

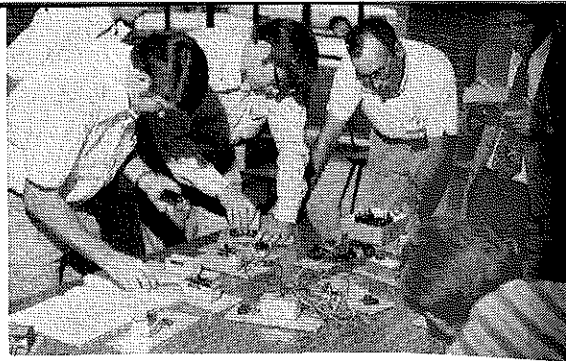
Career Awareness Promoted — McAdory, Alabama, Agribusiness Education Teacher Don Bristow, left, and elementary students Rhonda Moore, Vinson Ryals, and Anthony Price, listen as a Birmingham area vocational teacher explains careers in vocational education that enrich the well being of citizens, world-wide. (Photo supplied by Cecil Gant, Public Information Specialist, Auburn University).

Stories in Pictures

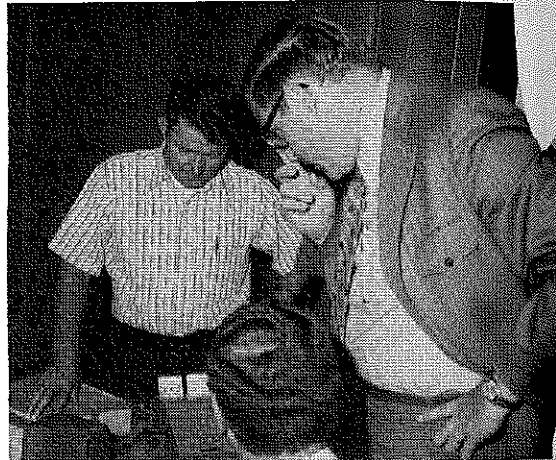
by Richard Douglass



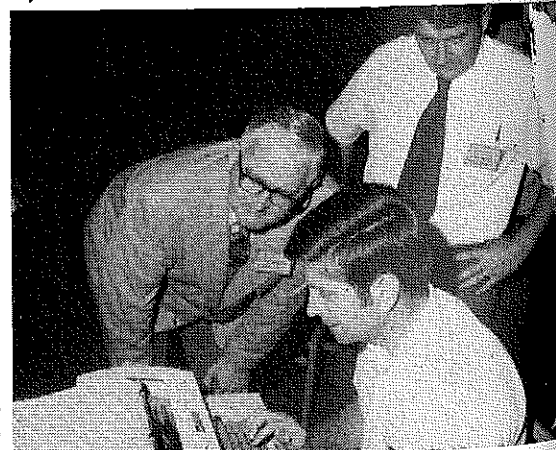
Meaningful Exploratory Career Education — Charles Elkins, Vocational Agriculture Teacher at Broadmoor Jr. High School in Baton Rouge, Louisiana instructs students in Ornamental Horticulture. This is one of the most popular departments in this urban school. (Photo supplied by J. C. Simmons, Assistant State Supervisor, Vocational Agriculture).



Teachers also Learn by Doing — Saving Labor with Electrical Controls is a part of many Vo-Ag Courses. These Nebraska Teachers are checking themselves out on a Kit of Electrical Controls. Six kits were made available by the Nebraska Inter-Industry Electrical Council and the Ag. Eng. Dept. Power use advisors across the State help move the kit between teachers and serve as consultants when necessary. Coordination, testing materials and use instructions are provided by Ag. Ed. Dept. Original kit design provided by University of Minnesota, Department of Engineering. For more details see December 1967 *Ag. Ed. Magazine*, pp. 137. (Photo supplied by Richard Bringelson — Coordinator of In-Service Agricultural Teacher Education).



Teacher Educators Study the role of Computers in Agriculture. John Thompson, Ag and Extension Education, Wisconsin, above, reviews the capabilities of the talking computer. The touch-tone telephone conversation with the computer was demonstrated by Dr. Stephen B. Harsh, Ag. Econ., Michigan State. Below, Dr. Ben Byler, Ag. Ed., Iowa State, tries his hand at outwitting the computer in a "Moon Lander" simulation. The cheering section includes Dr. Frank Baker, Ani. Sci., University of Nebraska and Gary McVey, Mech. Ag., South Dakota State University (Photo by Richard Douglass).

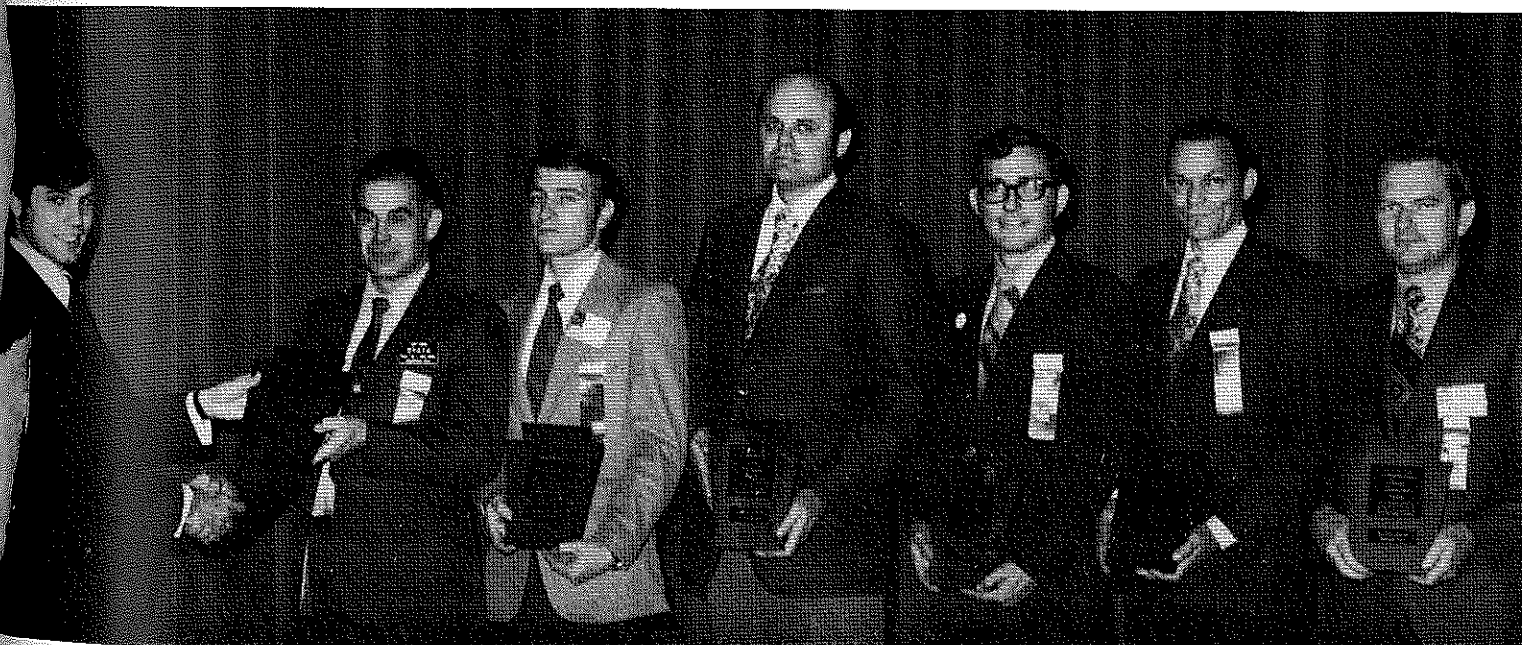


Volume 45

Agricultural Education

March, 1973

Number 9



Theme —
**CAREER EDUCATION:
 SECONDARY SCHOOL VISION**



The
**Agricultural
Education**
Magazine

Vol. 45 March, 1973 No. 9



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Send articles and pictures to the Editor or to the appropriate Special Editor.

COVER PHOTO:

Upper—**OUTSTANDING YOUNG MEMBER AWARDS:** The United States Steel Corporation sponsors the "NVATA Outstanding Young Member Award." It is designed to recognize a members' participation in the activities of NVATA. Limited to one member from each Region, it is open only to teachers who have taught at least three years but not more than five. Pictured left to right are: Charles Bourg, United States Steel Corporation; Rex Carlson, Cresco, Iowa; Joe Navrath, Hillsdale, Wyoming; Richard Watson, Sulphur Springs, Texas; Marion Riviere, Alachua, Florida; Donald Dilgard, Ashland, Ohio, and George Dunsmore, St. Albans, Vermont. (Photo supplied by Sam Stenzel, NVATA, Assistant Executive Secretary.)

Lower—**CAREER ORIENTATION AWARDS:** The New Holland Division of Sperry Rand Corporation sponsors the "NVATA Agricultural Career Orientation Award." It is designed to encourage teachers of Vocational Agriculture to put a continuing emphasis on informing students about the opportunities in agri-business. Pictured left to right are: Dave Kramer, Sperry Rand Corporation, New Holland Division, and the six Regional winners for 1972: Roy Reno, Riverton, Wyoming; Bobby Viertel, Eaton, Colorado; Thomas D. Burgess, Danville, Virginia; Gary Moore, Beverly, Ohio; Garland Woody, Hot Springs, North Carolina, and Allen Blezek, Lincoln, Nebraska. (Photos supplied by Sam Stenzel, NVATA Assistant Executive Secretary.)

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From Your Editor . . .

Editorials

EMPHASIS:

PRACTICE IN DECISION MAKING



Roy D. Dillon

It appears evident that implementation of the Career Education concept will structure the student's decision-making capabilities more than any previous educational concept. Today's youth are bigger, healthier, smarter, and more aggressive than previous generations. These young people have grown up in society where technology has changed rapidly. They are used to thinking, working and moving at a faster pace, and are typically less patient with others than their predecessors. These characteristics, if properly harnessed and guided, are positive traits. As a young person begins to ask, "Who Am I?", "What Abilities Do I Have?", and "What Do I Want To Do?", he desperately needs someone or group(s) that cares and shows an interest in guiding him to become aware of, explore, and define his interests.

Career education, through structured educational activities, enables the student to practice decision-making beginning in the lower elementary grades, through awareness and perception of self, family, neighborhood and how people

are dependent upon each other. He grows in his decision-making role in junior high, by exploring in-depth the requirements of various occupations, in order to make general but important decisions concerning occupational areas he would and would not want to pursue preparation for while in high school. The young person who has received adequate career awareness education, exploratory experiences, and understands his or herself, should be able to make intelligent decisions regarding high school courses.

Important to the decision-making sequence is that the student be encouraged to establish an occupational goal at the time he enters high school, so he can select high school courses that will help him reach that goal, whether it be a job, technical school, or four year college program.

For over fifty years, vocational agriculture has taught decision making through students' management of supervised farming programs, with guidance of parent and school. Career education broadens the sphere of practice in decision-making both vertically and horizontally, with the ultimate goal of the student being able to have confidence in the decisions he makes.

—RDD

Ronald C. Kowalka
Research Associate
The Ohio Agriculture Education
Curriculum Materials Service
The Ohio State University
Columbus, Ohio

HAS CAREER EDUCATION
LEFT YOU BEHIND?



R. C. Kowalka

The expert in career education is not the traditional vocational educator. Vocational education can no longer be aimed at turning out students who can perform a skill but don't know the many industries or job positions in which this skill is needed. I purport that even today, with the wealth of information available regarding career development and decision making, that many vocational agriculture teachers use the traditional method and base their curriculum and teaching upon job skills.

What is so wrong with this, you may ask? Is it wrong to base your curriculum around helping students gain skill competencies? For many years, "Vocational Education" has been offering programs which trained students for specific jobs. However, today our technology is changing rapidly and many of today's jobs require additional training, in

The vocational teacher has the potential to affect a person's career decision—a responsibility not to be taken lightly.

many cases even before the student begins the work for which he was hired. The student, now worker, has to be able to cope with the changing technology. He needs to know what to do about his career when the job for which he was prepared is no longer available or not to his liking. He has to make a decision—a career decision.

The decision making skills that you, as the teacher, have helped the student learn may well decide that person's ability to achieve a successful career. Decision making is a skill needed by all people regardless of position in life, especially the skill as it relates to career decisions. We are identified by our occupational orientation. Our values, political interests, attitudes toward other people and groups,

(Continued on next page)

the style we use in raising our children, and our social and avocational activities are in large measure also determined by the nature of our vocation. The career decision a person makes has a lasting impact upon his life. The vocational teacher has the potential to affect this person's decision—a responsibility not to be taken lightly.

A vocational educator, to be effective in this arena of individual awareness, should understand the differences between vocational and career education. Dr. Robert Taylor of The Center for Research and Leadership Development in Vocational and Technical Education has recently indicated that career education without the vocational component is a fraud, and likewise, that vocational education is not truly vocational unless careers are an integral part of the curriculum. You have been left behind if your vocational program is not optimizing career development of the individual. The product of this education is a student that:

1. Has a good understanding of himself;
2. Is aware of, and can use, the process of career decision-making;
3. Has an understanding of parallel or associated jobs to the skill for which he has been trained;
4. Has a working knowledge of the career options available to him;
5. Understands the job level at which he can enter the job market and has the motivation for upward mobility within the chosen career area.

MEANING TO THE TEACHER

Keith Goldhammer and Robert Taylor in *Career Education, Perspectives and Promise*, have indicated that the most fundamental change due to career education will result from the fact that the vocational education teacher will be responsible not only for helping students acquire

certain job entry knowledges and skills, but also for providing them opportunities to place these learnings into the perspective of their total career development.

As a result of career education, a student will be entering your classes with a much better idea of his interests and potentialities. No longer will he be content with a general curriculum of Production Agriculture, Horticulture, Agri-Business Supplies and Service, or Agriculture Mechanics. He will want to know how to perform an entry level job of a chosen or related occupation. He will want to know where else, within agriculture or other industries, that he could get a similar job meeting his interests and skill requirements. He will be interested in how people in the chosen job feel about their work, the satisfactions, frustrations, aspirations, and problems, and if upward mobility is possible. Will the skills you are teaching him be transportable—applicable in another town or state? The vocational educator of the present and future will also insure that the student knows when he has chosen a job that is doomed to extinction or has no possibility of upward mobility.

Career education means to the teacher that he must know much more about job opportunities and requirements in his chosen field, be it agriculture, construction, or other field. Important also is a teacher's ability to generalize requirements, from a job in agriculture to a similar job in construction, forestry, or another of the career clusters.

The theory behind career education is sound. Projects relating to career education were in existence before this decade and have proved to have overwhelming support. Career education is not the coming emphasis in education—it has arrived and is viable. Studies of parents, students, employers, educators, and other groups within our society show that this is what the public wants in education. How well you can learn to articulate and use the concepts will determine if you will be left behind. Why wait for an invitation?◆◆◆

BOOK REVIEW

THE SCIENTIFIC FEEDING OF CHICKENS by Titus, Harvey W. and James C. Fritz. The Interstate Printers and Publishers, Inc., Fifth Edition, 1971, 310 pp.

Nutrition is a basic subject important to all of us. It is especially important, if not essential, to livestock farmers and feed dealers, and vital to feed manufacturers. The book, *The Scientific Feeding of Chickens*, is especially appropriate for poultry nutritionists, students of poultry nutrition, feed manufacturers, feed dealers, and poultry producers. The Teacher of Agriculture will find it a comprehensive and well-written reference from which he may draw information for planning learning activities appropriate for high school students.

The book begins with some fundamentals of nutrition; discusses feed additives, digestion and absorptions and metabolism; proceeds to utilization, nutrient requirements and nutritional diseases; continues with a discussion of nutrient sources, energy values of feed stuffs, metabolic antagonists and incompatibilities in mixed feeds; and concludes with chapters on management and the formulation of diets.

Jack Mercer

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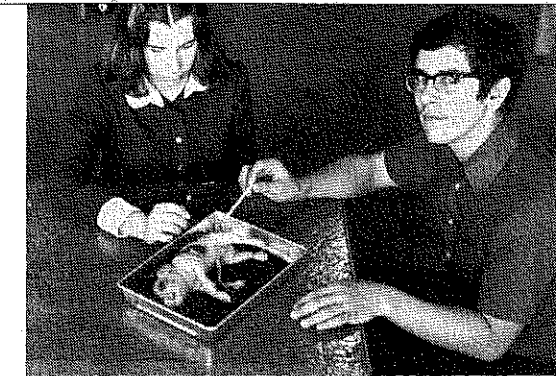
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I certify that the statements made by me are correct and complete. (Signed) Harlan E. Ridenour, Business Manager

OVER FOUR HUNDRED STUDENTS CAN'T BE WRONG!

Kenneth W. Jorstad, Instructor
Agriculture Occupations Department
Lincoln-Way Community High School
New Lenox, Illinois



Two students preparing a fetal pig for dissection.



K. W. Jorstad

Four hundred and fifty-six students in Agriculture in a high school! Furthermore, nearly twenty per cent are girls! This is quite a contrast to the thirty-five students taught by one Agriculture teacher seven years ago. Now there are four teachers in Agriculture in this semi-suburban area composed of four small towns.

To obtain this growth in our Agriculture Department we have done several things:

1. Titled our courses to attract attention from students, administrators, and the State Vocational Education Department.
2. Prepared behavioral objectives to assure ourselves that the material presented is designed to prepare the student to fulfill his occupational goal.
3. Designed our program to correspond to the demands of our community.
4. Built our curriculum to offer the opportunity for challenge from the poorest mechanic to the pre-veterinary student.
5. Used our community resources: guest speakers, field trips, curriculum advisors.
6. Specialize as teachers in one or two areas and then strive to develop our areas to provide students with the knowledge and skills necessary to either further his education or provide him with an adequate job and steady income upon graduation.

Subject areas and courses offered for 1972-73 are:

Animal Science:

Horse and Small Animal Science
Pre-Veterinary Occupations

Ecology:

Plant and Soil Science
Resource Conservation
Environmental Action and Technology

Horticulture:

Ornamental Horticulture
Landscaping Nursery, and Turf Management
Greenhouse Management and Operations

Mechanics:

Introductory Agricultural Mechanics
Agricultural Electricity and Construction
Farm Power and Machinery
Agricultural Engineering

As Animal Science is my main responsibility, I will discuss what has occurred the past two years and plans for the near future. A year ago there were two courses: Animal Science, dealing with farm animals; and Advanced Animal Science, covering in detail the aspects of nutrition, reproduction, disease, judging and anatomy.

A survey of 1970 graduates who enrolled in Pre-Veterinary Medicine in college revealed that none of them had taken any Animal Science courses at Lincoln-Way. Also there were larger numbers of horses and small animals in the area than farm animals. In the fall of 1972 we initiated the course entitled Horse and Small Animal Science, which replaced Animal Science. Half our time will be spent on horses and the other half on dogs, cats, fish, rabbits, and rodent pets.

Helping prospective veterinary students required a little different ap-

proach. We designed Pre-Veterinary Occupations to expose them to basic necessities and information for a career as a Veterinarian or Animal Health Technician. Included in the course is the dissection of a fetal pig, complete examination and exposure to artificial insemination in animals, lab sessions in dehorning and castrating, analysis of feedstuffs, and a tour of a veterinary college.

To further expand our Animal Science curriculum, we are planning a four-year sequence to begin operating in two to four years. We would like to develop a two-year junior-senior program to train students as Animal Health Technicians with emphasis on small animals. Their training would include: animal handling, grooming, animal safety, minor operations and administering medications. At least one semester of their senior year would be spent working as an intern Animal Health Technician with some type of certification upon graduation.

The response to our present program has brought more girls into Animal Science. There are thirty-eight girls and eighteen boys in Horse and Small Animal Science while Pre-Veterinary Occupations has eleven girls and ten boys. It is quite evident that girls do have and will express an interest in agriculture if given the opportunity.

Our goal at Lincoln-Way is to stimulate the student to prepare himself to be ready for college or ready to enter the labor force with an employable skill. At the same time we hope to make him conscious of his environment and his role in developing the world around him to provide satisfaction for himself and the generations of the future.◆◆◆

More specific course outlines may be obtained by writing to the author.



Fred J. Pumper

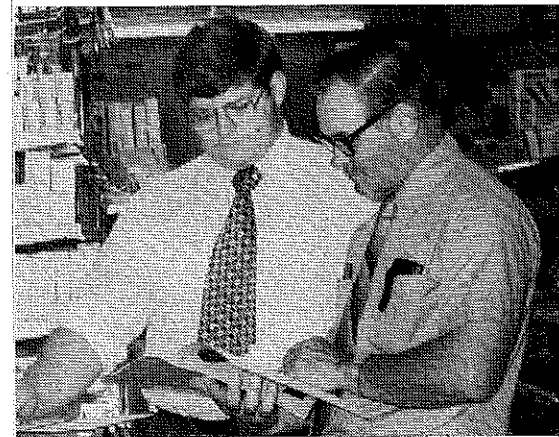
AGRICULTURE CURRICULA "RELEVANT"

Fred J. Pumper
Agriculture Teacher Educator
Western Illinois University
Macomb, Illinois

The question of agriculture curricula being relevant is being raised more often by students, parents and society. Webster defines relevant as: bearing upon or applying to the matter in hand, it implies a traceable and significant connection, fitness for or appropriateness to the situation or occasion, so close an association with the matter in hand that it cannot be dispensed with. If we as agricultural teachers and agricultural teacher educators examine Webster's definition, and relate it to the students who are enrolling in agriculture curricula there are some profound implications. It is not surprising therefore that the question of relevancy of vocational agriculture curricula and employability is being raised by students, parents, and society.

Smaller High School— Relevant Curriculum

It has often been said that small high schools cannot develop relevant off-farm agriculture curricula because of their size and often their location in smaller communities. The Atkinson High School has an enrollment of less than 200 students, and 72 of them are enrolled in the agriculture curricula. Atkinson has a population of 1,054. The agriculture enrollment figures sug-



Individualized instruction on the job by Ralph Moens with student Kevin Gustafson.

If students see the curriculum as relevant, it is likely to attract enrollment.

gest that something is attracting the students—*maybe the curriculum is relevant.*

The first two years are two one-year courses pertaining to the basics in agriculture, the junior and senior years consist of six one-semester courses from which a student will select courses plus placement in an agricultural business (Cooperative education between school and business).

Case Example of Relevancy

Let us follow an example of student Kevin Gustafson from a Cooperative Agriculture Curriculum in Atkinson to his own business. Kevin enrolled in the cooperative program because he had an interest in agriculture, was raised on a farm where there was very limited opportunity, and he enjoyed working with people. He became interested in the cooperative program through meat grading and judging in his basic agriculture courses.

Kevin's cooperative training program (work experience) included positions as locker plant slaughter house attendant, locker plant butcher, butcher and meat cutter in Atkinson, and meat cutter and display case man in Genesco. Kevin and his mother purchased Clover Farm Store in Atkinson near the end of his senior year. It is to be noted that over his two years of work experience Kevin was assuming more responsibility.

Kevin was active in the FFA Chapter serving as Treasurer, had a "B" average in high school, and was a heavy weight champion wrestler. Some of the ways the cooperative training program aided Kevin included: developed salable skills and abilities, developed his interest in business ownership, leadership and responsibility, and how to work better with people. The

Ralph Moens
Agricultural Instructor
Atkinson, Illinois High School



Ralph Moens

work experience also helped him develop self confidence and a feeling of success.

Currently there are thirty-two students in the Atkinson Agriculture Department who have farming programs, and thirty students who have work-experience programs in agricultural business. Examples of agricultural businesses being used are: two implement dealerships, feed mill, grain elevator, three livestock markets, insurance, banking, grocery and retail businesses, trucking, electrical shop, carpenter, secretarial work, swine confinement and beef confinement operations, and farm placement.

Curriculum—What Is Taught

The first year of basic agriculture (basic nutrition and livestock) includes such topics as: Introduction to Agriculture, careers in agriculture, self inventory, FFA and human relations, and basic beef, swine, dairy, sheep, poultry, and horse management. The mechanics area includes safety, tool identification, uses, fitting, care, paints, and shop planning.

During the second year of basic agriculture (crops and soils) students study agriculture careers, crop culture and management, hybrids, forage production, agricultural chemicals, insect control, tillage and machinery, and grain grading. The students also study basic soils, fertilizers, soil formation, soil classification, soil conservation, liming, soil judging, and pollution control.

A student may enroll in one of the six one-semester courses during each semester of his junior and senior years. They include semesters of: (1) Welding, (2) Agricultural Power and Machinery, (3) Agricultural Construction, (4) Wood Working and Electricity, (5) Agricultural Supply, Sales, and Service, and (6) Cooperative Agriculture.

Let us examine Agricultural Supply,
(Concluded on page 202)

USING STATEWIDE ADVISORY COUNCILS —IN CAREER EDUCATION PROGRAMS

Paul E. Hemp, Teacher Education
University of Illinois, Urbana



Paul E. Hemp

Career education programs cannot be effectively conducted without utilizing appropriate resources in the community. The educational process should not be confined to the four walls of a classroom or shop or even to the school grounds. The community is a learning laboratory which can be used to make career education programs relevant and meaningful.

One way to plan for effective use of community resources is to use an advisory council composed primarily of persons outside the teaching profession to build "connecting links" between the school and the community. Teachers of agriculture have used local advisory councils effectively for many years, but the use of councils which represent people and industry in a region or in an entire state is less common. If the career education concept is to be implemented effectively in community colleges, area centers, secondary schools, and elementary schools, a great deal of coordination and articulation must be practiced by all concerned. Local advisory councils can help educators coordinate and articulate local programs, but regional and state councils are needed to coordinate and articulate a statewide program of career education in a particular occupational area.

The statewide occupational council is a fairly new development in Illinois. In recent years, these councils have been formed for ornamental horticulture, agricultural mechanics, horse science, and young farmer education. Membership on these councils includes teachers, industry representatives, uni-

versity personnel, and other persons who have an interest in the occupational area to be served and in vocational education. In all instances, the statewide advisory councils make their recommendations to the State Occupational Consultant Unit in Applied Biological and Agricultural Occupations; however, their influence and support extends beyond the State Office level. Statewide councils in Illinois have assisted with the development of new occupational programs, articulation, teacher qualifications, and the promotion of agricultural occupations programs in community colleges, high schools, and area centers.

The ornamental horticulture state advisory council was started in Illinois in 1965. The regular members represent the Illinois Commercial Arborist Association, the Illinois State Florist Association, the Illinois Landscape Contractors' Association, the Illinois Nurserymen's Association, and the Turf Foundation. Exofficio members represent teacher education, the Division of Ornamental Horticulture at the University of Illinois, Vocational Agriculture Service at the University of Illinois, and the Applied Biological and Agricultural Occupations Consultant Unit. A minimum of three meetings are held each year at campus and school sites where horticulture programs are offered. In recent years, the council has prepared a brochure on horticultural careers, made recommendations concerning curriculum content and teacher qualifications, and reviewed programs at community colleges and high schools with the teachers employed at these schools. Perhaps one of the greatest benefits of the ornamental horticulture state advisory council has been the discussion and the exchange of ideas and opinions among industry personnel, teachers,



Members of the Illinois Ornamental Horticulture Advisory Council.

and state staff.

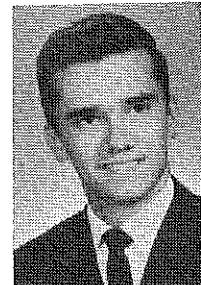
The agricultural mechanics council and the horse science council have provided advice regarding the need for new programs, employment and manpower trends, facility and equipment recommendations, and recommendations concerning instructional materials. The horse science council was formed recently to encourage community colleges and high schools to consider new vocational programs in horse science. Such a council serves as a catalyst in the change process by offering support, encouragement, and help to school officials who are sometimes reluctant to start a new, untested program.

The young farmer education council is the largest and newest statewide council in Illinois. The council was organized in 1971 with 35 members. At this time, there were no young farmer programs or young farmer associations in the state. The council encouraged teachers to survey their communities to find out how many young farmers were eligible for enrollment in young farmer programs. A brochure and program guide were prepared to help publicize the need for young farmer programs. At the annual state conference for agricultural occupations teachers, a kickoff luncheon was held for teachers, young farmers, and their wives to stimulate program

(Concluded on page 203)

A statewide occupational advisory council can build "connecting links" between schools in communities, areas, and in the state.

HERE WE GO AGAIN— GRADES! GRADES! GRADES!



L. H. Newcomb

How would you like to get a 20 on the first of 3 tests? How much incentive would you have to keep trying?

How would you like to do a shop project and be given a C and told to go on to the next area of work? How would you like for a student who does only average work to be your mechanic?

Students don't like it, teachers don't like, administrators don't like. Yet we keep it, as unhappy as many people in the educational community are with it. Yes, the grading system is what is referred to.

The rationale we as teachers often use in defending our current system of grading students is that we must have something to hold over the students so they will be motivated to learn. Yet Marx and Tombaugh¹ have indicated that "the side effects of the motivation produced by examinations in some cases are extremely deleterious."

What we seem to want is something that can be used as an incentive or motivator without causing anxiety and other such detrimental reactions. This writer feels that vocational educators are probably doing a better job of grading students than most educators. However, we still encounter those situations where we aren't quite sure; we are frustrated at having to "split hairs" or to build into our tests irrelevant questions. Perhaps some of our frustrations with grading can be overcome by using **CONTRACT GRADING**.

Contract grading is a method of grading whereby the student and teacher jointly determine what the student will have to do in order to receive a given grade. There are many variations of contract grading that you could try in the high school, but only one basic form of contract grading will be discussed in this article.

The contract which has been used by this writer is a written agreement negotiated between the instructor and each student, that specified some experiences required by all students as well as some experiences unique to individual students. The contract includes dates when student products are due, when tests will be given, etc. Under this system, all work, including tests, is evaluated as being either satisfactory or unsatisfactory. Unsatisfactory work is returned with reasons why it is unsatisfactory and the student is allowed to improve his performance until it is satisfactory.

The logic for allowing work to be re-submitted is really quite simple. If a test item, or shop project, home improvement project, or any other piece of evidence of a student's performance is worth requiring, it's worth requiring that it be performed satisfactorily. It is interesting how teachers frequently give impossible tests, never even

If evidence of a student's performance is worth requiring, it is worth requiring that it be performed satisfactorily.

Figure 1
SAMPLE GRADE CONTRACT FOR A VOCATIONAL HORTICULTURE CLASS
FOR ANY GIVEN SIX-WEEK PERIOD

In order to receive the grade checked, we the undersigned agree to the accompanying provisions:

Grade Desired (check the highest grade you are contracting for)	Evidence which will be submitted:
<input type="checkbox"/> D	1. Attend class regularly and complete all tests satisfactorily.
<input type="checkbox"/> C	1. Meet all requirements for a D. 2. Satisfactorily complete at least one home improvement project approved by the instructor. 3. Satisfactorily complete _____ hours of supervised occupational experience.
<input type="checkbox"/> B	1. Meet all requirements for D and C. 2. Satisfactorily propagate a flat of _____, and _____. 3. Satisfactorily care for _____ plants. 4. Satisfactorily design one center piece and one corsage.
<input type="checkbox"/> A	1. Meet all requirements for D, C, and B. 2. Here you could allow students to propose and conduct learning experiences of particular interest to them.

_____, Student
_____, Instructor

explain what the correct answers should be, and move on. If a question is important enough to ask, it should be imperative that the student fully understands the answer — or else don't ask the question. The same is true of a shop project. If it's worth doing it's worth doing right.

A sample grade contract which could be adapted to your situation is shown in Figure 1. This could be expanded to give more detail, such as deadlines, form in which a product is to be submitted, or other pertinent information.

This scheme for grading is probably more amenable to agricultural education classes than to many other types of classes. The contract notion could be combined with the currently popular emphasis on performance capabilities. There are a number of rather obvious advantages inherent in the contract method of grading. Just by virtue of the fact that the student is allowed to select his own grade you have harnessed powerful motivating forces. This method of grading also requires the student to accept most of the responsibility for learning. The grade (incentive) is there. If he wants the grade he knows far ahead of time what he has to do. In the case of students who are not grade oriented, there is no hassle. Since all work is either satisfactory or unsatisfactory, there is little if any anxiety or threat. Of course, there are also some pitfalls to contract grading.

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USE OF FEEDBACK IN PROGRAM PLANNING

Hollie Thomas
Agricultural Education Division
University of Illinois
Urbana, Illinois



Hollie Thomas

Developing programs in agricultural occupations for local community is the responsibility of the local teacher of agricultural occupations. He may develop a dynamic viable program in which he attempts to meet new and changing needs of students who have an interest in agriculture or he may attempt to maintain the status quo. The decision of whether to maintain the status quo or to develop a dynamic program is left to the teacher of agriculture, the program developer. His ability to develop programs will depend on a number of variables. A primary concern is his ability to **work within the system** to obtain permission to try new programs.

Both prior to and after securing administrative approval for changes in programs, the program developer must be attuned to his various publics: the school administration, agricultural community, teachers in his school system, students, and the internal politics of the school system. Thus information must be constantly gathered and synthesized, if programmatic changes are to reflect the agricultural needs of the community.

The Nature of Feedback

This process of obtaining and synthesizing information has come to be called feedback. The knowledge of this process and how to use it effectively are essential to the program developer. Feedback, as defined by Piffner and Sherwood,¹ is a process in which the flow of information has a reciprocation effect on behavior. The flow of information is usually continuous; thus the term "loop" is frequently used when the nature of feedback is explained.

The knowledge of how to obtain and use feedback effectively is essential to the program developer.

This circular pattern involves the flow of information that may include clues for the need for program change. Given this definition of feedback, it can be seen that a variety of inputs must be entered into the system, the program developer's thinking, if appropriate decisions concerning program development are to be made.

Obtaining Feedback

If the assumption that feedback is essential to program development is accurate, then the question the program developer must answer is, "How can the necessary information be obtained?" He must have his input lines of communication open for all necessary data including job opportunities, competencies needed for the various occupations for which students are being prepared, the quality of the instructional program and teaching, the success of recent graduates, the image the program has developed in the community, in the school and with the school administrators, and the agricultural interest of upcoming students.

Feedback concerning job opportunities may be obtained from sources such as national labor statistics, statewide surveys conducted by state offices of agricultural occupations, and local surveys made by the teacher of agriculture. Often the information from labor statistics are not classified such that it is useful in program planning for agricultural occupations; thus statewide surveys conducted by a university or state office personnel along with data collected locally by the program developer are usually most beneficial. Feedback is a continuous process; the program developer should be aware of jobs available in his community on a day-to-day basis. This knowledge will provide information to motivate students and to assist graduates in obtaining jobs.

Feedback regarding the knowledges of the competencies needed for employment in the various agricultural occupations may be obtained from competency studies already completed, by conducting competency studies or

Informal as well as formal types of data are important to program development.

by analyzing the task that individuals in these occupations do by observing employees. The list of competencies for a given employment area should be updated periodically by obtaining feedback from the advisory council or employers of students who are placed for occupational experience in the specific employment area under consideration.

The quality of the instruction will have much to do with the quality of the product, the student. Questions to be asked here are (1) is the right subject matter being taught for preparation for jobs as they exist today; (2) are the students learning that which is purported to be taught; (3) how do students feel about what is being taught; and (4) what is the students' evaluation of the instructor(s)?

To obtain the answers to these questions, observations may be made for some, while for others data must be collected. To determine whether or not the subject matter being taught is relevant to the specific area of employment, the content of the course may be compared to the data obtained from recent competency studies and validated by advisory council members and employers who are knowledgeable in the specific areas. Feedback concerning whether or not the students are learning what is purportedly being taught can be obtained from oral, written or proficiency examinations. In addition, the performance during on-the-job training or on supervised occupational experiences can be observed. Progress made on the training plan can be observed both for placement experience and supervised experience on the home farm or in the family business.

The formal process of obtaining feedback from students should be used periodically by employing questionnaires and evaluation sheets. Two types of information that may be obtained from students are their opinions about

(Continued on next page)

NEW IDEAS ON STUDENT MOTIVATION

Helen M. Hegarty
English Instructor

Paul R. Aldrich
Science Instructor

Essex Agricultural and Technical Institute
Hawthorne, Massachusetts

It is very hard for most students to realize that all the subjects they study can be related or are related. A majority of them feel that when they leave one class and proceed to the next, they are finished with the first subject for the rest of the day. One hears complaints of unfairness if a science teacher attempts to correct their spelling or punctuation. "This isn't English!" is the standard reply. This type of separation of subject matter is especially evident in the average and low achieving student.

In an attempt to integrate subjects, a program was developed jointly by an English and a Science teacher in a vocational high school. A group of twenty-three students from the ninth grade was chosen for the project. This group was considered below average,

but always eager to work.

The project originated in an attempt to help the students comprehend the material in the science book. The skill of outlining was developed by the English teacher by using the material presented in their science text. The Science teacher then used their outlines as a basis for his instruction of the material. Thus, the students began to see the relationship of English skills in the content area.

This process of integration was carried a step further. Each student was told to select a topic in a scientific or agricultural field that was of interest to him. The English teacher instructed the students in the use of the library and many of the aspects of writing a report. Because English and science were sequential in their pro-

gram, it was possible for both teachers to be present during work periods in the library. Thus, questions of source and procedure could be answered directly and immediately.

The Science teacher emphasized the importance of experiments and pictures to explain or expand their reports. He checked their reports for content and set-up. The English teacher emphasized the development of the report from their notes, outline bibliography, and the development of an introduction and conclusion. She checked the reports for mechanics and composition.

At the completion of the project, the students began to realize that their subjects are related. Skills learned in one class can and should be brought to all classes. ♦♦♦

(Using Statewide Advisory Councils: Hemp—from page 199)

development. In all these activities, members of the young farmer advisory council donated their time, money, and know-how to bring about program change in the state.

Statewide occupational advisory councils can be as helpful to the total state program effort as local advisory committees are to the high school program; however, certain safeguards must be built into the operating procedures of these councils. Some of these safeguards are as follows:

1. The role and function of the council must be explicitly defined in the charter or constitution.
2. The council must be advised and directed by a representative of the agency which has established the council. In Illinois, this agency is the Applied Biological and Agricultural Occupations Consultant Unit in the Division of Vocational and Technical Education, Springfield.
3. Membership on statewide advisory councils should include representatives from industry, teachers, state office and university staff, students and former students of on-going programs.
4. A workable procedure must be developed and used to relay the recommendations of the council to the agency to be advised. A feedback mechanism to report actions taken by the agency should also be used.
5. The council must be involved in a worthwhile program of activities which make a real contribution to the improvement of vocational programs. Busy people do not want to waste time on "busy-work" activities which have little or no impact on educational programs.
6. The constitution and by-laws should include safeguards which prohibit the council from becom-

(Thomas—from page 201)

what is being taught and how it is being taught. Feedback concerning the relevancy of the course material should be reviewed by the teacher, advisory council, and perhaps the school administrator. Evaluations of the teacher, on the other hand, should only go to the teacher who is being evaluated. The purpose of student evaluation of the teacher should be for the sole purpose of assisting the teacher in improving his instruction.

Obtaining feedback concerning the occupational success of recent graduates can be accomplished by conducting follow-up studies via mailed questionnaires or personal interviews. Information of interest here is the graduate's type of employment (related or unrelated to the training received), the relevance of training received to his job, the monetary returns of his occupation, and his satisfaction with his employment. Information of this type should be obtained from graduates during the first, third, and fifth year after graduation.

The image a program has with the community, school personnel and school administration can often determine the priorities of funding the program and the level of funding. Information concerning the image of a program must be obtained in order to determine program changes desired by

the groups or the need for more or better public relations to inform the publics of programs being conducted. Feedback, although it may be subjective, may be obtained from a variety of sources. An advisory council can provide information about how the community views the various aspects of the program. Annual program reviews should be conducted in which the program developer reviews the past year's efforts and accomplishments and proposes plans for the next year with the school administration as well as the board of education. Information about the attitudes of the faculty can usually be obtained by a perspective program developer if he occasionally visits the faculty lounge or boiler room where teachers and other school officials congregate. A cold shoulder here may indicate trouble for the program developer. However, care should be taken here not to become paranoid if other teachers give the teacher of agriculture some flak about playing with pigs, etc.

Knowledge of the employment opportunities available in specific areas of agriculture does the program planner very little good in planning what programs to develop if he has no idea of the nature of student interest in agriculture. Programs without students do not last long; thus the interest of students who will be at the age to enroll in a program when it is developed

must be ascertained so that interested students may be identified and their enrollment solicited. Instruments are available to measure interest in agricultural occupations as well as for occupations in all areas of vocational education. Such instruments should be administered to all eighth-grade students so that the students when identified as being interested in the various areas of agriculture can be recruited for the specific programs in which measurable interest was identified.

Conclusions

The concept of feedback is not new, nor is the idea of using community resources and community and national data to assist teachers to plan programs in agriculture. This article is merely an attempt to bring together and summarize the various types of formal and informal information that are useful to the program planner. Frequently the informal types of information (local politics) are as important to program development as are formal data collected in the community and in the nation. Armed with both informal information and formal data, the program planner should be equipped with the necessary rationale to support his program and to propose programmatic changes. ♦♦♦

1Pfiffner, John M. and Frank P. Sherwood. *Administrative Organization*. Englewood Cliffs: Prentice-Hall, 1960.

(Agriculture Curricula—Relevant: Pumper & Moens—from page 198)

Sales, and Service in greater detail. Topics include job opportunities in the area, orientation to the training program, distributive business organization, agricultural mathematics, human

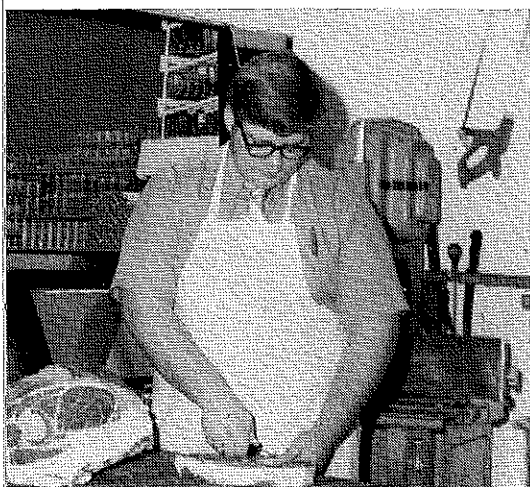
relations and personality traits. There are also units on store skills, salesmanship, feeds, seeds, fertilizers, and agricultural chemicals.

Topics in Cooperative Agriculture are: you and work, job choices and opportunities, applying for a job, you, your employees and your co-workers, your progress on the job, self inventory, and personal effectiveness. Another group of topics in the semester are: managing money, buying goods and services, bank services, credit, contracting for goods and services, buying and using government services, social security and retirement, and insurance. The semester is closed with your vocational development and post high school education and training.

Steps in Developing Curricula

When an agricultural teacher is developing local agriculture curricula it is necessary for him to (1) assess the

needs of students and society and develop the objectives, (2) plan and implement the curricula, and (3) evaluate the curricula to determine if the objectives were attained (students have saleable skills for the job market) also called product evaluation, and process evaluation which will include the evaluation of the teaching process and associated learning conditions. An agricultural teacher in determining program objectives should: (1) access needs of the student learners, (2) study society's occupational needs, and (3) study what curriculum experts and other experts (local advisory committee) recommend. The local agriculture department objectives will reflect these areas because a teacher will be teaching students who will be employed by society. It is important for an agricultural teacher to develop a sound plan of action which includes periodic and continuous evaluation to keep the agriculture curriculum relevant. ♦♦♦



Kevin Gustafson trimming meat for a customer in his own store.

THE DISADVANTAGED STUDENT— WHAT WILL HAPPEN TO HIM?

Charles P. Sauerwein
Vocational Agricultural Teacher
Haven, Kansas



C. P. Sauerwein

Bill sauntered into the vo-ag classroom, plopped down in his chair and began fiddling with his notebook. "Man, I wonder how I'm going to get that stupid English assignment done by tomorrow." He caught a few words from his teacher talking about dairy cows, "...the dairy cattle scorecard has four major areas..."

"Hey, come on Billy-boy," mimicked Larry sitting next to him, "why don't you get your pencil out and start taking notes."

"I don't even have one," Bill snapped back.

And at another school, "OK, I've got the tests graded and ready to pass out. Grades ranged from a 96 to a 48; Jim, Dewey, Ken, ..."

"Gosh, I hope I did better on this than that geography report," Bob thought, "Dad's always climbing on my back about getting good grades. Just because he got all A's in school doesn't mean..." "Bob, here's your test," remarked the teacher.

"Whadja get Bobby?"

"Did you really get that score?"

"Hey guys, Bobby blew it again!"

Are these uncommon scenes in our high school classrooms today? "Hardly not," exclaims Darrell Cardell, graduate research assistant in adult and occupational education. "About one-third of the students going through high school today are disadvantaged. By that I mean they simply aren't 'making it' in school." Phil Kingston agrees, "Like in the examples given earlier, the students lack motivation or are slow learners."

Both Cardell, a Richmond native, and Kingston, also a graduate research assistant in adult and occupational education from Madrid, N.Y., are teaming up on a Kansas State Department of Education sponsored project

"The general public has a misconception of the term 'disadvantaged,'" explained Cardell. "Too many times, it is associated with only the economically poor, but middle class and even upper class students can also be disadvantaged."

involving "The Implementation of the Ag Hand Project (Activities and Guidelines for the Handicapped and Neglected Disadvantaged)." They hope to assess the effectiveness of lesson plans, special activities, and special techniques for working with students with special needs. "Getting parental cooperation and more use of teacher aides is one of our goals," Cardell explained.

The project involves two different schools, Wamego High School, in a rural setting, and Manhattan High School, more on an urban setting. Kingston and Cardell will act as teacher aides, helping the vocational agriculture instructor initiate the program and special activities to those students with special needs.

Cardell related that there must be a reason for a student not "making it" in school and each reason is different from every other one's. "Economic, social, cultural, intellectual, or academic are the most common reasons," he pointed out. However, he feels that students are disadvantaged because they are conditioned to a lack of success.

Kingston states, "This lack of success is probably linked to a lack of motivation. A student tries real hard in a subject and receives a low grade. He really puts out again and still gets a low mark. By this time he's wondering if it's worth all the extra effort, so he starts sliding. We have to get the student re-motivated before it's too late and he drops out of school. If you

Students are disadvantaged when they are conditioned to a lack of success.

want an analogy, it's kind of like Senator Muskie's campaign."

I remember back to the old conditioning theory we studied about in educational psychology now coming to real life. Pavlov and his dogs couldn't have done it any better.

"Other students make fun of these kids, and that doesn't help either," revealed Cardell. "You have to start with the individual and breed confidence into him, provide him with opportunities with which to shine." I asked, how do you do this? "Ask them attitude questions where they have to express their feelings, so that they feel they'll get more respect because of their answers," Cardell explained.

I began to realize the situation that a lot of high school students here were in and the responsibility a vocational education teacher is faced with. But what should a teacher do to meet these needs of the disadvantaged? Again, I posed this question to Cardell.

He declared, "I feel that a high school teacher must first gain the acceptance of all his students. Get to know each one individually and become a part of the classroom." He related that he found success in talking about their problems, whether it be about home life, school problems or any of a number of things on their level, but still keeping a student-teacher relationship. "You have to have a want to listen to them," he said. "Sometimes I run into someone who thinks that some 'know-it-all' college student is going to try and tell him what to do. I try to break this barrier down fast by just being ordinary," he related.

Kingston added, "The student has to volunteer the information. You can't get too personal by probing for information or the student will lose faith in you."

"You should try to recognize the disadvantaged students in your class," Cardell pointed out. "Grades, personal attitudes, and class

(Continued on next page)

(Sauerwein—from page 204)

behavior are just a few means of doing this. The vo ag teacher has to rely on many sources," he added.

Kingston states, "Disadvantaged students should be identified as early in the school year as possible. Vocational agriculture provides a natural setting to work on a personal relationship by making farm visits. Here, the teacher can guide the student in setting goals and making the parents aware of the goals."

Cardell seemed to emphasize parental cooperation in this work, pointing out that sometimes teachers fear that the disadvantaged students' parents may be too difficult to communicate with when they are visited, however, the concerned parent will respond to a sincere teacher's commitment in helping their child "make-it" in school.

"Help plan his course work to meet

his post high school goal," indicated Cardell. "The ultimate goal of the teacher should be to have his students enter the job market prepared, therefore, job placement counseling is very important," he expressed. I found out that this means to keep up to date on post-secondary education opportunities, trade schools, vo-tech schools, business schools, and universities. It seems to me like vocational education teachers are going to have to ask Congress for a 36 hour day in order to get everything done that they're supposed to.

"I think the guidance counselor should work closely with the teacher, because the ag teacher should know the students aspirations better," affirmed Kingston.

Cardell would like to see a program started at K-State where teachers aides are trained to be auxiliary personnel, not licensed as such like teachers. "The effective TA would have to have the

personal ability to work individually with slower students. We could utilize retired teachers, part time help and even university-trained students," he stated.

"We need to get the teacher-student ratio down," declared Kingston. He firmly believes, "We have to keep this motivation high and keep them busy by utilizing and cooperating with other staff members in doing this."

Whether Cardell or Kingston can achieve their lofty goals remains to be seen. However, I can be sure that they'll leave a lasting impression on each and every one of their students, as a teacher who cared about them. ♦

This article is based on an interview with Darrell L. Cardell, graduate research assistant in adult and occupational education and Philip P. Kingston, also a graduate research assistant in adult and occupational education, both at Kansas State University. Portions were also taken from research reports.

ADAPTING TO STUDENT VOCATIONAL OBJECTIVES THROUGH INDEPENDENT STUDIES

Larry E. Miller, Assistant Professor,
Agricultural Education, College of Education
Virginia Polytechnic Institute and State University,
Blacksburg, Virginia



Larry E. Miller

What is a teacher to do with that single student who has a vocational objective completely foreign to the department's course offering? Is the student interested in forestry; in a production agriculture course of study? How can vocational agriculture instructors better meet the needs of these students? Ideally, of course, it would be desirable to offer the courses necessary to meet the goals of each student. As most teachers realize, this is seldom practical for several reasons. Local departments are often understaffed, without instructor time to teach the courses or without training in the area; and such a small class would be hard to justify to the school administration. Clark related that "we must find ways to meet in the same class and course, the needs of students with widely diverse objectives."¹

Independent study should provide greater relevance to the student, and allow the student greater flexibility in planning.

A practical and realistic approach to this problem may be through the use of independent studies. Most independent study programs have been for "honor courses," with team teaching, but they should be spread to a wider range of pupils at all levels of instruction.²

Colleges have successfully used independent studies for a number of years. These studies usually were culminated in the submission of a term paper or project report. Independent studies at the high school level have taken a similar form. They often can be conducted cooperatively with other school departments and teachers. Projects could lend themselves well to agricultural mechanics programs, occupational experience programs, or could be arranged with outside people or agencies.

Using independent studies in voca-

tional agriculture will not relieve the problem of teacher time. Careful consideration and thought should be given by both the student and the teacher before such a study is undertaken. For, in all likelihood, it will take more time than either would estimate. Both parties should carefully outline the objectives of the study so that they have a thorough understanding of what is to be accomplished. The student should carefully outline the procedures he is going to follow in accomplishing his study. A calendar, or schedule, should be prepared to provide deadlines for the completion of each segment of the study.

The final product, or report, of the study might take any of a number of diversified forms. The report might take the form of a written report, as many have in the past. However, other alternatives might better suit individual students' desires. They could be a project constructed; a display; an exhibit; bulletin boards; implementation of a practice at home, or a work cen-

(Concluded on page 207)

ASSISTANTSHIPS AND FELLOWSHIPS IN AGRICULTURAL EDUCATION, 1973-74

Harold R. Crawford
Professor and Head, Agricultural Education
Iowa State University

The 1973-74 survey of the Publications Committee of the American Association of Teacher Educators in Agriculture reveals a continuing availability of assistantships.

Key to Understanding:

Data provided are in the following order: Nature of assistantships (number available); number of months available during year; beginning month of employment; amount of work expected; monthly remuneration and other considerations such as remission of fees; whether aid is for master's, advanced graduate program, or doctoral students; source of funds; the 1973 deadline for application, and the person to be contacted. Slight variations in this pattern are due to the nature of the data provided by reporting institutions.

The University of Arizona

Research assistantships (2); 9 or 12 mo.; June or September; one-half time; \$360; out of state tuition waived; master's; Department budget; March 1 or 6 mo. prior to enrollment; Dr. Floyd G. McCormick, Professor and Head, Department of Agricultural Education.

University of Arkansas

Research assistant (4); 9 or 12 months; June or September; 1/2 or 1/4 time; master's or doctoral; \$125-\$250 plus out of state tuition waived; apply by March 1; Denver B. Hutson, Head, Department of Vocational Education.

Clemson University

Research Assistant (1); 12 mo.; August; 20 hrs. wk.; \$260 mo.; reduction in fees; master's; university funds; April 1; Earl T. Carpenter, Head, Department of Agricultural Education.

Cornell University

Research Assistantships; (4); 10 months; September 1; one-third time; \$300-\$350, tuition and fees waived; Masters and Doctoral; State, research and Cornell Institute for Occupational Education; April 1. Teaching Assistantships; (1); 12 months; July 1; one-third; \$300-\$350; tuition and fees waived; Masters and Doctoral; State, research and Cornell Institute for Occupational Education; April 1; Person to be contacted: William E. Drake, Professor and Chairman, Agricultural and Occupational Education, Stone Hall, Cornell University, Ithaca, New York 14850.

University of Illinois at Urbana-Champaign Teaching Assistant (1); one-half time; \$427.66; tuition and fees waived; Ed.D. or Ph.D.

Research Assistant (5-8); one-fourth or one-half time; \$181-\$187—1/4 time and \$360-\$372—1/2 time; tuition and fees waived; masters and doctoral. Graduate Assistant (2-3); \$181-\$372; Paul E. Hemp, Chairman, Division of Agricultural Education.

Iowa State University

Research Assistantship (2); 9 mo.; September-May; one-half time; \$290; reduced fees; master's or doctoral program in agricultural education; agricultural experiment station; March 15; Harold R. Crawford, Head, Department of Agricultural Education.

Teaching Assistant (2); 12 mo.; June-August full time, \$700; September-May, one-half time, \$350; doctoral program in agricultural education; state contractual funds; March 1; Harold R. Crawford, Head, Department of Agricultural Education.

Kansas State University

Teaching assistantship (1); 9 mo. June or September; 1/2 time; master's or doctoral; \$300; reduced tuition; apply by March 1. Research assistantship (1); 9 mo. June or September; 1/2 time; master's or doctoral; \$300; reduced tuition; apply by March 1; James Albracht, Coordinator Agricultural Education.

University of Kentucky

Description: Teaching assistant to work with the professional staff in pre-service teacher education programs with emphasis on methods courses and observation of student teachers in their training centers. Required work—approximately 20 hours per week. Appointment period—10 months at \$3,300, August 15 to May 15. Waiver of out-of-state tuition. For individuals above the Master's degree who desire doctoral degree in agricultural education or broader aspect—vocational education. Harold R. Binkley, Chairman, Dept. of Vocational Educ.

Louisiana State University

Graduate assistantships (6); 9 months; September 1; one-fourth time; \$250-\$300; out-of-state fees waived; local tuition reduced; masters and doctoral; April 1; Dr. C. M. Curtis, Director, School of Vocational Education.

University of Missouri-Columbia

Research assistantships (2); 9-12 months; July 1 or September 1; one-half time; \$300 per month; out-of-state fees remitted; masters, specialist, doctoral; department Instructional Materials Laboratory; March 1, Gene M. Love, Professor and Coordinator, 435 General Classroom Building, Columbia. Teaching assistantships (2); 9-12 months; July 1 or September 1; one-half time; \$300 per month; out-of-state fees remitted; masters, specialist, doctoral; State Department of Education; Gene M. Love, Professor and Coordinator, 435 General Classroom Building, Columbia.

Montana State University

Research assistantship (1); 9 months; September 15; one-third time; \$250; master's; College of Agriculture; Dr. Max L. Amberson.

Teaching assistantships (1); 12 mo.; September 15; one-third time; \$180; master's; experiment station; Dr. Max L. Amberson, Head, Agricultural and Industrial Education.

The University of Nebraska-Lincoln

Teaching Assistant (1); Research Assistant (2); 12 mo.; July 1; one-half time; \$300-\$400; doctoral; experiment station and/or rural development; March 15; James T. Horner, Professor and Chairman, Department of Agricultural Education.

North Carolina Agricultural and Technical

Two (2) Graduate Assistantships available for nine (9) months at the Master's Degree level; \$200 per month; a maximum of twenty (20) hours of work per week is expected. Deadline for application—30 days prior to beginning of semester; A. P. Bell, Head, Department of Agricultural Education.

North Carolina State University

Teaching Assistantship; Two; 12 months; July or September; one-third time; Approximately \$200.00 and waiver of out of state fees; Master's Degree; School of Education and Agriculture Fund; March or 6 months prior to enrollment; Dr. Cayce C. Scarborough, Head, Agriculture Education. Research Assistantship; One or more; 12 months; March or 6 months prior to enrollment; 1/2 to 1/4 time; \$380 to \$600; Doc-

This list of assistantships and fellowships in agricultural education is prepared annually by the Publications Committee of the American Association of Teacher Educators in Agriculture. Harold R. Crawford is Professor and Head, Agricultural Education, Iowa State University, Ames.



H. R. Crawford

torate in Occupational Education; Candidate for Occupational Education; March or 6 months prior to enrollment; Dr. Cayce C. Scarborough, Head, Agricultural Education. Ohio State University Teaching Assistantship (1); 9 or 12 months; July 1 or as late as September 1; one-half time, \$325-\$450 per month depending upon experience; in-state and out-of-state fees waived; doctoral student preferred; apply by April 1; Ralph E. Bender, Chairman, Department of Agricultural Education. Research Assistantships* (3-6); 9-12 months; July 1 or later; one-third to one-half time; \$300-\$450 per month; Master's and doctoral with preference for doctoral; apply by April 1; Ralph E. Bender, Chairman, Department of Agricultural Education.

Other assistantships are available through the Center for Vocational and Technical Education. Contact Dr. Robert E. Taylor, Director.

*Some of these assistantships provide experience in the development of curriculum materials with Dr. Harlan E. Ridenour.

Oklahoma State University

Research Assistantship (2); 10 mo.; September; one-half time; \$325 mo.; waiver of out-of-state fees; doctoral given first consideration; Agriculture Experiment Station and State Vo-Tech Department; March 15; Robert R. Price, Head, Agricultural Education Department.

Teaching Assistantship (3); 9 mo.; September; one-half time; \$325 mo.; waiver of out-of-state fees; doctoral given first consideration; university; March 15; Robert R. Price, Head, Agricultural Education Department.

The Pennsylvania State University

Teaching and Research Assistant (12); 12 mo.; June 20 or September 10; 20 hrs. wk.;

\$380; cancellation of all fees; M.S., M.Ed., D.Ed., Ph.D.; state and federal vocational, industrial; May 1; Dr. David R. McClay, Head, Department of Agricultural Education.

Purdue University

Teaching or Research Assistantships (3); 10 and 12 months; September-July; one-half time; \$300-\$366 a month; 20 hours per week; fees remitted except \$60; master's or doctoral; university; April 1, 1972; Dr. James P. Clouse, Chairman, Vocational Education.

Southern Illinois University at Carbondale

Research Fellowship (open competition); 9 or 12 mo.; September, June or January; none; \$255/mo.; tuition waived, tax free; master's; SIU; 2 months prior to quarter; Dr. E. S. Wood, Chairman, Professor, Agricultural Industries Department. Teaching and Research Assistantship (5); 9 or 12 mo.; September, June or January; one-half time; \$290/mo.; tuition waived; master's; SIU; 2 months prior to quarter; Dr. E. S. Wood, Chairman, Professor, Agricultural Industries Department.

Texas A&M University

Teaching assistantships (2); 9 mo.; September 1; one-half time; \$325-\$375; out of state tuition waived; master's, advanced graduate program, doctoral; College of Agriculture; April 1; Dr. Earl H. Knebel, Head, Department of Agricultural Education.

Non-teaching assistantships (2); 9 mo.; September 1; one-half time; \$325-\$375; out of state tuition waived; master's, advanced graduate program, doctoral; College of Agriculture; April 1; Dr. Earl H. Knebel, Head, Department of Agricultural Education.

Research assistantships (2); 12 mo.; Sep-

tember 1; one-half time; \$325-\$375; out of state tuition waived; master's, advanced graduate program, doctoral; Texas Agricultural Experiment Station; April 1; Dr. Earl H. Knebel, Head, Department of Agricultural Education.

The University of Vermont

Research fellowship (1); 10 or 12 mo.; July or September; one-half time; \$250; out-of-state tuition remitted; Masters; Experiment Station and Graduate College; June 1; Gerald R. Fuller, Vocational Education and Technology.

Virginia State College

General Assistantship (3); 9 mo.; September; 12-15 hrs/wk; none; master's; college; May 1; Dr. W. S. Edmonds, Dean, Graduate School.

Research Assistantship (3); 9 mo.; September; 12-15 hrs/wk; none; master's; loans; July 1; Dr. W. S. Edmonds, Dean, Graduate School.

Teaching Assistantship (3); 9 mo.; September; one class; none; master's; state fellowship; December 1; Dr. W. S. Edmonds, Dean, Graduate School.

University of Wisconsin

Research assistantship (2); 9 or 12 mo.; July 1 or September 1; 20 hrs/wk; \$333/mo.; waiver of out-of-state tuition; master's or doctoral; March 1; Chairman, Department of Agricultural and Extension Education.

University of Wisconsin

Graduate assistantship; 5 available; academic year September-May; beginning Sept. 1973; 12-15 hours per week; \$275 per month plus remission of out of state fees; master's degrees; apply by March 1, 1973; contact Dr. Marvin D. Thompson, Chairman, Department of Agricultural Education, University of Wisconsin. ◆◆

(Miller—from page 205)

ter; a radio or television program; a newspaper article or feature story and/or a speech. The important consideration is that it meet the objectives of the independent study and be within the capabilities of the student.

Independent studies can be offered for academic credit within areas of vocational agriculture that might otherwise not be made available to students. Since they could be adapted to a wide range of subject matter areas — the possibilities are almost endless — and student capabilities, the opportunity to undertake an independent study should serve to meet the needs of a greater number of students, provide greater

relevance to the student, and allow the student greater flexibility in planning. They should be undertaken with the understanding that they will require considerable staff time, cooperative effort between the teacher and student, and will necessitate the student to work with self-discipline with a specified time limit. They could be of varying difficulty and scope to meet the particular needs of the students involved, on a semester or a yearly basis. Several independent studies might be supervised within a formal class meeting, or entirely by student-instructor conferences.

Misunderstandings may be limited by providing a signed contract between

the student, instructor, and principal. This contract might include the title of the study, units of credit for the study, and the proposed date of completion of the study.

Independent studies for vocational agriculture students can provide a means of expanding the offering in the department, and can enlarge the students' course of study to be congruent with their vocational objectives.

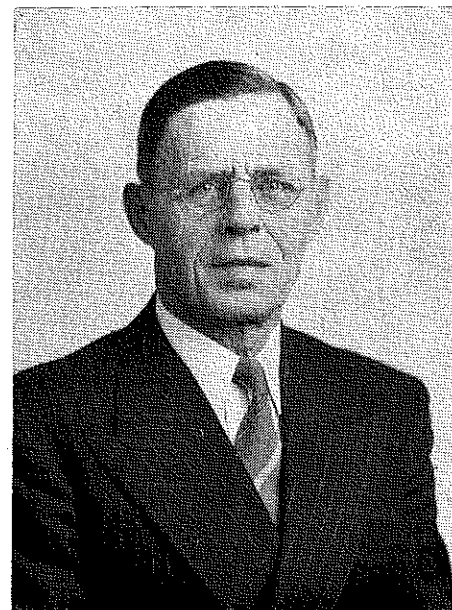
1. Raymond M. Clark, "Individualized Instruction in Vocational Agriculture," *The Agricultural Education Magazine*, XLII, (November, 1969), 122.
2. Harold S. Davis, *Independent Study, An Annotated Bibliography*, (Cleveland: Educational Research Council of Greater Cleveland), 1966.

(L. H. Newcomb—from page 200)

If you decide to try this method of grading be careful that you do not become so concerned with quantity as to overlook quality. The student needs to clearly understand that all unsatisfactory work will be returned for him to upgrade. You should also be prepared to issue a larger percentage of A's than you are accustomed to, for students are

very industrious when they know they can achieve if they're willing to persist long enough. There are no hidden rules, predetermined curves, or one shot tests to trip them up. The only objective is that they perform and perform satisfactorily.◆◆◆

1Marx, Melvin H., and Tom N. Tombaugh. *Motivation*. San Francisco: Chandler Publishing Company, 1967, p. 214.



Gustavus Adolphus Schmidt

If you go back and review the musty, dusty, early issues of this professional magazine there are few years from 1929 until 1945 that one or more articles by G. A. Schmidt doesn't appear. When he was appointed Special Editor for the section entitled Supervised Practice in May, 1930, he was cited as one of the most prolific writers in agricultural education. For a man born in Goppingen, Germany, in 1877 (?) (the question mark is on his Faculty Record Sheet at Colorado State University) he rapidly emerged as a leader in vocational education for which he had little professional training as we know it today.

One of the reasons for his emergence was his ability to provide the "nuts and bolts" kind of information teachers were groping for in those early days. One of his earliest *Agricultural Education* articles dealt with types of lesson plans. He exhorted vocational agricultural teachers to analyze the kinds of learning that was to take place and then select and use the type of lesson plan best suited to getting that learning across. He identified the three types of lessons (better terminology may be jobs) as Operative, Informational and Managerial. What he advocated in September, 1931, still has much application forty two years later.

Another of his "nuts and bolts" areas was in adult or evening classes. Here again he encouraged vocational agricultural instructors to analyze what they were attempting to do and select the procedure for best doing the

Leaders In Agricultural Education: GUSTAVUS A. SCHMIDT

job with adults. In an article entitled "Educational Procedures in Evening Classes" he discussed in detail what he called the informing procedure, the instructing procedure and the conference procedure. If we go back and review this May, 1932, article we find again that it has much application in our time for adult or evening school problems and encouraged vocational agricultural personnel to get involved.

"Doc" Schmidt was also a practical minded researcher. Much of his early research was aimed at documentation of the kinds of things which should be going on in vocational agriculture. An article in 1932 discussed his findings about beliefs vocational agriculture instructors had about "home projects." Another article in 1933 reported that 83.3 percent of the students in vocational agriculture conducted their "home projects" on their home farm. However, he was highly concerned about the remainder who had no project or conducted them on a vacant lot. He concluded that article by stating that "vocational agriculture teachers could be held liable by those students who were not getting a real practical farm experience." He included an article from a Denver paper, as support, which told of two men who had collected damages from an instructor who had tried to teach people to be structural steel welders by practicing on tin cans. The deeds and works of "Doc" Schmidt make it easy to develop a sound philosophy of vocational education and particularly of vocational agriculture even in today's world.

Dr. G. A. Schmidt, Professor Emeritus of Agricultural Education, was first employed at Colorado Agricultural and Mechanical College (now Colo-

rado State University) in September, 1919. Prior to that time he was Department Head for Agriculture and Rural Sociology at Whitewater (Wisconsin) State Normal from 1915-1919. He also spent some time farming in Illinois and working in the lumbering industry in the Pacific Northwest. There are some indications that he was involved in the contracting business for a while, but soon decided education was his field.

His educational background included an A.B. degree from the University of Illinois in 1903, and a Master of Science degree from the University of Wisconsin in 1915 with major fields in General Science and Education. He was awarded a Doctor of Philosophy degree from Columbia University in 1932 with a major in Agricultural Education.

His first appointment at Colorado State University in 1919 was as Associate Professor in charge of Agricultural Education in the Department of Rural and Vocational Education. He was advanced to Professor of Agricultural Education in 1937 and served in that capacity until retirement in 1945.

He and his wife, Sarah Lindsay Schmidt, were prolific writers. She wrote primarily children's and historical.

(Concluded on page 211)

The author, Ramsey M. Groves, is Assistant Professor, Agricultural Education, Colorado State University.



R. M. Groves

TRACTOR HYDRAULICS . . . --Something Old--Something New

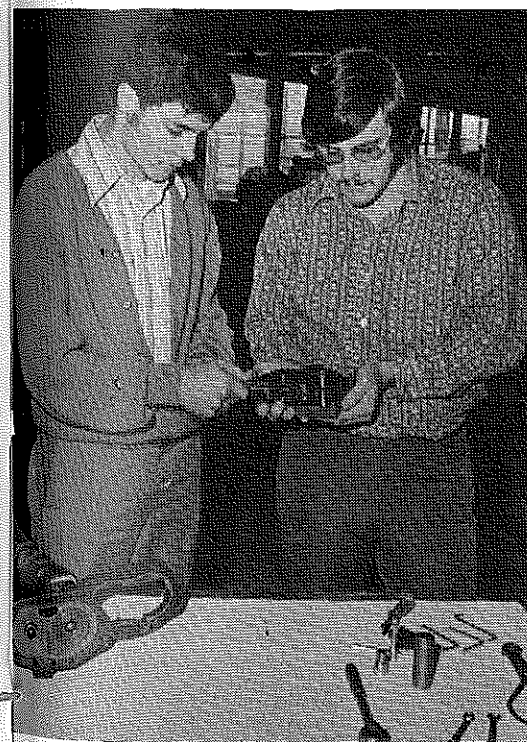
Thurston Spaulding, Sr.
Teacher of Agricultural Mechanics
Hobbs High School
Newton Grove, North Carolina



T. Spaulding, Sr.

A new and challenging area of Farm Mechanics for the teacher of agriculture is hydraulics. This unit of instruction offers sophistication and a new look at the field of Farm Mechanics for the student of agriculture. Research shows that there is a need for mechanics in the area of hydraulics, especially tractor hydraulics.

Hydraulics is another area of mechanics that offers mechanical skills that will be needed for the farm boy of the future, though in a different perspective than the farm boy of the past. A broad use of tractor hydraulics prompted our administration and agricultural department to implement this course in depth. The student is introduced to the fact that basic tractor hydraulics overhaul is applicable to all



Thornton and Farmer are taking gear measurements of hydraulic pumps.

phases of hydraulics, whether it is in automatic transmissions, or hydrostatics. A concept that the teacher should keep in mind is that instruction should be well organized; consequently the teacher should prepare himself fully before delving into this course. Service tools, testing equipment, and proper teaching materials are necessary, in that this course is very technical, and an excellent "learn-to-do-by-doing" activity.

I would like to share a few ideas that make our hydraulic instructional program effective. This course is both theory and practice, in that it lends itself to a "hands on" method of activity. We feel the support we receive from local tractor and equipment dealers and tractor mechanics is essential, in that they provide, first hand, proper teaching materials and instructive advice. For example, a local dealer in our area provides us with a new tractor, new equipment, and new and old hydraulic systems for teaching aids. Later in the course, after we complete the theory of hydraulics, shop skills are provided.

The students and adult farmers of our school community provide us with from eight to ten tractors for hydraulic overhaul and repairs. These tractors are also used in our tractor tune-up program. We have found that hydraulics is as essential to the farm boy's knowledge of mechanics as any other area of the farm tractors' and other farm machinery operation. The students are divided into groups of four. Each group examines the function and performance of hydraulic pumps, hoses, valves, quadrants, ram cylinders, seals, and gears. Following this, we visit a local dealer who acquaints the boys with different uses of hydraulics on tractors and other farm machines. We then return to the shop for disassembly, repair, service, and overhaul of the tractors' hydraulic systems provided by our boys.

We found that inadequate understanding regarding that which consti-



Hill and Giddens are making depth adjustments on a remote hydraulic cylinder.

tutes hydraulics is the basic problem farmers and students encounter in hydraulics. The hydraulic system of the tractor and other farm machinery is a means of making these machines highly versatile. It enables the engine to transmit power on and off the tractor.

The course outline was developed by our adult farmers, F.F.A. chapter, principal, superintendent, local tractor dealers and representatives from the state supervisory staff.

Phenomena Demonstrated

1. Causes of collapsed suction hose.
2. Pressure drop caused by friction losses.
3. Effect of using wrong size pump in systems.
4. Effect of "hammer" in a system.
5. Causes of contamination.
6. Causes of air leaks.

Shop Activities

1. Obtain old pumps and have students assemble and disassemble parts and study their functions.
2. Clean and drain hydraulic system.
3. Replace worn parts in hydraulic quadrant.

(Concluded on page 211)

INDIVIDUALIZED INSTRUCTION: A MUST IN AGRICULTURAL MECHANICS

Wiley B. Lewis
The Center for Vocational and Technical Education
The Ohio State University
Columbus, Ohio

T. J. Wakeman
Department of Agricultural Engineering
Virginia Polytechnic Institute and State University
Blacksburg, Virginia

Students interested in production agriculture occupations must be able to operate, maintain, repair, construct and/or otherwise use the agricultural mechanics items — machinery, equipment, structures, tools, and supplies — which they might encounter. This concept has long been accepted as basic to instruction in vocational agriculture programs. Its acceptance has resulted in the use of rather formalized departmental curricula in directing the related instruction. Such a procedure was considered adequate for it ensured that instruction related to specific mechanical items would be accessible to the student in the school while additional instruction and reinforcement could be provided through the field trip and the supervised occupational experience program.

Though instruction provided in this manner was thought to be meeting students' needs, the results of a recent Ohio study reveal that several changes should be made in the agricultural mechanics instructional program.¹ Among the changes suggested, the need for individualizing agricultural mechanics instruction was thought to be of foremost importance for several reasons.

Need for Individualized Instruction

First, an analysis of data collected during the conduct of the study revealed that the number of students who performed the several mechanical activities and the time at which they first performed the activities were highly varied. Thus, students, as has so often been said, have varying needs related to the agricultural mechanics items which were considered in the study.

Second, data collected from selected young and adult farmers showed that varying numbers of these individuals performed the activities being considered. Because of this condition it is apparent that while most students planning to enter production agriculture occupations will need to be able to perform certain activities, all students will not need to be able to perform every activity.

Third, reports from Ohio teachers of vocational agriculture indicated that the field trip and the supervised occupational experience program did not play important roles in the agricultural mechanics instruction associated with the production agriculture program. In other words, the supervised educational reinforcement and additional instruction which one might have believed was being provided through these types of learning experiences actually was not occurring.

Individualizing Agricultural Mechanics Instruction

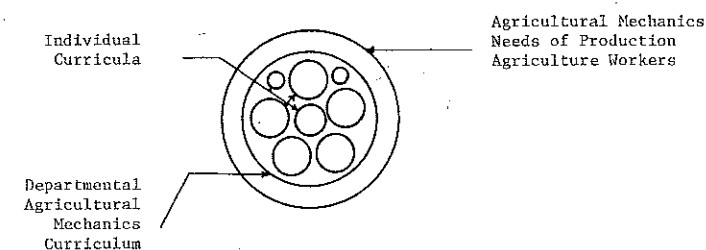
To cope with these conditions, the writers believe there is a definite need for providing individualized instruction.

Students varied greatly with respect to the kind of agricultural mechanical activities they performed and in the time they first performed the activities.

A first step toward individualizing agricultural mechanics instruction would be to ensure that a student's individual curriculum is established, generally within the confines of the departmental curriculum as shown in Figure 1. This individual curriculum would be based upon the student's abilities and the agricultural mechanics activities involved in his proposed occupational area. While such a curriculum would provide a structure within which individual instruction could be provided, a high degree of flexibility should be maintained. To meet the student's needs one might find it necessary to extend the individual curriculum outside the departmental curriculum as represented in Figure 1 and possibly, outside what is generally conceived to be the agricultural mechanics needs of production agriculture workers.

Figure 1

A CONCEPT FOR INDIVIDUAL CURRICULA



Each individual curriculum should be designed to ensure continuity and sequential learning of subject matter and skills related to the student's interests and needs. Such a curriculum would have multi-exit points so the student could leave the program with various skill and knowledge levels and then reenter the program to secure additional job preparation.

Periodic student evaluation on the basis of his ability to perform mechanical skills and his knowledge concerning such skills would aid in determining the content of both departmental and individual curricula. Those activities in which proficiency is exhibited on a pretest or posttest could then be de-emphasized in the curricula while areas in which deficiencies are identified would receive increased emphasis. This type of evaluation procedure would enable the teacher to describe precisely the products of his instructional programs in behavioral terms.

Individual work plans, study guides, learning activity packages, and other curriculum materials prepared to meet specific occupational objectives would play an important role in the teaching-learning process. Such items would aid both the teacher and student by giving direction to activities designed to aid the student in meeting the provisions of the several performance objectives.

Increased use of the supervised occupational experience program would help to individualize instruction by permitting the student to concentrate on those areas or units in which a need exists while supervised by the teacher of vocational agriculture, the parents, or the cooperating farmer. This approach would require that the agricultural mechanics items necessary and available for use within the student's program be identified. In addition, it would be necessary to ensure that the student is familiar with and capable of performing appropriate mechanical tasks associated with each item.

Implementation

To implement the concepts identified above, one must remember that the shape of the educational program does not count; what happens to each student enrolled in the program does count. What a teacher is and does remains the crucial variable in the educational situation.

Since our society is committed to the significance of individual performance, teachers of vocational agriculture must increasingly individualize their instruction. To do this, teachers should ensure that *four essential conditions* are established. **First**, subject matter coverage and skill development, according to the conventional boundaries of grade levels and arbitrary time units must be made more flexible. This flexibility will permit each student to work at his actual level of accomplishment in each subject matter or skill area and to progress in each area as soon as he masters the prerequisites for the next level of advancement.

Second, well-defined sequences of progressive, behaviorally defined objectives need to be established as

The individualized approach required that the Agricultural Mechanics competencies necessary and available for use within the students educational program be identified.

guidelines for setting up a student's program of study. The student's achievement could then be defined by his position along this progression of advancement toward his occupational goal.

Third, a student's progress must be continuously monitored. The teacher must ensure that adequate methods and instruments for evaluating each student's abilities and accomplishments are available and used. He must then use the results of such evaluation procedures to help the student plan his educational program.

Fourth, the teacher must provide each student access to appropriate instructional materials. These materials should be selected to contribute to the student's accomplishment of his educational objectives and be suitable for use with individuals of his current level of achievement.

Once these four conditions are established, the teacher's role can become one of helping the student to discover how he learns best. The existence of these conditions will aid the teacher in individualizing agricultural mechanics instruction as a means toward improving his students' preparation for entering or advancing in production agriculture occupations.◆◆◆

¹Wiley B. Lewis, "Agricultural Mechanics as performed on Ohio Farms in Comparison With Offerings in Vocational Agriculture" (Doctor's dissertation, The Ohio State University, 1970).

(Groves—from page 208)

cal fiction while his works were professionally oriented. He was sole author of three books and co-author of five additional texts. He also contributed regularly to the *Agricultural Education Magazine* and to such publications as the "Nation's Schools" and the "Colorado Schools" magazines.

"Doc" Schmidt was a member of many organizations in his time and was responsible for the organization of some. He was a charter member of the Zeta Chapter of Alpha Tau Alpha and served Alpha Tau Alpha as a National Vice President. One of his most important contributions to the profession was the organization of the Colorado State University Ag-Ed Club during the summer of 1930. His promotion and professional dedication developed the vocational agriculture summer sessions into a quality program that attracts outstanding visiting staff and vocational agriculture men from all over the nation.

"Doc" was a practicing vocational educator for over a quarter of a century and a real leader in the development of vocational agriculture. How-

ever, he loved the finer things in life including golf and beautiful women. At the age of 93 he wrote a letter to the editor of a local paper complaining about the lowering of the hem lines. Soon after this he also had his first experience evacuating a crashed airplane. Until his death in 1971 he was very active and insisted upon doing for himself and retaining his independence. The spirit of this leader is still with us and his philosophy still provides good guidance.◆◆◆

(Spaulding—from page 209)

4. Replace worn parts, filler plugs, and magnetic drain plugs in tractor hydraulic system.
5. Dismount and overhaul an entire hydraulic system of a tractor.
6. Clean, rebuild, and install remote cylinders.
7. Check for leading in pipes, pumps and cylinders.
8. Have students conduct hydraulic pressure test, using proper tools and gauges.

The following teaching materials are needed:

1. Films on hydraulics.

2. Transparencies on hydraulics.
3. Textbooks on hydraulics.
4. Drawings of hydraulic systems.
5. Hydraulic pumps, valves, hoses, seals, quadrants, etc.
6. Farm tractors with hydraulic systems.
7. Farm machinery with hydraulic systems.
8. Automatic transmissions (tractor or car).◆◆◆

Ed: If you desire a more detailed course outline, please contact the author.



Mr. H. H. Simpson, principal, Hobbs High School, and Mr. D. M. Singley, superintendent of Sampson County Schools, look over the 1972 course outline in hydraulics with instructor of agriculture, Thurston Spaulding, Sr.

MAKING THE TRANSITION . . .

From Year To Semester Courses

W. A. Clawson
Teacher of Agriculture
Tates Creek, Senior High School
Lexington, Kentucky



W. A. Clawson

Rapid technological advances in agricultural production have increased the productivity of farmers to the point where less than 15% of present day farm youth can expect to find gainful employment in production agriculture.

Along with this revolution in production agriculture, there has developed an entirely new cluster of occupations in agricultural business and industry. Agricultural business and industries have problems finding properly prepared personnel to fill their vacancies.

Many of these occupations are filled by young men with agricultural training. However, many of these occupations cannot be filled by farm boys, since we are facing a declining farm population. In order to meet these occupational needs we must recruit boys and girls from urban areas with non-farm backgrounds, students who do not live on farms but who can and will take jobs in the agri-business industry. Approximately one-half of the students enrolled in vocational agriculture each year at Tates Creek are sophomores, juniors, and seniors, who do not live on a farm and who have had no previous training or experience in production agriculture.

The purpose is to develop the understandings and knowledge essential for completion of individual study guide units in agri-business areas and diversified programs in agricultural occupations, thus enabling students to enter the co-operative program and work at training stations in the agri-business industry.

The program will also help meet the educational requirements for students who are interested in agriculture, but do not have a chance to farm,

who can not go to college for four years, and are not able to get a good job with just a general high school education.

After becoming interested in some phase or area of agriculture by virtue of exploring the various phases of agriculture and completing the individual study guide unit in agri-business, the student will then complete several mini-units in agricultural science to determine his interest and ability. He then can complete larger units of programmed instruction in the agri-business area, such as landscape gardening, soil conservation aide, livestock marketing aide, etc., thus enabling him to go on to a two year college in agriculture, a technical institution, etc. after he has had training in our cooperative program.

Procedures

★ Build a Programmed Instruction unit in Agri-Business (Description of career opportunities).

★ Build mini-programmed instruction units in agricultural sciences (plant, animal and soil science, including agricultural chemistry).

★ Build larger programmed instruction units in off-farm occupations.

★ Programmed Instruction in teaching phase-elective agriculture would be similar to phase-elective English. All students, upon enrolling in vocational agriculture will explore the field of agriculture, particularly agri-business (careers) — first by completing a general unit in agri-business.

The student will then complete several of the mini-units in agricultural sciences to determine his interest and ability before deciding on or selecting the larger units of Programmed Instruction in an area of off-farm occupations, or agri-business.

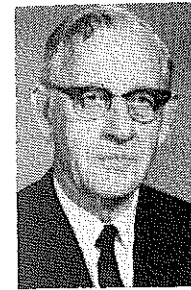
For example, the student who becomes interested in the field of horticulture after completing the unit on agri-business, would then complete the mini-unit in plant science for nine

weeks or a semester.

A student completing the agricultural plant science unit and going into the horticulture field need not complete the unit in animal science. The student completing the mini-unit in agricultural science need not complete the units in soil or plant science, since he will next complete the larger unit in programmed instruction and enter the animal industry. A student would need to complete only the mini-unit, consistent with his particular vocational education objective and the background he needs for his specific choice in the agri-business area.

The main purpose of this program is to provide supervised training for gainful employment in occupations related to agriculture. The high school program is accomplished by establishing a cooperative arrangement between the school and the agricultural businesses and industries in the community. It is designed to enable 11th or 12th grade students to receive specific on-the-job training in their chosen occupations while completing the requirements for a high school diploma. The student may spend considerable time at the training station during the summer between the junior and senior years. The student may spend part of the regular school day working at the training centers. The remainder of the school day will be spent at school in vocational agriculture classes where 60 per cent of the time will be spent in classroom instruction and 40 per cent spent on study guides for the specific training stations where he is working and completing studies in other areas necessary for graduation. The vocational agriculture teacher has the responsibility of providing the related instruction and coordinating the total program. The on-the-job training center will be under the direction of an individual selected from the firm or business in which the student is working. ♦♦♦

Robert E. Steffy
Teacher of Agriculture
Marion Center, Pennsylvania



Robert E. Steffy

The Marion Center Agribusiness Dekor Cooperative developed out of a situation in the junior-senior agribusiness class, made up of ten boys and four girls at the Marion Center Area High School. When the ten boys were scheduled for gym the seventh period Wednesday, it was decided that the four girls would study flower arrangements during that time.

At the time this decision was made, the unit being studied was farm cooperatives. The idea of a real live cooperative came from participation in a mini cooperative at the Pennsylvania Association of Farmer Cooperatives' Summer Institute, conducted on the campus of the Bloomsburg State College, July 12-16, 1970. When a mini cooperative in the agribusiness class was explained by the instructor, the members voted to form such a business organization. The name, the Marion Center Agribusiness Dekor Cooperative was chosen to identify the class and the purpose for which it was formed. The purpose of the cooperative was to produce and market winter bouquets, Christmas decorations, and other floral arrangements. The directors were elected, a manager appointed, and a set of officers installed. Committees were appointed to write a charter and by-laws, draw up a stock certificate, and make a name card. The life of the cooperative was the period from September 11, 1970, to June 1, 1971. Winter bouquets were made from such grasses as foxtail, brome sedge, fescues, smooth brome, timothy, witchgrass, and rye, used as a background for weeds such as musk mallow, teasel, golden rod, rough pigweed, queen anne's lace, heal all tea, burdocks, blue vervain, and cat tails. Princess pine, chestnut burs with nuts, and pine cones provided other decorative materials. Plastic flowers mounted on a 12" x 18" piece of 1/4" hardware cloth, with all four edges rolled in and

NOTHING VENTURED, NOTHING...

sprayed with gold paint, sold for \$2.00 each.

Then came the Christmas season. Christmas wreaths and yule logs were made and sold. The cooperative was able to declare a patronage refund of \$1.50 on all outstanding shares of stock on December 23, 1970.

The shares of stock were redeemed at \$1.50 on June 1, 1971, and the cooperative was dissolved.

Members explained the activities of this cooperative and displayed their products at an F.A.A.-4-H area meeting at Camp Blue Jay and at the Pennsylvania Association Farmers Cooperatives Summer Institute at Shippensburg, Pennsylvania.

Each year a teacher should try something new, if for no other reason than to see what will happen. This gives the students another opportunity to use their imagination, and everyone involved can cooperate in solving the problems that arise.

This experiment was originated by fourteen juniors and seniors in our agribusiness class, in order to put a little life into the unit on agricultural cooperatives. Objectives were formulated, activities were planned to accomplish these goals, and the whole affair was expedited by my favorite axiom, "Let the thing you are doing at the time you are doing it, be the most important thing in the world to you."

The first objective was to better understand cooperatives by actually creating one and participating in its organization and management. A charter, by-laws, and name cards were printed. Stock certificates were issued. The money from the sale of stock provided working capital to buy supplies. The officers listed in the by-laws were elected. The cooperative began to function. This form of business organization became a living thing, not just an abstract idea in a workbook.

The second aim was to learn cooperation by working together for the benefit of the group. Materials were gathered by the students and the teacher. Working together, these materials were converted into saleable prod-



Students prepare winter bouquets of grasses and flowers.

ucts. Their combined efforts produced a profit. Each member shared equally in the patronage refund. Cooperative effort converted into dollars is tangible evidence that the idea will work.

The third goal was to encourage creativity through cooperative effort. A variety of multicolored winter bouquets were assembled from sprayed grasses, weeds and grains. Plastic flowers mounted on hardware cloth provided variety in floral arrangements. Yule logs and Christmas wreaths were made. Place mats were framed. The students began to realize that their creative ability was in demand and had a market value. Pride of accomplishment was evident. Complimentary remarks on the part of the customers and others spurred them on to greater efforts.

The fourth purpose was to provide salesmanship experience in marketing the creations. Products were made and sold. Orders were taken and delivered. Salesmanship was practiced when a market was located. The value of the merchandise sold was not very high, but the business transacted provided a valuable learning experience. Production as such was not the aim of this activity, because this was an educational experience and only a limited time could be allotted to this unit.

The fifth objective was to emphasize the use and the appreciation of farmers' cooperatives. The Agribusiness group was familiar with Agway, for they had used and sold Agway garden

(Concluded on page 215)



Gordon Hall

Order in our lives is maintained by laws — natural, judicial and spiritual. Nature's law of gravity prevents us from falling off the earth; stealing of another's property is controlled by our country's statutes; and a spiritual law tells us it is wrong to be untruthful.

To these three basic kinds of laws—natural, judicial and spiritual—I would like to add a fourth—the laws affecting individual performance. I'm confident you will recognize some of the more common ones such as Parkinson's Law which says, "Work expands so as to fill the time available for its completion."

Then there's Murphy's Law, "If something can go wrong, it will." McGurk has rewritten Murphy's Law to read, "Any improbable event which would create maximum confusion if it did occur . . . will occur!"

Another one very familiar to all of us is referred to as the Cooperating Teacher's Law for student teachers. It reads, "Nothing is impossible for the man who doesn't have to do it himself."

The law of individual performance I would like to dwell upon is referred to in many ways. We're all familiar with, "You get out of something what you put into it" and "You harvest what you sow." Another is "Give to the world the best you have—and the best will come back to you." I prefer to call it, "No Deposit—No Return."

Perhaps the best approach to discuss the effect of this law upon vocational agriculture and the FFA is to break the program down into four segments—the program vehicle, the FFA, the teacher, and the student.

First let's take a look at the vehicle for the total program. Whether we refer to it as vocational agriculture, vocational education in agriculture, agricultural education, or career education, I suggest we should have some concerns regarding the relationships of our

NO DEPOSIT--NO RETURN

in-put and the eventual out-put.

There needs to be a deposit of individual and group talent, time and effort, to adjust our program to the new concept of career education. This includes utilization of the Core Curriculum, initiation of cooperative programs, team efforts with other occupational areas, specialized courses at the 11th and 12th years, true technical programs at the post-secondary levels and career orientation and exploration in the elementary and junior high levels. The return on this effort will satisfy the goal of career education—a saleable end product—an individual prepared to lead a productive and self-fulfilling life.

Our program vehicle will most likely be re-designed during this decade. Consideration is currently being given to replacing the traditional service areas with fifteen occupational clusters proposed by the U.S. Office of Education.

Regardless of whether this change is "the answer," each of us should be concerned about whether we have made the necessary deliberate actions to improve the existing situation in our area of responsibility. Are we willing to change in our approach . . . in our thinking . . . in our teaching?

The success of the program vehicle in the future—as has been the case in the past—is the individual teacher's willingness to modify his concepts to meet the changing needs of agriculture and the student.

Next let's take a look at the status of the second area identified—FFA. The most obvious indicator here is the decreasing FFA membership. Also, our traditional claim to fame, leadership development, is decreasing in effectiveness in my opinion. On the local, state and national levels, we have some outstanding young men and ladies serving as officers; however, as a group the total membership does not display the leadership skills traditionally characteristic of FFA.

The lack of opportunities and areas of interest for the specialized non-farm student, and the disadvantaged are other areas sadly deficient.

These items seem to indicate there is

need for serious consideration of the total FFA program to reverse the trend of diminishing returns.

The teacher is our third consideration. Perhaps this area should have been discussed first since the teacher is the catalyst who combines the program vehicle, the FFA and the student into a functional system.

The image of the vo-ag teacher along with the image of agriculture is continually changing as we move further away from the agrarian society of yesteryear. Although his image is changing and the conditions under which he operates—his purpose remains the same—to develop each of his students to their greatest potential.

The deposits in this area must be on an individual basis. There are, however, several items which indicate some need for improvement. The first is motivation, which I consider the most important duty of a teacher. Additional deposits must be made in challenging all students to pursue the program opportunities.

Many of us fail to realize learning is the process of importance—not teaching. I was impressed by this statement I read recently.

The mediocre teacher teaches

The good teacher explains

The superior teacher inspires

The great teacher causes learning

Professionalism and participation in state-wide activities are two more areas needing greater deposit from individual teachers.

Three additional teacher responsibilities which are predicted to become more important to program success in the future are (1) summer employment activities, (2) the use of advisory committees, and (3) cooperative efforts with teachers representing other academic and occupational areas of instruction.

Finally, we come to the fourth area of concern, the student. Today's student is different in several important aspects. He is confronted with numerous choices regarding the use of his time, he has a greater voice in setting policies and determining the actions of

(Continued on next page)

the adult society, and he often rejects the traditions held almost sacred by adults.

As a result of these circumstances and others closely related he is a greater challenge to the teacher today. He often appears less willing to devote the necessary time to develop himself and provide service to the FFA. He may decide for instance not to run for a chapter office because he doesn't like to wear official FFA dress, cut his hair or learn the opening ceremony.

Enrollment trends and the exit rate between freshman classes and 12th year programs appear to indicate the students' rejection of the traditional curriculum and FFA program. I suggest our action should be to motivate the student to find his interests as well as to adapt the program to this interest. This of course is simply the "student oriented" rather than the "program oriented" approach.

As has been stated before in the *Agricultural Education Magazine*, these young people we enroll are only potentially good students and producers in our society. They represent a constant challenge to teachers to insure they are properly oriented, informed and motivated so their full potential can be realized. In the final analysis, students learn precisely what they want to learn. Occasionally we complain that today's students are not motivated or interested in anything. Students are motivated, however, the problem comes in that their wants, interests and aspirations do not correspond with what we think their motivations should be. Many of the answers we are seeking can be gained by a simple action—listen. Listen to your students and provide learning activities which include their motivations.

Another difference exhibited by today's student is his philosophy regarding respect. Their tendency is not to respect a person because of his position. Their respect can only be gained by individual performance and an exhibited effort to understand their philosophy.

Today's student is different. Rather than reject this difference or attempt to change it let us make some deposit in our philosophy, our methods and the total program to provide the proper return being sought by these students.

We've discussed the four segments of vocational agriculture; the program

vehicle, the FFA, the teacher and the student. As our stated law, "No Deposit-No Return," implies, many of my comments were of the negative nature. These items were discussed because they identify some of the areas needing greater emphasis or perhaps change. I'm convinced the majority of the things we are doing today do not require change or revision, but provisions must be made for our changing clientele.

Vocational agriculture's future is greatly dependent upon our involvement during the next two years. May I suggest some items to guide our actions.

1. Keep ourselves informed regarding legislation and program trends.
2. Consider changes thoughtfully—without prejudice.
3. Speak out when opposed—but base our judgment upon fact—not tradition.
4. Support the implemented changes and motivate students to benefit from them.
5. Further reinforce and apply the theory that the strength of the program is at the local level.
6. Take a realistic look at accountability:
 - What is the teacher-student ratio?
 - How many were placed in jobs for which they were trained?
 - Can your administrator justify your summer employment to the school board based upon your performance?
 - Is the FFA really providing the greatest possible individual development for all students?
 - Are we really serving the disadvantaged student?
 - Are we training students for jobs with no employment opportunity?

ties?

7. Accept the philosophy of Alexander Graham Bell, "When one door closes, another door opens; but we often look so long and so regretfully upon the closed door that we do not see the one which has opened for us."♦♦♦♦

*Presentation by Gordon Hall, State FFA Executive Secretary, at the 1971 Arizona Vocational Agriculture Teacher's Conference

(Steffy—from page 213)
seeds, but they were surprised to learn that thirteen other cooperatives also served the area. Since a cooperative had worked for this group of students, it was easy for them to understand how one operated, on a larger scale, for farmers in the community.

To develop a hobby, or a spare time activity to provide extra income, was the sixth goal. Skills were developed by the members that could be put to use after graduation on an individual or group basis. The use made of this experience will depend upon the individual's interest in this type of work.

The seventh aim was to explore the opportunities for employment in the field of cooperatives. Farmers' cooperatives want employees with farm backgrounds to operate and manage their business. This experience helps to make the students aware of another source of employment.

The eighth purpose was to develop proficiency in the use of power tools. Instruction was given and an opportunity provided for the students to develop skill in the use of the circular, scroll, radial arm, band, and picture frame saws, as well as the router, the belt sander, the jointer, and the planer. Students learned to operate these tools safely.♦♦♦♦

Themes For Future Issues

- June — Career Education: The School's Responsibility For Placement and Followup
- July — Career Education: Unique Instructional Programs and Materials
- August — Career Education: For More Effective Teacher Education and Supervision
- September — Career Education: Articulation Among Local, Area and State Programs
- October — Career Education: Upgrading Adults
- November — NVATA Silver Anniversary Issue
- December — Career Education: Accountability In Evaluation



Benny Campbell is a Vocational Agriculture student at Booker T. Washington High School in New Orleans. Benny is receiving on-the-job training through the Co-operative Agriculture Education (CAE) Program. This is an excellent example of cooperation between business and the school system. Students attend regularly-scheduled classes in the mornings and receive their training during school released time in the afternoon. These students not only receive additional valuable training, but are also paid for their work by the business or industry in which they are employed. Benny answers questions about one of the plants he is responsible for at The Royal Orleans Hotel. One of these tourists is from Edmonton, Canada and the other is from Sacramento, California. Benny finds one of the most enjoyable duties of his job is answering the many questions asked him about the plants by guests from all over the world. (Photo from J. C. Simmons, Area Supervisor, Vocational Agriculture).



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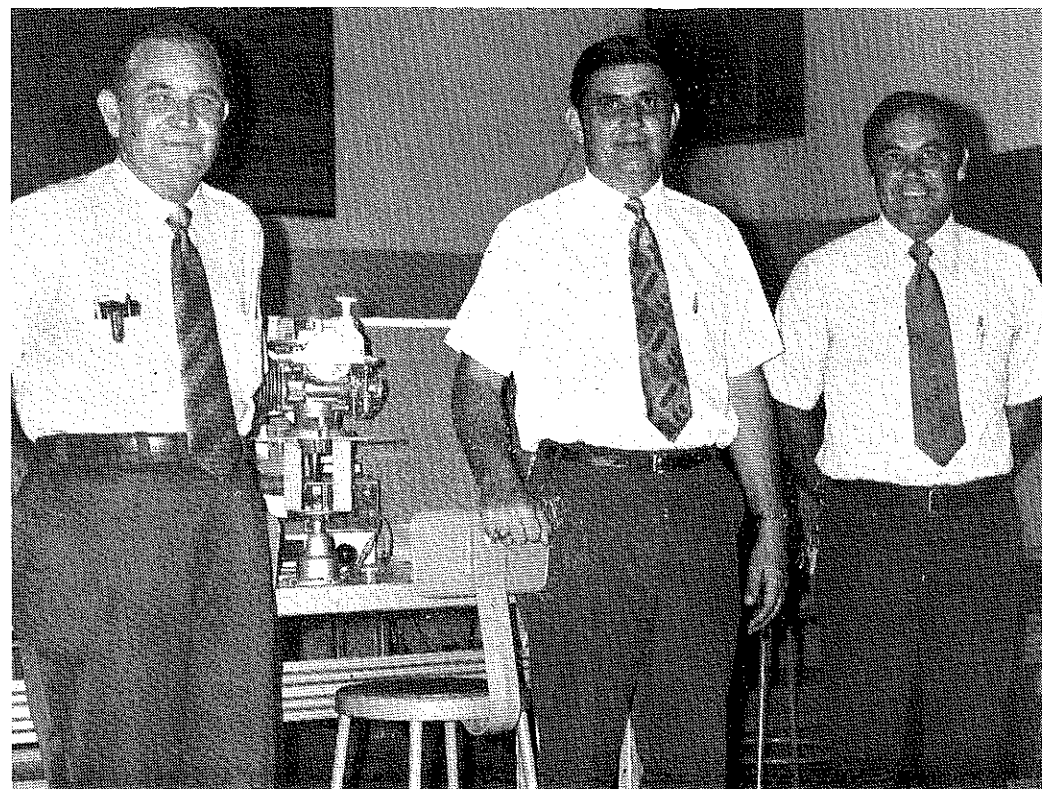
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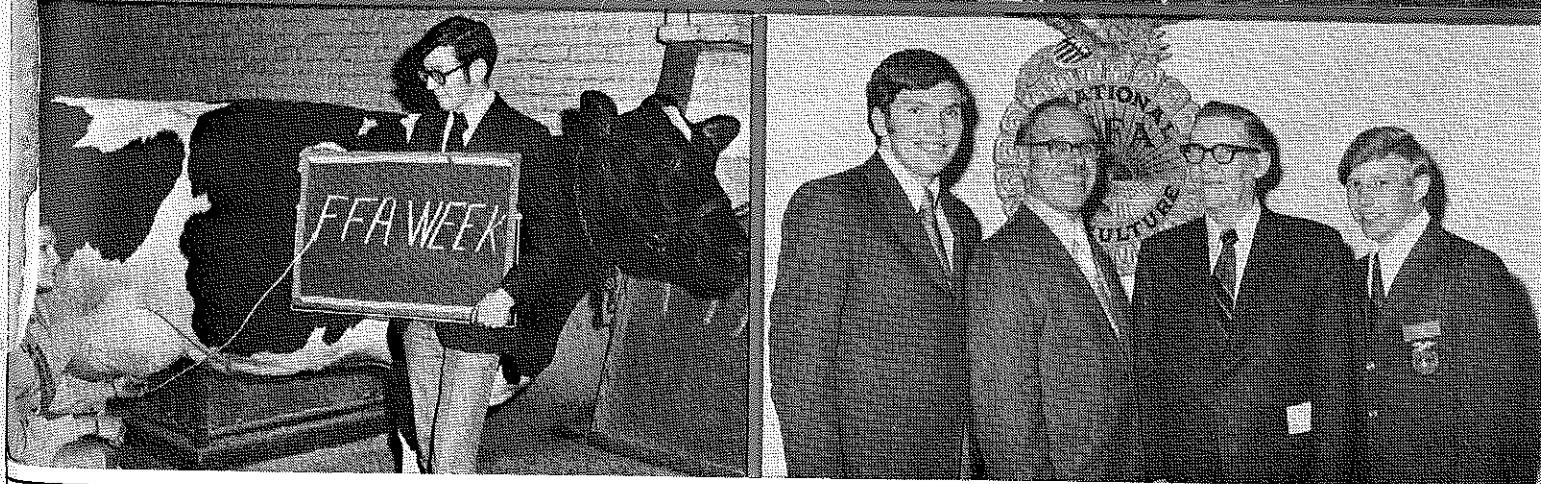
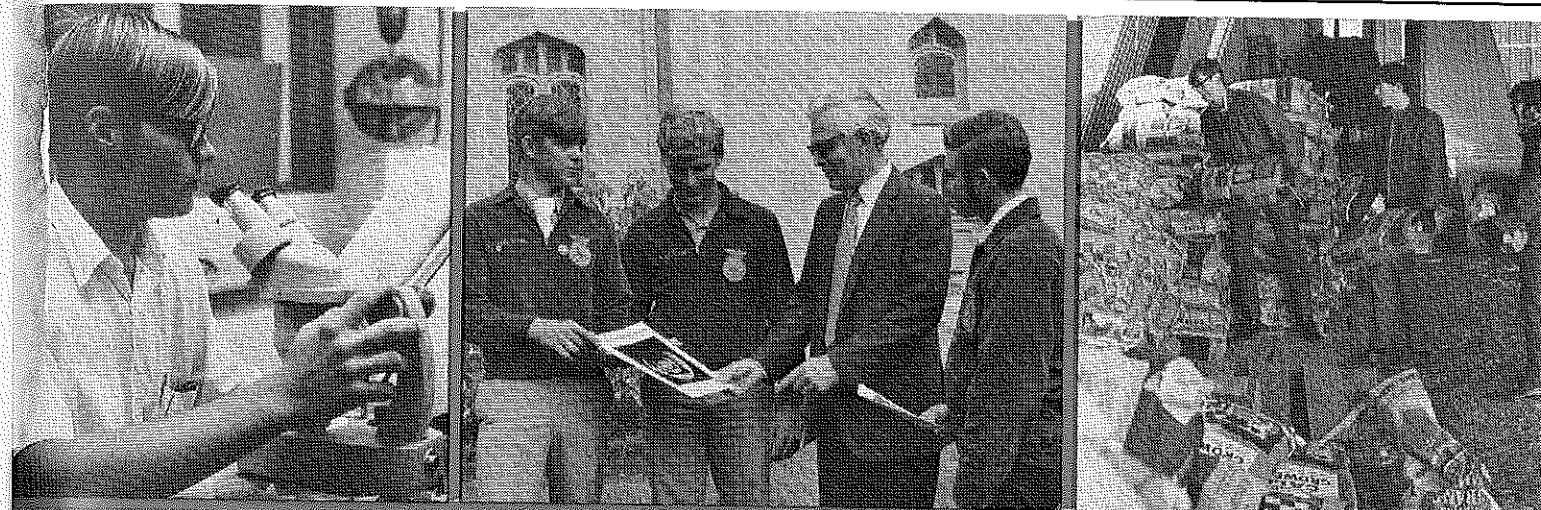
by Richard Douglass



SONS FOLLOW IN THEIR FATHER'S FOOTSTEPS — Curren Gaspard retired recently after thirty years of successful teaching, most of it as Instructor of Agriculture at the Marksville High School in Louisiana. The uniqueness of this retirement is that the vacancy created by Gaspard's leaving is being filled by his two sons, Lee and Landry. Both are qualified teachers of agriculture, having graduated from the same teacher training institution that their father attended.

This is unique in Louisiana as it is believed this is the first time sons followed their father teaching in the same high school.

Left to right — Curren, Lee and Landry are in the small engines lab in the Marksville High School Vocational Agriculture Department. (Photo from Ivan Baker, Supervisor, Louisiana.)



**Theme—CAREER EDUCATION:
YOUTH ORGANIZATIONS AS
AN INSTRUCTIONAL TOOL**