Six new National FFA Officers were elected at the National FFA Convention in November, 1979. Selected because of their knowledge, membership achievements, and leadership, these young people will serve as the National Executive Student Officers for the FFA. Their leadership is important to the continuing success of the program.

The officers for 1979-80 are:
Front Row (left to right): DOUGLAS C. RINER, 20, of Winchester, Virginia, National President, and PHILIP B. BENSON, 20, of Watsonville, California, National Secretary.
Back Row (left to right): ELIZABETH DICKINSON, 20, of Mesa, Arizona, Western Region Vice President; DONALD L. TRIMMER, JR., 20, of Woodburn, Maryland, Eastern Region Vice President; DON WILLIAM JAMES, 20, of Clay Center, Kansas, Central Region Vice President, and JEFFREY C. KIESY, 20, of Gadsden, Arkansas, Southern Region Vice President.
(Photograph courtesy of the National FFA Center, Alexandria, Virginia.)

THEME: Making Vo-Ag Relevant to the Needs of Agricultural Industry
Making Vo-Ag Relevant to the Needs Of Agricultural Industry

ARTICLE SUBMISSION

Subscriptions to The Agricultural Education Magazine are $25 per year. The editorial board reserves the right to accept or reject any article. The editor's decision is final. All submitted materials become the property of the magazine and will not be returned. Payment for accepted articles will be negotiated on a case-by-case basis. All queries and submissions should be sent to the Managing Editor. Please include a self-addressed, stamped envelope with your submission.

Table of Contents

ARTICLE SUBMISSION

Making Vo-Ag Relevant to the Needs of Agricultural Industry

Vo-Ag industry is the broad, all-encompassing term used to identify all of the functions associated with providing the food and fiber needs of people. It is the combination of agriculture and production agriculture. Agribusiness is said to be a complex blend of agriculture and business. It includes all of the business organizations which provide the inputs needed by farmers and ranchers and process, distribute, and otherwise market the products of farming and ranching.

The best statistical information available indicates that 12 percent of our labor force is employed in agricultural industry. With a labor force of over 90 million in the United States, there are about 16 million workers employed in agricultural industry. Of these, 3.2 million are in farming and ranching and 11.8 million are in agricultural areas. Vocational agriculture/agribusiness has the responsibility for preparing and up-grading the skills of most of these persons.

Three Contributors to Relevancy

How is it possible to provide the instruction that is relevant to the needs of an industry as diverse as agriculture?

Several contributions to the relevancy exist. Three of these are modern agriculture curricula, fully developed programs, and competent personnel.

Modern curricula are based on the employment needs and the technology that are employed in agricultural industry. Our system of providing food and fiber is so much different, and the needs are so much different, that can it be oriented to be oriented to be oriented to the needs of agriculture. We are contributing to weak links in our system of food production.

For each job curricula will include the areas of agriculture as well as production agriculture. Of course, each will be designed to meet the special needs of the employers in the community. In some cases this may be an all production agriculture curriculum, in other cases it may be all an all agriculture and agribusiness combination, or a combined curriculum. The curricula must be closely related to the industry, whether it is in horticulture, agricultural mechanics, agricultural supplies, farming, or other areas. Programs must be developed to provide for the needs of people and the need. A high school program, the necessary elements must be in place in order to maximize relevancy. These elements include classroom and laboratory instruction, FFA participation, and supervised occupational experience. Programs at other levels must include the elements necessary to relevancy, whether it is laboratory instruction, supervised experiences, individual follow-up and instruction, or some other elements.

Competent teachers are needed to implement programs. Teachers must have a broad base of preparation, with one or more areas of specialization. Practical work experience is needed, especially in the area of specialization. Each teacher must have a personal commitment to keeping up-to-date in both the technical and professional aspects of agriculture.

A Survival Issue

One of the major issues to confront vocational education in agriculture/agribusiness - and all of vocational education, for that matter - is the role of educational personnel in the survival of the industry. Shall they be program oriented or compliance oriented? This is a major issue in the establishment of the new U.S. Department of Education.

The implication of compliance versus program emphasis needs to be understood. The trend in moving from emphasis on programs to compliance with government regulations may have been influenced since the mid-1960's. We have seen the number of personnel with specific responsibility for vocational agriculture/agribusiness reduced to a very low level. (We can identify no more than two individuals with any significant amount of time commitment to vo-ag and the FFA at the Federal level.) The continuing trend to compliance emphasis threatens to erode our programs even more.

It is like this: We must have program emphasis, with compliance emphasis taking a secondary position. It is very possible for our programs to comply with regulations and, yet, lack relevancy. Many of the regulations are
Making Vo-Ag Relevant to the Needs of Agricultural Industry

(Continued from Page 3)

related to social concerns, without regard for program relevancy. The best way to overcome many of our social problems is through good career preparation. Vocational education needs leaders at the federal and state levels who can provide programmatic leadership!

Making vo-ag relevant to the needs of agricultural industry requires program leadership. It requires individuals who understand the nature of modern agriculture/agribusiness. It requires individuals who can relate to and communicate with employers and employees, whether on the farm or in agribusiness. An individual who is competent oriented would likely have none of these abilities!

March, 1980

This issue of the Magazine focuses on making vo-ag relevant to the needs of agricultural industry. Theme Editor Gary Briers of Iowa State University is to be commended on his work in soliciting and compiling articles. The authors represent a wide spectrum of involvement in agricultural education. Of particular note is that relevancy is addressed in perspectives: a banker, a postsecondary teacher, a vocational teacher with specific program thrusts, and a teacher educator.

The Cover

Students need instruction which keeps them current with developments in the agricultural industry. The cover photograph shows students at Hawkeye Institute of Technology, Waterloo, Iowa, using an electronic device to detect extra in a swine, Mike Dunphy, animal science instructor, supervises the students. (Photo courtesy of Virgil Christiansen, Hawkeye Institute of Technology, Waterloo, Iowa.)

Making Vo-Ag Relevant — Are You Up To The Challenge?

In vocational agriculture, we have long recognized that the teacher is the key — the catalyst — in a successful educational program. If we want to make vocational agriculture relevant to the needs of agricultural industry, we must begin with the teacher of vocational agriculture. Actually, we should start with the principal/vice teacher. Just as we require prospective teachers to complete a state and national experience, might we also ask our students to get agricultural experience?

Too often we assume either that agricultural education students have an extensive background in agriculture or that the technical agriculture courses provide students with practical experience. Neither of these assumptions (or both) may very well be false.

Step number one, then, is to provide the preservice teacher with practical, hands-on, in-service experiences in agriculture. Similarly, as Ms. Karna suggested in her article, in-service teachers should seek opportunities to gain direct experiences in agriculture during vacation periods, weekends, sabbaticals, or leaves of absence.

In summary, the technical competence of the teacher of vocational agriculture in the practical aspects of agriculture can be one assurance that the vo-ag program will meet the needs of agricultural industry.

Along with the impact of the "refined" product (competent teacher), the "in-tune" vo-ag program depends upon several processes to achieve, maintain, and enhance its relevance to agricultural industry. Some "approved practices" include the use of: advisory committees to plan, implement, and evaluate relevant curricula; industry resource people in the classroom; field trips to provide real observations of agriculture; laboratory experiences that approximate industry job responsibilities; cooperative educational plans that place students in job situations. These traditional practices should, and can provide relevance.

Other components of the vocational agriculture program are available to the teacher for relating instruction to industry needs. The teacher must plan classroom experiences role-playing, simulations, demonstrations, student activities, etc. — that are designed specifically for industry in mind. Too often, all of us are teachers selecting formation to teach based only on the subject matter. For example, we may teach the origin of various breeds livestock simply because that information exists. Rather, we should ask industry (or even ourselves): "What are our students about to learn livestock breeds?" How to select the best breeds to be successful in industry?" Perhaps students should know the "best heritage, breeders, etc. Nevertheless, by asking ourselves or others this question, we are more

What Are the Needs Of Agricultural Industry?

By Mary Warren

Editor's Note: Mr. Werker is Vice President and Farm Management Representative, First State Bank, Manchester, Iowa. He formerly taught vocational agriculture in Delia, Iowa, and worked in a farm supply business.

Communication and computation skills are important if the individual is to secure, succeed, and advance in a job. Often we hear people declaring that schools must do a better job of providing students with the very basic, yet most important, skills of reading, writing, and thinking.

Vocational agriculture programs can and should help to develop these basic skills by involving students in appropriate activities designed for this purpose. Students of vocational agriculture need to learn the concepts and skills of good record keeping, production estimation, inventory control, pricing margins, and marketing techniques of the business world. And, as we develop these abilities in students, we are also developing writing, and mathematical skills. Parliamentary procedure, human relations skills, and sales techniques help students develop communication abilities. Good business techniques and management skills are offshoots of the basic skills we develop in students.

More specific facts and abilities can, nonetheless, be adaptable in nature. For example, mechanical skills and other hands-on skills should be the top priorities in every vocational agriculture program. They open up many doors to entry level job opportunities, and they aid in the acquisition

of relevant SOE programs, and in their sharing of their experiences. The supervision of the programs can serve as a kind of insurance education for the teacher.

The EPA is the primary tool for the development of leadership and human relations skills, values, and ethics so desired by agricultural industry. We cannot, however, expect their acquisition to come simply because the EPA exists. Teachers must plan and provide activities for students with the express goal of developing those skills necessary in any kind of work.

Presented in this issue are examples of the needs of agricultural industry: in-service possibilities for teachers to assist them in becoming sensitive to industry needs; and agriculture programs at the secondary, postsecondary, and adult levels designed to meet industry needs. Let's now get on with the process of making vocational agriculture relevant to the needs of agricultural industry!
A Banker's View —

What Are the Needs Of Agricultural Industry?

(Continued from Page 3)

tion of managerial skills. Yes, beginning jobs still require technical ability!

Basic Facts

The backbone of agricultural industry (and the entire country's economy for that matter) is farming. Nevertheless, to be able to manage the financial resources needed for entering into farming and from where they would expect to get these resources if they did farm. Students totally understand and recognized these realities, it would put aside many farming myths and help forming proper priorities. Hopefully, they could then plan realistically for the future. Too

My experience as a loan officer fortifies my feeling that most young people have a very limited concept of budgeting and even a lesser understanding of how to actually implement one. In short, students must realize and understand that capital resources are a limiting factor for most of us. Changes in agricultural technology have not changed that fact and have probably made it even more important.

Basic Personal Qualities

Ethical standards and integrity need to be emphasized as desirable qualities to demonstrate our interaction with those with whom we work. We must be fair with everyone. Nothing leads to failure faster in agricultural business and/or farming than to develop a reputation of distrustworthiness. Personal integrity is a quality which we must develop. It is based on the appraisal others have of our character and honesty. These are two of the greatest assets an individual can have. Whether working in agricultural business or with farmers, honesty in our daily affairs is paramount. We can develop these qualities in students by demonstrating ourselves and by shouldeering students with responsibilities that demand integrity.

Another unwavering quality needed by students is enthusiasm. Teachers need to constantly strive to develop enthusiasm in their students. Like integrity, one of the best ways to do this is by example. If the teacher does not believe, how can we expect students to be eager to learn? If we cannot establish our students' trust to help them acquire? If you are a phony, your students will find out shortly after they meet you. To be leaders and develop leaders, we must become enthusiastic and be enthusiastic — be enthusiastic that what we are doing is exciting and important.

Terms such as common sense, ability to analyze a problem, and basic qualities that are individual characteristics of the qualities required to think and/or work through a problem and select the most advantageous solution. We have heard the statistics say, "We must stop our own breaks." This indicates that somewhere along the way we have the opportunity to make proper decisions and to select the right path.

Individuals need to be aware of the fact that, in nearly all cases, we are given alternatives from which to choose.

Many times, how successful we are in life is getting our being due to the problems and by our ability to sort out the big management decisions from the small. We must instill in the students the attitude that those hard won decisions are the fine moments in a successful business career.

Some might think of the quality of imagination, dreaming, many times leading to frustration. On the other hand, we want our students to so look upon the need for will to determine an idea which might be useful. For some, taking the leap of faith is a much too difficult task. We need to understand the importance of recognizing the opportunities for doing so, and when to do so.

In order to make proper decisions, we need to lay down dreams by supplementing them with continuing experiences. We need to help students learn proper problem solving and decision making techniques which could be useful in our future. In this regard, the awareness of the progress in our area of work, we let the students to become professionals. So, imagining continuing education go hand-in-hand.

A real quality needed by workers in agricultural industry. Many people go through the processes we have outlined, they do not want to put the plans into motion. On occasion a go-between is not accepted by the necessary perseverance and interest.

We need to establish both short-term and long-term objectives. Although the time period for attainment of certain varied, we need never be distracted from our objectives. Too many individuals never establish any goals and objectives. Others are sidetracked by activities which are in effect, they are wasting their time.

Agricultural industry needs "managers" who can, and will establish goals and objectives and then to achieve them. A manager of people depends on many principles which may be taught and developed in the vocational agriculture programs. Work experience management depends on the size and desire of the individual. A confident manager must first of all, have the self-esteem to exert their drive, to grow in their student sharing participation in the election-making process.

A Postsecondary Teacher's View —

Making Vo-Ag Relevant: THE BOTTOM LINE

It really doesn't make much difference if we use the word relevant or meaningful or effective when we discuss making vocational instruction meet the needs of agricultural industry. It is basically a necessity of the bottom line: Are the skills and abilities being taught really the ones which the industry believes makes a difference to have? Do we know that they do? Have we the efficiency to determine what the employer is? We have the ability to become too involved with textbook material, to think about the information which is to know, but not sure that the student in order to be productive in his or her chosen occupational field. We are sometimes confined to thinking that has "funnel vision." We become too involved with our day-to-day teaching activities that we neglect to take a look around to re-evaluate or even try to find out what changes industry has made and in what direction it is going. Relevant instruction means that we have to determine what skills and abilities a student must possess and be employable before we sort out the curriculum to be taught.

Students enrolled in postsecondary agriculture programs

should vocational agriculture "speed up" this assuming of the real leadership role of a manager?

Summary

Employers understand that vocational agriculture programs normally do not stress skills beyond the basic competence level, industry is willing to train individuals who demonstrate the ability to stay on the job. Similarly, employers expect a full day of quality work from their workers. Whether they are performing technical skills or managerial skills for a position that is looking for quality workmanship. Many employers complain about the high percentage of rejected items that do not meet industry standards due to a lack of technical skills. Businessmen have a small number of employees who do specific skills, people need dependable people. It needs employees who can be on time and on the job on a regular basis. Employers are looking for individuals who will do their job and, when the business needs extra help on occasion, will be there to help.

The need for the agricultural industry: basic skills, basic facts, basic personal qualities. The attributes needed for success in agricultural industry today are those we have yesterday, and they promise to be the same in the future.

Even as agricultural industry changes, its needs remain constant. Vocational agriculture programs should be designed to help develop these basic prerequisite skills and attitudes.

THEME

By VIRGIL CHRISTENSEN
Editor/IDe: Mr. Christensen is Head of the Agriculture Department at Hamline University of Technology, Waterloo, Iowa.
The Role of Advisory Committees

Course content can be determined by the effective use of advisory committees. Effective use means that the advisory committee must have a voice within the committee that makes up the program committee. This balance is achieved through having employers and employees represented. Input is essential from both sides of the desk, so to speak. Employers tell us what they have to have to make their operations productive. Employees inform us as to what they have to offer in the area of their skills and abilities. A match between the two should result in a rewarding situation for both. One may ask the question, How many members should an advisory committee have? The number should be determined by having enough members to represent all the segments of the industry. Each segment needs to be represented in the committee to ensure a fair and balanced representation. A typical committee may have 10 to 12 members.

The most common mistakes we make are that we either don't meet often enough with the advisory committees or we don't listen to them and make the changes in our curricula that they recommend. Advisory committee meetings should occur at least once a year and perhaps twice a year are recommended. The meeting should be long enough to be productive and short enough to be effective. Two or three hours are usually sufficient. Since we have been informed of their suggestions and recommendations, it is up to us to implement these into our curricula. If we don't make use of the committee, we are doing a great injustice to all segments of the agricultural industry.

An example of how an advisory committee can influence a curriculum: The first program of study for our agronomy program was designed to be a two-year program to meet the needs of the industry. However, an advisory committee was formed, and it was designed to be a one-year program to meet the needs of the students.

The committee was able to change the curriculum to meet the needs of the industry. The committee was able to change the curriculum to meet the needs of the students.

The Role of Student Experiences

Course content can be adjusted by making use of input from students. The student experience is a significant part of the educational program. Most postsecondary agricultural programs consist of some employment experience. Some credit is earned for on-the-job training of employees. The most effective on-the-job training is to be employed. The students will be more motivated to learn when they know that the knowledge and skills they are learning will be of direct benefit to them. This will make the curriculum more relevant to the students and will help to make the curriculum more effective.

The Chillicothe Story

How A Comprehensive Vocational Agriculture Program Meets The Needs of Agricultural Industry

Vocational agriculture can help to meet the needs of agricultural industry for skilled personnel. This will require expanded programs of agricultural education. Just as agricultural industry is vital to the economic growth of the nation and handling of agricultural products, vocational agricultural programs should encompass more than just producing agricultural products.

The relationships between agricultural industry and vocational agriculture provide the framework for the agricultural program at Chillicothe (Missouri) Area Vocational School. By establishing relationships and similarities between agriculture and business administration, a well-balanced set of educational objectives has been implemented in the high school and adult vocational agriculture programs. The purpose of this article is to describe elements of the program and call it "training network" at Chillicothe.

Our Production Agriculture Program

The vo-ag instructors at Chillicothe Area Vocational School are (left to right): Roger Wolf, Dwaine Davenport, Don Agler, and Don Brown (standing, left to right). Don Cassada, Lee Fitchett, Wayne Wade, Ron Wolf, and Bill Gutshall.

THE AGRICULTURAL EDUCATION MAGAZINE

MARCH 1997
The Chillicothe Story

(Continued from Page 9)

In addition to instruction in basic production agriculture taught in the animal and plant science courses, SOE also offers an Agribusiness Program. All students are encouraged to formulate their own individualized curricula, which may include courses in agriculture-related objectives. Periodic farm visits by the instructor keep students up-to-date on their projects to develop and realize their long-range objectives. The third year of production agriculture emphasizes advanced livestock and crop production. On farm record keeping is aggressively maintained in the third year. Students are encouraged to continue on at SOE.

During the third and fourth year, agriculture mechanics instruction is offered in several courses. Students are given the option to choose either agriculture construction or a "specialized course." Technical skills in agriculture mechanics are taught in both classroom and laboratory settings. Students are given the opportunity to learn and demonstrate their skills in various projects appropriate to the desired major and proper procedures.

A list of competencies for the program is included for each student and his or her personal accomplishments are continuously recorded for future reference. This list is an especially useful reference when prospective employers inquire about students.

An example of a specific competency list follows:

### Competencies in Farm Power (Example)

- **Level of Competence**
  - 1. Know and follow safety rules.
  - 2. Use tools and equipment.
  - 3. Use and maintain farm equipment.
  - 4. Understand and apply principles of power.

- **Graded seed corn**
  - X
- **Assembled barn and silo system**
  - X
- **Drain, flush, and fill cooling system**
  - X
- **Clean and pack wheel bearings**
  - X
- **Check tire pressure**
  - X
- **Align front wheels**
  - X
- **Turn-up ignition**
  - X

### Key to Level of Competence
- 1. Above average
- 2. Average
- 3. Needs improvement
- 4. Absent

In addition to increased emphasis in agriculture mechanics during the fourth year, students can become more involved in farm management. Such areas as agricultural credit, insurance, economic principles, income taxes, marketing, and partial budget are emphasized in the complete field book analysis taught by the instructor. Students are given the opportunity to learn and demonstrate their skills in various projects appropriate to the desired major and proper procedures.

### Our Agribusiness Program

Agribusiness was added to the Chillicothe curriculum in 1973. It is a full-time, four-year program with specific emphasis in the development of business characteristics sought by agribusinesses.

During the first two years of the program, students are exposed to agricultural activities in the local and regional area. Areas of specific interest include: sales and marketing, advertising and promotion, office machines, office machines, and customer service. Students are given the opportunity to learn and demonstrate their skills in various projects appropriate to the desired major and proper procedures.

After three years of pre-agribusiness training, students are given the opportunity to choose a specific area of agriculture to major in. Here, the characteristics of maturity, ambition, and practicality become very evident. To enhance understanding of the student, the employer, and the instructor, an agreement is made that work experience is the main tool used in higher education.

After an acceptable training plan has been developed, the student is advised to submit an application for employment with the appropriate employer. Samples of on-the-job work skills are as follows:

- Graded seed corn
- Assembled barn and silo system
- Operate cash register
- Cut and wrapped hams
- Formulate drugs for feed
- Figure dispersion on soybeans
- Filled meat cases
- Planted wheat
- Control soybeans
- Bagged feed
- Sold 4 chains saws
- Iron and tinshots to 4 liters of pigs
- Priced freight

During employment, students are formally evaluated four times. The evaluations are based on competence levels and individual characteristics involving the student, the instructor, and the employer. After completion of the curriculum, a permanent file is maintained on each student.

### Our Postsecondary Farm Management Programs

Since farms are the largest sector of the agriculture industry found in our community, we have an agricultural education program designed to facilitate the entry of young people into farm ownership. Our postsecondary farm management program makes students aware of the transition from high school or college to farming. Teaching beginning farmers from one to three years into the eventual goal of leaving their program and entering long-term farm management program.

Institution in the postsecondary farm management that includes:

- Bicentennial Farm
- Howard County Fair
- National 4-H Congress
- American Farm Bureau
- American Legion
- Future Farmers of America
- FFA
- National 4-H Congress
- American Farm Bureau
- American Legion
- Future Farmers of America
- FFA
- National 4-H Congress
- American Farm Bureau
- American Legion

After graduation students receive placement help, with 15-20 job offers usually available for each graduate. Placement in the past has been very high, with 100% of those graduates finding jobs being placed and receiving above average salaries.

A follow-up of graduates has been helpful in determining those areas of the curriculum that need to be upgraded. Most employer contributions to the program are appropriately meeting the needs for competent and highly motivated individuals in areas of agricultural equipment repair.

### Our Adult Farm Management Core Program

Adult education, although at times overlooked, is an integral part of the core of all our vocational agriculture programs. The adult program should be viewed as a culmination of previous efforts, via the high school and postsecondary programs, in a comprehensive agricultural training network. Our farm management core program is the basis of our adult program. It is the continuing phase of the vocational education with those individuals who had never completed high school and who have received correspondence training programs in our program.

### Our Postsecondary Farm Equipment Repair Program

Our postsecondary farm repair program is another facet of the Chillicothe postsecondary program. Initiated in 1967, this program deals directly with the needs of those planning to enter farm machinery repair occupations. An advisory committee consisting of machine dealers and manufacturers helps coordinate training plans and basic skills to develop. Practical experience is encouraged in a laboratory setting designed as nearly as possible to that found in the repair shops of machinery dealers.

Throughout the program, students are evaluated to determine mechanical competency development and skill retention. Results of each evaluation are permanently filed and readily available for future reference. On-the-job training is emphasized during the first year of instruction with each student receiving from 100-120 hours of basic on-the-job experience. Second year instruction is much more intense in specific areas of skills, such as fuel injection systems, hydraulics, and air conditioning systems.

The instructor has a dual capacity role of being involved in both the classroom and with individual visits. Classes are scheduled throughout the winter months, with topics coinciding with member interests. The main thrust of the program is to accomplish identified skills and job training at all times of the year. Visitations month is dependent on membership status, with full-time members visiting monthly and half-time members visiting every other month.

At the start of each year, individuals establish a set of short-term goals for that year and review or revise already established goals as needed. By establishing goals, a framework for guidance and a benchmark for measuring accomplishments has been established. The long-term goals also provide program continuity throughout the short-term period. The instructor's visitation form is used during each monthly visit, indicating what has been accomplished and what needs to be accomplished during the next visit.

The instructor's salary is paid in part by the state department of education, with membership fees making up the remaining salary. Full-time membership is an indication of commitment on the part of the class executive committee and the instructor.

Implementation of adult education in the total voca-
The Blackfoot Story —
How Cooperative Education Meets
The Needs of Agricultural Industry

When the agricultural cooperative education program was started in Blackfoot, Idaho, in 1979, there were a lot of skeptics cooperating. Some didn't care for the idea of "kids running loose" for half a day, and some didn't want students to fill jobs that might be needed to support someone else's family. Still others objected to the idea of changing the emphasis of an already successful vo-ag program from a production agriculture format to one of training for farm-related occupations. Nonetheless, a community survey indicated that a majority of the county, district patterns were open to the establishment of an agricultural cooperative education program. Agricultural cooperative education has been practiced in one way or another since the idea of vocational education began. In early colonial days, young people went through apprenticeship training to be blacksmiths, harness makers, millers, or other craftsmen while at the same time they were taught to read and write. In return for this training, the apprentice worked for the business as a full-time employee. As an organized part of vocational agriculture, cooperative education has become an integral part of the program with the passage of the 1963 Vocational Education Act (PL 90-968). It was further emphasized with the passage of the 1964 Vocational Education Amendments which provided money for planning and implementing cooperative education programs.

The Blackfoot Program

The enrollment of the Blackfoot agricultural co-op program started out quite small and has grown so large that there are problems finding seating in the classrooms for all the students who register for the course. In order for students to enroll in the program, they must be seniors and have taken at least vocational agriculture i, although it is preferred that students complete the total program of Ag I, II, and III classes. In the past nine years, 175 vocational agriculture students have completed the Blackfoot agricultural cooperative program.

By JAY C. MORTENSEN and RICHARD M. POSTER
Editor's Note: Mr. Mortensen is vo-ag instructor at Blackfoot, Idaho. Ms. Poster is a teacher educator at the University of Idaho.

THEME

What the Teacher Does

Supervision by the instructor during the initial few weeks of a student's placement is important in the transition from the student's student status to employee. After the initial break-in period, supervisory visits are made weekly or by request. During supervisory visits, the supervising instructor provides "Do and Don't" rules to be followed during supervisory visits. During the visits, the supervising instructor:

- Shows interest in the work underway by being present and asking questions when the opportunity presents itself.
- Makes notes on items which may be used for a conference with the student or for study assignments for the class.
- Quickly senses the sponsor's desire to terminate a conference.
- Consults with the training sponsor about progress of the student-learner in relationship to the training plan.
- Views the training sponsor in the evaluation of student-learners.

During supervisory visits, the instructor's doesn't:

- Call attention to student errors, bad practices, unsafe conditions, or the Like presence of others.
- Try to demonstrate how to do a job to which the student-learner is assigned.
- Request a conference with the employer when he or she obviously is doing a poor job as a student-learner.
- Intervene or interfere with the student-learner's work.
- Appear to be looting or just "passing the time of day.
- Forget to reassure the student-learner before leaving.

The success of Blackfoot's cooperative program is based primarily on the cooperative spirit of each of the participating employers. Students must be interested and willing to commit both time and energy toward making their training programs a success. This commitment is developed mainly through class instruction and development of realistic co-op experience plans.

The Blackfoot Story —
How Cooperative Education Meets
The Needs of Agricultural Industry

What the Teacher Does

Supervision by the instructor during the initial few weeks of a student's placement is important in the transition from the student's student status to employee. After the initial break-in period, supervisory visits are made weekly or by request. During supervisory visits, the supervising instructor provides "Do and Don't" rules to be followed during supervisory visits. During the visits, the supervising instructor:

- Shows interest in the work underway by being present and asking questions when the opportunity presents itself.
- Makes notes on items which may be used for a conference with the student or for study assignments for the class.
- Quickly senses the sponsor's desire to terminate a conference.
- Consults with the training sponsor about progress of the student-learner in relationship to the training plan.
- Views the training sponsor in the evaluation of student-learners.

During supervisory visits, the instructor's doesn't:

- Call attention to student errors, bad practices, unsafe conditions, or the Like presence of others.
- Try to demonstrate how to do a job to which the student-learner is assigned.
- Request a conference with the employer when he or she obviously is doing a poor job as a student-learner.
- Intervene or interfere with the student-learner's work.
- Appear to be looting or just "passing the time of day.
- Forget to reassure the student-learner before leaving.

The success of Blackfoot's cooperative program is based primarily on the cooperative spirit of each of the participating employers. Students must be interested and willing to commit both time and energy toward making their training programs a success. This commitment is developed mainly through class instruction and development of realistic co-op experience plans.

Importance of Employer

The employer is the key to the entire program. It is expected that cooperating employers in the Blackfoot co-op program serve as teachers as well. The selection and development of off-the-job training stations is as important to the Blackfoot cooperative program as the in-school experience. Since a large portion of the student's learning experiences will be gained on the job, the cooperative training station must be selected on the basis of the employer's goals and the individual student-learner. Answers to the following questions aid in the selection of good training stations:

- Does the training station sponsor show an interest in providing instruction on the job and not merely part-time employment for the student?
- Does the training station sponsor express a willingness to match learning experiences to individual student capabilities?
- Will the training station offer a variety of learning experiences for the student?
- Does the sponsor indicate willingness to develop a step-by-step training plan in cooperation with the potential student and the vo-ag teacher?
- Will the training sponsor discuss career possibilities with the student learner?
- Is the physical and moral environment of the training station appropriate and beneficial for the student-learner?
- Is the equipment and the training station safe, reasonably modern, and in good condition?
- Is the business currently observing all state and federal laws relating to employment of minors?
- Will the student-learners be employed at wages comparable to those paid to similar beginning workers or at the student-learner rate established by the U.S. Department of Labor?
- Would the employer be willing to provide reports on student attendance, evaluation of work completed, and the personality development of the student?
The Blackfoot Story —

(Continued from Page 13)

the community.
— Provide more individualized instruction.

Benefits to employees:
— Train potential full-time employees in their own plants.
— Obtain better qualified part-time employees who are more reliable and less interested in non-agricultural employment.
— Get a more direct return from their school tax dollars.
— Render an important public service.

Benefits to the community:
— Young people capable of being more productive citizens.
— Young people trained for local labor market.
— Young people who are more apt to stay in the community.
— Better school-community relations.

Cooperative education in agriculture puts the class “experience is the best teacher” to work. Students get entry-level job skills necessary to enter related professions. The school is able to provide an expanded curriculum for students who are looking for employment. The cooperating employer gains a reliable employee who is committed to learning and growing on the farm. The program is designed to improve both the quality and the quantity of agricultural education and to ensure a future workforce ready to meet the demands of the industry.

THEME

For the Horticulture Teacher —

A Personal In-Service Program Can Keep You Relevant

Do not deceive yourself by thinking that as an employed vocational agriculture teacher, you are nothing about horticulture. The industry is rapidly changing and, regardless of your background, steps must be taken to ensure that you are up-to-date on the latest and greatest technological advancements. What are these advancements? What are the operating costs facing the greenhouse, nursery, or florist in today’s economy? These are just a sample of the questions that you will face in preparing students for their first horticulture job. Current, accurate, and relevant facts and practices need to be taught so that our students have the knowledge necessary for success in their first jobs.

To keep current with industry changes, the vocational agriculture instructor should be active within the industry. One approach is to join the industry associations (Teplella, Inc., Florist Transworld Delivery, your state florist and landscape association, and local allied programs). Attend the meetings. If possible, become an active member and/or on the board of directors. As an active member, try to plan a meeting to concentrate on new trends and find out what is happening. You may be able to attend these meetings by using a professional day away from teaching. At the meetings, find out what the horticulturists know who are you and what a vocational agriculture teacher does. Direct your informal conversations toward what they perceive to be the issues changing the industry. Determine any resources which may be helpful in updating your knowledge or which can be used in the classroom. Without a question is to keep in contact with the horticulture business. Do not look for a position between you, the employer, and the future employer of your student.

Visiting the local horticulture outlet is another way to keep current with changing trends. Look at all the看了 the industry from wholesale production and retail marketing so that you are able to visualize the organization of industry. Most owners provide their business and will readily explain their operation and role. (If you want a formal tour, be sure to contact an owner or manager prior to your visit.) By listening and applying this information, you will see how important it is to be an active member of the industry.

Outside of the classroom, a student’s supervised occupational experience program allows you to help your students keep up with the industry changes. Regardless of the type of project — landscape design or greenhouse crop — you and the student will be researching the current industry practices to ensure a successful experience. You may be able to arrange with a horticulture supplier to test the newest plant varieties in the student’s project. The student benefits from a reduced cost of material, while the supplier can prove the plant growth in the local climate. You can keep up with prices, varieties, pesticides, and the student records his or her expenditures. During the supervised occupational experience project, you and the student have the liability of providing accurate application regulations which forces you to have a current knowledge and understanding. When the student develops his or her desire for the best production results, you may introduce new developments to the industry. You can capitalize on the knowledge students develop in their various occupational experiences and incorporate it into your instruction.

Cohort placement of a student offers another exciting aspect of current industry changes. Once a student has been placed, you can ask the employer for informal conversations toward what they perceive to be the issues changing the industry. Determine any resources which may be helpful in updating your knowledge or which can be used in the classroom. Without a question is to keep in contact with the horticulture business. Do not look for a position between you, the employer, and the future employer of your student.

Visiting the local horticulture outlet is another way to keep current with changing trends. Look at all the viewed the industry from wholesale production and retail marketing so that you are able to visualize the organization of industry. Most owners provide their business and will readily explain their operation and role. (If you want a formal tour, be sure to contact an owner or manager prior to your visit.) By listening and applying this information, you will see how important it is to be an active member of the industry.

Outside of the classroom, a student’s supervised occupational experience program allows you to help your students keep up with the industry changes. Regardless of the type of project — landscape design or greenhouse crop — you and the student will be researching the current industry practices to ensure a successful experience. You may be able to arrange with a horticulture supplier to test the newest plant varieties in the student’s project. The student benefits from a reduced cost of material, while the supplier can prove the plant growth in the local climate. You can keep up with prices, varieties, pesticides, and the student records his or her expenditures. During the supervised occupational experience project, you and the student have the liability of providing accurate application regulations which forces you to have a current knowledge and understanding. When the student develops his or her desire for the best production results, you may introduce new developments to the industry. You can capitalize on the knowledge students develop in their various occupational experiences and incorporate it into your instruction.

Cohort placement of a student offers another exciting aspect of current industry changes. Once a student has been placed, you can ask the employer for informal conversations toward what they perceive to be the issues changing the industry. Determine any resources which may be helpful in updating your knowledge or which can be used in the classroom. Without a question is to keep in contact with the horticulture business. Do not look for a position between you, the employer, and the future employer of your student.

Visiting the local horticulture outlet is another way to keep current with changing trends. Look at all the viewed the industry from wholesale production and retail marketing so that you are able to visualize the organization of industry. Most owners provide their business and will readily explain their operation and role. (If you want a formal tour, be sure to contact an owner or manager prior to your visit.) By listening and applying this information, you will see how important it is to be an active member of the industry.

Outside of the classroom, a student’s supervised occupational experience program allows you to help your students keep up with the industry changes. Regardless of the type of project — landscape design or greenhouse crop — you and the student will be researching the current industry practices to ensure a successful experience. You may be able to arrange with a horticulture supplier to test the newest plant varieties in the student’s project. The student benefits from a reduced cost of material, while the supplier can prove the plant growth in the local climate. You can keep up with prices, varieties, pesticides, and the student records his or her expenditures. During the supervised occupational experience project, you and the student have the liability of providing accurate application regulations which forces you to have a current knowledge and understanding. When the student develops his or her desire for the best production results, you may introduce new developments to the industry. You can capitalize on the knowledge students develop in their various occupational experiences and incorporate it into your instruction.

Cohort placement of a student offers another exciting aspect of current industry changes. Once a student has been placed, you can ask the employer for informal conversations toward what they perceive to be the issues changing the industry. Determine any resources which may be helpful in updating your knowledge or which can be used in the classroom. Without a question is to keep in contact with the horticulture business. Do not look for a position between you, the employer, and the future employer of your student.
ARTICLES

Privet, Petunia, or Pepperomia: Can You Tell Them Apart?

By Paul Drobot (Editor’s Note: Mr. Drobot is Horticulture Instructor at Franklin High School in Franklin, Wisconsin.)

Whether it be trees, shrubs, flowers, foliage plants, grass plants or weeds, the identification of plant materials is a very important part of horticulture. One reason is that a great many times a person who is working in a horticulturist occupation will have customers with questions who will bring in just the leaves, a branch, or a flower. The customers will want to know what is wrong with the plant, why it is not growing, or where to plant it. Obviously it then becomes important to be able to answer their questions. The following is a way I have developed to get the answers to these questions is the positive identification of the plant.

It cannot be overemphasized how important well-developed plant identification classes are to a horticulture program. More and more schools are starting to incorporate some type of horticulture program in their class offerings. Many of these classes must be taught by agriculture instructors who are not well-versed in plant identification. I am not a converted agriculture teacher, but a converted botany teacher. Botany and horticulture are not as closely related as many people think. The following is how I moved out of the “twilight zone” into reality.

How I Learned Plant Identification

At first many of us have a limited amount of plant identification knowledge—with which to work. Either we were never trained in this area or like a good number of things you learn in college you forget it and have to learn it later when it is needed. Being a vocational agriculture or horticulture teacher, especially during the first couple of years, you are extremely busy with the FFA, class preparation, fruit sales, sick cows, and mildew plants. Combined, these make it difficult to learn a large amount of diverse plant material in a short period of time.

I have found over the past five years that the best way to learn plant material is to work at it in a constant accumula-

If you are not a camera guy, slide sets can be purchased by the number of copies you need, but these are more expensive than digital photos. Some sets are of poor quality, however. Some of the sets your fellow horticulture students may have are written by the teacher. This little known fact only adds to the value of the best ones—used by the best teachers.

9. Review—in order to get the stu-
dents to have a little better retention of the plant material, I have them list, on a prepared form, all the plants they have studied and rate how well they know the plant on a scale of one to three. The list is reviewed later in the year.

At Franklin High School we have developed a three-year horticulture program. The first year includes many of the same elements of the two-year horticulture course. The class is then divided into the teaching methods mentioned above. Some of the units are 15-20 class period long. Others are only 3-5 class periods, depending upon the materials being studied and the rate at which the class is absorbing the material.

ARTICLES

This Business of Teaching

By Franke E. Kennedy (Editor’s Note: Mr. Kennedy is Vocational Agriculture Teacher in Vaca, Texas.)

When we hear the word “teacher,” what is our reaction? It should be positive. After all, I have a little confidence in the teaching profession. It has been the business of teaching in a good manner.

Respect and Discipline Necessary

In order to do a good job of teaching, one must have respect for the students. This respect is important to the student, but necessary to the teacher.

I have found that when a teacher is in control of the class, the students are more likely to stay on task and be respectful of the teacher.

Individual Approaches

It is important to study and learn individual students because they are all separate individuals. What works for one will not always work for the other. To bring out the desire to learn on the part of the students the teacher should not get in a rut using the same procedure all the time. A teacher must constantly change procedures in teaching, such as class discussion on one subject, written exercises on another, research and reporting on another, and so on.

Give Students Responsibility

Students like to be given responsibility, whether they will admit it or not. As an example, when working in the shop, I will divide the class into groups and assign a student to be in charge of that group. I take extra care to let the student have the opportunity to be the foreman. I change foremen often, in some cases during the same period.

(Continued on Page 16)
By Ben Yoder and Thomas A. Horner

Does High School Instruction in Agricultural Mechanics Make a Difference?

The agricultural mechanics program is a very important part of vocational agriculture. It is important for several reasons:
1) It provides an excellent opportunity to "learn by doing."
2) Today's agriculture is highly mechanized,
3) It provides many opportunities for students to learn marketable skills, and
4) It is an important tool in capturing and maintaining interest in the total vocational agriculture program.

Learning new skills has always been emphasized and will continue to be in the future. Students today must possess marketable skills to be able to contribute to the society. The development of agricultural mechanics skills involves much more than the presentation of facts and information.
Many skills can be taught and learned through approved projects. However, we need to be careful not to overemphasize projects in our teaching. Before any projects are approved, students should be required to complete certain activities where they learn specific skills. For example, if a student wanted to construct an approved welding project, he or she should first be required to complete certain basic arc welding skills such as a butt, lap, and T-joint welds.

This gives the instructor a great opportunity to check if the student is actually involved in the learning project on a larger scale. The cipate can apply to all areas of the mechanics program, whether it is carpentry, tractor power, repair, or other area.

Our Research Procedure
A recent study at Iowa State University was conducted to measure the effect of previous agricultural mechanics training on achievement in metals and welding courses. Students enrolled in Agricultural Mechanics 220 were studied.

Figure 1. A student using safe and correct procedures in preparing metal for a welded assembly activity in oxy-acetylene welding.

Figure 2. A one-page worksheet on sharpening a cold chisel.

The authors believe no significant differences were found for several reasons:
1) groups being compared were not of equal size,
2) students who had received previous instruction in agricultural mechanics may have enrolled in Agricultural Mechanics 220 with the idea that they could not gain much from the course since they had received previous training, and
3) high school and junior high school students may be placing too much emphasis on project development and not enough on skill development in areas related to agricultural mechanics.

Agricultural mechanics plays an important and exciting role to teach. Although the skills may be very worthwhile to the student completing the project. However, we should not overlook the importance of teaching basic skills first and then allowing each student time to complete an approved project or activity related to these skills.
IDEAS UNLIMITED

An Electrical Wiring Panel

By Vern Dahlstrom
Editor's Note: Mr. Dahlstrom is teacher of vocational agriculture at the Billings Career Center, Billings, Montana. This article is based on his entry in the Ideas Unlimited Contest sponsored by the National Vocational Agriculture Teachers Association.

An electrical wiring panel can be used as a "learning by doing" exercise in teaching wiring. A panel is also in use in preparing for agricultural mechanics contests.

I have found that a panel of the type I am describing here is compact and easy to store. It can be used without having to take up a lot of space in the laboratory.

I prefer a panel that is 4 feet by 4 feet square, with the studs on 16 inch centers. Two panels are made and set together back to back. One side of the panel has a breaker panel and a wall receptacle placed in the wall. The other side has two 3-way switches, two wall receptacles, and a light attached to the studs according to electric code specifications. The wires are stapled to the studs. (See the accompanying photographs.)

We have made six of these panels for our voag department. (The teacher of industrial electricity also uses the panels when not needed in voag.) In addition, our panels have been temporarily used for our district contest.

Is a Teacher a Leader?

Teaching is a part of leadership, and vice-versa. It may be easier to do a job than to teach another to do it, but the true leader helps others develop their skills in that same group setting. What is it? Why do some people have it? Many concepts have been attached to the word "leadership." Most people don't know how to register this concept in their minds until they hear the speaker develop it. Even then, they are not sure it is a live thing.

Why is something or concept called leadership? How is it taught? How is it learned? Can a leader be a teacher? When is it necessary? Where does one use it?

What is Leadership? Leadership is not a mystical individual who has and another has not. Leadership is learned behavior that anyone can master and improve by study and application. Anyone can be a leader, they have the determination to learn the abilities that make a leader.

Leadership can be developed by being completely honest with yourself. All right, you say, but you didn't say what leadership is. Good. Of all the definitions I have heard, three stick in my mind. I use these three definitions for those expressing the meaning of leadership.

True leadership is when others have a desire to serve, to achieve goals, and to leave things better than they were when the leader found them.

Who Can Be a Leader?

Who can be a leader? Contrary to popular belief, individuals are not suddenly endowed with the qualities needed for effective positive leadership. Anyone can be a leader with work. Every member in a group is a leader when he contributes an idea. Leadership passes from person to person as each contributes to the achievement of group goals. A group reaches its peak of performance and effectiveness when leadership is diffused throughout the membership. There should be no limit to the number of leaders within a group. The more the better because the very act of leadership develops initiative, creativity, and mature responsibility. This is why the group needs leaders from each group member.

As teachers, we have the responsibility to be effective leaders in the group which in which we work from day to day. We also have the responsibility to effectively develop leadership in those students whose lives we help shape. It is our duty. Whether we realize it or not we may be and are shaping leadership abilities in those group projects, those group or classroom discussions we carry on in those numerous PTA committee meetings. The opportunities are endless. We need to recognize and utilize these abilities as opportunities and use them to the fullest extent so that we can see everyone grow and draw out that leadership potential that lies within our students.

How Does One Learn to Lead?

The best way to learn the how to lead is to lead. This does not mean a person must dominate. It means being "tired up" and having that enthusiasm drive to get something done. A leader is a person who has a desire to serve, to achieve goals, and to leave things better than they were when the leader found them.

Also means potential leaders must study leadership. I suggest the following point program to learn leadership:

1. Study the qualities of recognized leaders.
2. Study yourself. Recognize your strong and weak points.
3. Work at being a good follower.
4. Learn as much as possible about group behavior. Make sure you understand your group.
5. Develop a plan of learning and improvement in leadership and work your plan.

Remember that leadership is a function. It is something a person does. It is not a group of personality traits.

When is Leadership Needed and Learned?

The timing of leadership may be important. Do we recognize when leadership is needed? Most leaders are needed to serve the group and take the initiative to make those sometimes hard decisions that bear out goals and directions of positive movement. Our emphasis should be placed not only on the leader as a person.

It is most important for leaders to remember that their particular ability may be very effective in the situation in which they now work, yet in other situations will want to learn how to be more effective. It is likely, however, that the person who is effective in one or more situations will want to learn how to be more effective in other situations. Herein lies the never-ending learning process. To be effective leaders we must always be learning.

As has been stated, leadership is something that can be learned and taught. Leadership ability comes with practice. Each experience builds on the next and provides background for more complex leadership tasks. Leadership experience may bring mistakes, but at Mahamadu Gandhi once said, "Freedom is not worth having if it does not include the freedom to make mistakes." When we make mistakes and use these experiences to build a firmer base for positive effective leadership.

(Continued on Page 22)
Is A Teacher A Leader?  
(Continued from Page 22)

Where is Leadership?  
Where leadership is or should be can be determined on the basis of whether the leader is today and what the group the leader represents has as goals. Leadership is a group phenomenon. One cannot lead unless there are those to be led. So we need to start where we are. Such a starting point is that teacher's meeting, in that church meeting. Begin listening, learning, participating, acting, positively contributing to the group, leading the group. We will be providing direction to the group. As teachers, we are in the midst of this phenomenon called leadership every single day. So do we take advantage of it?

Summary: We Are Examples  
It is vital for leaders to keep in mind at all times that we become an example to others members in our group the moment we participate. We need to remember this as teachers. Example is the best teacher. Individuals with whom a leader works are likely to copy attributes, characteristics and methods used by the leader. This is where it is and what it is and what it is all about. As far as teachers are concerned, teachers are leaders shaping the lives of future leaders. As the following classroom experience, we will do this by our very example.

I'd rather see a lesson  
That I could have been there.
Then clearly the show.
The eye's the better teacher.
And more valuable than the ear.
And council is confusing.
But example is always clear.
The best of all the teachers.
Are those who live their creed.
For to see good put into action
Is what everybody needs.

BOOK REVIEW  

Handbook of Agricultural Occupactions  
Norman K. Hoover  
Danville, I1.: The Interstate Printers and Publishers, Inc., 1977,  
Third Edition, 364 pp., $8.95

For many years, agriculture and farming were used almost synonymously. Today's old dictionary makes very little distinction between these two terms. Although most well-informed people now understand that agriculture or agronomy is a much broader term than farming or production, misunderstandings continue to exist in some influential circles. This handbook clarifies the meaning of these and several other related terms in a lucid manner.

A major purpose of this handbook is to provide realistic information on a cross section of off-farm occupations in agribusiness, beef enterprises, and in the professions. Therefore, seven of the fifteen chapters emphasize "OFF-FARM OCCUPATIONS" which generally do not require a college degree. These include: agricultural supplies, agricultural mechanics, agricultural products — livestock, fruit, and vegetables; agricultural products — cereal grains and other crops; ornamental horticulture; agricultural resources — conservation, wildlife, and recreation; and forestry. In addition, three chapters stress "Occupations in Agriculture Production" and cover employment, paid employees, and self-employment. One chapter is devoted to "Professional Occupations in Agriculture."

Occupational briefs are included for 87 typical off-farm agricultural occupations. These briefs are organized around an appropriate four-point outline: 1) description and nature of the work; 2) working conditions; 3) educational and personal qualifications needed; and 4) how to enter and advance. All of the occupational briefs were reviewed and updated by professional persons in agriculture or by agriculture industry persons for the third edition. Succinct descriptions of 72 titles for owners and employees in agricultural production are also included.

The functional handbook is the theoretical sound from a vocational guidance standpoint. Four chapters focus on "Career Education in Agriculture" and embody the philosophy of Frank Parsons who believed persons considering employment should study themselves, evaluate different occupations, match their attributes with the opportunities before making a final choice. These chapters are also peremptory occupational choice and vocational development theories of Guild, Super, and Tiedeman. 

Dr. Hoover, Professor Emeritus at Pennsylvania State University, is a distinguished educator and is highly qualified for writing in his field of expertise. But the book is written in a style that makes it enjoyable and easy to read.

Dr. Hoover, Professor Emeritus at Pennsylvania State University, is highly qualified for writing in his field of expertise. The book is written in a style that makes it enjoyable and easy to read.

23rd year of professional service and leadership with the continuation of the 73rd annual meeting of the National Vocational Agricultural Association (AVA) affiliated organization of agricultural educators within the AYA Agriculture Education Division, began its

NVATA Board of Directors  

The National Vocational Agricultural Teachers' Association (NVATA) is an organization of agricultural educators within the AYA Agriculture Education Division, began...
Stories In Pictures:

Making Vo-Ag Relevant to the Needs of Agricultural Industry

Relevant programs in agricultural education are needed if competent manpower is to be available for agricultural industry. New skills will need to be taught. Success in today's agricultural industry requires people who know computer searches, human relations, and many other skills.

Photograph Descriptions:

1. A student at Hawkeye Institute of Technology is shown propagating a plant. This experience is being gained on-the-job with a greenhouse firm.
2. Getting foods into the forms desired by consumers requires skills in many areas. This student at Chillicothe, Missouri, is shown at work in his supervised occupation experience program.
3. Many agricultural occupations involve selling the product. This student at Hawkeye Institute of Technology is shown in a sales procedure from her employer's standpoint.
4. Computers are increasing in importance in agriculture. This student in a commodity marketing course at College of Agriculture, Iowa, is learning how computers are aids in making decisions.

Photograph credits:

Photographs 1, 3, and 4 are courtesy of Virgil Christiansen, Hawkeye Institute of Technology, Waterloo, Iowa.
Photograph 2 is courtesy of Bill Cashell, Chillicothe, Missouri.