THEME: Programs in Agricultural Supplies and Services
Programs in Agricultural Supplies and Services for Three Million Workers: Have We Made Any Progress?

Vocational education in agriculture/agribusiness has had the responsibility of providing trained workers at least to the professional level for all areas of agricultural industry for over 18 years (since the passage of the Vocational Education Act of 1963). Most agricultural educators have strongly supported the expansion of programs to include this broad area. Excellent progress has been made in training for some areas of agricultural industry, such as agricultural mechanics and horticulture. In other areas, especially agricultural supplies and services, progress has been slow. Confusion has existed over terminology, curriculum, instructional strategies, and personnel qualifications.

Emphasis in production agriculture has continued to overshadow agribusiness even though statistical information from the U.S. Office of Education indicates that slightly less than half of the secondary students enrolled in vocational agriculture/agribusiness in the United States are in the production agriculture area. A vast assortment of programs has arisen. Are these programs meeting the needs of agricultural industry?

Editors' Page

The Need

The productivity of farms and ranches in the United States is directly related to the productivity of the agricultural businesses which produce supplies and services. It does little good to train people to farm without also training people for agriculture. Training people to farm is like studying only the tip of an iceberg. There is a lot more to an iceberg than just the tip. In fact, the tip is built on a base which is not readily visible. The same is true in agricultural industries. Modern farming and ranching is built on a base which may not be very obvious, but which needs to be more carefully studied and identified.

Instructional programs in vocational agriculture/agribusiness must deal with the whole iceberg, including agricultural supplies and services.

A number of research and development projects have been carried out through financial assistance from the past 15 years to assess opportunity needs. Studies have been valuable in gaining insight about the agricultural supplies and services required by farmers and ranchers. On the basis of these studies, we must conclude that specialized programs are needed, and that there is specific instructional content for the classroom and laboratory in agricultural supplies and services. Instruction in production agriculture alone will not be adequate. Merely placing students in supervised occupational experience programs in agriculture will not suffice. A planned instructional program in agricultural supplies and services is essential.

The Delivery

Quality programs in agricultural supplies and services require certain facilities and instructional materials. These are needed in order to provide instruction that is relevant to the real world of employment. Just as agricultural mechanics and horticulture programs require laboratory facilities, so do programs in agricultural supplies and services.
Have We Made Any Progress?
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supplies and services. The nature of the facility depends upon the instructional program. In agricultural supplies and services, it should consist of a simulated farm supplies store so that students may learn how to conduct displays, make physical and perpetual inventories, weigh and package supplies, properly use the telephone, handle money, make sales, fill orders, ship and receive merchandise, and perform many other activities. The agricultural supplies and services laboratory should contain a wide assortment of products with sample displays, display shelves, ticket registers, sales counter, cash register (or cash box), and other equipment appropriate for the curriculum.

In analyzing instructional agricultural supplies and services programs must be competency-based and develop problem solving skills. An analysis of the findings of competency studies has revealed that the needed competencies can be clustered into several instructional areas.

Fundamentals of agricultural management — The scope of management ranges from the top executives of giant corporations to the first-line supervisors at the local level. It should include the need for management, decision-making, planning, meeting legal requirements, finding labor, and other areas. Over the years, one of the sharp divisions between vocational agriculture/agribusiness and some of the other areas of vocational education has been education for entrepreneurship. And we want to continue preparing people who can competently function in a competitive society.

Relating to other people — This area of instruction focuses on human relations. More people lose their jobs for lack of the ability to get along with people than all other reasons put together. The efficiency and productivity of agriculturalists are closely related to the relationships which exist among employees.

Keeping records and following sound business procedures — Every employee gets involved with records and procedures in some way. The time that employees use when they arrive and leave work to the sophisticated systems of recordkeeping. Instruction includes using effective oral and written communications, following business routines; simple procedures in processing data manually, mechanically, and electronically; keeping records and how to use and interpret information.

Promoting supplies and services through displays and advertisements — Many agribusinesses need to improve the ways in which supplies are promoted. This can consist of sales and profits. Instruction should include the nature of promotion, using advertising media, preparing messages, using direct mail campaigns, preparing displays, and other areas.

Selling agricultural supplies and services — Many occupations involve selling agricultural supplies and services. The career ladder often requires managers to have had sales experience. The instruction should include the sales process, with emphasis on approaches in selling, determining customer needs, merchandise presentations, closing the sale, and sales follow-up.

Handling, transporting, and packaging supplies — All agricultural supplies are handled, packaged, and transported in some way. Instruction should include the functions of distribution and mobility, handling, facilities and equipment operation, ordering and receiving procedures, grading and inspecting, storing and warehousing, packaging and labeling, and transportation.

Direct selling of supplies/services associated with the production of animals and plants — This area of instruction refers to product knowledge, and involves developing the abilities of students in working with farmers, ranchers, home gardeners, and animal keepers.

Responsible to All

Vocational agriculture/agribusiness is responsible for provide jobs for all areas of the agribusiness industry. An area which needs additional efforts is agricultural supplies and services. The time has arrived when all agriculturalists must join together to implement vocational education for all of agriculture. We must make ourselves from the narrow "production agriculture" mentality and move into agricultural industry of the 1980's.

April, 1981

The theme for this issue of the magazine is Programs in Agricultural Supplies and Services, Dr. James E. McGuire of Western Kentucky University served as Theme Editor, and his assistance is greatly appreciated.

The Cover

Andy May, 1980 Central Region Star Agriculture student, is shown here as regional sales representative for the Vaughn Mcllvein Corporation, a horticultural supply firm. Andy began his supervised occupational experience in high school at Schwab's Greenhouse in Green Bay, Wisconsin. (Photo courtesy of Elliot Nowels, Western FFA Center).

THE AGRICULTURAL EDUCATION MAGAZINE

THEME

Challenges in Agricultural Supplies and Services Training

Yes, agriculture is more than farming! In earlier years farming and agriculture were pretty much the same thing. While farming is still the traditional industry of the total industry of agriculture, an extremely complex group of people and organizations are involved in the production and distribution of food and fiber. In addition to the farmers, we have organizations supplying the farmer with resources, marketing farm products to consumers, and groups of business providing services to suppliers, to producers, and to processors.

Asked to feed and clothe a hungry world, agriculture has thrived throughout the 1970's. The agricultural industry has increased production even while faced with escalating input costs, inflation, environmentalists, and energy crisis. American agriculture now faces a greater challenge of the future. What about agricultural education? Have agricultural educators made adjustments and changes relative to agriculture for the 1980's? Are we ready for the challenge of the future, or are we still challenged by the present? Have we geared up to vocationally train workers for the vast and complex off-farm agribusiness sector? Are we proud, or embarrassed, of our record in the area of agriculture supplies and services?

Being Theme Editor of The Agricultural Education Magazine for this topic was not an easy task. A person has to look long and hard to find a really functional agricultural supplies and services program anywhere in the country. Many admit the potential is there. Model programs are difficult to find. There appear to be some very real problems in the traditional agriculture program. We deal with a 2-year program. This is the situation after numerous challenges and a lot of hard effort have gone into the program.

The Challenge

The Vocational Education Act of 1963 clearly challenged us to develop programs for the off-farm sector of agriculture to complement our traditional production programs. Good progress has been made in agricultural mechanics and maintenance in some areas, but many programs are still lagging behind. It isn't because we have lacked leadership and curriculum materials. Thirty teachers from eleven states met the second time at Oklahoma State University in 1966. They developed an excellent curriculum guide for a two-year program in this area. States received a curriculum guide in 1977 from the U.S. Office of Education. Career Preparation in Agricultural Supplies and Services.

The National Ag Occupations Competency Study, directed by David McClay, became available to teachers in 1978. It identified and validated essential agricultural competencies needed for entry and advancement into agricultural supplies and service occupations. Finally, the Gregg Division of McGraw-Hill Book Company helped us by providing a set of eight student texts and eight student activity guides in 1978 and 1980. Since the 1963 challenge, many threats have come and gone. We have continued to work at supplies and services programs, but we simply have not gotten the job done. Rather than being challenged by the future, we are still challenged to meet the needs of the present!

Agricultural educators still face many challenges with agricultural supplies and services programs. Some of the considerations that teachers must deal with to establish a functional program are presented here.

Diversification — There are hundreds of different kinds of jobs within agricultural supplies and services. It is difficult for teachers to keep up with a rapidly changing market! There are so many different programs. How does the teacher prepare a curriculum around these diverse occupations to supply the student with the necessary product information? It takes a delicate blend of entire class, small group, and individual study to accomplish training goals.

Teacher Preparation — Teachers often need more training in the above mentioned diversification makes it difficult to find or to prepare teachers who have the broad background to work with so many different kinds of personnel. Similar to agricultural mechanics and horticulture, the person with a broad background is too often tempted out of teaching into the business. Teacher changes and personnel turnover are more complicated in supplies and services programs. Teachers are not involved in teaching the same course for an extended period of time.

Administration — Cooperative school administrators are a must in the success of the away-from-school portion of the program. Principals, superintendents, and school board members must understand and support the program. Sound written policies should be established and followed to provide the program with stability and continuity. Policies will help improve the efficiency and com-

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munity support of the activity. Policies will aid in evaluation of the supplies and services program.

Training Stations — Quality training stations are needed for student on-job experience and training. They simply do not exist in some communities. In other schools, they may be located too distant for today's high costs of travel. A careful survey of potential training stations is one of the earliest activities needed in establishing a program. Additional information and support can be gained by personally interviewing management during the survey process.

Student Selection — A consistent supply of upperclassmen who want and can profit from agricultural training is a needed ingredient. We need to work closely with counselors to formulate recruiting plans and to effect pre-enrollments. Within the department we must develop our own personal contacts and a good feeder system. Enrollments must be able to secure work releases and transportation for work at the training stations.

Student Placement — Much of the success of supplies and service programs depends upon a good-fit of enrolled students and training stations. The interview process will begin in the fall, and high school students will be expected. There should be written goals and purposes for each trainee. Everyone should be satisfied that the station will provide a variety of experiences and the opportunity for growth. Placement should provide for adequate supervision, in-service training, conference opportunities, and evaluation.

FFA Activities — Nationally, the FFA is still stacked in favor of production agriculture. Many existing contests and activities are partially effective for the supplies and service programs. Some have shown increasing numbers of demonstrations and proficiency awards for agricultural persons have been added to the awards structure. On the other hand, some states have not yet started Star Agribusiness Awards to parallel the Star Farmer Awards. Can we do more through the FFA to encourage the agricultural supplies and services programs at the local and state levels?

Public Relations — So far we have mentioned students, teachers, administrators, and agribusinessmen at the training stations. All important for a supplies and service program. But, we want the general public to understand and support the program. An effective public relations program is needed to interrelate the nature, purposes, and activities of this option area. They need to understand why the teacher is out around town during the school day. They need to know where students are down at the local feed and hardware stores rather than at school. Newspaper articles, radio broadcasts, posters, brochures, and other media can help. Keeping the public informed is of utmost importance.

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In Agricultural Supplies and Services

The Effective Use Of An Advisory Committee

By Odell Miller
Editor's Note: Dr. Miller is Assistant Professor, Agricultural Education Department, The Ohio State University, Columbus, Ohio 43210.

Do you have an advisory committee for your department? If you have one, is it active and effective or is it a common situation? Too often for the advisory committee is a paper committee because it has become a "yes" group for the instructor, it has only met occasionally, or the members do not understand their function.

In order to properly use an advisory committee you must understand its purpose. An advisory committee is first of all a study committee for administrative purposes. It is used in some schools to help in planning and conducting an instructional program in agricultural education.

If used as a study committee, it will not be a paper committee, but will be an effective means of support for the department. Consider the tips presented in this article to effectively use an advisory committee.

Administrative Approval

In organizing an advisory committee, the instructor should first present a study committee to the principal and the school and the school committee and the school and policy regarding advisory committees. Some school systems require that the board of education approve an operating policy for the advisory committee, that the superintendent be the nominating committee for the election of members, that those members be appointed by the principal and that the elected committee to serve on the committee be appointed by the superintendent. In other school systems, the principal or the agriculture instructor may be appointed to the selection committee including the selection of members. This was the case in the two schools in which the writer taught vocational agriculture and organized advisory committees.

Selecting Committee Members

The committee should be composed of individuals who represent all agricultural programs. This would include articulation for students, employers or operator-owners from areas of the agricultural industry such as agricultural supplies and services, representatives from adult education programs offered by the school, representatives from different geographical areas of the state, representatives of the agricultural organizations, representatives of parents, representatives of the FFA Alumni, the FFA president, and both males and females.

Some of the members may represent more than one group but each member should be:

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help select training stations, especially for the agribusiness students or students from other special programs; help plan meaningful activities for the FFA, such as BOAC projects and other community projects; help the FFA decide on the best money making projects for the chapter and one that the community will support; and help with the chapter's public relations.

In your department you may discover many other ways the advisory committee can help to make your job much easier. Remember, an advisory committee is not a pressure group, but a group that is willing to give time and experiences to advise you, the instructor.

References

THEME
Stars on Vo-Ag

By Elliott Novella

Editor's Note: Mr. Novella was Director of Information, National FFA Officer, Alexandria, Virginia 22314, at the time this article was written.

Transition* is a word vocational educators use often to describe it. "No man's land" is the way it might appear to many who have just recently entered it. "It is that space and time that stretches in front of a young person just graduating from high school and starting into the world of work.

Once this time zone is conquered one slips by it quickly — often to the point when it also becomes difficult to remember the quandaries that the transition point can bring. An increasing wealth of opportunities in the world of agribusiness brings yet greater diversity to the schools.

As a refresher course, perhaps it's helpful to approach those that are passing through "transition" or have quite recently completed the phase and are successfully mastering their own lives — the four FFA Star Agribusinessmen of America. What are their feelings on agribusiness, high school vocational agriculture, and their careers?

Jack Baber, Jr., California

Jack Baber, Jr., Star Agribusinessmen of America began his work experience program by leasing 30 acres of land from his father. Today he is a very involved part of of Baber Farms, Inc., the family business of custom rice production, land leveling, rice drying, and wildlife management. Baber Farms is undergoing an expansion with the construction of a new 20 x 85 foot storage and rice-drying complex.

Baber says that his ag teachers and his classes related to agribusiness opened his eyes in many ways. "I think I thought of agribusiness only as 'the parts store' when I entered a vo-ag, but it's much broader than that. More production people need to understand the world of agribusiness, how it affects them," he says.

Baber feels that some basic instruction in economics would be helpful to anyone coming out of vocational agriculture and that vo-ag ought to attempt to keep up on agribusiness's entry into the 'computer age.'

"The computer business is a wide open field," he says. "I think students should know about the different types of computers that are available with some application for farm use. We're (Baber Farms, Inc.) exploring computer recordkeeping and computer use in finding the optimum level of fertilizer application and use of other inputs."

All this aside, Baber feels that the basic sequence of career exploration, animal science, plant science and farm management has prepared him well for his role in his family's operation, as well as enabling him to increase ownership gradually.

"Vo-ag helped me become a little more self-sufficient. I used my SDE program and recordkeeping to keep track of my progress and was able to work up to my first loan."

Andy May, Wisconsin

Andrew May, the Central Region's Star Agribusinessman, began with general plant care, managing spring bedding plant sales and making holiday deliveries. As Schreuder's Greenhouse in Green Bay, Wisconsin. He managed the FFA chapter greenhouse as a sophomore while continuing his work at Schreuder where he was supervising 15 part-time employees and taking charge of holiday deliveries of over 4,000 plants. After a stint as manager of all wholesale orders at Schreuder's, he accepted a position of regional sales representative for the Vaughn-Jacklin Corporation, a horticultural supply firm in 1978, a position he now holds.

May says that enrollment in vocational agriculture and participation in the FFA caused a rather dramatic change in his attitude, changing from "they're just a bunch of farmers" to a real respect for the industry — both production and agribusiness.

"Right away I saw that the program had a lot to offer — it wasn't just a bunch of kids from the same old place. The diversity of options really impressed me. I learned you could even go to Europe with the FFA, which I did, in the summer before my senior year.

May, as with the other Stars, credits much of his success to the "individualized instruction" that he received from his advisor. He says that early on he had the confidence to make the difference. "I think we need more emphasis on first-year people. Advisors should really understand that new students must get involved early on. Start them immediately on SOE and recordbooks. Students need guidance, but also space to grow and make their own decisions."

May echoes Baber somewhat when thinking of improvements for instruction in agribusiness.

"Agriculture is getting more and more technical and we must make an effort to keep pace. I feel this when thinking back over some of the courses I have visited — we are not changing as fast as we might be able to or as we need to," he also indicates that the same idea might apply to the counseling phase of the program for his own students and he uses an analogy from his own business.

"In my business you shouldn't decide arbitrarily what a client does or doesn't want to do — you have to provide the best information you can and let them select. I think the same applies for the ag teacher and his students or FFA chapter. They should be able to do a certain thing or the student would like a certain career path."

Henry Lee Goodnight, North Carolina

Henry Lee Goodnight, the Eastern Region's Star Agribusinessman, holds one-third interest in L.L. Goodnight and Sons Farm Supply Company. When he started vo-ag/FFA in 1972, the decision was made to expand the family business. This required change from selling greenhouse plants and the construction of a 20 by 100 foot greenhouse adjacent to the existing store. Goodnight's skills and experience in delivering, poultry, and seed feed in bulk or in the bag and handles fertilizer in the same manner.

"I can't really think of an area that it (vo-ag/FFA) didn't help me in," says Goodnight. "I'd have always liked to be in more things — I'd have liked to be in all the contests — but you have to limit what everybody sees at bat."

Goodnight stresses the personal relationship of the Vo-Ag instructor and the student as being very important.

"My advisor was more of a good push for me than anything else. He didn't plan it out — he just opened the horizons for me — more than just instruction. I think it's really good for advisors to get to know their students; their name in class and things like that. Just by being the student's SOE the advisor should be able to detect a student's interest through SOE and the FFA and where they might fit into a good solar career."

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Stars on Vo-Ag

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Mike Tillman, Florida

Mike Tillman, the Southern Region's AgBusinessman, and his father decided to start their own farm equipment dealership in 1975 after Mike had worked as a parts manager and mechanic at another local dealership. At the time he was honored in Kansas City, Tillman was service manager of the business, with responsibilities for services, delivery, and on-farm repair on new and used equipment, combines, and implements. He now is Vice President of the growing operation, responsible for all the machinery and service in a greater management role.

When Tillman entered Vo-Ag, he admits now that he had an image of an agbusinessman as a ... " ... person really didn't get out and do anything." "I now realize that agbusiness still has that contact with ranchers and farmers and that it's very important to maintain it," he says. Tillman's responsibilities have changed and he feels the weight of them even when he's behind the desk in the office and not working on a tractor or rushing to shorten a farm's stocks of feed.

"As Vice President I have a certain responsibility to my employees as well as my customers. I have to think about putting in enough work to be able to keep the shop going," he says.

Tillman says that an early evaluation of his goals and his means of achieving them figured largely in his satisfaction with his chosen line of work. "I think the majority of WV ag teachers push me enough to let me know that they care a lot. When that happens you get to thinking that there must be something here for me. I'm ladder climbing. As long as you keep climbing, they will stay right with you, too. They still come by here. We're in close contact even though they're 20 miles away.

Patience is a word Tillman uses in extending advice for ag teachers in their contact with students interested in ag careers.

"Before you start giving a lot of advice, take time to get to know your students on a one-to-one basis ... I think that's real important." Mike thinks that there should be more recognition for the agronomic knowledge and awards. "The winner gets recognized, but we never have enough mention of the ag teacher," he says.

Ag Teachers, Records, and SOE

It's interesting to note in the above quotes the number of times the advisor came into play as the important catalyst, key to the young person's success. The tone of the comments says perhaps more than the words themselves. Terms like "agbusiness" and "caring" popped into the conversations as a matter of course. These, of course, are the very things that will make the difference between mediocre and extremely effective ones. At the same time, unfortunately, it's the same thing that can take, on the teacher's part, a great deal of time to cultivate.

Without any prompting at all, two of the Stars mentioned "record keeping" and three of them mentioned "SOE." Not really that astonishing when you consider all the discussion within the discipline of agricultural education on these subjects during the past several years, until you consider the fact that these individuals are agrbusiness ner, not educators.

Vo-Ag teachers Don Liebelt, Chris Yager, Glenn Alexander, Andy Andersen and Bruce L. Miller have likely learned many of their lessons the hard way. They've learned that making those Stars Over America in their transition. They've probably learned yet more from other students who could never hope to climb those Stars over America. An unusual sense of continuing education program could well be an ability to listen well as his or her students go through that first year as graduates — the transition.

BOOK REVIEW


This book places an emphasis upon the delicate balance that must be maintained in today's use of commercial fertilizers. We are living in a land which dictates the necessity for greater production from the land which is left. The key to greater productivity is fertilizer. However, fertilizer must be used in correct quantities and in balanced qualities.

USING COMMERCIAL FERTILIZERS places emphasis upon both the necessity of to fertilizers and the environment. Each chapter deals with a specific category of plant nutrients, along with a chapter on Fertilizer Testing and the Environment. In addition, there are chapters on the specific primary plant nutrients and a chapter on Secondary and Trace-Element Plant Foods.

Both of the authors are qualified for their writing in this book. William McVicker received his B.S. and M.S. in soil chemistry at The Ohio State University. Dr. McVicker has worked in the fertilizers and the Environment. In addition, there are chapters on the specific primary plant nutrients and a chapter on Secondary and Trace-Element Plant Foods.

The Key

It has been said that public relations is the key to an effective vocational agriculture program. Cooperation with all types of people and organizations has certainly enhanced the Linn-Mar FFA chapter and the people with whom they cooperate. One reason this relationship of cooperation is so valuable to the Linn-Mar FFA Chapter is that it has a number of urban students. These students receive valuable experiences which are not available elsewhere.

THE Linn-Mar Story

Cooperation with Agribusiness has a Big Pay-off

By J ohn DAVIS and Dennis SEAHASE

Editor's Note: Mr. Davis is a student in Agronomy Education at Iowa State University, Ames, Iowa 50011. Mr. Sease is a vocational Agronomy Educator at Linn-Mar High School in Marion, Iowa.

THEMEE

Cooperation among students is an essential part of an effective vocational agriculture/FFA program. It develops the ability to work together and creates situations where members gain experiences in working in group situations where members gain experiences in working in group situations. Examples of these activities are common in almost every vo-Ag/FFA program. Sales campaigns, recreational activities, building Our American Communities (BOAC), and other community service projects are a few of these examples.

Other types of cooperative activities for vo-ag are those involving students with other groups and organizations in the school and community. FFA chapters have a tradition of working with other youth organizations, such as the Future Homemakers of America (FHAA), local 4-H clubs and student council members. Along with these youth clubs, FHAA chapters work hand in hand with local civic clubs (such as the Lions Club and Rotary Club) and with government agencies (such as the Farmers Home Administration, Soil Conservation Service, and Extension Service). Local agribusinesses are also partners in the cooperative effort with vocational agriculture. Through interaction with school, civic, and business organizations, vocational agriculture has received a very good reputation for developing community interest.

Our Test Plot

The Linn-Mar Future Farmers of America, located in Marion, Iowa, developed a cooperative program to draw together local agribusiness firms, area farmers, and FFA members. The final goal for these activities was to develop beneficial programs for all involved. These activities stemmed from cooperative abilities learned within the FFA chapter and vo-ag classroom.

During the past few years, a local cooperative, Linn Co-op Oil Company, cooperated with the Linn-Mar FFA on several activities. These included a seed and chemical test plot, chemical disposal program, and agricultural work experience. Linn-Coop Oil Company is a cooperative member of the Iowa Cooperative. Farmland Industries is a supplier to midwestern cooperatives for such products as agricultural chemicals, fertilizer, and livestock feeds.

As an outdoor laboratory and community service project, the Linn-Mar FFA operates a test plot. It consists of 38 acres located near the Linn-Mar Community High School. The land is rented on a per-acre basis from the Linn-Mar School District. All tillage, seeding, preparation, and planting of the plot is done by the FFA members. Family-owned equipment is used. Area seed companies donate approximately twenty-five different hybrid varieties to plant the corn plots. The role of Linn-Coop in the Linn-Mar FFA test plot is to conduct the initial planning for the chapter's test demonstration. They also provide resources to provide classroom instruction. After the initial plans had been developed, the co-op serves as a source of supplies, such as fertilizer and chemicals. These are all provided by the co-op at reduced prices.

The co-op also participates with the chapter in hosting a field day at the test plot. Together, the Linn-Mar FFA and the Linn-Coop invite area farmers, agribusinessmen, and co-op customers to attend the field day at the demonstration plot. The co-op arranges for various company representatives to be on hand to explain the uses of their products.

We feel strongly in the importance of giving students "hands-on" cooperation. With the Linn-Coop Oil Company gives the students an opportunity to work in the field with knowledgeable people who work with the problems of crop production on a day to day basis. The test plot is used extensively in teaching classes of crop production, soil science, and horticulture. The students grow to value the experiences involved with the test plot.

Cooperation between the Linn-Coop Oil Company and the Linn-Mar vo-ag department is a give and take process. Some cooperative activities benefit the department while other activities serve a large purpose for the Linn-Coop. Still other activities benefit both organizations. Chemicals can be crushed, conducted by the Linn-Mar FFA, benefits the Linn-Coop through service to the area farmers.

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Agricultural Education Magazine: Past, Present, and Future

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The course work in the program is seventy credit hours in the areas of technical, management, sales, communications, and agriculture. The technical studies are designed to teach the basic skills needed to be employed by the dealership so the student can work into management. He or she will study engines, electrical systems, power trains, hydraulics, diesel systems, and farm machinery while learning basic technical skills.

Management skills will be learned through the study of parts and service management along with the study of dealership management. During this period of time the student is also involved with other college students in studying business and professional communications and small business management courses. Sales and related agriculture courses round out the student's formal academic training that provides the student with many of the managerial and technical skills needed to be successfully employed in a progressive farm machinery dealership.

Making Cooperative Placement Work

The cooperative phase of the program is very important. Here the student learns first hand how a machinery business functions. Sometimes a student learns from this experience that another career should be chosen. When this turns out to be the case the student has the opportunity to change the program to continue studying, in some other phase of agriculture mechanization, transferring some of the credit already obtained. Since the success of the cooperative program can alter a student's future, it is important that the student be placed in the right dealership. Business conditions, geographic location of good placement centers, and his actual experience that most students want to live at home are some of the factors that must be overcome to have the ideal match-up.

Early in the spring of each year efforts are made to identify placement facilities. During the summer, the students will have already have their locations selected and be making plans for their summer employment. For others, finding good places becomes more complicated. In the seminar classes, discussions are held with students concerning criteria they should look for in selecting a dealership. Experience has indicated that the best dealer to train a student may or may not be the most successful looking dealer in the community. The better placement program is one that has the desire to work with people, has volume, organization of shop areas, and other employee attitudes are important but perhaps secondary to the desire of the person in charge of the student.

Using ideas and criteria discussed in the seminar, the student is aided with during the cooperative period. Previous knowledge of the dealer by the student, parents, and other individuals aids the student in the selection process. Ideally, the student should have at least three dealerships mind before the final selection process begins at about spring vacation time.

The instructor's role in the final selection depends upon the three selections by the student. If a selected dealer has previously had successful placements, the time and effort of the instructor can be less. If this is not true, then the instructor will visit the selected dealerships to determine which one best meets our criteria and to discuss the possibility of being the cooperative dealer for a student.

If the dealer shows interest, then the term of the program can be discussed at that time and plans for the student to begin when the spring semester ends can be finalized. During the selection process or before the semester ends, counseling with the student becomes important. The new student may be apprehensive about the experiences as a cooperative student. Our discussion of the probable things that may happen and reports by previous cooperative students during our seminars on their actual experiences at dealerships helps allay fears and misunderstandings the new students may have had.

After a work station for a student has been confirmed, the instructor will visit with the student to discuss the work experience. During their first cooperative period, the student needs to have a variety of experiences so they can learn as much as possible about the actual operation of a dealership. The student in an employee of a dealership who has graduated from high school but not from college can be a valuable source of information on the dealership and his or her boss is the dealer or a designated employee of the firm. The dealer should provide the student with increasingly more difficult tasks as he or she progresses.

During the initial visit of the instructor and student a practical work schedule is discussed and outlined on the training agreement which the instructor, dealer, and student sign. This training agreement is helpful to all parties during the cooperative period because each person knows what is expected of each other. Students will also take advantage of the periodic field trips on future visits to see if the student is getting the experiences that were planned. It also will contain other useful instructions and things the student should learn. A very important phase of those assignments is that they cause the student to schedule a time with the dealer when they can discuss the information together. This one-on-one discussion creates a close working relationship that builds interest and confidence in the students as they successfully complete their cooperative program.

Either during or after the completion of the associate degree program, some students will elect to go on and complete a bachelor's degree in agricultural mechanization. The two programs are parallel so that students can take this option after they have studied at the University or while and decide that a bachelor's degree would be more rewarding to them. It depends on when they take the option as to the credit they can transfer. In some cases they can receive both an associate and a bachelor's degree in four and one-half years of study.

Advisory Committee Input

The Agricultural Equipment Management program was structured with the aid of an advisory committee. This advisory committee presently has twelve members representing all segments of the industry. Members are chosen by geographic location and their position in the agricultural equipment industry. Previous students, dealers, manufacturers' representatives, state association officers, and state education administrators have all contributed their knowledge to the program as an advisory committee member. The committee is chosen on the basis of experience, with four members going off and four new members coming on each year. The members choose a President, Vice President, and program chairperson, who meet twice each year, preferably in the spring and fall.

The committee serves in an advisory capacity only. Their input is invaluable, in recruiting good students, in serving as cooperative dealers, and in obtaining facilities and components for class use has been of tremendous assistance.

In summary, cooperative placement offers opportunities for students to advance in special areas, such as horticulture, agriculture mechanization, and service. Students need selective enrollment, a sound curriculum, well supervised cooperative experience, and the guidance of a faculty committee. The future truly belongs to those who prepare for it. Vocational educators must provide leadership in preparing opportunities for student preparation, and for the effective use of the machinery industry, and world food production depend on us.
ACT: More Appeal and Less Facilities

By R.Z. Arey
Editor's Note: Mr. Arey is Teacher of Vocational Education at Turnersville High School, Rutorials, Virginia, 23242.

Even with the lack of all this knowledge and information, we were adventurous enough to feel that the cooperative program had a definite formality for the advancement and improvement of the total vocational agriculture program in our department. With the support of our area supervisor and school administrators, our present program was conceived and gradually grew into what we now recognize as very much an asset to the total program. As the years passed, we have made steady growth and improvements in the business operation.

Agribusue vs. ACT Option
At this point, it is possible that we have thoroughly convinced you with the terms "agribusiness" and "ACT." Hopefully, we can give you our interpretation of what we now refer to as the vocational agriculture department.

First, all students are required to have the agriculture class from science and mechanics I and II. This you will readily recognize, is the basis for the option program. This is followed by the agriculture production curriculum for all students in tenth grade. When a vocational agriculture student reaches the sophomore or junior level, he has the option of continuing in agriculture production or agribusiness. If the student selects the agribusiness curriculum, he or she has an additional option which we label Agribusiness-Production or Agribusiness-ACT. The basic difference being the type of supervised occupability experience program. If the student moves into the ACT option, he or she achieves the SOE requirement by working in a cooperative training station on released school time. These training stations are located in some type of agribusiness in the school community.

However, if a student enters in the agribusiness-production program, he or she receives all training in the classroom and meets the SOE requirements in the same manner but has released school time for the cooperative work experience portion of the program.

The Curriculum
The curriculum is designed to be competency-based, an educational concept that is now foremost in our philosophy of education. It is our goal to provide a thorough, balanced and occupability oriented program for our agricultural education program.

The following is an outline of the agriculture education curriculum for competency-based instruction:

Agribusue I (ACT I)

1. General competencies - The student will be able to:
   a. Establish and keep records of a SOE program using the state record book.
   b. Become satisfactorily placed in a training station.
   c. List and catalog career opportunities in the field of agribusiness.
   d. Exhibit desirable competencies concerning agribusiness activities.
   e. Identify and describe the functions of agribusiness activities.
   2. Participate in FFA and other leadership activities.
   3. Properly perform sales procedures.
   4. Actively participate in activities to improve rural living.
   5. Understand and demonstrate the production of the product or service associated with the individual station.

Agribusue II (ACT II)

1. Course Orientation
   a. Course content and management
   b. Overview of agriculture education programs
   c. Keeping accurate and complete records in accordance with the state approved record book.
   2. Methods of indirect instruction
   a. Demonstration, report, display, and visitation of educational products, and/or services associated with training centers.

Agribusue (ACT II)

General competencies - The student will be able to:
1. Keep complete and accurate records in the state approved record book.
2. Properly perform and demonstrate the necessary skills in agriculture salesmanship.
Seeing Yourself As A Vocational Agriculture Instructor

By Allen Ruzer
Assistant Professor, Agrcultural Education Department, University of Nebraska, Lincoln, Nebraska 68588.

A competent vocational agriculture instructor is the most indispensable component of a good vocational agriculture program. This individual must be more than just a collection of fragmented pieces. This person must be a well-rounded individual having not only a broad base of subject matter knowledge, but also an understanding of the principles and procedures of good teaching and the ability to effectively use them.

A good teacher is always looking for ways to improve. Perhaps one of the most effective, yet most often overlooked, methods of improvement is through self evaluation.

What Is Self Evaluation?
The term evaluation means different things to people. Most responses by teachers tend to center around either grading, testing, measurement, accountability, judgement, or invasion of privacy.

Self evaluation, on the other hand, goes one step further. It does provide a means to accomplish many of the items listed above, however, it creates a situation where the instructor feels less threatened. Self evaluation allows the instructor to evaluate teaching skills and procedures in a private personal setting.

Why Should We Evaluate Ourselves?
Several reasons for self evaluation could be given by any vocational agriculture instructor, state staff member, or teacher educator. Among the most popular reasons include:

- Self satisfaction
- Meets students needs more fully
- Prepare for administrative evaluations
- Observe bothersome habits
- Observe movement around classroom
- Organization of presentation
- How many times have you taken advantage of the opportunity to observe yourself teaching during the past year? Regardless of the reason given, the bottom line should be to become a better vocational agriculture instructor.

A Possible System Of Self Evaluation
One of the most effective approaches to self evaluation, and yet perhaps most often overlooked, is through the use of the video tape recorder. The video tape recorder allows the instructor to not only observe the audio portion of a presentation (very useful in interaction analysis) but also enables the instructor to play back the video portion of the tape. The taping of a class doesn't even have to be complex or sophisticated. The teacher can either ask a student to run the video camera or even just set the equipment and camera in the back of the room and let it run by itself.

After the taping session comes the evaluation. A form has been developed for your use as you observe your taped classroom sessions. Although this form appears to provide all of the necessary elements for self evaluation, don't hesitate to add additional items where you feel the need to analyze yourself. Also, write notes back on the form. Compare one session with another to measure improvement. After you reach a level where you feel comfortable, invite another staff member with more experience to observe your tape and make suggestions, maybe even work out a trade where you exchange tapes for critiquing.

Students Gain From Animal Supplies and Services Instruction

By Roy D. Dillow
Editor's Note: Dr. Dillow is a Professor, Department of Agricultural Education, University of Nebraska, Lincoln, Nebraska 68588.

Students in high school vocational agriculture programs are preparing for entry jobs in on-farm and off-farm agricultural businesses. A study completed in Lancaster County, Nebraska, showed there were twelve different types of business firms which supplied animal producers and processed agricultural animal products. Twenty-seven different entry-level job titles were represented in the twelve firms. Employers were asked to identify competencies needed by persons in these entry jobs. The competency data produced five congruent areas of knowledge needed by these entry workers. These areas of knowledge were:

1. Classification of animal feeds.
2. Relation of animal nutritional needs to feeds.
3. Use of farm grown grains in formulating animal rations.
4. Rules for substituting feed ingredients when balancing animal rations.
5. Administration and supervision of facilities commonly used in animal feeds.

Follow-up interviews with managers of the animal supplies, service, and processing businesses verified the knowledge areas.

Problem and Procedure
A unit of instruction was developed, following a "question-answer-discussion" format, which contained the technical information needed by agricultural workers in the five knowledge areas.

The problem was designed to determine whether there was a gain in knowledge after classroom instruction in the five knowledge areas.

The procedure was to randomly select ten Nebraska High Schools, or a 7 percent sample of schools. Teachers were asked to teach the unit in their curriculum when advanced animal feeding was normally taught. A twenty-question (100 point) pre-test was administered before the unit was taught, and the same test was given as a post-test upon completion of the ten-hour unit.

A total of 111 students from the ten schools participated in the pilot unit test. The pre-test average score was 29.72, and ranged by school from 11.84 to 42.85. The post-test average score was 54.27, and ranged by school from 30.69 to 76.22.

The big step is up to you. Borrow a video tape recorder and tape yourself. Again, do this at the end of the day, while it's still fresh in your mind, get the teaching self evaluation form out, observe the tape, and evaluate yourself. As you view and listen to the video tape, without a doubt, you will be able to detect areas of strength and weakness. Put yourself on the back for your strengths and begin to work on your weaknesses. Recognize these areas may well put you on the road to seeing yourself as you become a truly great vocational agriculture instructor.
Plans for an Arc Welding Bench

By George Brown

Editor's Note: Mr. Brown is a member of the Agricultural Engineering staff at Michigan State University. He has built and used some of the equipment described in this article.

1. The welding booth is about 6' x 6' and is made of sheet metal 1/8" thick. The sides are made of 1 x 1 x 1/8 angle — or whatever similar size you have. The sheet metal is 18-22 gauge, held in place with machine screws. The entire inside of the booth is painted flat black to reduce reflection of the arc flashes. The floor is bolted to the floor with 1/4" hex bolts (used for hinges on the side panels.

2. The booth is a piece of 1/2" or thicker steel plate. 2 x 3 1/2" plate will do, but it is very prone to warping. The surface of the plate is kept smooth and free from weld beads with frequent grinding by the students with a portable grinder.

3. A ventilation duct can be provided at the rear to pull the fumes off the work, and not past the welder's face. It is a 3" x 10" i.d. home heating floor register. The duct work is 8" galvanized stove pipe, run horizontally behind the bench and resting on the horizontal bench supports. Ventilation needs are: Velocity 100 feet per minute; Volume — 400 cubic feet per minute for each booth.

4. Hooks for hanging the welder's tools are pieces of 1/4" round stock welded to the top bar of the rear panel, and bent up about 1/4" away from the panel. A large washer is welded to the pliers, and an S hook serves to hang the chipping hammer.

5. A helmet, pair of welding gauntlets, and five gallon pail for a quench bucket complete the booth.

6. The free-standing booth is mounted on a piece of 2" pipe that is welded to a disc plate. The wall mounted booths are supported on a frame similar to that shown below, made of 1 x 1 x 1/8 angle. The lack of a front leg makes cleanup easier. Hooks mounted on this frame keep the electrode leads neatly stored.

Bill of Materials

1" x 1" x 1/8" Mild steel angle (all framework)
18-22 gauge Mild steel sheet (not galvanized is preferred — takes paint better)
10-32 x 3/4" Round Head Machine Screws with Nuts
1/4" - 20 x 3/4" Hex bolts with nuts (for hinge at top and bottom rear of side panels, plus front of side panel)
1/8" x 1" x 3" Mild steel flat (for hinge at top of side panels)
1/4" Flat washers (spacer at hinge)
3" x 10" Floor register
8" stove pipe
1/2" Mild steel round stock (about 2" for each tool hook)
Flat black paint
Paint thinner
Rags
Electrodes
Lag bolts (3/8" x 4") to fasten to wall (or other appropriate fastener for your wall)
Optional (For Free Standing Booth)
34" 2" pipe
24" Used disc blade

Wall Mounted Booth

Free Standing Booth

THE AGRICULTURAL EDUCATION MAGAZINE
APRIL, 1981
Teaching Skills With Video Tapes

By Gordon D. Patterson
Editor's Note: Dr. Patterson is Associate Professor of Vocational and Adult Education at Auburn University, Alabama.

I

video tape presentation to be an effective learning experience for the students, there must be quality planning, production, incorporation of other audiovisuals, and proper classroom use. This is not to say that a video program or presentation is needed to produce a good program. The vocational agriculture teacher with his or her experience in planning lessons, giving demonstrations, and teaching manipulative skills should be capable of producing good video tape programs.

Planning the Presentation — (Scripting)

As in all teaching situations, there should be prior planning. When using video tape, it is essential that a complete script be prepared. This script will enable the presentation to progress smoothly and effectively without unnecessary retakes or omission of important procedures.

Basically, a script is a sequence of events with cue words for the camera operator and the instructor. Cue words can increase the efficiency of the script. For example, when camera operator has to change from one sequence to another without having to stop one and think about the other, the script does not have to contain words for what is to be said during the demonstration. The script is made even easier to read if the camera operator knows exactly what he or she is supposed to follow.

Script writing may seem like a laborious task, but it does not have to be. The script for a demonstration may be written while actually going through the demonstration. Notes can be made on procedures pointing out when and how to use each audiovisual aid.

Incorporating Other Audiovisuals

When using video tape, you can use any other visuals you would ordinarily use in a demonstration. Motion pictures, slides, overhead transparencies, charts, models, and cutaways can be incorporated into the video presentation. In teaching small engines, drawings or pictures representing procedures used to calculate piston displacement and compression ratio, to identify parts of the valves and seats, and to show the correct way to install them can be incorporated into the demonstration. Visuals that are well planned, well prepared, and effectively used add to the presentation and help students understand the skills being demonstrated.

Suggested Uses

Many units in agricultural mechanics lend themselves readily to video recording. A unit on small gasoline engines presents an opportunity to use video tape in a variety of situations. To demonstrate the principles of operation, a cut away engine can be used to show moving parts and their functions in the engine.

Another opportunity when used to demonstrate the use of power tools, has an added advantage that the noise created by the equipment does not have to be recorded. The audio to describe procedures, explain adjustments, and name parts can be put on the tape later (dubbed in).

The cost of video equipment and tapes is as much as one might think. Video tape has the capability of producing a copy of an expensive or time consuming demonstration so the demonstration will not have to be repeated. The cost of video recording equipment has decreased in the past few years making it more feasible for classroom use. Recorded tapes stored for future use can be erased and re-recorded if the information becomes obsolete.

Vocational agriculture students should be provided teacher supervision when they are involved in training, regardless of the time of the year. A principle of vocational education is that knowledge, skills, attitudes, and abilities required to perform the duties and responsibilities of a given vocation are to be included in the education of a student.

Such education does not logically follow a school calendar to be most effective. In vocational agriculture, the aim is to have students acquire the necessary knowledge and skills during the fall and spring quarters, due to the seasonal nature of agriculture, many experiences and decisions related to the adequate education of a student come during the summer months.

In order to assure students enrolled in vocational agriculture a complete cycle of work related experiences, teachers have been extended employment beyond the academic school year. During this extended employment period, teachers are required to provide occupational experience supervision and individualized instruction for all students enrolled in vocational agriculture.

The Economic Merit of Summer Programs

Economic perspectives of increasing teacher salaries and decreasing state subsidies have provoked questions in Ohio regarding the importance of extended service. The Ohio Agricultural Extension Service, in light of these questions, is re-evaluating its extended service standards. Questions are particularly addressed to areas of horticulture and agricultural mechanics. In as.

By Larry E. Miller and Darrell L. Fair
Editor's Note: Dr. Miller is Professor, Department of Agricultural Education at Ohio State University, Columbus, Ohio 43220, and Dr. Fair is Director of the Agricultural Education Service for the State of Ohio, Columbus, Ohio 43215.

The national survey of agriculture industries in Ohio were convened in two separate sessions. Committee members completed a general questionnaire related to the vocational agriculture program; related to the previously validated test inventory lists for the taxonomy areas in terms of what task was best learned, summer or academic rehearsal, and engaged in a general discussion related to the topic.

Results

The general questionnaires distributed to the committees had several items related to summer programs. These items were rated on a 4-point scale. The average responses for horticulture and agricultural equipment and mechanics are shown in Tables I and II, respectively.

(Continued on Page 22)

TABLE I

<table>
<thead>
<tr>
<th>Rank</th>
<th>Statement</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The theory relating to some skills could be taught in the classroom anytime during the school year, but practical experience in the summer is needed for some skills.</td>
<td>3.7</td>
</tr>
<tr>
<td>2</td>
<td>Summer placement experiences and other school directed experiences, such as in the FHA, can help students develop personal skills that will be useful to them.</td>
<td>3.5</td>
</tr>
<tr>
<td>3</td>
<td>Students would be poorly prepared for job entry if they did not have some experiences gained through the summer.</td>
<td>3.3</td>
</tr>
<tr>
<td>4</td>
<td>A teacher of vocational agriculture can teach all a student needs to know for job entry during the regular (9 month) school year.</td>
<td>3.2</td>
</tr>
<tr>
<td>5</td>
<td>Year-round agricultural activities in my community make necessary a year-round program of vocational agricultural education.</td>
<td>3.0</td>
</tr>
<tr>
<td>6</td>
<td>Students would not suffer any loss if vocational agriculture teachers were only on a school year (9 month) contract.</td>
<td>2.8</td>
</tr>
<tr>
<td>7</td>
<td>Competencies needed for entry level jobs in my field include skills best learned in the summer.</td>
<td>2.7</td>
</tr>
</tbody>
</table>

TABLE II

<table>
<thead>
<tr>
<th>Rank</th>
<th>Statement</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Summer placement experiences, and other school directed experiences, such as in the FHA, can help students develop personal skills that will be useful to them.</td>
<td>3.4</td>
</tr>
<tr>
<td>2</td>
<td>Year-round agricultural activities in my community make necessary a year-round program of vocational agriculture.</td>
<td>3.2</td>
</tr>
<tr>
<td>3</td>
<td>The theory relating to some skills could be taught in the classroom anytime during the school year, but practical experience in the summer is needed for some skills.</td>
<td>3.2</td>
</tr>
<tr>
<td>4</td>
<td>Students would be poorly prepared for job entry if they did not have some experiences gained through the summer months.</td>
<td>3.0</td>
</tr>
<tr>
<td>5</td>
<td>Year-round agricultural activities in my community make necessary a year-round program of vocational agriculture.</td>
<td>2.7</td>
</tr>
<tr>
<td>6</td>
<td>Competencies needed for entry level jobs in my field include skills best learned in the summer.</td>
<td>2.7</td>
</tr>
<tr>
<td>7</td>
<td>Students would be poorly prepared for job entry if they did not have some experiences gained through the summer.</td>
<td>2.6</td>
</tr>
</tbody>
</table>
Educational Merit of Summer Programs

(Continued from Page 21)

The horticulture committee addressed a total of 264 duty and task statements. Summer experience was indicated to be essential to 69 (26.1%) of the duty/task categories. In combining categories of summer experience being essential or best, as compared with other times of the year, 94 (35.6%) of the duty/task statements were marked. The committee for agricultural equipment and mechanics responded to a total of 572 duty/task statements. From the total list, summer experience was indicated to be essential to 76 (13.3%) of all duties and tasks on the list. In combining categories of summer experience being essential or best, as compared with other times of the year, 203 (51.2%) of the duty/task statements were marked.

Summary and Recommendations

Both the horticultural and the agricultural equipment and mechanics committees clearly indicated through the general theme that summer experiences were an important dimension of preparing students with entry level competencies. The importance of this conclusion is highlighted in that these members represent future employers of the students in vocational agriculture.

Agricultural equipment and mechanics committee members emphasized that students must acquire work experience in four general areas: tractor mechanics, machine shop, farm equipment and harvest equipment and herbicide application machinery. Guided summer experiences are essential components of both the vocational horticulture and agricultural equipment and mechanics programs if students are to receive the instruction in the complete array of the respective program's duties and tasks. This summer program should be under the guidance of a competent and qualified teacher of vocational agriculture.

Recommendations, based on the findings of this study, were to maintain the extended service component for both taxonony areas, conduct a study to review standards in view of the level of instructional services required, direct immediate attention toward effective teaching, develop a more equitable sharing of student costs, institute incentive activities for local administrators, supervisors, and parents, develop a conduct and monitoring effective extended service programs, and that local superintendents, teachers, and administrators of vocational agriculture programs should exercise greater control and accountability of teachers on extended service programs.

BOOK REVIEW


A comprehensive survey of agricultural marketing, this book would be an ideal reference for the vocational agriculture teacher. It may be used as a text for agriculture classes at the secondary or college level. The completely updated 5th edition includes new tables and data, a complete glossary of marketing terminology, and chapter preview and discussion questions. The book is easy to read and is designed for use by students who have had little or no previous experience with economics. Vocational agriculture students will be able to use the book to gain valuable skills in the marketing of a variety of agricultural products. The book contains twenty-eight chapters on various aspects of agricultural marketing and is divided into five distinct parts.

The five parts include the framework of the marketing problem, food markets and institutions, prices and marketing costs, functional and organizational issues, government and food marketing, and commodity marketing.

Chapters of special interest to vocational agriculture teachers include: the behavior of farm prices, cooperatives in the food industry, standardization and grading, transportation, and the many chapters included in the students and commodities.

This book contains many tables, charts, and maps of ideal quality that will aid in the development of teaching materials. The extensive glossary is almost a necessity for anyone teaching or working in agriculture.

Richard Hylton
California State Polytechnic University Pomona, California

Vo-Ag Occupational Experience Workshops Sponsored by DeKalb

Promoting more effective "hands-on" learning for high school students of agriculture is the mission of FFA's new in-service workshop program. The workshops, being developed by a committee of individuals involved in agricultural education and will be presented to instructors of vocational agriculture as well as current students aged who use or will use supervised occupational experiences (SOE) to enhance ag instruction. Sponsored by DeKalb AgResearch, Inc., of DeKalb, Illinois, the workshops will teach how to put classroom knowledge to work in the expertise of the market and to maintain quality records. When the workshops begin across the nation in 1983, they will also explain the nontraditional experience programs and FFA awards that honor students' accomplishments in the programs.

Sponsored Workshops

4/20/83 Iowa
5/25/83 Missouri
6/18/83 Ohio
7/6/83 Oregon
7/13/83 Texas
7/20/83 Washington
8/3/83 Wisconsin
8/10/83 West Virginia
9/7/83 Arkansas

Scholarships Now Available From Dairy Experience Abroad

Scholarships from agricultural interests will now help Future Farmers of America (FFA) members get international experience through the FFA Work Experience Abroad (WEA) program. Scholarships assisting with the funding of the overseas travel have been sponsored by LAMBE and Lamborghini North America, Inc. for one FFA member in New York and one in Pennsylvania annually. The Oregon Seed Trade Association will sponsor a scholarship rotated between Washington, Idaho, and Arizona. The International Bovine Association, Inc., will sponsor five students—one each from Wisconsin, Minnesota, Michigan, and Indiana.

National FFA Talent Gains Co-Sponsor

The National FFA Talent, a group of about 40 FFA members who perform at the organization's national convention, has gained another sponsor. Kansas City Cold Storage joins Educations, Communications, Inc., in sponsoring the group that performs at conventions.
The agricultural supplies and services area provides for the needs of producers. A few activities in supplies and services occupations are shown here.

Photographs courtesy of (beginning top left and clockwise): National FFA Center, Gregg Division, McGraw-Hill Book Company; The Editor; and Gary Gray, student at Mississippi State University.