

Agricultural Education



William R. Shaffer, Maurertown, Virginia
National President Future Farmers
of America

*"Be ashamed to die until you have achieved
some victory for humanity."—Horace Mann*

EDITORIAL COMMENT

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

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Subscription price, \$1 per year, payable at the office of the Meredith Publishing Company, Des Moines, Iowa. Foreign subscriptions, \$1.25. Single copies, 10 cents. In submitting subscriptions, designate by appropriate symbols new subscribers, renewals, and changes in address. Contributions should be sent to the Special Editors or to the Editor. No advertising is accepted.

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

LOOKING TO THE FUTURE

"WHAT has the future in store for teachers of vocational agriculture?" That is a question frequently put to us, who train and supervise the men in this important field. We are not prophets and of course cannot say what the future of any calling will be. Our history of vocational agriculture is a brief one. Therefore we have no basis of the past upon which to prophesy. When asked this question the other day, I remarked, "We have two grandfathers teaching vocational agriculture." Here, at least, is one future.

Teaching vocational agriculture is not a "blind alley." If they wish, men may easily go from teaching agriculture, into related vocations, such as farm adviser work, farm managers, school principalships, government work, and practical farming. In fact, in these days, teachers of agriculture are being sought out for service in many other fields, and some of our best teachers are being tempted away. Men who are looking for agricultural and rural life leaders, know that the training and experience which our teachers of agriculture have, are the very best possible for such service.

Even if a young man goes into the teaching profession temporarily, he will be able to make it a "stepping stone" to another career, only as he throws his whole life into the work, as if he were going to make it his life career. To teach agriculture with this spirit and attitude is being fair to one's pupils, as well as ones self, because only in sincere, whole-hearted, enthusiastic work is drudgery removed, and the work made pleasant and profitable.

If one is looking for fame and fortune, he is likely to be disappointed in the future of any teaching career, but if he can be satisfied with adequate competence, a savings for the "rainy day," a host of high class friends, an esteemed and honorable standing among his fellow men, a life of useful service, and leisure time in which to enjoy the best things of life, then the future of teaching can guarantee happiness and success that satisfies.—A. W. N.

PART-TIME CLASSES

WHILE visiting an agriculture teacher recently and talking over his program of work, we were agreeably surprised to have him remark, "Do you know I got more kick out of my part-time classes last year than any other part of my program, and although they did take a lot of time and effort, they were well worth while. I feel sure the young men in the classes received a lot of help with their agricultural problems, and I know, too, that the classes

helped the work of the high school department and made vocational agriculture better known in this community. Being a young teacher, I was a bit reluctant to start the work last fall, but I did not find it difficult, and you may be sure that as long as I remain at this school there will be part-time agricultural classes."

This remark by the teacher gives us food for thought. Why have there been so few part-time classes in agriculture organized in the country? Why are teachers so slow in starting this work? The answer to both questions is that we as supervisors, teacher-trainers, and teachers, have not stressed or realized the importance of these classes. We need to work everlastingly at the problem of making other teachers see their importance, showing them how to get groups together, organizing the teaching content, and developing a method of follow-up that fits this kind of group instruction. Many an excuse will be offered—no heat in the school room, no interest on the part of school authorities, not "regular" school work, no tuition received from sending districts, too large an enrollment of day-school pupils, no additional travel allowance, to mention a few,—but these excuses are more apparent than real, and if we break them down, we can have more part-time classes.

The state supervisors and teacher trainers of the North Atlantic Region have recently received a communication from their regional agent, reading in part as follows: "To provide the kind of educational services for young men out-of-school in rural communities so urgently recommended by leaders in education, it is desired and expected that each department or school of vocational agriculture in the region will organize and conduct one part-time or evening school in agriculture during the school year 1935-36. The goal set for the region is 100 percent." If this goal could be reached throughout the whole country, what an advance there would be in vocational agriculture! Why not 100 percent for every state?—H.O.S.

CORRECTIONS

YOU will find the article, Science Studies on the Project, on page 24 of the August issue of Agricultural Education, well worth rereading, if you have not already done so. This article was prepared by Mr. James F. Gallant, related science teacher at Essex County Agricultural School. We are glad to give this credit as the original copy did not specify the author's name.

October issue, page 50, Mr. Pearson kindly sent in the article relating to Commissioner Studebaker, for which he was given credit. We have been asked and are glad to acknowledge the fact that the contribution was prepared by Mr. John H. Lloyd, Assistant Editor, Office of Education, Washington, D. C.

It will greatly assist the editor, as well as give recognition where it is due, if all manuscripts submitted bear the name of the author. Several months ago we used a contribution in Agricultural Education and recently the identical article appeared in a professional magazine with authorship credited to another writer.

THE UNKNOWN TEACHER

FAMOUS educators plan new systems of pedagogy, but it is the unknown teacher who delivers and guides the young. He lives in obscurity and contends with hardship. For him no trumpets blare, no chariots wait, no golden decorations are decreed. He keeps the watch along the borders of darkness and makes the attack on the trenches of ignorance and folly. Patient in his daily duty, he strives to conquer the evil powers which are the enemies of youth. He awakens sleeping spirits. He quickens the indolent, encourages the eager, and steadies the unstable. He communicates his own joy in learning and shares with boys and girls the best treasures of his mind. He lights many candles which, in later years, will shine back to cheer him. This is his reward. Knowledge may be gained from books; but the love of knowledge is transmitted only by personal contact.—Henry Van Dyke, The Journal of the National Education Association.



Professional



Comments on Applications of Candidates for the American Farmer Degree

W. T. SPANTON, Federal Agent for Agricultural Education Pacific Region, Washington, D. C.

(Note: This article has been read and heartily endorsed by Mr. J. A. Linke, National F.F.A. Adviser)

THE National F.F.A. Constitution provides that a candidate for the American Farmer Degree must possess the following minimum qualifications:

"1. Satisfactory membership for at least three years in the F.F.A.
"2. Hold active membership and the degree of State Farmer for at least twelve months previous to the national convention at which nominated for the American Farmer Degree.
"3. Possess demonstrated ability to farm by having conducted an outstanding program of supervised farming thruout the period of vocational training and active membership in the F.F.A.

"4. Be engaged in a farming occupation or have definite plans for becoming a farmer.

"5. Earn and deposit in a bank, or otherwise productively invest at least \$500. (In cases where the applicant has assisted in the support of dependents, the amount so expended, in the judgment of the National Board of Trustees, may be considered as an investment.)

"6. Possess demonstrated ability to work with others by having participated in some agricultural co-operative enterprise or movement.

"7. Be in the upper third of his class in scholarship during the period of his instruction in school.

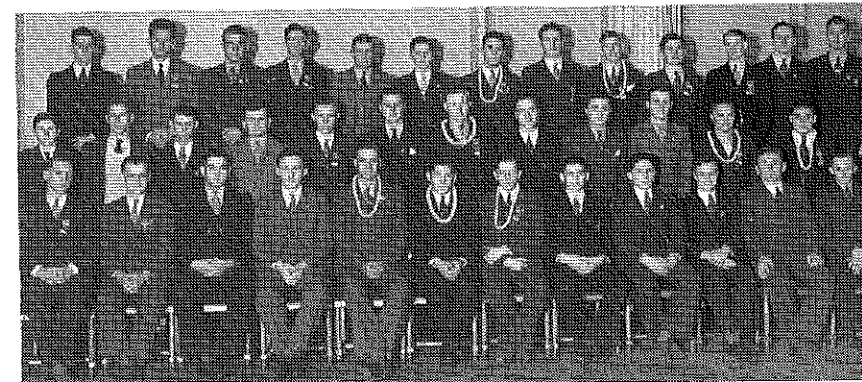
"8. "Be recommended by the National Board of Trustees and receive a majority vote of the delegates present at a National Convention of Future Farmers of America."

I SHALL not attempt in this article to discuss in detail each one of these minimum qualification requirements. However, there are some of these constitutional requirements that need to be clarified or interpreted, for as they now stand there is certainly room for honest differences of opinion in some instances as to whether these requirements have or have not been properly met by certain candidates for this degree.

For instance in the case of requirement Number three, listed above, different individuals will undoubtedly hold different opinions as to just what constitutes an "outstanding program of supervised farming thruout the period of vocational training and active membership in the F.F.A." Each year there are usually one or more instances where the evidence submitted by a candidate indicates that he has conducted a rather

meager supervised practice program, rather than an "outstanding program" as required by the constitution. However, the border-line cases are the ones that cause the real difficulty in determining when this requirement has been adequately met.

Another requirement which is rather difficult to fairly interpret is the one which requires that a candidate "be engaged in a farming occupation or have definite plans for becoming a farmer." It would seem unjust to recommend that a boy not receive the American Farmer Degree simply because he plans to continue his agricultural education at some agricultural college. So far as I know this has never been done, so long as the boy indicates in his application



American Farmers Eighth Annual Convention Future Farmers of America—1935

that he has definite plans for becoming a farmer after leaving the agricultural college. However, we all know from experience, regardless of the applicant's good intentions, that it is somewhat doubtful in most instances as to whether or not the individual will ever actually return to the farm, once he enters an agricultural college.

A STUDY of the present occupations of boys, who received their American Farmer Degrees and later graduated from an agricultural college, should be made to determine the extent to which these boys have adhered to their original intentions. If such a study should reveal that any considerable proportion of them are not now actually farming, then one of two things should be done: either the constitution should be amended so as to no longer require that a candidate "must be engaged in a farming occupation or have definite plans for becoming a farmer" or no candidate should be recommended to receive this degree unless he is immediately after graduation from high school going di-

rectly into a farming occupation, and not to college. Logical arguments could no doubt be presented in defense of either proposition.

The requirements that the candidate "possess demonstrated ability to work with others by having participated in some agricultural co-operative enterprise or movement" is another requirement that is rather rigid and subject to varying interpretations. The writer has always considered that this requirement is not satisfactorily met unless the candidate has, as a member of his local F.F.A. chapter, actually participated in some recognized co-operative purchasing, selling, or community improvement organization.

EACH year the regional agents of the United States Office of Education are asked to review and evaluate carefully for the National F.F.A. Adviser all applications and substantiating credentials submitted by candidates for the American Farmer Degree from the states of our respective regions. Upon the completion of this task we prepare a memorandum to the National Adviser of the F.F.A. in which we report our findings

and make recommendations as to whether or not in our opinions the various candidates meet the minimum qualifications for this degree. These memoranda, together with each applicant's credentials, are later turned over to the National Board of Trustees of the F.F.A. for their consideration before they make their final nominations to the National Convention.

Such a procedure should provide each state with the annual "opportunity" to select from its hundreds or thousands of F.F.A. members one or more boys whose records of accomplishment during their four years in high school and active F.F.A. membership are so outstanding that they can honestly be pointed to with genuine pride. Pride, not because these boys have excelled in one or two particular qualification requirements for the American Farmer Degree, but because they have excelled in all of them. The credentials and records of accomplishments of these boys should constitute a representative sample of the best and most outstanding products of local departments of vocational agriculture.

opportunity to show, thru this representative sampling process, just how excellent their program really is.

UNFORTUNATELY and in far too many instances these "samples" only serve to bring into the spotlight the weaknesses of our program and show by contrast how poor some phases of our work really are. I realize that this may sound radical when speaking of the records of accomplishment and credentials of candidates who have submitted their applications for the American Farmer Degree (The Phi Beta Kappa of Vocational Agriculture), but I am going to give just one example of the things I recently found when reviewing applications and credentials of candidates for the American Farmer Degree from the Pacific Region, and then ask you to be your own judge as to whether or not I have been too severe in my statements. I also happen to know that similar situations arise occasionally in states of the other regions.

One boy whose record of accomplishments was entirely satisfactory in almost every particular submitted with his application a series of 13 completed project record books, which were supposed to contain complete, neat and accurate project plans and records of his farming enterprises, as substantiating evidence that he had conducted an outstanding program of supervised farming thruout his period of vocational training. Upon carefully checking these books I found that in no instance had even a satisfactory project plan been prepared. In his records I found that on one page a mistake of \$20 had been made in adding up a series of only four items. On another page in the same book I found that a mistake of \$68.75 had been made in multiplying 440 by \$.25. On still another page in another book this same boy made an error of \$198 in adding up a column of seven figures. Other smaller mathematical errors appeared in instances too numerous to mention. Entries were not sufficiently specific or descriptive to distinguish whether the item was supposed to be pounds, bushels, cwt., doz., tons, dollars, or cents. No self labor had been recorded.

ASIDE from these unpardonable sins of omission and commission contained in this boy's project plans and records, he would have been an outstanding contender for the Star Farmer Award. The pity of it all is that the boy has to suffer the consequences when his teacher or teachers and to a somewhat lesser degree, the state supervisor, are really responsible for this situation. One thing I am at a complete loss to understand is—how this boy and others with somewhat similar records ever get by the state association and state adviser and secure their State Farmer Degrees.

Under date of June 26, 1935, F.F.A. service letter No. 100 was sent to all state advisers. This service letter had been very carefully prepared and it contained detailed instructions for selecting American Farmer candidates, but apparently this matter is still not receiving the serious consideration at the hands of some state advisers that it deserves.

No man could take the task of reviewing credentials of applicants for the American Farmer Degree and the making of recommendations for their ap-

proved or disapproved more seriously than I do. Perhaps I take it too seriously, but I realize that in doing so we are dealing with young farm boys at a very formative period in their lives. For that reason extreme care needs be exercised in seeing to it that each boy receives fair and honest consideration. At the same time we must insist that high standards of achievement to receive the American Farmer Degree must be maintained if any real honor is to be attached to this award.

I FULLY realize that in some instances state supervisors have become personally acquainted with some of their most outstanding boys in the several schools of their state and have taken so much interest and pride in watching them grow and develop that they temporarily lose sight of the fact that there are several very definite and specific minimum qualifications for the American Farmer Degree. For instance the mere fact that a boy may be an extremely outstanding individual who may have been high man in a national judging contest, high man in a national public speaking contest, valedictorian of his class, captain of all the athletic teams in a large high school, and have \$500 to \$1000 in a bank or productively invested is all of no avail so far as the American Farmer Degree is concerned if he did not also conduct an "outstanding program of supervised farming thruout the period of vocational training" or if he is not now engaged in a farming occupation or does not have definite plans for becoming a farmer, or if he has never demonstrated his "ability to work with others by having participated in some agricultural co-operative enterprise or movement."

Right or wrong a boy must meet all of the qualification requirements as set up in the national F.F.A. constitution and as explained in service letter No. 100 if he expects to receive the American Farmer Degree, rather than excel in some of them and fail entirely to meet certain others. If the qualification requirements for the American Farmer Degree as now outlined in the national constitution are too high, then the constitution should be amended rather than evaded or violated. Otherwise we will be guilty of building up in the minds of these young men erroneous ideas of honesty, justice, and fair play and will be promoting the cause of special privilege and disrespect for constitutional government. This would, of course, be contrary to the ideals of good citizenship to which the F.F.A. is dedicated.

I See Him

A. W. SHORT, Teacher of Agriculture, Hillsboro, Ohio

I SEE him on horseback going over the mountains in West Virginia answering a call from a boy that has a sick pig. I see him in Pennsylvania at an important city meeting, getting across an idea for the betterment of the community. I see him slipping into the tent of an F. E. A. boy at midnight out in Oregon, the boy is homesick and a little afraid, and he makes an excuse so that he can stay until the youngster is cheered up. I see him down in Georgia with about fifty adult farmers, laboring thru a tangled mess of figures studying marketing. It is late, yet he stays because the men want

to stay. I see him in Texas with a group of boys on a high school auditorium stage, ready to put on an Arbor Day program. I see him up in Wisconsin playing handball with his shirt tail out, his shoes and socks off, his pants rolled up to his knees—at a state camp where his boys see in him a boyish love for fun and respect. I see him in Kansas registering at a large hotel with a bunch of boys away from home for the first time in their lives having traveled all the way from California to attend the American Royal. I see him start out from home in Ohio with a bunch of his boys and travel a few thousand miles sight seeing and studying how things are done in other F. F. A. chapters. I see him up in Michigan with a couple of weeks growth beard of his face having the time of his life with a fighting bass at one end of the line and himself at the other. I see him in the mirror of the soul of thousands of boys who have gone back to the farms after graduation and who are making a success of farming and of life—

After seeing him in all these places in varying circumstances it gives me great joy and a greater sense of my own responsibilities as a vocational agriculture teacher.

AAA Establishes Further Service for Teachers

LYMAN E. JACKSON, Specialist in Information, Regional Contact Section, Division of Information, Agricultural Adjustment Administration

WITH the appointment of a full-time man to direct the project, permanent service for teachers of vocational agriculture has now been established under the supervision of Mr. Alfred D. Stedman, Director of the Division of Information, Agricultural Adjustment Administration.

Teachers of the country have been receiving a good deal of help in the form of materials prepared especially for them by various individuals working under temporary appointments with this Division. Mr. Reuben Brigham, Chief of the Regional Contact Section of the Division, has also worked closely with Mr. J. A. Linke, Chief of the Agricultural Education Service, U. S. Office of Education, in making available to teachers the many publications prepared by the Agricultural Adjustment Administration. The teachers in the cotton belt have been admirably served by the cotton section of the AAA, under the direction of Mr. Cully A. Cobb. Mr. I. W. Duggan of the cotton section has been particularly responsible in directing the educational program for the teachers in cotton areas.

The new position in the Regional Contact Section has been established with the idea of providing further service to the teachers of vocational agriculture in the United States, and of giving continuity and permanence to the work. A general conception of the scope of the proposed program may be gained from a description of the duties of the position which are about as follows:

To contact members of the AAA in Washington and in the field to obtain the latest facts regarding various commodity situations and programs.

To organize, in co-operation with commodity divisions, such basic subject matter material as will be useful to state supervisors and teachers of vo-

national agriculture in meeting the needs of all-day, part-time, and evening school students of vocational agriculture in understanding the agricultural situation and the program of agricultural adjustment.

To contact the Office of Education in Washington and the state supervisors of vocational agriculture to determine the type of material most needed and to advise with and aid them in securing the most effective utilization of such materials as may be made available.

There is little doubt but that the teachers of vocational agriculture recognize the challenge in the words of Secretary of Agriculture Henry A. Wallace, as expressed in the foreword to the bulletin "Agriculture's Interest in America's World Trade." Quoting from the foreword "Until the thoughtful people in every township of the United States have asked themselves questions of the sort presented in the following pages we cannot be sure of a long-abiding, fundamental prosperity. Township by township, county by county, we are on our way toward an informed Economic Democracy."

It is in achieving an "Informed Economic Democracy" that teachers of vocational agriculture have an active part to play. Vast amounts of valuable information have been discovered, developed and organized for use. The farmers and future farmers of the United States constitute a great portion of our society needing and desiring the latest comprehensive information. Those engaged in educational activities surely recognize the responsible position they hold.

Farmers should be enabled to analyze their problems in the light of the available facts. It is not the business of teachers to tell farmers what to think, but it is their business to help farmers make use of the best facts obtainable.

An analysis of farm management and its relationships reveals that the modern farmer has a very complex series of factors to consider in trying to achieve a satisfactory rural life for himself and family. Factors that are national and international in scope may have a very direct bearing upon the management of an individual farm. For example, facts concerning domestic and foreign production and consumption of wheat are essential in deciding whether or not an individual farmer should join with other farmers in a giant co-operative effort to adjust wheat production. Often such a decision may be made upon the basis of hear-say, or even biased information. Obviously it is the duty of teachers to help provide the information that farmers may use in making intelligent judgments and decisions that are so necessary in present-day farm management.

The Division of Information of the Agricultural Adjustment Administration is vitally interested in making available to all concerned, the facts that are assembled by the various governmental agencies. It is recognized that the teachers of vocational agriculture thruout the country constitute one of the active educational agencies serving the farm population. For these reasons, the Division of Information has established the co-operative service upon a permanent basis.

Star American Farmer From Kansas

PAUL LECK, 18 year old boy of Washington, Kansas, was awarded the title of Star American Farmer. His parents, Mr. and Mrs. H. H. Leck, live on a farm of 174 acres and with their fullest co-operation he has been able to achieve this honor.



Star American Farmer—1935. Left to right: Oscar L. Chapman, Assistant Secretary of the Interior, Washington, D. C., Paul Leck, Star Farmer, Washington, Kansas; and W. A. Cochel, Editor, Weekly Kansas City Star.

A. P. Davidson, executive adviser, Kansas, says: "Paul was president of his high school class, captain of his football team, ranked second in scholarship with a four-year average scholarship grade of 95 percent, a successful show record in local and county competition, a member of the team that represented Kansas in the livestock judging contest at the American Royal in 1933, a member of the winning team in the milk judging contest at the American Royal in 1934, being high individual in this contest, and was president of the Kansas Association of Future Farmers of America for the year 1934. In addition to an excellent livestock and crops supervised farming program, Paul has tangible evidence on his home farm of the finest farm shop carry-over that it has been my pleasure to observe in the eight years that I have been reviewing State Farmer and American Farmer Degree applications. Paul is a modest and unassuming farm lad who possesses that fine characteristic of doing thoroughly and well whatever he elects to do."

Paul gave his own story in a radio talk: "The title Star Farmer of America with the accompanying award of \$500, came as a great surprise to me night before last in the arena at the American Royal Livestock and Horse Show here in Kansas City. I am naturally quite happy to receive this honor, and wish to express my appreciation to Editor W. A. Cochel and the Weekly Kansas City Star for making this award possible."

"When invited to talk over the radio, I thought you might be interested in hearing something about my program which merited this consideration."

"I attended the Washington High School, Washington, Kansas, where I had the opportunity of taking four years of vocational agriculture. My supervised farming program, which is a part of the vocational agriculture course, was of a general farm nature. I engaged in the production of poultry, swine, beef cattle, and grew corn, sorghums, and

other feed crops. During my last year I added a garden and fruit project, for the purpose of furnishing these commodities for home and market consumption.

"Naturally in the production of livestock, one has to have buildings and equipment. These were planned for in my vocational agriculture courses, and constructed as needed."

"One of the early needs was a farm shop building, equipped with the necessary tools to enable me to do the necessary construction and repair work incident to the type of livestock programs engaged upon. My farm shop is 10' x 18' framed from native lumber, and the total cost of building and equipping this shop was \$100.00."

"I constructed one new straw loft, open front, laying house, 200 bird capacity, which cost \$275.00, and remodeled a poultry house already on the farm, and converted it into a 200 bird house at a cost of \$35.00. My total expenditures for laying houses, brooder houses, and poultry equipment inventories at \$537.00."

"Two individual hog houses were built to care for my swine projects at a total cost of \$15.00."

"I am a member of the Junior Duroc Record Association, and the Kansas Crop Improvement Association."

"I landscaped the yard about our home by grading the ground and planting trees, shrubs and grass, and building flower beds and trellises. I planned and built a bathroom in our home, and installed all the necessary plumbing."

"In marketing my poultry products, I developed a local fresh egg and dressed poultry trade."

"During the four years of my supervised farming, I was able to make a labor income of \$1685.00. This labor income was largely made possible by keeping the cost of production down thru mixing my own feeds, doing my own vaccinating, culling, and selecting and testing the seed for my crops projects."

"Many of my fellow American Farmers have asked me what I plan to do with the \$500.00 Star Farmer award. I have not had time to give this much thought, but shall probably use it in the expansion of my farming program."

"I had already planned, as soon as I could afford it, to build satisfactory quarters for my beef cattle enterprise, two additional farrowing houses, and two 10'x16' brooder houses for my turkeys. My experience with my garden project last summer convinced me that it would be advisable to install an irrigation plant, which was also included in my future plans. I am of the opinion that this expansion program will require all the cash provided in the Star Farmer award."

"I want to give credit to my parents and to my vocational agriculture teacher, Mr. H. H. Brown, for the fine co-operation and encouragement which made it possible for me to win the most sought after honor in the Future Farmers of America Organization."

"CHANCE will not do the work. Chance sends the breeze, but if the pilot slumber at the helm, the very wind that wafts us toward the post may dash us upon the shelves. The steerman's part is vigilance below it, rough or smooth."—Sir Walter Scott.



Methods



The Cross Section Method of Organizing Courses in Vocational Agriculture

F. W. LATHROP, Research Specialist in Agricultural Education, Office of Education, Washington, D. C.



F.W. Lathrop

I BELIEVE many of you have had some experience with the cross section organization of courses in vocational agriculture, whether by this or some other name. To make sure that we are all thinking about the same thing, I am going to state what is meant by the term Cross Section Method of Organizing Courses. The term "Cross Section" refers to the way in which we distribute the teaching of an enterprise over several years. When I taught vocational agriculture back in the "dark ages," I taught crop enterprises in one year and animal enterprises in another. If I were teaching now and wished to use the cross section principle, I would teach the dairy cattle enterprise, for example, if it were a major enterprise, in all four years of the vocational course. If I distributed the jobs in the other major enterprises, each thru two or more years, I would have a cross-section course.

I think you know what I mean by the term "Cross Section" organization. Whether you are interested directly in the cross section principle or not, I think the discussion is worth-while because it involves some of the most important principles of vocational teaching.

Underlying the cross-section organization of courses are, I believe, two important principles. One is that supervised practice in a major enterprise should extend over more than one year, resulting in continuation projects. The second principle is that the course of instruction should be based on supervised practice and so run concurrently with it. It may be that we should stop and examine these two principles, but unless there is serious objection we will have to proceed to another matter.

In several states, cross section courses are being developed at the present time. In discussing these courses with teachers and with supervisors, I find that one difficulty stands out above all others and that is to determine which jobs or other units to distribute in the various years. It is on this problem that I am going to focus my discussion. Recently I have discussed this problem with six persons who have had much experience in cross section organization. These six persons do not agree wholly in the principles to be used in distributing jobs in the various years.

THE most important influence which should determine in what year a job

will be placed is the need of the student in connection with his supervised practice. I will draw my examples from the poultry enterprise and the potato enterprise because I discussed those particular enterprises with the above-mentioned six persons. I use the job as the unit of content because it is so frequently used, but I think the principles to be developed apply to other units. To give an example of supervised practice need, the student with a poultry major would need instruction in feeding chicks his first year. He might not need instruction in feeding for egg production until the second year. Incubation may be postponed until the third year if the student buys his chicks from a hatchery the first two years. Some teachers with whom I have talked take the point of view that this principle of supervised practice need means that they should teach each job in a major enterprise the first year and repeat the teaching of these jobs each succeeding year. This means a congestion of teaching the first year and may mean useless repetition in following years. Hence these teachers have two teaching problems: the first is how to get all the major jobs taught in the first year; and the second, how to avoid dull repetition in teaching the same jobs year after year to the same group. The solution of the first problem is not to teach all the major jobs the first year, but to select the most vital jobs for intensive study and postpone the other jobs until later years. This postponement of jobs in a way violates the principle of supervised practice need. There are several things to be considered in deciding which jobs to postpone and how long to postpone them.

At this point I would like to give you a form, which is a device to assist a

which I am familiar. You may mark such a job "Yes" and later decide that it can be postponed because of several more important jobs. When you mark a job "Yes" in Column (1) it must be more or less tentative.

Some persons object to postponing a job which is related to the first-year project. Such postponement is necessary rather than desirable; however, not a great deal of harm will result if the teacher merely gives direction to the student as to how he performs these postponed jobs. It is surely much better to take a few essential jobs and study them intensively, than to take too many jobs and teach them superficially and ineffectively.

We may decide that a job be postponed because it is not so essential to the first-year project as some other jobs. However, it may be desirable to teach that job early in the course for some other reason. Two of these reasons are indicated in Column (2). The first reason may be called "Repetitive Need." There are jobs which need to be taught again and again before they can be mastered. In my own experience, for example, feeding chicks is a job. One needs to do this job several times before he really becomes expert at it. You perhaps know of other jobs which will emphasize the principle of repetitive need better than this.

Another reason for teaching a job early may be called the "Need for Tangible Results." Our all-day pupils are immature when they enter high school. If tangible results are forthcoming, these 14 and 15 year old boys will be encouraged to push ahead. If the jobs which these boys are doing show no tangible results immediately, discouragement of younger pupils is likely to result. For example, one advantage of teaching the job culling the laying flock early in the course, is that when the culls are segregated the egg production of the main flock is undiminished. On the other hand, establishing a rotation requires several years and it is difficult at first to see results. Mature pupils are more likely to

THE DISTRIBUTION OF JOBS IN MAJOR ENTERPRISES
(Assuming projects in major enterprises the first year of a four-year course)

Name of Job	(1)	(2)	(3)	(4)
	Is the job essential to the success of the first year project?	If the job can be postponed, should it be taught early because of	Should the job be postponed because of	In which of the four years should the job be placed?
		Repetitive need	Congestion	
		Need for tangible results	Difficulty	

teacher in placing jobs in the year in which they belong. Most of our remaining discussion will concern the placement of jobs according to certain principles which are indicated in the headings of this form. In the column marked (1) is the question "Is the job essential to the success of the first-year project?" Some jobs must come the first year, because they are so vital to the success of the first-year project. For example, it seems to me that treating seed potatoes would be such a job, at least in the areas with

persist and maintain interest in such a job, where younger pupils may lose heart.

Passing to column (3), some jobs must be postponed until the later years of the course. In general the jobs to be postponed are those which are less essential to the success of projects in the earlier years. Sometimes it is hard to determine this point with respect to a given job. In some farming areas the farming is so diversified that there are several major enterprises. At certain seasons of

the year, there is a teaching congestion because several jobs demand attention at the same time. Some of these conflicting jobs are the ones which we should postpone. If one of these jobs requires more time for teaching than the others, the congestion will be relieved to a great extent by postponing this job. In your own situations you will know far more about the seasonal conflicts between jobs than I will, and you will have to furnish your own examples in relation to this point.

Other things being equal, the more difficult jobs should be placed in the later years of the course. How do we tell which are the more complex jobs? We have no exact measurements of the difficulties of various jobs, but we do feel certain that some jobs are more complex and therefore more difficult than others. For example, there are jobs of which the underlying principles are difficult to grasp—like the principles of plant and animal breeding. Economic principles are complex and difficult. In general, management problems are more difficult than operative problems. Some jobs have much related technical content which is difficult; for example, the control of insect pests in plant diseases. Some other jobs are founded on a body of experimental evidence. These are a few examples of what we may call difficult jobs.

MY MAIN objective is to arrive at an understanding of the principles which we might use in distributing jobs in the various years. There is another related problem which I need to mention briefly. If a pupil has a project—for example, in potato growing—during each of the four years of his course, more or less the same jobs come up in each year. Treating of seed potatoes, for example, is a job in all four years of his potato project. Assuming that his job is taught intensively the first year, I wish to suggest that in following years it be taught very briefly as a means of reviewing what was taught the first year. In addition, instruction may have to be given to meet something new in the student's situation, or some variation in practice which has been recently developed. Sometimes advanced phases of the job are given after the first year. Ordinarily I find that teachers do not know how to divide a job into its elementary and advanced phases. If there is considerable experimental data on a job, a study of these data might constitute the advanced phases of the job. Ordinarily I am not sure that the teacher should try to make a separation between the elementary and the advanced phases of a job.

At this point, I would like to have you suggest certain jobs—perhaps four or five—and have you think about them for a few minutes with relation to the year in which they should be taught, using this blank as a device to help you in your thinking. Note that all that needs to be put on the blank is the name of the job in the first column and then either "Yes" or "No" until you get to the fourth column, where you should finally decide on the year which will be indicated by 1, 2, 3 or 4.

IN conclusion, I would like to summarize what I have said. Cross section organization refers to the way in which jobs are distributed thru the four years of a vocational course. The primary basis for determining the year in which a

job should be placed is the degree to which it is essential to the success of supervised farm practice. There are some principles not necessarily concerned with supervised farm practice which demand that a job be placed in the first part of the course. These are repetitive need, and the need for tangible results. Other jobs must be postponed until the later years of the course. Principles like seasonal congestion and difficulty demand that certain jobs be placed in the later years of the course. In many cases, there is a conflict of principles which makes it difficult sometimes to determine where a job should be placed; then the teacher must use his best judgment. However, it seems to me that a consideration of these principles will assist him in determining the best place to teach a job and thereby to some extent improve the teaching of the job.

* Talk given at the Western Regional Conference, May, 1935.

The Course of Study in Vocational Agriculture as an Aid to Placement

S. D. MITCHELL, Supervisor of Agriculture, Conway, Arkansas

FROM the start vocational agriculture instructors of Arkansas have had the sole responsibility of developing the courses of study designed to meet the community needs. The procedure in determining these courses has been an interpretation of the community's needs from the community survey. The most important enterprises of the community survey were organized into a course calendar which all boys of the class studied. Thoughtful leaders in the vocational agriculture field soon realized that the individual's interest was being sacrificed for that of the community. For this reason the individual job sheets were introduced as teaching material. The most radical departure from the group study method was the provision for pupil selection of enterprises and individual progress which practically eliminated the discussion period. Much confusion usually resulted after the first year or two with classification efforts where the above plan was used.

THE plan for making the course calendars in the local department has, as its ultimate objective, the training of the boys for a definite type of farming. Obviously, the logical route by which a boy will determine a definite type of farming to which he is willing to commit himself, will be the route of the prevailing type. Agriculture census data, community survey, and class survey are utilized by the instructor to determine the local type of farming from the standpoint of productive work units and financial value. The course calendar for the first year's work includes the jobs of these enterprises. All members of the class study the scientific principles and improved practices related to these jobs and the relation of the enterprises to each other in this type of farming. A limited amount of individual instruction and much discussion on the advantages and disadvantages of the prevailing type of farming characterize the method used in this course. The number of enterprises included depends upon the important enterprises found in the local type of farming.

The course calendar for the second year is composed of enterprises of a special nature not included in the prevailing type. The number of enterprises, which is usually smaller than that of the first year, will depend upon the number of types of special farming done in the vicinity. Consequently, a larger number of jobs relating to the enterprise is studied in greater detail. The boy is given more freedom of choice in excluding one or more of the enterprises and adding others on the basis of individual interest and more time is given to individual job sheets and individual instruction. Group discussion centers about the interest the boys have in the special enterprises, how they fit into the prevailing type of farming, and possibilities of modification on a sound farming basis. The pupil continues his study of types of farming the third year by selecting those enterprises which he is to include in his farming program and justifying same on sound farm management basis. Each pupil is working independently of the others. Group discussions center about sound principles of farm management and economics.

In the above plan the pupil progresses from the general to the specific and utilizes more individual responsibility during his progress. He has also laid careful plans for a definite type of farming to which he is willing to commit himself by selecting the enterprises, studying the jobs, and developing the skills pertaining thereto. Farm management and farm mechanics have been studied and utilized in connection with the entire course of study, and the social and economic phases considered in their proper setting. The graduate has met the first requisite of successful placement, training in a definite type of farming.

Educational Exhibits Sell Vocational Agriculture

O. T. RYAN, District Supervisor Vocational Agriculture, Lubbock, Texas

IN SEPTEMBER 1934, twenty-one I.F.F.A. Chapters of the Texas Plains Area prepared educational exhibits for the South Plains Fair at Lubbock and the Tri-State Fair at Amarillo. These exhibits were based on current agricultural problems of this section of the state. They proved to be one of the most popular features at both fairs, and it is generally conceded that they were an important factor in inducing several communities to introduce vocational agriculture into their public schools. Five new departments were set up in Lubbock County alone. The fair association increased both space and premiums for this type of exhibit for 1935 and thirty-one chapters prepared new exhibits—different to any shown last year. The judge for these exhibits referred to them as being the greatest group of exhibits of its kind ever shown in this state. Another increase in space has already been promised for 1936. Among the farm problems on which exhibits are based are wind erosion control, soil and water conservation, feed conservation, balanced farm program, weed eradication, farm shop, curing meat, controlling grain smut, farm home beautification, pasture improvement, creep feeding pigs, car-lot feeding, and poultry feeding.



PART TIME

Farmer Classes

EVENING



Organizing an Adult Evening School

J. B. TODD, Agriculture Instructor, Noblesville, Indiana

LAST winter an evening school was organized for adult farmers. Being a new department and the teacher's first year in the community there was naturally some speculation among the farmers as to just what was going on in the agriculture department at the high school—were the boys learning theories which they could not use or were they getting some practical information which they might take home and apply? The chance to prove the need of vocational agriculture came when a few farmers asked if they might have some evening school instruction such as they had been reading about, being given in other communities. This was a good lead so the instructor immediately got out a survey blank telling the nature of evening school work and was sent out to as many farm families as could be reached thru pupils at school. This was followed up by several articles in the local paper. When the surveys that were returned indicated that there was enough interest to attempt an evening school, personal visits were made with several farmers. The date was set for the first meeting and extra chairs placed in the agriculture room to accommodate the anticipated large group. At the first meeting eight men showed up. This was not very encouraging but those present were interested so together we sat down and prepared about twelve jobs for study in "Swine Production." Each man agreed to try to bring another with him to the next meeting. The boys in the all day classes had by this time become interested in seeing their fathers come back to school so they began to contact their neighbors and fathers in regards to the school. The second meeting found 12 men present but the very bad weather kept several away. At this meeting a survey blank showing acres in the farm and crops, numbers and kind of livestock and other data, was filled out by each student. Officers of the class were elected and the secretary instructed to keep the proceedings of each meeting. These were then written up and given to the local newspaper for publication.

The third meeting found 19 present with most of the old ones back. The enrollment steadily increased at each meeting and at the seventh, 34 were present. There was a slight decrease after this but averaged thirty for the remaining sessions. Several local and outside men were brought in to lead discussions, including the county agent, veterinarian, livestock commission man, and a hog man.

In most cases this method worked out very satisfactory, but some times did not promote enough discussion from the group when the leader had not prepared the lesson well enough.

For the last night a banquet was planned, in conjunction with the boys' all day classes. About 70 men and boys

turned out. Diplomas were presented by the superintendent to 24 men who had attended a majority of the meetings and had planned to use some new practices in swine production on their home farms.

A few facts learned from conducting this evening school are: In order to promote discussion among the group, the teacher must have the lesson well prepared, so he can guide the trend of thought in the right direction.

Second—The meetings should start on time and end on time, never lasting over two hours.

Third—Before the close of each session the teacher should briefly state some of the points and problems to be discussed the next time.

Fourth—Some publicity should be given to each meeting, giving an account of the major problems discussed.

Fifth—A few key farmers should be contacted by the teacher before the school is started.

Sixth—Give the men as much good practical information about facts as is possible, and

Seventh—A few good outside men on the program will stimulate interest and relieve the teacher of a part of the burden.

A Part-Time School in Farm Tractors

I. C. WALDO, Instructor in Agriculture, Gordon, Nebraska

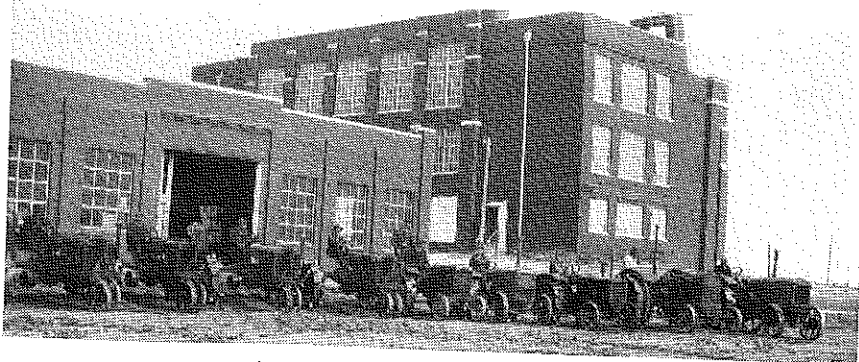
WHAT can we offer the out-of-school farm boy in the way of information that is timely, practical and interesting? Vocational agriculture graduates, and other young men not regularly enrolled in high school, are glad to come back if they can get something new which they can put into immediate use. Boys like to do things and see results, and, with this in mind, I have tried to figure out some kind of part-time work which would fill the need. With two years of experience in part-time work, I had noticed that the majority of the boys liked the shop work very well. Therefore, why not give a course entirely of this nature? Since many farmers planned to replace horses with tractors this spring on account of the high feed costs, why not a course in tractor operation care and repair?

In our community is a young man who had taken college work and several tractor courses at the factory, and who had had lots of practical experience in operating, repairing, and rebuilding tractors. After talking the idea over with him, he agreed to lend his assistance. We went to the implement dealers and they agreed to co-operate in every possible way, such as furnishing literature, charts, motion pictures, factory representatives, etc.

Since this was our first experience in anything of this nature, the boys selected for the course were hand-picked. Out of 20 boys interviewed, 18 thought enough of the idea to enroll in the course. Thirteen boys attended practically all of the five weeks, some not missing a single day. The work was given in the agriculture shop, the full day being used, five days a week. Some of the boys came in and worked on Saturdays. The assistant took over the repairing and mechanical feature of the course, assisted by the regular teacher—when his all-day classes were not in session. The regular agriculture teacher took charge of outside speakers, charts, bulletins, tractor tests, etc.

Tractors were furnished by the boys themselves, each bringing in the tractor from his home farm. During the five weeks, nine tractors were brought in. Five were completely rebuilt; each of these was repainted. The remaining four had new pistons, sleeves, bearings, valves ground, etc. Tractors consisted of four Farmalls, two McCormick-Deering, two Hart-Parr, and one John Deere—so the boys had experience on more than just one kind. During the course the boys had opportunity to hear talks given by representatives of four different tractor manufacturers and to attend one motion picture, which showed the complete building and operation of one make of tractor. We had to limit the enrollment because the size of the shop did not permit a larger class for this type of instruction. If possible next year, we will carry on a similar part-time course with possibly a few changes, as this one was the most popular of any yet conducted.

The easiest way to reach the top is to go to the bottom of things.



Made Ready for Work by Part-Time Pupils

Up-to-Date Evening Class Work

G. A. SCHMIDT, Colorado Agricultural College, Fort Collins, Colorado

A NUMBER of timely topics were stressed in methods classes dealing with evening class work at the Colorado Agricultural College last summer. The first of these topics pertained to farm management.

Along this particular line it appears that every teacher of vocational agriculture has a wonderful opportunity to offer a course to adult farmers in farm management. Right now is the time to start such a course. There are available in every state farm record books particularly set up for the use of farmers. In these there is a blank for an inventory of the farm and its equipment and for gathering data on the various activities of the farm during the year. Then, too, the following bulletins and publications would be very helpful in work along the lines being discussed.

Farm budgeting—FB 1564

Farm inventories—FB 1182

A system of farm cost accounting—FB 572

Financing the individual farm business—Misc. Pub. 1486, U. S. Office of Education, Division of Vocational Education

What makes some farms pay? (A business analysis of 114 farms in Eaton County, Michigan) Special Station Bulletin 187, Michigan Agricultural Experiment Station

Having a complete inventory of a farm and a full account of the farm business, it appears that a most effective course in farm management could be given along the lines of analyzing the farm business, farm budgeting, and improving the farm business for the coming year. The teacher of agriculture would take an inventory and get the records of about 20 farmers. He would calculate data that would give him an average picture of these farms and particularly of those factors important in calculating the efficiency of a farm business. Having these data, the teacher could compare each farm with the average farm and show how it compares, or he could get the averages of the best 5 farms and point out where the others are below or above the average. Perhaps the most useful thing done with such an analysis would be determining the outstanding weak points in the twenty farms, then in the evening class determine ways and means of overcoming or improving the weak points.

This is just one timely subject for an effective evening class that a teacher might take up at the beginning of the new year. At present many other topics for evening class work present themselves, such as utilizing waste land, improving lands taken out of production, permanent pastures, establishing farm wood lot, reorganizing the farm business in line with the present economic condition.

It is topics of the kind described and of these latter ones mentioned that now have an important and timely place in evening class work in vocational agriculture.

Farm Management Evening Class

J. HOWARD BROWN, Instructor of Agriculture, Goshen, Indiana

THE adult evening class this year was the first to be held. Personal visits were made to secure the enrollment. The first eight men visited, signed applications for the evening class in farm management. Seven attended and the other sent his son. Two of these were vocational agriculture graduates of the department. These eight represented a group of outstanding farmers. Further enrollment came more tediously. All the remaining parents of the boys in the day classes were visited. No "high-pressure" salesmanship was attempted as we considered the evening class to be entirely a voluntary educational effort from both sides.

From comments of farmers who heard and read about our evening class this year, it appears that next year we might secure considerable enrollment without depending entirely upon personal visitation.

Our farm management program was built upon the basis of each farmer studying his own farm and working out factors of measurement from a preliminary analysis of last year's business, and further discussing problems of farm management as herein listed. Forms for study of individual farms were secured from the Farm Management Department, Purdue University.

The subjects for the meetings included: size of farm business; balance of farm business; production of livestock, hogs, and poultry; dairy herd management; crop production management; crop rotation and special crops; markets; and opening Indiana farm record books.

Fifteen farmers were enrolled by the second meeting. Two dropped out. The average attendance of the men enrolled was 8.5. In addition, we had numerous visitors. One old gentleman visited seven or eight meetings but did not care to enroll. Nine of the men worked out an analysis of their own farms, either partly or completely. They did this work quite largely outside the evening class periods because after the third evening the conference and discussion required the entire period.

We had reference materials which were used by about two-thirds of the men. On numerous occasions we requested information from an individual who had particular experience bearing on the management problems which were to be discussed. The discussion from the group was rather meager at the first session but increased as the meetings progressed and soon was very spontaneous. We adjourned the meetings at 9:15 but the group had a habit of remaining another hour or so for their own pleasure. A splendid volume of good practices was brought out by the members. I thanked the group the last evening for the things they had taught me. They returned the compliment. So many expressed the desire to be included in any such meetings which we might have in the future, that I returned home from the meetings and told Mrs. Brown, "Goshen is a mighty good place to live."

Applications of practices studied in the evening classes include such practices as: growing more feed per acre by

use of alfalfa, and in at least one case increasing the proportion of corn; full feeding dairy cattle on pasture by supplementing with Sudan grass; growing adapted varieties, particularly oats; and increasing attention to swine sanitation.

The largest and most far-reaching benefits following from this evening class, we think, will result from the twelve men who are starting to keep, after the Indiana plan, farm records on their twelve farms which total 2,205 acres.

Eleven Points

N. K. SPEICHER, Mill Creek, West Virginia

THE following is a list of points which I think help make an evening class successful:

1. Select an enterprise that the whole group is interested in.
2. Make a home visit to each farmer who will attend the class.
3. Know each member of the class personally.
4. Have the group appoint their own secretary from their own group.
5. Know what practices were used and results each farmer had during the previous season.
6. Have experimental data on charts and reference material ready and in a handy place before class.
7. Be able to use charts at the proper time.
8. Do not have charts so dense that the groups cannot understand them.
9. Keep from giving your own opinion on problems if possible.
10. Keep the group discussions on the problems to be discussed at the meeting.
11. Make home visits to the group members while the class is in progress.

An Evening Class in Farm Management

HOWARD C. HENDERSON, Teacher of Agriculture, Seymour, Illinois

AN EVENING class in farm management was organized last January with an enrollment of 30. Among these were many former students of the vocational department of agriculture.

The greatest interest was shown in farm record work. Two years ago one vocational boy completed a farm record project and submitted his book to the farm management department of Purdue University for summarization and analysis. Last year about ten completed the record project and this year eighteen of those in the evening class started farm record books.

In addition to this work the class studied such problems as:

- (1) Analyzing the farmers' income.
- (2) Balancing the farm business.
- (3) Selecting a farm of the right size.
- (4) Large versus small farms.
- (5) Choosing the correct amount of livestock.
- (6) Farm layouts.
- (7) The need for farm credit.
- (8) Government charts on market trends and outlook.

The class also studied together "New Frontiers" by Henry A. Wallace.

The concluding meeting was in the form of a father-son banquet with a program and guest speaker, Prof. O. F. Hall, from the education department of Purdue University.



Pencil and Paper Tests for Measuring Achievement in Vocational Agriculture

G. P. DEYOE, State Teachers College, Platteville, Wisconsin

THE development of measurement devices and techniques for use in the field of vocational agriculture has been given attention by many research workers and instructors. A survey of the results of these efforts reveals that to date a few measurement procedures of merit have been developed.¹ It appears, however, that there has been little progress in the development of valid achievement tests of a type suitable for classroom use.



G. P. Deyoe

The construction of pencil and paper tests which would be satisfactory for this field has been the hope and despair of many who have undertaken this difficult task. Several tests have been published in which the major emphasis has been placed on pupil attainments as measured by responses to detailed items of information. In the appraisal of these tests, it is important to consider such questions as the following: (1) Do these tests measure satisfactorily some of the most important outcomes of instruction? (2) Of what value are the results of these tests as predictive instruments for certain other learning products of significance?

For orienting ourselves in this matter of testing, the suggestions of Tyler are extremely valuable. He emphasizes that the objectives of a field should be used as a basis for developing tests which are valid, and that a test is valid to the extent that it is helpful in evaluating the various forms of pupil behavior which are implicit in the objectives.² Thus, in formulating a testing program for vocational agriculture it is essential to determine the important objectives, or outcomes, and to define these in terms of pupil behavior. This should be followed by the selection of situations in which the pupils will reveal the extent to which the desired forms of behavior have been achieved.

Outcomes of Instruction in Vocational Agriculture

It has been decreed that the primary aim of instruction in vocational agriculture shall be "to train present and prospective farmers for proficiency in farming."³ This major objective may be divided into various contributory aims. Stated in terms of the changes sought in the behavior of the learner, the following divisions include all or most of

these aims which contribute to "proficiency in farming": (1) The acquisition of information which is high in value for proficient farming, (including factual materials frequently used, fundamental principles, and a vocabulary of approved terms); (2) the development of abilities associated with the thinking processes necessary for success in farming, (including the ability to apply materials to various problem situations, the ability to evaluate, and the ability to generalize); (3) the development of manipulative skills which are important for farming successfully; and (4) the cultivation of the appreciations, interests, and ideals which are basic to continuous growth and happiness in the individual and group aspects of farm life.

With such objectives before us, it appears likely that the usual type of test which measures information and little else is valid for measuring a small portion only of the desired outcomes.

Comparison of Various Types of Responses

There has been considerable controversy with respect to the interrelations of the various outcomes of instruction in vocational agriculture. It is still contended by some that if pupils acquire a large body of subject matter, the ability to apply this information can be taken for granted. Many tests now in use, in which the primary emphasis is placed on facts and principles as removed from true-to-life situations, reflect this viewpoint.

In order to evaluate such viewpoints as this, a study was undertaken to determine if possible the extent to which some of the outcomes of instruction in vocational agriculture are correlated.⁴ Tests were formulated in such a way that comparisons could be made between the responses to various types of items. Some of these items were formulated to test for information. This was obtained thru responses to true or false items, to items of the multiple-choice type, and to items of the completion type. Items to test the ability to apply materials were included in the form of problem situations. Among the problem types represented were those in which the correct solution was dependent on the ability to select from a list of statements the materials which were appropriate; another type involved the brief statement of the correct procedure for a given situation; a third type involved arithmetic operations; and a fourth type required the ability to generalize. The test was organized so that certain portions called for responses to items of information, while in certain other portions problems were included which in-

involved the intelligent application of similar information.

FOR obtaining the data for the present study, the above test was used in the farm problems contest which was held at Madison in October 1934 for pupils from high school departments of vocational agriculture in Wisconsin. For most of the statistical comparisons here discussed, data were included for 64 pupils from 39 departments. As might be expected, the pupils who entered in this contest were above the general average in mental ability for the group which they represented. In fact, their average was at approximately the 60th percentile of all high school pupils of the state, whereas the general average of all pupils in vocational agriculture in Wisconsin is close to the 35th percentile.⁵

After the test was given, correlations were computed to determine the relationships between responses to various types of items.⁶ Of several computations of data, the highest coefficient of correlation between responses to items of information and responses to problem situations was .41. The various coefficients ranged from this figure down to approximately zero.

In order to hold constant any possible influence of general mental ability, partial correlations were computed in which the factor of mental ability was held constant. The relation between mental ability and responses to problem situations was in general somewhat higher than the relation between mental ability and responses to items of information. The highest coefficient for the former was .37 and for the latter the highest was .32. For the coefficients of partial correlation in which the factor of mental ability was held constant, the net coefficients between responses to items of information and responses to problem situations were in most cases slightly lower than the original correlations. The highest of the partial coefficients was .32.

The reliability of the test which was formulated for the present study was approximately .80, as determined by correlating responses on chance halves and applying the Spearman prophecy formula for estimating the reliability for a test the original length.

IT should be emphasized that the investigation which is here reported is intended to be suggestive only. While the preceding discussion involves results which are sufficiently reliable to be of considerable value, the findings are not to be interpreted as being conclusive evidence. It is important that more studies be made in the field of vocational agriculture with tests which involve

a wider range of responses and a greater number of pupils than in the investigation described.

AN analysis of the responses to individual problems of the test reveals some interesting information. For correct solutions, these problems involved reasoning and in some cases required computations. The frequency of errors for some of the problems was high. One problem was stated as follows:

"A farmer says that he is certain the soil on his farm is as good as it can be made because he grows legumes in the rotation, feeds all of the crops grown, and returns the manure to the land. Are there any aspects of soil fertility which he may have failed to consider? If so, state them briefly."

About two-thirds of the answers for the preceding problem were partially correct, but less than one-third gave answers which were approximately complete. About one-third included statements which were seriously in error.

A problem calling for generalizations from a body of data showed responses that were especially deficient. This problem included a table of data showing average yields of corn for various sections of a state, with different numbers of kernels per hill in each section. The pupils were asked to state briefly any conclusions which they felt could be drawn from these figures. Only about 16 percent gave responses which were approximately correct, even tho the standards for grading the responses were quite liberal. About two-thirds made serious errors in their responses, and about one-third gave generalizations which were entirely wrong. Many of the responses indicated a total disregard of the data and included a statement of the "stock rule" of three kernels per hill. Others showed inaccurate attempts to generalize in terms of the data for all sections lumped together.

One problem dealt with the selection of rations suitable for rapid gains on weaning pigs kept in a dry lot. Six rations were listed, with the suggestion that one, several, or none might be suitable. In reality, three of the rations were suitable, and the others were inadequate in one or more respects. Only nine percent of the pupils checked all three of the suitable rations with no additional ones, while twelve percent checked these three with one unsuitable ration or more checked in addition. Eighteen percent checked two out of the three with no unsuitable ones, and nine percent checked two out of the three with one or more of the undesirable ones in addition. This left more than half who checked one only or none of the suitable rations.

SEVERAL problems were included which involved the intelligent application of materials similar to those included in factual items in other portions of the tests. The coefficient of correlation between these two types of responses was only about .18, altho it should be recognized that the reliability of individual parts of the test was quite low, and this comparison is therefore less dependable than some of the others.

A somewhat similar contest was held in 1933 in which a test was used that included a preponderance of items of a non-problem type. However, a few problems were included, and it was possible

to make statistical comparisons involving 64 pupils. These results were quite similar to those already reported for the 1934 contest. In this case a coefficient of correlation of approximately .30 was obtained in comparing responses to factual items with responses to problem situations. A coefficient of partial correlation of .20 was obtained with the factor of mental ability held constant.

Several problem items in the tests for both years involved computations which were quite elementary for the most part. Errors were so frequently in evidence that for some of the problems less than half of the solutions were correct, and in some instances three-fourths or more of the solutions given were wholly or partially erroneous. These errors ranged thru the entire gamut of possibilities, and included misinterpretation of the problems, selection of improper procedures, lack of arithmetic skill, and misinterpretation of the results after the computations were made.

It should be emphasized that this lack of skill in problem-solving was manifested by a better-than-average group of high school pupils who were among the best in the departments of vocational agriculture which they represented. The showing of the mill-run of pupils in vocational agriculture undoubtedly would be even more disappointing inasmuch as the coefficients of correlation between problem-solving ability and general mental ability were positive and ranged as high as .40 for the two studies described.

Other Studies of a Similar Nature

Altho few, if any, studies of this nature have previously been reported which involve vocational agricultural materials on the high school level, several studies have been made for aspects of science which are largely non-agricultural in nature. While space does not permit a review of these studies, the findings in general are quite similar to those previously discussed. For the most part, these studies indicate relatively low coefficients of correlation for comparisons between responses on items of information and situations requiring higher mental processes, such as are involved in the intelligent application of information. Among these studies are those reported by Bedell,⁷ Tyler,⁸ Brown,⁹ Hendricks and Tyler,¹⁰ and Johnson.¹¹ These investigations in most instances were with high school pupils or with students on the junior college level.

Implications of Test Comparisons

While it is recognized that the investigation herein reported does not serve as conclusive evidence on the matters under discussion, it is believed that the results are sufficiently reliable to have definite implications for pedagogical practice in the field of vocational agriculture, especially since there is considerable corroborative evidence from studies in related fields.

In the first place, it is important for teachers to recognize that a test which measures the acquisition of information is not an accurate instrument for predicting the extent to which information can be applied intelligently. A correlation of .41 between two sets of data, which is the highest obtained in the

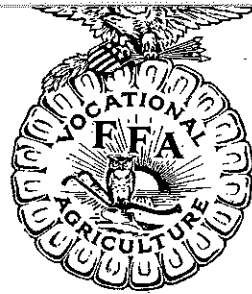
present study, if used to predict one type of response from the other is an improvement of less than ten percent over a sheer guess. A correlation of approximately .866 is required to increase the reliability of a prediction to a point which is fifty percent better than a sheer guess. Thus, to assume that the measurement of the informational aspects will serve as an accurate index to problem-solving ability is contrary to any scientific evidence as yet available. While it is true that no one can apply that which he does not know, the results of this study and others clearly indicate that mere knowing may be quite widely removed from ability to apply.

THIS investigation has indicated that the usual responses to the more complicated types of problems are in general quite disappointing. This may suggest that problem solving has not been made an important part of our instruction. Both teaching and testing should reflect an emphasis on a functional type of learning, such as is involved in the solution of true-to-life problems.

Furthermore, it should be recognized that many problems which are associated with proficient farming cannot be reduced satisfactorily to a pencil and paper basis. It may be that problems of a pencil and paper type can be found which correlate sufficiently high with actual situations, and accurate predictive instruments for use in testing may thereby be evolved; but we are a long way from such devices as yet. Until this time comes, we must continue to rely on first-hand observation of each pupil's performance when he is placed on his own responsibility, and note thereby his ability to solve the problems which arise. In other words, we must measure *doing ability*, and the testing ground must approximate as nearly as possible the actual farm situation. We can utilize to a certain extent the pencil and paper types of tests for measuring the informational outcomes of learning and for measuring the ability to solve such problems as can be reduced to this basis. However, to confine our testing primarily to responses on written items gives undue emphasis to these aspects of our instruction. It may result, and undoubtedly does result in many cases, in overemphasis on subject matter for subject-matter's sake, which has long been the evil of teaching in the academic subjects. Must teachers of agriculture fall into the same error?

IN a recent publication consisting of a symposium on the effects of measurement on instruction, many excellent contributions by recognized authorities are included. Among the aspects of the testing movement given recognition by several of the writers are: (1) Various types of measurement should be evaluated in terms of the purposes for which the teaching is carried on; (2) certain tests which measure limited or relatively unimportant types of outcomes may serve in the end to give these outcomes an unjustifiable share of instructional emphasis; (3) there is need for developing measurement instruments for "subtle and dynamic qualities such as initiative, co-operation, methods of work, methods of thinking, appreciations, attitudes or emotional effects."¹² Herein lies much

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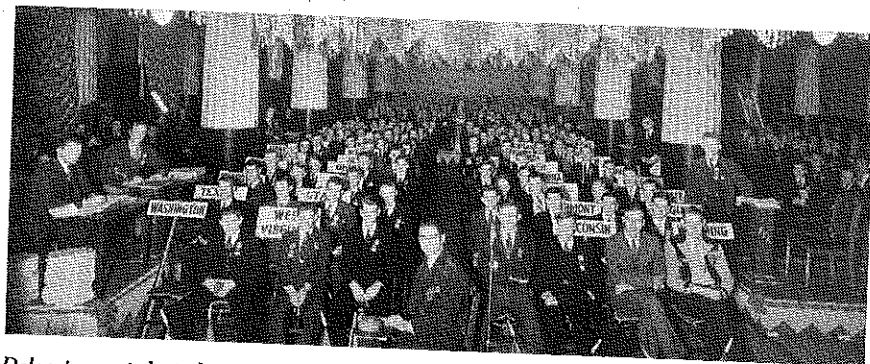


Future Farmers of America



Eighth National Future Farmers of America Congress at Kansas City

EIGHTY-NINE delegates from 47 state associations and the Hawaiian association, representing over 100,000 Future Farmers of America, were called to order by President Andrew Sundstrom of South Dakota, who is seated in the center of the accompanying picture. This was by far the most outstanding convention held by the organization. The new officers elected for 1936 are shown in the picture at the bottom of the page.



Delegates seated at the opening session of the Eighth Annual Future Farmers of America Convention at Kansas City, 1935.

American Farmer Degrees Awarded

SIXTY-NINE boys from 36 states were advanced to the highest degree of the organization—The American Farmer Degree. After the impressive ceremony of this degree by the national officers, gold keys were presented to the following boys:

Andy Fulton, Dardanelle, Ark.; Jesse Pruett, Dardanelle, Ark.; Lorenzo Smith, Snowflake, Ariz.; Ole R. Mettler, Lodi, Calif.; Takashi Mori, Fresno, Calif.; William Silveira, Tulare, Calif.; E. Raymond Sisk, Modesto, Calif.; William Wolfe, Lincoln City, Del.; Greely Steele, Laurel Hill, Fla.; Elmer Larsen, DeSoto, Ga.; Frank Hendrix, Gore, Ga.; Claude G. Johnson, Idaho Falls, Idaho; Charles Norton, Naponset, Ill.; Earl Certley, Princeville, Ill.; Myron Hays, Houston, Ill.; Adolph Riechenberg, Steeleville, Ill.; Maurice Gantzert, Gainer, Ill.; Julius Black, Ames, Iowa; Paul Leck, Washington, Kans.; Ellwood Baker, Abilene, Kans.; Harlan Veal, Lexington, Ky.; Lloyd Burrows, Stampington Ground, Ky.; Joseph B. Gremillion,

Jr., Longbridge, La.; Nolan Hebert, Lafayette, La.; Elvin Hughes, Husser, La.; Myron Gartley, Presque Isle, Me.; Carroll I. Miller, Boonsboro, Md.; Norman Smalley, Webberville, Mich.; Carl E. Loss, Dickerville, Mich.; John Bartholomew, Leeton, Mo.; C. L. Buoy, Jr., Fayette, Mo.; Orlando Todd, Clearwater, Nebr.; Earl Harriman, Fallon, Nev.; Paul MacKintosh Raynes, Chester, N. H.; Lawrence L. Munther, Hanover, N. J.; Lynn Wood, Little Valley, N. Y.;

Shelton C. Davis, Spring Hope, N. C.; Arley Hovland, New England, N. D.; Melvin Rings, Amlin, Ohio; Stanley Tschantz, Dalton, Ohio; Dale Dargitz, Montpelier, Ohio; Paul Waddell, Waldo, Ohio; Carl Williams, Ponca City, Okla.; Marion Garrett, Kingfisher, Okla.; Steen Lemon, Kingfisher, Okla.; Virgil Wertz, Ashland, Okla.; Leon Hubbard, Newberg, Ore.; Garrett Hunter, West Alexandria, Pa.; John Rolfe, Worthing, S. D.; Edward Widener, Boyd's Creek, Tenn.; James Paul Atchley, Seveirville, Tenn.; Wade Slaten, Sparta, Tenn.; Turner Binkley, Goodlettsville, Tenn.; Herbert Mills, Sterling City, Tex.; Wilburn Daniel, Gustine, Tex.; Howard Dalton, Mt. Pleasant, Tex.; Thomas Franklin, Decatur, Tex.; Adrian Tarver, Cotulla, Tex.; Julian Rader, Beeville, Tex.; Eldrow Reeve, Hurricane, Utah; Francis W. Nye, Barton, Vt.; William R. Shaffer, Maurertown, Va.; J. Fletcher Blankenbaker, Zeus, Wash.; Donald Hedrick, Menlo, Wash.; George Ward, Chelan, Wash.; Raymond Rada, Chippewa Falls, Wisc.; Donald N. McDowell, Montello, Wisc.; Owen David Owens, Montello, Wisc.; and Junior Beckman, Powell, Wyo.



National Future Farmers of America Officers—1936. Back row: (left to right) Leon V. Hubbard, Newberg, Oregon, 4th Vice-President; Julius Black, Ames, Iowa, Student Secretary; Owen Owens, Montello, Wisconsin, 2nd Vice-President; Stanley Tschantz, Dalton, Ohio, 3rd Vice-President. Front row: J. A. Linke, National Adviser, Washington, D. C.; William Shaffer, Maurertown, Virginia, President. W. A. Ross, National Executive Secretary, Washington, D. C.

Tune in an F. F. A Broadcast over N. B. C. Farm and Home Hour, Second Monday of Each Month

Judging Contests

ONE HUNDRED and thirty-six teams from 36 states represented a continued growth of these contests. Keen competition between teams continued for the 600 prizes awarded.

Placing by states in the contests were:

Livestock Contest (all classes): First, Oklahoma; Second, Texas; Third, Arizona; Fourth, Kentucky; Fifth, Utah.

Ranking of states in judging different classes of livestock:

Sheep: First, New Mexico; Second, Oklahoma; Third—tie, Kansas and West Virginia; Fifth, Missouri.

Swine: First, New Mexico; Second, Wisconsin; Third, Minnesota; Fourth, Kansas; Fifth, Oklahoma.

Beef: First, Oklahoma; Second, Missouri; Third, Texas; Fourth, Idaho; Fifth, South Dakota.

Horses: First, Utah; Second, Arizona; Third, North Dakota; Fourth, Texas; Fifth, Wyoming.

Dairy Contest: First, Colorado; Second, North Carolina; Third, Kentucky; Fourth, Nebraska; Fifth, Oklahoma.

Ranking of states in judging different breeds of dairy cattle:

Holsteins: First, Kentucky; Second, North Carolina; Third, Washington; Fourth, South Dakota; Fifth, Colorado.

Guernseys: First, Utah; Second, North Dakota; Third, Colorado; Fourth, Mississippi; Fifth, Nebraska.

Jerseys: First, Colorado; Second, North Carolina; Third, Ohio; Fourth, Oklahoma; Fifth, Minnesota.

Meat Contest: First, Illinois; Second, Colorado; Third, Missouri; Fourth, Kansas; Fifth, Arkansas.

Poultry Contest: First, Arkansas; Second, Nevada; Third, South Carolina; Fourth, Oklahoma; Fifth, Utah.

Milk Judging Contest: First, Kansas; Second, Oklahoma; Third, Illinois; Fourth, Wisconsin; Fifth, Colorado.

THE members, coach, and name of school of winning teams in each contest were:

Livestock—Oklahoma

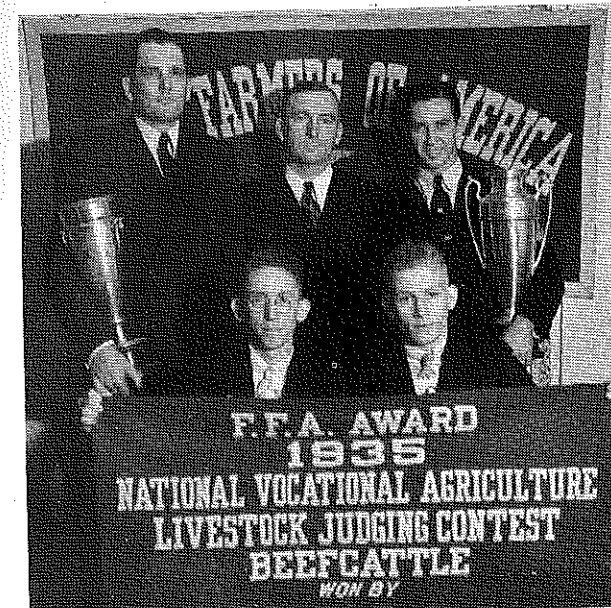
The winning team members, Eugene Matrow, Opie Hartman, and Veldon Swigart, Moreland, Oklahoma, were coached by C. R. Craig. The team scored a total of 2049.6 points out of a possible 2400. Thirty-four teams took part in the contest.

The Texas team from Richland Springs took second place with a score of 1993.3.



Eugene Matrow, Moreland, Oklahoma. Highest ranking individual judge in livestock contest.

Also significant in the achievement of this first rank was the consistent high scoring in the sub-contests; the Oklahoma boys placed first in beef cattle, second in sheep, fifth in swine and eighth in draft animals. Add to this the facts that Eugene Matrow ranked high boy in the entire contest with an all-time record score of 735.9 out of a possible 800 and



Winning Livestock Team, Moreland, Oklahoma. Left to right: Standing, J. B. Perky, State Supervisor, Roy Craig, Coach, Eugene Matrow. Seated: Opie Hartman, Veldon Swigart

that Opie Hartman ranked fifth, with the third team member, Veldon Swigart not so far down the line.

Young Matrow, as the best judge among the 105 state champions, was presented with a \$300 agricultural college scholarship awarded by the Merchants Association of Kansas City. He also received \$10 from the Kansas City Kiwanis Club and a Gladstone bag awarded by *The Country Gentleman*.

Grant Fish of Lake Side, Arizona, placed second, Will Munday, Jr., Las Cruces, New Mexico, third, and Glenn Best, Powell, Wyoming, fourth.

Dairy—Colorado

Coached by H. F. Johnson, the team from Greeley, Colorado, won the contest, scoring 1536 points out of a possible 1800. This team made an outstanding record by ranking first in judging Jerseys, third in Guernseys and fifth in Holsteins. Floyd Adams placed second in the entire contest with a score of 535.8 and Arne Magnuson ranked third, scoring 533; a score of 600 is perfect. Joseph Roehmer was the other team member.

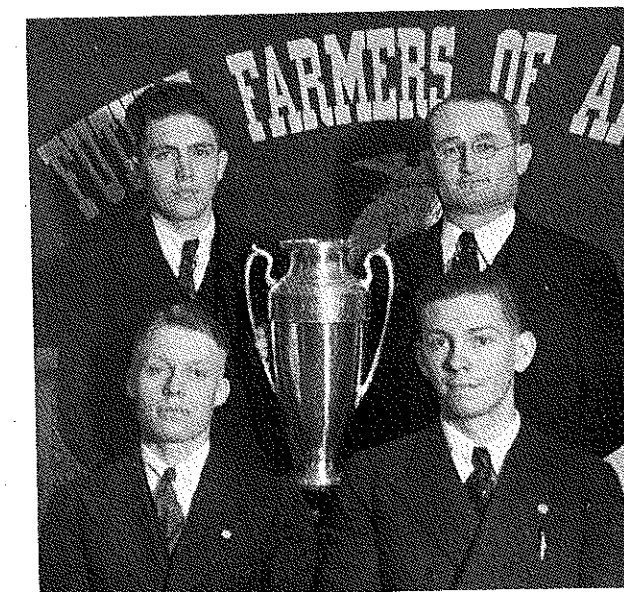
The team from North Carolina placed second with a score of 1515.3.

Of all 96 boys competing in dairy judging, Kenneth Anderson of Picadome, Kentucky, placed first with an exceptional score of 562.1. As a reward for his skill he received a \$300 agricultural college scholarship presented by the Kansas City Merchants Association and a Parkette pen and pencil set from *The Country Gentleman*.

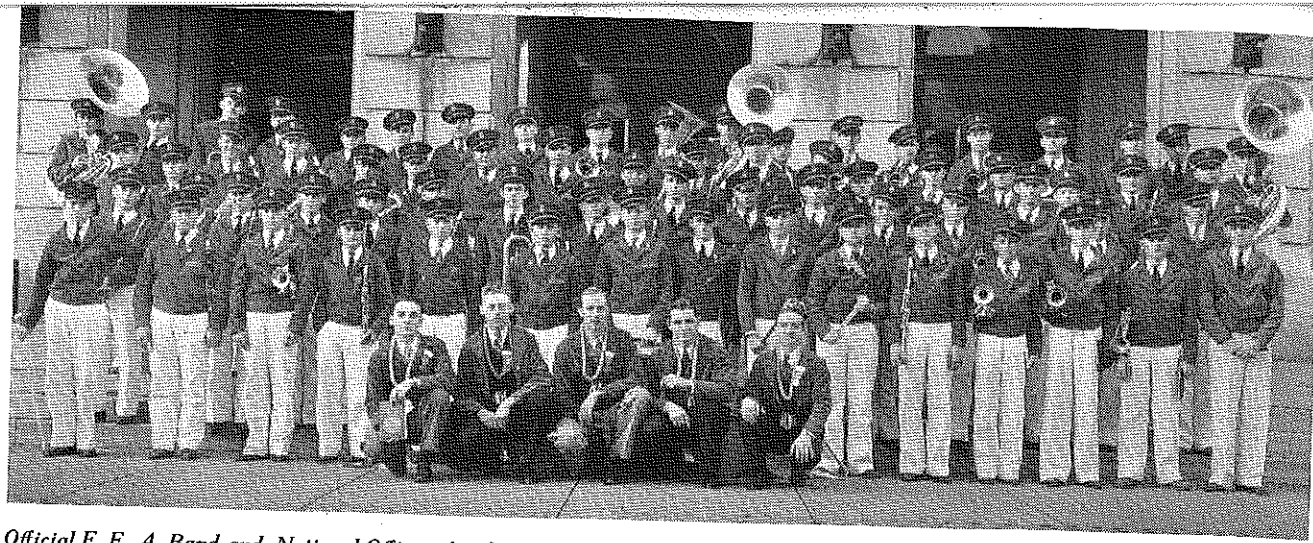
Meat—Illinois

For the third consecutive year Illinois placed first in the meat judging contest. The Cantor, Illinois, team coached by C. M. Stelzel, Leonard Nelson placed third as an individual, Donald McFall fifth and Nelson Moore tenth. The team scored 276 points out of a possible 300.

With scores of 98 out of a possible 100, Russell Hollensmith of Huntsville, Missouri and Everett Singleton of Harold, Texas, tied for the title of best individual meat judge in the contest. Each received



Winning dairy team, Greeley, Colorado. Left to right: Seated, Arne Magnuson, Joseph Roehmer. Standing: Floyd Adamson, H. F. Johnson, Coach



Official F. F. A. Band and National Officers for the Eighth Annual Convention, 1935. The 73 piece band was selected from 160 F. F. A. boys who applied from 26 local chapters in Texas. The band was directed by H. G. Rylander, teacher of agriculture, Itasca, Texas. Mr. Rylander is standing in the front row extreme right. Paul Haines, Director of Vocational Education, and J. B. Rutland, State Supervisor of Vocational Agriculture were in charge of the band. The 1935 National Officers—(left to right) George Myers, Pennsylvania; John Reisz, Kentucky; Jaques Waller, Florida; Andrew Sundstrom, South Dakota; and Leonard Arrington, Idaho.

a check for \$10 awarded by the American Royal Live Stock Show.

Poultry—Arkansas

The poultry team composed of James Kipple and Clifford Beckwith of Gentry, Arkansas, coached by G. T. Cherry, won the title of National champion at Kansas City, in a field of 24 teams.

William Edmonson of Broken Arrow, Oklahoma, placed first in the poultry contest and received a gold medal from Swift & Co., \$12 from the American Royal and a Parkette pen and pencil set from *The Country Gentleman*.

Milk Judging—Kansas

Competing as one of 22 state championship teams, Thello Dodd, Loren Van Patton, and Norman Lehmeyer, from Linn, Kansas, coached by Clark Milligan, won the milk judging contest.

Thello Dodd of this team ranked first in the contest and received a gold watch presented by the National Co-operative Milk Producers Federation of Washington, D. C., and in addition a cash award of \$12 from the American Royal Live Stock Show. The milk contest calls for considerable skill in determining various qualities in the samples on the basis of taste, smell, and appearance. Twenty-two teams competed.

Special prize to teams electing to judge both horses and mules:

The Horse and Mule Association of America, Wayne Dinsmore, Secretary, Chicago, Ill., awards a \$500 stallion or \$500 jack to the highest ranking team in the judging of horses and mules.

Monroeville High School, Ohio, represented by Leon Stein, Ralph P. Thomas, and Melvin Schafer, won this prize and selected the \$500 jack.

Showmanship Prizes Awarded

R. W. Moffett of Stuarts Draft, Virginia was adjudged the best beef cattle showman; Joe Reitshell of Lillon, Montana was best in showing horses and mules; Lloyd Johnson, Lakeside, Arizona received the award for his sheep

handling, and Chester Hauge, Bemidji, Minnesota was most skillful with dairy cattle. These boys were all alternates on their respective teams.

GREETINGS TO THE FUTURE FARMERS OF AMERICA

"Greetings to the Future Farmers of America assembled in convention," the telegram read. "America looks to our youth and especially the farm youth for efficient leaders and co-operators such as your organization provides. Regret that I am unable to be with you as I had hoped to be. Carry on."

"(Signed) J. W. Studebaker."

Six Honorary Degrees

THE honorary American Farmer Degree was conferred upon the following:

O. L. Chapman, Assistant Secretary of the Interior; F. H. Servatius, Secretary of the American Royal Livestock and Horse Show; G. M. Rohrbach, Assistant Manager in the Advertising Department of the John Deere Plow Company, Moline, Ill.; J. H. Pearson, Regional Agent of the Central Region, Office of Education, Washington, D. C.; L. R. Humphries, Utah State Adviser, and H. D. Garver, Local Adviser at Shawnee-Mission Rural High School.

Shawnee-Mission Chapter, Kansas Wins Chapter Contest Award

WINNER of the chapter achievement contest of the Future Farmers of America is the Shawnee-Mission Chapter of Merriam, Kansas. For submitting the best record in working as a group on supervised practice, co-operative activities, community service, and other activities, Shawnee-Mission Chapter receives first place and the award of \$300 and plaque.

Second in the Chapter Contest is the Golden Empire Chapter of Live Oak, California which receives a prize of \$200.

Third is the Little Valley Chapter of Little Valley, New York, winning an award of \$150.

Fourth place, with an award of \$100, went to Massanutten Chapter of Mt. Jackson, Virginia.

Shawnee-Mission High School, the home of the chapter taking first place, has a tradition of vocational training going back nearly a century. Here Indian and white boys studied farming in the Shawnee Indian Manual Labor School which later became first capitol of Kansas. One of the projects of the Shawnee-Mission Future Farmers of America was to assist in beautifying the grounds of this historic center of education, reli-

gion, and government. With seventy-two active members, Shawnee-Mission Chapter is one of the largest in the state. Members carried on 97 agricultural projects including the raising of 25 cows, 9 heifers, 29 fat steers, 33 sheep, 49 swine, 379 chickens, 4 acres of potatoes, and 20 acres of corn. Nearly 90 percent of the projects were fully owned by the boys undertaking them.

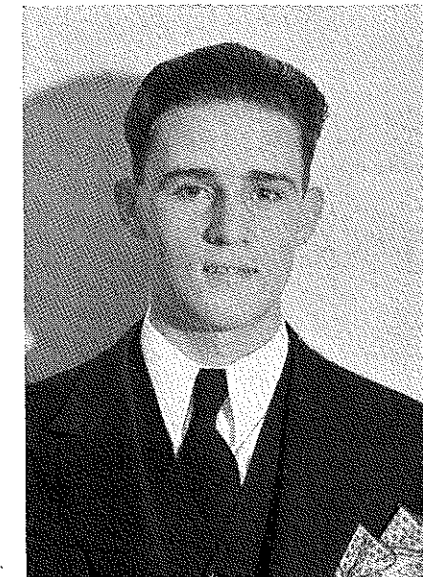
Among the co-operative activities in which the chapter engaged were these: Operation of electric incubators and one of the first electric hotbeds in this region, organization of a cow testing association which not only tested the cows of the chapter members but also ran tests on three herds of dairy cattle in the neighborhood, egg laying contests, battery brooding contests, publication of a chapter magazine, and the operation of a fruit and truck garden project for which members manufactured the necessary crates and boxes in the school work shop.

Featuring the Shawnee-Mission Chapter's report were illustrations of pioneer life compared with modern farm life. Mr. Frank Miller, staff artist for the

(Continued on page 96)

LAND USE

MONT KENNEY, Holden, Utah, Winner in the Eighth National F. F. A. Public Speaking Contest



Mont Kenney

"THE natural resources of America are the heritage of the whole nation and should be conserved and utilized for the benefit of all our people." This is the striking statement made by the National Resources Board in its recent report to President Franklin D. Roosevelt dealing with land use and other related problems involving our national resources.

The problem of land use has been, and is today, one of the most important questions that people and governments must face. History shows that when the people of a nation use their land resources wisely the nation grows and prospers; but, on the other hand, when they misuse and waste their land the nation begins to decay.² A new nation on virgin soil very seldom troubles itself with the problems of land use and the conservation of its natural resources. The traditional American attitude shows that we are no exception to this rule. Most of our trouble with land today is due to the lack of a land policy during the early settlement of our country. Our practice has been to develop and exploit the natural resources with little regard for the consequences. Unfortunately the attitude of our Federal Government has been to transfer its land to private ownership as rapidly as possible. This seems clearly shown from the fact that the laws controlling the acquisition of land have permitted, and even encouraged, people to acquire land that was unsuitable for occupancy. We have proceeded for one hundred years or more on the basis of every man looking out for himself and letting the future generations do the same. "Farm lands have been used and abused and bought and sold as mere commodities, practically without restriction."¹

AN effort has been made to farm millions of acres of land which are unsuited for cultivated crops. Much of this land was placed under cultivation because of land speculations schemes promoted by politicians and wealthy realtors. The high prices of farm products during the World War and other peak periods encouraged this unfortunate practice. The prevailing low prices during the depression and drought has been abandoned or sold for taxes. The families who made the struggle for a livelihood on such areas are now left destitute and dependent on government relief, rehabilitation and aid from the Resettlement Administration.

The lands in many sections of the United States are becoming less and less productive because of abuses of present and past owners. The soils have been depleted and worn out beyond profitable productivity and frequently are useless for grazing. Too often farmers plow and plant their land each year in an effort to harvest a crop but give little thought to the maintenance of soil fertility and the prevention of erosion. For years farmers have been mining instead of cultivating and conserving the soil. The eroded areas of the palouse section in Washington, the barren soils of New England, the wind blown soils of the Dakotas and the

natural resources that which in the past has been thoughtlessly and carelessly destroyed.

SINCE the report of the Country Life Commission in 1909, various agencies have been working on the problems of land use in one form or another. At the present time there are approximately twenty federal agencies classifying land, making surveys, and collecting other information concerning the problems of land use. At the same time a number of the states have become aware of the general problem and have passed legislation, appropriated money, appointed planning boards, and are now giving considerable attention to the solution of land use problems. The investigations of both the states and the national agencies have been hastened during the depression. These various agencies as yet have not coordinated their efforts effectively in a frontal attack on the common problem. It is encouraging to note, however, that public and private agencies, and the people in general, are becoming roused to the seriousness of the problem. The objectives in the program of these several agencies dealing with land use may be summarized as follows: First, a determination of land quality, both physical and economic, to serve as a reliable basis for permanent land utilization and rural rehabilitation; second, a determination of the best ultimate use of land; third, to devise ways and means of giving assistance and direction to local, State, and Federal agencies leading to the solution of the problems in land use and the formulation of a permanent land policy.³ Probably the Resettlement Administration and the National Resources Board are doing more to bring these land use problems to the attention of the people than any other agencies.

middle west, the fire-burnt areas of Montana and Idaho, the impoverished soils of the South—all of these areas and others bespeak the influence of man in disturbing the balance as set up by Nature.

THE rapid erosion of the soil of our country has created a problem which affects the interest of the entire nation. Erosion is causing a great loss of natural land wealth. For example, in Oklahoma during the period between 1926 and 1930, eighty percent of the land abandoned, or 1,350,000 acres, was abandoned because of the effects of soil erosion. Man has encouraged erosion to a great extent because of his own selfish motives in his methods of handling the soil. Americans generally, farmers and livestock men in particular, have prided themselves in freedom of action, which is a good thing until such freedom interferes with the common good. Some men have over-grazed private and public ranges and have given no thought to the future. These cases furnish some of the reasons for the deplorable conditions in which we find our country today.

This nation owes a great debt of gratitude to such men as Theodore Roosevelt and Gifford Pinchot who were influential in establishing great conservation movements such as forest reservations and national parks. In the early settlement of our country much of the timber cleared from the land was burned and the vegetative covering destroyed. For many years we have been using lumber over four times as fast as we have been growing it and until very recently Uncle Sam did very little about it. There was much opposition to forest service regulation when first instituted, but the wisdom of this far-reaching change in public land policy is now apparent. Because of deforestation practices, and promiscuous land settlement due to a lack of a land planning policy, the people of this nation are now faced with the problem of restoring to our

AGLANCE at the map of the problem of the National Resources Board indicates that our whole country, from coast to coast, is dotted with problem areas which must be given special consideration in a program of rehabilitation. Indeed, one is impressed with the fact that the whole country is concerned with the problems of land use. In a general way the federal agencies are recommending a long-time land policy as essential to solve these problems and correct the present abuses in the use of land. Immediate help is being given to distressed farmers by the Rural Rehabilitation Program of the Resettlement Administration. This program provides assistance in the form of loans for the purchase of new lands, seed, livestock, feed, equipment, and other commodities. The federal government is also planning a land purchasing program which will extend over a period of fifteen years. During this period it is proposed to purchase seventy-five million acres of sub-marginal land. These lands will be used in a program of grazing, reforestation, game refuges, playgrounds, and watersheds.

spending considerable time and money, at least forty-two states have appointed planning boards which have to do with such problems as land use. Several states have made appropriations to carry on surveys of land classification and have passed legislation including rural zoning laws. These zoning laws give the counties the power to designate specific lands for agriculture, forestry, and recreation. I refer particularly to the states of Wisconsin, Minnesota, Maryland, and Tennessee.

The problem of land deterioration due to misuse is a far-reaching challenge to our civilization. According to Dr. Gray: "Whenever you have a deteriorating land area, you have a deteriorating people!"⁴

Are we, as American citizens, going to sit idly by and see our land misused due to the lack of proper planning and utilization? Certainly the answer will be "NO." Now is the time to act—act to bring the question of proper land use to the consciousness of every true blooded American citizen in order to preserve our land resources, the greatest of all our natural heritages. Let it not be said by our future generations: "Here's the farm, but WHERE'S THE SOIL?"⁵ In the language of the National Resources Board, "We are tenants and transients on the earth. Let us hand down our heritage not only unimpaired but enriched to those who come after us."

- 1 Report of the U. S. National Resources Board, December 1, 1934.
- 2 Land and Civilization—A. F. Bracken, President, Western Division American Agronomy Association.
- 3 Proceedings of Western Farm Economics Association; June, 1934, p. 70.
- 4 L. C. Gray, Director of Land Section, National Resources Board.
- 5 Author unknown.

Shawnee-Mission Chapter, Kansas, Wins Chapter Award

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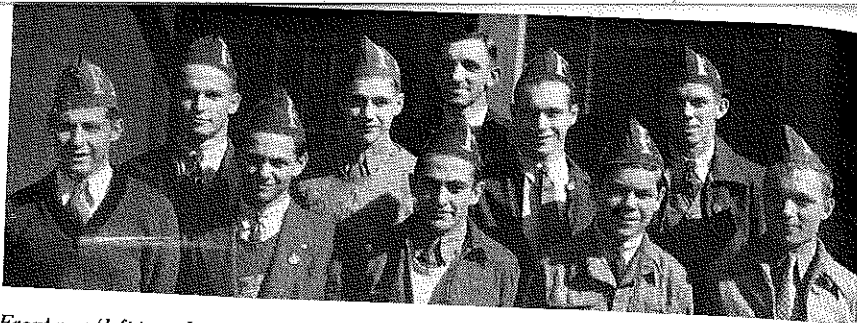
Kansas City Star, made the illustrations accepting in payment improvement work on his lawn by members of the chapter.

J. W. England III, a member of the chapter, was runner-up in the national F.F.A. public speaking contest last year.

President of the Shawnee-Mission Chapter is James Nutt and the adviser is H. D. Garver.

Live Oak Chapter, California, is distinguished for its varied program which guaranteed that all members would obtain broad experience in farming skills. By co-operation the chapter raised nearly a thousand dollars to make possible a trip to Yellowstone, Grand Canyon, Boulder Dam, and other National Parks in a truck purchased and outfitted by the chapter. Edward Coboan is president of the chapter and E. R. Hansen is adviser.

Little Valley Chapter, with a membership of twenty-five, in a New York dairy region distinguished itself in dairying and forestry. Members raised 76 purebred calves—an average of three per member. They made a survey of the herds owned by sixty farmers in the neighborhood. By agreement with farmers owning purebred bulls, Little Valley chapter members obtained and raised bull calves in return for 50 percent of the



Front row (left to right): Houston Carter, President, 1934; Vernon Needham, Secretary, 1935; James Nutt, President, 1935; Robert McAnany, Reporter, 1935; Charles Mangold, Vice-President, 1935. Back row (left to right): Lawrence Miller, Secretary, 1934; Leighton Kester, Treasurer, 1935; H. D. Garver, Chapter Adviser; Douglas Christy, Treasurer, 1934; Harry Weber, Vice-President, 1934; J. W. England, Reporter, 1934 could not be present due to the fact that he was a state delegate. Shawnee-Mission Chapter elects officers in the middle of the school year, hence the two sets of officers. These officers were in office during the year 1934-35, at which time the chapter's year of activities was reported in the 1935 National Better Chapter Contest. Shawnee-Mission Chapter placed first in this contest, winning a beautiful plaque and \$300 in cash. The chapter plans to use this money as a project loan fund for active members.

net proceeds. The chapter owns one bull outright and has a half interest in fully a dozen more. The net result is improvement of herds thruout the region.

Little Valley boys also engaged in a co-operative reforestation project, planting a total of 26,000 trees in the watershed of the village's reservoir. By agreement with the village officials, the Future Farmers Chapter will be permitted to cut 6,000 Christmas trees when mature. Proceeds from sales will be used as Christmas present scholarship loans to Little Valley Future Farmers. President of the Little Valley Chapter is Lynn I. Wood and the local chapter

adviser is H. J. Shoup.

Massanutten Chapter in the Shenandoah Valley developed close relations with all the activities of its home community, Mt. Jackson. Under the leadership of President Fred Fadely, members raised 54 acres of corn, 17 acres of wheat, 17 acres of barley, 20 acres of clover hay, raised 1660 hens for market and 2040 broilers. Their projects also include 11 cows. The chapter ran four fertilizer experiments on corn, two on potatoes, and three on pastures. Earnings of this chapter for one year totaled almost \$1,000. The adviser of the Massanutten Chapter is C. E. Richards.

Pencil And Paper Tests For Measuring Achievement in Vocational Agriculture

(Continued from page 91)

food for thought for anyone undertaking the difficult but important task of perfecting ways and means for measuring the outcomes of instruction in vocational agriculture.

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- 2 Tyler, R. W. *Constructing Achievement Tests*, pp. 1-14. Columbus, Ohio: Bureau of Educational Research, Ohio State University, 1934.
- 3 *Training Objectives in Vocational Agriculture*, p. 1, Bulletin 153. Washington, D. C.: Federal Board for Vocational Education, 1931.
- 4 The writer wishes to acknowledge the hearty co-operation of I. H. Fay, Agricultural Teacher Trainer, Wisconsin Board of Vocational Education, in the formulation and administration of the tests upon which this study is based.
- 5 From data collected through the Wisconsin Co-operative Testing Program for high school pupils and compiled by the writer.
- 6 About thirty correlations were computed for various portions of the test. Professor H. C. Wilkerson, his classes, and Earl Julson, all of the Platteville State Teachers College, assisted materially with these computations.
- 7 Bedell, R. C. *The Relationship between the Ability to Recall and the Ability to Infer in Specific Learning Situations*. Kirksville, Missouri: Bulletin of the Northeast Missouri State Teachers College, p. 55.
- 8 Tyler, *op. cit.*, p. 102.
- 9 Brown, Clara M. *Syllabus for Educational Measurement*, Part A, p. 83. University of Minnesota, Division of Home Economics.
- 10 Hendricks, B. C. and Tyler, R. W. "Testing for a Mastery of the Principles of Chemistry," *Science Education*, Vol. 18, December, 1934, pp. 212-215.

11 Johnson, P. O. "The Measurement of Outcomes of Instruction Other than Information," *School Science and Mathematics*, Vol. 34, January, 1934, pp. 26-33.

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Future Farmer Wheat Projects

THE Joplin Montana Chapter of the Future Farmers of America had an unusually successful year with wheat projects.

The objective of the chapter, as set by the group of boys last year, was 8,000 bushels. That goal seemed large in view of the fact that a serious grasshopper infestation was predicted for the section.

With this aim in mind, each boy set about his task with the determination to do his part to reach the objective. The result was 8783 bushels of high-grade Marquis and Supreme wheat. This represented eleven projects composed of 567 acres.

At the closing of the project records November 15th, the total receipts were \$7590.11, the total debits \$3506.96 leaving a net profit of \$4063.15.

The average selling price was 84.14 cents per bushel. The cost of production, was 39.9 cents per bushel.

F. F. A. Chapters—Have a program of work and work the program.

F. F. A. exhibits are important.