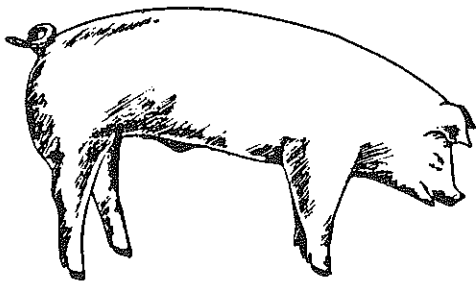


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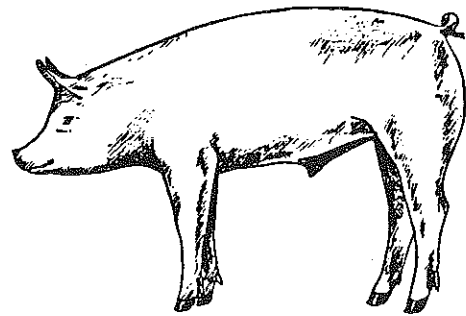
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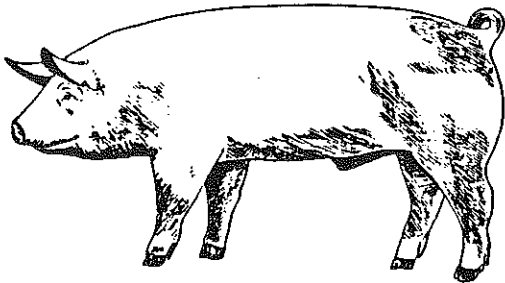
Magazine



Model Of The 1960s



Model Of The 1970s



Model Of The 1980s



Model Of The 1990s

**THEME: Staying Current in  
Animal Agriculture**

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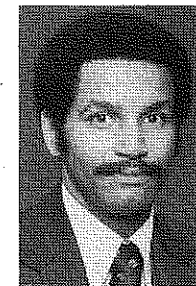
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**Marketing 101, Lecture #2**



BY BLANNIE E. BOWEN, EDITOR

(Dr. Bowen is an Associate Professor in the Department of Agricultural Education at The Ohio State University.)

How should vocational agriculture respond to pleas for quality instructional programs that meet the needs of contemporary society? A two step solution was presented during the 1986 Central States Seminar in Agricultural/Agribusiness Education in Chicago the last week of February. The first step is to have high quality programs. The second step involves an effective marketing strategy to sell the programs. Admittedly, this seems like a simple enough solution that is worth a try.

Let's explore in more detail the essence of the solution. First, Emmett Barker, president of the Farm and Industry Equipment Institute in Chicago, told the group of teacher educators, state supervisors, teachers, graduate students, and others in attendance that vocational agriculture is recognized by the image projected by the FFA. In terms of contemporary instructional programs, Barker said vocational agriculture leaves much to be desired. As others have also noted, Barker remarked that about 20% of America's farmers produce about 80% of the food and fiber. Quite simply, no market exists for the multitudes preparing for careers in production agriculture.

Barker was kind, but blunt in his assessment. He could have painted a different picture because he was very active in the FFA and vocational agriculture as a youngster. He and his organization are not guilty of cheap talk because they are staunch supporters of the FFA. From all indications, he plans to remain a vocal and visible supporter. From a realistic angle, how much sustained support can be expected when a program is in need of the reforms he mentioned. Barker's ideas must be taken seriously because it takes a true friend to tell friends that changes are needed.

**Client Input Needed**

Accordingly, Barker's keynote address was discussed by those attending the Chicago meeting. The audience was divided into small study groups to discuss the presentation. One major theme emanating from each small group was that vocational agriculture must become more realistic in its course offerings. Instructional programs featuring more agribusiness education were central to most of the reports. A second theme was that considerable thought must be given to the role of the FFA and other youth organizations. Additional thought must be given to Barker's comments by all who are concerned about vocational-technical education in agriculture. Discussions must include all client groups and not just teacher educators and state supervisors.

Input from parents, students, vocational agriculture teachers, and the business community is essential if meaningful solutions are to be derived. High caliber input is being collected by the Committee on Agricultural Education in Secondary Schools that is studying topics Barker mentioned. This national study is being done through the National Academy of Sciences at the request of former USDA

Secretary John Block and former U.S. Department of Education Secretary Terrell Bell. The findings of this Committee should have a major impact upon vocational agriculture well into the next century. This is only one example that solutions are being sought to the legitimate concerns Barker and other leaders in agribusiness are airing.

**Market Quality Products**

How to implement the solutions is a different matter. Another speaker at the seminar gave practical ideas about marketing vocational agriculture to society. James R. Stone, an assistant professor of marketing and distributive education at the University of Wisconsin-Madison, conducted an excellent Tuesday morning session devoted exclusively to marketing techniques. Stone was quite impressive, to say the least.

He started his presentation by discussing Rule #1 in marketing. You must have a product worth promoting because consumers can see through smoke screens. He cited the fiasco (?) involving soft drinks marketed by Coca-Cola. Some background information may be of help. "Old Coke" became the "New Coke" which is rapidly being replaced by the "Old Coke" that is now being bottled as "Coke Classic." Sound just a bit confusing? Welcome to the Club.

The person who devised this scheme is either a genius or a fool who is willing to bet the ranch (and possibly a career) because the Coke marketing scheme is working. Old Coke faithful, including this writer, were never deceived because Coca-Cola is the Real Thing and nothing else will suffice. This realistic scenario captures the essence of Stone's message: Promotion without a quality product does not succeed.

**Marketing Components**

Stone discussed 5 Ps involved in an effective marketing plan: Product, Place, Price, Promotion, and People. Key questions about each are: **Product** - How does your product look to the potential consumer? **Place** - Where does the consumer have to go to obtain the product? **Price** - Is the perceived value greater than the price being paid? **Promotion** - What must be done to create a picture of your

(Continued on page 4)

## Marketing 101, Lecture #2

(Continued from page 3)

product in the mind of the consumer? People - What teachers, administrators, support staff, and other individuals are needed to create a positive impression about your product? According to Stone, "The key to successful marketing is to have the right product, at the right price, in the right place, with the right promotion, using the right people" (VOCED, "New & Related Services Insider," August, 1984, p. 32b).

## THEME

# Animal Agriculture: An Ever Changing Science

The livestock industry represents a very substantial portion of the total agricultural sector of our nation's economy. As a reflection, a large portion of our high school vocational agriculture curriculum deals with the animal sciences. Livestock shows and judging contests have been a "show case" for our programs since the beginning of vocational agriculture. Over the years, there have been few areas of our curriculum that have undergone more rapid and dramatic change than the segment dealing with the livestock industry. Even the youngest of our teachers can remember the time when the concepts of embryo transfer seemed like a theme from a highly imaginative science fiction novel.

Now the concept has become a process that is common place. In fact, it is nothing uncommon for a judging team to visit a purebred producer and judge a class of four heifers that are full sisters, the same age, and all raised by different cows. Now, new concepts such as cloning and gene splicing are not considered to be futuristic but are, in essence, a reality. The "ideal type" of livestock selected by industry has evolved over the years as new research and different economic situations have changed our concept of the perfect animal. Selection of animals is becoming much more effective through the use of centralized computer compiled production records and sire summaries that supplement visual appraisal.

### Staying Current

Amid this flurry of change, the local high school voca-

This two step solution must be put in place if vocational agriculture is to survive in the 21st Century. Having a quality product will not suffice in an era of high technology that is producing more and more information overload. Stiff competition requires that an appealing product be successfully marketed to clients who can be persuaded to participate.

Dr. Ray Herren served as theme editor for this issue on animal agriculture. He and other writers discuss ways of keeping current with contemporary instructional programs in this area of agriculture.



By RAY HERREN, THEME EDITOR

(Dr. Herren is an Assistant Professor of Agricultural Education at Oregon State University, Corvallis, Oregon 97331.)

tional agriculture teacher is expected to stay abreast of the latest developments of the industry, realizing, of course, that the animal industry is only a part of our vast and ever changing agricultural industry. Since it is essential that we stay updated in order to retain our positions as professional, effective teachers and community agriculture leaders, how do we find the time and resources to do a first rate job of keeping current? Within this issue are several articles dealing with methods of staying on the "cutting edge" of the animal industry. Although no **single** method can keep a teacher current with the latest technology, the use of a **combination** of the methods described in this issue can result in competent, current teaching in animal agriculture. As with all aspects of our profession a carefully thought-out and worked-out plan for updating will be essential as teachers cope with modern animal production and look forward to the twenty first century and the new technology just over the horizon.

Coming in July . . .

## Staying Current in Classroom and Laboratory Management

## THEME

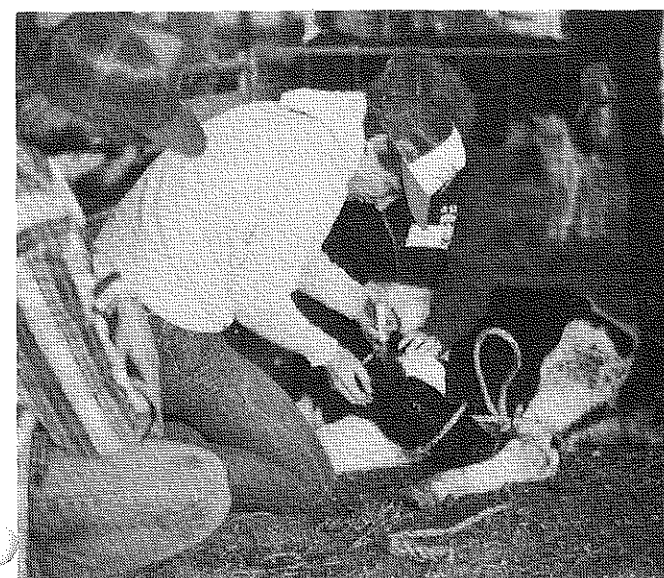
# An Inservice "Paravetic" Workshop

"The pace, content and experience were excellent, . . . material presented will be useful in my teaching, . . . excellent hands-on experience, . . . the veterinarians answered questions thoroughly and were very willing to help, . . . on target with the practical hands-on experience, . . . a well developed workshop and the experience was excellent." These were just a few of the comments we heard from a group of 18 teachers of agriculture who attended a series of animal health competency workshops held this past fall for beginning teachers of agriculture in Pennsylvania.

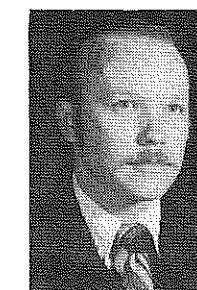
The Beginning/Young Teacher Program is sponsored by the Pennsylvania Department of Education and offered through the Department of Agricultural and Extension Education at The Pennsylvania State University to all first- and second-year teachers of agriculture on a credit or non-credit basis. The goal of the Beginning/Young Teacher Program is to provide teachers with instructional materials, pedagogical skills, and technical hands-on experience to enhance their teaching effectiveness. Experience has shown that teachers, especially during the first few years of teaching, need technical skill training and resource materials to help them "settle into" the teaching profession. Through survey questionnaires and personal conversations with teachers, we identified a need in the area of livestock health competencies.

### Planning

Planning for the workshops began in August with consideration to site selection, resource people, reference materials, time format, equipment, materials, and presentation methods. As we looked at a map of Pennsylvania,



Calf receiving injection after being properly restrained. (Photo courtesy of Dennis Scanlon.)



By GEORGE VOHOVIK & DENNIS SCANLON

(Mr. Vohoviak is a Graduate Assistant and Dr. Scanlon is an Assistant Professor in the Department of Agricultural and Extension Education at The Pennsylvania State University, University Park, Pennsylvania 16802.)

we found most of the new teachers located within a 100-mile radius of each other in the south central portion of the state. Therefore, it was decided to hold the workshop at a high school vocational agriculture facility centrally located in that area.

To get up-to-date information presented in a practical manner, veterinarians who practiced in the immediate communities surrounding the host school were asked to participate. Resource information was provided through a comprehensive "Animal Health Competencies Resource Manual" which contained technical notes from various livestock associations, research facilities, and industries.

Workshops were scheduled for Friday evenings and Saturday mornings on two weekends in October and November. This allowed for travel time to the site and kept some of the weekend free for the teachers to return home for other responsibilities.

The veterinarians provided all equipment necessary for the hands-on experiences while the local vocational agriculture teacher lined up livestock and secured butcher shop scrap ears and hoofs for ear tagging and hoof trimming practice. In planning the workshops, emphasis was placed on the need for hands-on experience. The veterinarians agreed, and the success of the workshops was due to the large amount of actual hands-on experience provided to the teachers.

A final consideration in planning the workshops was the legal and professional limitations of performing health competencies on livestock as well as the concern that veterinarians might see teachers who perform these tasks as going beyond their professional boundaries. We discovered that most veterinarians felt many of these tasks could and should be carried out by livestock owners. They did, however, stress the fact that people should be properly trained. They also agreed that if teachers are knowl-

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## An Inservice "Paravetic" Workshop

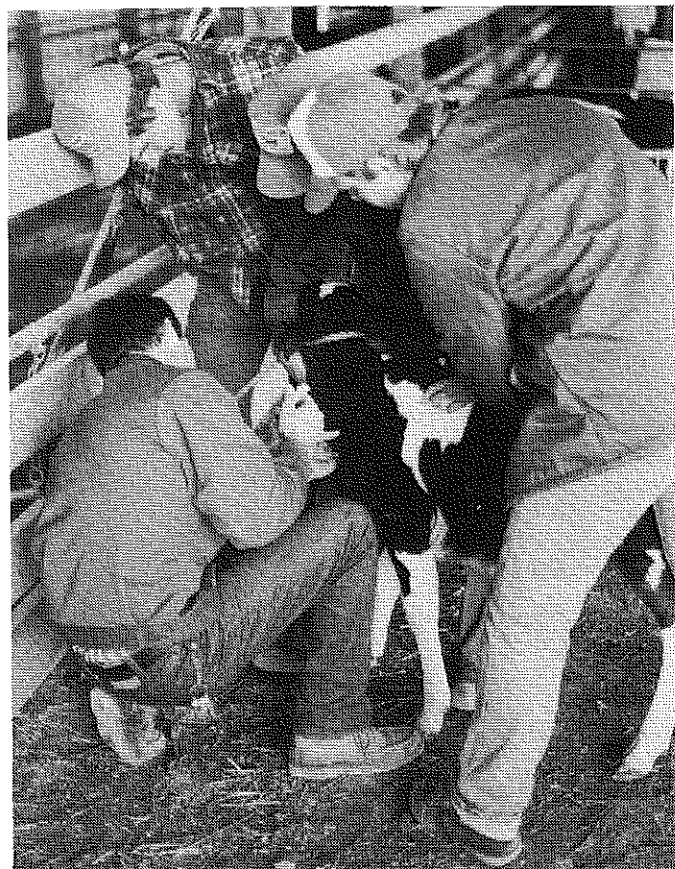
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edgeable and aware of possible outcomes and symptoms that may occur, most simple procedures can be performed successfully.

### Cattle Health Competencies

October's workshop dealt with cattle health competencies. It began with a review of goals and objectives, and a few brief introductions. On the first evening we visited a nearby dairy farm where the veterinarian demonstrated cattle restraint and handling techniques. The veterinarian stressed that the majority of health problems can be prevented by proper management, preventive health care, and daily monitoring of livestock. This idea was reinforced by a demonstration of mastitis testing techniques that should be conducted by the dairy manager. To wind up the Friday evening session, we returned to the school agriculture facility where we practiced ear tagging and tattooing on scrap ears. Hoof trimming was demonstrated and then practiced on butcher shop cattle hoofs. It was during the session that we discovered the willingness of the veterinarians to cooperate and offer answers to the multitude of questions from the teachers.

Saturday morning we traveled to a nearby beef farm where the veterinarian demonstrated castrating. Three different techniques were carefully described by the veterinarian who then guided the teachers through the actual



Calf is steadied by agriculture teachers as injection is completed. (Photo courtesy of Dennis Scanlon.)

procedures on the young animals. With a successful castrating lesson completed, we returned to the host school facility where 10 dairy calves were waiting. Using equipment provided by the veterinarian, the teachers practiced several dehorning techniques and injection methods on the calves. We concluded the cattle workshop at the vocational agriculture shop where growth implant procedures were practiced using the scrap cattle ears. As with the Friday session, the veterinarian was deluged with questions as he packed his equipment to leave. The workshop was a success and we were looking forward to November's workshop on poultry and swine health competencies.

### Poultry and Swine Competencies

The November workshop dealt with poultry and swine health competencies. Friday evening a local veterinarian who deals exclusively with poultry met with the teachers. He arrived at the host school with 30 chicks, supplies, and a complete set of equipment. The session began with a discussion and demonstration of poultry injection and pesticide application methods. Some of the birds were then used to practice debeaking with an electric debeaker. Most birds fared well, although several lost more beak than was intended; but we all learned how to debeak young chickens. Next we received a caponizing demonstration; it looked simple enough, so the teachers began trying it. Once again, most birds survived this ordeal and the group



Locking a butcher shop scrap hoof in place for hoof trimming practice. (Photo courtesy of Dennis Scanlon.)

had an excellent hands-on experience. To finish the poultry session, the veterinarian brought out several birds suffering from an undiagnosed illness. Necropsy was the subject and an incidental poultry anatomy lesson followed. During the necropsy, the veterinarian pointed out internal anatomy, egg development and the deadly cancer that caused the birds' death. As with the other sessions, while the veterinarian packed up his equipment and surviving chickens, there were many questions from the teachers.

The Saturday morning session was devoted to swine competencies. We felt the effects of a local pseudo-rabies threat in that no local swine were volunteered for the workshop. However, the veterinarian who provided the instruction gave an excellent discussion on swine management, stressing preventive measures. His audio-visual aids graphically illustrated many health problems of swine, how they are detected, and how to prevent them. By noon most of the questions from the teachers were answered and we concluded the program with information on inservice

credit and future workshops. Evaluations rated the program as one of the most successful, and praised the local veterinarians for their cooperation and willingness to share their knowledge.

### Summary

In looking back, we saw several key factors that helped make the inservice workshops a success: (1) the felt-need of the teachers for the workshops; (2) the use of practical hands-on experience; (3) the cooperation of the veterinarians; and (4) the up-to-date information provided by both the resource manual and the veterinarians. These, then, are a few of the guidelines we would suggest for anyone involved in coordinating future workshops for new or beginning teachers.

### Reference

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## THEME

# Utilizing Research, Trends, and Issues in Keeping Current

Keeping current in animal agriculture must be viewed as a continuous process by agriculture teachers, supervisors, specialists, and teacher educators in this country. Hamilton and Wonacott (1984:53) state that, "The final essential characteristic of an effective strategy for technical update is that the process must be continuous and self-renewing." Therefore, we suggest that each professional must have planned time in the work schedule for this endeavor in order to remain current and proficient in this phase of the program.

### Areas in Which to Keep Current

In dealing with animal agriculture, whether in the swine, dairy, beef, horse, or sheep industry, the question is usually raised, "Just what do I need to keep current on?" The following broad categories are offered as suggestions for directing efforts toward keeping current on research, trends, and issues in animal agriculture:

1. Consumer Demands and Concerns
2. Changes in Breed Type and Characteristics
3. Genetic Applications to Applied Breeding Programs, Embryo Transfer, and Genetic Engineering
4. New Breeds and Breed Development
5. Livestock Futures and Population Trends
6. Feed Rations and Price Ratios
7. Economic, Government, and Private Programs
8. Management Techniques
9. Health and Nutrition, including Disease and Parasite Problems
10. Facilities and Equipment



BY JAMES BOB DRAKE & DEAN A. DANIELSON

(Dr. Drake is an Associate Professor of Agricultural Education in the Department of Vocational and Adult Education and Dr. Danielson is an Assistant Professor of Animal Science in the Department of Animal and Dairy Science at Auburn University, Alabama 36849-3501.)

11. Marketing Schemes and Programs
12. By-products and Their Use
13. Current and Future Occupational Trends, Including Job Tasks

### Keeping Current with Research, Trends, and Issues

Keeping current with research findings continues to be the key to proficiency in animal agriculture. The recent identification of Fescue Toxicity (*Acremonium coenophialum*) in one of the major forage crops for the  
(Continued on page 8)

## Utilizing Research, Trends, and Issues in Keeping Current

(Continued from page 7)

livestock industry in the United States accents the importance of research and keeping current (Ball, 1983).

Toxicity in fescue was, and is, a major setback for beef cattle production and economics. Fescue toxicity affects (1) daily gain on steers, (2) gain on weaned calves, (3) general health and mortality in the beef cattle population, and has been suggested to affect reproduction in females (Ball, 1983). Research has identified the problems associated with fescue toxicity and subsequently corrected these problems in a very short time. This was accomplished through (1) development of non-infected strains of fescue and (2) development of treatments and techniques, although still expensive, for dealing with current stands of toxic fescue (Ball, 1984).

This research has resulted in increased production and proficiency for the American beef cattle producer. By keeping up in the field, and being able to advise about solutions to this type of problem, the agriculture teacher can make a major contribution to students and adults in helping them become more proficient in their animal enterprises.

Four major sources exist to facilitate the local agriculture teacher, specialist, or teacher educator in keeping current in animal agriculture. First, for the highly technical sources of research, information may be found in scientific journals, at scientific meetings, and through personal contacts with scientists in the field and industry specialists. Examples of related scientific journals that should be considered minimum readings for keeping current include: (1) JOURNAL OF ANIMAL SCIENCE, (2) JOURNAL OF DAIRY SCIENCE, (3) ANIMAL PRODUCTION, (4) FEDERATION PROCEEDINGS, and (5) AGRONOMY JOURNAL.

Second, and probably the most popular source of research, trends, and issues for the animal agriculture consumer is articles and research summaries in the popular press. Even with limited resources, the following publications are suggested for any agricultural library: (1) BEEF, (2) DROVER'S JOURNAL, (3) FEED STUFFS, (4) HOARD'S DAIRYMAN, (5) NATIONAL HOG FARMER, (6) PROGRESSIVE FARMER, (7) PURPLE CIRCLE AND/OR SHOWSTEER, (8) SHEEP BREEDER AND SHEEPMAN MAGAZINE, (9) ANIMAL NUTRITION AND HEALTH, and (10) THE STOCKMAN - THE GRASS FARMER'S JOURNAL. Also added to this list should be the breed magazines.

A third source of research information is Extension Specialists' mailing lists for: (1) Livestock, (2) Agronomy, (3) Entomology, (4) Agricultural Engineering, (5) Agricultural Economics, (6) Veterinary Medicine, and (7) Experiment Stations. These sources are usually at no cost to the consumer.

The fourth source of research information may be grouped into an area of public forums such as seminars,

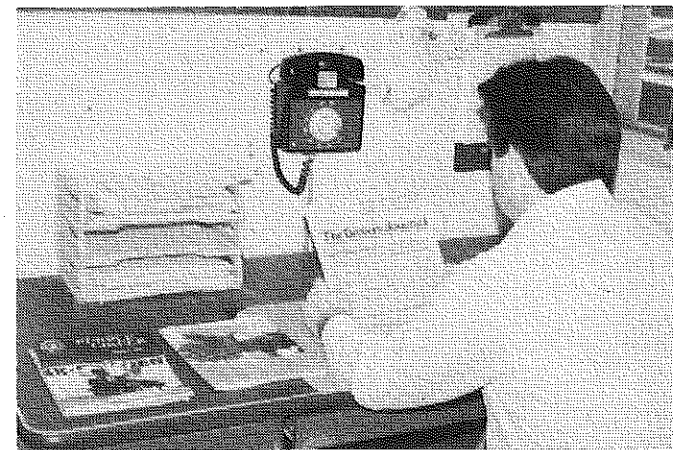
short courses, workshops, field days, fairs, and agriculture fairs sponsored by public and private groups with interests in animal agriculture.

### Conclusion

Having these resources on hand will not ensure that one will stay current in the field. Again, the authors wish to stress the point that as professionals in the field of agriculture, all must perceive it as part of their job responsibility to keep current. Accepting this responsibility, they will periodically plan time in their work schedule for reading and attending meetings that will contribute to their becoming more proficient in their field.

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Reading research and professional publications helps one stay current with latest trends and issues. (Photo courtesy of James Bob Drake.)

### The Cover

The swine industry is a prime example of the changes constantly occurring in the livestock industry. The rugged, high volume, loose middled "ideal pig" of the 1980s sharply contrasts with the tight middled, high muscled "ideal pig" of the 1960s and the long, tall, flat muscled "ideal pig" of the 1970s. Would any one care to predict what the "ideal pig" of the 1990s will look like? (Artwork courtesy of Ray Herren).

## THEME

# Inservice Activities Designed to Help Teachers and Extension Agents Assist with Livestock Enterprises

The continuing educational development of vocational agriculture teachers and county Extension faculty is an important responsibility of departments of agricultural and extension education. At the University of Florida, the Department of Agricultural and Extension Education meets this responsibility by conducting professional and technical inservice activities for teachers and Extension agents. Funding for these activities comes from the College of Agriculture, Cooperative Extension Service, and the Florida Department of Education, Division of Vocational Education.

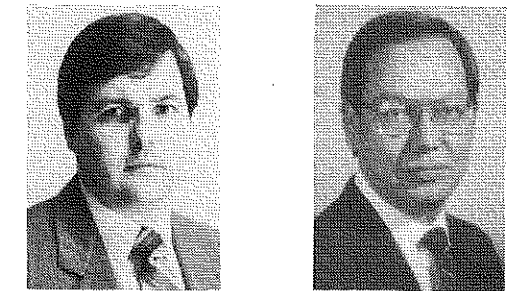
### Need for Inservice

Previous inservice activities for teachers and Extension agents relative to livestock topics heavily emphasized the latest industry information and techniques. For the teachers and agents with an animal science background, that information was perceived as very helpful. However, the greatest concern for many (some with little or no actual experience with livestock) was in how to help students and 4-H members who wished to start or continue a livestock enterprise. While it is important for students to be aware of the latest livestock innovations, such as embryo transplants and computerized livestock information networks, it is critical that they have success in selecting, raising, showing, and marketing their heifer, barrow, or lamb. The term "enterprise" rather than "project" is used in this article because of its connotation with entrepreneurship. Too often, a project is considered as a one time or short term activity rather than as something from which to expand or on which to build.

It is not unusual for teachers to have students from urban/suburban backgrounds whose parents have little or no experience with livestock. The teacher and agent who can help show the student and parents how to properly select, and care for a steer, boar, or mare will receive greater support and respect from that family. Similarly, 4-H Extension agents have members and volunteer leaders with the same needs and concerns. It was with these needs in mind that a workshop was developed to help teachers and Extension agents better deal with the livestock concerns of their students and members.

### A Practical "Hands-on" Workshop

It was determined by the Animal Science Department and the Department of the Agricultural and Extension Education at the University of Florida that three days would be needed to provide teachers and agents with the information and activities necessary to help youth with



By THOMAS L. CURRY & JIMMY CHEEK

(Dr. Curry is an Assistant Professor and Dr. Cheek is a Professor in the Department of Agricultural and Extension Education at the University of Florida, Gainesville, Florida 32611.)

livestock enterprises. Beef and swine were the types of livestock emphasized. To give different perspectives and most effectively utilize available expertise, specialists from the Animal Science Department, selected Extension agents, and vocational agriculture teachers were used to help present various topics. The University was chosen as the site for the program because of the availability of livestock, personnel, and facilities (including a meats lab). The workshop was designed to teach those competencies teachers and Extension agents needed in order to assist FFA and 4-H members in developing appropriate beef and swine enterprises. The following topical agenda illustrates the practical nature of the activities:

### Topic

- Day 1 -** Evaluation of steers and hogs on foot  
Selecting feeder calves (group participation)  
Determining and building appropriate facilities for livestock enterprises  
Management of newly purchased calves  
- implants  
- health program  
Halter breaking techniques  
Making a rope halter (group participation)  
Designing a feed program to fit the calf
- Day 2 -** Selection of enterprise pigs (group participation)  
Fitting, grooming, and showing swine (group participation)  
Show ring tips (do's and don'ts)  
Judging the finished project

(Continued on page 10)

## Inservice Activities Designed to Help Teachers and Extension Agents Assist with Livestock Enterprises

(Continued from page 9)

- Day 3 - Grooming, fitting and showing cattle (group participation)
- Evaluating the product
    - carcass data
  - Evaluating carcasses at the meats lab (group participation)
  - Holding a meeting with exhibitors to cover the results of the show and contents
  - Helping youth keep appropriate records (actual examples of 4-H and FFA record books handed out)

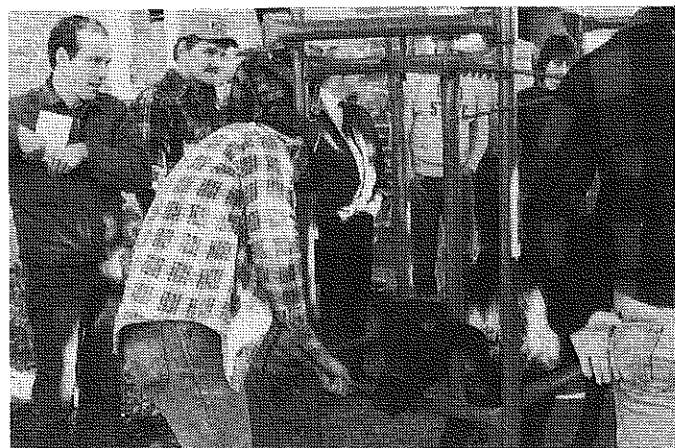
By the time the teachers or agents completed the workshop, they had been involved with all of the essential components necessary to help a young person secure, raise, keep records on, show and sell, or expand a beef or swine enterprise.

### Results and Conclusions

The first of these workshops was held in the summer of 1982. Twenty-three vocational agriculture teachers, 11 Extension agents, and one graduate student attended. Because of its success, it was determined that a similar workshop would be conducted every other year. An additional benefit to all who attended was the participation of both teachers and Extension agents. Many of them, through group interaction, found resources and support they had not used or were unaware of in their own or near-by communities.

Based on an analysis of the evaluations, comments, and observations of the 1982 and 1984 workshops, the following conclusions are drawn:

- This workshop was essentially helpful to new teachers, teachers with limited livestock experiences, and Extension agents with 4-H responsibilities.



Steer is restrained prior to castration exercise. (Photo courtesy of Dennis Scanlon.)

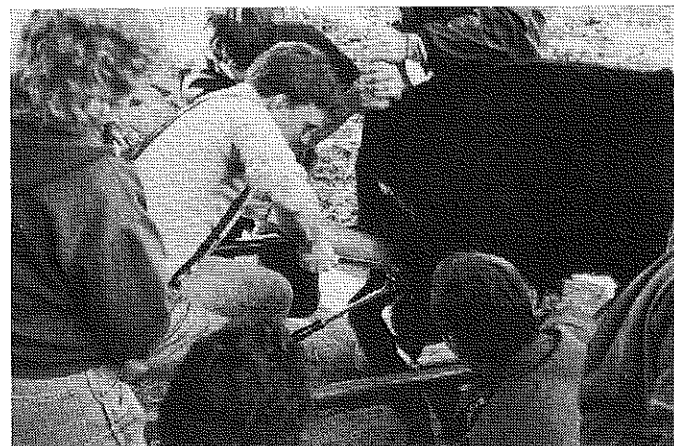
- The content and format were very appropriate.
- The workshop format provided a useful model from which to develop other animal enterprise workshops.
- The interaction between Extension agents and teachers was very important and should be promoted in more inservice activities.

### Other Inservice Activities

As the number of students and 4-H members from non-farm or ranch homes increases, so does the need for animal enterprises that can be used in more urban-suburban settings. In the summer of 1985, a workshop was held for teachers and Extension agents that emphasized poultry and game bird enterprises. The Poultry Science Department and the Department of Agricultural and Extension Education worked together in developing a workshop that was patterned after the 1982 and 1984 livestock workshops. It was considered an extremely helpful activity by all who attended. In 1986 there will be workshops emphasizing sheep enterprises, beef and swine enterprises, and meat related activities. They will all use the enterprise approach (from selection to marketing activities) that emphasizes actual teacher/agent "hands-on" participation.

### Summary

Livestock enterprises have and continue to be very popular ownership components of student Supervised Occupational Experience Programs and 4-H projects. The skills and experiences obtained by selecting, raising, and marketing an animal are very valuable to students in understanding entrepreneurship regardless of their occupational goals. It is therefore vital for teachers and agents to be able to provide practical livestock advice and help. With an increasing number of teachers and agents coming from non-farm or ranch backgrounds, it becomes more and more important to provide inservice training that emphasizes "hands-on" experience with livestock. While this type of education is expensive and time consuming to plan and carry out, it is more than justified by the increase in teacher and agent competence which in turn benefits youth.



Steer undergoing castration by one of the beginning vocational agriculture teachers. (Photo courtesy of Dennis Scanlon.)

## THEME

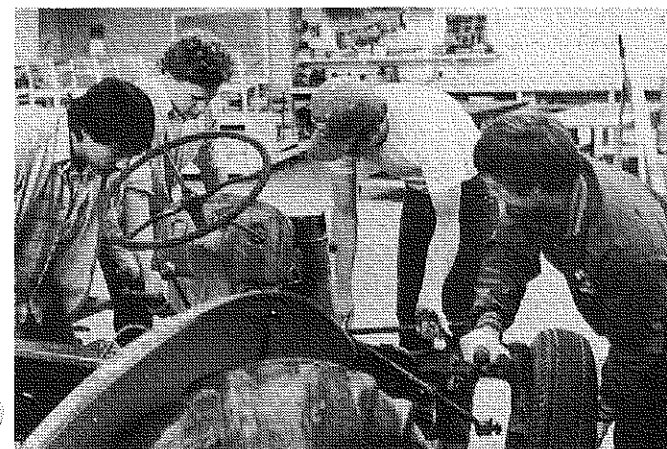
# The Community College's Role in Updating Skills in Agricultural Education

Whether they are called community colleges, junior colleges, or vocational-technical schools, America's post-secondary, 2-year institutions offer an excellent opportunity for updating skills needed in today's agricultural education. These programs provide a wide range of offerings and most include animal science. From complete programs leading to the Associate in Science or Arts Degree to specialized job training Certificate types of programs to simply on-demand skills development courses, their ingrained flexibility makes them an ideal resource for the high school vocational agriculture teacher. These schools fulfill a variety of needs and provide a valuable service in many diverse areas.

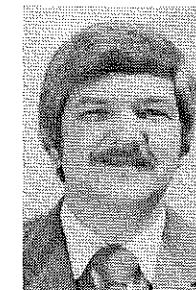
This article deals with the various functions of these post-secondary, two year institutions and how they are suited to provide needed updating of technical skills. Next, the ramifications to high school vocational agricultural programs will be explored. Finally, ways in which high school instructors can better utilize these resources will be examined.

### Institutional Missions

Comprehensiveness is the key word for many institutions of this type. The typical community college/junior college has a many faceted mission. First, it functions as a transfer institution, developing educational foundations for continuance at a 4-year college or university and, in most cases, duplicates the first two years of any college education. Next, one of the most important functions is to provide job-skill development and training for immediate employment upon completion of vocational courses. This



The philosophy of community college vocational programs is "hands-on education." (Photo courtesy of Mark E. Bender.)



By MARK E. BENDER

(Mr. Bender, an Agriculture Instructor at Modesto Junior College in Modesto, California, is currently on sabbatical and pursuing a Doctoral Degree at Oregon State University, Corvallis, Oregon 97331.)

can be part of a degree program or a vocational training certificate program. In either case, the objective is to provide the student with both technical and behavioral skills necessary to be successful in a chosen occupation. Another component part is to respond to community needs. This is in the form of short duration vocational and avocational courses designed to update and train in specific areas.

Vocational-technical schools concentrate on specific occupational areas and provide high level job training. This is not to imply that necessary attitudinal skills and academics are overlooked. On the contrary, most of these institutions recognize the need for the employee to have communicative skills as well as interpersonal skills and provide education in these areas also. In actuality, the major difference between the different post-secondary 2-year institutions is in name only. For this reason and simplicity, the remainder of this article will refer to these institutions as community colleges.

### A Resource For Updating

There are many reasons why community colleges are best suited to serve as a primary source for updating technical skill areas. First is accessibility and convenience. These schools are scattered over large geographic locations and are more readily available because of it. They are local in scope and are tailored to the agricultural needs of the community. They can react easily and quickly to trends that shape the local agricultural economy. Because of this, the community college parallels the high school program, emphasizing local needs.

Courses, many of which are taught at night, are convenient for attendance by high school teachers. Courses can be general, full-term, full-credit, like Livestock Breeding and Selection, Beef Production, Crop Production, or Plant Propagation or short term specialized courses like Fitting and Showing, Livestock Judging, Parliamentary Pro-

(Continued on page 12)

## The Community College's Role in Updating Skills in Agricultural Education

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cedure, Computers, etc. Some, especially the laboratories, can be taught on weekends. They can be taught at the College, an industry location, or even at the local high school. All that is necessary is a willing instructor and students.

Another side benefit is the contacts made in these courses. Many of the individuals taking them come from industry, are 4-H leaders, or are retired people, many of whom were involved in agriculture. They make up an additional resource to be called upon for help.

As deliverers of specific technical information, community college instructors concentrate on one or two subject matter areas (unlike vocational agriculture teachers who must teach a broad spectrum of courses) and thus can develop high levels of expertise in their particular areas. They are in close contact with industry and are involved in cooperative efforts with university Extension and county agricultural commissioners. In addition, they have the opportunity to attend industry and trade workshops, fairs and shows, and a variety of other activities designed to update their technical skills. Community college instructors are specialists, rather than generalists, and can provide information and training that is on the cutting-edge of new technology. But most importantly, they are teachers. Most community college instructors started their teaching career at the high school level. They hold an inborn fondness for high school vocational agriculture and the FFA and have a special understanding of the associated trials and tribulations.

Important is also the fact that the philosophy of community college vocational programs is "hands-on" education. This parallels the philosophy of high school agricultural education, i.e. education at the "doing level." Emphasis is not on theory and research, but on the applied techniques. Many skills learned by high school vocational agriculture instructors in community college courses can be instituted into the high school curriculum with little change. And they can be assured that the information is current, up-to-date, and has sufficient depth to more than adequately cover the subject.



Community college instructors are specialists rather than generalists. (Photo courtesy of Mark E. Bender.)

## Ramifications to High School Programs

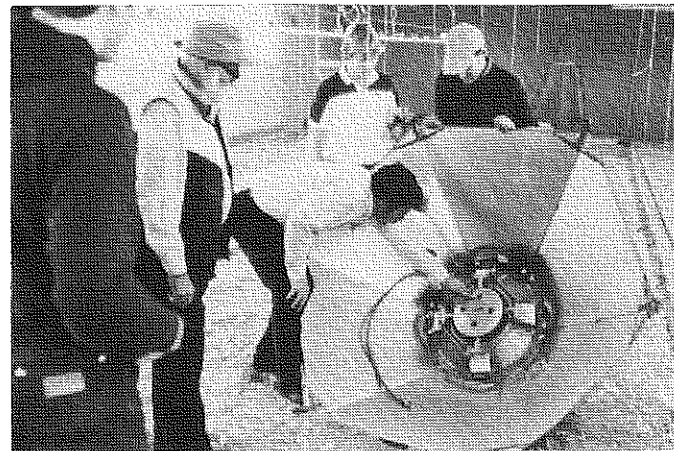
Helping update agriculture instructors is not the only advantage that the high school vocational agriculture program receives from the community college. Many times, community college facilities and equipment can be made available for vocational agriculture classes, enhancing the class and introducing the students to additional resources otherwise unavailable. Judging classes can also be set up using materials obtained from the local community college. In many cases, materials such as plants, seeds, books, soils, judging aids, etc., are provided free. Some colleges provide bulletins and newsletters in specific areas which provide information of a timely nature.

The individual community college instructor can also be a valuable resource. From answering technical questions on the telephone to providing in-class demonstrations, most instructors welcome the chance to interact with the local high school program and its students. Many community college instructors help obtain show animals and other materials for Supervised Occupational Experience Programs and can also communicate the availability of employment for Work Experience Programs. They can help coach a judging team or provide a practice site and expertise. Many officiate project competition, proficiency awards, and judging contests, as well as judge county and state fairs.

## Utilizing Community Colleges

Most community colleges welcome the input of high school agriculture instructors. After all, they want to serve their future clientele, but it goes deeper than that. Community colleges know that better prepared students coming from high schools means students with good foundations on which to build higher knowledge and technical skills. Suggestions for college courses are appreciated and if one of the existing community college instructors lacks the particular expertise, maybe someone in the high school ranks has a good understanding and could teach the course. The main element is communication. Without good interaction, the process breaks down. Think of the community college as an extension of the high school program: A 6 year concept with the high school curriculum providing educational foundations that interface with the

(Continued on page 13)



Community college courses, many of which are taught at night, are convenient for attendance by high school teachers. (Photo courtesy of Mark E. Bender.)

## THEME

# Staying Current: Animal Agriculture

How does one stay current in an industry which changes rapidly? Have you noticed what type of hog is being selected by producers and meat packers recently? If you have not been actively involved with selecting swine within the last six months, you would likely select for the wrong type of hog. This is just one example of the rapid change which occurs in the animal industry. Many other examples may come to mind such as drug and medicine restrictions; use of microcomputers in management; buying and selling; and ration formulation, to name a few.

So, how does a vocational agriculture teacher stay current in a dynamic and changing animal industry, especially when all of the other agricultural taxonomic areas are also changing very rapidly? The question may be just as appropriately stated, what can a university agricultural education program do to provide for the professional development of vocational agriculture teachers and thus help them stay current in animal agriculture?

There may be a number of options open to teachers of vocational agriculture aimed specifically at staying current in animal agriculture. The one factor which must arise out of any plan to stay current is that it had best be planned.

## A Professional Development Plan

In order to stay current in animal agriculture and all of the other agricultural taxonomies, a vocational agriculture teacher should develop a plan for his/her professional development. In this plan, the vocational agriculture teacher should identify his/her current strengths and weaknesses. This might be done by utilizing a self-assessment checklist of essential competencies for the vocational agriculture teacher. A self-evaluation on the competencies contained within such a list would give an excellent starting point for decision making. Many states now have such competency checklists and vocational agriculture teachers should contact their agricultural education departments at either their state department of education or their teacher preparation university to secure a copy.

Once the current skill and knowledge levels are assessed, the vocational agriculture programs advisory committee should be utilized to help the teacher prioritize the needed competencies. With the prioritization should come the development of a short and long range plan for acquisition of needed knowledge and skill competencies.

A vocational agriculture teacher should go about the process of developing a professional development plan utilizing this type of procedure because the alternative might be complete frustration over the amount of professional development needed versus the time constraint extended contracts impose. A well planned program for professional development will allow both the vocational agriculture teacher and his/her administrator and community to place priorities appropriate to community needs and thus, have a significant impact on the quality of the local vocational agriculture program.



BY LEE COLE

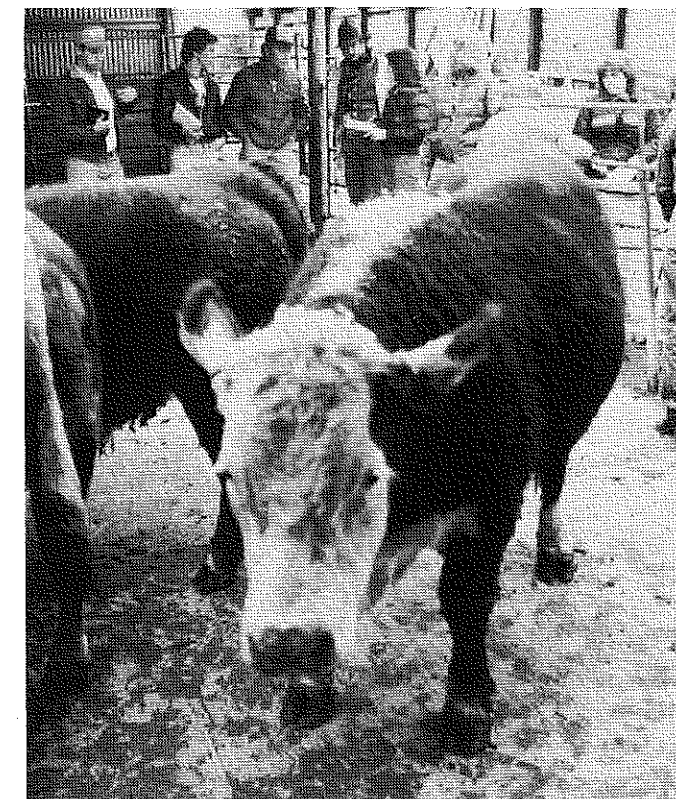
(Dr. Cole is an Associate Professor of Agricultural Education at Oregon State University, Corvallis, Oregon 97331.)

## Implementing the Plan

It is recognized that staying current may include learning activities in areas not previously covered in a teacher's preservice preparation simply because of changing industry production patterns, national consumption patterns, and/or international work potential for vocational agriculture teachers. For example, small animal production appears to be of ever increasing importance both within the United States and in international agriculture yet few preservice agricultural education programs contain substantial coursework in that area.

If the local advisory committee is to be involved with this planning process, a frank and open discussion about

(Continued on page 14)



Two-week course on meats started with live animal carcass evaluation. (Photo courtesy of Lee Cole.)

## Staying Current: Animal Agriculture

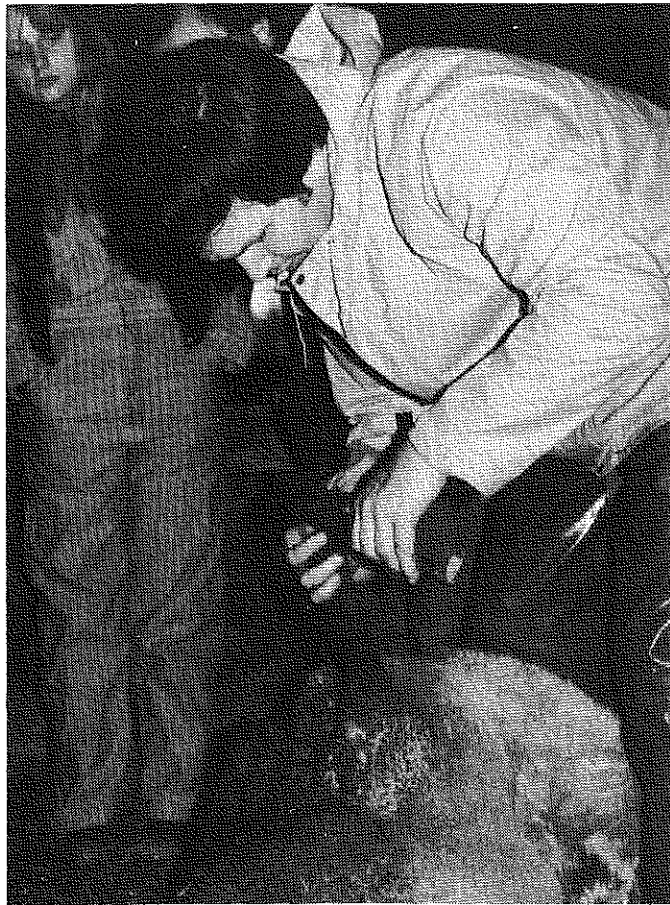
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the teacher's interest and desire in international work may be necessary. Most people recognize the value such experiences can bring to the classroom and are willing to consider various kinds of sabbatical leave situations.

The university education system must have the flexibility to deal not only with the changing animal agriculture, but also with the fact that vocational agriculture teachers work on extended summer contracts, thus the courses taken by these teachers must be structured with these unique constraints in mind. It is nearly impossible for vocational agriculture teachers to take time for normal summer school activities (normally eight weeks or more in duration). Therefore, one and/or two week short courses in technical areas like animal agriculture must be made available to vocational agriculture teachers. If these one and/or two week short courses are taught by individuals from the animal industry, and ample practical application and hands-on skills are a foundation for the instructional program, then the necessary updating will take place.

### Skill Development

The foregoing statement contains a rather significant assumption. We must get courses to the doing level, and that might be difficult in one and two week short courses. It takes good planning and coordination to get short dura-



Foot rot is a major problem in rain-soaked Western Oregon, and skills classes must include this topic. (Photo courtesy of Lee Cole.)

tion courses to the doing level. If the courses never get to the doing level, they are usually of little benefit. Vocational agriculture teachers teach applied science and if they cannot apply the science and do the skill connected with the scientific knowledge, then their students will have gained little.

There must be a commitment on the part of the university offering the course to get to the doing level. An illustration may be very helpful at this point.

Last summer we sponsored a course on meats — wholesale and retail cuts, judging, and consumer concerns. In addition to teaching technical information about meats and the meat industry (i.e. cutting, judging, and consumerism), we also had the teachers slaughter animals and then cut and wrap meat all in a two week course meeting four hours per day. Teachers participating in such courses make their most positive evaluative remarks about the value of the "doing" section of the courses. The doing of the activity becomes the necessary repetition and reinforcement for knowledge learned in the classroom. The teachers actually learn the material better because the extra time was spent getting to the doing level.

It is critical that an appropriate amount of a subject matter be selected for study if doing is a key component to such a course. Sometimes college courses try to cover too much material and do it poorly, thus the participating teachers feel their time might have been better spent at home. Technical courses should generally take smaller amounts of information and teach it more completely by getting the participants to the doing level. An old axiom says, "Do what you do do well." This axiom has application in both high school and college curricula.

### Concluding Comments

A final point which may assist in long term gains in information and skill for vocational agriculture teachers would be that the agricultural education staff should work with teachers during the last several hours of the short duration workshops to help convert the technical information, skills, and activities into useful curriculum. Thus, the vocational agriculture teachers could finish the workshop with a usable and useful end-product (the curriculum).



One- and two-week courses on animal skills can cover a variety of topics and species of livestock. (Photo courtesy of Lee Cole.)

The curriculum which was the end product of each of these workshops should then be made available to all other vocational agriculture teachers in the state. This general distribution would have impact in two ways. First, those teachers who have been updating their knowledge and skill through contact with industry would have a usable organized curriculum with which to teach. Second, those teachers who had little or no updating on the subject could

gain much needed information from the curriculum and perhaps would then seek additional help as they saw the need. This additional help might come from peers, state staff, or university staff, but the end result would be a better prepared vocational agriculture teacher.

Agricultural education university staff members, the challenge is before you. Quality inservice educational programs should be followed by quality curriculum.

## THEME

# Quality Animal Science Laboratories

Today, more than ever changes are taking place in the technical areas of our profession. A major purpose of change in agriculture is increased production. However, to adopt alternative practices requires that we believe that increased production will be the result. As teachers, we are willing to try new practices which are reasoned or proven to be beneficial. However, we know that for many people, demonstration of new technology is much more convincing and is better received than verbal descriptions.

The use of demonstration farms has long been hailed by vocational agriculture and the Extension Service as a viable means to demonstrate new technology or practices and their benefits. It is an effective method of keeping students and adults current in the area of animal science. Many vocational agriculture departments have developed mini-farms (animal science laboratories) on or near the school campus. The purpose of these farms is to provide students and adults an opportunity to demonstrate and practice basic as well as new and innovative practices.

### Need for Animal Science Laboratories

Students seeking occupations in animal science have a clear need for experience in dealing with live animals. Whether a student plans to be self-employed, work for others, or seek advanced training, a strong background in the basics of livestock management is necessary. An increasing number of students are enrolling in vocational agriculture with limited production backgrounds. If these students are to reach their desired occupational goal in animal science, we must provide them with experience. Even if some students may not seek to become directly involved in production, their job in the animal science industry may depend on production; therefore, their understanding of livestock management is necessary and should be encouraged.

Not only do we have students with no production backgrounds, but we also have students with poor production backgrounds. For various reasons, many producers operate at less than optimum efficiency. If the problem of "doing as Dad does" is to be changed, then students must be exposed to a better way than "Dad's" and a demonstration and explanation of why it is better.

To adults engaged in production, we need to be able to demonstrate and explain new and innovative technology



BY DAVID M. AGNEW & BILL VESTAL

(Dr. Agnew is with the Department of Agricultural Education at the University of Nebraska, Lincoln, Nebraska 68583-0709; Mr. Vestal is the Vocational Agriculture Teacher at Riverside High School in Parsons, Tennessee 38363.)

or management practices in a setting similar to theirs. Most people will adopt new practices if they can be shown that changes will bring about improvements. The school is an unbiased setting which can provide that evidence. In teaching basic principles or learning new procedures, the likelihood of adopting a technique by students or adults is increased if they are provided an opportunity for immediate practice under supervision. The animal science laboratory provides students this opportunity with immediate feedback from the teacher.

One of the most important benefits of an animal science laboratory to the overall program is increased student involvement. Not only are students given the opportunity to increase their knowledge through hands-on experience, but they obtain self-satisfaction by seeing first-hand the rewards of their labor.

School farms or laboratories are also very visible. Therefore, their potential for making a positive, progressive image for the vocational agriculture program is very real. Community involvement in the vocational agriculture program can be greatly increased as a result of the school farm. Through the support and advice that members of the community contribute, they become part of the program and develop a feeling of pride in knowing they are contributing to a worthwhile program that builds the community.

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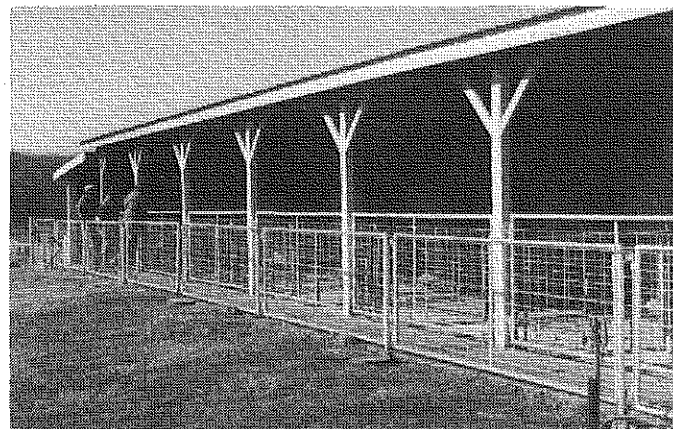
## Quality Animal Science Laboratories

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### Three Model Programs

In west Tennessee, three schools have developed model instructional animal science laboratories (school farms) that reflect the sincere effort to allow students and adults to practice current management practices in a realistic setting. These programs, located in some of the largest pork producing counties in the state, reflect the needs of the community. The first school farm, located at Dresden High School in Weakley County, Tennessee, has what many consider the largest and best kept animal science facilities in the state. The teachers are Larry Houston and Ray Griffith. Since its beginning, the farm has gone through a transition from an FFA project to an adult program operated by the state and back to a mini-farm operated by the vocational agriculture department. When the new high school was being built, vocational agriculture students erected a 10-stall farrowing house and tractor shed behind the new school on property owned by the school district. As the program expanded, it was administered as an area vocational school for adult and several new buildings were erected. At present, it is operated by the Weakley County Board of Education which hires an additional teacher to manage the farm. Students enroll in the program from six high schools in the county and work totally with livestock projects. The animal science laboratory operates with over 40 sows and about 10 brood cows and calves.

The second program is located at Huntingdon High School in Carroll County, Tennessee. The teachers are Max Walker and Guy Ward. Unlike the program at Dresden, this program serves only those students at Huntingdon High School and is operated by the students in the local program with the finances channeled through the FFA chapter. The buildings and equipment were funded primarily by a grant from the State Department of Vocational Education and local (FFA) funds. Although it did not begin as such, Huntingdon is now a two-teacher department with both teachers using the facilities for instructional purposes with one teacher responsible for the farm operation and maintenance. The facilities include a six-stall farrowing house, a feeding floor, grain handling facilities, a storage shed, and sow houses. The farm runs



The school sets the standard for an efficient operation that students can learn from and apply. (Photo courtesy of David Agnew.)

from 18 to 24 sows and sells feeder pigs, market hogs, and sells or keeps some gilts for herd replacement.

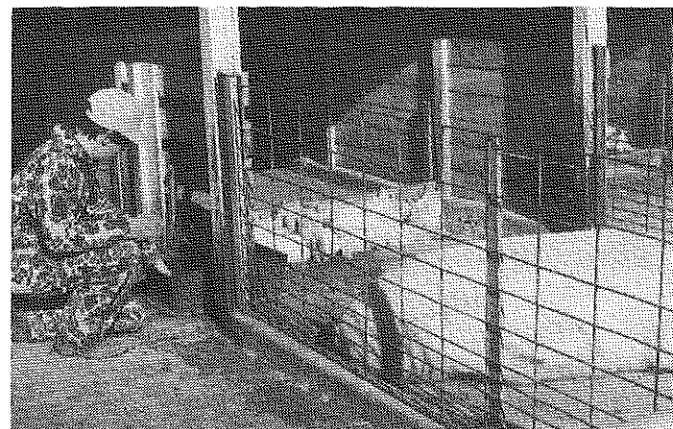
The third school farm is located at Riverside High School in Decatur County, Tennessee. The teacher is Billy Vestal. Unlike the first two schools, the livestock are not all owned by the FFA or vocational agriculture department. Some students house their livestock on-site. The farm started when the county court provided money to the school board for the erection of a 10-stall farrowing house. The original building was the only building on the farm not financed by the FFA Chapter or the FFA Alumni. The vocational agriculture department presently operates the facilities with eight sows and has had as many as 20. In addition to the farrowing house, the farm has a modified feeding floor, a beef barn, a tractor shed, several sow houses, and a classroom building.

### Purposes of School Farms

Although all schools use their farms in several ways, improvement of instruction is the primary function. Students in each school get hands-on experience in the daily management of livestock. Students apply basic and advanced principles learned in the classroom such as mixing rations, hand versus pasture breeding, castration, marketing, computing rates of gain, determining feed conversion ratios, operating and maintaining equipment, using an electronic backfat tester, practicing paravetic techniques, experimenting with different feed rations, and artificially inseminating school-owned cows. Cows are observed by the students from the time of breeding through gestation and calves can be observed as students progress through the program. Students receive experiences not possible at home. Classes meet two to three hours each day with a part of the instructional time spent in the classroom. The foundation of their successful school farm is a quality instructional program. Besides the specialized courses in animal science, other agricultural classes have direct access to the facilities when studying animal science.

### Supervised Occupational Experience

At Decatur County High School, the farm is used extensively by students in conducting supervised occupational experience programs. The FFA Alumni own livestock kept in the facility to be used in the instructional program, but



Students learn to monitor and maintain the operation for maximum production. (Photo courtesy of David Agnew.)

students are also allowed to keep livestock in the facility if they don't have facilities at home. Students often begin an SOEP Program by purchasing one or more animals from the school or someone in the community while they build or expand facilities at home. Some students feed out steers, lambs, and swine and exhibit them in local and state fairs and shows. One very popular program for "non-farm students" is purchasing of feeder pigs, feeding them out at the school, and then showing and selling them at the County Fair's Junior Market Hog Show.

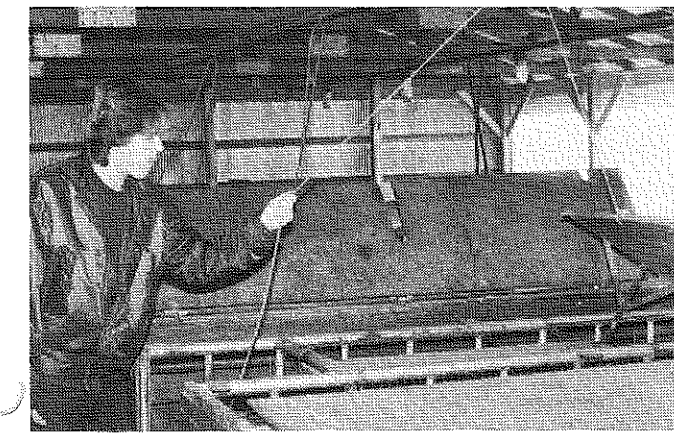
Some students are allowed to complete their requirements for an SOE Program by managing the school farm after school or during study hall. In a time of increased emphasis on SOE programs, the school farms provide additional avenues for many students to meet the requirement of an SOE program, thus making it truly vocational.

Livestock chains have long been a part of many vocational agriculture programs. A school farm allows a chapter to have livestock at its disposal to provide for the student's first pig, calf, or lamb. Programs such as these allow students, who otherwise lack the financial resources, to get started in a livestock program. Also, the Dresden program provides swine to other vocational agriculture departments to start pig chains.

### Adult Education

Vocational agriculture departments are increasingly encouraged to provide training for adult members of the community. Many farmers in the school's service area still operate inefficient facilities. The school farm also exposes farmers to new ideas through observation of activities or night classes. Knowledge of improved methods of management is gained by farmers observing the school's livestock facilities in use. It is not uncommon for farmers or others interested in the program to drop by the school to view the farm in operation.

Adult classes which range from a single session to a series of sessions are taught by the vocational agriculture instructor or in some cases, by a specialist from the university or industry. On several occasions, agricultural businesses have used the school facilities to conduct programs or demonstrations. The Extension Service has used the school facilities in conducting tours showing different types of operations in the community. The farm at Dresden was used for many years by a local adult area voca-



On the school farm, students experience the full range of activities they would find in a real swine operation. (Photo courtesy of David Agnew.)

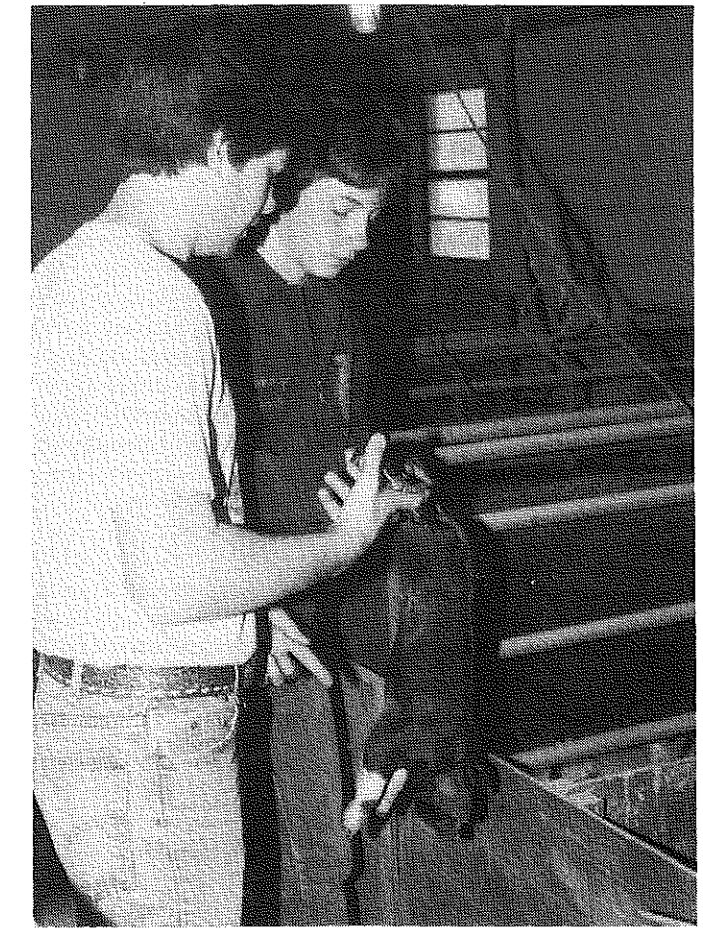
tional school for instruction. In some cases, local farmers are taught to use new and specialized equipment owned by the school which results in the acceptance of the equipment and gains support for the program.

### Management

In each program, the manager of the school farm is a full-time vocational agriculture instructor at the school. Riverside has a single teacher department. Huntingdon has a two-teacher department with one teacher being primarily responsible for the management of the farm. Dresden is unique in that the Board of Education hires a separate teacher to manage the school farm. This is the only example where teaching animal science courses and managing the school farm are the teacher's only responsibilities. Each school's program includes an animal science course or a production course that is responsible for the operation of the farm.

At Riverside, the finances of the school farm are handled through the FFA Alumni. The Alumni own the school livestock and pay for the feed with money obtained from the sale of those livestock. The local instructor, the FFA Alumni, and the Alumni Board of Directors play an important part in the farm's management. The FFA Alumni paid for the classroom building in one year, partly with money from the sale of farm livestock. In addition to managing the farm, the instructor teaches a traditional agriculture

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Opportunities for laboratory activities are within a few minutes walk of the classroom. (Photo courtesy of David Agnew.)

## Quality Animal Science Laboratories

(Continued from page 17)

production program offering Agricultural Science I and II as well as Agricultural Production. The Alumni raise registered stock which is available for sale to students who wish to participate in fairs and shows.

At Huntingdon, the finances are channeled through the FFA account. Since the initial buildings and equipment were paid for by a state grant, the farm has been able to build a cash reserve. A major goal of the operation is to be financially self-supporting. The department keeps replacement gilts and only buys replacement boars from performance tested sales. The managing instructor is faced with the same management decisions that a local farmer must face. In addition to managing the school farm, the teacher also teaches other vocational agriculture classes.

At Dresden, one teacher devotes full-time to teaching animal science classes and managing the farm. Since the students are members of the FFA Chapter in another school, the teacher's other responsibilities such as contests and fund raising are reduced. However, management decisions are of increased importance because the program must finance itself and half of the managing teacher's salary.

The program is a financial success since it also is operated for a profit. The finances are channeled through the central office of the county, freeing the instructor of bookkeeping tasks. Management decisions made by the instructor include the size of the operation, the breed of animals to use, selection, and buying of all animals. Although he does not handle the money, he does all the buying and selling. Because of the pressures of financial independence, his management decisions become very difficult at times.

### Beyond the Community

Each of the three programs discussed have been used with inservice education programs for vocational agriculture teachers in the state. During construction of the facilities at Huntingdon, a vocational agriculture inservice class on electrical wiring met at Huntingdon High School and teachers completely wired the building. Teachers from

other schools have visited these programs for individual inservice credit.

Since students from other schools tour the facilities, the school farms have benefited other vocational programs as well. When FFA contests have been held at these schools, contest participants are usually taken on a tour of the facilities. In fact, when Riverside began discussing the possibility of building a farrowing house, members of the class and alumni visited the program at Dresden to get ideas on how to proceed.

### Summary

There are many advantages to having a school farm or animal science laboratory. However, not every school could or even should have such a program. In all three programs, the teachers state, "If it was to be done over, they would work toward the establishment of a school farm." However, before other teachers establish an animal science laboratory or school farm, they recommend considering the following factors:

1. the availability of land,
2. the cooperation of the administration,
3. the financial needs for construction and equipment,
4. community support and need, and most importantly,
5. an instructor willing to devote the necessary time and energy required to develop the program

By far, the biggest disadvantage to operating an animal science laboratory or school farm is the money and time required to manage the operation. Just as it is harmful to the vocational agriculture program for a teacher to devote all of his/her energies to the FFA, it is harmful to the vocational agriculture program as a whole if it devotes all of its money and energy to a school farm.

School farms or animal science laboratories do help teachers stay current and are able to demonstrate new practices or technology and provide students with opportunity to practice and refine those new techniques or management practices. Not only are there advantages to the students or adults in the community, but the teacher and the program as a whole benefit from the visibility of the activity. In a time of difficult economic conditions in rural areas, the stability of the farmers can be helped by educational programs that reflect state-of-the-art technology, production methods, and management practices.

Coming in August . . .

## Staying Current With Youth Organizations

## THEME

# Keeping Current in Animal Science

While student teaching I realized how important it is to keep current in animal science. I found when talking to producers and students with animal science SOEPs how quickly one can lag behind the current thinking and practices.

As a student, the remedy seemed logical . . . take more classes. However, with more thought, more problems came to mind. These problems included cost, time, and validity. How much would these extra classes help when the classes I took two years ago are already obsolete? Also, when I am teaching, I doubt I will have the time to take many classes other than summer school graduate work. This brings us to the problem at hand: How do we stay current in animal science?

The key is to make effective use of time allocated for remaining current in animal science. Three possibilities are workshops, county and state fairs, and periodicals.

### Workshops

There are many advantages to effective workshops. Information can be directed toward a particular geographic area, most questions can be answered immediately, and specific information can be presented. Workshops can be more specific than a class and less time consuming, thereby leading to more productive use of the instructor's time. While workshops have traditionally been the tool to remain current in animal science, they do have their drawbacks. They may be difficult to work into the busy schedule of a vocational agriculture instructor. Also, they may be expensive and time consuming to prepare. Also, finding a person who is qualified to present the needed information can be hard to locate and schedule.

### Fairs

County and state fairs offer an excellent opportunity to pick up information to help keep current in animal science. A common scene I see at fairs is this: Instructors gathering around a central area — visiting. I realize this may be the only time he or she may have in a hectic day for any relaxation. However, while an instructor is relaxing, why not do it along side of the show ring? Many times an instructor is required to be there as a superintendent. Why not make the best of that time? Look at what is available to an instructor at no cost — the judge! In most cases, the judge is an expert, whether that person is a commercial producer, a purebred breeder, or a professor of animal science. Much can be learned from these experts.

One can add information to an area in which he or she is proficient or use this as background information. As with anything, judges are not always perfect. This situation is more common at the county level. Sometimes the judge is from the local area and may have a strong background in animal science, yet he or she could be behind on the cur-



By PAUL ANDERES

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rent practices and technology of animal science. At the other end of the spectrum, a judge too forward thinking can pose a problem by advising practices that are not proven. Be careful not to confuse extreme trends with practical practices.

Talk with the judge after he or she has made a decision. Do this whether or not you agree with that decision. In most cases, judges are more than willing to share ideas and answer questions. Many times you can learn from either school of thinking. Further explanation may make their decisions more meaningful.

### Read Periodicals

Perhaps the most effective use of time while trying to stay current in animal science is reading periodicals. These periodicals cover a wide range of topics. This information is probably already in your classroom and can be anything from trade journals, breed association mailings, to Extension bulletins. In many cases, periodicals make up a substantial part of the agriculture department's budget. An instructor may benefit from these twice: Once while the students read them and second when the instructor reads them. Time may be saved by using the students to identify articles that are worth reading. Also, by quickly skimming the information when you receive it, articles can be targeted for reading at a later date. These targeted articles can be located and read in a limited amount of time. The problems with magazine articles are that they often are not applicable to your particular area and the information in them may not give you the specific information that you need on a topic. Even with these disadvantages, periodicals can be a great asset to help you stay current in animal science.

### Summary

Keeping current in animal science can be done without taking too much of your valuable time if you are aware of opportunities to gather information. Workshops, fairs, and periodicals are but a few methods of remaining current. Tours, speaking with producers, and the traditional classes are other options. All you need to do is keep your eyes open for every opportunity to remain current in animal science.

## The Community College's Role in Updating Skills in Agricultural Education

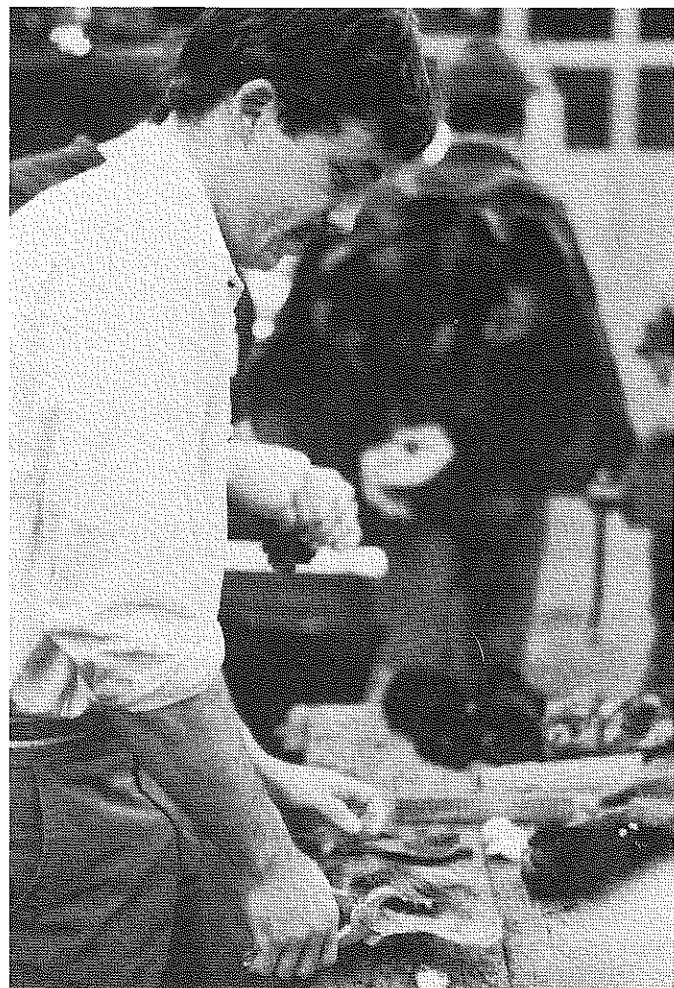
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community college curriculum and each segment complementing the other. As such, the community college has a vested interest in helping high school agriculture instructors update their skills and be knowledgeable of current technology and industry trends in animal science and other areas of agriculture.

Don't hesitate to ask for help. Suggest courses that need to be taught, the time frame, and where they need to be taught. Become knowledgeable of the community college program, its facilities, and its instructors. Request classroom speakers and demonstrations and tours of facilities. Whenever the opportunity arises to interact with the community college, do not hesitate to take advantage of the offer. Many community college instructors live in your community and have good knowledge about your program. Ask for input on advisory committees, livestock sale booster committees, and encourage participation in local and state agricultural education professional associations.

### Summary

In closing, it seems that we often overlook the best opportunities because they are close to home. It is a matter of effort expended for benefit derived. I believe that there is no better opportunity for professional growth and updating of technical expertise than the community college. Just as there is no better occupation than teaching and specifically agriculture teaching, there is no better reward than the feeling of a job well done. It is a great responsibility. After all, the only people it can help are the most important, our students.



Tattooing practice using scrap ears from local butcher. (Photo courtesy of Dennis Scanlon).

## BOOK REVIEW

**TIMBER MANAGEMENT: A QUANTITATIVE APPROACH** by Jerome L. Clutter, James C. Fortson, Leon V. Pienaar, Graham H. Brister, Robert L. Bailey. New York, New York, John Wiley & Sons, 1983, 333 pp.

**TIMBER MANAGEMENT: A QUANTITATIVE APPROACH** was written with a principal objective of presenting clear and complete treatment of the planning and decision making methodology used in intensive timber management for both students and practicing professionals. The organization of the book is intended to be used as a college level text or a reference.

This book is subdivided into three component parts. Part 1 contains Chapters 1 through 4 and concerns aspects of forest mensuration that are directly related to timber growth and yield predictions. It requires some

basic knowledge of tree measurement techniques. Part 2 consists of Chapters 5 & 6, and provides a basic coverage of forest finance, taxation, and risk calculation. It assumes no prior training. Parts 1 and 2 are designed to be studied independently of each other. Either part can be studied or taught without reading the other. Part 3 consists of Chapters 7 through 10 and requires a knowledge of concepts developed in Parts 1 and 2. It deals with timber management analysis and decision making. Part 3 also deals to a large extent with what has been referred to as forest regulation.

This book has an extensive and detailed Table of Contents which aids in quick and easy access to information. The book contains very detailed information written by 5 professionals with approximately 100 years of ex-

perience, for employees in seven countries across four continents.

**TIMBER MANAGEMENT: A QUANTITATIVE APPROACH** is a very good reference for college seniors dealing with natural resources and as a teaching aid for natural resource instructors involved in modern timber management, especially Part 1 which deals in detail with the methodology involved in estimating weights, and volumes and evaluating site quality. Part 2 breaks down the fine points involved in forest investments.

The authors developed a quality reference that updates the student on the immense progress made on quantitative planning in the past two decades.

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Central Ohio Technical Center  
Plain City, OH

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animal science updating and their options for improvement. They can assist teachers who desire professional improvement by encouraging the use of a variety of methods of providing inservice to teachers, emphasizing creative approaches that are efficient and effective. The agricultural education profession relies often on teacher educators to initiate, plan, support, and arrange for the delivery of various inservice activities in agriculture. Teacher educators must continue to respond to this challenge, thus helping to ensure up-to-date teachers and high quality vocational agriculture programs now and in the future.

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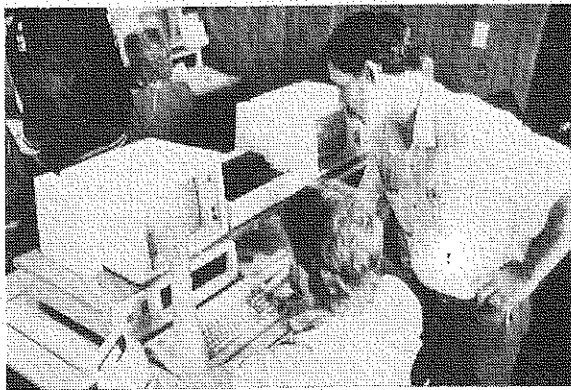
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# Stories in Pictures

## Staying Current in Animal Agriculture Means Staying Current in Many Areas.



**Computers**



**Reproductive Technology**



**Selection**



**Management Techniques**

Photos compliments of Mark Bender, Modesto Community College, Modesto, California.