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Number 10

THEME
SOEP: Laboratories

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AGRICULTURAL EDUCATION
MAGAZINE

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EDITOR'S PAGE

Discussion on the Quality of Education: Establishing a Posture

BY LARRY E. MILLER, EDITOR
(Dr. Miller is a Professor in the Department of Agricultural Education at The Ohio State University.)

In the December issue of the *Phi Delta Kappan*, Stuart Rosenfeld presents an eloquent rationalization of some of the benefits provided through vocational education in agriculture. His article, (p. 270) entitled "Something Old, Something New: The Wedding of Rural Education and Rural Development," should constitute compulsory reading for every professional in agricultural education.

Many of the contributions he enumerates have been made by vocational agriculture are directly related to the articles appearing in your magazine over the past fifteen month term of the Editor. Regardless, it is reassuring to hear the plaudits, with which we are so intimately familiar, voiced by someone outside the profession.

Several of the recently released studies on public education in the United States have not been particularly complimentary to vocational educaiton; granted, some seemed not to realize that it existed. Agricultural educators are staunch proponents of quality education. They will always be found in the vanguard of the advocates of high quality education. There is always room for improvement and vocational agricultural teachers, concerned with the welfare of their students, will willingly lead the way.

Rosenfeld points out the contributions of vocational agriculture specific to rural America. We well know that our programs are not confined exclusively to rural areas. The contributions made by vocational agriculture to students wherever they are and to rural America are profound, if not explicitly quantifiable.

Another Viewpoint

The January 1984 issue of the *Phi Delta Kappan* carried an article, entitled "Vocational Education and Job Success: The Employer's View" (p. 347), by Wellford W. Wilms. He conducted a study of employers in downtown Los Angeles and in Torrance, California. A conclusion he draws is that ". . . secondary and postsecondary programs in vocational education, as they currently exist, are not meeting the needs of a great many U.S. employers." The statement leaves one wondering how representative the two areas are of the rest of the United States to whom he generalizes, and what was the nature of the employers studied. Is the author knowledgeable of all of the facets of vocational education which he "suggests" are not meeting the needs of U.S. employers? Are any of the employers described by Steve Pietrolungo, Vocational Agriculture Instructor at Canoga Park High School, in this issue among those surveyed?

Given the Rosenfeld article, one can see that vocational agriculture has made many contributions of an entrepreneurial nature. All of our graduates from vocational agriculture do not become employees, but many become the employer and provide some of the 86% of the new jobs available in the private sector which Wilms noted.

The suggestions made by Wilms leaves the general impression with readers that vocational education is not fulfilling its mandate. He suggests more attention should be paid to small firms, but has he studied the Minnesota Small Business Management program? He suggests that "local councils representing private industry and educational institutions could be established," but has he studied the workings of the many advisory and craft committees already functioning effectively? He calls for a "consortia of providers" to provide training to meet the needs of employers, but is he aware of the consortia arrangements already functioning in Ohio?

Reaction

The critics of education seem to be emerging out of the woodwork. In vocational education in agriculture, let us use these studies constructively to further improve our program. Let us remain optimistic and continue to tell the story of the good things our programs do for students. One good way, of course, for vocational agriculture teachers to tell the story is through THE AGRICULTURAL EDUCATION MAGAZINE.

The Cover

Many unique laboratory experiences are provided to vocational agriculture students. Here, vocational agriculture students in Elma, Washington, are actively involved.

Many of the salmon are returned for later harvest and were specially marked when they were fingerlings with a platinum wire in their nose. These wires have been coded with considerable data which will give the fisheries' biologist information about the salmon habits. The students must watch for fish with the back fin removed, as those are the coded research salmon. The salmon are measured, nose-tagged and removed for shipment to the state laboratory. (Photography courtesy of Clarence Pearson, Vocational Agriculture Instructor, Elma High School, Elma, Washington 98541.)

SOE: Laboratories

By. H. Dean Sutphin, Theme Editor

(Editor's Note: Dr. Sutphin is an Assistant Professor of Agriculture and Occupational Education, Department of Education, Stone Hall, Cornell University, Ithaca, New York 14853.)

The agriculture profession has from its inception used laboratories in the school and community as vehicles for implementing the principle of "learning by doing". Traditionally, agriculture teachers have used laboratories for student practice as the application stage of in-class instruction. Laboratory use for supervised occupational experience (SOE) programs, which is the theme of this issue, has not been as popular a practice by teachers in the past.

Laboratories, whether they are used for in-class instruction or SOE, enhance the teaching and learning process and develop competencies needed for placement in agricultural careers. The best use of laboratories occurs when they closely replicate the agriculture work place in terms of equipment, design and operation. Similarly, all SOE programs should help teachers "bridge the gap" between school and the work place. SOE by definition (Lee, 1980) is "an individually planned, continuous program to develop the competencies needed for occupational entry by a student". The focus of any type of SOE should not be on a requirement for class credit, but on the opportunity it provides for students to maximize their learning and opportunity for placement and advancement in an agricultural occupation.

Opportunities For Students

A high priority concern among many agriculture teachers today is the need to identify opportunities for their students to develop high quality occupational experience programs. Diverse student agricultural occupational interests, the increasing number of students from urban and suburban backgrounds, a decline in the number of farms, and a tight economy are a few of the barriers to involving every vocational agriculture student in SOE. Yet, a recent research study (Sutphin, 1981) indicated that approximately 98% of the "experts" in agricultural education believed that all agricultural students should conduct an SOE program.

A Viable Option

The Handbook for Supervised Occupational Experience used during the National SOE Workshop in July of 1981 recognized laboratories as one viable option for implementing SOE. Placement experience opportunities according to the Handbook include "Directed Laboratory" which could be conducted either at school or on community owned facilities. This practice sometimes does not involve ownership or pay, although such are preferable. The increasing popularity of using agricultural laboratories including greenhouses, crop land, orchards, livestock, mechanics and conservation areas (Williams, 1980) as a means of providing SOE indicates that teachers are seriously exploring all their options for introducing and implementing SOE.

The articles which follow address various positions/ideas with regard to issues and questions associated with the use of school and community laboratories in the supervised occupational experience program. The issues/questions addressed include:

1) To what extent can school and community laboratories be used for viable occupational experience programs?

2) What are the benefits and limitations of laboratory SOE?

3) What specific activities in school laboratories can be legitimately considered as supervised occupational experience?

4) What are the appropriate options for students assuming ownership and responsibility for profit and loss of projects conducted at SOE laboratories?

5) What changes/adaptations in school laboratories are needed to accommodate SOE?

6) What role should the state education department and teacher education programs play in assisting teachers to explore SOE: laboratory opportunities?

7) What guidelines will need to be implemented in order to insure high quality laboratory SOE?

Vocational agricultural teachers who wish to use the laboratory as SOE will need to consider the ideas and options addressed in the articles in order to develop a policy statement for their program. Communicating this policy to administrators, supervisors, students and parents is important to obtain the endorsement and support of key individuals, provide SOE opportunities for our students and insure cost effective use of scarce educational resources.

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Laboratory SOEP: What Are The Options?

By Clarence Pearson

(Editor's Note: Mr. Pearson is a Vocational Agriculture Instructor at Elma High School, P.O. Box 698, Elma, Washington 98541.)

Laboratory supervised occupational experience programs are the opportunity many young people with a keen interest in agriculture are searching for in their secondary vocational education training. If it were not for the laboratory SOEP exposure, many students would be totally deprived of the frustrations, problem solving and true feeling of success that can be gained in production agriculture and agribusiness situations. The actual SOEP instills within the student two of the most important qualities, "common sense and good attitude" which are so often lacking in those with only theory exposure. It is through experience that the individual is able to visualize the true picture of agriculture and agribusiness.

As professionals, agriculture instructors should take the time to study the type of home situations from which each of your students come. A teacher should also take a survey of those students not in the program. What are their home situations? Are they interested in agriculture? Are you offering anything that would interest them? Are you really meeting the needs of the youth in your community?

Remember, things have changed in agriculture since you came to that community five, fifteen, or twenty-five years ago. Agriculture used to be one of the basic subjects in many early American school curricula. Therefore, as professional agriculture instructors, we need to look at ourselves, the curriculum, the community, and its needs to make sure we are truly professional agriculturalists meeting future challenges.

Local Situation

How are we bridging the gap in Elma, Washington, which is changing from a total rural community to a suburban or urban situation for many of our students? It has been through the use of not only one type of laboratory project but many, and our students are nearly 100 percent involved in agriculture or agribusiness. We still give instruction in the traditional types of agriculture, but have added units to meet the needs of those students living on limited acreages or in town.

Laboratory SOEP options that have been made available to the students in Elma are tree planting, mountain beaver trapping, big game animal management, fire trailing, fire mop-up, forest research, salmon spawning and propagation, greenhouse management, plant propagation, retailing greenhouse plants, landscape maintenance and business interior plant care contracting.

Benefits

Our use of laboratory SOEP started in January, 1976, with a trapping program for the Weyerhaeuser Timber Company. The trapping program was introduced into the forestry curriculum. The motivation and enthusiasm that

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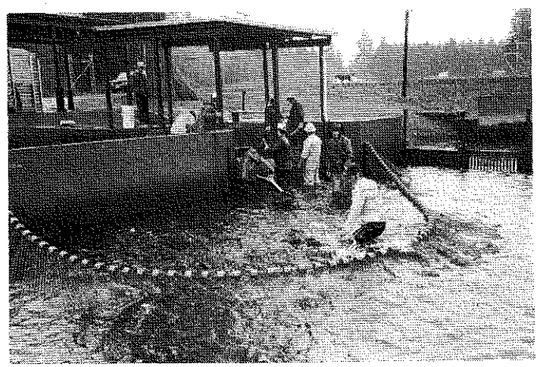


Elma FFA members assist the Washington State Fisheries Department in harvesting salmon eggs for future generations of silver and chum salmon. The net has been drawn on one of the hatchery holding pens and the initial harvest of some 10 million eggs is about to get underway.

This student has just removed a buck silver salmon from the dip net and lifted it to the dispatching rail. The fish will be dispatched and the milt used to fertilize the eggs.

Laboratory SOEP: What Are The Options?

(Continued from Page 5)

were provided by an opportunity to work in the area of forestry was unbelievable. The laboratory SOEP venture required considerably more time and responsibility for the instructor than regular farming programs. However, the rewards of observing such tremendous student growth in leadership, responsibility and attitude were well worth it.

Starting the trapping program required a means of transportation, vehicle insurance, financing of traps and flagging tape, preparing contract bids, performance bonds, tax numbers, state industrial insurance, employment security reports, a bookkeeper and eventually the formation of a non-profit foundation known as the Elma Ag Boosters.

The educational values gained from this laboratory venture were: (1) borrowing money for financing vehicles and traps, (2) preparing contract bids, (3) securing bonding, (4) knowledge about industrial and workman's compensation insurances, and the completion of government forms to become a non-profit foundation.

Once the contracts were let and our bid was successful, the students gained many experiences that are acquired only through an employment situation. The students learned to be responsible to the crew and to the quality of their work. They learned the proper attitude and to follow orders given by the employer. They also learned what it was like to work under the most adverse of weather conditions. Through these activities they were learning a skill, earning money to become financially independent, and acquiring a feeling of being useful. When the first pay checks were distributed, each student definitely had a full understanding of the FFA motto, and could relate to the meaning of vocational training.

Laboratory Alternatives

The second laboratory SOEP required a greenhouse facility. Since the ground work had already been accomplished through the formation of the Elma Ag Boosters for the trapping program, they accepted the challenge of gathering the materials and building a 30'x80' greenhouse for the department. This new facility provided excellent SOEP opportunities for students having career choices other than those relating to forestry. The greenhouse helped students gain experience in management, propagating, retailing, landscape contracting and plant care contracting. Saleable skills were acquired and career opportunities were being explored.

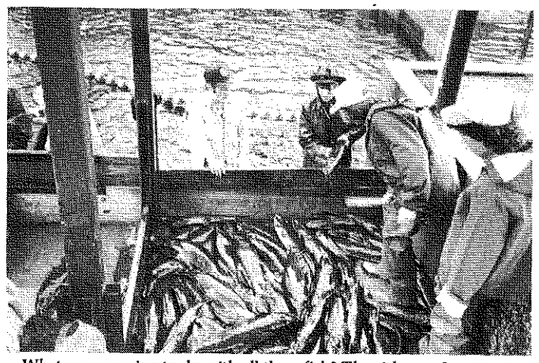
The mountain beaver (a small rodent that lives in the ground and eats trees) laboratory venture soon increased in size from the small beaver to big game animals (deer and elk). The students put protective screens on some tree seedlings, paper bud caps on others, and sprayed some with big game animal repellent in an attempt to save young forest plantations. These animal damage activities even led to the movie world as the crew was filmed and used in a Weyerhaeuser commercial that was used on Monday Night Football.

As would naturally occur with an eager group of students seeking to expand their forestry knowledge, SOEP, and financial status, other forest regeneration practices were contracted. Many of the FFA members interested in a laboratory SOEP that will pay them between $5.00 and $10.00 per hour have the opportunity to become involved in tree planting. The tree planting crews have usually planted over a half million trees annually since this laboratory SOEP venture was started in 1977.

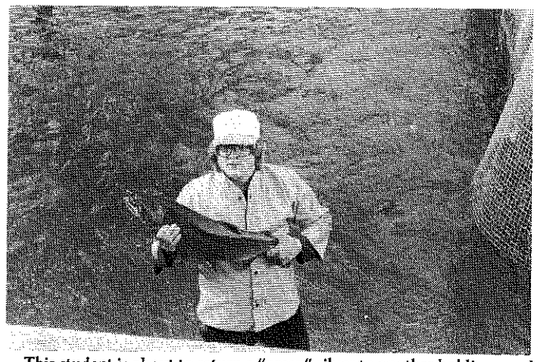
Another laboratory experience finds FFA members gaining knowledge about forest research and earning wages for their diligent work. The students are involved during the late winter and early spring in the progeny planting of the "super trees." Follow-up research data are collected during the summer and fall which provides additional employment and experience.

The late spring finds laboratory activities for those wishing to develop arm and back muscles through the building of miles of fire trail on terrain that is too steep for the most daring of bulldozer drivers. The students are required to calculate bids on this type of work just as they have on all the other forest related practices.

The summer is no dormant time for the laboratory SOEP in forestry. That is the time of year when all the harvested lands must be prepared, by burning, for reforestation the next winter. Through the Ag Boosters, all student labor is contracted by the hour with the local timber companies. The hourly rate is approximately $8.00 per hour. The students do some hand drip torch lighting of fires where the helicopters are not used, do fire mop-up and fire watch. The hours are long, the work is often dirty, but the complaints are rare. The smiles of satisfaction on each face, in knowing that a job was well done, make all the extra work for the instructors involved with laboratory SOEP's well worth it, not to mention the financial and experience void you have filled in that student's life.



What are we going to do with all these fish? The girls are about to start opening the females and dumping the eggs into collection buckets.



This student is about to return a "green" silver to another holding pond for spawning at a later date. The salmon must be held until the eggs are loose in the skein (ripe), otherwise they will not become fertile.

Salmon Experience

In Elma, we have one major SOEP which is strictly a learning situation. However, we do expect each student to put that experience to use if it can be arranged through the local FFA chapter and the Washington State Fisheries Department.

During the months of November thru February, the State Fisheries Department needs to spawn thousands of salmon to maintain, improve, or restore the salmon population in Washington streams. Some streams have lost their salmon runs due to the Mt. St. Helens eruption, others to pollution, and some to over harvesting by commercial and Indian netting.

A laboratory experience program has been established with two salmon hatcheries for the students to assist with spawning, fish rearing and planting. Teams of students go to the hatcheries twice or three times per week to assist with the spawning salmon. The experiences are great, but the working conditions are often wet and cold, cold, cold! The students are involved in the spawning of some six to seven thousand salmon which will yield in excess of ten million eggs for propagation.

The expected student application for this experience is the building of a small hatchery unit and starting a run of salmon in the creek or river nearest their home. During the last few years, the state has barely been able to collect the number of eggs they need. If there are any extra eggs, we work with the fisheries personnel and acquire the eggs for the student operated hatchery units. Each unit takes 5,000 eggs and they require daily supervision. If the egg supplies are not sufficient for us to stock all student units, we have the students double-up on units on the same stream.

Although no earnings are realized in this laboratory SOEP, the students feel greatly rewarded when they see their salmon returning to the stream where they had been raised two or three years previously.

A Challenge

The examples of laboratory SOEP's that are working in Elma, Washington, may not come anywhere close to things in your community. However, as a vocational agriculture instructor with some twenty-five years of experience spread over three schools, there were laboratory SOEP's in each community that could have been developed. You may feel that every single one of your students has a satisfactory SOEP in progress, but I challenge each of you to try a laboratory or group SOEP and see if many of your students are not exposed to opportunities they never had before. The laboratory SOEP has helped us meet the needs of the rural as well as the urban and suburban student, not to mention the $100,000, plus, revenue it has generated for the students and dollars that it has put into circulation in our community.

Some salmon are collected at other fish traps and transported to holding ponds at the Simpson Salmon Hatchery for ripening and harvesting of the eggs.

The mountain beaver (rodent) does considerable damage to young Douglas fir plantations by clipping off the newly planted trees or eating all the bark off the roots, in addition to digging tunnels all through the ground which sometimes damages the root systems.

THEME

Using Land Laboratories

By Jimmy G. Cheek and Larry R. Arrington

(Editor's Note: Dr. Cheek is an Associate Professor and Dr. Arrington is an Assistant Professor in the Department of Agricultural and Extension Education, Institute of Food and Agricultural Sciences, 305 Rolfs Hall, University of Florida, Gainesville, Florida 32611.)

In the past several years, vocational agriculture has experienced a variety of changes. One of these changes has been in the nature of the students who enroll. Fewer students today come from farms, more are coming from urban areas and typically have limited facilities and space for traditional SOE activities. In addition, contemporary programs emphasize production agriculture, but also teach ornamental horticulture, agriculture supplies and services, forestry, agricultural products, and a variety of other instructional taxonomies in the field of agriculture.

As changes occur, new ideas and new ways of doing things are necessary. New ideas always have those who resist. In industry, for example, Henry Ford had to test drive his new invention, the Model T, late at night because his neighbors ridiculed his horseless carriage. However, if society and education are to progress, change is inevitable, and so it is with vocational agriculture.

Innovation Needed

To provide appropriate supervised occupational experience activities for students, innovative approaches need to be developed to meet the changing needs of students and programs in vocational agriculture. One method to provide additional avenues for supervised occupational experience programs for students is to use school land laboratories.

Some teachers believe land laboratories should primarily be used to provide instructional activities and practice for students during regularly scheduled class time. However, land laboratories can and should be used to provide SOE experiences for students.

Utilizing the land laboratory in providing such experience enhances the use of the facilities as well as broadens the SOE opportunities for students. The land laboratory is an ideal location for providing supervised occupational experiences for students and teachers because it has the facilities and land necessary to meet the basic requirements of many agricultural activities and it is easily accessible.

For example, Florida has traditionally had a large number of land laboratories associated with vocational agriculture programs. Zinner and Cheek (1981) found that 93.1 percent of the schools in Florida had land laboratories. These land laboratories ranged from an area of less than one acre and a greenhouse to schools with very large demonstration farms. Other states have large percentages of schools with land laboratories and indications are that in the future more schools will have land laboratories.

There is increasing evidence land laboratories are providing opportunities for students to develop supervised occupational experience programs. A recent California study (Leising, Wolfram, and Zilbert, 1982) found 18.7 percent of California vocational agricultural students were utilizing the greenhouse for SOE projects, 18.9 percent of the students were using the land laboratory for projects and 16 percent of the students were using the school barn for projects. In Florida, almost one-fourth of the 1983 vocational agriculture graduates had conducted SOE activities on the school land laboratory facilities (Arrington, 1983).

Implementation

Various approaches have been used in providing SOE activities on land laboratories. The following are methods innovative teachers have used on the land laboratory to enhance SOE opportunities for students.

COOPERATIVE OWNERSHIP. Using the cooperative ownership concept, students divide into groups. Each group is responsible for funding the costs of the enterprise. Some groups sell shares based upon anticipated costs while others simply divide the costs among group members as they occur.

Group members are then divided into rotating work groups and each group is responsible for the total care and upkeep of the enterprise for specific periods of time. Members are responsible for advertising and marketing what they have produced. The members divide the income at the end of the activity based on the money the enterprise generates.

An example of cooperative ownership is four students joining together in a cooperative arrangement to grow poinsettias in the school greenhouse. The students would be responsible for all aspects of the production process including production, management, recordkeeping, financing, and marketing. All labor would be performed after regularly scheduled class time with all students sharing equal responsibilities. All costs would be shared equally by the students involved. At the conclusion of the activity each student would receive an equal share of the money generated from the sale of the poinsettias.

INDIVIDUAL OWNERSHIP. With individual ownership, an individual student who owns an agricultural enterprise and is responsible for the purchase, management, care, and marketing of that enterprise. The student is responsible for providing the capital and other types of inputs required for the enterprise.

The land laboratory is used to provide the physical location needed for the project as well as the facilities and equipment. For example, in several schools in Florida, students are provided facilities to raise their own livestock on the school land laboratory. This type of arrangement has included show animals for local fairs as well as small breeding operations. Other schools provide students with greenhouse space or land to grow their own crops.

SHARED OWNERSHIP. This concept is very similar to individual ownership; however, the school assumes the financial risks and provides the capital necessary for the enterprise. The student is responsible for providing essential ingredients such as management, labor, and recordkeeping.

The Miami Agricultural School has successfully used this concept for many years. The vocational agricultural program rents space to students on the land laboratory for the purpose of conducting SOE. Various options are available to students ranging from rental space in the shade house, a greenhouse, a poultry area, and/or livestock area. Each student determines how much space to rent and the kind of space to rent.

The program provides all of the inputs necessary. Each student is responsible for the care, management, and recordkeeping related to the activity. When it is time to market the product, the student has two options, either sell the product to the school at a small profit or purchase the product at a predetermined price above the cost of production, and market the product themselves. Most choose the latter option because it provides much more potential for making a profit.

DIRECTED LABORATORY EXPERIENCE AT SCHOOL. Directed laboratory experience occurs on school facilities and is conducted at times other than regularly scheduled class time. The students may or may not be paid for their work experience and it may be for either a long or short duration. The student does not have personal ownership. Directed laboratory experience (DLE) takes place before school, after school, on weekends, during study periods, during school release time, and/or during the summer.

There are an unlimited number of possibilities related to DLE. An example is a demonstration farm owned by a vocational agriculture program in Florida. At this school, a variety of vegetable crops are grown on the land laboratory. The production cycle for these crops frequently extends into the summer months when students are no longer in school. To solve this problem and provide SOE experiences for a student, the school contracts with a student to manage, harvest, and market the crop for a percentage of the receipts.

In addition, schools may enter contractual agreements with other groups to provide pre-specified services. For example, the school could contract with a local nursery to produce plants. The teacher could then develop DLE experiences for students and pay them to provide the labor and management needed in the enterprise. Contracts can also be developed between the vocational agriculture program and the school to provide custom horticultural work such as landscaping, plant care and maintenance, and lawn care.

Other examples of DLE include: a student working in a greenhouse after the regular school day, a student working on the land laboratory for pay during the summer or after school, or a student working during a school release period to landscape the school ground. The list of activities could go on but the key to directed laboratory experience is that students receive on-the-job training and experience designed to help them further develop the competencies they are studying in the regular instructional program. It is important that the student have a training plan which specifies the competencies to be learned during the experience and keep a placement record book.

Teachers must set the standards for their individual programs and research reminds us that students will live up to or down to teacher expectations. So it is important that a comprehensive SOE be expected of each student.

Benefits to Teachers

You may be asking the question, how will SOE on the land laboratory help me as a teacher? There are several benefits that accrue to teachers, students, and programs as a result of using the land laboratory for supervised occupational experiences. Many of today's students do not have facilities and land at home in order to conduct SOE activities. Thus, the land laboratory provides the physical location where students can conduct SOE activities. In addition, in this time of rising costs and tight budgets, many travel budgets for vocational agriculture teachers have been reduced. Thus, the land laboratory offers the opportunity to have quality SOE programs nearby.

In addition, many teachers have had to teach increased student numbers which makes it difficult to properly supervise and visit each student at home or on-the-job. Land laboratory SOE programs provide maximum utilization of the teachers' time because they are not required to leave the school facilities for conducting supervisory visits. Moreover, control of each project is an advantage. Since the projects are conducted on the land laboratory, teachers have much more control over the type of care and quality control that they can exert on students with their various SOE activities.

Having a variety of student SOE programs on the land laboratory provides additional instructional situations for students. Many times a student's SOE could be observed on class field trips to see various stages of production of an agricultural commodity, crop, or livestock. SOE programs on the land laboratory give increased visibility to the vocational agriculture program in the community and to students. Thus, SOE on land laboratories has a variety of benefits which further enhance the vocational agriculture program.

Summary

Vocational agriculture has experienced a variety of changing conditions over the past several years. In order to respond effectively to these changing conditions, innovation is needed. By using the land laboratories to provide SOE activities for students, teachers are taking a positive

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Using Land Laboratories

(Continued from Page 9)

proactive stance. Students will be able to more fully participate in SOE and benefit to a greater extent as the result of the vocational agriculture curriculum.

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THEME

Utilizing Laboratories in Urban Settings

By Steve Pietrolungo

(Editor's Note: Mr. Pietrolungo is a Vocational Agriculture Instructor at Canoga Park High School, Canoga Park, California 91303.)

Does agriculture exist within the urban boundaries of a large city? Can an urban school attract students into an agricultural program and run a successful Future Farmers of America program including supervised occupational experience? In my opinion, agriculture does not only exist but is just as vital in the city school as that in the rural school. I firmly believe that any successful vocational agriculture program must integrate the philosophies and ideas of the FFA including the supervised occupational experience program.

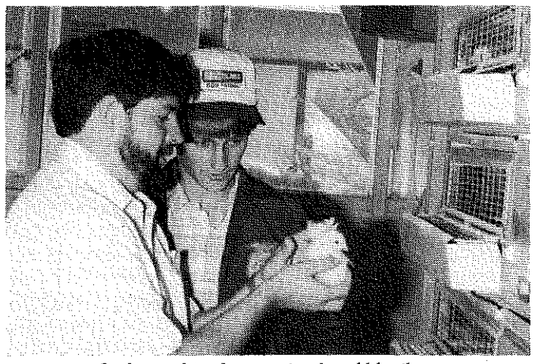
Our Program

Canoga Park is located in the San Fernando Valley, a suburban area of Los Angeles, with a population over 100,000. During the 1950's, the San Fernando Valley was a major agricultural community; however, today skyscrapers dot the skyline. But agriculture still exists. First, there are still many pockets of crop and fruit production. Second, the horse population continues to grow. Third, the animal care industry is begging for technicians. Fourth, every house has a lawn, trees, houseplants, gardens and planters. There is also a nursery or a flower shop on almost every corner. Agriculture is still a vital part of the city's economy and needs to be incorporated in the high school curriculum.

Canoga Park High School has a student body of about 1800 students. The campus sits on a major intersection and directly across the street from a shopping mall complex. Within the campus proper is our school farm of about two acres. The school farm contains a classroom, greenhouse, lathhouse, nursery, animal facilities, landscape areas, vegetable plots, and a work room. Land in a city is at a premium. Likewise, space utilization is an important aspect of our program. Every available space is used productively.

Approximately 150 students enroll in the agriculture program and during the past three years FFA membership has been over 130. Since most of the students live on small residential lots or in apartments and since we have a large enrollment, it is important to offer a wide range of SOEP's

Students with steer projects move decomposed granite into their pens.



Student and teacher examine day-old broilers.

Newly born calves and rabbits constitute some of the variety of projects maintained by students.

at the school farm. In a one person department, it would almost be impossible to regularly visit 130 projects. By using the school farm, we can meet the needs and interests of the individual student.

Involving students with SOEP's in floristry was simply a matter of changing the format of the floristry classes into a classroom floral shop. In other words, students gain job experience in the classroom which lead many of the students into paid work experience with local florists. The market outlets of the students' projects were right outside the door. The student body buys many of the completed projects. These include such items as corsages and boutonniers for the prom and other dances, arrangements for the homecoming and prom court, school spirit corsages for the football games and other holiday plant gifts and arrangements. Many of the students will contract their services for weddings, anniversaries, and other special occasions. Hopefully, by the time students graduate they will have the ability to operate, manage and/or own a floral shop.

SOEP in Horticulture

Probably the biggest aspect of agriculture in the urban setting is ornamental horticulture. Many of the students are attracted into the program by the livestock but change their career goals to horticulture. The school farm leads to many SOE programs. Basically, the horticulture SOE programs are divided into two types, ownership and non-ownership.

Ownership projects include nursery container plants, house and foliage plants, and floral crops. The school provides three different options: 1) the student may go into partnership with the school where the school provides the material and capital while the student provides the labor and in this option the school and the student share the profit; 2) the student provides all material, capital, and labor and, in return for the space and water, the student pays the farm ten percent of their profit; 3) the student contract-grows a predetermined number of plants for the school farm. The student receives a preset price for the plants grown and the school receives the plants. Most students find these three options very profitable and are introduced to the nursery industry.

Nonownership projects entail both paid and non-paid work experience. Jobs are readily available to students at most of the local nurseries. Many of the students will also start their own business, usually starting out by mowing lawns and then progressing into maintenance with specialization in landscaping, turf, aborculture, and consulting.

Nonpaid work experience may include home beautification, landscape maintenance, and school community beautification. The students are still required to keep accurate records and they develop the same pride as ownership projects. Most of the students currently employed in horticulture gained their initial experience through nonpaid work experience.

For the student interested in crop and vegetable production, the school farm provides vegetable plot enterprises. These enterprises involve three to five students and entail the planning, planting, growing, and marketing of their commodity. During the last few years, head lettuce has been the popular winter crop; as our lettuce matures in January and February the retail price has soared to almost a dollar a head.

Our Farm

The animal projects attract many new students into the program. The majority of the students enter the program with career goals in veterinary medicine, animal veterinary technicians and animal behavioral scientists, small animal care and maintenance, and including many of the animal science fields. To help students reach these goals, the farm tries to offer many various types of the animal industry SOEP's.

The school farm currently handles eight market steers, ten breeding ewes, and twenty market lambs. These three projects are very popular with the students who desire to continue their educational studies in animal science and realize the importance of hands-on experience. For the beginning student, the co-operative projects are high in demand. These include rabbit fryer production and broiler production projects. Both projects introduce the basic concepts of management and feeding principles of animal science with a minimum investment of money and time. These beginning projects will also weed out those students who handle animals for the first time and realize that they should change their career goals. Other animal SOEP's include peking ducks, game birds, goats, drop calves and

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Utilizing Laboratories in Urban Settings

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seeing eye dogs. Work experience consists of employment at feed stores, horse training, stable work, meat cutting and packing, pet grooming, pet stores and veterinarian assistants.

To run successful SOEP programs, I find that the market outlets for the product of the projects must be researched before the project even begins. Failure to market a completed project will demoralize the students involved and could give the program a bad reputation.

Success breeds success! Making a profit on a project is important and is not detrimental. However, the learning experiences are invaluable even if the project fails economically or if failure is due to poor management practices. In our program, students are encouraged to grow plants that are in constant demand and we find the local nurseries are overjoyed to have us as a source. Some of the nurseries even call us first to locate particular varieties.

Livestock Projects

The large livestock is sold either through the local fairs or through private arrangements. The students realize they must contact prospective buyers throughout the year to insure a price above the break even point. With fryers and broilers, we have prearranged buyers that purchase the animals live for a predetermined price. To market our produce, the school belongs to a direct from grower to consumer marketing cooperative. The search is always on for improving our market outlets and increasing the net profit for the students.

The future looks bright for agriculture in the urban setting. Recently, the state of California has approved a grant for construction of a modern market hog unit and hen house. Hopefully, with the addition of a computer laboratory, the students will also be trained in computer applications in agriculture. To complete successfully on behalf of the students, programs must offer the most recent and modern techniques and technology; otherwise, we will not meet the needs of our students nor that of tomorrow's agriculture.

THEME

Systems to Improve Teacher Efficiency

Instruction conducted at the student work site deserves careful planning just as does classroom instruction. Individual instruction given while visiting the student on their home farm or at their work site can and may be the most productive and valuable time that a teacher can give a student. In most programs, time available to do this teaching is very limited. Therefore, every effort should be made to maximize the efficiency of the teacher while preparing for and conducting the visit.

By Clifford L. Nelson and Elmer L. Cooper

(Editor's Note: Dr. Nelson is Professor and Head and Dr. Cooper is an Associate Professor in the Department of Agricultural and Extension Education at the University of Maryland, College Park, Maryland 20742.)

Teacher SOE Notebook

One technique that has proven useful is to develop a SOE notebook to carry while conducting supervisory visits. The notebook should contain one sheet of paper for each student. The top of the sheet should contain the student's name and address, parents' names and address, home phone number, and placement details including the name of the supervisor, address and phone number.

The remainder of the page should have column headings and be lined for date, teacher comments and instruction conducted.

Students frequently do not have their record books when the teacher visits, so comments and instruction can best be noted on a separate form. The teacher's notebook increases teacher efficiency in several ways. First, the teacher can quickly review details of all previous visits before seeing each student. Second, the teacher can review the notebook to determine who might need visits at any point in time. Third, the notebook helps the teacher in developing efficient summer programs.

Notebook entries with instructional activities are very strong supporting documentation for summer employment. Administrators and school board members have less difficulty understanding the individual instruction conducted by the teacher when such documentation is regularly made available to them. Further, the Internal Revenue Service may ask questions about professional travel and these questions may be answered with acceptable documentation when a visitation notebook is used.

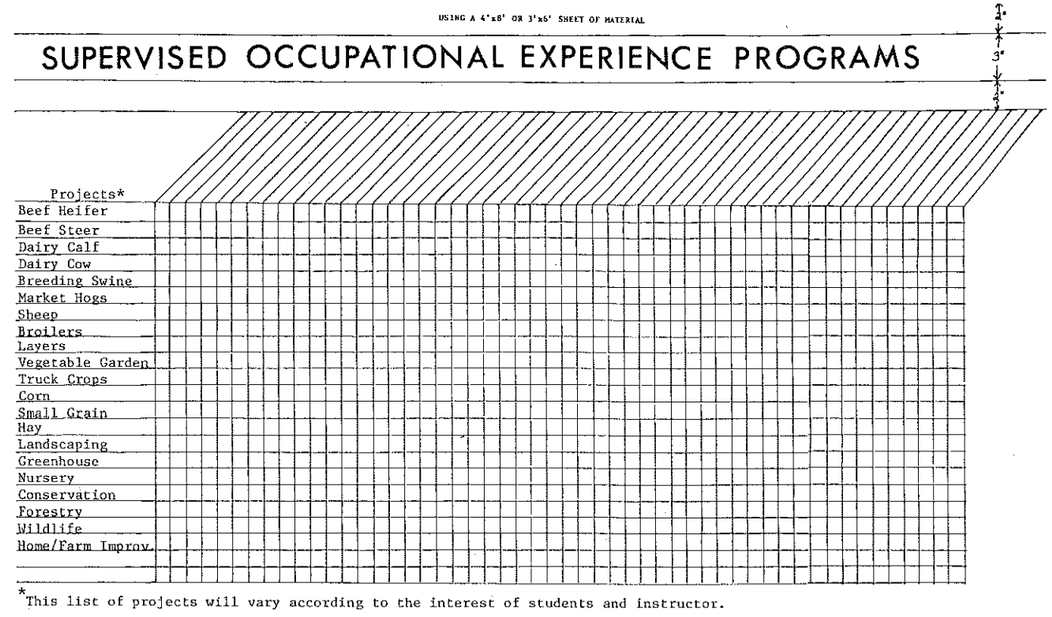

Figure 1: Layout of a Supervised Occupational Experience Program Board

It is expected that within the next decade the paper paged notebook may become somewhat obsolete. The introduction of more portable personal computers within the profession will contribute to this change. It is currently possible, with tape storage, to collect considerable material in the field for later entry into a school microcomputer. It would then be possible, to retrieve the information on screen or in printed form for any who might have interest or to use the material as needed.

Instructor's Work Box

One of the most beneficial tools for increasing the effectiveness of SOE supervision is a box in the trunk of the car or pick-up with backup materials, tools and supplies for the instructor. The content will vary depending upon the region of the country but the intent remains the same. In a dairy or livestock area, the box could include clippers, hoof knives, a halter, curry comb, brush, extension cord, copies of the common bulletins distributed by the Cooperative Extension Service for beginning livestock projects, extra record book pages, the DeLaval book for dairy professionals, a slide camera, etc. The teacher should also have available work clothing such as coveralls or shop coat and sanitary shoe coverings.

The work box is an indication that the teacher is ready to teach by demonstration and individual direction. The instruction is intensified for the student and does not suffer because there is a lack of materials to conduct the teaching at the students' homes.

Another Student

Some students with a particular project interest may not have the opportunity to receive individual instruction at their homes. In addition, other students requiring specific instruction may benefit from demonstration at another project site. If school liability policies allow and logistics permit, it is very useful to have one or more other students along on the SOE supervisory visit. First, however, the teacher should visit the home alone and determine with the parents and students whether or not others would be welcome at the home for instruction. If they are welcome, other students may accompany the teacher as a learner or assistant.

Inclusion of other students increases the learning opportunities for those who do not have home SOE opportunities like those being visited. Second, it is often useful to have an extra pair of hands when demonstrating some skills at the home site. Thus, the wise teacher can teach more skills to larger numbers by taking more than one student on visits where instruction takes place.

Monthly Calendar

Home or SOE supervisory visitations can be improved by scheduling them systematically. A technique successfully utilized by farm management instructors in the midwest and west is suggested here. At the beginning of each month, the teacher passes around an 8" by 11" calendar with each day and time assigned for visitation marked. Students are invited to sign up for the day that they wish to be visited. This calendar can then be easily duplicated and left with the administrator so an up-to-date plan of field work of the teacher is always in hand for use as needed.

The visitation calendar also allows teachers to better plan their time. It assures that students will be visited on a regular basis and allows students to prepare for visits. It is

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Systems to Improve Teacher Efficiency

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suggested that the calendar be posted so that students can see their visitation times and be aware of the teacher's systematic instruction at the home or other site.

A Program Board

The SOEP board is a device and technique used by teachers to motivate students in developing meaningful supervised occupational experience programs. Further, the device is an excellent reference for the teacher, students and visitors concerning student plans for SOEP's. The SOEP board is a large display board placed on a wall of the classroom. It indicates what each student is doing as a SOEP. The SOEP board has the following benefits:

1. Provides an extensive list of project ideas.
2. Puts each student's name and SOEP activities on display.
3. Provides encouragement for students to develop programs through friendly competition.
4. Provides the teacher and students with a list of students having similar programs.
5. Catches the attention of visitors and focuses on student nonclass involvement in the program.
6. Provides a constant reference from which the teacher can relate classroom instruction, vis-a-vis, the students' SOEP programs.

A SOEP board may be constructed as shown in the figure. The following procedures are suggested:

1. Obtain a 4'x8' piece of plywood, paneling, homosote, cork board, particle board, etc.
2. Paint the surface and edges to make it attractive for hanging on the classroom wall. A sunny yellow will provide an attractive background. The board could be covered with paper or other suitable colored material.
3. Use the template provided in the figure for an opaque projector to mark the board for the laying out of lines (or trace entire board from template.)
4. Lay out the board and place liners with india ink, permanent marker or narrow vinyl lining tape as shown on the template. Dark colored lines and print on a light colored background is recommended.
5. Add strips of paper lettered with student names and project names. Stick-on letters may also be used.
6. Add a thumbtack in each square to attach a tag. Purchase a supply of several hundred cardboard tags with a hole. Several different colors could be utilized on the board to identify different project types. Colored, pressure sensitive, removable, round, colored labels are available from the Avery Company. These may well be the most visible and flexible type of tags available.

Job Application Workshop

Students need to develop the skill to accurately and neatly fill out applications for employment and other official documents. It is suggested that students, before placement, be systematically instructed in the proper methodology of completing a written job application. Often, personnel workers from community firms are willing to assist the teacher in determining what to teach and in evaluating students' written materials regarding job applications.

Annual SOE Reports

An important part of the teacher's task in conducting SOE supervision is to assure that sufficient time and resources be available for this instructional activity. The justification for this support can be made easier by preparing an annual summary of the student SOE accomplishments for the year. It is suggested that such a summary be circulated among administrators, board members and parents, as well as the advisory committee.

The report should include a summary of the scope of student activities (i.e., numbers of livestock, acres of grain, hours of work, net income, salary earned, etc.). It is astounding to many in the community to discover the significant economic contribution that results from instructional activities of the vocational agriculture teacher.

Project Closure

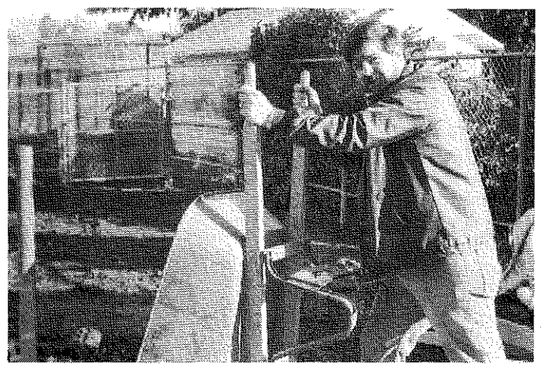
Nationally, SOE record procedures are moving to the calendar year for SOE projects. This tendency has been increased, in part, so student records are consistent with FFA Award and degree requirements. Thus, the teacher has a record of student accomplishments accurate through December.

It is suggested that teachers conduct a second closeout of the books at the end of each school year. This practice has several benefits. It assures that spring accomplishments will not be lost from the record if a student moves or takes another subject. Secondly, it is a productive activity for students as school closes and other traditional teaching activities may be difficult. It assures that information will not be lost over the summer by careless record book handling or storage and it will focus the attention of teacher and student on summer activities where instruction might be needed. The end of school year closeout has been found to be most effective when student grades are not cleared for voag from classes unless the report is satisfactorily completed.

Summary

Instruction may be greatly improved by utilizing effective management techniques in coordinating SOE program activities. The teacher should consider the use of an instructor's SOE notebook, an instructors's work box, additional students when visiting, a monthly visitation calendar, a SOEP Board, a job application workshop, an annual SOE report, and semi-annual project closures. These techniques should save time and greatly increase the instructor's efficiency.

Having another student along during a SOEP visit can provide them with learning opportunities. (Photograph courtesy of Steve Pietrolungo, Canoga Park, California.)



Teachers must be willing to take part in the activities engaged in by the student during a visit. (Photograph courtesy of Steve Pietrolungo, Canoga Park, California.)

THEME

Funding Laboratories

By Charles Berry

(Editor's Note: Mr. Berry is a Vocational Agriculture Instructor at Fleming County High School, Flemingsburg, Kentucky 41041.)

When discussing school laboratories for Supervised Occupational Experience Programs in vocational agriculture, whether talking with vocational agricutlure instructors or school administrators, the first words most often spoken are: "We don't have funding." In fact, these four words may have become a popular phrase for anything that is not being done in our society today.

Problems Encountered

In many schools, funding for school farms, shops, greenhouses, forests and other laboratories is provided by the school system. In most situations, funding is either not available or is very inadequate. Why is this so?

Most problems will fall into one of two categories:

1. The school system honestly cannot afford the capital outlay for a suitable laboratory; or
2. Funding is available but the administrators deem the program unworthy of such funding choosing instead to spend the money elsewhere.

What can the instructor do when faced with either of these two situations? The solution may in many instances be simpler than the first appearance suggests.

If the school system cannot afford the capital outlay required for a greenhouse, school farm, shop or some other type of laboratory which is appropriate for the program in that particular area, and school administrators will lend their moral support, then funding may be obtained from several sources.

Let us say we need funding to build a $20,000.00 greenhouse for a horticulture program. By using students in the program to construct such a facility, the instructor(s) may cut costs in half while giving the students an excellent opportunity to learn about greenhouse construction. This will also help to build pride and respect for the horticulture program.

Planning

Prerequisites for an undertaking such as this are a good knowledge of carpentry, electricity, and greenhouse construction by the instructor(s), as well as a well-laid set of plans, including such things as local building codes, building permits, and sources for materials. The approval of parents and administrators should be sought before using student labor for a project such as this.

Now we have cut the price of the greenhouse in half. Where do we get the other capital? Contributions might be gained from banks, the Farm Bureau, Production Credit Association, greenhouse operators, farmers or the FFA Alumni.

In asking for contributions from the public, there are a few things we should remember. Do not ask for donations too often, and decide who should ask. In many situations, possible donors will be more receptive to a couple of articulate, well-dressed FFA members; while, in other instances, the instructor(s) or an influential friend of the program may be able to generate contributions.

What should you as an instructor do to keep these contributions coming? Say "thank you" everytime you can.

This can be done by presenting a plaque or certificate to

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Funding Laboratories

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donors, with newspaper or magazine articles, or by recognizing contributors at the FFA banquet. Another good idea would be an annual appreciation breakfast or dinner for those who have contributed to the program. Additional money may be earned by students using many of the tried and proven methods used by FFA chapters all across the country.

This method of funding will work if used properly. Whether we are talking about a greenhouse or a school farm, the only limitations are the resources in the local community and the willingness of the instructors and school administrators to undertake and carry through on them.

Perhaps we in vocational agriculture have become like others in society expecting the government to take care of all our needs, while some groups, such as the American Cancer Society, as well as both public and private universities, raise millions for research every year. It has been proven many times that public and private industries will actively support all aspects of the vocational agriculture program if worked with properly.

All too often educational groups on the elementary and secondary level have focused on small things (which are badly needed and appreciated), such as buying window blinds or an air conditioner for a classroom, while failing to fight for a bond issue for building a new facility or creating an endowment for an elementary or secondary education program, as is often done in public colleges and is almost always done in private colleges and universities.

Priority Setting

What can an instructor in the second category do if local educational administrators have sufficient funds available for laboratories and other needs of the program and do not choose to use the funds for that purpose.

The instructor can do one of three things:

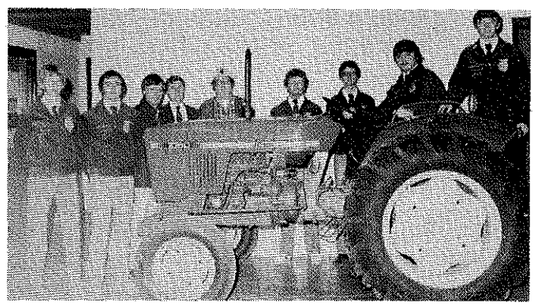
1. Find another job where the program is appreciated and treated accordingly;
2. Stay in the position and learn to do without; or
3. Stay and work to build the type of program that is needed in the community.

If one chooses the latter, then you must be willing to do more than just work hard and show the community the value of a good program. However, it is absolutely necessary that an instructor work hard and accomplish certain things as a first step in rebuilding a dead program or starting a new program. Only then can the community be expected to support the program.

In order to continue receiving the support of the public, whether for funding laboratories or other aspects of the program, instructors must continually cultivate certain aspects of the community. School administrators, school board members, board of directors of Farm Bureau, Soil Conservation Service, local banks and outstanding farmers and other businessmen must be kept in constant contact with the program.

All too often, a yearly FFA awards banquet is the only contact many of these people have with the program. While this is a good first step in keeping the community informed and involved, this is exactly what it is, a first step. A newsletter, newspaper article or a personal letter or note from the instructor(s) will go a long way toward maintaining support for the program.

In conclusion, we should say that receiving adequate funding for laboratories for our supervised occupational experience programs is not always easy. However, adequate funding can be obtained if the instructor(s) are dedicated to the program and are willing to work.



This tractor, for use in tractor driving and safety as well as on the school farm, was purchased using funds donated equally by local banks, FFA alumni, school board and FFA Chapter.

This combination livestock-tobacco barn and 24' x 38' classroom-laboratory was built by a senior class using funds donated by local banks, Farm Bureau, FFA Alumni and school board.

THEME

Laboratories: Inservicing Teachers

By Dan Moskwa

(Editor's Note: Mr. Moskwa is with the State Education Department, 99 Washington Avenue, Albany, New York 12230.)

Why is inservice education necessary for teachers of agriculture who conduct land laboratories in support of their agricultural instruction programs? As teachers of agriculture, we know of the many educational values of our students can obtain from a well managed and properly supervised land laboratory that is an integral component of our instructional program. We are also well aware of the values a well managed land laboratory can contribute to program quality, community support, and relationships within agribusiness. What then is the need for inservice programs?

Reasons for Inservice

Some of the more important reasons emphasizing a need for inservice programs include:

— A poorly managed land laboratory can greatly tarnish the public's image of an agriculture program in light of other outstanding qualities it may have.

— Some teachers experience problems with time management in scheduling student activities at the land laboratory during the instructional day as well as caring for the animals or crops when school is not in session.

— Some teachers have difficulty obtaining administrative support for land laboratory expenditures, transportation needs, and the legal aspects related to liability responsibilities.

— Teachers tend to avoid starting and/or maintaining land laboratories if they are unfamiliar with them, or if they have experienced some negative occurences while conducting a laboratory.

Our Efforts

New York State Education Department standards for quality occupational programs in Agricultural Education recommend that land laboratories be an integral part of the instructional program. Each school offering a program in Conservation should maintain a minimum land laboratory of fifty acres. Schools with programs in production agriculture should maintain a minimum of ten tillable acres and a greenhouse of 800 square feet, while programs in ornamental horticulture should be supported with a 2000 square feet greenhouse facility with a head house/laboratory of 600 square feet and an outdoor land laboratory of five acres. In addition, programs in agricultural mechanics are encouraged to utilize land laboratories to demonstrate procedures for operating field equipment and to provide students with the opportunity to acquire operational and related skills. However, within the last decade there has been a decline in the number of agriculture programs with land laboratories in New York State.

Through a 1982 statewide inservice needs assessment survey, the teachers showed a renewed interest in land laboratories by selecting them as their second highest priority for inservice education. This survey, as conducted every two years by Cornell University, is a project of the Joint Staff Inservice Committee for Agricultural Education.

In the spring of 1983, a thirteen member statewide Agricultural Education Inservice Advisory Committee was formed to address inservice needs and activities. One of the committee's first tasks was to provide necessary details

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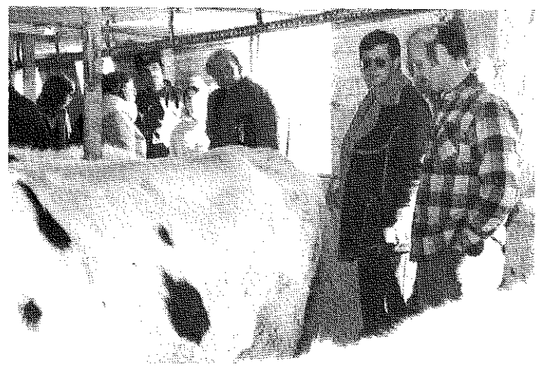

Teachers unfamiliar with land laboratories can overcome apprehension with adequate instruction.

Laboratories: Inservicing Teachers

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to develop a proposal requesting funding for inservice workshops using agricultural instructional land laboratories more efficiently and effectively. The five needs to be emphasized in the workshops as identified by the committee are:

— How to develop land laboratory projects to correlate with the instructional program.

— How to incorporate various resources to maximize the potential educational value of the land laboratory for the students and community at large.

— How to acquire and maintain community involvement, the cooperative efforts of business and industry, and the interaction and support of agricultural organizations and agencies.

— How to schedule students' out-of-school supervised work experience activities at the land laboratory.

— How to efficiently manage the operation of a land laboratory in regard to inherent costs, equipment needs and work demands when classes are not in session.

Funding to conduct ten workshops was approved by the State Education Department. These workshops were geographically located in the state for ease in accessibility by the 263 teachers in the four program areas. Agricultural instructors from the six SUNY Agricultural & Technical Colleges and from Community Colleges were also invited to attend the workshops.

The ten, one-day workshops were scheduled from 9:00 a.m. to 4:00 p.m. on weekdays and held in the fall and spring to take advantage of both the planting and harvesting seasons. They were held at schools having successful land laboratory operations. Schools having multiple types of laboratories were selected, as well as those located within a reasonable distance from other schools with individual/unique type of laboratories. Each teacher in attendance invited his/her high school administrator and FFA land laboratory committee chairperson to accompany them to the workshop.

Workshop Activities

The activities for each workshop were organized around the three phases of exploration observation and application. During the exploration phase, the stage was set for all participants by a four member discussion team addressing the basic issues pertinent to the organization, management, financing and S.O.E. involvement with land laboratories. To obtain a broadened prospective of the basic issues generic to all instructional areas, the discussion team was made up of a teacher of agriculture, a school administrator, a teacher educator, and a member of the state education department staff.

During the observation phase, the participants were provided with a series of questions to look for as they visited one or more land laboratory operations. At each site; the teacher, school administrator, and individuals from the community and agribusiness held informative sessions and demonstrations regarding the operational aspects unique to their laboratory.

Following the site visits, the participants returned to the central location to take part in the application phase. This phase was designed so that all could discuss and share ideas and experiences gained from the visits, as well as their experiences with land laboratory programs at their home school situations. An important outcome of the application phase was the management plan that the teachers developed with their administrators for improving their own existing land laboratory. Those not having an existing laboratory developed a plan for securing and managing a new land laboratory appropriate to the instructional program(s) offered at their school.

At each workshop, printed materials such as found in current literature highlighting techniques and methods of conducting successful land laboratory operations were distributed. Tape recordings were made at each workshop to use in selecting germane pieces of information for compiling a comprehensive guideline publication. This publication will provide information to assist teachers and administrators in establishing and maintaining new land laboratories and to assist teachers with improving their existing land laboratory operations. The publication is to be distributed to administrators and teachers of agriculture in all schools in the state.

Cooperative Effort

Richard Tenney, Cornell University, served as Director of the project. He was assisted by a statewide and ten regionally based workshop coordinators. Project consultation and assistance was provided by the Joint Staff. Members of the Statewide Agricultural Inservice Advisory Committee assisted in promoting the workshops. All agriculture teachers in the state were kept updated on anticipated activities, and the scheduling of each workshop through the "Agricultural Inservice Hotline", a monthly publication of the inservice committee.

When this article was being prepared, there was time for only one workshop to be completed. Consequently, substantive outcomes were not available for publication. Based on the enthusiastic involvement of teachers, administrators, and support groups experienced at this first workshop, we expect to have similar success at each of the other nine. It is anticipated that the outcomes will be made available during the summer of 1984 for those interested.

We strongly feel that the success of these inservice programs was the result of cooperative involvement by all constituencies. A bonafide needs assessment followed by contributions to the planning effort by the teachers, the professional organizations, post secondary groups, and the State Education Department, helped pave the way for quality inservice programs.

Teachers familiar with land laboratories find they aid teaching.

Horticulture laboratories require special expertise to maintain an appropriate environment.

THEME

Developing, Implementing and Managing Laboratories

By Anthony Juestrich

(Editor's Note: Mr. Juestrich is a Vocational Instructor at Oakcrest High School in Mays Landing, New Jersey 08330.)

A supervised occupational experience program is only as strong as the needs of the students it is designed to serve and the occupational goals it is designed to meet. It is well to keep this in mind when developing a SOE program where trends in agriculture are changing, with emphases changing in our agricultural industry and with students that exhibit no agricultural background, it is not the time to make rash decisions based on unfounded information.

The Greater Egg Harbor Regional High School District serves 360 square miles of rural area. Farm enterprises and students representing this sector of agriculture is no longer significant. On the fringes of the rural school district is a sprawling urban area, which is capped off with the rise of the Atlantic City casino industry.

Establishing Need

Is there a need for agriculture education in our district? The first step was to have the agriculture advisory board conduct a survey, which approached the related areas of agriculture: golf courses, nurseries, greenhouses, landscape maintenance and the floral design industry. Since the survey was conducted a new opportunity has developed with the casino industry of interior plantscape. The survey results were encouraging enough to embark on a change from production agriculture to ornamental horticulture.

From where will the students to be trained for these related occupations come? The school district has joined with the county vocational technical school. County students residing out of the school district are permitted to attend our high school for the agriculture curriculum. An agriculture interest inventory is the primary tool for admittance into the program. Recent enrollment was 61 stu-

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Students learn through practice in the greenhouse and receive SOE credit.

Developing, Implementing and Managing Laboratories

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dents. Twenty-two students were highly urban; thirty-eight students were from rural environments, meaning their homes were situated on large lots in areas outside of the city limits. The agriculture department would serve urban youth with limited available land.

The third factor in developing a basis for a SOE program is a sound philosophy. Agriculture education, regardless of the specific discipline, is not vocational education without a meaningful SOE program.

Oakcrest vocational agriculture students must have an SOE program. Standards or policies may differ in order to meet individual needs or differences. SOE programs may be for twelve months or a summer program of three months. Three hundred and fifty hours of occupational experience is a goal for which an additional 5 credits are issued to the student after each successful project year.

SOE projects have no limitations, except that they be agricultural in nature and offer job employment skills. A beginning project may be simple in nature but it has a profitable or employable goal. SOE projects are meaningful if there is an opportunity to plan and organize activities, keep and analyze records, and develop skills.

Facilities

Having developed a need through a survey it was quite evident that the Oakcrest vocational agriculture department would have to supply the needed laboratories for the implementation of SOE projects for urban youth interested in ornamental horticulture careers. Oakcrest High School offers the following laboratories used in the program's everyday instruction: 18′ x 66′ glass greenhouse; 26′ x 58′ solar heated, fiberglass greenhouse; 16′ x 24′ wood frame, film plastic greenhouse; 12′ x 16′ pit greenhouse; 18′ x 37′ pipe film plastic greenhouse; one-half acre nursery; one acre golf course laboratory; slat house nursery container stock area; floral shop; 82 acres of woodland and sufficient equipment storage areas. Instruction, via the use of the agriculture laboratories, will introduce and give beginning skill practice. The instruction of most units will bring into play the possibility of a SOE program.

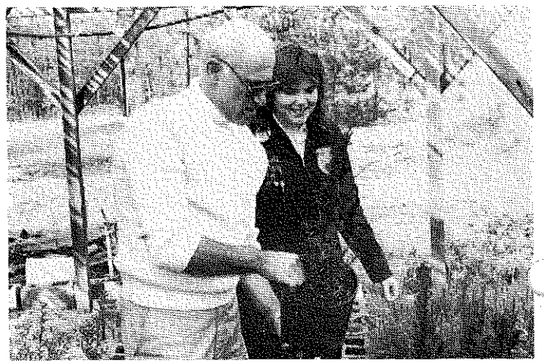
Alternatives

School-based SOE opportunities are: designing in the FFA flower shop; landscaping through class oriented projects. FFA based opportunities are: annual reforestation program, woodlot management, and BOAC. The agriculture department has a large inventory of power equipment for student use on improvement or small nursery related production projects. Placement projects are conducted during the school session and during the summer months. Community employment are in floral shops, golf courses, nurseries, landscape maintenance, greenhouses, roadside stands, garden centers, and campgrounds.

An annual reforestation program hires approximately twenty students for a six week period every spring. Students earn a wage while they experience the field operation of tractor transplanting of two-year old forest tree seedlings. The seedlings are planted for private land owners; the chapter cooperates with the local forester. The chapter has planted over a million trees over the past twenty years.

Through class related units on plant propagation, various propagating structures have been constructed and planted to evergreen trees by seeding or landscape shrub material by cuttings. These units have encouraged students to develop their own propagating frames at home or on school grounds. The FFA chapter is encouraging the propagation and production of nursery plant materials so that a cooperative wholesale nursery can develop. Presently, the chapter has an inventory of plants in excess of $4000.00. The county FFA Alumni Association is planning the operation of a roadside stand for the sale of student produced products.

It is interesting to note that despite the initial lack of knowledge in the ornamental plant production industry, students are concerned about how they will sell the 2,000 rooted cuttings or containerized stock or a field of 1,000, 4-5 year old evergreen stock. Therefore, the nursery management class is developing a plant material catalog for distribution to local roadside stands, garden centers and local landscapers. Land owners in the community possessing sub-marginal land or productive acreage lying idle are cooperating by permitting students to plant evergreen seedlings on the land. Agreements are made between the land owners and the students to determine tree care responsibility and cost.



Supervision of beds and slathouse activities provides the vocational agriculture instructor the opportunity for individualized instruction.

Student Comparisons

Implementing SOE laboratories is indeed challenging as there is a diversity of programs and rewarding as for most students, it is a new venture. Managing the school laboratories and off-school student laboratories demands much attention.

The paramount concern is the student. Prior to the ornamental horticulture era, production agriculture SOE farm-oriented projects had youth that were interested, involved, independent, and experienced from their childhood experiences. With a supervised visit to a farm-oriented youth, suggestions or recommendations from the advisor were heeded. As you left the site, you had the feeling that your advice would be followed and that the student would probably "do you one better".

The ornamental SOE student from an urban area has literally been thrown into the traditional, production agriculture SOE philosophy. At times, the student must be shown how to use a shovel. The advisor may spend hours assisting a student in preparing a soil medium for their 4′ x 8′ propagating frame, regardless of the initial instruction on the school laboratory. The harvesting of 2,000 rhododendron cuttings is a difficult task for the student; however, once accomplished, there is a great sense of pride and satisfaction. Diligent supervision of these projects is required to insure the obvious management chores. Record books are maintained and conducted in the same manner any production project would be handled.

Laboratory SOEP are necessary for our semi-urban ornamental horticulture agriculture department. We must develop opportunities for the student. The opportunities must have an attainable goal. Not a week goes by that there could not conceivably be a call for 1,500 rooted pachysandra cuttings or 30, 6′ white pines; there are plants highly recommended for our seashore areas that are not planted into landscapes because the materials are not available. Laboratories whether located on school grounds, in the community or in the student's backyard, can supply some plant material demands. The student has an opportunity to become established and perpetuate a small nursery ornamental horticultural business.

Japanese holly and azalea provide SOE projects for students when space is at a premium.

RESOURCES

As a school decision maker, you will be determining whether to use microcomputers in your school. Two new publications from the National Center for Research in Vocational Education can provide assistance in this process.

The first, MICROCOMPUTERS IN VOC ED: A DECISION GUIDE, offers insight on microcomputers in vocational education, from a brief history of the computer to the future of microcomputing. This guide examines topics pertaining to present and future use of microcomputer instruction, including specific applications of computer instruction.

The second publication, AN ADMINISTRATOR'S GUIDE TO MICROCOMPUTER RESOURCES, concentrates on the material available for operating a microcomputer system. Listings of organizations related to microcomputers and education and a sampling of educational software vendors are included. Additionally, an extensive annotated bibliography contains reading and resources related to educational microcomputing. The bibliography is subdivided into five sections for quick reference to topics of interest.

The guides can be used separately, but together the two supply a wealth of information invaluable to the use of microcomputers in vocational education.

You may order MICROCOMPUTER IN VOC. ED.: A DECISION GUIDE (RD 239A - $8.75), 70 pp., and AN ADMINISTRATOR'S GUIDE TO MICROCOMPUTER RESOURCES, (RD 239B - $9.50), 99 pp., from the National Center for Research in Vocational Education, The Ohio State University, Publications Office, Box N, 1960 Kenny Road, Columbus, Ohio 43210; 614/486-3655 or toll-free outside Ohio at 800/848-4815.

ARTICLE

Developing a Cooperative Experience Program

By Ray Gless

(Editor's Note: Mr. Gless is a Vocational Agriculture Instructor at North Sevier High School in Salina, Utah 84654.)

Although the time that a vocational agriculture teacher spends developing a successful vocational agriculture program is great, the time spent in organizing and developing a cooperative experience program is great, but time well spent. Once the plans have been made and the program put into action, one will find that their program will run smoother because the cooperative experience program will extend itself into other parts of the program. What you have really developed is a resource that the program can tap for help in all parts of its work.

Procedure

The following is an outline of the steps we followed to organize a cooperative experience program in our community.

Step one

With the help of my advisory committee, local FFA supporters and the FFA chapter officers, we made up a list of all agricultural resource people in the community. This included the local banks, feedlots, ranch and farm operations, feed, supplies, equipment, sales and service centers. Do not forget the American farmers, Young Farmers program, FFA alumni, honorary chapter farmers and any other related organization.

Step two

Write a letter explaining your plans for the program to all people on the resource list. This letter will give them time to analyze their program so they can determine how much they can help with the program. Include in the letter a brief outline of possible resources that they might have that the program needs.

Step three

After a short period of time, about one week, contact all prospective resource people by telephone and set up a meeting with them. It is also a good idea to take one of the chapter officers in official dress.

Step four

In the meeting, give them a short sales pitch about the department and the cooperative experience program that you are trying to organize. Here are just a few ideas that we have discussed in some of our meetings:

1) The accomplishments of the chapter and its members.

2) The goals you hope to achieve with this program.

3) Exhibit a willingness to work with them.

4) If they do not know about your department explain to them the purpose.

5) Use the resource outline that you have sent to them previously.

Step five

Get a commitment from them. Give them a timetable so they know what months that their resources would be required.

Step six

Implement your program. Put an article in your local newspaper about the program and the people who are becoming involved. Give credit to those who help.

Step seven

Keep in contact with your resource people. Keep the relationship on a positive note. Have your FFA members and their parents thank them whenever they can.

Step eight

Support that resource person's business. Encourage members and their families to do business with them. Give them a "We support FFA activities" decal so others may know, and so they can easily be identified in the community.

Step nine

Thank you notes from the retiring chapter officers expressing their thanks in helping them and the members in reaching their goals.

Step ten

Do special activities for the resource people such as clean and paint some of their buildings, plant trees and flowers, or repair fence or buildings.

Evaluation

Using this method we have found the following successes:

1) Sponsorship of awards at our member/parent banquet.

2) Work stations for students.

3) Credit for members at many of the businesses.

4) Discount on feed and equipment (10-25%).

5) Small loans to help students to buy livestock.

6) Uses of equipment and facilities.

Getting the program started is one thing; keeping it going is another. Continuing public relations work is required if you want to have a successful cooperation experience program. As you can see, all of the contact with one's resource people can help build a lasting relationship that can benefit your program.

TEACHING TIPS

Photo Display

Is your public relations showing? In other words, are the activities of your vocational agriculture department publicized in such a way that the community is easily made aware of what is going on in your department?

To help ensure this awareness, community resources were utilized by Jack E. McClaskey, teacher of vocational agriculture, Girard, Kansas. Jack used a watch case display that the local jeweler was glad to give away. Jack converted the discarded watch case into a useful photo display at little expense and effort.

Basically, Jack removed the advertising from the case and installed a new light. The words, "FFA Activities" and "Girard Chapter" were made from blue tape and placed in the circle from where the advertising label was removed.

Pictures of FFA activities were placed in the case and embossing tape was utilized to describe each activity. The tape could be removed and replaced as pictures were rotated, depending upon recent functions of the department. Small stands to support the pictures were made from plywood.

Jack discovered that selecting an appropriate location for the display case to assure full effectiveness was most important. He concluded that the display should be located where the traffic included rural as well as urban population. Jack ultimately located the display case in a local bank which is a strong supporter of the FFA.

Suitable activities for display could include judging contests, farming programs, parent and member activities, fair exhibits, leadership school, and activities of state and American Farmer degree winners.

Jack emphasizes that the success of this public relations idea is increased by the frequent changing of the pictures in the display case.

Unique Placemats

Need to revitalize your local FFA chapter banquet with some new activities? Then try using your local FFA chapter charter as the basis for a banquet placemat.

Langdon FFA Chapter in North Dakota, advised by John F. Nowatzki, tried this arrangement and were very satisfied with the effect. The chapter photographed the original charter and then reproduced the photo in the size needed for the placemat design. Information concerning the chapter officers and the chapter were placed on the left side of the charter photo. To the right of the charter photo was placed the banquet program and menu information. The final development step was the duplicating of the original placemat design.

Following the banquet, the chapter officers mailed copies of the placemat to all of the charter members who had not attended the banquet.

Have you ever wondered what to do with all of the magazines your vocational agriculture department accumulates during a school year? Are there any techniques for assuring that students receive maximum benefits from the magazines? Are there uses for magazines other than student reports?

Lowell Hedges, former vocational agriculture teacher at Elgin High School, Ohio, used past issues to keep his technical agriculture files complete and up-to-date. When a magazine would arrive in the department, Lowell would scan the table of contents for the purpose of identifying any articles that would apply to future lessons to be taught to either high school students or adult farmers. If an article was of the appropriate subject, he would place an "X" beside the topic. The magazine would then be placed in the magazine rack for student use.

Later on, when there was a need for a "back-up" class activity in the event that a lesson was completed earlier than was expected, or if a large number of students happened to be absent from class on a particular day, the magazines were the center of class activity. Students were instructed to look through the magazines, locate the table of contents, and look for marked articles. Students cut the articles from the magazines, stapled together the pages of the article to prevent loss of any portion of the article, and placed the removed magazine article in a box. Periodically, several students who had extra study halls and had time to spend working with the files, placed the articles in the appropriate technical agriculture files. When Lowell planned lessons throughout the year, the articles served as up-to-date references.

What animal commonly found on farms can fall five stories onto concrete and still live, gnaw through a steel pipe, or tread water for two or three days? The answer: a rat.

These tough rodents eat an estimated 33 billion tons of animal feed each year and destroy about 20 percent of all planted crops. In addition, they carry and spread 35 diseases, including swine dysentery and baby pig scours. This destruction translates into a daily loss of $5 million to the farm community.

To help eliminate this costly menace, and to teach students about the rat's sometimes "superman" abilities, Ralston Purina Company is offering free a **Rat Control Lesson Plan** to 4-H and FFA groups nationwide. The lesson plan is designed for classroom instruction. Also available on a loan basis are a film and cassette on rat control.

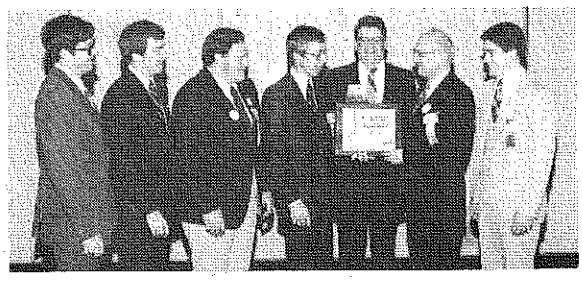
In addition to educating 4-H and FFA members on the rat's life cycle and characteristics, the lesson plan outlines a practical eradication and control program. At the end of the course, students will be able to show farmers how to implement similar year-round rat control programs to ensure complete success.

Advisors interested in obtaining a free copy of Purina's **Rat Control Lesson Plan,** and/or the film and cassette should write to: Fran Olson, Health Industries, Ralston Purina Company, Checkerboarn Square — IAP, St. Louis, MO 63164.

Stories in Pictures

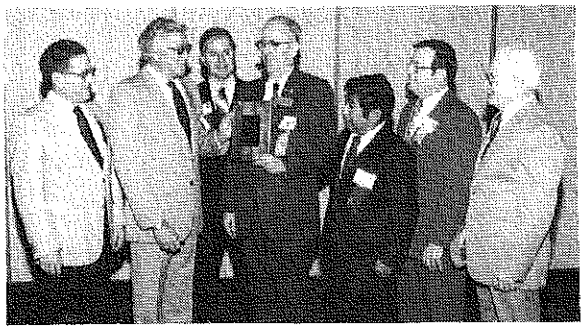
NVATA Leadership/Awards

The National Vocational Agricultural Teachers' Association (NVATA) began their 36th year of professional service and leadership with the conclusion of the 77th AVA Convention in Anaheim, California. Pictured are the members who will serve on the 1983-84 NVATA Board of Directors: (Seated left to right): Sam Stenzel, Executive Director, Alexandria, Virginia; Dale Butcher, President, West Lafayette, Indiana; and Walter Schuh, President-Elect, Bow, Washington. (Standing left to right): Duane Watkins, Vice President, Region I, Thermopolis, Wyoming; Ralph L. Thomas, Vice President, Region II, Woodward, Oklahoma; Myron Sonne, Vice President, Region III, Letcher, South Dakota; E. Craig Wiget, Vice President, Region IV, Mt. Blanchard, Ohio; Ross H. Smith, Vice President, Region V, Athens, Alabama; and Carroll L. Shry, Vice President, Region VI, Woodsboro, Maryland.



The "Sound Off for Agriculture" award recognizes vocational agricultural teachers who promote agriculture to the non-farm community through public relations activities. The awards are sponsored by Elanco Products Company. Pictured are the 1983 award recipients: (left to right): Reid Ledgetter, Olin, North Carolina; Daniel T. Stone, Coweta, Oklahoma; Larry Stine, Estherville, Iowa; Clark E. Israelsen, Logan, Utah; Frederic H. Stillwagen, Allentown, Pennsylvania; Max E. Riggin, Advisor Agricultural Communications, Elanco Products Company, Indianapolis, Indiana; and Dennis Pohlman, Elida, Ohio.

Persons who have made significant contributions to vocational agriculture on a national level are awarded the outstanding service citation by the NVATA. Pictured are those receiving the award: (left to right): C.V. Tart, Chief Consultant Agricultural Education (Retired), Zebulon, North Carolina; Jack E. McClaskey, Vocational Agriculture Teacher (Retired), Girard, Kansas; Dale Butcher, NVATA National President, West Lafayette, Indiana; Robert W. Cox, Executive Director, National FFA Alumni Association, Alexandria, Virginia; John F. Coy, Manager, Corporate Support Programs, Deere and Company, Moline, Illinois; and Enos B. Heisey, Manager, Agricultural Relations, Agway, Inc. Syracuse, New York.



Sperry New Holland sponsors the "Outstanding Teacher of Vocational Agriculture Award" for vocational agriculture teachers who are at the pinnacle of their profession and conducting the highest quality vocational education program in agriculture. Award winners are: (left to right): Francis Steiner, Granton, Wisconsin; Conrad Larsen, Branch Manager, Sperry New Holland, Fresno, California; James L. Dunway, Jr., Ormond Beach, Florida; Horace E. Short, Wyoming, Delaware; Matsuo Okamoto, Kaneohe, Hawaii; Frank L. Breedlove, Jeffersonville, Ohio; and Jack E. McClaskey, Girard, Kansas.

NVATA Outstanding Young Member Award — 1983. John Deere sponsors an "Outstanding Young Member Award" designed to recognize a member's participation in the professional activities of the NVATA. Pictured are the award recipients: (left to right): Jack Broderick, Seward, Nebraska; John Coy, Manager Corporate Support Programs, Deere & Co., Moline, IL; Michael Gaines, Carrizozo, New Mexico; Frank Downs, Duncan, Arizona; John T. Carl, Marysville, Ohio; Jonathan Pierce, Athens, Tennessee; and Karen Hutchison, Dover, Delaware.

The Executive Committee for the AVA Agricultural Education Division for 198[illegible] are: (seated, left to right): Jim Guilinger, AVA Agricultural Education Division Vice President, Sycamore, Illinois; and Floyd McCormick, AVA Agricultural Education Division Secretary, Tucson, Arizona; (standing, left to right): Eddie Moore, AATEA President, East Lansing, Michigan; Dale Butcher, NVATA President, West Lafayette, Indiana; and Les Olsen, NASAE President, Topeka, Kansas.