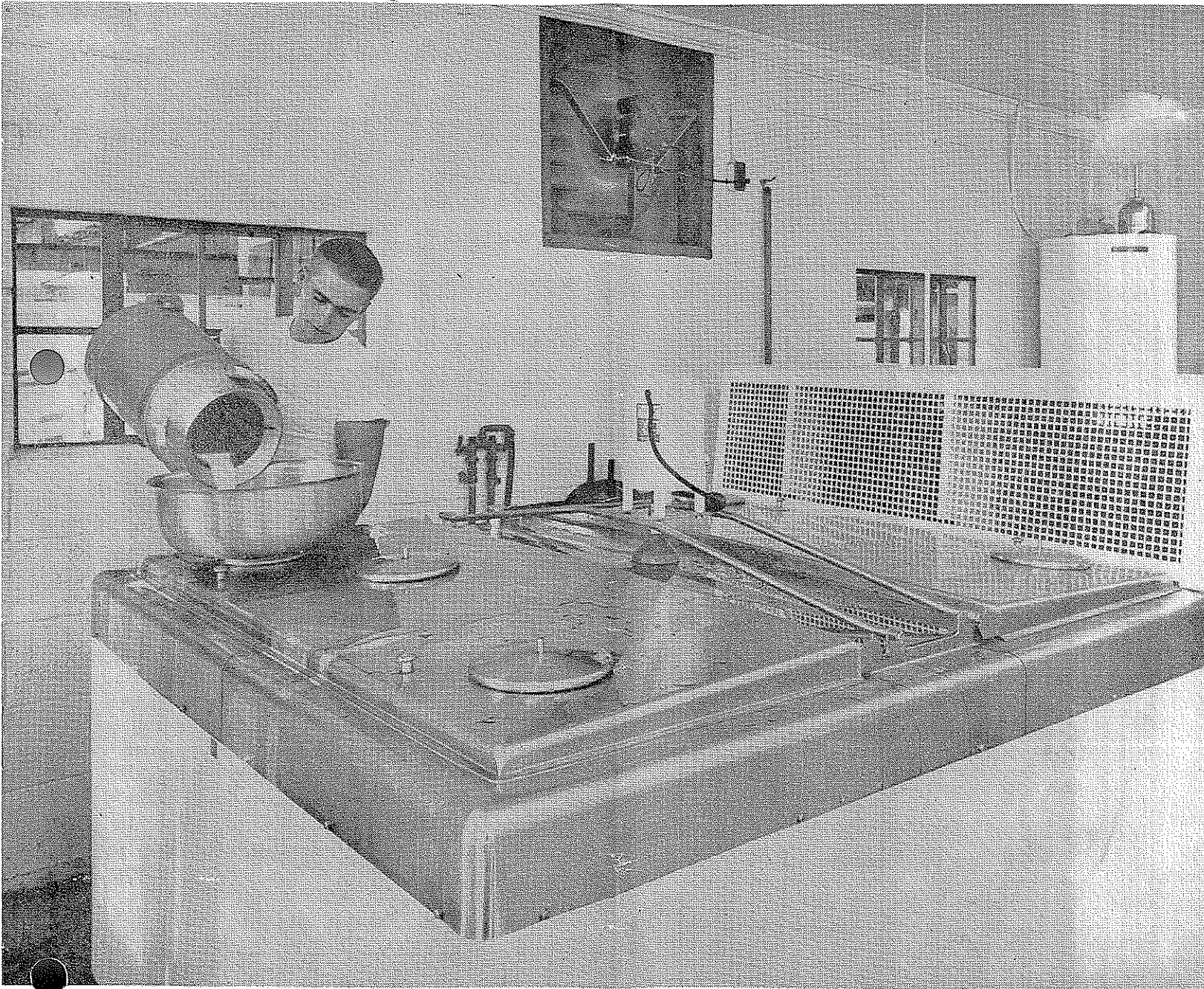


AGricultural EDucation

VOLUME 35

FEBRUARY 1963

NUMBER 7



*Featuring—*Maintaining Technical Competence

Also a Special Report on Vocational Agriculture
From the President's Panel of Consultants

A monthly magazine except for a combined issue of August & September for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Interstate Printers and Publishers, Danville, Illinois.

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The Agricultural Education Magazine

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Second-class postage paid at Danville, Illinois.

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THE COVER PICTURE

Agencies controlling the sanitary production and handling of milk have continued to make their regulations more stringent. These developments have technical agriculture and farm mechanics implications which must be considered by Vocational Agriculture Teachers in updating their teaching.

—Photo courtesy of R. S. Crist, West Penn Power Company, Greensburg, Pennsylvania.

Guest Editorial

How Fast Are We Traveling?

T. L. FAULKNER, Supervision, Alabama

"You can't push something that's traveling faster than you are traveling." This famous statement made by the late Charles F. Kettering several years ago. It was a true statement then; it is true today. And . . . so it is in teaching vocational agriculture. We can't successfully teach today if agriculture and rural living are changing faster than we are changing. Technical competence must be maintained.

We are told that agriculture has made more progress in the past ten years than was made the previous 100 years. This being true, what will it be like ten or twenty years from now or at the turn of the century only thirty-seven years away. We are told that the world population will be doubled by that time, which means that twice as much food and fiber must be provided. Some of us may still be teaching vo-ag when our population has doubled. Will we be ready and willing to meet this challenge?

What, then, can the teachers of vocational agriculture do in order to keep up to date and ahead of the fantastic progress that is being made today in agriculture and education? What can state staffs do to help the teachers keep up? At first thought you will probably say the one answer to meeting this challenge will be a strong in-service education program, and you will be definitely correct. The successful teacher, teacher educator, or supervisor never stops learning. They are continually reading, studying, observing, learning new skills, and securing new ideas. Yes . . . they are "Maintaining Technical Competence."

Here is how some states are meeting this problem. One questionnaire all teachers during their annual conference for the problem areas in which they need help. After the needs are determined, resource personnel from the state staffs in Supervision, Teacher Training, the Agricultural College, Extension Service, and others are made available. These resource people help conduct workshops and educational meetings throughout the year.

Two years ago the teachers in Alabama requested additional training in farm welding. In June of 1961, forty selected teachers were brought in to the college and given a twenty-hour streamlined course in farm welding. Working in pairs during July of the same year, these key teachers, along with our University farm shop instructor, conducted twenty similar workshops, thereby completely covering the state. As a result, more and better farm welding is being taught to adult and high school students throughout the state.

During the summer of 1962 a similar program was conducted in the repair and maintenance of small

(Continued on Next Page)

From the Editor's Desk

Next Steps for Our Professional Magazine

The Agricultural Education Magazine is now on a sound financial basis.

This sums up the reports of business manager T. L. Faulkner and publisher Russell Guin to the Editing Managing Board as they met in Milwaukee on December 4. Their reports covered the previous year's activities during which it was found necessary to increase the subscription rate from two to three dollars and to issue one combined issue. Since subscriptions for the magazine are received every month of the year, a more complete analysis can be made at the close of a year's operation under the new rate.

The latest count shows slightly over 8,000 subscribers which is within 2% of the count at this time last year. In view of the increase in subscription rate here is a testimonial to the loyalty of our subscribers and to leaders in the profession who made special efforts to secure new subscribers.

A real challenge to the Editing Managing Board and to the profession lies in the fact that only about two-thirds of those engaged in our profession have subscribed to their professional journal during the past few years. These individuals, we believe, have missed an opportunity for professional growth. The profession as a whole has also suffered in that our advancement depends upon securing the maximum contribution of every individual.

Another aspect of the problem lies in the wide differences in percentages of subscribers from state to state. While more than half of the states have 100% of their membership as subscribers a number of states with large memberships in the profession have only a handful of subscribers to the magazine.

The board proposes two attacks on this problem; first to make the magazine interesting and attractive enough that members of the profession will want to read it, and, secondly, to aggressively promote new subscriptions in states which have small percentages of subscribers.

Within this proposal there is an opportunity for every reader to do his bit for his profession and his professional publication. You can testify of the value of the magazine to others. You can send in your suggestions for the improvement of the publication. You can send in articles and other contributions. You can suggest that others contribute to the magazine. Finally, you can put in practice those ideas which you glean from reading the magazine and so contribute to your profession.

Ray J. Woodin

How Fast . . .

gasoline engines. A factory representative was obtained to help train the key teachers. These two-day workshops proved to be most successful. New practice engines and tools have been secured for all vo-ag shops, and instruction is now being given in adult classes and to in-school students. Plans are now being developed to conduct a similar workshop program in home beautification or landscaping during the summer of 1963. The key vo-ag teachers are being trained by staff members of the University School of Agriculture and the Extension Service.

We should like to pay tribute to the Southern Association for Agricultural Engineering and Vocational Agriculture for its contribution in helping vo-ag teachers maintain technical competence. The SAAE&VA has developed and provided many outstanding and up-to-date technical references in the Farm Mechanics field during the past eighteen years. The high value of this service is due to the fact that the materials produced are not available from any other source.

And so . . . in the final analysis every teacher must assume the responsibility for keeping himself competent. The resource people serving him can only offer opportunities. When they are not available, he and his fellow workers must create them. The job of keeping up to date must be done or we fail the people who support us. Therefore, our responsibility in Maintaining Technical Competence in Vocational Agriculture never ends. In fact, it becomes increasingly urgent as our technology advances. □

From Horner Isaacs

Thirty years ago, Carsie Hammonds wrote: The struggle of the farmer to live like other men is still keen and strong. How the struggle will end, no one is wise enough to predict with certainty. There are encouraging signs. Agricultural science has transformed farming into a creative process. The farmer is surrounded by institutions which can bring the world to his doorstep. Men and young men are preparing themselves for the vocation of farming and will be satisfied with nothing less than such desirable things as other men hold dear."

Sir:

M. D. Mobley's letter in the December issue is most timely and important.

If members of Congress are to act wisely upon recommendations which come from the President's Panel of Consultants on Vocational Education, it is imperative that they have a comprehensive understanding and an acquaintance of the many reasons for effective strong Vo Ag programs in the future. No one is in a better position to help congressmen do this than are the vocational agriculture instructors who reside in the districts from which they come.

Glen H. Strain,
Lincoln, Nebraska

Sir:

I read with considerable interest your article "Public Relations During The Next Decade." If we are to have the good will and support of the other 94% who will not be farming in the 1970's we certainly will have to keep them informed and merit their financial help.

Agricultural teachers must strengthen faith in their work before they can do an effective job on Public Relations. I believe too that personal contacts are still probably our best means of communication and public relations.

V. D. Rice,
Williston, North Dakota

Sir:

For the most part I thoroughly agree with Ovid Bay, for I've long been of the opinion that we in vocational agriculture have been hiding the light of our accomplishments under a basket and not getting it up on the candlestick for all men to see. The most disturbing element is the apparent inability of Agriculture to tell the farmer's story to the 90 percent of our people who are non-farm. It is almost inconceivable to those of us engaged in agriculture that the big city newspapers and magazines—and it would appear as if it were by intent—have striven to distort public perspective about agriculture.

True, vocational agriculture has a part to play in creating this more favorable image for agriculture as pointed out in Mr. Bay's article; but it is the job of *all of agriculture* and

not of vocational agriculture alone. We all must take every opportunity to bring about a respected public opinion of agriculture.

We are ahead in the race to plenty, thanks to the American farmer. Others all over the world are envious of our position and are trying to get there too.

Bert L. Brown,
Olympic, Washington

Sir:

I planned to submit an article about our work in Thailand and wrote it last March. As yet, I haven't gotten it cleared.

I originally came to Thailand to advise the College of Agriculture and then the Ministry of Education asked me to study their 17 vocational agriculture schools, then recommended four be upgraded to junior colleges. They asked that I be permanently detailed to work with them and to make a study of their teacher training school and continue to work with them in upgrading the four schools.

I ignore your plea for more subscribers and circulate my copy among the staff, then to the ministry, and then into the Library of the Teacher Training Institute, so it gets rather dog-eared but well read by the end of the trail.

I have missed the group, the AVA Convention, Regional Conference, etc., but look forward to returning next year. I took this as a two-year assignment, and I feel that the experience will be wonderful but I am ready to return to stateside life as a college professor.

Harry W. Kitts,
Bangkok, Thailand

Sir:

There is no disagreement that a primary purpose of adult education is to "teach farmers to be better businessmen and competent to make farm management decisions on their own" as expressed by Reily in his article on "A County Wide Approach to Adult Education."

Each Vocational Agricultural Instructor with his close personal contacts is in the best possible position to do the job. If the local instructor does not feel competent in the farm business area a special instructor working in several schools could pre-

sent the technical information in adult class sessions, with the follow up instruction being done by the local instructor.

Guiding a county wide approach is a responsibility of the Agricultural Extension Service. A cooperative program with the Extension Service supplying the subject matter specialist and Vocational Agricultural Instructors doing the follow up instruction has been successful in our County which has eight Vo-Ag departments.

Glen R. Boling,
Wooster, Ohio

Sir:

The position paper by Mr. Kalangi of Hyderabad, India represents a refreshing point of view in contrast to views held in some developing countries. I refer to the organization of separate vocational schools as contrasted with the new multi-purpose secondary schools now being developed in India. I refer also to the

feeling in some countries that the farmer need not be educated but that he should be "advised" or "supervised" through some sort of governmental or extension type program. In some instances there has appeared the mistaken notion that a country can make the leap from a primitive, agrarian economy to an urban, industrialized economy without developing its agriculture. The building of the agricultural phase of the economy to a strong position is effectively stressed by Mr. Kalangi.

It is to be hoped that, while recognizing "vocational agriculture in the U.S.A." as offering "a promising pattern," the mistakes we have made in this country may not be repeated in India. I refer to our preoccupation with education of high-school youth to the neglect of adult education. Adult education will have greater effect on increased production of food, if tested techniques of teaching are used. I refer also to our failure to parallel vocational agriculture with

good courses in general education in agriculture. It should be borne in mind that if Mr. Kalangi's recommendations were to be carried out, the instruction in agriculture that is truly *vocational* in character will not have the highest *general* education value for the urban people of whom he writes. Students with vocational objectives in agriculture and those with general objectives can not generally succeed in achieving their objectives if enrolled in the same course.

The Agricultural Education Magazine is making an important contribution to its readers' understanding of programs of agricultural education in other countries. As the audience of our professional magazine is augmented by increasing numbers of educators from other countries the international aspects of agricultural education take on greater significance.

Harold M. Byram,
East Lansing, Michigan

The Why and How of Maintaining Technical Competence for Teaching

BENTON K. BRISTOL, Teacher Education

The Pennsylvania State University, University Park, Pennsylvania

Not long ago a brilliant young engineer wrote a searing condemnation of engineers who make "too little effort to keep abreast of ever-expanding and changing knowledge and techniques." He also insisted that classroom emphasis should be on the "why" aspect of engineering rather than the "how," since the "how" becomes outdated so rapidly.

A noted professor of physics in an address at a creative problem-solving institute stressed "technology's need for more creativity in education." He recognized the *responsibilities* and *opportunities* of the small community which has "helped to provide that indefinable something which made our country great." This man believes that schools should provide a "substitute working environment that requires *significant* achievement as the prerequisite to recognition."

Problems in maintaining technical competence are present in all fields of work. We recognize the engineer's statements as applying to agricultural

education as well as to engineering. It is not difficult to understand that the remarks by the professor of physics apply with equal accuracy to the need for workers in agricultural education to seek more creative approaches as they attempt to maintain their technical competence.

Before proceeding further, let's agree on the working definitions which follow:

Maintain—to continue or persevere in or with; to carry on; to keep possession of; to hold or keep in a valid or efficient condition; to keep up-to-date

Technical—any word, series of words, body of truths, principles, laws or apparatus which pertain to a particular field of endeavor

Competence—capable or sufficient, especially as it refers to one who is able to apply technical information to the needs of his field

Interest in "professional improvement" and "in-service programs and procedures" is shown by the fact that for a recent ten-year period the *Sum-*

maries of Studies in Agricultural Education listed more than 50 studies under the two classifications. Excellent articles have been published in *The Agricultural Education Magazine*, and entire issues have featured such themes as "Professional Improvement," "Improving Professional Status," "Professional Preparation and Improvement," "Adjusting Agricultural Education to Technological Change" and "Is the Farm Mechanics Program Keeping Up?" *The Journal of the American Association of Teacher Educators in Agriculture* has emphasized the importance of professional competence for leaders in agricultural education at all levels.

There are many questions concerning the maintenance of technical competence which should be answered. Four of them are considered briefly in the paragraphs which follow.¹

¹Based on the results of the *Agricultural Education Studies*, 1952-61; *The Agricultural Education Magazine* articles, January 1952-January 1962; and all issues of *AATEA Journal*.

What's in it for me?—Examples of rewards for achieving (and then maintaining) technical competence are: the satisfaction of being able to do an outstanding job, increased inspiration to achieve greater goals, improved teaching ability, desirable growth in self confidence, broader viewpoints, more mature philosophy of education, improved ability to do significant research and to interpret the research done by others, greater skill in writing (or any other desired talent), valuable contacts, enhanced prestige and professional recognition.

What needs to be done?—There needs to be more satisfactory follow-up first-year workers, more effective supervision of all personnel and improvement of both formal and informal in-service education. Not only first-year teachers but first-year teacher educators, first-year supervisors and first-year specialists need adequate follow-up assistance. All personnel from the national level to the local level should have more effective supervision than they are now getting. Greater freedom for innovation in all types of in-service education is essential. This is true for individuals and for groups.

How?—Each individual will need to answer this question for himself ac-

ording to his actual needs as he adjusts to changing situations. Opportunities for a variety of appropriate in-service education activities need to be readily available to him. They should be planned on a "year round" basis.

An example of this continuous every month effort is furnished by a list of The Pennsylvania State University Ag. Ed. 434v "Agricultural Developments" classes scheduled for 1962-63. Dr. Gene M. Love is responsible for the technical agriculture phases of this program, while the writer is responsible for the farm mechanics phases.

Friday evening, Saturday morning and summer on-campus classes; visits to first-year and experienced teachers by teacher education and supervisory staff members; monthly area teachers' meetings; annual teachers' conference,



Photo A—Pennsylvania teachers of vocational agriculture begin work on a 24 ft. x 40 ft. garage and machine shed as part of an in-service teacher education workshop.

—Photo courtesy of H. F. Longwell, Teacher of Vocational Agriculture, Elderton Joint High School, Elderton, Pennsylvania.

cooperating teacher conference and county institutes; department evaluations; university correspondence courses and other programs provide numerous opportunities for Pennsylvania agricultural education personnel to maintain their technical competence.

Over 40 publications written especially for workers in the State are available from the Department of Agricultural Education, and the 14-page Newsletter, *Pennsylvania Agricultural Education* is published monthly from September through June.

Why should we maintain technical competence?—Workers in agricultural education must keep up-to-date because of (a) the rapid accumulation of new vocational agriculture knowledge, (b) new developments in technical subject matter and (c) greater possibilities for making more effective applications of professional subject matter.

We owe it to ourselves, our profession and our nation to meet the highest standards of service and effectiveness. This is possible only when we "pay the price" necessary to achieve—and then maintain—the required technical competence. □

AG. ED. 434v "AGRICULTURAL DEVELOPMENTS" 1962-63
The Pennsylvania State University

Workshops listed according to dates, credits, course content & locations

| | | | |
|----------|------------|---------------------------|-------------------|
| July 6 | non-credit | Forage Crop Management | Bedford |
| 9-13 | 1-credit | Budgetary Analysis | Lampeter |
| 23-27 | 1-credit | Landscaping Home Grounds | Greensburg |
| Aug. 2-3 | non-credit | Dairy & Livestock Judging | Penn State campus |
| 20-22 | 1-credit | Hay Baler Care & Maint. | Penn State campus |
| 27-29 | 1-credit | Methods of Teaching | Selinsgrove |

Off-campus courses. Courses are all one-credit or two-credit, depending upon the number and length of meetings.

Quality Milk

Oct. 1, 8, 15, 29 & Nov. 5, 12—State College

Dec. 18, Jan. 15, Feb. 19, Mar. 19, Apr. 16, May 21—Shillington

Oct. 22, 23, 24, 25, 26—Lewisburg

Nov. 1, 8, 15, 29 & Dec. 6, 13—Greensburg

Jan. 2, Feb. 6, Mar. 6, 27 & May 1, 22—Shippensburg

Nov. 6, Dec. 11, Jan. 22, Feb. 26, Mar. 26, Apr. 23—Mansfield

June 25, 26, 27—Bedford

Landscape and Design

Oct. 10, Nov. 14, Dec. 12, Jan. 16, Feb. 13, Mar. 13, Apr. 10—Eisler's Nursery, 11 miles East of Butler

Farm Mechanics

Oct. 2, Nov. 6, Dec. 4, Feb. 5, Mar. 5, Apr. 16—New Bethlehem

Oct. 4, Nov. 8, Dec. 6, Feb. 7, Mar. 7, Apr. 18—Cambridge Springs

Sept. 5, Oct. 3, 17, Nov. 7, 21, Dec. 5, 19, Feb. 6, 20, Mar. 6, 20, Apr. 17—Homer City

Oct. 10, Nov. 14, Dec. 12, Feb. 13, Mar. 13, Apr. 24—Ephrata

Small Gasoline Engines

Sept. 11, Oct. 9, 16, Nov. 13, 27, Dec. 11, Feb. 12, 26, Mar. 12, 26, Apr. 23, May 7—Danville

Attendance for courses where credit may be earned has ranged from 10 to 28, with an average of 18. For non-credit courses, the attendance generally is higher. Over 40 attended the Dairy and Livestock Judging School.

Themes for Future Issues—

July—Improving High School Courses

August—Planning Occupational Experience and Farming Programs

September—Teaching Farm Management

October—Teaching Adult and Young Farmer Classes

Summer Help for Minnesota Teachers in Farm Machinery Operation

LEWIS C. TAYLOR, Department of Agricultural Engineering,
University of Minnesota, St. Paul



The June 1960 issue of "Agricultural Engineering," gave a report of the work done by the Committee on Agricultural Teacher Training, Education and Research Division, American Society of Agricultural Engineers in stating policy and recommendations which would apply to the teaching of farm mechanics. Among the statements given in this excellent report was a section on farm power and machinery which stated that one of the objectives of instruction in this area should be to develop the ability to operate, adjust and service machinery.

Here in Minnesota we have started on a program which attempts to explore the objectives set forth by the above committee and to assist in the planning of instruction which will promote the teaching of the operation, maintenance and adjustment of the machines used on the farms.

Deciding What to Teach

The present program was initiated at the College of Agriculture and the

initial planning called for some specific examples of machines which could be used in the teaching program and which would have statewide application. After due consideration was given to the census figures for the state pertaining to the number of various machines on farms, it was decided that hay balers and combines would have a broad enough application to be useful for this purpose. A series of operator's manuals for each machine was consulted to obtain some insight on the jobs expressed in the manuals, the thinking being that the jobs set forth in the operator's manuals would be those which the companies would expect the farmers to become proficient in for their farming operations. This in turn would have implications for the teacher of vocational agriculture. If the farmer should be expected to know and to perform those operations set forth in the manual, then possibly the teacher who is teaching for proficiency in farming should know and be able to perform those operations also. Man-

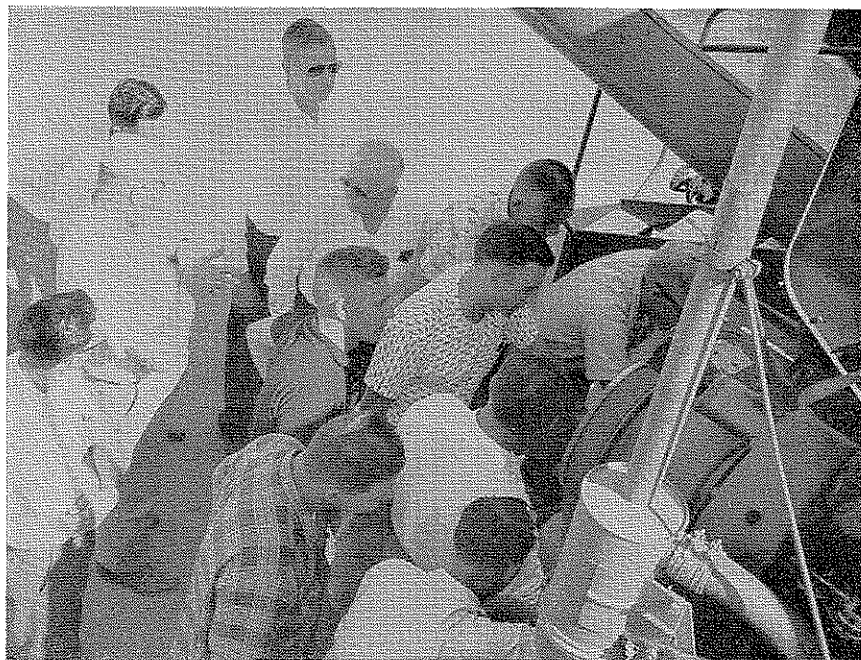
uals for Allis-Chalmers, Case, Ford, International Harvester, John Deere, Massey-Ferguson, Minneapolis-Moline, New Holland, and Oliver companies were all consulted to ascertain the similarities and the differences in the operational procedures set forth in each company's manuals. The thinking which prompted this was that particular attention should be paid to those jobs which were similar to most of the machines, and the special jobs could be taken care of on an individual basis.

The Workshop Program

On the basis of the work done to establish the needs of the instructional program, it was decided that two days would be required to make a minimum presentation which would give the teachers a working knowledge of each machine used in the program. Therefore a two-day workshop was outlined according to the following plan:

1st Day:

- 9:00 a.m. Introduction to workshop participants.
Philosophy of workshop.
Objectives.
- 10:00 a.m. Literature and references used in the workshop.
- 11:00 a.m. Component parts of implement.
General principles of operation and adjustments.
- 12:00 noon Lunch
- 1:00 p.m. Dealer presentation of each implement.
Individual demonstrations on operation, adjustment, and maintenance procedures.
- 3:00 p.m. Safety practices of operation, maintenance, and adjustment.



Dealer presentation of the combine. Here the teachers are observing adjustments recommended by the operator's manual for owner responsibility.

3:30 p.m. Teacher operation and adjustment of implements.

2nd Day:

9:00 a.m. Field operation and adjustments of implement.

12:00 noon Lunch

1:00 p.m. Review of safety procedures.

1:30 p.m. Application of workshop information to vocational agriculture teaching.

2:30 p.m. Critique of workshop. Suggestions for improvement.

Teacher Acceptance

The acceptance of the workshops by the vocational agriculture teachers was very good. About one-third of the teachers attended the two-day activities and enthusiastically participated in the events. Some time was given at the beginning of the workshop for explanation and discussion of the purposes of the event. It was felt advisable to make sure that everyone knew of the planning which had gone into the development of the workshop, and also it was felt advisable to give the participants the opportunity to react to the proposals. In this way a more nearly unified action could be expected from the members of the workshop.

Operator's manuals and related written material formed the bulk of the supporting reference information used in the workshops. The farm machinery companies very generously furnished enough manuals so that all participants could be supplied. This permitted the individuals to have in their hands specific information about each implement as it was presented and to form ideas concerning the extent to which they should go in working on machinery in their programs. The information presented in the owner's manual proved to be a good indication of the responsibility of the vocational agriculture teacher. The workshop did not attempt to limit the teacher to any one source of information but it did attempt to give the teacher a good basis upon which to build additional activities. By learning the recommendation and activities presented in the owner's manual, the teacher could develop a basis for his farm machinery instruction. The owner's manual does much

to fix the extent of the vocational agriculture teacher's responsibility in the teaching of farm machinery.

Given a sound background in regard to the source of information presented at the workshops, the participants were then shown each machine. As a machine was shown, the elements which were peculiar to it were stressed. The machine was presented in an overview first. As an example, with the combine, the flow of material was followed through the entire machine. The function of each element of the combine, that is cutting, transporting, threshing, separating, cleaning and storing, was shown as the talk pertaining to the flow of material through the combine progressed. It was felt that in this way the workshop participants would begin to form an opinion of the overall function of the combine and would develop ideas about the operation of it. As a means of reinforcing the learning relating the entire operation of the combine, the power train of the combine was discussed after the flow of material was traced through the machine.

After the machine was discussed in a general way, each dealer was given the opportunity to present his own machine to the group. The dealer stressed the operational design of his machine and gave pointers on adjustments in which the owners should become proficient to use the machine in the most efficient manner. At this time the class members were encouraged to ask questions relating to the operation, maintenance, and adjustment of the machine. It was felt that the dealers would be the most authoritative source of information regarding each machine and that the class members at this time could clear up any of the questions which they had.

Practice in Adjustment

After the dealer presentation, the machines were put out of adjustment by the dealers. The teachers were asked to inspect the machines, determine the adjustments which should be made to put the machine in operable condition, and finally to make each adjustment under the supervision of the dealers. At this time, the symptoms of each maladjustment were discussed and the teachers were asked to make tentative guesses about the results in the end product when the machine was out of adjustment.

These activities completed the first day, and it was thought that this,

with proper follow-up reading in the operator's manuals would prepare the teacher for the next morning's work. This consisted of actually operating the machine under field conditions. In the case of the hay baler, several acres of hay were baled with the machines which were used in the first day's discussions. The teachers were asked to assume the responsibility of making sure that they took a turn at running the baler through the field and performing the checks necessary to determine that the baler was operating according to recommended conditions. There proved to be enough problems in getting the balers operating smoothly so that there was sufficient review of adjustment procedures for the teachers.

When the field operations were completed, the teachers were brought back into the classroom. Here a review of the workshop activities was carried out. Visual aid material for teaching operation, maintenance and adjustment of the machine were presented and a discussion was held pertaining to the application of the workshop activities to the teachers' instructional programs.

Promising Results

Since the completion of the workshops, reports have come in pertaining to the results of the activities. While some of the reports do indicate that the teachers will need some time and some practice to perfect the abilities taught at the workshops, there are strong indications that more instruction is being given in the area of farm machinery as a result of the workshops. One agriculture instructor reported that his school district had acquired a new superintendent of schools. The superintendent came to the farm mechanics class on an inspection tour and upon seeing the agriculture instructor's classroom work with the operation of the combine said that it had been some time since he had seen a good-sized piece of farm machinery in the agriculture shop. The superintendent complimented the agriculture instructor for his ability to relate the instructional program to the actual farming problems of the community. □

A wise old owl sat on an oak;
The more he saw the less he spoke;
The less he spoke the more he heard;
Why aren't we like that wise
old bird?

—Edward Hersey Richards

Try a Welding Contest!

WILLIAM L. CARR, State University of New York,
Morrisville, N.Y.



We have a contest in everything else—why not welding? There are very few manipulative skills which students are more interested in during this “mechanical age” and the degree of proficiency within a group of students varies considerably. These two facts combined with the need for increasing the proficiency of students in welding makes it a very desirable contest.

Ralph Whitehead, my partner, and I have conducted an electric welding contest for Vo-Ag boys at our annual “F. F. A. Judging Contests” here at the college for the past 4 years. The details of the operation of the contest represent our own ideas as we had never heard of an electric welding contest of this type when we set it up. Our method seems to work in our situation and, of course, may or may not work out with you. The event is designed as an educational device and this is stressed more than the competition. As you will notice, each weld is graded in front of the student and suggestions for improvement are made.

Operation of the Contest

We conduct the contest by having the contestants group outside the door where they are given the contest score sheet and an explanation of the procedure to be used in the contest. As they go in the door in

single line, they receive four pieces of metal per student. You can see it takes a lot of metal. There is only one student at a welder at a time. The students next in line can be preparing their metal on the grinder. Each student has ten minutes to complete his three welds, (butt, lap and fillet). They arrange the four pieces of metal as shown on the drawing.

Upon completing the welds, the contestant will clean and quench them and move to the metal identification part of the contest. One year we had the students break the welds after completing them. However, we did not think this added much to the contest. I would say this would be at the discretion of the judge.

The metal identification part of the contest consisted of the identification of low, medium and high carbon steels plus cast iron. We used pieces of round stock which were the same size and shape. This made it necessary to use the “spark test” on the grinder for identification.

The judging has been done either by a welding supply house representative or one of us. The student brings his welds to the judge where they are discussed and graded in the presence of the student. This takes considerable time but we feel it is very important. The better welds are saved to be considered for top honors. The welds that are saved are numbered identical

to the score sheet so that they may be reviewed and a winner picked after the contest. Soap stone or a felt marking pen can be used to place the number on the weld. In picking a winner, we usually weight the welding some heavier than the metal identification.

It takes us about 2½ hours to run 60 students through the contest as I have described it using six welders. The supervision that we used is as follows:

- One instructor—at the door giving instructions for the contest.
- One instructor—helping the judge and overseeing the contest.
- Two students—helping the contestants at the welders. These students will not give the contestants any help other than to see they follow directions.
- One student—supervising the metal identification contest.

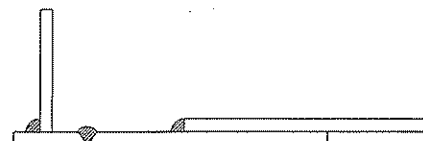


Figure 1. The Arrangement of the Four Pieces of Metal for the Welding Contest.

Of course, the limiting factor in most school shop situations would be the number of electric welders available. It seems to me that if each school had their own eliminations and sent one or two boys to the county contest, the numbers would not be too great for the welding machines available.

The reactions of both students and instructors to the contest have been very favorable. I feel there is a place among our contests for this popular and important shop skill—arc welding. □

Changes in Positions

Herman Brown has been appointed to the agricultural education staff at Texas A. and M. College. His departmental duties will consist of teaching two classes of agricultural education, serving as advisor to the Collegiate FFA and to freshman students who plan to major in agricultural education, preparing material for district and area leadership contests and conducting research. Brown plans to start work on a doctoral degree in September, 1963.

Dr. John B. McClelland of the department of agricultural education at Iowa State University is returning December 1 to Dacca, East Pakistan where he will serve the next two years as advisor to the University of Chicago Pakistan Education Project. John has served the University of Chicago in this capacity at Dacca for the past two years having served the three years previously as chairman of a committee responsible for developing a program in Agricultural Education at the University of Mindanao, Philippines.



Evaluation of the finished welds contributes to the learning process.

Special Report

The President's Panel Looks at Vocational Agriculture

FLOYD JOHNSON, Member of the President's Panel on Vocational Education and Teacher of Vocational Agriculture, York, South Carolina



Editor's Note: Floyd Johnson served with distinction as a member of the President's Panel on Vocational Education bringing to the panel his sincerity and enthusiasm for which he was known as a recent NVATA president. In this report he points out the thinking of the panel and some of the challenges which this report holds for vocational agriculture.

In his first message to Congress on American Education, February 20, 1961, President Kennedy proposed that an advisory body study the Federal Vocational Education Acts. "The basic purpose of our vocational education effort is sound and sufficiently broad to provide a basis for meeting future needs," he said. "However, the technological changes which have occurred in all occupations call for a review and re-evaluation of these Acts with a view toward their modernization."

On October 6, 1961, the Secretary of Health, Education, and Welfare appointed the Panel of Consultants on Vocational Education, twenty-five men and women representing agriculture, education, Government, management, labor, the teaching profession, and the public. The Panel held many meetings, commissioned numerous studies, and convened several specialized conferences to carry out the charge of the President to review and evaluate the Federal Vocational Education Acts. The Panel concluded its work last November with the completion of its Report, "Education for the Changing World of Work: Challenge to A Free Society."¹

Recommendations for Agricultural Education

The Panel recommends that new Federal legislation for vocational education substantially increase the Federal contribution of funds to assist

¹Report of the Panel of Consultants on Vocational Education, U. S. Department of Health, Education, and Welfare, Government Printing Office, December 1962.

States in supporting their vocational education programs, including vocational agriculture. A total Federal appropriation of \$400 million is recommended for the 1963-64 school year. In addition, the Panel recommends that these funds be allotted among the States on the basis of the groups of people to be served rather than the traditional subject-matter categories of agriculture, home economics, trades and industries, etc. These categories would continue to be the subject-matter of vocational education, of course, along with office occupations which should be, for the first time, made eligible for Federal funds.

As our employment structure continues to change, and as knowledge and skills become more complex, this proposed new type of administrative structure should permit the flexibility necessary to meet the demands of technological change. Under this proposed new arrangement, it should be more nearly possible to meet the needs of these groups of people who will need or want training in vocational agriculture:

1. High school youth who are preparing to become farmers or to enter the labor market.
2. High school youth who have special needs and require special programs to attain occupational competency.
3. Youth who have left high school and who are enrolled, full-time, in courses which prepare them for farming or farm-related employment, or for entrance into the general labor market.
4. Youth and adults who are already engaged in farming or other related employment.

In addition, the Panel proposes a fifth administrative category to undergird these four. Funds would also be allotted for services and facilities required to assure quality programs of vocational education to the proposed

groups to be served. If accepted, this recommendation would lead to Federal support of research in vocational education, instructional materials laboratories specifically for vocational education, and expanded programs of teacher training and guidance and counseling.

Limitations and Achievements

In reviewing the Federal Vocational Education Acts, the Panel of Consultants devoted much time to vocational agriculture, trying to assess its limitations as well as its achievements. The Panel recognized that vocational agriculture has made a great contribution toward America's status as the world leader in agricultural production. At the same time, through vocational agriculture, the needs of individuals in our democratic society have been met to a high degree as students have been encouraged to develop character, thrift, scholarship, cooperation, good citizenship, and patriotism. The shortcomings of vocational agriculture were considered to be those resulting from lack of funds, outmoded administrative patterns, and specific legislative limitations which have made it difficult to revise the program to meet the needs of a changing economy.

Although vocational agriculture is now taught in approximately 10,000 secondary schools in the United States, many schools do not now provide vocational agriculture programs where they are needed and wanted. Fewer than half of the persons entering farming have been vocationally prepared.

Even though the manpower requirements in farming are decreasing, a special study made for the Panel, "Manpower In Farming and Related Occupations" states:

It is clear that the Nation will need more, not fewer, highly trained efficient farmers in the future. The growth of efficient family farms is very pro-

nounced. The increased complexity of farming operations associated with improvements in technology and the increased investment per farm accompanied by greater specialization in production can be expected to continue. These developments emphasize the premium which will be placed upon managerial ability in agriculture during the next decade. Knowledge and flexibility will become even more important than they have been in the past. Ability to adapt quickly to changes in technological and economic conditions will be the test of success in farming.²

The technological developments in all fields have emphasized the need for better understanding of the fundamentals of science and of the other forces that affect our economy. The farmer of the future must have knowledge of plant and animal growth; he must understand the chemistry and physics underlying the development of farm products; he must know and understand business principles and how our economic system works.

Training for Agriculture Related Occupations

The panel of Consultants commended the instruction in vocational agriculture and has recommended that the curriculum be expanded to include training in agriculture-related occupations other than farming. Some indications of the importance of the task can be gained from these statistics:³

²"Manpower In Farming and Related Occupations," a Study prepared for the Panel of Consultants on Vocational Education, July 1962, by C. E. Bishop and G. S. Tolley, Processors, Department of Agricultural Economics, North Carolina State College, Raleigh, North Carolina.

³"Manpower—Challenge of the 1960's," U. S. Department of Labor, Washington, D.C., Government Printing Office, 1961, p. 11.

Average Years of School Completed of Those Working in 1959:

| | |
|--------------------------|------------|
| Professional & technical | 16.2 years |
| Proprietors & managers | 12.4 |
| Clerical & sales | 12.5 |
| Skilled | 11 |
| Semi-skilled | 9.9 |
| Service | 9.7 |
| Unskilled | 8.6 |
| Farmers & farm workers | 8.6 |

Some New Challenges

Should Congress approve the proposed new legislation to expand and strengthen vocational education, vocational agriculture teachers and administrators must turn their attention to the following challenges:

... Vocational agriculture courses must be continually evaluated and updated in keeping with technological changes.

... Farm science and management will require greater emphasis in many programs.

... High school and adult programs must serve a larger clientele. In addition to providing basic training for the occupation of farming, the curriculum must be diversified to prepare youth and adults for nonfarm occupations which require knowledge of agriculture.

... Cooperative programs involving agriculture and two or more areas of vocational education must be created where these would provide effective learning experiences in preparation for employment.

... Programs must be strengthened for young farmers who are striving to become established and for adult farmers who must continue to increase their proficiency.

... The future use of agricultural lands for conservation and recreational purposes requires occupational training in occupations not fully developed or even foreseen at the present time.

... Technician training must be developed to prepare high school graduates to prepare for employment

in agricultural service occupations and businesses. These programs should be provided in secondary schools, community colleges, and/or area schools.

... Research in agricultural education must keep practices abreast of scientific, economic and social changes.

In Conclusion

Agriculture is a dynamic and rapidly changing industry. It has a higher investment per worker than nonfarm industries taken as a whole. If the "farm problem" is to be solved, farming operations will of necessity become larger and more complex. If farmers and farm workers are to receive returns for their labor and management which are comparable to those received in other occupations, they must have corresponding managerial ability and productive capacity. This means that they must have access to adequate education and training experiences.

The Panel report includes recommendations that will make it possible to train people in vocational education in agriculture who have the need, the desire, and the potential to benefit from such training.

Space limitations prevent giving many of the findings and implications of this important study. It would seem desirable for every worker in Agricultural Education to become thoroughly familiar with this important study. A first step would seem to be to study the "Summary Report" published in the December, 1962, issue of THE AMERICAN VOCATIONAL JOURNAL. Many workers will, also, want to study the implications and findings reported in the complete report of the panel which includes over five hundred pages.

No one in our field can afford to be less than completely informed as history is being made in Agricultural Education in the United States. □

From Former Issues

Thirty years ago Carsie Hammonds said: "At present, farmers are faring none too well, but to a large extent, their distress is due to the fact that they depend too much on certain cash producing crops. They find themselves at the mercy of the buying public. The markets have failed and they find themselves in debt. Having neglected to prepare themselves for living on their own production, they

are a little better off than city wage earners."

Twenty years ago, R. W. Gregory wrote, "A generation ago, farming was perhaps the most individualistic occupation in this country. That time has passed, and only farmers who are able to get together in an intelligent cooperative way, and arrive at sound constructive judgment can hope for satisfactory solutions to the many problems of farming. If this be true, then not only one farmer or few farmers, but all farmers must become and remain students of their prob-

lems and be able to react intelligently to them."

Ten years ago an article in the October, 1952, issue stated that 11 of the 13 states in the Central Region had cooperated in a study of the institutional on-farm training program. Plans for the study were made at the 1950 Central Regional Conference. The committee consisted of W. A. Williams, Indiana; J. F. Malinski, Minnesota; U. E. Wendorff, Nebraska; C. E. Bundy, Iowa; and R. L. Hayward, Missouri. □

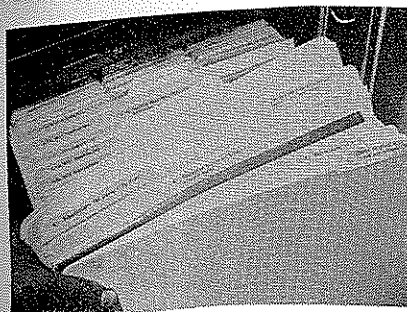


Figure 2. Introductory Materials in the File Include a Master Code, an intact copy of the Curriculum, and Introductory materials for the School Year.

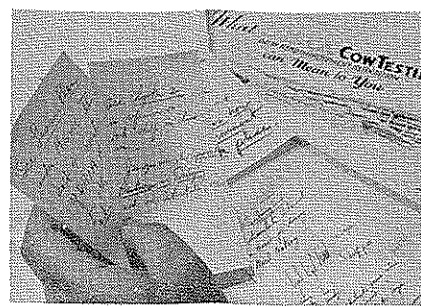


Figure 4. Many Items to Aid in Teaching Should Be Filed in the Folder "Teaching Materials, Aids, and References" for Each Unit.

4. Staple each outlined unit to the left-hand side of the correspondingly labeled folder, for example: I. 1. Unit: Dairy Herd Testing: Thumb Rules for Feeding. Lesson Plans.
5. Prepare teaching or lesson plans for the various subject or problem areas of each unit within the four-year curriculum. See Figure 3. Each lesson plan should be filed in the same folder for which the corresponding outlined unit has been stapled.

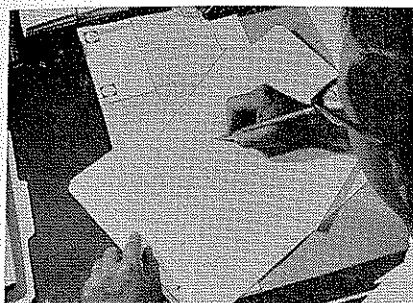


Figure 3. Preparation of Teaching Plans for Subject and Problem Areas is a Responsibility of Each Instructor.

6. Insert in the folders for "Teaching Materials, Aids and References" single copies of reference materials, notes about teaching materials and aids, listings of cross-reference items found in other folders. See Figure 4.

7. As unit examinations are prepared throughout the year, the instructor can file single copies of the examinations in the appropriate folders for reference purposes for subsequent years.
8. At the end of a school year, a complete file drawer for the local curriculum should be organized as is shown in Figure 5. Note that all folders containing outlined units and lesson plans are located on the right-hand side; the center-cut folders contain teaching materials, aids and references; and the left-hand cut folders contain unit examinations. From this figure, it becomes obvious that the original coding system is essential to the use of the file.

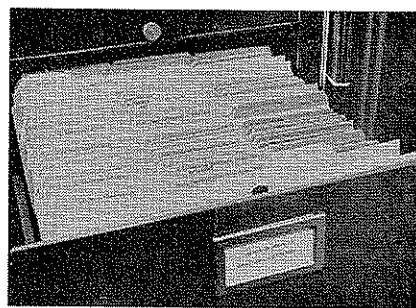


Figure 5. A Complete File Drawer for the Local Curriculum (or Course of Study) in Vocational Agriculture.

9. After teaching a unit from the local curriculum, an instructor should make notes on his lesson plans and subsequently upgrade his instruction accordingly. Materials should be culled from the file periodically to avoid having content become obsolete.
10. When new references and/or teaching materials and aids are purchased or ordered, the instructor should insert cross-reference notes in various folders where materials can later be used in teaching. For example, Chapter 10 in a new reference might be helpful in teaching Unit 3 in Agriculture II and Chapter 17 for Units 5 and 6 in Agriculture III. Noting this in the appropriate folders, the instructor could eliminate repetition of locating materials in this manner.

This file system provides an organized procedure for filing curriculum materials. The system was proposed by the author for use by Wisconsin vocational agriculture instructors in the summer of 1960. The basic idea was set forth in the most recent suggested course of study in vocational agriculture in Wisconsin.* The functional quality of the system might be attested to by the fact that approximately 70-80 per cent of the instructors are organizing and using the proposed system. It is believed that the organization proposed for a curriculum file will help instructors provide up-to-date scientific and technical instruction in modern agriculture. □

*Suggested Course of Study in Vocational Agriculture for Wisconsin High Schools. Published by Wisconsin Association of Vocational Agriculture Instructors, Inc. 1960. 61 pp.

School Forestry Plots as an Aid to Instruction in Teaching Vocational Agriculture

N. K. QUARLES, Teacher Education, East Texas State College



Forestry Laboratory Needed

In teaching many subjects, especially vocational subjects, good laboratory facilities are needed to put into practice those things that are discussed in the classroom. Sometimes these facilities are available in the

classroom or in an adjoining room. However, it is very often necessary to make field trips so that students can see and participate in activities that are not available on the immediate campus. Such is the case in the field instruction in forestry.

Timber an Important Crop

Today, as in the past, our forests of the United States are of major importance. They not only provide full-time employment to more than 1,300,000 Americans, but enough lumber is produced each year to build

3,700,000 one-family homes. There are 438 pounds of paper and paper board consumed annually for every man, woman and child in our country.

Timber production in East Texas is not only considered a crop, but a valuable crop. This industry provides a very large percentage of the income to rural people from the Red River to the Gulf Coast. Ninety-three percent or 10.8 million acres are in privately-owned forest land.

With forestry being this important to the economy of the farmers, vocational agriculture teachers of East Texas have made forestry instruction a part of the long-time teaching plan. Some schools in the heavily wooded areas may devote up to 40 or 50% of their class time to forestry instruction.

Forestry Plot Contest Started

An important boost to the teaching of modern forestry practices was made in 1952 by the Sears Foundation in cooperation with the Texas Education Agency. A contest was started in which prize money was offered for the best five forest plots improved each year. The prizes were from \$200 for first place to \$50 for fifth place. Any school could enter that could buy or lease at least 10 acres of timberland on a public road. In most cases the commercial companies and individuals were very happy to give a ten year lease to the schools at \$1.00 per year.

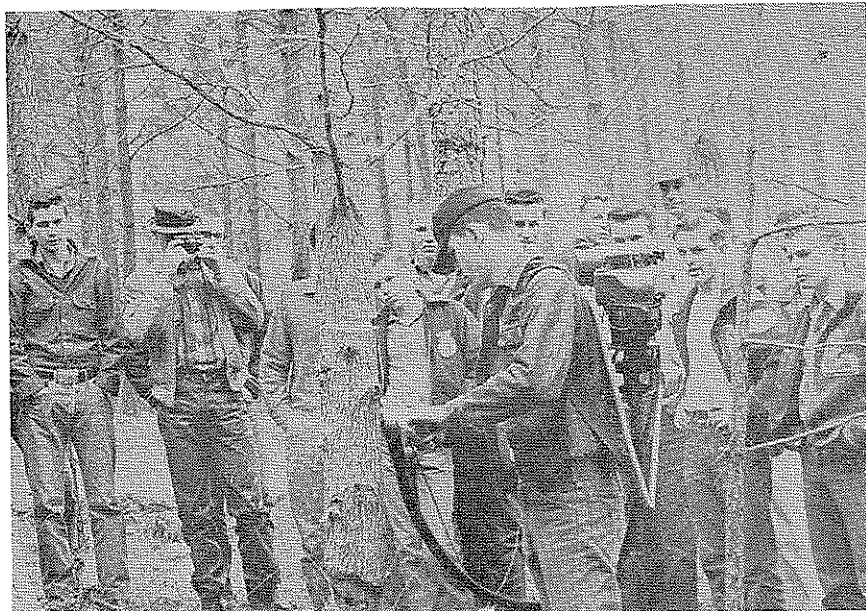
Many schools have obtained forestry plots of ten acres or more, and the contest has been continued on the basis of the fine work that they have done. For example, the Overton FFA Chapter, Overton, Texas won first place when they were last judged in December, 1961. With the permission of Charles Holmes, teacher of vocational agriculture at Overton, I would like to give you a summary of last year's achievement report made by members of his chapter.

The Overton Report

A one acre plot was selected adjacent to the 1960 plot and had a large stand of slash pine with some large and some small undesirable hardwoods.

The plot was marked off with white markers during a class period.

We contacted the Texas Forestry Service, and they sent a tractor to plow fire lanes around our plot. Members then raked around the plowed



Edward Felker of the Overton FFA chapter demonstrates making a "Little Beaver" girdle as a means of removing weed trees.

area so as to provide space to fight any outbreak of fire. We then used the plow as a standby when we did prescribed burning on an area of our plot to demonstrate how to kill small brush without damage to the pine trees.

Several hardwood trees were girdled by members using the ax and the little beaver methods. The little beaver girdle was demonstrated during our field day. Several trees on our plot were ax girdled several years ago, but many of them were still living. We used a poison consisting of 2-4-5-T and ammate on the remaining trees.

We demonstrated the use of ammate poison in both dry and liquid forms during our forestry field day on large hardwoods as well as stumps to prevent sprouting. We will know the results of these demonstrations next spring.

The 2-4-5-T was used with kerosene to spray on stumps, in frills, and on the base of small hardwoods to prevent sprouting and to kill undesirable trees. The cost was approximately six dollars per acre.

We marked with yellow paint the trees that will be cut out next spring for fence posts. Some of the trees that were marked to be removed are forked trees and trees with the tops broken out due to the heavy ice damage the last winter. Several diseased trees were also marked and will be removed.

Part of our 1961 plot was treated with prescribed burning in the fall of 1960 on demonstration day. We got good results, and this year we

planted several rows of loblolly pine seedlings in the area. The pine trees were not damaged by prescribed burning.

Near the center of our plot was a plum thicket. With the help of all members the thicket was removed and the stumps poisoned with 2-4-5-T and was interplanted with pine seedlings.

We had a good turn-out for our forestry demonstration plot visitation day. Seventy-five persons attended and signed the guest list. The boys demonstrated planting of pine seedlings, root injection of hardwoods with 2-4-5-T and kerosene, dry ammate applied to stumps, wet ammate applied to stumps and in frills around hardwoods. Also demonstrated were the ammate cup method of killing hardwoods, marking of undesirable trees, foliage spraying with 2-4-5-T and water, pruning of pine trees, ax girdling, little beaver girdling, cutting of fence posts, and the explanation of results from treated and untreated posts. We had some treated posts that were twelve years old, fire resistant, and still in good condition. □

Dr. Paul E. Hemp of the University of Illinois will serve as state editorial representative for Illinois. Special editor John Costor discovered that Illinois had previously been omitted from the published list which appeared in the October issue. Our apologies also to Max Amberson for misspelling his name in this list.

Opinions of Teachers of Vocational Agriculture Concerning Forestry, Conservation and Mechanics Education

LUTHER R. HILTERBRAND, Teacher Education, Wisconsin State College



Many times teachers of vocational agriculture are asked their opinions about including enterprises in their curriculum which are not considered major enterprises in the community. Inasmuch as the southern half of Missouri is predominantly covered with forests which constitutes a portion of the income for the farmer, teachers of vocational agriculture of fourteen counties in the area were asked their opinion concerning curriculum content in their school. Table I indicates the responses of the teachers to questions about conservation of forest land, forestry and training for mechanics. It was inferred the type of training in mechanics would be valuable for occupations other than agriculture.

Eighty-three per cent of the respondents believed conservation of forest land should be in the curriculum. Approximately seventy-two per cent of the teachers believed forestry was important enough in the area to be included in the curriculum, while all of the teachers thought mechanics should be a part of the student's program of instruction. Consequently, eighty-five per cent of the teachers believed that the curriculum for vocational agriculture in their school should include conservation of forest land, forestry and mechanics.

The teachers' reactions to a proposal to include conservation of forest land, forestry and mechanics in the curriculum was quite varied. Most teachers thought it would be valuable training to students who plan to be full-time farmers as well as the part-time farmer. However, some respondents considered forestry and conservation of forest land a by-product of teaching and should be accomplished by specialists in the particular fields. Also, these persons should be brought before their pupils as resource personnel only. Others were of the opinion that forestry and conservation instruction should not be taught to the students because it would crowd out other major enterprises.

The teachers were also asked their opinions concerning attitudes on training needs. The training needs listed were agricultural occupations other than farming, training of employees of wood-products industries, and off-farm employment for part-time farmers.

One hundred per cent of the teachers were of the opinion that information regarding occupations other than farming should be provided to their students. However, the teachers were equally divided concerning the training for employment in the wood-products industries of the area. Approximately sixty-one per cent of the teachers did not favor training students for off-farm employment as part-time farmers.

Several comments by the teachers indicated more and more of the people in their school districts were seeking employment in towns and cities and leaving the farming activities to the children. Small acreages and low incomes from farming were forcing the farmers to seek off-farm employment. Since most adult work was built around the farmer's working part-time off the farm, more information about occupations other than farming should be taught to them.

Most of the teachers believed training of students for employment other than farming was out of their field.

Teachers were asked their opinions concerning the effect reorganization of school districts and the establishment of area vocational schools upon their local programs of vocational agriculture.

About thirty-eight per cent of the teachers believed reorganization of schools would broaden the program of vocational agriculture; whereas fifty per cent disagreed and eleven per cent indicated no opinion. Eighty-three per cent of the teachers favored the establishment of area vocational schools in their area. Five per cent did not favor the establishment of area vocational schools and eleven

TABLE I
OPINIONS OF TEACHERS
REGARDING REORGANIZATION
OF SCHOOL DISTRICT AND AREA
VOCATIONAL SCHOOLS

| Teachers Opinions | Favor | |
|-----------------------------------------------------------------------------------------------|-------|-------|
| | No. | % |
| Reorganization of Schools to Broaden Program of Vocational Agriculture | 7 | 38.89 |
| Establishment of Area Vocational School in Immediate Area | 15 | 83.33 |
| Beneficial Effects of Establishment of Vocational School on Program of Vocational Agriculture | 9 | 50.00 |
| Total | 31 | |
| Per Cent | | 57.41 |

per cent indicated no opinion of the matter.

Various comments on the establishment of area vocational schools were presented. Some teachers indicated they believed their students would attend the area vocational school rather than enroll in vocational agriculture. Others indicated their students took vocational agriculture because there was not any other vocational course offered in their schools. Still other teachers believed there was a place for area vocational schools, but did not believe the limited population would support such a school. The teachers were generally of the opinion that area vocational schools were the institution to provide training for wood-products industry employees.

Summary

The teachers of vocational agriculture were generally of the opinion that instruction in forestry, conservation of forest land and mechanics could be incorporated in their curriculum to a limited extent. The teachers located in southeast Missouri indicated there was little interest in forestry in that area, since the land

was being cleared for more productive enterprises.

All the teachers believed other occupations should be included in the program of vocational agriculture, but they should be limited in detail, since other enterprises would have to be dropped if they were included.

The teachers were not in agreement concerning the training of wood-products industry employees. The opinions expressed varied from recom-

mendations to include this training to a belief that this type of training was out of their field.

One-half of the teachers did not believe reorganization of school districts would help broaden the program of vocational agriculture.

Most of the teachers favored the establishment of area vocational schools to promote vocational training. Some teachers believed that area vocational schools were the place for

the training of wood-products industry employees. Approximately one-half of the teachers believed that area vocational schools would be beneficial to the program of vocational agriculture. However, some teachers believed that the program of vocational agriculture would have difficulty in maintaining enrollment if area vocational schools were established in their area. Others believed the present population would not support an area vocational school. □



Who Is Enrolling in Our Agricultural Colleges? Who or What Influences Them to Do So?

VERN FREEH, Head, Short Course Department, University of Minnesota

How is agriculture doing in the face of its increasing need for college trained manpower? According to a recent national study,¹ there has been a downward trend in the number of students enrolling in colleges of agriculture for the past ten years and the number of agricultural students as a proportion of the total land grant college enrollment has decreased consistently for the last twenty years. It is predicted that, if present enrollment trends continue, agricultural colleges will be graduating barely enough to fill one-fifth of the agricultural positions requiring college trained men by 1970.

Because of the significance of these trends and their potential effect on the agricultural industry, a study was conducted in Michigan:

- 1) Who is enrolling in agricultural colleges? (characteristics of freshman students in agriculture)
- 2) Why are they enrolling in agricultural curricula? (who or what

influenced their college curricula choice?)

Procedure of the Study

A questionnaire was developed and administered to 339 first term male freshman students at Michigan State University during the fall of 1961. The students were divided into three groups: (1) farm youth enrolled in agricultural curricula; (2) nonfarm youth enrolled in agricultural curricula; and (3) farm youth enrolled in other than agricultural curricula. The students were classified as "farm youth" if they answered affirmatively two or more of the following questions:

- (1) Have you lived on a farm for three or more of the last eight years (1953-61)?
- (2) Have you worked on a farm for three or more of the last eight years (1953-61)?
- (3) Are your parents or guardians presently living on a farm?

This method of classification was developed for the study and is offered as a valid method for identifying "farm youth" in future research studies.

Responses were secured from 89 percent of the students contacted. The three groups were compared by use of the chi-square and t-test techniques.

Selected Findings of the Study

General characteristics of the students

Who is enrolling in our Agricultural Colleges? Approximately half of the Agricultural College enrollees in the study came from urban backgrounds and half from farm backgrounds. A check on freshman enrollments in the Agricultural College for the three years preceding the study showed the same ratio.

Farm youth enrolled in agricultural curricula differed significantly from farm youth enrolled in nonagricultural curricula and nonfarm youth enrolled in agriculture, in that they more often reported:

- (a) Their parents or guardians were full-time farmers.
- (b) The adults they admired most were in agricultural occupations.
- (c) Their closest friends were aspiring to agricultural careers.
- (d) They had studied vocational agriculture in high school.
- (e) They had participated in the FFA and 4-H.
- (f) They had a good understanding of career opportunities in agriculture.
- (g) Their first career choice was farming.
- (h) They had visited the college campus for FFA and 4-H activities.

With respect to general characteristics, there was a greater similarity between nonfarm youth enrolled in agriculture and farm youth not enrolled in agriculture than there was between farm and nonfarm youth enrolled in agriculture.

Nonfarm youth differed significantly, however, from both groups of

This article is based on a dissertation by the writer, "Characteristics and Influence Patterns of Students Enrolling in Agricultural Curricula at Michigan State University," Doctor of Philosophy degree, Library, Michigan State University: East Lansing, Michigan, 1962. 118 pp.

¹Harris M. Benedict and Robert S. McGlothlin, "College-Trained Manpower for Agribusiness" (A proposal for research, Stanford Research Institute, Agricultural Research Center, June 1960), p. 1-2.

farm youth in that they:

- (a) Selected their college curricula earlier in life.
- (b) More often reported that their father had encouraged them to continue their education.
- (c) More often reported that their parents didn't care what career field they chose as long as they liked it.
- (d) More often classified their potential career as "related to agriculture."

Cognitive factors associated with curricula choice

Who influence students in their choice of a college curricula? Table I shows how the student groups ranked various people as a source of influence. Parents were rated as the greatest source of influence by farm youth, while nonfarm youth ranked adults (other than parents or teachers) as having exerted the greatest influence.

Implications of the Study

1. Publications dealing with agricultural careers and agricultural curricula were perceived, by students enrolled in agricultural curricula, as having influenced their choice of college curricula a great deal. Therefore, it would seem that if agricultural colleges and potential employers of college graduates in agriculture wish to influence more youth to attend college and to enroll in agricultural curricula, they should make careers and curricula publications readily available to high school students.

This might be accomplished by sending the publications to school librarians, vocational agriculture instructors, school counselors, science instructors and directly to the students.

2. Students enrolled in agricultural curricula reported that people outside the school exerted considerable influence on their choice of a college curricula. These included parents, adults they admired (other than parents or teachers), and employers. This implies that to effectively influence prospective college students relative to their curricula choice one must not only influence the prospective students, but, beyond that, must identify and influence the people who exert and influence on students.

The latter might be accomplished in part by providing these people with information about career areas and college curricula.

3. Farm youth who were not enrolled in agricultural curricula in college reported significantly less

TABLE I
STUDENT RATING OF PEOPLE WHO
INFLUENCED COLLEGE CURRICULA CHOICE

| People | Students | | |
|---------------------------------------------|----------------------------------|--------------------------------------|-------------------------------------|
| | Farm Youth in Ag Curricula | Farm Youth in Non-Ag Curricula | Nonfarm Youth in Ag Curricula |
| | Rank | Rank | Rank |
| Parents | 1 | 1 | 2 |
| Adults (other than parents and teachers) | 3 | 2 | 1 |
| Friends | 5 | 5 | 6 |
| Vo-Ag Teachers | 2 | 8 | 8 |
| 4-H Agent or Leader | 9 | 9 | 9 |
| Teachers other than Vo-Ag | 4 | 3 | 5 |
| High School Counselor | 6 | 4 | 7 |
| College Faculty Member | 7 | 6 | 4 |
| Employers | 8 | 7 | 3 |
| Others | 10 | 10 | 10 |

years of enrollment in vocational agriculture, and less participation in the FFA and 4-H than did farm youth enrolled in agricultural curricula. This might imply that youth develop many of their attitudes toward agriculture prior to entering high school. As a result, they may have decided against an agricultural career before entering high school and thus do not enroll in a course which is associated with agriculture or participate in activities so oriented. If this deduction is valid, as it appears to be, then it is important that information about agriculture, agricultural careers and agricultural curricula be readily available to youth while they are in the latter years of grade school.

Again, this information might be distributed to librarians, counselors, and teachers.

4. The vocational agriculture course, FFA experience, and the vocational agriculture instructor were rated high as sources of influence by students enrolled in agricultural curricula. In view of this, it would seem that the vocational agriculture courses and FFA programs should be structured so as to provide youth with an accurate and thorough understanding of the career opportunities in agriculture, the importance of higher education to success in modern agricultural careers, and the scope and nature of the agricultural curricula in college. It would seem that means of preparation for entrance into and progress in agricultural occupations

other than farming should receive equal or greater emphasis than farming in vocational agriculture courses.

5. If there is an increasing need for college graduates who have majored in agricultural curricula, as the available evidence indicates, then agricultural colleges might well give special emphasis to programs and activities designed to promote a better understanding of modern agriculture, agricultural careers and agricultural curricula among prospective college students and the general public. To carry out these activities they might well enlist the support of agricultural organizations, people in agriculture and potential employers of college graduates in agriculture.

6. The findings of this study strongly infer that additional studies need to be conducted to determine the attitudes of potential students toward agriculture, and their understanding of modern agriculture and the career opportunities it offers.

7. Since over fifty percent of the students enrolled in agricultural curricula in Michigan in the past few years have come from nonfarm backgrounds, agricultural colleges and others interested in attracting more youth into the agricultural field might well emphasize programs and activities which are designed to provide potential students of this nature with more information about modern agriculture.

8. Since this study and others have shown a high correlation between the

levels of educational and occupational aspiration of youth and the levels of educational and occupational aspiration that their parents have for them, it would seem that, in order to raise the aspiration levels of youth, one must also raise the aspiration levels of the parents.

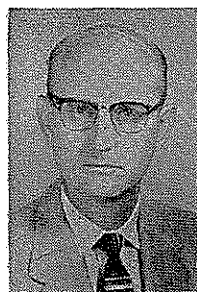
9. This study seems to refute some of the findings of Haller.² He found

that farm youth who intend to farm, plan to attend college less frequently than those who do not plan to farm. Yet in this study 48 percent of the farm youth enrolled in agricultural curricula indicated that farming was the career area in which they would most like to work. There is a possibility that planning for farming and naming farming as the career area in which one would like to work is not

the same thing. It would seem that they are quite similar, however.

10. The criteria used for identifying "farm youth" in this study could provide the basis for a standardized method of identifying "farm youth" in future research studies. □

²Archibald O. Haller, "The Influence of Planning to Enter Farming on Plans to Attend College," *Rural Sociology*, Vol. 22, No. 2 (June 1957).



A National Listing of Assistantships and Fellowships in Agricultural Education

V. R. CARDOSIER, Teacher Education, University of Maryland

Following is a list of assistantships and fellowships available for persons to pursue graduate study in agricultural education during 1963-64. The information provided is based on returns of a survey of all agricultural education departments in the United States. Due to lack of space, only a minimal amount of information is provided about each listing. No attempt was made to secure academic information and requirements for degrees; interested persons should contact institutions for such information and additional information on assistantships and fellowships.

Some listings show reduced tuition, reduced fees and the like. Other institutions did not report this information, although they do not charge out-of-state tuition for any graduate students.

Data provided are in the following order: Nature of assistantship or fellowship (number available); number of months available, and beginning month; amount of work expected, if any; monthly remuneration, and other considerations, such as remission of fees; whether aid is for masters' or for doctoral students; the 1963 deadline for application; and miscellaneous information, if reported.

University of Arizona

Research assistantship(1); 12 mo., July 1; ½ time; \$200 per mo., tuition and course fees remitted; masters' students.

Auburn University

Assistantships (2—research 1, teaching 1); 9 & 12 mo., June and September, respectively; ½ time, @ \$200 per mo.; masters' or doctoral.

Clemson College

Research assistantship(1); 12 mo., June or September; ½ time; \$200 per mo., reduced tuition; masters'; sponsored by Coker Pedigreed Seed Co.

Cornell University

Teaching and research assistantships (7); 10 mo.(1) & 12 mo.(6); September; 20 hrs. per week; \$183.33 to \$250.00 per mo., tuition waived for 5 assistantships; masters' or doctoral students; college and foundation funds; apply by March 1.

East Texas State College

Assistantship(1); 12 mo., September; includes teaching & research; 24 hrs. per week; \$200 per mo.; masters' or doctoral.

University of Illinois

Teaching & research assistantships(4); 9 mo., September; amount of work "varies"; \$238.88 per mo., tuition & fees remitted; masters' or doctoral.

Fellowships(several); 9 mo., September; no work; \$200 per mo., tuition & fees remitted; tax exempt fellowships; apply by February 1.

Tuition fellowships(several); 9 mo., June or September; no work; tuition & fees remitted; masters' or doctoral; apply by February 1.

Iowa State University

Research assistantships(2); 9 mo., September; ½ time; \$222.22 per mo.; masters' or doctoral; apply by April 1.

Louisiana State University

Research assistantships(3); 9 mo., September; 1/5 time; \$100 per mo., reduced tuition; masters' or doctoral; apply "at once."

University of Maryland

Research assistantships(2); 12 mo., June or September; @ 15 hrs. per week; \$200 per mo., tuition remitted; masters'; apply by April 1.

National FFA Fellowships(2); 10 mo., September; participating experience in

National FFA Office; \$300 per mo.; masters'; apply by April 1; sponsored by Massey-Ferguson, Inc.

Michigan State University

Instructorships(2—teaching, research, other duties); 9 mo., September; ½ time; \$333.33 per mo., out-of-state tuition waived; either but preference to doctoral students; apply by March 1.

Research assistantship(number varies); 9 mo., September; ½ time; \$244.44 per mo., out-of-state tuition waived; doctoral students; apply by April 1.

Teaching assistantship(1); 9 mo., September; ½ time; \$244.44 per mo., out-of-state tuition waived; doctoral; teaching assistantship in Agric. Engr. Dept. for agric. educ. doctoral student; apply by March 1.

University of Minnesota

Teaching assistantships(2); 9 mo., September; ½ time; \$240 per mo.; tuition reduced; apply by June 1 or earlier.

University of Missouri

Research assistantships(2); 9 mo., September; 10 hrs. per week; \$138.89 per mo.; masters' or doctoral; apply by April.

Ohio State University

Teaching and research assistantships (3); 12 mo., June or September; 15 hrs. per week; \$200 per mo.; doctoral; apply by March 1.

Oklahoma State University

Teaching fellowship (1); 9 mo., September; ½ time; salary not reported, reduced tuition; masters' or doctoral.

Oregon State University

Teaching assistantship(1); 9 mo., September; ½ time; \$100-125 per mo.; masters'; sponsored by the continuing education program.

Pennsylvania State University

Assistantships(1 research, 3 teaching); 9 or 12 mo., June or September; ½ time; \$178 per mo., tuition and fees; masters' or doctoral; apply by January 1.

Purdue University

Research assistantships(2); 10 mo., September; ½ time; \$230 per mo., reduced tuition; masters'; apply by April 30.

Instructorship(1); 10 mo., September; ½ time; \$320-340 per mo., reduced tuition; doctoral; apply by April 30.

Sam Houston State Teachers College

Teaching assistantships(2); 9 mo.,

September; time arranged; \$466.67 per mo. "plus"; masters'.

Texas A. & M. College

Teaching assistantships(3); 12 mo., September or June; ½ time; \$175 per mo.; masters'.

Virginia Polytechnic Institute

Teaching assistantship(1); 9 mo.,

September; 15 hrs. per week; \$160-175 per mo.; masters'.

University of Wisconsin

Research assistantships(2); 10 or 12 mo., June or September; ½ time; \$205.50 per mo., out-of-state fees waived; masters' or doctoral students; apply by March 1. □

Needed—More Experts in Vocational Agriculture

CHARLES C. DRAWBAUGH, Teacher of Vocational Agriculture,
Dover, Pennsylvania



"A man is like a bit of Labrador spar, which has no lustre as you turn it in your hand until you come to a particular angle; then it shows deep and beautiful colors. There is no adaptation or universal applicability in men, but each has his special talent, and the mastery of successful men consists in adroitly keeping themselves where and when that turn shall be oftenest to be practiced." These words of Emerson reveal the potential within each individual to become an expert in specific areas of knowledge and skills. Why do we not make more use of this philosophical approach to specialization in vocational agriculture to learn in depth a subject and then be able to make scholarly observations upon it?

Specialization in Other Fields

The practice of specializing or becoming an expert in a narrow field of knowledge is common to all professions and occupations. Doctors become specialists of internal medicine, surgery, and specific diseases; lawyers become experts in corporation, criminal or civil law; and the Armed Forces provide for technicians in cookery, electronics and hundreds of other positions. Observe more closely the next time a television program credits the staff who produced it and discover the kind and amount of specialization required. Medicine, law, Armed Forces and communications—each is a broad area of education and training divided into precise areas of knowledge over which the specialist is to have large control. This very same system can and should be encouraged and provided for more positively in vocational education in agriculture.

You will readily agree that the field of vocational agriculture is so broad

that a complete teaching knowledge of the many subject-matter areas is not possible. Teachers use only a few of the facts, principles and concepts already known to teach boys crop production, livestock management, conservation practices and leadership abilities. One cannot teach what he does not know or understand. In education the teacher of vocational agriculture may choose to specialize in curriculum, administration, supervision, or vocational guidance. After a basic understanding of vocational agriculture is obtained there is no limit to the number of related knowledge areas which can be pursued to excellence.

A teacher with special interests will tend to delve more intensively into all facets of those interests in an effort to develop first rate skills and accumulate a body of related knowledge. He is, therefore, in this area of more value to those he teaches. We say he is "well-grounded" in the subject.

A Waste of Talent

It is wasteful to have a source of information unused except for one or two occasions each year. It is shortsighted to have an expert in a specific subject-matter field who is not utilized to the utmost. Considerable more use could be made by administrators and supervisors of teachers who are specialists. Superiors who recognize special strengths of teachers and encourage other teachers to pursue special problems undoubtedly increase the efficiency of their own positions. One grows to mediocrity by attending to all necessary tasks of a job or profession and to excellence by caring for the unusual. The home run ace of baseball must hit, only a few extra homers to receive the honored crown.

Excellence is reached only when both ordinary and special tasks are done extraordinarily well.

We do not have a sufficient number of experts, authorities, or specialists to satisfy the common needs of vocational agriculture and strengthen our public relations program in other related fields of endeavor. The major untapped source of supply is the teacher of vocational agriculture. There is in Pennsylvania a growing need for teachers with more training in horticulture. The recent trend of providing vocational-technical schools is creating part of this demand. Horticulture is one branch of agricultural instruction which lends itself well to the vocational-technical school curriculum. The teacher supply, however, is limited to those with either a basic horticultural or agricultural education training. The desirable situation for administrators is to obtain instructors proficient in both the subject-matter field and principles of teaching. A second real situation which is creating an immediate demand for horticultural specialists in vocational agriculture in Pennsylvania is the "garden center" approach to selling home lawn and garden supplies and equipment. This indicator of urbanization shows plainly the need for boys trained in floriculture, ornamental horticulture, and greenhouse crop production. Our concern in agricultural education is to supply teachers with the necessary training to educate specifically for this changing agricultural economy.

Exchanging Teachers

At present there is a strong feeling among vocational agriculture teachers that Young Farmers' programs would benefit immensely through the exchange of specialized teachers. For

example, a teacher who specializes in milk-house construction could prove helpful to another teacher as consultant in a classroom meeting and for follow-up instruction on the farm. At a later date the favor may be returned by the other teacher who is, for example, a specialist in horticulture or tractor maintenance. Young Farmers in both schools would benefit from the guest teachers' wealth of knowledge. Each host teacher would receive fine in-service training.

Supervisory areas with teachers of agriculture who excel in specific knowledge and skills would have a continuous supply of teachers for in-service training sessions. This condition, presently a dream, would be a utopia for supervisors blessed with more than a casually organized effort on the part of his teachers to help themselves. Each man in the supervisory area would be a member of a team which renders special services to others for similar service and betterment of the total educational program.

Problems of Policy

The most difficult part of this proposal is to suggest a comprehensive plan for the utilization of the expert outside his school jurisdiction. States and school systems vary policy on this issue. On the local level it is suggested that teachers exchange time for time. Schools demand the teacher-hours for which they pay. Little or no flexibility is provided by school systems for teacher exchange. Quality of personnel involved will rapidly reduce this barrier. On the state level the expert should be a temporary member of the state staff or the agricultural education staff or both. The number of experts employed at a given time would depend upon needs and trends in vocational agriculture. Specialists may be asked to serve for a year while on sabbatical leave from high school. An annual rotation of specialists would provide a changing emphasis on subject matter and at the same time keep employment expenses to a minimum. At the end of a year the local school system would benefit from the return of a more experienced specialist and teacher of agriculture.

Teachers Can Become Experts

You may now ask, how does one become an expert? Teachers cannot with any degree of success be ordered to improve themselves. You can persuade, cajole or guide but volunteers

cannot be manufactured. Likewise, experts cannot be brought or legislated. Learning deeply, then, must evolve spontaneously and voluntarily from an inquiring mind.

Many teachers who become experts, do so by way of graduate school. In the four-year college program one approaches a reasonable mastery of subject-matter, while in the graduate program he adds depth to a chosen subject-matter area. Advanced course work and research provides understandings, skills and attitudes basic to the special qualifications sought. Research is a means of growth which provides new challenges and the creation of new interests. It helps one become an "authority" rather than one who depends upon the opinions and results of authorities.

There are those who become experts only after they are made aware of special skills and understandings by another or others. Each teacher has peculiar strengths and aptitudes, the direction and development of which make him of the greatest possible worth to the profession. One developed strength is worth many improved weaknesses. The penetrating observer may start a chain reaction by helping the teacher become aware of his peculiar strength or gift. It is often the case when one is led to appreciate his own power and possibilities that he inevitably feels a consequent ambition and responsiveness and will continue to greater heights. Guidance of this sort should be gradual, progressive and persistent.

If someone, whether it be a professor, supervisor or fellow teacher, can create within the teacher an ambition to grow into the greatest possible professional effectiveness, why is it not more widely done? Teachers have

a right to grow in their best ways to the maximum development of their native and acquired abilities. On the other hand, as with all rights and privileges, the teacher has parallel obligations. The teacher is obligated to grow. He is obligated to those who stimulated him toward advancement, to the profession and to the society of which he is a member.

There are other ways of becoming an expert. Occasionally hobbies lead individuals into areas of specialization. Extensive reading will further develop one's capabilities and competencies. And by no means to be overlooked, real practice and experience are both excellent teachers which lead toward future specialized roles.

Expected Benefits

Everyone would benefit from this proposed program. First, the person who becomes an expert will have the satisfaction of being able to excel in something. This is reward enough for most people. It stresses the idea of success and permits failure to slip into oblivion. Someone has said that about all there is to life is to grasp an idea and work it out to a very successful conclusion. Then too, the wealth of a profession consists more than anything else of the number of superior men it encompasses. To be blessed with a competent pool of consultants who perform specialized duties with dispatch within and outside vocational agriculture would be a positive source of strength to the profession. And finally, the whole of society will benefit when men and professions do better whatever job is theirs to do. It is superiority, not mediocrity nor standardization, which is the measure of progress in the world today. □

Lateral Transmission: Education for a Changing Agriculture

THOMAS K. SHOTWELL, Teacher Education,
Louisiana State University



To place our educational system in perspective we must consider that it originated in a changing society. Primarily it was designed to provide all young people with the broader education previously reserved for the elite. It was a system of *vertical* transmission of knowledge; teaching of

tried and true by the old mature and experienced teacher to the young immature and inexperienced pupil. The only real difference in now and then seems to be one of degree not kind. There has been a change in the rate of change. We can no longer relegate adjustment to change to the next

generation. The knowledge which is of most importance to our students is not yet discovered.

Advances made in theoretical science in the last fifty years are far more numerous than those made in the preceding fifty years and those made in the preceding fifty years far more numerous than the fifty before that, etc. If we visualize theoretical science as a snowball already grown to giant proportions, then we see behind it a smaller but rapidly enlarging agricultural science. No one can be sure of the changes which application of scientific knowledge will make in the next few years but if there is anything we should learn from the history of science then it is the cavalier way in which doubters are treated.

The kind of education which the agriculturalist needs in the next generation then may be of a two fold nature. First our system must prepare the pupil by giving to him the basic part of man's tried and proven knowledge which will allow him to participate in his world. This we can call *vertical* transmission of knowledge. He must be able to read, write, spell, do basic mathematics, and speak acceptably. In short he must have at his command the tools which man has found useful in producing and maintaining a civilization. Secondly, he must be capable of rapid, self-conscious adaptation to change. In

this sense we may find it necessary to change our definition of the student from that of a young, immature, dependent person who is sheltered from the vagrancies of society and in turn from whose irrational actions society is protected, to any person who is desirous of, and capable of learning. No field of education has gone further in this direction than agricultural education. Is not *lateral* transmission of the newly discovered what we have done in our young adult farmer programs? Is this not the central concept of "out of school youth" programs? Isn't a recognition of the adolescent's need and right to work and the adult's need and right to study the concept that prompted the type of program now offered by vocational agriculture teachers across the nation? Yet, placed in perspective we have only scratched the surface of lateral education. Nintenths of our students do not become farmers and many do not enter agricultural occupations.

Is there any reason why occupational choice should exclude a person from additional education? The present program would indicate such a feeling. If a boy chooses to market farm products rather than to produce them has his need and right to additional education ceased?

The application of these principles to the overall curriculum means that

public education might become a basic ingredient in American life. We cannot hold these arguments strictly to the field of agriculture since the whole of man's world is changing in much the same way. In all occupations, in all age groups there is a need for additional education beyond our present school system. Can there be any doubt that this need will increase as our lives became more complex, our occupations more specialized, and our knowledge more extensive?

Fairfield Osburn and Loren Eisley seem in agreement that *the greatest impediment to human progress is the tenacity of outworn beliefs*. If our educational system has been fundamental in bringing about this state of affairs then don't we have a responsibility for carefully considered evaluation? Many years ago a quiet old man remarked that "The unexamined life is not worth living." Might we not say with equal sincerity today that "The unexamined profession is not worth serving"?

The teacher is a most influential citizen and as a consequence his actions should undergo rigorous self inspection. If we find a need for re-designing parts of our educational system then we have a professional and indeed a moral responsibility to assist in bringing about those changes but there is no room for immature or ill-considered action. □

Teaching Tips

Use Resource People to Enrich Your Vo. Ag. Program

L. C. SCHANK, Supervision,
Carson City, Nevada

There are many people in the community who can and will gladly assist teachers in putting on a better program of work. Most of these resource people consider it an honor and a privilege to assist you.

Resource people are a reliable source of information on current and local practices, methods and techniques. They bring to the classroom realistic experiences and up-to-date information.

When you have decided on the specific job or problem and the resource person you wish to use, notify him well in advance, indicating the place and time of meeting, the size and age of group and tell him exactly what you would like him to do. Your

school administrator should meet him if he comes to the school. In most cases it is best to take your group out to where the resource person works. His natural setting and illustrative material makes for more interesting and better learning. It is also a good idea to orient your class or group to ask good questions, to act interested and to show appreciation for what the resource person has taught them.

These resource persons can and will do you and your Ag. program a lot of good. They become allies and will speak well of your program to others in the community.

It would be well for you to check your course of study and determine in advance—what resource person would fit in well for that particular lesson. It would also be well for you to make a list of resource people you have in your community such as:

1. *Farmers*—who are doing well in some type of farming or some good farm practice.
2. *The Banker*—who can tell how to make loans and how to finance farming programs.

3. *The Lawyer*—who can tell about laws pertaining to agriculture.
4. *The County Recorder*—who will show and tell about different deeds, mortgages, and how land transactions are made & recorded.
5. *The Insurance Agent*—who can discuss the different kinds of insurance that farmers have (no sales talk).
6. *The Veterinarian*—who might advise on a few common animal diseases, what to do before veterinarian arrives, etc.
7. *The Druggist*—who can explain the various drugs, antibiotics, serums, vaccines and other medicines used by farmers.
8. *The Nurseryman*; the feed dealer; the realtor; the farm implement dealer; the fertilizer dealer; the County Agent, and other agricultural agencies. □

The Moving Finger writes; and, having writ,

Moves on; nor all your Piety nor Wit
Shall lure it back to cancel half a
Line,

Nor all your Tears wash out a
Word of it.

Omar Khayyam

Planning an Effective Farm Shop Program

LEO KEEGAN, Teacher of Vocational Agriculture, Richland Center, Wisconsin

To have a farm shop program that produces results requires long range as well as day to day planning. At the Richland Center school, the students may begin planning shop activities a year or more before they actually participate in the shop activity in the farm shop.

The boys prepare lists of farm equipment that they plan to bring to the farm shop for repair and reconditioning, also prepare plans for a wood-working project to be constructed at the school.

During the summer, the instructor visits the farms of these students and while there checks the equipment that the student plans to bring to the school and talks with the parents and the boy regarding the repair work to be done.

Ten to twelve weeks are devoted to the unit on farm machines including farm tractors.

During the first week of the unit on Farm Equipment, the students make their plans for overhauling, obtaining parts for, and the painting of the equipment. Several weeks are then spent sharpening cutting tools such as discs and plows, replacing worn parts and painting the equipment to make it look like new. For the farm tractors special emphasis is given to servicing, the cooling, ignition and oiling systems.

A portion of the unit is devoted to advanced welding instruction so the students can use this skill in doing the machinery repair work.



Good Planning in Farm Mechanics Results in good teaching.



Safety is another feature that receives emphasis in the farm shop. Boys are taught to safely handle the tractors to avoid the hazards of quick turning and those involved in hitching the tractor to farm machines.

An exhibit of the repaired and repainted farm equipment is made each year at the time of our annual FFA banquet. This gives the other FFA

boys and all of the parents and guests an opportunity to observe the kind of farm shop work being done and stimulates an interest of other boys in this phase of the program.

The farm machinery instruction has a high carry-over to the farm. Many times a boy after repairing a machine in the farm shop will repair and paint other machines on his home farm. □

News and Views of the Profession

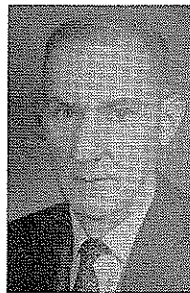
Dr. Joe P. Bail Succeeds Dr. C. W. Hill as Chairman of Agricultural Education Division at Cornell

Dr. C. W. Hill, Chairman of the Agricultural Education Division at Cornell since 1955, has voluntarily resigned as of February 1, 1963. At this time, Professor Hill will be on sabbatic leave

and will return the Fall of 1963 as a regular member of the staff.

Under his direction, the Division of Agricultural Education has enjoyed unusual growth in the areas of research, writing, graduate programs, and pre-service and in-service training of teachers of agriculture. He has been primarily responsible for initiating research under Hatch funds, establishing professional positions in instructional materials, improving the communication process among various groups, and in providing leadership in State, regional, and national committees and workshops. He has served as chairman or member of the AVA Research Committee, Agricultural Education Research Committee, and the National Study Center on Agricultural Education.

Professor Hill began his teaching career in West Virginia and served successively as teacher of agriculture, principal, supervising teacher, staff member in Agricultural Education and Head of Agricultural Education at West Virginia University. He received the Bachelor's and Master's Degree in his home State and the Ph.D. Degree at Cornell University.



Dr. Joe P. Bail will succeed Dr. Hill as Chairman of the Division of Agricultural Education, effective February 1, 1963. Professor Bail joined the Cornell staff in 1957. Prior to that time he was on the

Teacher Education Staff at West Virginia University.

Dr. Bail completed the Ph.D. degree at Michigan State University. His Bachelor's and Master's degrees were awarded in his home State of West Virginia where he was also a teacher of agriculture and on the staff of Glenville State College and served as a captain in the Air Force in World War II.

He has served on many regional and state committees and is past chairman of the National Professional Information Committee of the Agricultural Education Section of AVA. □

AVA Scholarship Awarded

The fifth annual American Vocational Association Agricultural Education Scholarship has been awarded to John Alex Hash of Independence, Virginia. The award, which is sponsored by Prentice-Hall, Inc., is to be used for graduate study in the vocational agricultural field at Cornell.

Scholarship judges were Dr. Charles W. Hill, Cornell University; Dr. Ralph Bender, Ohio State University; Dr. R. W. Cline, University of Arizona.

McQueen on Assignment in Liberia

Dr. F. T. McQueen, Professor and Head of Agricultural Education at Tuskegee Institute, began a two-year leave of absence in November 1962 to work as Director of Rural Teacher Training in Liberia.

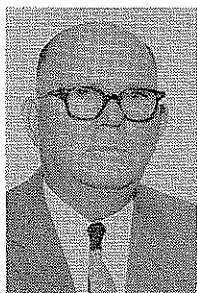


His work is a part of an agreement between Tuskegee Institute, Alabama, and the Government of Liberia, in cooperation with the Agency for International Development.

McQueen has completed 18 years with Tuskegee Institute, and 25 years in agricultural education. He has published numerous articles in professional journals and served on several important educational committees of state and national levels.

Dr. E. W. Garris Retires

Dr. E. W. Garris, Head of Agricultural Education Department, University of Florida, Gainesville, Florida, completed forty-five years service to education upon his retirement July 1, 1962.



Dr. Garris a native of South Carolina, graduated from Clemson College and began his career in education as a principal and later served as teacher of vocational agriculture. He was an Assistant State Supervisor of South Carolina and received a Ph.D. Degree from Peabody College.

In 1925 Dr. Garris came to Florida as State Supervisor and two years he was appointed Head of the Agricultural Education Department of the University of Florida, where he served until his retirement.

Dr. Garris has served as past President of the Florida Vocational Association; Chairman of the Teacher Education Committee of the AVA; member of AVA Committee on the Vocationally Talented Pupil; and was a member of Editing-Managing Board of Agricultural Education Magazine for eight years serving two years as chairman.

Dr. Garris continues to teach a men's Bible class which he started teaching more than twenty-five years ago in the First Baptist Church of Gainesville.



FORAGES under editorial authorship of H. D. Hughes, Maurice E. Heath and Darrel S. Metcalfe. Iowa State University Press, Ames, Second edition, 707 pp., 1962. Price \$7.50.

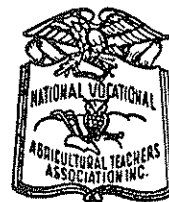
This second edition of *Forages* presents the works of 75 specialists in forage production and utilization. It is an authoritative report on the latest findings and practices in forage production and utilization. Some 64 chapters present information on the origin, history, adaptation, improvement, characteristics, varieties and strains, utilization, stand establishment, seedbed preparation and rotation of forage crops. Emphasis is given to the basic principles of forage production with more emphasis on the "why" and less emphasis on local problems and applications. These basic principles have been applied in the writings whether the material is regional or nationwide in nature.

The material is organized into four major parts as follow. Part I—Forages and A Productive Agriculture; Part II—Forage Grasses and Legumes; Part III—Forage Production Practices, and Part IV—Forage Utilization.

The book is systematically organized with complete citations for all reports. Numerous illustrations and charts add to the presentation. Each chapter is concluded with a list of questions which are useful in evaluating the material.

As a general recommendation, this book would be extremely useful as a teacher reference. The reading level is far above that generally considered useful for classroom instruction. However, the professional agriculturalist will find a wealth of well-documented information on forages, perhaps unsurpassed by any other volume. □

Joe P. Bail
Cornell University



N.V.A.T.A. News

from
James Wall
Executive Secretary

Wenroy C. Smith of Saltsburg, Pennsylvania, newly elected president of the National Vocational Agricultural Teachers' Association will lead the 10,000 member teacher organization through its convention in Atlantic City next December.

Wenroy, a graduate of Penn State, has a masters degree from the University of Pittsburgh. He has taught vocational agriculture for 28 years, two years in Westmoreland County, and is in his sixth year at Elders Ridge Joint School District, Indiana County, Pennsylvania.

Wenroy is a member of the Poke Run Presbyterian church where he has served on the board of trustees and as a teacher of the adult Sunday School class. Wenroy and his wife, Pauline, have one daughter, Sallie Irene, age 15.

James Durkee of Douglas, Wyoming, was elected to a 3 year term as vice president representing Region I. Fred Hansen of California was elected as alternate vice president.

Durkee is a graduate of the University of Wyoming. He teaches at Douglas, Wyoming, where his duties include teaching 42 high school students and operating a 160 acre school farm. The Douglas FFA Chapter received a Silver Emblem in the 1962 National Chapter contest.

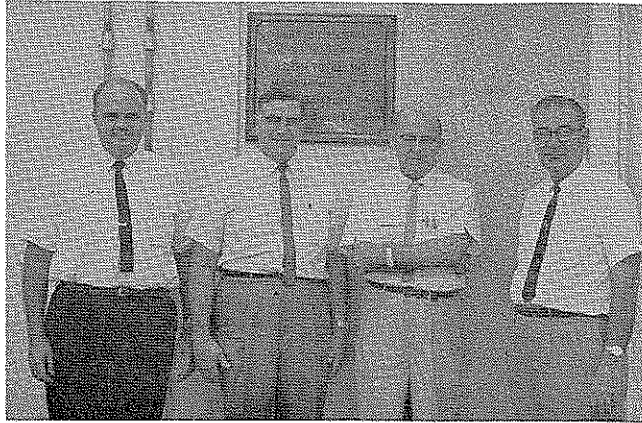
James and his wife, Leora, have five sons—Jim, Steve, John, Bob, and Dave—ranging in age from 3 to 15 years. Jim is an FFA member and was a member of the National FFA Band in Kansas City last October.

James Givens of Winchester, Virginia, was elected to a 3 year term as vice president representing Region VI. Carl Widger, Munnsville, New York, was elected alternate vice president.

Jim has served as president of the Virginia Vo-Ag Teachers' Association, vice president of the Virginia vocational association, and is currently serving on the advisory committee to the teacher-training department of V. P. I. He was awarded the Honorary American Farmer degree in 1962.

Jim and his wife, Louise, have three children—James William, 15; Sara Jean, 11; and Mary Ellen, 20 months.

Stories In Pictures



U.S.O.M. Agricultural Education Staff, Thailand. L-R: George Miller, Indiana, Ralph Gill, Montana, Everett Cree, Iowa, Harold Kugler, Kansas—all former vo-ag teachers. Photo submitted by Harry Kitts; also of staff, and from the University of Minnesota.



The National FFA officers for 1962-63 (left to right): First Row—Kenney McMillan, Prairie City, Illinois, President and Vern France, Gooding, Idaho, Secretary. Second Row—Larry Whittington, Angier, North Carolina; Duane Leach, Winnebago, Minnesota; Jerry Diefenderfer, San Luis Obispo, California and Richard Mottolo, Andover, Massachusetts, all of whom are Vice Presidents. Third Row—A. W. Tenney, National Advisor and W. Paul Gray, Executive Secretary of Washington, D. C. and Julian M. Campbell, Treasurer, Richmond, Virginia.



Farm chemicals receive increasing attention in Ohio Adult Farmer classes.



Frankie Ruhall, FFA Chapter Secretary of Mason, Kentucky, shows Kenney McMillan of Prairie City, Illinois, National FFA President for 1962-63, a print of the new poster is being used to publicize National FFA week February 16-23.



R. C. S. Sutliff, (left) Chief, Bureau of Agricultural Education, New York State Education Department, inspects farm partnership arrangement with Alvin Wells and his son, David Wells, State FFA President 1961-62 as A. W. Tenney, Director, Division of Agricultural Education Branch of the U. S. Office of Education (right) gives approval. Mr. Wells and David told teachers of agriculture of New York, who were touring their farm, of the values vocational agriculture shares in their operation of their partnership. Photo by W. W. Sharpe.



Two Future Farmers from the Philippines visit an Ohio member's corn project.