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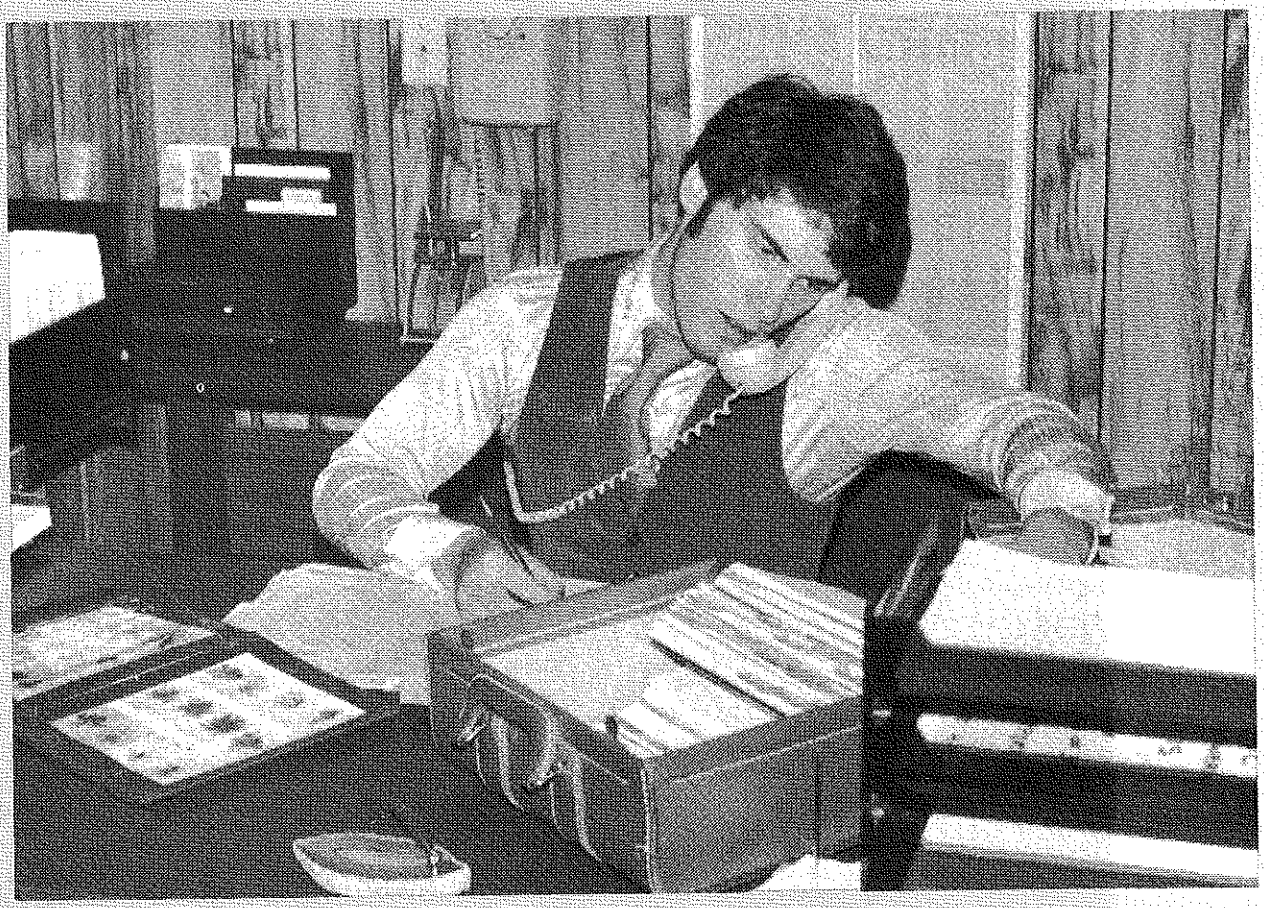

THEME: Programs in Agricultural Supplies and Services

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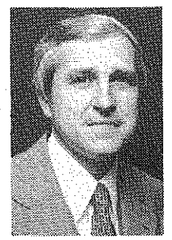
EDITOR'S PAGE

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



JASPER S. LEE, EDITOR
(The Editor also serves as Professor and Head, Department of Agricultural and Extension Education, Mississippi State University.)

Vocational education in agriculture/agribusiness has had the responsibility of providing trained workers at less than 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 broadened 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?

The Nature

The area of agricultural supplies and services includes all of the agribusinesses which provide the inputs farmers and ranchers need to produce plants and animals. Three million workers are employed in agricultural supplies and services occupations.

Farm operators spend $98 billion each year for supplies and services, primarily feed, seed, fertilizer, chemicals, and fuel. Of this amount, over $17.5 billion is spent for feed and seed, and another $6.3 billion for fertilizer and lime annually. Another $10.8 billion is spent for farm fuel, lubricants, and accessories each year. In fact, farming uses more petroleum than any other single industry!

The productivity of today's farms and ranches is closely related to the efficiency of the agricultural supplies and services sector of agricultural industry. Acting alone, farmers and ranchers could not begin to produce at the current level. Statements are often made which attribute abundant crop and animal production to the nation's farmers and ranchers. The abundant production cannot be fully attributed to them, however. Much of this abundance is due to the non-farm agriculturalists who provide supplies and services. Without them, farming and ranching would be carried on today much as it was 200 years ago. The agricultural supplies and services sector has made it possible for farmers and ranchers to be abundantly productive.

The Need

The productivity of farms and ranches in the United States is directly related to the productivity of the agribusinesses which produce supplies and services. It does little good to train people to farm without also training people for agribusiness. 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 industry. 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 by vocational educators in the past 15 years to assess employment opportunities and needs. These studies have been valuable in gaining insight about the agricultural supplies and services employees which are distinct and separate from those needed by persons employed on farms and ranches. 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 agribusiness 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

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Have We Made Any Progress?

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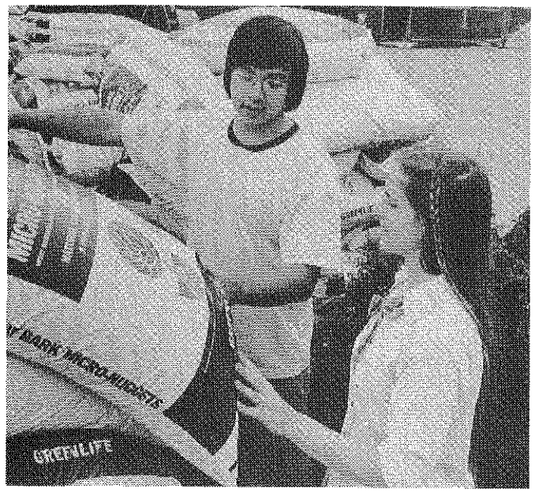
supplies and services. The nature of the facility depends upon the instructional program. In agricultural supplies and services, it should consist of a simulated farm supplies store so that students can learn how to construct displays, make physical and perpetual inventories, weigh and package supplies, properly use the telephone, handle money, make sales, fill out sales tickets, ship and receive merchandise, and perform many other activities. The agricultural supplies and services laboratory should contain a wide assortment of product models, scales, display shelves, ticket registers, sales counter, cash register (or cash box), and other equipment appropriate for the curriculum.

In analyzing instructional needs, 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 agribusiness 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 distinctions 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 capitalistic 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 agribusinesses are closely related to the relationships which exist among employees.



Product knowledge is important in many agricultural supplies and services occupations. These students are studying product information. (Photograph courtesy Gregg Division, McGraw-Hill Book Company.)

Keeping records and following sound business procedures — Every employee gets involved with records and procedures in some way. These range from the time card 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 file and retrieve information.

Promoting supplies and services through displays and advertisements — Many agribusinesses need to improve the ways in which supplies are promoted. This can boost 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 materials handling, facilities and equipment operation, ordering and receiving procedures, grading and inspecting, storing and warehousing, packaging and labeling, and transporting.

Understanding the supplies and 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 preparing employees for all areas of agricultural industry. An area which needs additional effort is agricultural supplies and services. The time has arrived when all agricultural educators must join together and move forward to implement vocational education for all of agricultural industry. We must unshackle 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 Agribusinessman, is shown here as regional sales representative for the Vaughn-Jacklin Corporation, a horticultural supply firm. Andy began his supervised occupational experience while in high school at Schroeder's Greenhouse in Green Bay, Wisconsin. (Photo courtesy of Elliott Nowels, National FFA Center).

THEME

Challenges in Agricultural Supplies and Services Training

By James E. McGuire, Theme Editor
Editor's Note: Dr. McGuire is Teacher Education in Agriculture at Western Kentucky University, Bowling Green, Kentucky 42101.

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

Asked to feed and clothe a hungry world, agriculture has met its challenges through the 1970s. The agricultural industry has increased production even while faced with escalating interest rates, inflation, environmentalists, and energy crisis. American agriculture now faces a still greater challenge of the future. What about agricultural education? Have agricultural educators made adjustments and changes relative to agribusiness for the 1980s? 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 this part of the vocational agriculture 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 compliment our traditional production programs. Good progress has been made in agricultural mechanics and horticulture, but our supplies and services programs lag 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 thrusts 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 and to communicate with so many different groups. How does the teacher prepare a curriculum around these diverse occupations to supply the students with adequate product information? It takes a delicate blend of entire class, small group, and individual study to accomplish training goals.

Teacher Preparation — The above mentioned diversification makes it difficult to find or to prepare teachers who have the broad background to work with so many kinds of businesses. Similar to agricultural mechanics and horticulture, the person with adequate background is too often tempted out of teaching into the business. Teacher changes are more complicated in supplies and services programs since so many persons are involved with the training programs. Provisions must be made for much inservice technical training of these teachers.

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 consistency. 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 agribusiness 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. Enrollees 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 train at the same time the good-match is being attempted. 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 — Nationwide, the FFA is still stacked in favor of production agriculture. Many existing contests and activities are partially effective for the supplies and services students. Some new activities such as sales demonstrations and proficiency awards for agribusiness 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 of these are important for a successful program. But, we want the general public to understand and support the program. An effective public relations program is needed to interpret 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 why the students are down at the local feed and hardware stores rather than at school. Newspaper articles, radio broadcasts, posters, brochures, and other mass media will help. Good human relations and word-of-mouth is a must. The advisory committee is perhaps our strongest cog in an effective public relations program. It helps solve the many problems of establishing and maintaining the program and can provide two way communication between the teacher and the community. (See article by Odell Miller in this issue.)

Facilities — A few schools have constructed elaborate facilities for training students for agricultural supplies and services. More often a classroom has been modified to simulate a store setting with product shelving, counter space, a cash register, telephones, and tape recorders. The main facilities are out at the training stations. Some attempt at innovating special classroom facilities will better prepare students for the training stations in the real world. They will also add student pride in their specialty area.

Other Challenges — The challenges mentioned above are somewhat common throughout the overall program. Other problems appear only in selected states or schools. Certain trade associations may be hard to work with in certain locales. Distributive Education may have gotten the upper hand within an area and taken over the agribusiness sector. School administrators are in the numbers game attempting to stretch scarce school dollars. Even the rural nature of some schools prevents or works against the agricultural supplies and services program. As the challenges differ, so do the opportunities.

Rewards For Opportunities

We have said that challenges are opportunities. We know that there are rewards for those who make good use of opportunities. Teachers and school systems that are effective in meeting the challenges associated with agricultural supplies and services will be rewarded with the satisfaction of a job well done. Most of the rewards will accrue to the students and to the community. Perhaps that is as it should be.

A successful program will give expanded career choices to the students. They will be able to train for entry into many challenging jobs. Not only will they be trained to enter the job, but they should make excellent growth on the job. This will be an asset for both the student and the business. Agricultural supplies and services programs enable students to earn both credits and dollars. This is instrumental sometimes in encouraging a student to stay in school.

Supplies and services programs build bridges in the community. They draw the school and the community closer together. The non-farming sector of agriculture becomes actively involved within the vocational agriculture department. The long range results should be a more efficient agribusiness contributing to a better community within the school district.

State teacher organizations, teacher educators, and state supervisors must help meet the challenge. Somehow we need to strengthen our effectiveness in meeting the program training needs in the agricultural supplies and services area where the opportunities are so great. It will not be an easy assignment. But no one ever promised that teaching would be easy.

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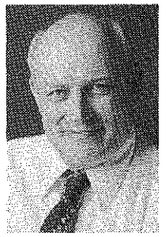
THEME

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 committee on paper only? Too often 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 and foremost a study committee for advising the instructor and school administration 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 discuss with the school administrators the need for the committee and the school policies regarding advisory committees. Some school systems require that the board of education approve an operating policy for the advisory committee, that the superintendent be part of the nominating committee for the selection of members, that those members be approved by the board and the letter of invitation to serve on the committee be signed by the superintendent. In other school systems, the vocational agriculture instructor has full responsibility for the organization of the 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 interests. This would include:

employers or owner-operators from areas of the agricultural industry, such as agricultural supplies and services;

representatives from adult education programs offered by the school;

representatives from the different geographical areas of the school district;

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:

knowledgeable in their fields,

leaders in their field and in the community,

interested in education and youth, and

civic minded and have the courage to express their views.

If possible, the vocational agriculture instructor should make personal visits to prospective members to make them aware of the purpose of the committee, the goals for the department or for the specialized program, and to inform them of who the other potential members of the committee are. The number of members on the committee will vary according to the size of the area and population. In most committees, 9-12 members make the most efficient committee. An administrator and a representative of the board of education should serve as ex-officio members. The members should serve three-year terms, except when first organized and then a third should serve one year, a third two years, and a third three years.

The First Meeting

After the members have been selected, a date for the first meeting should be established. At least a week before the meeting, the instructor should send a letter to all members, the school administrator, and the board representative stating the date of the meeting, the place for the meeting (usually the vocational agriculture room), the starting time, and the agenda. The agenda for the first meeting should include:

introduction of members;

explanation of school's policy regarding advisory committees;

purpose of the advisory committee;

drawing of the one-year, two-year, and three-year terms;

election of officers (A president and vice president are usually elected. It is best that the instructor not serve as

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The Effective Use Of An Advisory Committee

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secretary but have the FFA president serve. This gives the president responsibility to the committee.); and

date of next meeting.

Subsequent Meetings

The agenda for the subsequent meetings must be planned by the president and the instructor. The agenda items should meet the following tests:

Is this a real problem?

Is this a problem which they earnestly desire to solve?

Will the school seriously consider the committee's recommendations?

Is this a question in which the committee is interested or can become interested?

Is the committee competent to discuss and make recommendations on this type of problem?

Do members have sufficient knowledge of facts and background information to make worthwhile suggestions?

This means that all information pertaining to questions for discussions must be sent with the agenda. Be sure the information is complete and in an orderly fashion. If you want the committee to evaluate the curriculum, an outline of the curriculum must be with the agenda, if the discussion is about an FFA activity, both pros and cons should be stated, and if the discussion is about buying a piece of shop or laboratory equipment, the material should include why you feel you need this equipment, how the equipment will be used, and the cost of it.

The letter and agenda should be signed by the president of the advisory committee and not the instructor. The president should conduct the meetings; the instructor should take a low profile and only enter the discussions when information or an explanation is needed. Too often the instructor takes charge of the meetings. It isn't long until the members feel they are there to rubber stamp the instructor's program and, consequently, the committee becomes inactive. This will also happen if the instructor fails to use the advice of the committee.

As the terms of members expire, new members may either be selected by the committee, if the school policy allows it, or, if not, by the nominating committee. Again it is most valuable to have the instructor make a personal visit to the new members.

Number of Meetings

The writer has found that if the advisory committee is to be effective, there must be at least three meetings per year. Too many instructors plan for only one meeting per year, and in a few years the committee is in name only.

Conclusion

In today's changing agriculture, an advisory committee can be the instructor's right hand. The committee can:

held decide the best curriculum to meet the needs of the community;

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.

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THEME

Stars on Vo-Ag

BY ELLIOTT NOWELS

Editor's Note: Mr. Nowels was Director of Information, National FFA Center, Alexandria, Virginia 22309, at the time this article was written.

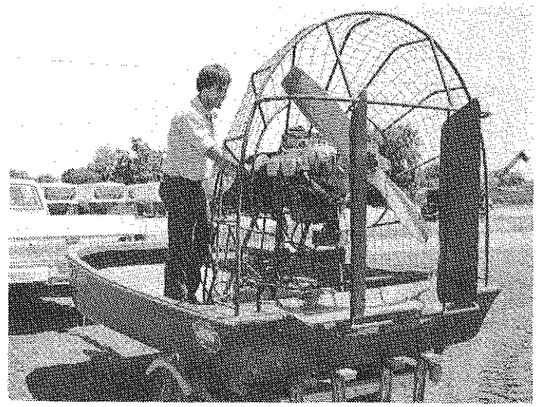
"Transition" is a word vocational educators use often to describe it. "No man's land" is the way it might appear to many who have just recently entered it. "It" is that space and time that stretches in front of a young person just graduating from high school and starting into the world of work.

Once this time zone is conquered one slips by it quickly — often to the point where it 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 dilemmas to today's youth.

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 Agribusinessman of America, began his work experience program by leasing 30 acres of riceland from his father. Today he is a very involved part



Jack Baber, 1980 Star Agribusinessman of America, is shown here at work. He states that "vo-ag helped me become a little more self-sufficient."

of Baber Farms, Inc., the family business of custom rice production, laser land leveling, rice drying and storage, and wildlife management. Baber Farms is undergoing 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 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 agriculture'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 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 SOE 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 at Schroeder's Greenhouse in Green Bay, Wisconsin. He managed the FFA chapter greenhouse as a sophomore while continuing his work at Schroeder's, where he soon 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 Schroeder'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 club, it was extremely organized. 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 influence can 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 chapters 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 that an advisor does for his or her 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 shouldn't assume that the chapter wants 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 Center. When he started vo-ag/FFA in 1975, the decision was made to expand the family business by selling greenhouse plants and the construction of a 20 by 100 foot greenhouse adjacent to the existing store. Goodnight also sells and delivers dairy, poultry, and swine 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 it so that everybody gets a shot at it."

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 I suppose. He really opened up the horizons for me — more than just instruction. I think it's really good for advisors to get to know their students; see them in class and at home. Just like 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 solid career." *(Continued on Page 10)*

Stars on Vo-Ag

(Continued from Page 9)

Mike Tillman, Florida

Mike Tillman, the Southern Region's Star Agribusinessman, 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 tractors, combines, and implements. He now is Vice President of the growing operation, using his aptitude in mechanics and service in a greater management role.

When Tillman entered Vo-Ag, he admits now that he had an image of an agribusinessman as a ". . . person who really didn't get out and do anything." "I now realize that agribusiness 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 farmer's down-time in the field.

"As Vice President I have a certain responsibility to my employees as well as my customers. I have to think about pulling 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. "My ag teachers pushed me enough to let me know that they care a lot. When that happens you get to thinking 'there must be something here for me'. If you're halfway decent to your advisors, 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 ag teacher within the realm of 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 all important catalyst to learning, increased involvement, and satisfaction. The tone of the comments says perhaps more than the words themselves. Terms like "personal relationship," 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 programs 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 considering 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 agribusinessmen, not educators.

Vo-ag teachers Don Liebelt, Chris Yager, Glenn Alexander, Andy Andreasen and Bruce L. Miller have likely learned much from working with these Stars Over America in their transitions. They've probably learned yet more from other students who could never hope to climb this high on the ladder. An ag teacher's best personal 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

USING COMMERCIAL FERTILIZERS by Malcolm McVicker and William Walker, 4th ed., Interstate Printers and Publishers, 1978, 363 pages, $7.50.

This book places an emphasis upon the delicate balance that must be maintained in today's use of commercial fertilizer. We are losing productive 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 quantities.

USING COMMERCIAL FERTILIZERS places emphasis upon both the necessity and proper use of fertilizer. The book has a total of twenty-four chapters. The chapters cover such varied topics as The Fertilizer Industry, What Plant Nutrients Do, Principles Involved in the Use of Fertilizers, Fertilizers and Plant and Animal Nutrition, Fertilizer-Pesticide Combinations, Chemical Sources Versus Organic Sources of Plant Nutrients and 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.

Both of the authors are qualified for their work in writing this book. The late Malcolm McVicker received his Ph.D. in soil chemistry at The Ohio State University. Dr. McVicker has worked in the fertilizer field at the Virginia Agricultural Experiment Station, with the National Fertilizer Association, the National Plant Food Institute, and for one commercial company in the chemical industry.

William Walker received his Ph.D. in soil fertility from Iowa State University. He worked for the University of Tennessee Extension Service. He is presently on the faculty of the Agronomy Department at the University of Illinois.

USING COMMERCIAL FERTILIZERS can be used as a library reference in any secondary program of Agricultural Education. The reading level is appropriate for high school age students. It could also be used as a text in post secondary level programs.

John Hillison
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THEME

The Linn-Mar Story — Cooperation with Agribusiness has a Big Pay-off

BY JULIE DOESE AND DENNIS SELNESS
Editor's Note: Ms. Doese is a student in Agricultural Education at Iowa State University, Ames, Iowa 50010. Mr. Selness is Vocational Agriculture Teacher at Linn-Mar School in Marion, Iowa 52302.

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 (FHA), local 4-H clubs, and student council members. Along with these youth clubs, FFA 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 can disposal program, and agribusiness work experience. Linn Co-op Oil Company is a cooperative member of Farmland Industries. 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 cash basis from the Linn-Mar Schools. All tillage, seedbed preparation, and planting is done by the FFA members. Family-owned equipment is used. Area seed companies donate approximately twelve different hybrid varieties to plant the seed corn plots. The role of Linn Co-op in the Linn-Mar FFA test plot is to conduct the initial planning for the chapter's test demonstration. They also provide resource personnel for 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 Co-op 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 experience." Cooperation with the Linn Co-op Oil Company gives the students an opportunity to work in the field with knowledgable 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 realize the value of the experiences involved with the test plot.

Cooperation between the Linn Co-op 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 Co-op. Still other activities benefit both organizations. Chemical can crushing, conducted by the Linn-Mar FFA, benefits the Linn Co-op through service to the area farmers.

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 members 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.

THEME

Implications for Supplies and Services —

Cooperative Training in Agricultural Equipment Management

By Orville W. Dotson and Cletus Mitchell
Editor's Note: Mr. Dotson and Mr. Mitchell are Agriculture Mechanics Instructors at Western Kentucky University, Bowling Green, Kentucky 42101.

A 1971 survey of Kentucky farm power and equipment dealers indicated a great need for training young people for employment in the farm machinery industry. So in 1972 an Agricultural Equipment Management program was begun at Western Kentucky University to train students in the technical and management skills necessary for mid-management in the farm equipment business. Although Kentucky is not recognized nationally as a major agricultural state, it does have some excellent agricultural areas for intensive farming enterprises. It is so agriculturally diversified that machinery sales represent a wide variety in the types of machinery sold. This diversification funnels down to the local dealerships smoothing out sales peaks common to farm machinery dealers in other states.

This two-year program is the only one of its kind in Kentucky and unique in the country. High school agricultural students can continue formal training in preparation for career in a management position. Students from all agricultural areas of Kentucky, some neighboring states, and a few foreign countries have enrolled in the program. Sex, race, and nationality are no barrier for student enrollment.

While this program is primarily agricultural mechanics, the methods of organization and management are common to most agricultural supplies and services programs. We hope some of the ideas used in our program will be useful to other teachers in horticulture, agriculture mechanics, and agriculture sales and service. Emphasis will be upon the cooperative phase of our program — a key element.

How Our Program is Organized

Interested students enroll in the program just as they would any other program of study of Western's campus. Once enrolled in the associate degree program, they become regular students on campus with all rights and privileges of any student pursuing a bachelors degree. Most of the course work of the program will require the student to be in the same class as the four-year students and to meet the same class requirements for an equivalent grade.

The program of study the student pursues is basically a twenty-four month program. The student studies on campus during the fall and spring semester with cooperative work experience assignments during the summers. During the first summer, he or she will be placed in a farm machinery dealership for at least an eight week period and then return to the campus in the fall for more studies during the fall and spring semesters. In the summer of the second year, the student will be placed another eight weeks in a dealership and graduate in August.

The course work in the program is seventy credit hours in the area of technical, management, sales, communication, and related agriculture knowledge. 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 management 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 the fact that most students want to live at home are some of the problems that must be overcome to have the ideal match-up.

Early in the spring of each year efforts are made to identify the placement center for each student. Some students will already have their locations selected and will 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 centers seem to be the ones who have the desire to work with people. Business volume, organization of shop area, and other employee attitudes are important but perhaps are secondary to the desire of the person in charge of the student.

Using ideas and criteria discussed in the seminar, the student selects dealers to be worked 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 in 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 ture, 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 certain student. If the dealer shows interest, then the details of the program can be discussed at that time and final 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 a dealership helps to alleviate previous fears and misunderstandings the new students may have had.

After a work station for a student has been confirmed, the dealer will probably not be revisited until the end of the semester and it is time for the student to begin work at the dealership. Telephone calls are usually sufficient for communication to the dealer during the waiting period.

At the beginning of the cooperative period, the student and instructor visit with the dealer to discuss the work experiences for the student. During their first cooperative period, the students need to have a variety of experiences so they can learn as much as possible about the actual operation of a dealership. Students during their second cooperative period will concentrate more in a special area and on what the dealer thinks they can do best.

We like for the first year student to work in the parts department, service area, make a service call or two with an experienced technician, work with a salesman on a prospect, work in the setting up of new equipment, attend dealer employee meetings where applicable, and aid in the performance of other positive activities the dealer may assign within the dealership. The student is an employee of 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 was discussed and the instructor uses it as a review on future visits to see if the student is getting the experiences that were planned. It also will contain other useful information, such as the salary the dealer will pay the student, beginning and ending dates of the training period, and who is responsible for the training. It becomes an important document for the instructor's files.

Throughout the cooperative period students are given assignments by the visiting instructor. These assignments are not necessarily difficult, but do concern various things about the business that the student should learn. A very important phase of these 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 for awhile and decide that a bachelors 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 bachelors 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 advisory committee members. The members are chosen on a three year rotation basis with four members going off and four new members coming on each year. The members choose a President, Vice President, and Secretary and meet twice each year, preferably in the spring and fall.

The committee serves in an advisory capacity only, but their input in keeping the program current, in recruiting good students, in serving as cooperative dealers, and in obtaining facilities and components for class use has been of tremendous value to the faculty.

In summary, cooperative placement offers opportunities for students to advance in specialty areas, such as horticulture, agriculture mechanics, and sales and service. Successful programs need selective enrollment, a sound curriculum, well supervised cooperative experience, and the guidance of a functional advisory committee. The future truly belongs to those who prepare for it. Vocational educators must provide leadership in providing opportunities for student preparation. Our students, the agriculture industry, and world food production depend upon us.

ARTICLE

ACT: More Appeal and Less Facilities

By R.Z. Arey
Editor's Note: Mr. Arey is Teacher of Vocational Agriculture at Turner Ashby High School, Bridgewater, Virginia 22812.

Is "ACT" a new agricultural education term for you? It has been for me. ACT has become accepted as the designation for the agribusiness option which employs the work experience program at the school where I teach.

For this reason, I feel that it is most pertinent to describe for you my personal understanding of the agribusiness option as it is now in operation in my vocational education department. Also, before making recommendations and discussing appropriate laboratory facilities, you must understand my interpretation of agribusiness because I'm sure there are many different ideas and curriculums being used successfully in vocational agriculture today.

From 1917 until the middle sixties, vocational agriculture progressed and certainly accomplished the purposes for which it was established. However, production agriculture lost its gigantic punch when agricultural educators realized that four percent of our people were involved in producing food and fiber, and a much larger percentage of the working population had become engaged in other areas of agricultural industry. Correctly so, this began to disturb many educators and school administrators throughout our country.

At this point, the idea was developed of including agribusiness in the vocational education curriculum. This was an absolute necessity, and this injection was a life saver to our vocational agriculture program. As a result of this, more of the total program generated much greater appeal for school boards and the general public.

Our Beginning

In 1967, our area supervisor of agricultural education approved our vocational agriculture department with the idea of starting a pilot program in cooperative work experience. This was a shocking experience because up to this point our department had been a one hundred percent production agriculture curriculum. We had no concept of the involvement, such as the facilities needed, teaching materials, or curriculum that would meet the requirements for this brand new program.

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 option.

Agribusiness vs. ACT Option

At this point, it is possible that we have thoroughly confused you with the terms "agribusiness" and "ACT."

Hopefully, we can give you our interpretation as we now operate in the vocational agriculture department. First, all students are required to have the agriculture classes in Agriculture Science and Mechanics I and II. This you will readily recognize, is the basis for all option programs. This is followed by the agriculture production curriculum for all sophomores or tenth grade students. When a regular vocational agriculture student reaches the eleventh grade level, he or she 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 occupational experience program. If the student moves into the ACT option, he or she achieves the SOE requirement by working in a cooperating training station on released school time. These training stations are located in some type of agribusiness in the school community.

However, if a student enrolls in Agribusiness-Production, he or she receives all training in the classroom and meets the SOE requirements in the same manner but does not have 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 establish behavioral objectives for our agricultural education program.

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

Agribusiness I (ACT I)

— General competencies — The student will be able to:

1. Establish and keep records of an SOE program using the state record book.
2. Become satisfactorily placed in a training station.
3. List and catalog career opportunities in the field of agribusiness
4. Exhibit desirable competencies concerning human relations
5. Identify and describe the functions of agribusiness
6. Participate in FFA and other leadership activities
7. Properly perform agribusiness sales procedures
8. Actively participate in activities to improve rural family living
9. Give an oral report and/or demonstration on the product or service associated with the individual training station.

Units of Instruction

1. Course Orientation
   a. Class organization and management
   b. Overview of agriculture education program
2. Keeping accurate and complete records in accordance with the state approved record book
   a. Importance of record keeping
   b. Completing necessary records
   c. Agreements
   d. Financial statements
   e. Monetary and fringe benefits
   f. Summarizing and analyzing record books
3. Applying and interviewing for jobs
   a. Completing application forms
   b. Preparing a student resume
   c. Personal interviews
   d. Telephone communications
4. Legal requirements for student trainees
   a. Work permits
   b. Social security
   c. Insurance
   d. Taxes
   e. Wage laws
   f. Fair Labor Standards Act
5. Developing satisfactory training plans
   a. Locating, evaluating, and approving training establishments
   b. Identifying opportunities offered by businesses to develop competencies
   c. Safety on the job
6. Career opportunities
   a. Identify and analyze all vocations in the agriculture industry
   b. Classifying businesses of the local community
   c. Identifying products and services associated with local businesses
   d. Appraise the employment situation of local agriculture community
   e. Educational requirements
   f. Educational field trips
7. Succeeding on the job
   a. Understanding and demonstrating personal development such as etiquette, mannerisms, and personality
   b. Proper attitudes and grooming
   c. Getting along with other people
   d. Proper work ethics
8. Organization and functions of agribusiness
   a. Importance and functions
   b. Four methods of operating all agribusinesses
      1) Proprietorship
      2) Partnership
      3) Corporation
      4) Cooperative
   c. Supply and demand of agriculture commodities
   d. Roles of agriculture government associations
9. Leadership and the FFA
   a. Importance and principles in leadership
   b. Participating in FFA awards
   c. Participating in FFA activities
   d. Conducting a public relations program for the chapter.
10. Agribusiness procedures
    a. Using sales tickets
    b. Using credit and credit policies
    c. Determining selling prices
    d. Taking an inventory
    e. Ordering and stocking merchandise
    f. Figuring discounts and sales taxes
    g. Using calculators
    h. Agribusiness math
11. Improving rural family living
    a. Farm and home safety
    b. Participating in church, civic, community, and agriculture organizations
    c. Opening and maintaining checking accounts
12. Methods of individualized instruction
    a. Research or training stations
    b. Demonstration, report, display, and visitation of management, products, and/or services associated with training centers

Agribusiness II (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
3. Identify and compare methods of marketing agriculture commodities
4. List and distinguish between the processing procedures for farm products
5. Write plans for merchandising, advertising, and displaying agriculture products
6. List in writing ecological problems of agriculture in relationship to our environment
7. Identify characteristics of personal supervision and management
8. Participate in FFA and other leadership activities
9. Plan the establishment of an agribusiness
10. Actively participate to improve rural family living

Units of Instruction

1. Course orientation
2. Advanced record keeping
   a. Opportunity costs
   b. Partial budgeting
   c. Economics of record keeping
3. Agriculture salesmanship
   a. Planning for a selling vocation
   b. Performing successful skills in sales
4. Marketing agriculture commodities
   a. Principles of marketing
      1) Government grades and standards
      2) Handling, transporting, and storing agriculture products
      3) Supply and demand
      4) Imports and exports
   b. Methods of marketing
      1) Commercial
      2) Private (direct to consumer)
      3) Roadside
      4) Future contracts
      5) Public auctions
5. Processing agriculture products
   a. Methods of food processing
   b. Sanitation and waste disposal
   c. Types of consumer products (fresh, frozen, raw convenience, converted)
6. Merchandising, advertising, and displaying agriculture products
   a. Preparing goods for sales
   b. Pricing goods for selling
   c. Selecting advertising media
   d. Preparing advertisements
   e. Comparing advertising economics
   f. Preparing a display
7. Agriculture in our environment
   a. Federal, state, and local regulations
   b. Understanding ecology and the balance of nature
   c. Correcting agriculture related problems in ecology
8. Agribusiness supervision and management
   a. Personal qualities of a supervisor and/or manager
   b. Responsibility of decision making
   c. Production efficiency
   d. Safety on the job
   e. Personal relationships and motivation
9. Leadership and the FFA
   a. Completing foundation, state farmer degree, and scholarship awards
   b. Participating in FFA activities
   c. The FFA alumni
10. Establishing an agribusiness
    a. Determining the potential
    b. Choosing the community and site
    c. Determining the physical requirements
    d. Determining the necessary personnel
    e. Financing the business
    f. Legal aspects
11. Improving rural family living
    a. Personal and family budgets
    b. Proper living habits such as language use and eating habits
    c. Securing loans
    d. Farm and home safety
    e. Civic responsibilities in the community

Evaluation of student progress in agriculture education

a. Written tests
b. Performance tests
c. Laboratory participation
d. Classroom participation
e. Participation in FFA activities
f. General attitude, conduct, and safety
g. Supervised occupational experience program

Facilities Needed

The facilities and equipment needed for the conduct of a successful agribusiness program need not be elaborate or numerous but can consist of the regular teaching material and equipment found in most agriculture classrooms.

The laboratory for the program can and should be the agribusinesses that serve as training stations. If proper care is maintained and there is close correlation between the instructor and agribusiness activities, the results are certain to develop many saleable skills in the student trainee.

However, we suggest a few ideas for a facility that can be used in simulated agribusiness experiences that might be helpful in the regular classroom, as follows:

A simple adding machine, calculator, and typewriter may be useful.

A cash register should be included and can be employed in many different exercises.

The general understanding of the purpose and use of a time clock can be a learning experience. Also, several mock telephones are excellent for training exercises.

In the area of salesmanship and merchandising, an agricultural display case, sales counter, and show racks can be employed for display problems that your students may be required to do.

In conclusion, it is my opinion that an agribusiness program can be operated the most economically of any of the agricultural options offered in the public schools today. For this reason, the agribusiness program does sometimes have more appeal to school administrators and the general public. We are confident that vocational agriculture education is destined to have a bright future if an agribusiness program is incorporated into the total curriculum.

ARTICLE

Seeing Yourself As A Vocational Agriculture Instructor

By Allen Blezek
Editor's Note: Dr. Blezek is Assistant Professor, Agricultural Education Department, The University of Nebraska, Lincoln, Nebraska 68583.

A competent vocational agriculture instructor is the most indespensable 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 for self improvement. Perhaps one of the most effective, yet most often over looked, 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 given include:

Self satisfaction

Meet 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 wish to analyze yourself. Also, make extra notes on the back of the form. Compare one session with another to measure improvement. After you reach a level where you feel comfortable, invite another staff member with whom you feel comfortable to observe your tape and make suggestions, maybe even work out a trade where you exchange tapes for critiquing.

The big step is up to you. Borrow a video tape recorder and tape yourself. After class or 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. Pat yourself on the back for your strengths and begin to work at once on your weak areas. Recognizing these areas may well put you on the road to seeing yourself as you become a truly great vocational agriculture instructor.

TEACHING
Self Evaluation Form

NAME_____ LESSON TAUGHT_____

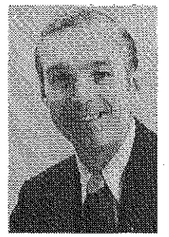
Place a check in the appropriate column to indicate how you evaluate yourself on each item.

	Excellent	Good	Needs Improvement	Comments
I. PERSONAL QUALITIES				
A. Voice				
B. Appearance — dress, hair, hands				
C. Posture				
D. Flexible and adaptable				
E. Confidence				
F. Enthusiasm				
II. ORGANIZATION				
A. Materials				
1. Organization				
2. Well chosen				
B. Work area				
1. Attractive arrangement				
2. Orderly				
3. Visible to group				
4. Well lighted				
5. Physical comfort				
III. PREPARATION				
A. Advance planning is evident				
B. Materials prepared before-hand				
C. Orderly sequence				
D. No obvious waste of time				
E. Knowledge of subject				
F. Objectives clear to group				
G. Organizational approach				
H. Set/closure				
I. Media				
IV. PRESENTATION				
A. Hold group's attention				
B. Pupil participation through questioning and application				
C. Motivation				
D. Discipline				
E. Enthusiasm				
F. Summary and conclusions				
G. Resources				
H. Timing				
I. End Product Display				

ARTICLE

Students Gain From Animal Supplies and Services Instruction

By Roy D. Dillon
Editor's Note: Dr. Dillon is Professor, Department of Agricultural Education, University of Nebraska, Lincoln, Nebraska 68583.



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. Antibiotics and special feed additives 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 agribusiness 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 where 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.

1. The test showed significant difference in knowledge gain between pre-test and post-test within schools, and across all ten schools.

2. Schools with the smaller class size tended to score higher on the post-test. Classes of 7-12 students tended to score higher than classes of 13 or more students.

3. Years of teaching experience had no significant affect on knowledge gain by student. However, students in schools with younger teachers tended to score higher than in schools with teachers with over 15 years experience.

4. Year in high school had no significant effect on knowledge gain.

5. Participation by students in an ongoing supervised occupational experience program had no significant affect on knowledge gain when compared to freshman students who did not have SOEP.

6. Location within the State had no significant affect on knowledge gain by students. Schools represented seven of the eight Nebraska Vocational Agriculture Association areas.

Teach Supplies and Services Skills

The findings indicated significant increase in knowledge gain can result from instruction in the technical information needed in animal supplies and service occupations.

Plans for an Arc Welding Bench

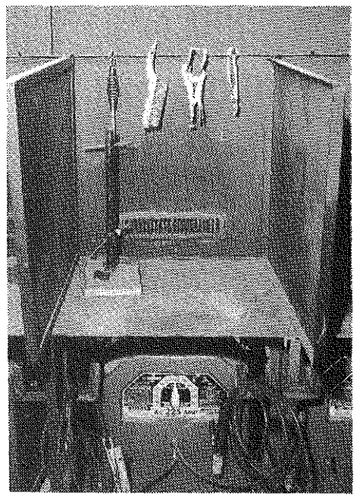
Need an arc welding bench that is an economical user of space, yet can be opened up for larger projects? This article describes one that has been used at Michigan State University and other locations.

Students working on practice welds need very little space — an area 2 feet by 2 feet is adequate — yet project work and repairs often require more welding bench space. This booth solves both problems with sides that swing away on ¼" bolt hinges. With the small booth size, a student standing in front of the bench effectively shields others from arc flash; this is aided by having the dividers between booths (or the side of a single booth) extend approximately 6" beyond the front edge of the bench. With a row of these booths mounted against the wall, the students will be standing in the booths — facilitating supervision.

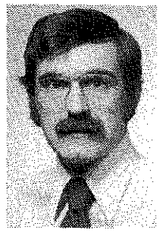
The booth may be mounted to a wall or free standing.

Notes

1. The frames for the rear (2' x 2') and sides (2' x 2'6") 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 flash. These frames are bolted to the bench with 1/4" hex bolts (rear) and use 1/4" hex bolts for hinges for the side panels.



Wall Mounted Booth



By George Brown
Editor's Note: Dr. Brown is a member of the Agricultural Engineering staff at Michigan State University in East Lansing, Michigan 48824.

2. The bench is a piece of 1/2" or thicker steel plate, 2' x 2'; ¼" plate will do, but 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" 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.

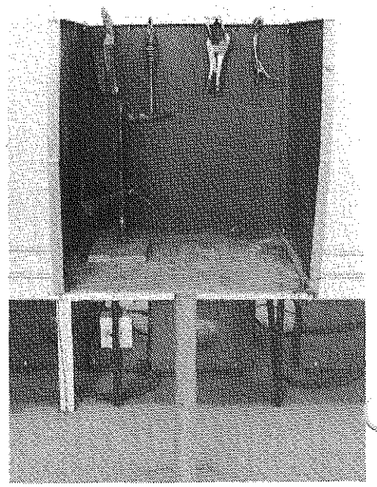
4. Hooks for hanging the welder's tools are pieces of ¼" round stock welded to the top bar of the rear panel, and bent up about ¼". A large washer is welded to the pliers, and an S hook serves to hang the chipping hammer.

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

6. The freestanding booth is mounted on a piece of 2" pipe that is welded to a disc blade. 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

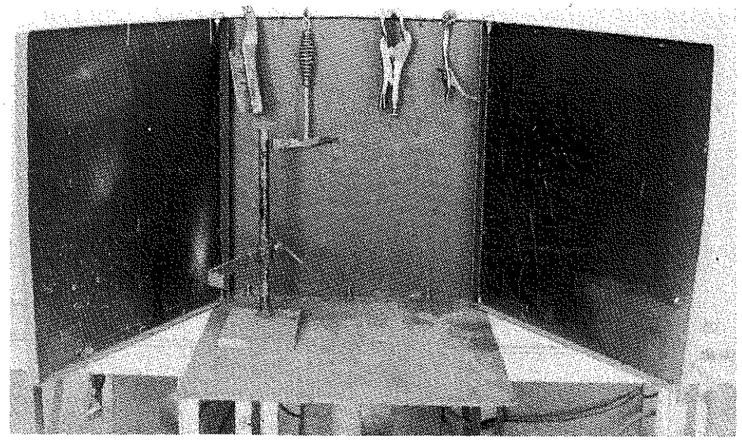
1" x 1" x 1/8" Mild steel angle (all framework)
18-22 gauge Mild steel sheet (not galvanized is preferred — takes paint better)
10-32 x ½" Round Head Machine Screws with Nuts
¼" - 20 x ¾" Hex bolts with nuts (for hinge at top and bottom rear of side panels, plus front of side panel)
1/8" x 1" x 3" Mild steel flat (for hinge at top of side panels)
¼" Flat washers (spacer at hinge)
3" x 10" Floor register
8" Stove Pipe
¼" 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

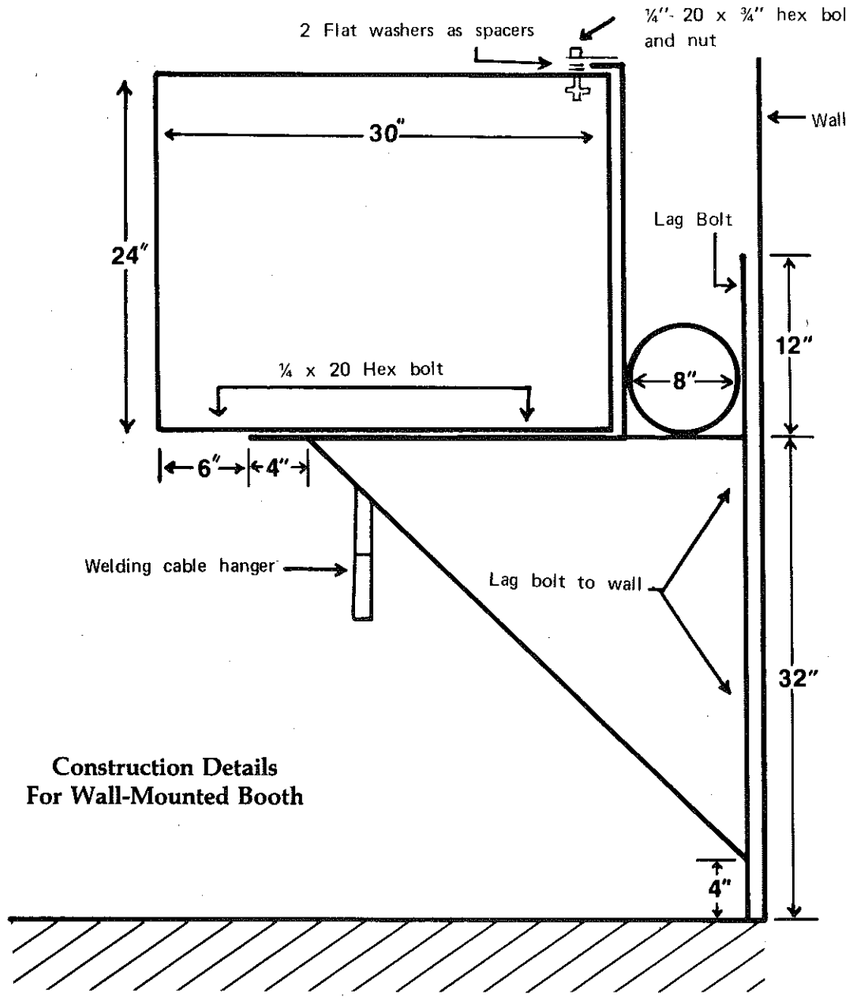


Free Standing Booth

Tool List

Combination Square
Scratch Awl
Center Punch
Paint Brush
Drill Press/Portable Drill
Mill Bastard File
End/Socket Wrenches
Framing Square
Steel Rule
Hack Saw
Ballpeen Hammer
Twist Drills
Arc Welder
Screwdriver
Tin Snips
Level





Construction Details For Wall-Mounted Booth

ARTICLE

Teaching Skills With Video Tapes

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

Do you have to stop in the middle of a demonstration to let students crowd around the demonstration area or to pass around a piece of equipment because they can't see? Using video tapes is an easy and practical solution to this problem. With video equipment you can teach detailed procedures through the use of pre-recorded tape or live with camera and monitors. Afterward, the students can get first-hand experience with the skill in the laboratory.

The advantages of using video for demonstrations are: (1) it brings the demonstration close to the students in small groups; (2) the video camera through monitors can increase the size of parts to illustrate motion and key elements that cannot be seen by the student at a distance; (3) the demonstration can be shown on closed circuit and taped at the same time for playback later; and (4) once the demonstration has been taped, it is a permanent record for use with other classes or by students for review or individual study.

Video tape can also be used as a self-evaluation device so you can critique your demonstration techniques and teaching procedures. It will provide answers to questions: (1) are your demonstrations providing the desired information for the student; (2) have you included all the key steps in the demonstration; (3) how effective are your teaching procedures; and (4) how can teaching procedures be improved? Additionally, you have a record of your presentation for review by others who may be able to help you improve.

Using Video Tape Equipment

The type of video tape recording equipment used in schools is relatively simple to operate. If you can use a tape recorder, you should be capable of using video equipment with a little practice. If you do not have a media specialist in your school, a student can be trained to operate the equipment and to help tape demonstrations. For a 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 professional 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 inable 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 or phrases on the script enable the camera operator to change from one sequence to another without having to second guess the instructor. The script does not have to contain word for word what is to be said during the demonstration; however, a complete script is easier for the camera operator 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 cut aways 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 cycles of the engine 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 the 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.

Video tape, when used to demonstrate the use of power tools, has an added advantage in 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 not as much as one might think. Video tape has the capability of producing a copy of an expensive or time consuming demonstration so that 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.

ARTICLE

Educational Merit of Summer Programs

By Larry E. Miller and Darrell L. Parks
Editor's Note: Dr. Miller is Professor, Department of Agricultural Education at The Ohio State University, Columbus, Ohio 43210, and Dr. Parks is Director of the Agricultural Education Service for the State of Ohio, Columbus, Ohio 43215.

Vocational agriculture students should be provided teacher supervision when they are directly involved in training, regardless of the time of the year. A principle of vocational education provides that knowledges, 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 needed competencies for the job. 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 Problem

Economic perspectives of increasing teacher salaries and decreasing state subsidies have provoked questions in Ohio regarding the importance of extended service. The Ohio Agricultural Education Service, in light of these questions, is re-evaluating its extended service standards. Questions were particularly addressed to areas of horticulture and agricultural mechanics. To assist in this re-evaluation a study was conducted to determine if the existing standards should remain intact or be modified.

Method

The methodology employed was based solely upon the educational merits and criticality of students acquiring specific experiences available only during the summer months. Advisory committees from the horticultural and agricultural equipment and mechanics 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 task inventory lists for the taxonomy areas in terms of when that task was best learned, summer or otherwise; 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
Mean Score of Summer Experience Related General Questionnaire Statements As Rated by Horticulture Committee Respondents

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

TABLE II
Mean Scores of Summer Experience Related General Questionnaire Statements As Rated by Agricultural Equipment and Mechanics Committee Respondents

Rank	Statement	Mean Score
1	Summer placement experiences, and other school directed experiences, such as with the FFA, can help students develop personal skills that will be helpful to them.	3.4
2	Year-round agricultural activities in my community make necessary a year-round program of vocational agriculture.	3.2
3	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.	3.2
4	Students would be poorly prepared for job entry if they did not have some experiences gained through the summer months.	3.0
5	Students would not suffer any loss if vocational agriculture teachers were only on a school year (9 month) contract.	2.7
6	A teacher of vocational agriculture can teach all a student needs to know for job entry during the regular school year (9 month).	2.7
7	Competencies needed for entry level jobs in my field include skills best learned in the summer.	2.6

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, 293 (51.2%) of the duty/task statements were marked.

Summary and Recommendations

Both the horticulture and the agricultural equipment and mechanics committees clearly indicated through the general questionnaire 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.

The committees indicated further that certain competencies should be gained outside the academic school year if students are to possess the needed competencies. One can conclude that the summer component is an important dimension to providing valid vocational experiences.

As one horticulture committee member stated in the general discussion, "The question is not whether or not the summer program is necessary, but rather how is the summer program being used? You are talking about an industry that essentially operates from March 15 through November 15 and the summer period is the heart of that time span. You cannot start and stop a horticulture program."

Other members of the committee supported this position and interjected such additional comments as: "There's only one right time for seeding a new turf; the month of August, and that's when it should be taught.", and "Perhaps not all students are placeable during the summer and they are the ones that need a teacher the most to be working with them on school-based projects. Any school-based horticulture program that has a greenhouse, nursery stock, demonstration plots and/or orchard has more than enough cultural and maintennance opportunities to provide non-placeable students critical summer learning experiences."

Agricultural equipment and mechanics committee members emphasized that students need on-the-job experience in four general areas: tractor mechanics, machinery set-up, parts department and harvesting equipment. They also stated that summer experience under actual field conditions was essential for teaching the operation and adjustment of harvesting 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 instruction and experience 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 taxonomy areas, conduct a study to review standards in view of the level of instructional services required, direct immediate attention toward effecting a more equitable sharing of costs, institute inservice activities for local administrators, supervisors and teachers relative to planning, conducting and monitoring effective extended service programs, and that local supervisors and administrators of vocational agriculture programs should exercise greater control and accountability of teachers on extended service programs.

BOOK REVIEW

MARKETING OF AGRICULTURAL PRODUCTS, 5th ed., by Richard Kohls and Joseph Uhl, New York: Macmillan Publishing Co., Inc., 1979, 612 pp., $18.95

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 agribusiness classes at the secondary or college level. The completely updated 5th edition includes new graphs and tables, 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 specific interest to vocational agriculture teachers and students include: the behavior of farm prices, cooperatives in the food industry, standardization and grading, transportation, and the many chapters included in the marketing of commodities.

This book contains many tables, charts, and maps of ideal quality that will aid in the development of teacher and student instructional materials. The extensive glossary is almost a necessity for anyone teaching or working in agriculture. MARKETING OF AGRICULTURAL PRODUCTS also includes an annotated bibliography of available agricultural marketing references.

Richard Hylton
California State
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FFA PAGE

Vo-Ag Occupational Experience Workshops Sponsored by DeKalb

Promoting more effective "hands-on" occupational experience for high school students of agriculture is the mission of FFA's new in-service workshop program. The workshops are being developed by a committee of individuals involved in agricultural education across the country and will be presented to instructors of vocational agriculture as well as current students of ag-ed who use or will use supervised occupational experience (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 experience projects and how to maintain quality records. When the workshops begin across the nation in 1983, they will also explain nontraditional experience programs and FFA awards that honor students' accomplishments in the programs.

Scholarships Now Available For FFA Work 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 SAME and Lamborghini Tractors of 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 Oregon, Washington and Idaho annually. Pioneer Hi-Bred International, Inc., will sponsor five students — one each from Wisconsin, Minnesota, Ohio, Iowa 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 annual national convention, has gained another sponsor. Kansas City Cold Storage joins Educational Communications, Inc., in sponsoring the group that performs at convention sessions, meal functions and special events throughout the city. The high school members have country/western bands, song and dance routines, comedy acts, ventriloquism and other acts that display their well-rounded backgrounds.

Food For America Adds Atlantic Richfield Foundation Sponsorship

Food For America is the program that helps high school Future Farmers of America members tell elementary school children the story of agriculture. The Atlantic Richfield Foundation of Los Angeles, California, has now joined Mobay Chemical Corporation and J I Case, A Tenneco Company, in sponsorship of the program. Through Food For America, FFA members use games, posters and films to explain how the food and agricultural products on the supermarket shelf begin on the farm. A visit to a local farm is usually the highlight of the program for the children.

Dairy Production Proficiency Award to be Co-Sponsored by American Breeders Service

The Dairy Production Proficiency Award honors Future Farmers of America (FFA) members with outstanding projects of raising dairy cattle and producing milk. American Breeders Service of DeForest, Wisconsin, this year joins AVCO New Idea and DeLaval Agricultural Division in sponsoring the award. The local, district, state, regional and national honors reward FFA members with outstanding skills, inventories, efficiencies and management practices in Dairy Production.

National Leadership Conferences For State FFA Officers Sponsored

National Leadership Conferences for State Officers of the Future Farmers of America Organization will be held throughout the U.S. this summer. Sponsored through the National FFA Foundation by the Merck Company Foundation of Rahway, New Jersey, these conferences will provide leadership training for leaders of each of the FFA's 51 state associations. "This training will assist state officers as they work with local chapter members and carry out their year-long responsibilities," said Byron Rawls, National FFA Advisor. "The State Officer Handbook and audio-visuals sponsored by Merck Company Foundation will explain FFA programs, group dynamics, public speaking, human effectiveness and motivational techniques to the officers. Community organizations, business and industry will benefit from this training as FFA members enter leadership roles in society following their FFA years."

Stories in Pictures

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.