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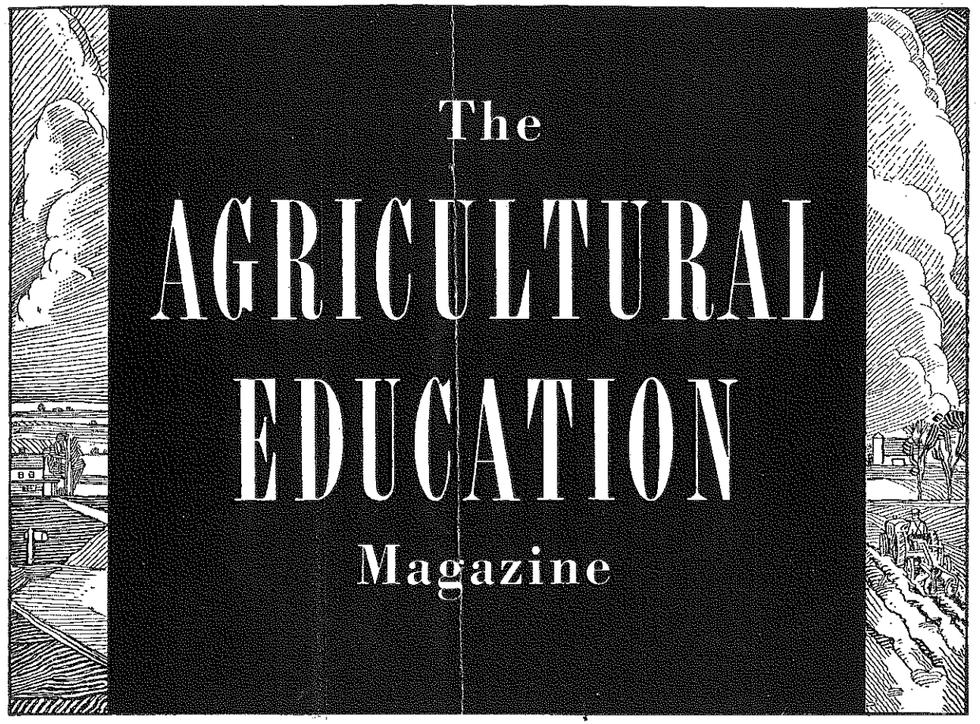

He is a successful teacher who arouses in his pupils a desire for learning. The teacher is not someone in charge of the knowledge supply whose sole business is to ladle out information to inquiring minds. His business is to create an appetite. When a boy or girl wants to learn he can be said to have the rudiments of culture—not until then.—Dr. Frank Crane.

The Agricultural Education Magazine

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Editorial Comment

Hitching to a Star

People seldom improve when they have no other model but themselves to copy after.—Goldsmith.

HISTORY reveals that many men have attained greatness thru the dominating influence of some one person or persons. That individual perhaps represented the *ideal* toward which such a man aimed. He represented the degree of success hoped for; his characteristics have been a source of emulation.

Some of us can recall a college teacher who exemplified in every way the "ideal teachers" he was trying to develop in the class in education which he taught. He was able to demonstrate with perfection how to apply educational and psychological principles which he upheld. The skill possessed by this man has been acquired by many teachers thruout the country today, as a result of the ideal set.

Charles R. Allen once said, "The only reliable source of content for specific training in an occupation is in the experiences of masters of that occupation." How many of us bear this in mind in planning and carrying out instructional activities in vocational agriculture? All of us can recall that occasionally we have met a farmer who seemed to be doing a superlatively good job of farming. A visit with such a man has raised our spirits. It has left us with a feeling that farming is, indeed, a high calling when done rightly. How many of us have given our students this experience? Elsewhere in this issue will be found an article describing how one teacher of agriculture has conducted interviews with successful farmers. Many teachers have used these "master farmers" as banquet speakers and in other ways to help inspire boys and establish ideals.

The critic warns that the highly successful are exceptional cases and that they arise amid circumstances different from those surrounding the rank and file. This may be true, but it depreciates the *value* of ideals not one whit. The Great Teacher Himself set ideals of character, humility, service, and self-sacrifice which, since then, have not been found together in one person. His life is still the model for millions.

A professor once took a class of students, preparing to teach vocational agriculture, on a trip to study near-by departments of vocational agriculture. Altho having the advantage of being easy to reach in one day, many weaknesses existed in these departments. These were brought out in a critical discussion of observations made by the students. Finally, one young man protested: "I can see, as a result of our trip, many things that I ought *not* to do as a teacher of agriculture. What I would like to see now is what I *should* do to be a successful teacher of agriculture."

Many of the farm boys in our classes in vocational agriculture are in the same position. They are familiar with farming practices followed by their neighbors, of which many practices are open to serious question. They need contact with farmers who are growing. Why do boys become discouraged or follow community practice, even tho they have "discovered" newer and better practices and have developed the ability to use them? It may be because they have never had a good look at a successful farmer, one who uses these practices with profit.

Last fall we talked with a teacher of agriculture who had recently gone on a trip with the F. F. A. Chapter. In the course of the journey the boys and their adviser had stopped in the town in which was located the chapter that had won the national contest the year before. Boys and instructor had listened and observed for two hours while the members of the host chapter "showed the boys around" and told of the activities they were carrying on. Adviser and members returned home with new ideas, inspiration, and a new vision of the possibilities in a F. F. A. Chapter. Their activities this year reflect these new ideals.

Let us be critical of poor workmanship and poor performance. Let us be dissatisfied with anything short of the best that is in a person. But let us also help those we teach to see how the job *should* be done. To use an old adage, let us *hitch our wagon to a star!*

The Teacher's Place in the Sun

IF YOU should ask John Citizen to name the occupation requiring the greatest amount of skill and formal training, he would answer without batting an eye, "Surgery." It is a common belief that it requires much technical training and practice to perform operations on human beings. As a result of this belief, society demands that surgeons spend about eight years beyond high school in training for their work. After leaving school, they must have many years of practice before they are considered highly competent.

I approve of society's demand that surgeons be well trained and have much practice. I feel this very keenly when one of my children is on the operating table having his tonsils removed. The child's physical well-being is involved. A mistake might result in death.

There is another profession, however, that society should be concerned about, even more than surgery. This profession trains the human body to be healthy and strong but, what is much more important, it develops and directs the human soul. It deals with great human values. It shapes the future of our society and very largely determines our destiny. This is the profession of teaching.

It is more difficult to put into a child's heart the ideal of service than it is to take out his adenoids; it takes more skill to develop in him an appreciation of the good, the true, and the beautiful than it does to amputate an arm or remove an appendix. It is more important that a warped personality be straightened than that a crooked leg be straightened. It is more important to develop in a child the habits of good health than it is to cut out some part of his anatomy which has become diseased because he failed to observe the habits of good health.

The work of the true teacher goes on and on. This thought is well expressed by Daniel Webster: "If we work upon marble, it will perish; if we work on brass, time will efface it; if we rear temples, they will crumble to dust; but if we work upon immortal minds, inspire them with knowledge, with the just fear of God, and love of fellowmen, we engrave on these tablets that which will brighten thru all eternity."

It will be a great day in our civilization when society recognizes fully the importance of true teaching and the great skill needed to teach effectively. When this day arrives, teachers will be as well trained as surgeons and they will occupy their rightful place in the sun.—Barton Morgan, Iowa.

The Challenge of Teaching

WHAT does teaching mean to *you?* Does it hold for you a challenge? What do you see when you visit one of your boys? The boy? His pigs, or corn, or tobacco? Or do you see him with a glint in his eye, the fire of ambition behind it, and his face turned to the future? Do you see a picture of him on that farm, or some farm, in the future? What do you see when you observe the first effort of that boy to make a speech or conduct a meeting? Do you see in it only his first unsteady effort? Are you concerned only by the demand it makes upon your time? Or do you see that boy as a future citizen in his community? Do you see him as a leader of the people in his county? Do you get from this picture a challenge to help him over the rough places at the start, to push him on thru the burdensome stages of his training, and to glory in his successes as he wins the chapter or district public-speaking contest, or otherwise distinguishes himself among his fellows? From such pictures as these many teachers receive the joy that the farmer gets from seeing his field of waving grain or his barn filled with the harvest. By formulating their own answer to these questions, many teachers receive the challenge that urges them to push on year after year with different individuals, to sharpen the ambitions of a different group. In them they see the picture of much-needed leaders for that community and for rural America.—*The* (Kentucky) *Agricultural Advance*, April 1929.

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

Contributions of Leading Americans to Agriculture—Henry Cantwell Wallace, 1866-1924

R. W. GREGORY, Specialist in Agricultural Education, Office of Education, Washington, D. C.

In Enterprise, Alabama, there stands a monument erected by a grateful people to the cotton boll weevil. What had appeared at first to spell complete ruin for them and all they possessed had finally been conceded to be a blessing in disguise. How frequently this happens!

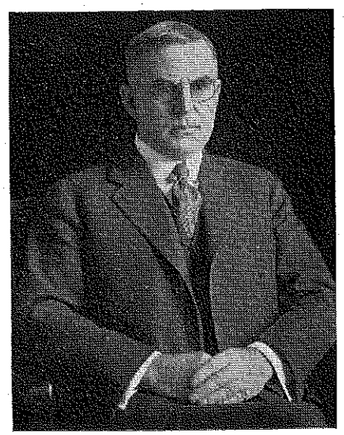
R. W. Gregory

IN 1876, a young minister of the United Presbyterian faith, obliged to give up the ministry because of threatened tuberculosis, found it necessary to seek and engage in a new vocation. That little calamity, tremendous in its effect upon the personal lives of the young minister and his family, set in motion a current of events that gave to agriculture and rural people three generations of distinguished leadership; a leadership that made a contribution to agricultural life by the Wallaces comparable in character and importance to the contribution made to political science and government by the Adamses. For the young minister was Henry Wallace (later the loved and honored "Uncle Henry"), and the occupation he chose was farming and farm journalism. For three generations, and for more than 60 years, the influence of this event has been of significant and colorful proportions.

Standing in the center of this family trio, son of the initiator, and father of the third member in this line of distinguished agricultural statesmen, is Henry Cantwell Wallace, the subject of this short essay. It is about him and his contribution to farming and farm-living that we write.

Henry Cantwell Wallace missed being an Iowan-born by only the width of one river, and a farmer's son by the short space of ten years. It was on May 11, 1866, in Rock Island, Illinois, that this first son of Henry Wallace and Nannie Cantwell Wallace was born. It was from here, when he was five years old, that the family moved to Winterset, Iowa, where, in 1876, his father gave up his ministry and from then on devoted his full time to farming and agricultural journalism. And thus was established as an indisputable fact, Henry Cantwell Wallace, Iowan and farmer.

Henry C. Wallace's boyhood days were spent at Winterset, and he gained from the months spent on the farms operated and managed by his father near there. He was educated in the local schools, and on Saturdays and after school in his high school days he worked at setting type for the newspaper in which his father was interested. The basic training in both farming and in publishing thus began early in his life and stood him in good stead in the strenuous days to come. Of this period in the life of Henry C. Wallace, his father has said: "My oldest son, when about twelve or thirteen years of age, developed abnormal activity, and I thought it best to take him into the printing office at three dollars a week, giving him the position of 'devil.' I stipulated that I would find his board and clothes, but that out of his three dollars he must open a bank account



Henry C. Wallace

and save enough to start him in college. He continued at this for several years and then entered Ames College in 1885."

The Farmer

The second period of Henry Cantwell Wallace's life began with his college matriculation and ended some ten years later when he resigned a college professorship to devote his full time to publishing. For two years Mr. Wallace diligently applied himself to his studies and at the same time found opportunity to "woo and win" the girl who was to share his life with him. Again his father, speaking of him in this and the immediately succeeding period, said: "At the close of the second year (college) he came home on a visit, came into the office and told him that the lease on one of my farms had expired, that the tenant had given me notice that he would leave, that I had told him it would be all right and I would look for a new tenant. He asked me how much the tenant had made in five years, and I said, 'Somewhere between $2,000 and 2,500.' He then said, 'How would you like me for a tenant?' I said, 'All right.' 'On what terms?' 'On exactly the same terms I have given the retiring tenant.' I suspected that the tenant was trying to get a better deal out of me, and that his refusal to renew the lease was for this purpose and none other. Hence I answered him promptly. My son accepted the terms, and in November married Miss May Brodhead, then living at Muscatine, Iowa. He was only about 21 at that time. But as his choice was worthy and based on true affection, neither his mother nor I made any objections."

The young bride and groom became tenants on one of his father's farms where, during the next five years, much of the substance of the structure of Henry C. Wallace's character and stability was developed and refined in the crucibles of a farm experience, rich and true. His own words, "The long days in the fields give time for thought and reflection," render more clearly than anything else the depth and quality of this experience and suggest a clue as to one source of his dependable, sound judgment and dogged determination. It was while on the farm that two of the children, Henry Agard, the present Secretary of Agriculture, and Annabelle, his sister, were born.

The April 16, 1921, issue of the *Literary Digest*, speaking of Mr. Wallace's appointment as Secretary of Agriculture, referred to his experience on the farm as follows: "For five years after attaining his majority, we read, 'He farmed 320 acres of Adair County's rolling prairie. He did just what every other young farmer starting in life does. He plowed the ground, sowed the grain, fed the hogs, milked the cows, and on Saturdays drove over to Greenfield to do the week's trading. Each year he marketed several hundred hogs, cattle, and horses.

" 'That was in 1887 to 1892, when corn sold for 15 cents a bushel, if it sold at all; and hogs brought $2.75 a hundred, if the farmer could find a buyer. It was then and there that Secretary Wallace first learned that conditions can become critical even for the farmer. All around him farmers were working themselves into premature graves, with the close of each year finding them no

fore. It is no wonder he is distressed now when he analyzes the situation confronting the American farmer today.' "

Assistant Secretary Howard M. Gore, who succeeded Mr. Wallace in the office of Secretary, writing in Volume 51, Number 8, of *The Experiment Station Record*, says of him and this period of his life, "Secretary Wallace thought of the American farmer in terms of a higher standard of life, from the standpoint of individual opportunity, education, and business prosperity. The tired bodies and aching limbs of those who endured the hardships and inconveniences of life upon the farm were matters of deep concern to him. He was ever zealous in seeking to devise ways and means that would lighten the tasks of those who produced the food and raiment of the land, and to give to every farmer in this Nation the benefits of the discoveries of modern science and to enlarge the possibilities of unexplored fields for his upbuilding. He sought to open to every boy and girl on the farm a wider and more attractive opportunity for service to their country in the necessities of life, and in a better equipped citizenship in its broadest sense."

The November 7, 1924, issue of *Wallaces' Farmer*, quoting press tributes to its late editor, reported the *Prairie Farmer* as saying: "The younger Henry Wallace saw in farming not only a good business, but the best opportunity in the world to raise sturdy boys and girls into the highest type of American citizens. He was deeply interested in the farm home, too. He saw clearly that better farm homes, wider educational opportunities for the boy and girl, and more satisfying farm and community life, were dependent on the success of the farm as a business. . . . He devoted his efforts to making farming a paying business, in order that the yearly profits might be made the basis for dividends of human opportunity and happiness."

Further evidence of the breadth of his conception of the values inherent in the farm is to be found in the words of an early editorial of the *Farm and Dairy*, when he was its associate editor: "We are apt to forget that the most important crop on the farm, the crop for which all other crops are grown, is that of the young people."

On the day following his death, the *New York Times*, eulogizing him, referred to his experience as a farmer: "It is said that Secretary Wallace was able to call more farmers by their first names than any other man in the country. He was a true dirt farmer as well as a scientific agriculturist, knew what it was to toil in the broiling sun and to struggle thru seasons of low prices for corn and wheat. And as far back as the family records go, the Wallaces were identified with tilling the land. Several ancestors attempted other vocations but all of these were temporary wanderers from the family record who returned to weld a continuous chain of farmers."

Henry C. Wallace never lost his genuine interest in the practical aspects of farming. He believed in farming and worked for its improvement. He always felt that it should be able to justify itself as an economic institution and altho fully appreciating the values of farming as a way of life, was somewhat thusiastic for these features that they neglected it as a business. He believed in farmers and respected their advice and judgment. It was during his period as Secretary of Agriculture that farmers began to feel a sense of proprietary interest in and to hold an intimacy of contact with that Department. He continued to speak their language and to deal sympathetically and understandingly with their problems. The present day trek of "dirt farmers," in all of its tremendous proportions, to the office of his distinguished son, really had its beginning in the trek to his own.

He not only believed in farmers but he was convinced of the soundness of the principle of inseparability of the farm and the farmer. Speaking of land speculators he once said: "Land speculation by non-farmers is a curse, injuring both the man who farms and the consumer who must buy what he produces. Some time perhaps we may find a way to keep the speculator from meddling with farm land." Yes, Henry C. Wallace was a farmer!

The Editor-Publisher

Henry C. Wallace did another unusual thing—he returned to college after having farmed for five years and after having married and started a family of his own. He returned to the Iowa State Agricultural College in 1891 and in one year's time completed his work for his degree, specializing in dairying. Part of the encouragement for doing this came from no less a person than Professor James Wilson, later Secretary of Agriculture, who, having been a frequent visitor in the Wallace home, had seen possibilities in young Henry C. Immediately upon his graduation, Professor Wilson secured his appointment as Assistant Professor of Agriculture, Iowa State Agricultural College, and placed him in charge of the Dairy Department.

While acting in this capacity, Mr. Wallace launched his career as an editor and publisher. Along with Charles F. Curtiss, later Dean of Agriculture at Iowa State College, he purchased and published *The Farm and Dairy*, a small semi-monthly publication serving Central Iowa. In 1894 he resigned his position at the college and from then on devoted his full time to the publishing business. Within a short time his father, who had withdrawn from the editorship of *The Iowa Homestead*, and his brother, John P. Wallace, came into the business with him. They changed the name of the paper to *Wallaces' Farm and Dairy* and, under the following editorial banners, instituted a courageous and distinguished service to the farmers of this country: "*The Farm and Dairy* is a semi-monthly paper devoted to the interests of the farmer, dairyman and creameryman. The aim of its publishers is to supply a journal that will be practically helpful to its readers in their every day business. We wish the farmers of the state to see for themselves the spirit at least of the paper we propose to issue during the rest of our life and to leave as an heirloom to our children. It will emphasize the word 'FARM'—spell it so to speak in capital letters—and interpret it as meaning the farmer and his family as well." For 25 years Henry C. Wallace was promi-

Further insight into the thinking of the Wallace editors is gained by reference again to *The Independent's* statement in its issue of April 2, 1921. It says: "There is found today, as always, standing at the head of the columns of the paper, the motto wrought by the elder Wallace, 'Good farming, clear thinking, right living.' The editors of *Wallaces' Farmer* have always stressed the economic side of farming. First and foremost the farmer must prosper; for without prosperity no decent standards of living can be maintained. Thus *Wallaces' Farmer* has constructively sought to improve actual farming conditions. A striking characteristic of the paper is that it has always kept a high moral tone and has been an influence for good among its rural readers. It has, therefore, occupied the place of the 'family paper' in many an Iowa farm home."

When the movement to improve Iowa corn started some 20 odd years ago, to which end Professor Perry G. Holden was secured for Iowa State College, *Wallaces' Farmer* joined with the two other concerns in piecing out his salary, since at the time appropriations were not sufficient to provide a salary large enough to entice him from the University of Illinois. Mr. Wallace and his father were on the first "corn special" train to traverse the State.

IN THE first issue of his own paper published after his death is this statement: "The career of Henry C. Wallace as associate editor and later as editor of *Wallaces' Farmer* was a series of battles for the farmers' interests. He led the fight for the creation of the office of state commerce counsel. As secretary for 17 years of the Corn Belt Meat Producers, he was in every important battle for equalizing railroad rates on farm products. In national affairs, he stood with Pinchot in the Ballinger Controversy, an incident prophetic of his own coming struggle with Secretary Fall. In the days of food control during the war, when the Food Administration was attempting to back out of its promises to livestock producers, he secured a modification of government policy that saved the livestock men hundreds of thousands of dollars. When the Federal Reserve Board began its deflation program in the fall of 1919, Mr. Wallace was one of the first to see the significance of this step in relation to agriculture, and to protest. He was well aware that agriculture, due to this and other after-effects of the war, was in for a hard period."

In "A Narrative History of the People of Iowa," by Edgar Rubey Harlan, is this tribute: "As associate editor and after his father's death in 1916, as editor, he made a reputation for himself as a writer of vigorous editorials on farm practices and on questions affecting the welfare of the farm family and the country as a whole."

On September 6, 1895, *Wallaces' Farm and Dairy* became a weekly and changed its name to *Wallaces' Farmer and Dairyman*, with Henry C. Wallace continuing in the dual capacity of assistant editor and manager. The fields of service of the paper broadened and problems of a wider range of interest were attacked. Some of those early editorials were prophetic of campaigns

on December 6, 1895, the leading editorial dealt with "Worn Out Land" and said, "It seems strange that in a new state like Iowa, farmers should speak of land that is worn out, or corned out, or farmed out," referring to lost fertility, however, instead of soil eroded away.

Again, on November 26, 1896, the paper was equally prophetic when it said, "Farm papers are beginning to suggest and properly, too, that the Secretary of Agriculture selected by the incoming President to sit at the council board of the nation shall be a thoro farmer and not a mere politician; that he should be a man who has not only had experience in farming, but who knows the wants of the farm, and who has a broad general acquaintance with agriculture in all its departments."

Apropos to these sentiments, *The Philadelphia Inquirer*, writing of him at the time of his death in October, 1924, said: "He came to the Department of Agriculture as one who had devoted all his life to the interests confided to it. He was editor of one of the best known agricultural journals. He was an expert in scientific farming, no less than a practical farmer. To be Secretary of Agriculture was to him the climax of an opportunity for efficient service. He was no politician, and there was no thought of personal or party advantage in his wise administration of his office. Such unselfish men as he, honestly intent on duty, with no other end to serve, are none too common in public life."

IN THE November 6, 1903, issue of what was now *Wallaces' Farmer*, Henry C. Wallace was listed for the first time as associate editor and manager, and the leading editorial of that issue dealt at length with "Land Values." For the next ten years there were no changes in the head personnel of the editorial or management departments of *Wallaces' Farmer*. The influence of the paper grew and it became the leading general farm paper of its time. In the December 25 issue of 1914, Henry A. Wallace, of the third generation of the Wallace family, was listed on the mast head as an editor. In this issue the leading editorial had to do with tenancy, under the title, "Shall Iowa Land be Considered?" Among other sentiments expressed is the following significant statement: "If we are to keep our soils from wasting their fertility we must regard them as in a sense the property of the nation, and the loss of fertility as a national loss. . . . Hence the nation must protect the land. Then the tenant must have his rights."

In the second issue of *Wallaces' Farmer* after "Uncle Henry's" death, and with Henry C. Wallace now the senior member of the firm, significantly enough the leading editorial was addressed, "To Some Father." The general theme was, "Boy's Calf—Dad's Cow," and ended by saying, "Take notice of that boy of yours. He and his mother and brothers and sisters are of all of your possessions the most to be treasured and loved."

During the next five years the mission of *Wallaces' Farmer* broadened, the editorials tended to develop broad basic and fundamental issues undergirding farming, and without doubt had much to do with the development of a dawning [illegible] on the part of farmers par-

whole, of the foundational importance of farming as a business.

Such editorials as the following headlined the issues between 1916 and 1921 and will bear reading again and again if one would be oriented in the problems of his time:

1. How Farmers Made the Great Cities
2. A Just Price
3. The Farm Land Boom
4. Collective Bargaining for Farmers
5. Land Speculation
6. The Farmer Must be Heard
7. Railroad Rates
8. Prices Abroad
9. The Stockyards Jonah
10. The Farmer and the Tariff
11. Government and the Farmer

These editorials dealt with a variety of agricultural subjects and problems of the time, both domestic and foreign. Thru them, and otherwise, Henry C. Wallace exerted a tremendous influence upon farmers, individually and collectively. For a decade and a half he attended and spoke at farmers' institutes and public gatherings and worked with farmers' organizations.

On the campus at the Iowa State College stands a boulder erected by the American Country Life Association as an honor to Henry C. Wallace's service to agriculture. The inscription on it reads:
"As editor, he worked for a richer and happier rural life; as Secretary of Agriculture he provided an economic service for the American farmer; as statesman, he led the vanguard in the battle for equality for agriculture; as prophet, he saw in the fertile lands of the corn belt the basis of a rural civilization finer than any the world has yet known; he died laboring to bring nearer the day of its coming."

Probably next to farmers and farm problems, his chief interest was in the rural church and he worked earnestly in its behalf. He was greatly interested in the Y. M. C. A. and for years served as chairman of the state committee and as a member of the international committee of this organization.

Yes, Henry Cantwell Wallace, editor and publisher; but a farmer still!

Agricultural Statesman

The appointment, by President Harding in 1921, of Henry C. Wallace to be Secretary of Agriculture was a foregone conclusion. Of all men of that day he was the man best prepared for the arduous tasks ahead. *The New York Herald Tribune*, quoted in *Wallaces' Farmer* of November 7, 1924, expressed the sentiment of public and press thruout the land. It said, "Henry C. Wallace Agriculture, because to him the farm and its sound economic development were as the breath of life. He was a practical farmer, a professor of scientific farming, and the editor of one of the worthiest and most influential of American farm journals.

"His chosen work was the upbuilding of American agriculture. He valued the opportunities which came to him, culminating in the secretaryship of agriculture, only as a means to do that work. He was not a farmer-politician. He never sought to get votes or personal advantage out of his devotion to the farming community. He always gave more than he asked or expected, because his heart was in what he was doing for the farmer rather than in what the farmer might do for him in return.

"He represented the middle-western spirit at its best, intensely interested in community advancement, in economic efficiency and in the substitution of modern conditions of farm life and production for the conditions of pioneer days. He was a sincere and genuine figure in the new western expansion, which is an intensive and spiritual one, not a mere surface conquest of the prairies.

"In this era, when so many crafty politicians are trying to confuse and exploit western agriculture, Mr. Wallace's shining merit was that he was never anything but the farmer's honest and competent counselor and his unselfish friend."

From March 4, 1921, to October 25, 1924, is not a long period of time as time goes, but into these short years of service, as Secretary of Agriculture, Henry C. Wallace packed a host of accomplishments. Speaking before the Iowa editors a few days before he took office, he set up the platform of his agricultural program when he said: "Farm products must go up in price and other products must come down, until the normal relation between them is restored and they meet on a price level preferably about 70 percent above the normal before the war. This talk of bringing prices back to pre-war normal is wrong. We incurred a heavy debt on the inflated price. If we now force prices back to pre-war normal, it will be equivalent to just about doubling our debt. We can pay off this debt much easier if we maintain a price level nearer the level at which it was incurred."

At another time, he said: "The obligation to get our food products to the consumer with the least possible waste and at the least possible cost consistent with fairness to those who handle them is just as sacred as the obligation to produce these crops in the first place. . . .

"There is just as much reason why the Department of Agriculture should assist the farmer in developing methods of marketing his crops efficiently as why it should assist him in increasing his production. The study of improved systems of marketing, as well as the study of conditions the farmer should understand to produce intelligently and to adjust his production to the needs of consumption are proper functions of the department. . . .

"If prices are to be satisfactory, there must be a right adjustment of production to the marketing conditions. Information relating to the world's pro-

Department of Agriculture should make available, is especially useful and necessary in aiding farmers to decide what to produce and what not to produce, or, in what quantities given commodities should be produced in order that there may be an adequate supply, but not a destructive glut."

DURING his term of office, the Agricultural Credits Act of 1923, establishing an intermediate credit system and raising the loan limit on farm land bank loans, was passed. Much of the work on the original drafting of this bill was done in his department. It was also during his term of office that the Bureau of Agricultural Economics was created, that "intention to plant" surveys were started, and that a tremendous amount of emphasis on economic research was injected into the work of the Department of Agriculture. Mr. Wallace had long been interested in these questions and had repeatedly expressed himself upon them through the columns of *Wallaces' Farmer*. He rather completely reorganized the Department of Agriculture so that it could function more effectively when dealing with such matters as co-operative marketing, farm management, studies of supply and demand, and other like problems of economic import. He recognized, however, that many of the things being done had only temporary value and that in the long run the problems of the farmer would have to be solved otherwise. He recommended to the President in December, 1923, that the Government attempt some solution of these problems thru the organization of an export corporation designed to take surplus farm products off the domestic market and to sell them abroad. The principles of this recommendation were incorporated in the McNary-Haugen bill which Secretary Wallace supported.

Altho he recognized the service which the agricultural colleges and experiment stations, the agricultural press, and all other agencies interested in agriculture had rendered in the field of economic production, he maintained that more emphasis should be placed upon the problems of marketing, credit, and intelligent adjustment of production to consumption than in the past. He summarized his point of view in the following statement: "I do not mean to suggest that there should be any lessening in our efforts to increase production, and especially to cheapen production costs, but I would add to these efforts equal attention to what I may call the business side of agriculture."

In order to secure more co-ordination in the work of the department, Secretary Wallace appointed directors of scientific, extension, and regulatory work. He also was instrumental in having the department organize and offer graduate courses of study and research for members of the department staff who were unable to leave Washington for such advanced instruction.

He believed in the conservation of our natural resources and strongly opposed the separation of the department from the administration of programs designed for that purpose. His interests were broad and he saw that in the last analysis the things which would be of most value to agriculture, and farm people in particular, would be those build and promote the general welfare. As a consequence, he was constantly striving to make the whole nation conscious of the importance of the problems affecting the farmer. As an administrator he attempted, in the framing of his policies, so to construct them as to be of greatest value to the people as a whole, while at the same time rendering particular service to farm people.

When Mr. Wallace came in as Secretary, one of the first problems he faced was the problem of making both the Government and the country conscious of the need for an agricultural program that went further than merely the promotion of production. As a matter of fact, Mr. Wallace, in his administration, pioneered in the idea that the Government could and should do something for agriculture in the realm of economics and marketing. Today the problem is not one of whether to do anything at all; it is a problem of what to do. Apparently Mr. Wallace pioneered well.

He died while in office, October 25, 1924. At the time of his death, he had almost completed the preparation of the manuscript of a book, "Our Debt and Duty to the Farmer," which presents in a single volume the attitudes and ideals he held toward farm problems and farm people.

What He Meant to Iowa and America

The real significance of Henry C. Wallace, farmer, publisher, and statesman, is best summarized in the statements coming from people who had known and worked with him during the most fruitful period of his life. From President Calvin Coolidge to the typesetter's devil back home, Henry C.

(Continued on page 18)

Alpha Tau Alpha

Professional Agricultural Education Fraternity

ARETAS W. NOLAN, National President, University of Illinois

THE readers of *The Agricultural Education Magazine* who have not read the story of Alpha Tau Alpha, in the June 1932 issue, or those who have read and forgotten, may be interested in a review of the history and growth of this fraternity. It was not just another organization on a college campus, imposed by ambitious teachers—it grew out of the ideals and purposes of young men in training to teach vocational agriculture. What more definitely planned career among men in college, or one more substantially supported by governments and schools, than the teaching of vocational agriculture? If *ever* men had a good reason for banding themselves into a fraternity, teachers of vocational agriculture have this reason.

It was at the end of a busy day one winter evening in 1921, just as I was about to close my office, when three young men from one of my classes in agricultural education diffidently stepped in, and asked if they might explain a proposition that was upon their minds. We sat down together, and after an hour or more of earnest conversation and dreaming, a new fraternity for prospective teachers of vocational agriculture, a group of men, unified by such a high purpose as to become good teachers of agriculture, and to serve a nation-wide cause so honorable, had good reasons for a formal organization. Why not band together in a professional fraternity, and enjoy the benefits which such fraternities have brought to other groups, with no more worthy motives or causes for organization than teachers of vocational agriculture have?

There was worked out a tentative constitution, and a trial ritual. The preamble of the constitution sets forth the purposes and ideals of the fraternity:

"In order (1) to develop a true professional spirit in the teaching of agriculture, (2) to help train teachers of agriculture who shall be rural leaders in their communities, and (3) to foster a fraternal spirit among students in teacher-training for vocational agriculture, we band together in this professional fraternity."

The constitution proceeds in a simple, dignified form, providing a flexible organization, adaptable to the interests of various states and institutions. The ritual of the fraternity is a beautiful, impressive ceremony, driving home the ideals of agricultural education, character, and service to rural life.

The fraternity has grown in influence and number thruout the country since its founding in 1921. The following chapters have been organized:

1. Alpha—University of Illinois
2. Beta—University of Nebraska
3. Gamma—University of California
4. Delta—George Peabody College
5. Epsilon—University of Florida
6. Zeta—Colorado State College
7. Eta—Pennsylvania State College
8. Theta—University of Wyoming
9. Iota—Louisiana State University
10. Kappa—Clemson College, South Carolina
11. Lambda—State Teachers' College, Conway, Arkansas
12. Mu—Texas College of A. & I., Kingsville
13. Nu—University of Missouri
14. Xi—Normal, Illinois, Teachers' College
15. Omicron—Mississippi State College.

Several other institutions are now considering the installation of chapters.

The National officers are as follows:

Dr. Aretas W. Nolan, President, University of Illinois.

Dr. Roy L. Davenport, First Vice-President, Louisiana State University.

Mr. Chas. D. Parker, Second Vice-President, Texas College of A. & I.

Mr. Herbert J. Rucker, Secretary-Treasurer, University of Illinois.

One delegate from each chapter together with the above officers constitute the Executive Board.

The Alpha Tau Alpha fraternity has found a rich field of service. Not only have trainees in vocational agriculture, but also teachers in the field, been brought together in a fine professional spirit of enthusiasm and loyalty for their work. This is surely a part of the work of teacher-training institutions, to foster the spirit of enthusiasm and love for teaching, and Alpha Tau Alpha does contribute toward this end.

From time to time articles will appear in *The Agricultural Education Magazine*, telling of the activities of the various chapters of Alpha Tau Alpha thruout

A. M. FIELD

Methods

A Minnesota Plan of Individualized Learning

III. Evaluating Pupil Progress in an Integrated Course

THOMAS W. RAINE, Teacher Education,
University of Minnesota

T. W. Raine

IF integration is to be achieved, some unifying force must bring together, in the mind of the student, the separate phases of the environment which we have encouraged him to inspect. An evaluation guide can be used to aid the student in unifying the integrated work. It will enable him to see the results of his labors, not as a conglomerate mass, but as a unified whole. Thru the guide, a student sees that he is the master of his success or failure, an important perspective from a disciplinary standpoint. He sees how futile it is to try to beat the teacher, because he is setting his own pace with his own problems. It is significant that in every case of individualized approved practice study with which I have had contact, each one reports a marked change in the attitude of the students. The entire viewpoint is transformed.

As an aid in accomplishing this, an evaluation guide was devised to aid in combining the social development, mental achievement, classroom work, and farm practice activities (supplementary, improvement, and production projects) of the boy.

This guide is organized to fit a school year of 36 weeks divided into quarters of 9 weeks each. It can be readily adapted to a six-weeks organization plan by using two-thirds of the values indicated. In this manner Part A would receive 170 points instead of 250, Part B, 230 instead of 350, etc. The total number of points for a six-weeks period would be 800.

Part of the guide, Form I, deals with the personal factors which have to do with the development of the boy as an adjusted member of society. Ten traits are listed, each with a given evaluation. A student is asked to rate himself and two of his classmates. The teacher can quickly designate which students are to be rated by using his class record book. After the forms are filled in, the teacher gathers them, clips off the two evaluations at the right end, and gives them to the student whose name appears at the top. The teacher then makes his evaluation of each student in the space provided on the form. The complete rating is then passed out to each student, who averages his own estimation with have made of him. He then adds the result to the teacher's evaluation to get his total number of points. To illustrate with figures, suppose the two students who rated Raymond gave him 107 and 114 points, respectively, and his evaluation of himself totaled 112 points. The teacher's evaluation was 110 points. Then, 107+114+112=333, divided by 3=111. 111+110=221 points. He would receive 221 points of the 250 points provided in the guide.

Students are usually quite interested in their classmates' impressions of them. They compare results from quarter to quarter to see if they are making definite progress in the total number of points earned. Part A of the guide performs a service if it merely calls the 10 personality traits to the attention of each student.

Part B of the evaluation guide is a transmutation of the usual high school grades in agriculture into numbers which may be figured in the total. Three hundred fifty of the possible 1,200 points are allotted to this section. This may seem rather low, but parts of the characteristics often used in determining grades are included elsewhere. Grades are kept in the standard class record book, averaged in the usual manner,

A Guide for Evaluating the Progress Made by Students in Agriculture II, III, and IV

Quarter grades—Perfect score.....1200

A. Personal Development.....250

	Teacher's Evaluation—125	Pupil's Evaluation—125
1. Starts work promptly	15	15
2. Keeps himself and desk neat	10	10
3. Class posture and appearance	10	10
4. Initiative exhibited	15	15
5. Spells words correctly	10	10
6. Co-operates with classmates and with teacher	15	15
7. Pleasant and congenial attitude	10	10
8. Exhibits leadership ability	15	15
9. Gets to class promptly; goes immediately to seat	10	10
10. Talks quietly, not noisily	15	15

B. Factual Achievement.....350

1. Teacher's evaluation of the quality of work and outstanding endeavor	150
2. Daily work and unit examinations	125
3. Quarter examination	75
	350

C. Farm Practice Work.....600

1. Each approved practice written and diagramed in the classroom..... 10, 15, 20
2. Each approved practice put into effect with approval of the parent and the instructor 20 (15–35)
3. Planning and executing jobs connected with production projects.....250
4. Planning and executing jobs connected with improvement and supplementary projects..200

D. Final Grade—Perfect Score..... 5,500

1. Total possible points made during the year..... 4,800
2. Production project completion..... 700
   a. Outstanding project work.....586–700
   b. Average project work.....466–585
   c. Below-average project work.....350–465

A Personal Rating Chart

Name of student.....

	Self-Evaluation	Teacher's Evaluation	Classmate's Evaluation	Classmate's Evaluation
1. Starts work promptly.....(15)				
2. Keeps himself and his desk neat....(10)				
3. Class posture and appearance.....(10)				
4. Exhibits initiative.....(15)				
5. Spells words correctly.....(10)				
6. Co-operates with classmates and teacher.....(15)				
7. Pleasant and congenial attitude.....(10)				
8. Exhibits leadership ability.....(15)				
9. Gets to class promptly, goes immediately to his seat.....(10)				
10. Talks quietly, not noisily.....(15)				

Average pupil rating.....+ Teacher's rating.....= Total Score

and transmuted into numbers at the end of the quarter. At Fairmont, the following points are allotted to each grade:

Numerical Rating Scale 1	ABCD Rating Scale 1*
95=310—350	A=308—350
90=282—315	B=265—307
85=248—281	C=222—264
80=214—247	D=180—221
75=180—213	

A high 95 could receive 342—350 points
A low 95 could receive 316—325 points

In this way greater differentiation could be made between grades, which would lessen the error in determining the final grade.

Part C is the most important section of the evaluation guide, and the part which aids in encouraging greater participation in farm practice activity. It encourages students to consider their own problems in the light of their home needs, serving as an excellent plane upon which student-interest, teacher-guidance, and parental interest can meet and join in the mutual solution of farm problems.

C-1 is an evaluation of approved practices formulated in the classroom. As the student finishes a teaching unit, which necessitates individual study, planning, and teacher-pupil discussion, he gives it to his instructor. The instructor checks the approved practices for accuracy of statement, information, and organization, grading 15 points for an average quality of work, 20 points for a good approved practice of complete statement and organization (above average), and 10 points for an approved practice of less than average quality. Approved practices which are misstated, or which have related information and jobs mixed or incomplete, do not receive any points until the errors are corrected. The teacher must decide at this time if all of the necessary approved practices have been included to complete the learning unit satisfactorily.

After a period of time students become very proficient in their ability to spot approved practices as they scan the reference material, and equally proficient in organizing the related information, jobs, and devices.

Form II, set up on 8½x11 inch size sheets, is used to facilitate bookkeeping. After each unit is graded it is only a moment's work to check the correct grade in the proper column. As all of the numbers used are multiples of five and arranged vertically, it is equally simple to add the total for the quarter.

C-2 considers the practical home usage of the approved practice after it has been formulated in the classroom. Varying numbers of points are allowed for doing this, as some approved practices require little work and others require a great deal of time and effort to put them into satisfactory operation. Twenty points for each approved practice successfully established on a reasonably permanent basis is the average allotted for this activity. The number actually varies from 15 to 35 points.

If boys are to become established in farming, production projects should be encouraged early in the course. Part C-3 allows points for doing jobs connected with production project work. The points allotted depend upon the degree of difficulty, obstacles to overcome, and the thought and labor needed to do the particular job. A boy who looks for just the right gilt, and then drives 50

Name.....

Enterprise	Teaching Unit	Learning Unit	App. Pract. No.	10	15	20
Swine.....	II	B	1	.....	.....	.....
.....	.....	.....	2	.....	.....	.....
.....	.....	.....	3	.....	.....	.....
.....	.....	.....	4	.....	.....	.....

Form II

miles to get to her, has learned more than the boy who buys the first one available. The separate jobs for production projects averaged about 25 points for both planning and doing. These jobs are reported on the same form as the applied approved practices.

Improvement projects and supplementary farm practices are evaluated in a like manner, using the actual effort expended as a basis for allotting points. The boys in Fairmont voted to leave the number of points allowed for each activity to the discretion of the teacher, as the work connected with doing jobs varies greatly from farm to farm. At times they were asked to evaluate their own work.

Students report their farm practice activities on a prepared form which is divided into four sections. They write in the names of applied practices in the first section. In doing this they are asked to include the date of completion, the number of the approved practice, and the teaching unit and learning unit in which it was formulated. The second section is used for reporting production project jobs. Here the date of completion, enterprise, and nature of the job performed are required. The supplementary farm practice jobs are written in the third section, stating the date of completion. The fourth section is used to record improvement projects. Students are asked to record in this section the name of the project job and the date of completion. This form for reporting farm practice work is given to each student at the beginning of each quarter. As the student does the project job he enters each in the proper place. Thus he will have a complete record for the year at the end of four quarters. The forms are due one week before the end of each quarter. This allows the teacher time in which to check, allot points, and total the data preparatory to determining grades.

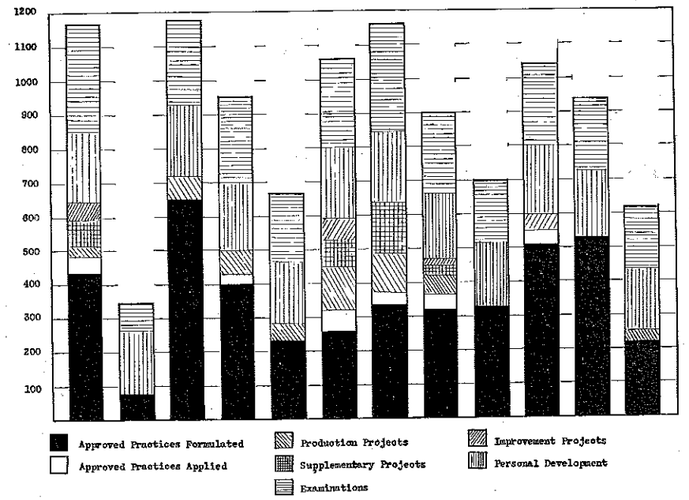
The highest grade given in the Fairmont High School is 95; the lowest passing grade 75. Intermediary grades are 80, 85, 90. Students are expected to earn a total of the following points to receive the respective grades for each quarter:

Numerical Rating Scale 2	ABCD Rating Scale 2
1,080—1,200=95	A=1,050—1,200
960—1,079=90	B= 900— 949
840— 959=85	C= 750— 899
720— 839=80	D= 600— 749
600— 719=75	

This allotment of points gives a fair distribution of the separate marks when compared to a normal curve. With the exception of the 95 students, the marks checked very closely with those given by other high-school teachers. This was the criterion used to determine whether the students were receiving a fair grade for the work they were doing.

As an example, let us assume that John has formulated 19 approved practices for which he has received a total of 260 points (C-1) and that he has done enough jobs in connection with his swine production projects to give him 150 points (C-3 on the evaluation guide). He has earned 50 points from supplementary projects around the farm; 65 points from improvement projects (C-4); his teacher, he and his classmates evaluate his personal improvement at 212 points. (A) His examination grades show he is entitled to 260 points from (B) of the evaluation guide. He has

(Continued on page 18)



A graph showing the grades of an agriculture class, Fairmont, Minnesota, determined with the evaluation guide.

Supervised Practice

H. H. GIBSON

Supervised Practice Trains Boys for the Business of Farming

HARRY E. BRADFORD, Chairman,
Department of Vocational Education, University of Nebraska, Lincoln

H. E. Bradford

IF YOU want to make sure that your teaching will function in the life of a boy, give him practice in the thing you want him to learn. This is recognized as good teaching gospel the world over. Football coaches teach the principles of good tackling and blocking and the boys go thru the motions in practice. But the first real test of efficiency comes in a hard scrimmage or in a scheduled game with spectators on the side lines. The teaching may be excellent but complete understanding is reached only thru experience.

The successful farmer is a man who has learned how to manage a business made up of many intricate details. Success or failure often depends on the choice of the correct business practice. The hard way to learn is thru trial and error, with many a failure. The easier way is to learn with the aid of books, bulletins, and a teacher who guides the practice.

The teacher of agriculture has a splendid opportunity to teach thru practice. The farm is right at hand and the setting is a natural one. Most boys like to undertake a man-sized job that tests skill and judgment. Success and profit will depend upon the application of correct business principles that are learned when needed.

The real test of the teacher lies in his choice of significant and important farming situations as bases for his teaching thru practice. If the objective is the teaching of business principles, then the boys must actually participate in buying, selling, borrowing, and working in a partnership. Giving a real note in exchange for real money is an experience that is far more valuable than simply borrowing an animal from dad and promising to repay at some future time.

A Sand Hills Ranch Project

Hay Springs is a thriving town in the northwestern corner of Nebraska. It is a ranch town between the sand hills and the hard land. Sand hill ranches stretch away to the south with plenty of grass and water. On the north one sees ranches again and rough country with some dry land farming. John Roth is the teacher of agriculture in the Hay Springs high school, with more than 50 ranch and farm boys in his classes. He sends the following story of business training in

Harold Dorshorst enrolled in the vocational agriculture class of the Hay Springs high school in the fall of 1934. His home was on a sand hills ranch where the talk of the family was cattle and grass. No dry farming on that ranch. Cattle roamed the hills and came to the lake to drink. Profit was counted in the spring calf crop that went to the Omaha market as feeders a year or so later.

Harold was given an opportunity to study all the possibilities of a project program and soon decided on beef production. He borrowed the money from his father and bought two yearling purebred heifers. He selected purebreds over grades because he saw a possibility of selling purebred bulls or of raising purebred heifers for his future herd. At the end of his first year's operations he had a net return of $48.30 as a result of increase in inventory. No cash was realized but the boy was looking ahead to his herd of the future.

During the year 1935–36 Harold's project showed a profit of $48.00 from the sale of two bull calves, and in 1936–37 he sold one bull calf and kept one heifer calf for his herd. The continuation project went on successfully during Harold's senior year in high school. Now he is on the home ranch raising purebred Hereford cattle on a share basis with his father. Some time the ranch will be enlarged, another set of buildings will be added, and Harold will operate his own business.

A Town Boy in the North Platte Valley

Out in the valley of the North Platte lies Gothenburg, in the midst of an irrigated region where alfalfa is a major crop. Herbert Yost, broad shouldered and six feet-three, is the "Smith Hughes" teacher, and they say that the agriculture department is one of the most important features of the Gothenburg high school. Yost sent the writer the project record book of John M. Stickelman, with the remark that the book speaks for itself. And it does.

John is a town boy whose father, formerly a farmer, now operates a livestock sales company in Gothenburg. The family lives on an acreage on the edge of town and they carry on a number of farming activities for profit and for home supplies. Yost says that John is a hustler and a busy sort of lad who makes the most of every opportunity. His project record book shows that he seldom misses a business chance.

Listen to the record book as it talks for John. "Rented one acre of land at $5.00 for one year." "Borrowed $150.00 at the Gothenburg State Bank on my note, payable in six months—interest the Gothenburg F. F. A. Chapter for one year at five percent interest." "This project and the financing of it are entirely my own."

This project was started in the fall of 1937–38 when John was 19 years of age. In December, 1937, John bought two A-type hog houses for $10.00. In the school shop he made a self-feeder and a self-waterer. Then he bought two purebred Duroc Jersey sows from the North Platte Experimental Sub-station at a cost of $90.00.

The record book tells of balanced rations and costs; it mentions soap and water, clean ground, and good care at farrowing time. Evidently good stock, good care, and good feeding practices brought results because the record shows that the two litters numbered 19 pigs and only two died. John sold the two sows for $90.62, and received $423.75 for 16 pigs, making a total of $514.37 cash receipts. He has kept three gilts for breeding purposes. He made a net return of $345.41, and figures the cost of production at 4.9 cents per pound of pork.

These figures would be good but they do not tell the whole story. This boy never misses a bet. His pigs went to the fairs. They went to the Dawson County Fair first where they won sweepstakes, six first, two second, and three third places; and the prizes amounted to $41. Then two of the litter were shown at the Nebraska State Fair and they came home with $6 in prize money. Again at the Gothenburg Harvest Festival the pigs went to town and came home with $19 in prize money. The total awards amounted to $65. These prizes were not counted in estimating costs and net returns.

In the record book John said that his ambition was to have a worth-while project to set an example for the freshmen who will enter vocational agriculture classes in the years to come. He accomplished his ambition and received for himself a business training that will be valuable to him in whatever line of activity he may choose as his life work.

New Department at Crete Brings Results

Crete, 28 miles southwest of Lincoln, population 2,500, home of Doane College, is heavily populated with Bohemians. The surrounding farm land is good and the farmers are thrifty. The high school had always been quite academic and conservative until vocational agriculture was introduced in the summer of 1937. The situation was ideal for the establishment of a practice teaching center at Crete, so co-operative relations were requested by the University Teacher-Training Department. Ralph Canada was brought from a successful experience at Holdrege to build the Crete department from the very beginning and to become the critic teacher. The following story is just one evidence of the success attained by this brand new department in about a year and a half.

in high school when vocational agriculture was introduced in the Crete schools in the fall of 1937. He was not greatly interested in general high school subjects and made only fair progress, taking no part in school activities.

He was one of the first students to enroll in agriculture and as the year progressed Samuel's work improved and his confidence grew. He became an active F. F. A. member and is continuing to attend meetings and participate in F. F. A. activities since graduation.

Samuel's first project consisted of four purebred ewes and a ram. He was encouraged to add a sow and litter project. A purebred spotted Poland China gilt was purchased for $10.00 at 100 pounds weight. The gilt was grown out on a balanced ration, was flushed carefully, and bred. The sow farrowed 14 pigs, 11 of which were raised to market weight. Six months from the date of farrowing this litter tipped the scales at 2,785 pounds of pork. Four of the best gilts were retained on the farm and will be used to increase the size of Samuel's continuation swine project program. The sow was rebred and farrowed 11 live pigs as a fall litter, which will be a potential ton litter in six months' time.

The porkers were raised under what farmers know as the "100 percent sanitation system" involving clean sows, clean houses, clean lots, and clean pasture. Grain consisting of equal parts of corn, rye, and oats, plus tankage and alfalfa pasture, served as the ration used. Profits from the project will be used for purebred breeding stock, also for providing a pasture program, now under way, in order to rehabilitate swine on this farm. The sheep project will be expanded as time passes.

The farm on which Samuel resides with his parents consists of 135 acres, 75 acres of which are owned by his father. Dairy cows and poultry constitute the livestock enterprises on the farm. Corn, wheat, oats, and alfalfa were the crops raised as indicated by the home farm survey in late summer of 1937. Samuel's father became interested in agricultural education and asked for an evening school course. He was the key man in organizing the first adult farmer class in this community.

The writer with Mr. Canada visited the Welsch farm last October. The pigs were in the pasture and the sheep were in the lot. Samuel's father looked on in silence while the boy told the story of a ton litter from one $10.00 sow. Samuel knew his feed records and could tell to the last penny how much the pigs had cost to date. He was proud of his sheep, too, and it was clearly his intention to enlarge the herd.

The first litter of pigs has been raised and sold. Samuel found himself during his last year in high school and now he knows that producing livestock will be his life work. He intends to remain on the farm with his father. The sheep and swine projects will be carried as separate units until such a time as a separate partnership arrangement seems desirable.

These are not unusual project stories. They could be duplicated many times over in every state. The important thing to note is that in each project was a series of real business transactions. These boys planned, borrowed, bought, at the profit. Now with a small reserve of capital in the bank or on the farm, each is going on to further production in the same line and on a larger scale.

The Project as a Useful Tool in Realizing a More Efficient Rural Educational Program

HARLEY F. TAYLOR, Teacher,
Middletown and Smyrna Colored Schools,
Delaware

THE objectives of rural education may be stated somewhat as follows: First, rural education must furnish a means of conserving country life, and secondly, it must result in an adjustment of the individual to society in general. The teacher of agriculture has one of the greatest opportunities of any rural leader to carry the needed educational services to country people. The multiplicity of problems encountered by the teacher of agriculture places him in position to rate high as a past, present, and potential contributor to rural life.

To Enhance Farm Family Living

In view of the important position thus held by the agriculture teacher, we are fortunate in having a vital tool, the wise use of which will aid considerably his ability to perform a more efficient job. This tool is supervised farm or home projects touching every school unit: all-day classes, day-unit classes, part-time classes, and evening-class members—projects that are locally practical, economically promising and socially interesting. My mind often recalls that part of American history known as the "classical" or "land farming period." During this period there was a rich flow of "project" activity carried on by country people. The family unit thrived, enjoyed work, completed "projects" and loved and worshipped the land. The call was to the land and the results were many and varied home enterprises, all in order to effect happy living. Today the members of the family frequently have little desire to carry on home enterprises. We find instead, too often, a general desire to abandon the farm as soon as possible in favor of securing work in urban industrial centers. One will find large areas of idle land and vacant farmsteads on the one hand and large groups of idle men and boys on street corners in small urban localities on the other.

If one looks for efficient farm laborers, he will often find a deficiency of such workers. Check your list for good farm managers and you will likewise discover rural living satisfaction" on the part of the complete family unit and you will find its vibratory expression undesirably low. How can these various maladjustments be corrected? How can the rural educational program change the situation to a more desirable condition? Let me call your attention again to this important tool, an elaborate project activity program, well planned and supervised.

I have carefully recorded the number of first-year pupils, both part-time and all-day members, who had previously carried some type of home project. The lists of such boys register only .03 percent. This small number which had been engaged in project activities were boys who had either worked on well-managed farms or were former 4-H Club members. In checking on the attitudes of all first-year pupils, I have found those boys who had some experience in carrying project activities extremely interested in continued project work because of three reasons—"to make some money," "to be my own boss or manager," and "to make Ma and Pa happy." It has been my observation that any vocational agriculture pupil who has carried a project for one year, notwithstanding the fact that he might have had a "net loss," will have a greater desire to broaden his scope of activity the succeeding year. Where he has suffered a loss and the profits are not the drawing force, there is another factor which draws him into the work, the challenge to make a profit another year. Where he has made a small profit, there is a desire to make larger profits. Where he has pleased his parents, there is the pleasure of seeing them continually happy.

No one can challenge the soundness of farm projects. The economic value cannot be over-estimated. The pleasure that Ernest receives when his project nets him several well-earned dollars becomes an economic factor contributing to the well-being of Ernest and his family. The money gained by Donald from his project may prove to be a main source of family income. The desire of both individuals will be to broaden their enterprises in order to reap greater profits. This one factor may result in Donald's and Ernest's becoming two more successful farm owners, contributing considerably to rural life, materially and culturally.

The intimate relationship required between the pupils, teachers and parents in successful projects is fundamental in building better rural living and greater rural contentment. It also brings other rural agencies such as extension workers and homemakers in touch with both the parents and pupils.

The project offers an efficient agency in aiding the teaching process. The project motivates, provides for initiative, supplies opportunities for making choices, involves organization of the mental process, provides a source of self-discipline, and indicates or points out the necessities of life and the proper management of them. And somehow there is evidence of many useful and valuable by-products affecting one's social behavior and adjustments resulting from ideal project activity.

Each state has its own characteristic setup which regulates the effectiveness of the project tool as it relates to the

L. B. POLLOM

Farm Mechanics

Rural Electrification in Vocational Agriculture

CLYDE WALKER, Associate Professor of Agricultural Engineering,
Oregon State College

Clyde Walker

FOR many teachers of agriculture, especially the men who are new in this field, the problem of what to teach in such phases of farm mechanics as rural electrification is a difficult one. The person entering the field of teaching vocational agriculture finds that such subjects as forge work, woodwork, soldering, and other similar phases of farm mechanics are quite well defined and established, but that other fields, including rural electrification, are not so well defined.

The problem of rural electrification has been summarized as being one of "how to get electricity to the farmer at a price he can afford to pay." Looking at it from a little broader view, however, we find that the problem of rural electrification divides itself into several more or less distinct phases.

First is the question of the source of the electricity. There are two sources available, either an individual farm electric plant or central station service.

Second is the problem of distribution from the central station or generating plant to the transformer at the farm. The next step in the distribution problem is from the transformer to the various parts of the farmstead, or, in other words, farmstead wiring. I have divided the distribution problem in this way because the problem of delivering electricity to the transformer at the farm belongs to the power company, while it is the farmer's problem to take the electricity from the transformer and distribute it about the farmstead.

The third and final general problem in rural electrification is the application or utilization of electricity in the farm business. This involves all of the three general purposes for which electricity is used, namely: light, heat, and power.

With this rather brief outline of the general problem of rural electrification, let us consider each division in more detail.

Selecting a Source of Electric Power

The question of selecting a source of electric power is usually already settled. In most cases it is not a question of a farmer deciding whether he will have an individual electric plant or service from the power line, as he might choose between two different makes of automobiles. If service from a power line is the individual farm electric plant (except in very unusual cases) that there is no question about using central station service in preference to the individual plant. On the other hand, if no power line passes near the farm and there is no immediate prospect of obtaining one, then there is only one source of electricity left, and that is the individual electric plant. In this connection, the question of whether to have this plant powered by a gas engine, a windmill, or water power may arise, but other than that there is not much opportunity to make a decision between the two sources of electricity. In case there is a situation in the community which does make this selection a live question, then by all means it should be utilized in teaching vocational agriculture, but in the absence of such a situation it will probably be given only slight attention. Any time put on this question at all under such circumstances can be justified only on the basis of giving the students general information which will give them a broader view of the whole problem of supplying electricity to the farm, and some of the relative costs and merits of the various sources of electricity.

If electricity is to be obtained from a central generating plant, then the question of distribution from this plant to the farm may be a live issue. This is particularly true if agitation is under way to secure extension of a power line into a rural community. In case the lines are already in existence, then any time put in on this question must be justified on the same ground as mentioned in the paragraph just preceding; namely, that of giving the students a broader understanding of where electricity comes from and of some of the problems that are involved in supplying it to the farm.

Similarly, the question of distribution of electricity about the farmstead or, farmstead wiring, is likewise an important issue only when the farmstead is being wired for the first time. This statement needs modifying to the extent that the question of wiring may be a more or less continuous one as new buildings are built or as additional uses for electricity in existing buildings are found. As a general rule, however, the problem of planning a wiring layout for the whole farmstead is one that comes only "once in a lifetime." It is a real problem while it does exist, but after it has been solved, then it ceases to be of more than passing interest. Such problems as do arise will deal with maintenance, rather than original construction.

In contrast with all of the preceding points which have been discussed, the question of electricity about the farmstead is one which is never completely solved. By this I mean that new uses for electricity are continually being discovered, and farm families are discovering that, as they become familiar with electricity and its uses, they continually find additional ways in which it can be used. For these reasons it is a subject that must remain open for consideration.

Determining What to Teach

From the preceding statements it will be seen that it is impossible to outline for any individual teacher of vocational agriculture exactly what he should teach. If a rural line extension is being planned in the community in which the school or some of the students are located, it affords an excellent opportunity for the class to study all of the problems which arise in connection with extending a power line into a rural community. Since a genuine problem exists for at least part of the students, the instructor should be able to develop very keen interest among them in studying the problem. On the other hand, if the community in which the school is located is already well supplied with power lines, then interest in the study will not be nearly as keen. When the student already has electric service on the farm we cannot expect him to become greatly interested in the problem of securing a rural line extension. In such cases, the immediate problem is "Is electricity being used to the best advantage, or in as many ways, as it can be used on the student's home farm?"

Developing new uses of electricity or extending the use of electricity in existing operations on the individual farm may involve some wiring, and also a study of such questions as are involved in the utilization of electricity for a particular job. There are very few farms where electricity is being used in as many operations as would be possible; and even on farms where this may have been true a year or two ago, it is not necessarily true at the present time. The study of new developments in the use of electricity on the farm is one that can be repeated year after year with a minimum of duplication.

In addition to a study of applications and possible new uses for electricity on the farm, there is another general field of study which is also always in season: the problem of maintenance of electrical equipment which is being used. Electric motors need occasional attention. They should be cleaned and inspected periodically, lubrication checked, brushes inspected, and the commutator sanded or cleaned. Electric circuits should be inspected periodically to make sure that no conditions are developing which may result in a short circuit or other damage.

Preliminary Instruction on Principles

In connection with the problem of teaching rural electrification to high school students I would like to suggest

the students understand something of the principles of electricity before they attempt to use it extensively. I have noticed in some cases that one of the first things which instructors attempt to teach their students is something about electric wiring; yet it seems to me that it is foolish to do this before the student has some understanding of voltage and of the uses and abuses of the material with which he is dealing. The student who has no conception of electricity or how it should be handled is likely to be the one who will take short cuts on the wiring job, with possibly dangerous results. If physics is taught in the school, the agriculture teacher should enlist the aid of the physics teacher in presenting to the students some of the basic principles of electricity. With the study of electricity on the farm as motivation for understanding these principles, the instructor should find it much easier to do a good job of teaching than when the subject matter is being taught as a series of ordinary exercises. For example, the principle of magnetic induction as involved in transformers should be much more interesting than usual when taught in connection with an actual transformer installation, to show how the voltage of from 2,300 to 11,000 volts of the primary line is reduced to 110 or 220 volts for use about the farmstead.

Another topic which should be emphasized in the minds of the students very early in the period is that of caution in the use of electricity. They should be warned to always open a circuit before touching any point on the circuit or any appliances connected with it. Students should be drilled in this and similar precautions before they attempt very extensive work with electrical appliances. It will pay the instructor to lay a good foundation of understanding of fundamentals before attempting to build a super-structure of applications of electricity about the farmstead.*

Placement in the Curriculum

With regard to the classes which should receive instruction in rural electrification, much again depends upon local conditions. As a general practice, I believe, instruction is offered in the day school to junior and senior students. Some phases of the problem, such as rural line extension, will afford excellent material for part-time or evening-school groups if the problem is a live question in the community at that time. As a general rule, the part-time or evening-school students will be more immediately concerned with the use of electricity on the farm than the regular day school student. With this keener interest, of course, much more effective instruction can be given.

The instructor must bear in mind at all times that, to justify its use, electricity must do at least one of two things for the farmer and his family. It must either bring him greater comfort and convenience, or a profit, or both. If use of electricity involves only additional comfort and convenience, then the farmer before using it should always be able to reply in the affirmative to the question, "Can I afford it?" If the use of electricity under consideration is not one involving comfort or convenience, covered by the other question; "Will it make a profit?" If it will make money for the farmer then it may help pay for some of the other uses which can be regarded only as luxuries.

Statistics show that on December 31, 1937, 18 percent of the farms in the United States had electric service from central stations. Eight states have over 50 percent of their farms electrified, while twenty-two states have 25 percent or more of their farms supplied with electric service. From these figures it can be seen that there is a vast field still open for supplying electricity to the farm; while, as previously stated, there is always the question of additional uses of electricity on the farm already enjoying service. For this reason I feel that every teacher of vocational agriculture should be encouraged to develop the teaching of at least some phases of rural electrification. To refrain would be to ignore one of the most vital forces prevailing at the present time for the betterment of agriculture and for raising the standard of living on American farms.

I realize that many teachers now in the field have not had an opportunity to obtain instruction in uses of electricity, and as a result feel that they are not qualified to handle the subject. This condition can be gradually corrected by making sure that new men entering the field are adequately trained, and by providing courses in special summer sessions for the men already engaged in teaching.

It is to be hoped that more extensive provisions for and utilization of summer school courses for instruction in this subject will be developed in the near future.

*The A. S. A. E. Committee on Relations with Vocational Education has sponsored the preparation of teaching aids in rural electrification for departments of vocational agriculture and 4-H Clubs. These were prepared under the supervision of Mr. J. B. Rodgers of the Agricultural Engineering Department, University of Idaho, and are available from Hobart Beresford, Box 282, Moscow, Idaho, under the title "Rural Electrification Shop Projects for the Farm." Two groups of 20 projects each are included.

Efficient Use of Time in Purchasing and Handling Shop Supplies

ROBERT L. BERGER, Teacher,
Auburn, Nebraska

THE quantity of shop supplies handled by the agriculture teacher is dependent upon the location of the school as regards to lumber yards and hardware stores. Where it is necessary to handle supplies the following procedure is recommended.

Only the most common cuts of lumber, average sized nails, screws, nuts, washers, and other materials most used should be carried. Specifications should be made for supplies and bids taken from the various places, unless the local school board has established other arrangements for purchasing.

Each school should have a lumber rack for lumber. Bars of iron may be stored in a light frame or long box resembling a flat-bottomed hog trough that may

A very good storage rack for nails, screws, and other small things may be made with the "V"-shaped shelf tipped forward to expose the contents of the cans placed in this rack. Quart alcohol or oil cans are clean and easy to obtain. Reserve supplies should be locked in a cabinet or drawer and cans may be filled from this supply. An outstanding advantage of having nails in cans is that boys can take the can to their bench, use what they need, and return the can without having extra nails in their pockets or on the bench and floor.

Grocery store sales pads are cheap and convenient to use in recording sales. The pad with scratch paper should be at the boy's disposal and when lumber is used he should record the board feet, price, and cost; drop one copy in a box; and keep the other. When the project is completed and the boy brings the work and his bills to the instructor for grading, the instructor can make additions for nails, paint, and other materials used. After the bills are given to the instructor he may have a boy file and keep up-to-date the accounts of the other boys.

Accounts should all be paid before credits are granted at the end of the year. The superintendent should be furnished a report of each boy's account.

It seems best to raise the price of supplies slightly and suggest to the boys that lumber for any large project be purchased at the lumber yard. Lumber for small projects and extra boards may be purchased at school. By this method supplies are handled with a minimum of effort, and the instructor's time is conserved when all boys can work the complete period and not depend on him for a job when they run out of material.

Section Ladders as Shop Projects

GLEN C. OLSON, Teacher,
Lyons, Nebraska

VERY serviceable section ladders can be built in the farm shop at about one-fourth the cost of the price listed by mail order houses or lumber dealers. Several of the young men of our evening-school, part-time, and all-day classes have built such ladders with much success.

The uprights are ripped from a 2" x 6" at the desired length such as 12, 14, or 16 feet. To save material and yet have plenty of strength we select a straight-grained piece of fir and measure two inches from one edge and one end. The opposite end and edge is also measured across two inches. A chalk line is used to get a straight line for the ripping.

The rungs are made from 36" birch dowels one inch in diameter cut the desired length, such as 18 inches, to avoid waste. These dowels can be purchased for about $1.20 per dozen of 36-inch lengths, or about $7 per 100.

To get the depth uniform a one-inch wood bit is used and the hole is drilled or cut until the screw of the bit barely shows on the opposite side. It is advisable to dip the ends of the rungs in linseed oil or some good outdoor paint before inserting into the uprights. Brads may be used to hold the rungs in place. One-quarter-inch rods threaded at both ends placed under several of the rungs

Studies and Investigations

C. S. ANDERSON

Placement Opportunities in Farming for Young Men From All-Day and Part-Time Classes in Hardin County, Kentucky

JAMES T. ALTON, Teacher,
Vine Grove, Kentucky

DURING 1937–38 I made a study of the placement opportunities in farming for young men trained in vocational agriculture in the county. I sought to determine the approximate number of young men that farming will absorb annually; also what age, schooling, marital status, and net worth is most essential for desirable placement in farming.

Three hundred fifty farms were surveyed with the help of the four teachers of vocational agriculture in the county, an individual survey form being used. An effort was made to get a representative cross-section of the farms in the county. There are 3,319 farms in the county. Thus, slightly more than one farm in 10 was included in the study.

In 1938, 21 young men with training in vocational agriculture graduated in the four high schools in the county having departments of vocational agriculture. Two departments are being added this year, making six departments, all the county will need. Assuming that the new schools graduate a proportionate number of young men, there will be approximately 30 young men graduating from high school each year trained in agriculture.

The 1930 census reported 1,371 males 15 to 21 years old on farms in the county. There were on farms approximately 403 males between 21 and 25. In other words, 56 percent of the 15- to 21-year-old young men have been leaving the farm before reaching 21 to 25 years of age. Applying the remaining 44 percent to the 1,371 males 15 to 21, there will be 603 of these young men on the farm when they become 21 to 25 years old. Adding the 403 and the 603 young men, we have 1,006 young men on the farm, made up of the group now 21 to 25 and the group 15 to 21 who will remain on the farm until they are 21 to 25. The 1,006 young men cover an age range of 10 years. Thus, each year 100 young men, on the average, will reach placement age.

In 1935 the farms in the county averaged 105 acres, over 80 percent of the farms being less than 179 acres in size. Of the 3,319 farms in the county, 2,120 were operated by full owners, and 242 by part owners. There were 13 farm managers and 962 tenants. The average value of land and buildings per farm was $2,249.

In the survey 276, or 78 percent, of the farmers received less than 40 percent of their income from one enterprise and were thus classified as general farmers. Self-sufficing farmers made up 7.7 percent of the total number. The umes and grass hays, and tobacco. One finds dairy cattle, beef cattle, sheep, hogs, and poultry well scattered over the county.

Twenty and one-tenth percent of the owner-operators in the study were between 20 and 40 years old, while 36.4 percent of the renter-operators were between 20 and 40. Fifty-two and five-tenths percent of the owner-operators and 48.8 percent of the renter-operators were between 40 and 60. The owner-operators over 60 were 27.4 percent of the total, while the renter-operators over 60 were 22.7 percent of the total.

One hundred eighty-nine or 54 percent of the 350 farmers interviewed in this study worked as hired hands an average of eight years before becoming farm owners; 89 or 25 percent of them worked an average of six years as a share cropper; and 118 or 33 percent worked as renters for six years.

Sixty-eight, or 24 percent of the farm owner-operators in the survey, worked as hired hands and renters. Seven, or 2.5 percent of the men, worked as share croppers and renters; and 24, or 8.4 percent, worked as hired hands, share croppers, and renters before becoming farm owners. Of the 284 farms operated by owners in the survey, 251 or 88 percent secured their farms thru purchase. Twenty, or seven percent of them, inherited the farms they are operating, and the farmers' wives inherited 13, or five percent of the farms.

From Table 1 it is evident that the farmers of Hardin County prefer farm hands, share croppers, and renters with some schooling. While the farmers prefer grade graduates to high school graduates, 45 percent of the farmers who expect to hire help prefer men with training in vocational agriculture. One half of the farmers expecting to enter into share or rental agreements prefer men with training in vocational agriculture. Sixty-one of the 350 farmers in this study said that they would enter into some kind of share agreement and 40 said they would enter into a rental agreement with desirable young men within the next four years.

The age limits preferred by farmers desiring share agreements are shown in Table 2.

Table 2—Age Preferred by Farmers

AGE	Number of Farmers
18 to 21 years	9
22 to 25 years	30
26 to 30 years	14
Over 30 years	8

The amounts of working capital required by the farmers willing to enter into some kind of share agreement with desirable young men are indicated in Table 3.

Table 3—Capital Required by Farmers for Share Agreement

Amount of Capital Required	Number of Farmers Requiring Various Amounts of Capital
None	22
$100 to $300	30
$400 to $600	10
Over $700	7

Concluding Statements of Findings

Each year there are available for placement on farms in Hardin County approximately 100 young men, trained and untrained. Normally, death will remove 73 farm operators per year from the farms in the county. There will be 72 additional farms per year for rent in the county. Thirty-three percent of the farm owners in the county operated a rented farm for an average of six years, before purchasing a farm. Assuming that one-sixth of the farms in the county for rent in a given year will become available to young men who have never rented farms, there would be 12 such placement opportunities each year for young men. The 73 farms losing their operators by death and the 12 additional farms becoming available to farmers who have never before rented a farm make 85 opportunities annually for placement as farm operators on Hardin County farms. No doubt part of the 100 young men reaching placement age in a given year would leave the farm. Therefore, likely opportunities to become farm operators seem to exist for all the young men who will stay on the farms in Hardin County.

If we assume that the six high schools offering vocational agriculture in the county should graduate each year a total of 30 boys with training in vocational agriculture, and if we assume that the six schools should always have in training 120 additional young men in part-time classes who had not had the all-day work, and if we further assume that these part-time students are trained in 4 years, there would be turned out each year only 60 young men for the 85 openings as farm operators.

Table 1, Schooling Preferred

Schooling	By Farmers Expecting to		
	Employ Hired Hands Full Time	Enter into Share Agreements	Enter into Rental Agreements
None	3	4	2
Grade school graduate	14	10	10
High school graduate	9	10	7
Training in vocational agriculture	21	31	20
College graduate	0	6	1

If the surveyed farms are representative of the county, there will be employed in the county within the next four years 256 married men and 220 single men as hired hands for full time, in addition to the number employed in 1937. Forty-five percent of the farmers in the survey preferred as hired hands young men trained in vocational agriculture. Applying 45 percent to 476 (256+220) we get 213 opportunities for placement in four years, or 53 opportunities each year for full-time placement of hired hands trained in vocational agriculture.

If the surveyed farms are representative of the county, there will be 166 share agreements made in Hardin County in the next four years in which the young men will have a chance to share in all the farm enterprises. "Share agreement" refers to an agreement where one works on a farm managed by the owner, the owner furnishing most of the livestock and equipment necessary to operate the farm. Likewise, there will be for rent in Hardin County in the next four years, 159 farms with crop-rental agreements, and 139 farms with livestock-rental agreements. "Renter," as here used, refers to one who manages the farm and furnishes at least one half of the livestock and equipment necessary to operate the farm. Fifty percent of the landlords in the survey offering their farms for rent preferred young men who had had training in vocational agriculture. Applying 50 percent to 298 (159+139), we get 149 farms for rent in the next four years, to young men with training in vocational agriculture. In other words, there will be an annual opportunity for approximately 37 young men with training in vocational agriculture to enter into rental agreements. Eighty-five percent of the landlords preferred that the renters be married men.

With annual preferred opportunity for placing 53 hired hands full-time, 21 share-croppers, and 37 renters it would seem that the same opportunities exist for the young men to become farm owners in Hardin County as existed for the present farm owners in the county.

A Survey of the Agricultural Resources and Possibilities of St. Louis County, Minnesota

J. J. McCANN, Teacher,
Gilbert, Minnesota

AN IMPORTANT aim in vocational agriculture should be to develop in boys the desire for facts from scientific studies in order to solve their farm problems, and to develop the habit of looking for such facts whenever these problems arise. Every agriculture teacher has listened to students discuss over and over again the activity that their community is best fitted for, without any scientific facts with which they could really think out and solve their problems. Research in each community is very necessary so that instructor and students will have facts to apply on their

It is essential that the instructor know the character of the soil, the condition of the land, means of transportation, nationality of the community, crops that can be grown most successfully—as well as whether there is a good local or distant market for their products. Whether products now shipped in can be supplied by local sources is primarily a question of comparative advantage. It becomes important, therefore, to give consideration to possibilities of improving the position of local production as a source of supply by better production and marketing practices and improved land use.

The object of this study was to determine what St. Louis County, Minnesota, possessed as an agricultural community in order to better direct the agricultural education of the youth and adults in our all-day, part-time, and evening schools of the county.

The problem under consideration involves many details and, before a satisfactory solution is offered, definite information was necessary on the following vital factors:

1. Transportation facilities.
2. Size of consuming population.
3. How great is our rural or producing population, and is its nativity such that it will be adapted to various lines of production?
4. Number of farms, farm acreage, and values of farm land and buildings.
5. Types of farms and acreage devoted to each.
6. Produce raised in the county.
7. Produce shipped into the county and seasonal variations of shipments.
8. Produce shipped out of the county.
9. Available land for agricultural production in each township of the county.

A personal survey was made of 1,432 farms to determine whether the farmers were producing enough for their own needs of certain specified products, also to make a study of suitable and unsuitable land, for agricultural purposes, in the county.

A survey of 613 retail stores, 11 wholesalers, and 12 transportation companies was made to determine the amount of produce shipped into the county, and the amount shipped out, as well as season of such shipments. Only those products were listed that could be raised in St. Louis County, being adapted to our soil and climate.

The survey revealed that the county had been shipping in large quantities of beans, peas, potatoes, cabbage, sauerkraut, eggs, berries, and honey. Much of this had been shipped in during the competing season, that is, during the time that the market could be supplied by our own growers.

Another survey was made, thru the County Extension Office, of each township. The town chairman, clerk, and some others were consulted on their opinion of the amount of land available for agricultural purposes and whether they would favor relocating to better areas. The general aim of this part of the study was to determine where the best agricultural land is located, based on suitability for different uses, economic as well as physical.

In some townships the land is entirely unsuited to agricultural purposes, with respect to markets, roads, schools, and other public services.

It is believed that the data being

upon which to build programs of vocational agriculture within the county.

A Study of Farmers' Ages

W. M. ADAM, Teacher,
Vandalia, Missouri

A STUDY of the ages of farmers in the Vandalia, Missouri, area revealed a noteworthy situation. The average age of the farmer group is 52.5 years! Twenty-three percent of the men are 65 years of age or over! There are more farmers over 60 than there are under 45!

The table shows the age distribution of the group for the years 1937 and 1938.

Age of Farmers in Vandalia, Missouri, 1937 and 1938

AGE	Number 1937	Number 1938	Per Cent 1937	Per Cent 1938
Under 30	11	10	3.1	2.9
31–34	19	20	5.5	5.7
35–39	26	23	7.4	6.5
40–44	42	36	11.8	10.3
45–49	64	71	18.0	20.2
50–54	42	37	11.8	10.5
55–59	42	43	11.8	12.3
60–64	27	25	7.6	7.1
65–69	41	44	11.2	12.5
70 & over	42	42	11.8	12.0
Total	356	351	100	100

Average Age 1937—51.8 years
Average Age 1938—52.5 years

The community of Vandalia consists of a town of 2,500 population surrounded by a general livestock farming area. The town has a fire brick plant which employs about four hundred men. I mention this fact because it has a bearing upon the results of the age study.

As the figures at the bottom of the table indicate, the average age increased seven-tenths of a year between 1937 and 1938. It may have been steadily increasing for a number of years previous to the time of the study. And what is more important to us, there is some likelihood that it will increase for several years to come. However, the fact is self-evident that the increase must stop sometime. The two factors which will bring the increase to a halt are the death of the older individuals and the influx of younger farmers.

In the Vandalia community, and in all others similar to it, there is certain to be a need and an opportunity for an increasing number of young farmers in the near future. In view of the fact that nearly one fourth of the farmers are 65 years of age or older, it would seem probable that this fraction of the operators will be replaced within the next 10 years.

If the department of vocational agriculture can be a means of furnishing young farmers for replacements as the need occurs, it will render an invaluable service to the community. If the department fails to provide the young men, "cull" renters, eliminated from neighboring communities, will drift in and Vandalia community will be definitely the loser.

To say the opportunity will exist for young men to start farming does not presage that the young men will be available and prepared to start. They will need to have saved something in the way of cash and equipment, to have established their credit, and to have developed manual and managerial ability. Therein lies the challenge

Future Farmers of America

L. R. HUMPHERYS

Roadside Stands

A. GREENWAY, Reporter, Essex Chapter F. F. A., Hawthorne, Massachusetts

"WHAT an attractive stand you have!" "Fine stand you have here, my boy." "Has this stand been here in other years?" Such were the remarks of many people concerning our F. F. A. roadside market. The stand had been renovated during the early spring by students as part of their farm shop training. The appearance was so improved that persons who had passed by the old stand in other years began to stop and take notice. This stand was leased and operated to market our F. F. A. school vegetable garden products. We renovated the stand, gave it a coat of paint, and made many changes to make it attractive. The stand was stocked with such vegetables as were then in season, raised by our Future Farmers.

Every morning a survey of the stock was made for the purpose of replenishing with fresh produce. At nine o'clock the stand was opened and the produce arranged to make a good display. Harmony and contrasts of color played an important part in the setting up of a balanced display.

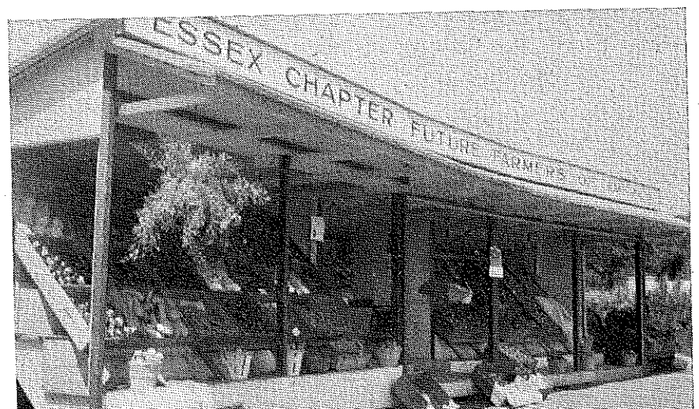
A display of the particular produce in demand was always kept out near the edge of the turnpike, in order to catch the eye of prospective customers. The setting up of these displays and cleaning up usually required a full morning's work on the part of the attendant. Afternoons and evenings were well taken care of by waiting on customers and keeping up the appearance of the stand. Spare time was occupied in weeding the flower beds and driveway.

Our F. F. A. attendants alternated in tending the market; that is each worked every third day, the two intervening days being spent at work in the vegetable garden. There were Sundays when three attendants were necessary to give prompt service to waiting customers. I have counted as many as 12 cars in our driveway and 35 people waiting their turn to be served. It required quick, accurate, and yet polite service to fill their demands. Customers were stopping in as others drove out, making a continuous flow in and out of the stand.

Much experience was gained in the ways of retail selling and in buying produce. The contact with so many people brought out the fact that the greater part of the buyers desire high quality produce even at added expense. The likes and dislikes of people regarding shape and size of vegetables were discovered. We learned that a long slim carrot and small beets are desired by the greater part of the people. So it is with other produce. It soon becomes possible to recognize at sight a congenial customer and a fussy one, and these were treated accordingly. It was possible to tell whether or not the particular customer would be interested in buying more produce than she had at first intended. Some customers seemed to dislike having one try to sell something other than that which they came after. It was often possible to tell, by the customer's manner, whether or not a good sale was in store.

The roadside stand offers a good chance to study human nature. Tact is necessary in selling; one must shift his manners to best please the customer. Some customers require "Yes, ma'am," or "Yes, sir," while others are conversational.

A great many friends were made, friends who were interested in our success, in the interest of the business, in the work at the school, and in other school affairs. Some of our regular customers became good friends, stopping and having a word with us whenever they chanced by. Many came miles to trade at our stand. Such friends we are going to miss, since we will not be at the stand in coming years. To know that we have been able to successfully please our customers is worth all our extra hours at the stand. Here is a chance for one or more students in every chapter to have an interesting project for the summer.



Problem of One Future Farmer Starts Dairy Breeding Program for Chapter

GEORGE SALISBURY, Teacher, Ludlowville, New York

CHARLES LYON, a chubby, curly haired youngster with twinkling hazel eyes and engaging smile, loved to help his Dad care for the cows and drive the team about the little farm on which they were share-tenants.

Charlie had ambition, hope, and courage. He wanted to own a large farm with fine purebred stock, run it in modern ways, and provide comforts and luxuries for his mother, whom he thought did too much of the arduous farm work.

What Charles earned he largely saved, and eventually he had $20 laid by with which he bought a purebred Ayrshire heifer calf and had it registered in his name.

When county fair time came, Dolly, the calf, was trucked to the grounds and won the honor of being the best of her breed and class.

That night came the cloudburst. The river rose rapidly. Swirling, muddy waters usurped the fairground. Bawling stock were swept into the current or drowned in their stables. But not Dolly. A tearful-eyed boy rescued her and with her his hopes of a better farm life. Back home she came and survived her exposure to Nature's tantrum.

Charles and his teacher later sought a suitable sire for Dolly's calf. No good Ayrshire bull was in the neighborhood. The Ludlowville Vocational Agriculture Club visited a sale of surplus stock of the state college in the hope of securing a young bull for co-operative use. To their disappointment the boys saw all the stock sold at prices far beyond their combined purse.

The college had good Ayrshire bulls. Charles' virgin Ayrshire heifer was tested and certified by a veterinarian as being free of tuberculosis and Bang's disease. A truck properly disinfected would take the heifer to the college barns. Money adequate even for an exhorbitant breeding fee was ready, but —the request was not allowed. Of course the college advocated better herds thru better breeding. Many high salaried specialists preached that. However, no avenue existed for Charles to get his heifer bred to a bull likely to "get" offspring superior to her.

The disappointed boy finally hired a truck to take Dolly to a bull several miles away. On the bull's dam no records were kept. He was purebred and

One day Charles, his agriculture teacher and several of his classmates were called to the barn to find beside Dolly a sturdy bull calf, purebred but of no future value as a herd sire for discriminating dairymen.

Charles could look forward to no way to better his stock.

Then—there came a light in the clearing. Dolly's next calf will be from a very fine sire by artificial impregnation!

A group of dairymen that fall and winter organized for the purpose of economically improving their herds thru artificial insemination. The agriculture department of Ludlowville High School became a charter member of this group, the Pioneer Co-operative Breeding Association, and is the only agriculture department represented.

The system can be briefly explained as follows. Dairymen pay $5 each as a membership fee. This buys a superior bull—either a proven sire or one from a lineage which practically insures improvement. Offspring of the bulls now in service in the Pioneer Co-operative Breeding Association average 12,000 pounds of milk per year, or double the state average.

When needed, the veterinarian in charge is telephoned early in the morning. He then collects semen from a service by the bull, dilutes it and stores any not immediately needed at the proper temperature which preserves its usefulness three days. Then taking that needed on the day's calls, he sets out.

The breeding fee of $5 per head is paid when the veterinarian arrives at the farm. This pays the veterinarian for his time and travel. He will make three trips if necessary to get a cow with calf for this single fee. Participating herds must be within 20 miles of the quarters of the association's bulls.

As a result of the co-operation of the group, from 500 to 1,000 cows can be gotten with calf by one bull in a year. At time of writing over 200 cows owned by members of the association are now with calf. As only very superior bulls are used, greater herd improvement is expected in a few years than normally would occur in scores of years.

The Ludlowville F. F. A. made a unique proposal and the authorities tentatively accepted it. This proposal was that the F. F. A. Chapter pay the five dollar membership fee and receive charter membership. The boys then would be accorded the privilege of having service for their cattle from bulls of any breed owned by the college as well as from the Holstein bulls owned by the Pioneer Co-operative Breeding Association. Of course the five dollar breeding fee would be paid by each boy for each cow bred as explained above. It is to be noted that the boys' cattle may be either purebred or grade and tested disease-free or not. Naturally by artificial insemination there need be no danger of transmitting disease to the bulls.

We believe we have found a sound workable solution for the rapid improvement of stock by breeding. What has been done by the Ludlowville Chapter can be done by chapters near state college herds or other herds where excellent bulls are kept. For those far away, development of the use of thermos containers for the shipment of herd should make this modern, practical, and economical method of herd improvement popular.

In this state and other states are many boys like Charles who aspire to higher production herds. Of great help to the boys would be other similar associations sponsored by F. F. A. Chapters of a county or some similar area.

May the F. F. A. lead in this modern development of a time-tested procedure in herd improvement!

Future Farmers Interview a Successful Farmer

L. C. SCHANK, Instructor, Fallon, Nevada

THE advanced Future Farmers of the Churchill County High School at Fallon, Nevada, have introduced a practice this year which is instructive to the boys, is compensating to the Dads, and results in adopting improved farm practices. Successful farmers and community leaders are invited to attend the chapter meetings twice each month. These leaders and future leaders sit around the tables in an informal way and participate in the deliberations of the meeting. After the regular business items are given consideration and properly disposed of, one of the farmers is introduced to the chapter by the president or the adviser. A subject is announced for discussion for the chapter meeting. Usually the question for discussion pertains to some very important phase of farming.

The forum procedure is used. The farmer usually remains seated while discussing the farm problem assigned. Upon completion of his talk, the students raise pertinent questions in round-table procedure. These boys are full of questions and the farmer or farm leader is gratified at the interest of the boys, and together they get down to "bed rock." This procedure follows for about 40 minutes. The instructor, with the help of a student, shows a sound film related to the subject, covering a period of about 20 minutes. At the conclusion of the day's events, the chapter president announces the personnel of the committee to plan the next program.

Four meetings of this type have been conducted this year, with a manifestation of real interest and success. All of the subjects discussed at these meetings have dealt with farm problems in the community, such as "Feeding chicks for egg production."

The purposes of these meetings are:

1. To give boys practice in planning and conducting meetings and transacting business.
2. To provide the boys with significant local information which they can use in their farming programs.
3. To develop a love for farming as a vocation. This is accomplished when adults show them there are opportunities and money in farming if it is done right.
4. To teach boys respect for leadership.
5. To encourage boys to strive for improvement in their every-day farming activities.
6. To develop interest and power of
7. To make the vocational agriculture courses more interesting and applicable.
8. To bring successful farmers and community leaders in closer contact with the school.

These men see the room and equipment of the agriculture department; they see and hear what the boys are doing, and, being favorably impressed, become our friends.

Sidney Future Farmers "Going to Town" on Farm Program

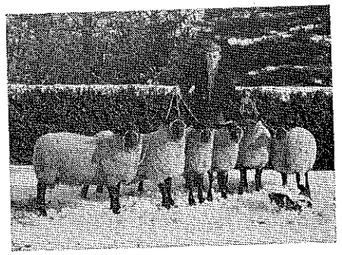
A. W. JOHNSON, State Supervision, Montana

SIXTY-NINE farm projects carried by 61 Future Farmers or an average of 1.11 projects per boy is the first-year record of the new chapter of Future Farmers of America at Sidney, Montana.

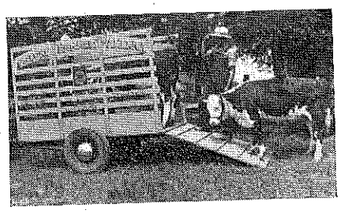
The vocational agriculture department was established at Sidney last summer, July 1, 1938, with Lambert Hruska, 1938 graduate of Montana State College, as the new instructor and chapter adviser. Lambert Hruska is a former F. F. A. member from Lewistown, Montana, and was an outstanding and active college student.

Here is a summary of the project program at Sidney this first year. It is a beginning record of which Hruska can be proud.

The Sidney chapter has 69 projects, or an average of 1.11 projects per boy. The chapter will have a total of 1,900 chicks, 80 acres of corn, 160 acres of wheat, 40 acres of beets, 13 brood sows, three beef cows, 14 lambs, eight acres of potatoes, five ewes, 10 acres of millet, one baby beef steer, 35 turkeys, 35 laying hens, and one fourth acre of strawberries.



Fred Tidwell, a future farmer in the Juab F. F. A. Chapter, Utah, and a group of his prizewinning Suffolks



Trailer built by the Dexter, Missouri, F. F. A. boys and used to transport their purebred livestock and farm shop equipment. Jesse

A Minnesota Plan

(Continued from page 9)

applied 3 new approved practices at home which total him 70 points (C-2). This will total 997 points, or quarter grade of 90.

Provision is made for extra credit work by allowing students to transfer points from any section of the guide to other sections at one-half value. For example, the guide allows a student to earn 600 points thru farm practice activities. If he did this and received a high score on sections A and B he would receive a grade of 95 for the quarter. Perhaps he has earned only 230 points of the possible 350 allotted to examinations. He could transfer any additional farm practice activity credit above 600 points at one-half value. He would need to earn, in this case, a minimum of 175 additional points in order to receive a grade of 95. (To illustrate, 175÷2=87.5; 87.5+230=317.5 points. According to Numerical Rating Scale No. 1, 317.5 is within the range of points needed for a grade of 95.)

FINAL grades for the year may be determined in the same manner by using Part D of the evaluation guide. Type and quality of project completions are considered in this section. A project with accurate records and summary and which has been of benefit to the student and his home can receive up to 700 points. Other projects can be graded accordingly, allowing 350 as a low score on an acceptable project. Projects not acceptable would not receive any points, the theory being that the effort required to complete a satisfactory report should be worth 350 points. Scores for the final grades are:

Numerical Rating Scale 3	ABCD Rating Scale 3
4,951—5,500—95	A—4,812—5,500
4,401—4,950—90	B—4,125—4,811
3,851—4,400—85	C—3,437—4,124
3,301—3,850—80	D—2,750—3,436
2,750—3,300—75	

As the student has received credit for jobs done with his projects, this part of the guide considers only completion and quality.

The evaluation guide has now covered the full range of the student's activity as he studies agriculture in the high school. It is not important from a marking standpoint, but it is important from the viewpoint of the student. Thru it he can see the correlation of everything he does. He sees that his success or failure depends upon his own initiative and resourcefulness. He sees that he has nothing to get by the teacher. He understands how he is arranging and studying his own problems, not teacher problems or the problems of someone else. He sees day by day how he is contributing toward his stated goal. He sees that high-school marks are conditioned by every activity in which he engages. It is this reasonableness of procedure that seems to convince the student and make the change in attitude mentioned.

Teachers have often stated that a system of this kind must entail much routine work. The writer found it required very little more time than that required to average the usual high-school class records. Its use is highly gratifying.

Individual study of approved practices graded in this manner has increased the interest and participation in farm practice in the Fairmont High School. Parents say that their boys have begun to consider the problems of the farm with a new interest. Fathers and their boys have found a common source of companionship in discussing the solution of a home problem that had been brought to light in class. It has brought a new pleasure and interest in teaching to the writer. Each day has brought a new problem which is vital and necessary to the welfare of the student and his home. Dealing with live problems has increased the satisfaction of achievement. Discipline trouble has become a thing of the past. Students have experienced the thrill of helping to organize a course of action. Following that course with teacher encouragement and guidance has given them a new experience in teacher-pupil relationship.

The teacher has become a friend and counselor in whom students can confide personal problems as well as farm problems. Solving those problems has brought the teacher into close harmony with the family at home and paved the way for teacher-pupil-parent activity which has opened the door to farm practice work on an "apprenticeship with Dad" basis. This has made possible a much wider range of experience and activities than would be possible on an ownership basis, as well as developing an all-important spirit of co-operation. This spirit has been augmented by a number of evening schools in which the entire family participated in an educational and recreational evening. Much of the planning of these meetings was done by the members of the Fairmont F. F. A., helping this organization to function in the development of department services in the community.

*The ABCD rating system is given as a convenience for schools using this system.

Book Review

Livestock Farming, by Paul W. Chapman and L. M. Sheffer, published by Turner E. Smith and Company, Atlanta, Georgia, price $2.68. In 58 chapters covering 645 pages, this book treats in a most interesting manner the problems of the livestock and poultry farmer. The illustrations are well chosen and of excellent quality. *Livestock Farming* is a handbook of carefully compiled and indexed information. It lists sources of supplementary material and hundreds of references, outlines rules and study plans for every national contest, and includes an ample list of suggested exercises. A significant feature of this book is the biographical sketches of leaders in the field of agriculture, which occupies 58 pages of this 720-page text. The authors state that *Livestock Farming* is designed to inspire young men to prepare themselves for successful careers in the livestock industry, and as a means to this end the book contains the portraits and biographies of more than 60 of the great leaders in the animal industry of the United States. This book should prove to be stimulating to both the farm boy and his teacher.—A. P. D.

Many men owe the grandeur of their lives to their tremendous difficulties.—Spurgeon

Henry C. Wallace

(Continued from page 7)

Wallace was a man among men. The following statements exemplify this sentiment:

"Coming from private life to the post of Secretary of Agriculture at a time when its administration was surrounded by acute and unprecedented difficulties, he brought a particularly effective equipment of wisdom, industry and executive capacity. Thru their unsparing application, he achieved a splendid series of successes in behalf of the restoration and rehabilitation of this supremely important national interest. His work has won for him the unstinted confidence of all citizens, as his high character and appealing personal qualities gained for him the affection of all who enjoyed the privilege of intimacy with him."—Calvin Coolidge.

"We say that Jerry Rusk and J. Sterling Morton were the foremost economists of their day. This man Wallace is their equal. 'Tama Jim' Wilson was a learned, practical farmer. This man Wallace is his equal in this respect. Secretary Houston was a scientist. This man Wallace is not a whit his inferior. Edwin T. Meredith is a publicist and a business man. This man Wallace is all of these. Pick out the outstanding trait in each of our past Secretaries of Agriculture and you will find it fully developed in Henry C. Wallace. He is the sum total of the best in all of these great men."—*The Literary Digest.*

C. W. Pugsley was Assistant Secretary of Agriculture under Mr. Wallace. His unusual opportunities to know the difficulties Mr. Wallace's administration went thru and to see him in action make these statements made by him particularly significant:

"I think he had greater capacity for work than any man I have ever known."

"And last, I want to pay a tribute to his character and personality. No one has ever even thought of thinking he could be bought. You just knew he couldn't the first time you ever saw him."

"I wonder when we will have another Secretary of Agriculture who never had a dollar that he did not honestly earn with his own hands and brains, who for years had successfully farmed an average corn belt farm with his own hands, who earned his own way thru college, whose college degree was in agriculture, who was called back into his own college to teach, who with his immediate family established a farm paper which has become an international authority on agriculture, who was the leader of many groups of actual farmers in their fights for economic justice and who did not receive his call to the high office as a payment of political debts?"

Henry C. Wallace best summarizes his character for himself in a Thanksgiving editorial which was written by him and reprinted in the November 21, 1924, issue of *Wallaces' Farmer*:

"There are three excellent reasons why we should observe Thanksgiving this year in a very real spirit of Thankfulness. First, we have much for which we should be thankful. . . . No people on the face of the earth are so happy and prosperous. Second, it is good for us that at least once a year as a nation we formally recognize God as the Divine Ruler thru whom our blessings come. Third, a thankful spirit will give us a much more wholesome outlook and make us more capable of dealing with our troubles."

A Useful Tool

(Continued from page 11)

agricultural program. In Delaware we have an ideal situation which makes it possible to get the maximum value of this teaching and educational tool. Our rural population, because of its educational, social, and economic status, can very well profit by the sponsoring of an efficient project program.

It promises to furnish a means of leading rural members in Delaware to a higher economic, social, and educational level, resulting in greater satisfaction, contentment, hope, and inspiration on the part of country people, a type of satisfaction which is generally lacking but which is essential to greater rural co-operation and progress.

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