THEME: Just for Teachers

Introducing the National Opinion Poll On Vocational-Technical Education in Agriculture
Who Holds the Key?

Vocational-technical agricultural education has the mission of helping to ensure a supply of competent workers for agricultural industry. This mission is achieved through a three-component program: classroom-laboratory instruction, supervised occupational experience, and student organization activities. Individuals who are responsible for the program must be—to name a few—managers, directors of learning, counselors, and public relations specialists. Only vocational teachers are so talented as to be able to handle all of these things. They hold the key to the success of programs in vocational-technical agriculture.

The theme for this issue of The Magazine is "Just for Teachers." It could have easily been "just the key holders." The success or failure of vocational-technical education in agriculture is in the hands of these teachers. Supervisors and teacher educators are important to the success of the programs but not to the same extent as the local teachers.

Larry E. Miller, an Outstanding Professional

Editor-Elect Announced by Editing-Managing Board

The Editing-Managing Board of The Agricultural Education Magazine has selected Larry E. Miller as Editor-Elect. Miller, a Professor in the Department of Agricultural Education at The Ohio State University, will assume responsibilities as Editor with the January, 1983, issue. The Editor-Elect has served on teacher training staffs at the University of Missouri-Columbia and Virginia Polytechnic Institute and State University. He holds a B.S. degree in Agricultural Education from the University of Missouri-Columbia, an M.S. from Northwest Missouri State University (NWMSU), and a Ph.D. from Purdue University. He taught vocational agriculture for five years in Missouri and one year in the Agriculture Department at NWMSU, Maryville, Missouri, before beginning his doctoral studies.

Dr. Miller, a life member of NWATA and AVA, has been active in both the Southern and Central Regions of the AAATE. Nationally, he served as Editor of The Journal of the American Association of Teachers of Education in Agriculture and on numerous committees. He is the author of Skilling in Agriculture, which is published by McGraw-Hill Book Company for vocational agriculture students. He is also the author of numerous articles in referred and refereed publications and has written several monographs and curriculum guides. He has previously served as a Regional Editor of The Agricultural Education Magazine.

Dr. Miller notes that he is particularly interested in seeing The Magazine address issues facing our teachers, their programs, and the total profession. His most immediate concern is encouraging a rapid growth in the number of subscriptions. Individuals who wish to correspond with the Editor can write him at:

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THE AGRICULTURAL EDUCATION MAGAZINE

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THEME

Just For Teachers

The theme topic of "Just for Teachers" is exciting to me. Having served on the Editing-Managing Board of The AGRICULTURAL EDUCATION MAGAZINE representing the vocational agriculture teachers, I remembered the critical remarks I gave to the Board about the contents of this magazine. I believed most of the articles were for the college educators or supervisors, and not for teachers. The Board and editors listened and, in my opinion, the Magazine is much improved with more articles being practical for classroom teachers.

The opportunity as Theme Editor to obtain articles of a practical nature for teachers was a real challenge. I quickly learned that you may know teachers who have had excellent success and have ideas that should be shared, but to get them to write an article for The Magazine is quite difficult. The most often given response is, "I don't do anything different than my neighbors."

This assumption may or may not be true. My own experience has taught me that I have had few innovative ideas of my own. However, I have been able to use the experiences, techniques, and ideas of others for improved teaching of the students in my classes. Most of the ideas were those some other teachers believed was common place, but I had never conceived the idea until I personally saw or heard about it. We do need to share our successful techniques.

The AGRICULTURAL EDUCATION MAGAZINE could not exist if teachers did not subscribe. Because of this, the Magazine should present articles that are of interest and useable by teachers. Many magazines have a letter to the editor or question column with answers written by the experts in the field. Would such an addition in The AGRICULTURAL EDUCATION MAGAZINE improve its utility?

This Magazine is our magazine. No outside publisher makes a profit or writes an article. As a teacher I am convinced we need a professional magazine. Each of us should concern ourselves with the success of the Magazine. First we should subscribe. The dollars are a must for the Magazine to exist. Second, we should realize that the Magazine is written for agriculture educators, and for this reason we need to critique the Magazine by informing the Editor of our desires. Third, we should promote the Magazine and its purposes to our fellow professionals. As a former NVATA officer, I had the opportunity to speak to numerous vocational agriculture groups. Many of my speeches contained a poem which came from the file of my vo-ag teacher, Mr. L.D. Rader. The author is unknown. With the increased emphasis nationwide for SOR programs and because I have been asked by so many for a copy of this poem, I present it as a part of this issue, "Just for Teachers." It is done as a tribute to my vo-ag teacher, a professional who inspired so many of his students to further their interests in agriculture through education beyond high school and understood so well the meaning of this poem.

BY ROBERT McBRIDE, THEME EDITOR

First Boy

I left my dad, his farm, his plow
Because my calf became his cow;
I left my dad — T'was wrong, of course,
Because my calf became his cow.
I dropped my hoe and stuck my fork
Because my pig became his pork;
The garden truck I made to grow
Was his to sell and mine to hoe.

Second Boy

With dad and me it's half and half
The care I own was once his calf;
No team for mine; I still not bolt,
Because my horse was once his colt.
I'm going to stick right where I am
Because my sheep was once his lamb.
I'll stay with dad, he gets my vote,
Because my hog was once his shoat.
It's fifty-fifty with dad and me
A profit sharing company.

The Cover

Teachers know the value of firsthand experience. The cover photograph shows students and soil scientists evaluating crops and soil type. (Photograph courtesy of Steve Forsythe, Assistant Professor of Agriculture and Experimental Farm Coordinator, Mid-America National College, P.O. Box 1796, Olath, Kansas 66061.)

What's Your Opinion?

Add your thoughts and mail the opinionnaire on vocational-technical agricultural education presented on pages 21-22. Please do so by May 30, 1982.

The findings will be reported in three different issues of The Magazine. The September issue will report on program administration. The October issue will report on the curricula. The November issue will report on professionalism.

THEME

Professionalism

Searching through many volumes of research materials has done little to alleviate my apprehensions of writing on professionalism.

Professionalism means something different to each individual in every profession. It is a choice each person must make as he/she enters his/her chosen field of work.

The professional teacher of vocational agriculture is no different than all of the millions of other professionals working in the world except for a few minute details.

At no time in the history of vocational education, especially that of vocational agriculture education, has it been more important than it is today for each of us to practice professionalism. The choices are great, the dilemma seems insurmountable, and the continued pressures at times seem unbearable.

While the English, math, and history teachers are asked to be professional teachers and the trade and industry instructors are asked to join in with the ranks of the teachers and vocational teachers as well, the teacher of vocational agriculture is asked not only to be a professional teacher and vocational teacher, but also to be an active viable professional in agriculture as well. He/she is, and rightfully so, in demand to belong to, to participate in, and to assume roles of leadership in every agricultural organization in the community as well as in the teachers organizations.

What is the answer? When do you stop? How much is too much? The answers to all of the questions must be found by each individual depending on his/her situation, his/her interest, and desires to promote, support, and sell education, vocational education, agricultural education, and, probably, agriculture itself.

Education and agriculture today are faced with more cutting blades than at anytime, we are faced in agriculture with the sharp edge of inflation, the razor of interest rates, and the wild slicing of government. All of those involved in agriculture, regardless of the extent of involvement, must stand up and be counted. Likewise, in education, we are faced with many of the same problems. We must also face the millions of dollars of educational spending. We are faced with a demand for more and better education. We are to accomplish this with fewer people and less money each year.

The decision to be made about professionalism is, "How much do we need?" Professionalism is more than paying dues to professional organizations. It involves having backbone to stand up and be counted even when you may be standing alone. It involves carrying out our programs so well that there is a lasting influence on the community.

When do you stop? Until a task is accomplished, an issue won, or another goal reached. You don't stop until you feel as a professional teacher of vocational agriculture you have accomplished what your own goals to vocational agriculture have been. The real question here is, "Does anyone of us ever accomplish all of our goals?" The true professionals set new goals each day. It is easy to say and we have all been guilty from time to time of becoming complacent in our attitudes, work, and professionalism.

Professionalism is more than paying your dues. It is more than attending a meeting or two each year. Professionalism is the active and continuing involvement in those organizations that pertain to the profession.

The real key to professionalism for teachers of vocational agriculture is stated in the very first sentence of our creed, "I am a teacher of vocational agriculture by choice and by chance." This one very short, simple, and concise statement sets the vocational agriculture teacher apart. He or she is not better or worse or more or less professional, only an individual who has chosen to dedicate a

(Continued on Page 6)
The vocational agriculture program at Damascus, with 100 per cent membership, State and national dues are paid by the chapter. The FFA provides the incentive for many students to enroll in vo-ag classes and offers a wide range of activities. FFA offers many students the opportunity to develop social and leadership skills that are not available elsewhere in the school.

To encourage participation in production agriculture type contests (dairy, livestock, poultry, etc.). special emphasis must be placed on the leadership and character development aspects of the judging contests, such as oral reasons. Of course, evidence of past successes by judging teams (a classroom full of plaques, banners, and trophies) and the knowledge that winning teams take trips doesn’t hurt at all!

Although information related to FFA judging contests is discussed in class, actual training of judging teams takes place outside of school hours. FFA Alumni members provide invaluable assistance in training teams and in selling

MAY, 1962

THE AGRICULTURAL EDUCATION MAGAZINE

Teaching Vocational Agriculture in the Suburbs

By Robert DeLaughter

Teaching agriculture in a suburban area such as Damascus (approximately 35 miles from Washington, D.C.), calls for a good deal of variation from the traditional Ag I, II, III, and IV system. Students with little or no firsthand agricultural experience are seldom willing to make a four-year commitment to a program that many believe will only lead to farming as a career. As a result, every course offering is independent of every other course and there are no prerequisites.

Constant reminders to students, the school, and to the community in general that agriculture is more than farming and is an absolute necessity. To emphasize the wide range of career opportunities in agriculture, career education is a part of every course offering and included in nearly every unit taught. Special emphasis is put on careers that are locally available with students visiting areas of interest and reporting back to class.

The Curriculum

Courses taught at Damascus include three years of horticulture, two years of animal science, farm business management, and agricultural mechanics. In spite of course titles, the program is aimed towards the interests and abilities of the students offered.

A continual effort is made to assess the interest of students and to gear material towards those interests. As a result, animal science classes in the barns, homes and homesteading, and small animals, meats, genetics, and nutrition are also important parts of the animal science program and would be appropriate regardless of the background and career objectives of the student clientele.

Farm business management classes cover business principles that would be appropriate for any audience and include credit and depreciation, credit, money management, labor management, marketing, and taxes.

In the agricultural mechanics class, students are taught small gas engine repair, chainsaw repair, welding, and much general repair work. A good deal of repair work is also done on the many small tractors owned by area suburbanites. The agriculture mechanics laboratory is one of the best community relations tools in the Damascus agriculture program as many community residents bring their lawn mowers and chain saws to the school for repair.

The horticulture program is patterned after the predominating horticultural enterprises in the area and stresses commercial production, retail flower shop management, and turfgrass and nursery production. Vegetable gardening is also included.

Supervised Occupational Experience

Supervised occupational experience programs present a special challenge in a suburban area and cannot be required as per county school policy. Many students have limited or no facilities for a production-type project larger than a flower box or a small garden plot or possibly a cat or dog. While agricultural type jobs are available in the area, many of them hold little of the glamour of the many government type jobs available.

Students are strongly encouraged to have supervised occupational experiences in whatever possible and a special effort is made to locate facilities for small production-type projects and to provide placement in agriculturist. Close cooperation with the school career center and the several work experience coordinators in the school makes this task much easier.

For those students who have no opportunity for a supervised occupational experience program at home, a small school farm is maintained with several steers, two beef cows, some rabbits, 125 caged laying hens, and 100 broilers. Some of the calves are used as well as other farm animals. All class members assist in the feeding, care and management of the animals under the direction of a supervised farming committee. Eggs (approximately 1800 dozen per year) are sold to school faculty members. The students are completely in charge of all aspects of the operation including delivery schedule, billing, record keeping, and pricing.

Students keep records of all parts of the farming operation. Livestock projects must stay in the black in order to be continued from year to year.

The vocational agriculture program has two greenhouses (26' x 42' and 10' x 32') that are run by students as near to commercial operations as possible. Students are responsible for all phases of the greenhouse operations including planting and care of plants, pricing, sales, and marketing of the plants grown. Close ties are maintained with local greenhouse operators to help insure that misunderstandings do not develop in regards to competition.
A Special Issue... An Invitation to Professionals

This issue of THE MAGAZINE is being mailed to all secondary and postsecondary programs of vocational-technical education in agriculture in the United States. The mailing lists of subscribers and programs were consolidated so that subscribers would receive only one copy. About 13,000 copies of THE MAGAZINE were mailed this month.

If you do not now subscribe, a subscription form is presented on page 23. You will enhance yourself and your profession by subscribing.

Articles and photographs are also invited. Submit these well in advance of the date of intended publication. The photographs should be quality, 5 x 7, black and white, action shots depicting vocational technical agricultural education. Be a professional! Subscribe and contribute to THE AGRICULTURAL EDUCATION MAGAZINE.

THEME

Just for Teachers... The Maryland Story: Internships for Vo-Ag Teachers

During the summer Maryland vocational agriculture teachers may be found working on a dairy farm, in a flower shop, at a milk processing plant, at the department of wildlife or parks and recreation, or at a meat processing plant. The list could go on. This "bands on" approach is a method of providing inservice education for teachers in a program entitled "Internship in Agriculture/Businss/Induslry/Education" (IABIE). In a small state like Maryland, which has 125 teachers in 80 programs of agriculture/agribusiness and natural resources, identifying enough teachers for a class who have inservice needs in the same area can be a problem. So for years the Joint Agricultural Education Staff which is made up of representatives from state supervisory staff, teacher education, vo-ag teachers, postsecondary and adult education, FFA alumni, and other leaders in agricultural education addressed this issue. A committee of state staff and teacher educators was found to seek ways in which inservice needs of teachers could be met.

Following an extensive needs assessment of teachers inservice needs, a 5 year inservice master plan was developed indicating titles of courses to be taught and identified them, and where and when they would be taught. This plan worked well where a group of teachers had similar inservice needs. In a small state with programs as diverse as those in Maryland, sometimes only one or two teachers needed a given class. This was not enough to justify offering a class, so something innovative had to be developed.

A grant from the Maryland Department of Education enabled the development of a program to serve the inservice needs of individuals or small groups of teachers. This is when the Internship in Agriculture/Businss/Induslry/Education program was started. Through the cooperative efforts of teacher educators at the University of Maryland, Eastern Shore, and the University of Maryland, College Park, vo-ag teachers who were graduate students at both campuses were invited to participate.

Procedures

IABIE, now moving into its third year, has become a popular one week workshop. It is one thing to discuss trade skills in the classroom and another to learn under actual working conditions. Too often teachers of agriculture have the background in the theory, but lack the practical experience of actually working in the industry. As a result, the students they train have a limited perception of what the industry needs and how they can fit in. IABIE helps tie the theory and practice together.

Early in the school year, in addition to reviewing the "Five Year Inservice Plan for Vo-Ag Teachers," teachers are asked to identify the types of skills or competencies they would like to develop as part of the internship. At this point a central location is identified in the State that will be convenient to the majority of the teachers participating in the program and also a location that has the types of businesses/industries that can provide technical experiences to meet the needs of teachers.

After registration for the IABIE program, teachers are matched with training stations. This is an important aspect of the program. After a station has been identified, much planning is needed in order for the teacher to gain experience in the areas needed. The IABIE coordinator, the health supervisor, and the teacher will work meet to discuss what is expected of each and plan a long-term program of work for the teacher that will best help serve his/her needs.

A program of work may include:
1. competencies to be learned
2. activities for learning the competencies
3. performance standards for evaluating each teacher's development of these competencies.

BY DAVID MILLER AND IVAR HOLMBERG

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A student takes a look of her sheep as part of supervised occupational experience program. (Photo courtesy Urigence (Maryland) FFA Chapter and Maryland State Department of Education.)
The Maryland Story: Internships for Vo-Ag Teachers

(Continued from Page 9)

may come back next year and take tractor mechanics.
At the conclusion of the week evaluations are complete.
Teachers present a 2,000 word paper on the application of
their experience in their own vocational agriculture pro-
gram. They also identify and validate competencies that
students should have in order to be employable. A needs
assessment for employment is conducted at each internship
site.
Since vo-ag teachers receive a limited amount of "hands
on" experience in order to develop their technical skills
during their formal education, the LABIE interactive pro-
gram is one way of developing and improving skills of
teachers in technical areas. This program has been enthu-
siastically accepted by vocational agriculture teachers and is
an outstanding means of serving a variety of inservice needs.

Use the latest textbooks and references that we can
find. Some examples are:
- John Dyer: "Fundamentals of Service and Funda-
ments of Operation"
- National Hog Farmer Swine Information Series
- The Short Hog, The Dairy Guide, Ohio Cooperative Extension Service
- Ohio Beef Industry Handbook
- Ohio Pork Industry Handbook
- Ohio Agronomy Guide
- Farm Builders Handbook
- Writing Simplified

We also like to use manuals because they cost less than text-
books and are generally up-to-date. Also, by being written
by specialists in the area of study, they have the latest tech-
nical information available. Many magazine articles are also
used.

Then by utilizing FFA chapter farm projects and the su-
pervised occupational experience programs of the stu-
dents, the classroom discussions can be more interesting.

The Instructors

When planting crops on the chapter farm, all students
are involved in planting cultivation and operation. Each
student in the crop production class must develop a com-
plete plan of herbicides, fertilization, varieties, etc.,
for the chapter farm. This makes the crop study more relation-
able for each student. The more interesting the class the higher
the quality of the classroom and in FFA activities. I believe
that the secret to our FFA success is quality class-
room and agricultural mechanics instruction. If the class-
room does not stress classroom teaching first, other parts
of the vocational agriculture program will follow. By con-
stantly trying to improve classroom and agricultural me-
chanic instruction, the teacher sets the example for stu-
dents in all of their classroom and FFA participation.

Constantly updating classroom teaching to meet the
changing needs of students in both the farm and non-farm
areas is essential. It is important to know and meet student
needs in any vocational agriculture program. We must do
this to remain attractive to potential students. The needs of
the students are examined by examining the occupational
experience programs of the students and then teaching ac-
cordingly.

The Facilities

A teacher should never be satisfied with the facilities or
they will soon be out of date. We must also be aware of the
cost of running a field of agriculture around us and
where our students are getting jobs. My school is in a rural
area and many of our students do go into farming, but we
have more students with jobs in agribusiness.

When selecting equipment we seek high quality, in-
dustry rated equipment. This equipment takes the wear
much better and does not need to be repaired or replaced
as frequently. New equipment is introduced to the chapter over a period of time.

Mig and Tig welders have been added to provide addi-
tional skills for students in using these machines for
agribusiness work. Many new shop projects can be com-
pleted for the farm with these welders. All students are re-
quipped to shop projects or they are assigned a project
that a resident that has asked to be constructed. Shop projects
can also be selected when making supervised occupational
experience visits. These projects should develop skills that
students can use upon graduation.

Facilities do not make a department but they certainly
do help. A vocational department must be constantly up-
dated like any other business if it is to stay in the business
of education and be attractive to the public. This may not
always be the latest up-to-date books and equipment but
the latest in knowledge and skills that are needed in agri-
culture.

The Support of Other People

Working with the school administration and expediting
the need and the justification for our purchases, we are
constantly updating our library, references, and shop
equipment. The successful college football, basketball, or any other team sport is dependent upon recruiting and retaining tal-
ented players. The successful vocational agriculture de-
partment is also dependent upon recruiting and retaining
good students. Without this, a department must have an educational program and an end product that is attractive to the prospective student.

At Miami Trace, students visit the junior high schools
and show films of FFA activities, graduates, depar-
tment activities, and explain the career opportunities in
agriculture and the vocational curriculum. Students can re-
late to students in the 8th grade. This also makes the cur-
cent students feel that they are partially responsible for the success of the program and more depen-
dent upon securing students who are above average.
The "above average" refers to the desires to get ahead and
try to do the best that they have done in the past. Of
course, the more students that you have with this attitude
and with above average academic records, the easier it is to develop a successful FFA chapter.

When working with students we would be wise to re-
member the FFA Motto:
- Learning to do
- Doing to learn
- Earning to live
- Living to serve

The students must have parents who are supportive of
the program and their own son or daughter. The production
vocational agriculture program encourages the employ-
ment of the latest technology in the growing of livestock
crops. Students with parents who allow them to try new developments and evaluate them see more clearly the
value of their classroom instruction. The teacher and
the parent need to work together in developing the knowledge and skills that the student needs to be successful in the fu-
ture.

The higher the reputation of the vocational agriculture
department with the better farmers in the area, the more
respect, cooperation, and support it will have in the com-
munity. This is done by teaching the latest technical
knowledge and skills and have good supervised occupa-
tional experience programs.

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Secrets to a Successful Program
(Continued from Page 11)

The Key to Success
As the director of the agriculture education program the teacher is the key to the success of the program. The dedicated teacher will spend many non-school hours working on departmental business. The teacher must have the dedication, determination, vision, and enthusiasm to guide the department to the goals that have been set. The following summarizes success:

The Winner
The man who wins is an average man. Not built in any particular plan, Not blessed with any particular luck, Just steady and earnest and full of pluck. When asked a question he does not "guess". He knows and answers "No" or "Yes" When set a task that the rest can't do, He succeeds down till he's put it through. So he works and abide till one fine day There's a better job with better pay And the man who shines whenever they could Are burred by the man whose work made good. For the man who wins is the man who worked. Who neither labor nor trouble shrinks. Who uses his hands, his head, his eyes. The man who wins is the man who tries. — Author Unknown

Just for Teachers . . .

Small Engine Maintenance

Are you in need of self-paced, introductory instructional materials? Do you teach a course in Maintaining Small Engines?

If you answered ‘yes’ to the above questions, a new series of sixteen packets may be the answer. The materials are competency-based, self-contained, clearly illustrated and provide easy to follow step-by-step procedures. The materials are written and designed:

1) to provide minimum skills for disadvantaged and handicapped students entering the mainstream;
2) to supplement vocational skills of students already in a regular small engine program; and
3) to provide instructional materials for the modular classroom setting.

Contents
Maintaining Small Engines includes the following units:
- Jobs Related to Small Engines ........................................... Unit 1
- Safety Rules in Small Engines ......................................... Unit 2
- Small Engine Tools and Their Uses .................................. Unit 3
- Small Engine Parts and Their Uses .................................. Unit 4
- Fuel Selection and Use — 2-Cycle ................................. Unit 5
- Inspecting and Servicing Spark Plugs ............................... Unit 6
- Cleaning and Inspecting the Cooling System ..................... Unit 7
- Servicing Small Engine Air Cleaners ............................... Unit 8

Cleaning and Inspecting the Crankcase and Exhausts .................... Unit 9
Changing the Oil in a 4-Cycle Engine .................................. Unit 10
Checking the Carburetor for Proper Operation ....................... Unit 11
Preparing for Carburetor Adjustments ............................... Unit 12
Adjusting the Carburetor Choke ...................................... Unit 13
Adjusting the High Speed Load Valve ............................... Unit 14
Checking the Ignition System ......................................... Unit 15
Starting and Operating Small Engines .............................. Unit 16

Format
The design of the format is innovative. Students have decision making responsibilities and find the materials easy to use because of the simplified instructional objectives, defined key terms, and easy to follow illustrations. The motivational techniques capitalize on student strengths and reinforce student independence. Students respond to the following statements prior to beginning each unit:

Show What You Can Do.
Check the statement that fits you best.

I can do all the tasks in this unit and want my instructor to check me through the Practical Exercise Performance Checklist.

I want to study the information in this unit before I do the Practical Exercise Performance Checklist.

TURN THE PAGE AND BEGIN.

Each individual response determines the instructional approach. However, each unit begins with an introduction and a description of the specific tools and materials needed. Each step of procedure is well illustrated, and easy to follow instructions are emphasized. At the end of each unit the student completes the Practical Exercise Performance Checklist.

This becomes a record of the competencies the student is capable of performing. The instructor grades the student as completing the unit satisfactorily or needed to repeat the unit before starting the next unit.

Additional information may be obtained by writing the Instructional Materials Laboratory, 10 Industrial Education Building, University of Missouri, Columbia, Missouri 65211, Telephone number: 531-685-2883.

Just for Teachers . . .

Shop Projects For Skill Development

By Fred Lendrum
(Ell's Note: Mr. Lendrum is an instructor in the Agricultural Mechanics Division, Agri- cultural Technical Institute, Waco, Ohio 43469.)

Many teachers in the vocational agriculture field have been critical of the project approach to agricultural mechanics skill development in the high school shop. This criticism stems from the fact that many times projects become high priority repair jobs rather than directed learning experiences. It is my hope that this article will put new life into the project approach to skill development.

Early in my teaching career, like many other beginning teachers, I discovered that it was much easier to motivate students working on projects that would eventually go home, than students striving for additional checks on a skills chart. The only problem was, I also quickly observed, that students like to do what they can do best and as a result most successful projects only serve to further develop the skills the students already possess.

These observations furthered the development of clusters of projects, grouped on the basis of the skills required and the level of competency desired. Requiring students to select projects from each of the clusters encourages the mastery of a wider variety of skills and retains the motivating influence of the project approach to skill development.

Developing Project Clusters
Project cluster lists will vary with the local school facilities and community needs, so standardized lists would be of little value. The first step in developing project cluster lists is to determine the skills to be taught during the four years and the year a specific skill will be emphasized. Input should come from the community, students, fellow teachers and materials from the state level, as well as your own observations. Don't try to teach everything. Include only those skills that will be most beneficial to the students and (Continued on Page 14)
Shop Projects for Skill Development
(Continued from Page 13)

After project cluster lists are developed use tactful persuasion to control project selection. The following pointers will increase the success of the project cluster approach to skill development.

1. Develop a file of project plans for each cluster area.

2. Keep a supply of quality materials and fasteners on hand for the projects chosen most within a cluster area.

3. Demonstrate all hand tools, power tools, and construction techniques that a student will be using on specific projects within a cluster area.

4. Advise students with regard to problem areas of construction for specific projects before they arise.

5. Keep shop and tools clean, neat, up-to-date, inventoried, and in good working order.

6. Justify new tools by reviewing new skills to be taught and projects to be constructed.

7. Closely supervise all levels of construction and display an interest in the students projects.

8. Help students divide construction into simple, logical steps.

9. Emphasize workmanship by recognizing a quality project and pointing it out to other students, teachers, and the parents’ students. Display quality projects at a community fair.

10. Don’t accept poor quality, make students redo mistakes and pay the additional materials cost.

11. Never allow incomplete projects to leave the shop.

12. Discourage repair jobs outside of the skill area being covered.

13. Constantly stress safety in dress and work habits.

Skill Development

Most agricultural mechanics skills can be taught using the shop project approach, if project selection is carefully controlled. This procedure requires organization on the part of the instructor, but much time will be saved as files of plans and construction procedures are developed. Compared to the skills check list approach, students are highly motivated by the lasting fulfillment of accomplishment that results as a quality project is completed. It should also be noted that for some students this may be the first real feeling of accomplishment ever experienced.

The skills check list should not be completely discarded as it serves as an excellent tool to be used by the teacher for self evaluation, in addition, it must be used in skill areas not applicable to the project approach. Although the shop project is an excellent technique for teaching mechanics skills, from time to time the teacher must emphasize the skills being learned so the students think of agricultural mechanics as more than just a course in shop.

This technique for skill development in agricultural mechanics allows the teacher to use the project to motivate students and still direct the learning experience.

A Sample Project

Plans for constructing a floor plans are included with this article as an example of one type of project. Students learn and apply many skills in constructing this project.

PROCEDURAL PLAN FOR BUILDING A FLOOR PLAN

1. Lay out and cut side rails to length.
2. Lay out side rail holes.

3. Drill pilot holes in side rails using a template to maintain proper spacing.
4. Drill 3/4” holes in side rails using a screw metal back-up to keep the twist drill from drilling in the channel iron frame (drill one side at a time).
5. Cut upper channel rails and table rails to length.
6. Fasten the drill pilot holes in upper channel rail.
7. Clamp the drilled upper channel rail to each side of the side rails and drill pilot holes using the upper rail as a guide to ensure proper alignment.
8. Clamp the two upper rails together and complete the 3/4” holes.
9. Complete the 3/4” upper channel rail holes in the side rails.
10. Cut base supports to length with a 45 degree angle at each end.
11. Complete the two parts in each base support.
12. Clamp base supports to side rails and drill pilot holes in the side rails using the base support as a guide to insure alignment.
13. Complete drilling 3/4” holes in the base supports and side rails.
14. Drill a 5/8” hole in each side rail for the lower 5/8” spacer rod.
15. Complete the spacer length to width from 5/8” cold rolled and thread ends.
16. Bolt the base supports to the side rails.
17. Bolt the upper rails and side rails together using hardened bolts.
18. Install lower 5/8” spacer.
19. Drill 3 1/4” holes in table rails for spacer bolts allow for 1 1/4” clearance between spacers and side rails.
20. Complete the spacer 3 1/4” long to allow for table movement.
21. Cut base plate for jack, upper and lower guide plates to length.
22. Drill pilot holes and 1/4” holes in the upper and lower guide plates and jack base plate with the three parts clamped together to assure alignment.
23. Mark out a 1 3/4” center hole in the lower guide plate for the arbor (it may be necessary to drill this hole drilled in a machine shop).
24. Cut the arbor and chamber the end to be worked.
25. Assemble and square the jack support mechanism.
26. Slide arbor into lower guide, square with jack base plate and weld the arbor to the base plate.
27. Disassemble the support mechanism, weld the lower guide to the upper rails and reassemble.
28. Cut and notch spring supports.
29. Assemble supports to upper and lower guides.
30. Weld and cut a short pipe section under the upper guide to hold the jack in position.
31. Cut garage door springs with austenite torch (open spring sections with cold shears and then cut the spring with cutting, reposition, clip ends of the springs on the cut end of the springs.
32. Prepare the press for painting.
33. Assemble and mount the guide rods and arbor.
34. Cut and chamber two 3/4” cold roll table support rods.


The book is separated into five parts, each containing from four to eight chapters. Part one contains an introduction to economics and how it relates to agriculture, a brief history of U.S. economic policy, and a description of types of economic systems, types of business organizations, the U.S. monetary system, and the U.S. economy.

In part two, capital and natural resources are discussed with characteristics of U.S. farms. The third part details the principles of supply and demand and how they interact including prices, comparative advantage, diminishing returns, equimarginal returns, and market structures and competition.

Part four considers the economics of agriculture, a description of the farm supply business, the cost functions of marketing, types of marketing, consumption, and U.S. agricultural policy. The final section deals with foreign trade, economic development, and the Federal Reserve System. It also discusses budget. balance sheet ratios and analysis, the marginal rate of substitution and several other principles of farm management and agrribusiness management.

The book is best suited as a text book for an introductory course in agricultural economics at the college or junior college level.

Dan Countryside Fairfield, Jr. Sr. High School Groen, Indiana

BOOK REVIEW

Skills to Be Taught Using the Floor Press Project
1. Selecting metal and bolts.
2. Feeding planes.
5. Cutting metal with a band saw.
6. Drilling metal using an electric drill.
7. Drilling metal using a drill press.
8. Cutting threads with a die and die stock.
9. Cutting pipe with a pipe cutter.
10. Cutting metal with an oxyacetylene torch.
11. Welding with a 6021 rod.
12. Cutting metal with a bench grinder.

MAY, 1982

THE AGRICULTURAL EDUCATION MAGAZINE
Just for Teachers

The Three C's of Judging Contests

Judging contests have long been a part of the FFA component of the vocational agriculture program. In the early years of vocational agriculture, teachers felt a need to involve students in competitive activities where they could exhibit and practice the skills learned in the classroom. These early contests dealt primarily with the production agriculture areas of crops and livestock.

Today we find a wide range of judging contests covering literally every aspect of agriculture. In Ohio, for example, there are 32 contests available for the students.

Three questions must be answered by vocational agriculture teachers about judging contests: Are contests important enough for teachers to use their time in preparing students? The importance of contests can be summarized by looking at the three C's of judging contests. Competition, confidence, and careers are the three C's of judging contests and make them an important ingredient in the total vocational agriculture program. Competition has long been a part of the American way of life. It is not only important, but it is competition that makes an American farmer and agribusiness person.

Competition teaches students some basic principles about life:

- Principle I: Most of us have more abilities than we use.
- Principle II: Benefits from an activity are proportionate to what is put into it.
- Principle III: People like to be recognized for their accomplishments.

Application: Encourage students to look forward to representing themselves, the chapter, vocational agriculture program, school, and community as they participate in contests. Recognize the accomplishments of students in the school newspaper, local papers, state FFA reports, and magazines.

In competitive activities students have the opportunity to put their talents and skills against other contestants. The idea of competing against other students can be a motivating force for encouraging students to improve themselves in agriculture skills and abilities. Students like to feel a sense of accomplishment. Competition is a means by which students can see the results of their efforts individually or as a team.

Confidence in one's ability is a valuable trait for any person, especially students of vocational agriculture who are constantly required to make major decisions about agriculture production and business. Students develop confidence as they participate in contests and find they are able to make sound judgments and decisions. Confidence is acquired, not declassed. As students have successful experience in judging contests, they acquire a feeling of self-confidence.

When students with proper training take part in judging contests they can be successful. This is not to say they will always win, but they can be successful. The confidence of students will be increased with successful participation in judging. As the students are successful and confidence in their ability increases, you will see them wanting to study and practice for contests.

BY RAY GRIFFITH
(Formerly a member of Agricultural Education at River View High School in Warren, Ohio 44483.)

Recruiting top talent is a reward for success in judging contests.

The third "C" of judging is careers. Participation in such contests as meats, milk, poultry, soils, and mechanics exposes students to various career opportunities in the field of agriculture. Many students have developed a special agriculture interest while taking part in judging activities. The teachers should discuss career opportunities as they work with students. Resource people used in training judging teams are good contacts for students wanting career information.

Many good students from small or non-farm situations can be helped into agriculture careers through interest developed in contests activities.

Number

How many contests should a teacher supervise? Two main factors that will influence the number of contests a teacher should supervise are available time and teacher experience. Since time is always at a premium for vocational agriculture teachers, each teacher needs to budget time to spend on judging contests. A written schedule or time budget on judging practices allows the teacher and students to keep up with preparations for contests. A schedule also shows the students that the teacher is interested in judging contests.

The background and experience of teachers affects the number of contests the teacher supervises. Teachers will usually prepare judging teams in areas where they feel competent. Beginning teachers are often limited in experience for many judging contests. It would seem advisable for a new teacher to select those contests that can be handled and prepare students as they can be successful.

Teachers who want to learn about contests should involve themselves in helping supervise these contests as well as work in grading and scoring.

Teachers can learn about contests by listening to the comments and placings of official judges. When students are involved in contests, the teacher should see that the students are present to hear the reasons and placings by the judges. As students begin to judge, they can learn by listening and observing the contest results. The most important knowledge of a teacher is that when a teacher takes students to a contest and then leaves before the results and reasons are given, they are losing out on valuable training experiences.

The decision on how many contests to participate in rests with the teacher. The teacher should consider the fact that proper training should precede participation. Having students enter contests with no preparation does little to help them learn or have successful experiences that causes them to want to improve.

Who should train the students for contests? Basically the participation in contests should be an extension of the classroom teaching. Students who are aware that they can represent their chapter or school may find a deeper interest in what is being taught. However, teachers may need help in some subject areas to get technical information. Resource people in the school area may include FFA alumni members who were on previous judging teams, livestock breeders, and people actively engaged in the contest areas.

The teacher is responsible for the students and should be involved with their preparation. Students will know how important the teacher feels contests are by the level of involvement of the teacher. Also, the teacher who participates in the training of students will enjoy the success of the students since their accomplishments reflect the teachers involvement. Vocational agriculture teachers have the distinct opportunity of seeing their students exhibit their skills and abilities in contests.

In the past 21 years, nearly four-hundred vocational agriculture students have represented our high school on the state level. Forty students have represented our State at National Contests in Kansas City. These students have done something few of their fellow classmates will ever experience. They have represented their school and chapter at State and National competition. Along with developing agriculture skills and abilities, they can use in an agricultural career, these students have found satisfaction and personal fulfillment in being successful in a competitive way with other students. I have seen what many call "poor students" become involved in a judging activity and place first on the state level. Contests are tools teachers can use to stimulate students who may have been turned off by the regular school menu.

Judging contests are only one part of the vocational (Continued on Page 18)

MAY, 1982

The students are competing in judging dressed poultry.
The Three C's of Judging Contests
(Continued from Page 27)
agriculture program and should be kept in balance with the
other aspects of the program. Teachers who are interested
in seeing their students improve in judging contests need to
apply PMA (positive mental attitude) to their teaching.
Students should set personal goals for themselves, and
their team goals should be written and challenging. En-
courage the students to fix in their minds what they want
to accomplish and then direct them in preparing for their
respective contests. The teacher will need to make avail-
able resource materials and practice experiences. This at-
titude toward contests will lead to a successful experience
for the students and students.
Success in a judging contest is when prepared students
participate and learn from their experience. Cooperation
between the teacher and students is needed to make judg-
ing experiences worthwhile.

IDEAS UNLIMITED

Practical Design, Easy to Build . . .

Solar Food Dryer Construction

In recent years solar food drying has increased in popularity. The sun, as a
source of heat, can be successfully used to dry food. The Garden City, Kansas,
vocational agriculture department has modified and perfected a useful dryer.
Fifteen of these dryers have been con-
structed and placed in use by Garden City residents. The model shown has 14
square feet of drying area.

Due to the popularity of solar dry-
ing, two food dryer workshops were
held in the summer, 1981. Performance of the dryers is consistent. A variety
of foods have been dried, including tomatoes and hot peppers.

Some suggestions are:
1. Use nylon net or fiberglass screening for the food tray covering.
2. Use knot-free lumber.
3. Cutting and placing of vertical side piece boards is critical.
4. Adjust vent so maximum solar temperature does not exceed 110-115°F.
5. Seal the wood surface with Caperitol, inside and outside.
6. Use high temperature flat black oil based paint inside the dryer.
7. Allow at least 1½ inches between food and racks for air circulation.
8. Paint exterior chocolate brown or jade green.
9. All hinges and hardware should be brass, aluminum, or galvanized iron.
10. After the dryer is completed, operate empty for two bright sunny days to drive off volatile paint, glue or

Additional information is available from the author.

By Gerald W. Hornaday
(Editors' Note: Mr. Hornaday is an instructor at Garden City Community College, Garden City, Kansas. The article is based on his entry in the Idea Unlimited Contest sponsored by the Na-
tional Vocational Educators Teacher's Association. He may be contacted at 504 Shorty, Garden City, Kansas 67846.)

The renewed emphasis and thrust is the result of a National SOE Commit-
tee of professional vocational agricultur-
education teachers, supervisors, and
and teacher educators who have been
and now work on SOE for nearly two
two years. The culmination of the commit-
tee's work will be a National SOE Workshop in Washington, D.C., in July, 1982.

Each state will select and send a team

of four individuals to be trained at the
National SOE Workshop. The intent of the workshop is to act as a catalyst for
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Using Bulletin Boards Effectively

By RICK FOSTER

(Editors' Note: Dr. Foster is Assistant Professor of Agricultural Education at the University of Idaho, Moscow, Idaho 83843. He is also Teaching Specialist Editor for Two Magazine.)

An attractive background for a vo-ag bulletin board may be permanently covered with colored burlap fabric or temporarily covered with construction paper. Whatever is used as a background, remember that students react favorably to cleanliness and color. It pays to have a well-maintained bulletin board.

Active display items may be obtained from current media, i.e., newspapers, farm magazines, or commercial sources. Past FFA calendars are useful for gathering color-activated photographs of FFA activities. Of course, some of the best items are those made from the imagination of vo-ag instructors and students. In any case, use display items that are colorful, show action, attract attention and illustrate the concept effectively.

In gathering materials, don't forget to check necessary construction equipment such as tape, stapler, glue, and appropriate letters. Many instructors have found it easiest to maintain a file of past bulletin boards in pictures, letters, and other materials may be reused.

Planning the Arrangement

No matter how much trouble you go through to collect the appropriate materials, if the arrangement isn't right, the bulletin board can lose its whole effect. Follow some simple rules of design. The human eye is influenced by:

- the direction that objects face
- location of items (usually about 3/4 up and in the center)
- sequence or order of events
- directional lines or arrows
- use of color
- use of white space

Getting the Work Done

If bulletin boards are going to provide a contribution to the education of students then they can take a direct role in their planning and construction. Students can gain very valuable experiences in constructing such a bulletin board as part of a course requirement.

It is suggested that students be made aware of the potential curricular content and be made responsible to prepare an appropriate bulletin board to supplement the unit. Given enough advance notice, students can develop an idea (approved by the instructor), draw a sample arrangement (also okayed by the instructor), gather the materials, and construct the board.

Evaluating the Finished Product

To be really effective, the bulletin board needs to be evaluated. Consider:

- Is the theme easy to comprehend?
- Is it technically accurate?
- Does it attract attention and generate interest?
- Does it fit into the instructional program of vo-ag?

If the bulletin board meets these final criteria, all the instructor needs to do is include its use at the appropriate time in the unit and make sure it is replaced when it has fulfilled its purpose. Be sure to maintain a good file system so materials can be reused or the entire display can be used another year.

The classroom bulletin board need not be an affair. It can and should be an attractive addition to the instructional program. With advance planning and design, the cooperation of vo-ag students, it can be instrumental in reinforcing essential classroom concepts.

Mail by May 30, 1982

Opinionnaire

Vocational-Technical Agricultural Education

Be a part of the opinion pool. Indicate your responses to the following items, cut this page from the magazine along the dotted line, and mail to:

The Agricultural Education Magazine

P.O. Drawer AV

Mississippi State, MS 39792

The findings of this poll will be presented in three parts. Part I (Program Administration) will appear in the September issue with Part II (Curricula) and Part III (Professions) appearing in the October and November issues, respectively.

Part I: Program Administration

A. The primary mission of vocational-technical agricultural education at the high school level should be to prepare individuals for:

   1. (check all that apply)
   - Employment in farming and ranching
   - Employment in agribusiness
   - Advanced study of agriculture at the postsecondary level
   - Advanced study of agriculture at the baccalaureate level

   Other (Specify)

B. The primary mission of vocational-technical agricultural education at the postsecondary level should be to prepare individuals for:

   1. (check all that apply)
   - Employment in farming and ranching
   - Employment in agribusiness
   - Advanced study of agriculture at the postsecondary level
   - Advanced study of agriculture at the baccalaureate level

   Other (Specify)

C. Vocational-technical agricultural education in the public school system should serve:

   1. (check all that apply)
   - Students in grades 9-10
   - Students in grades 11-12
   - Students in postsecondary programs, including junior college/community college students
   - Adult/vocational students
   - Other (Specify)

D. The major problems currently facing vocational-technical agricultural education are:

   1. (check all that apply)
   - Funding for local programs
   - Lack of student interest
   - Lack of state support
   - Lack of school administrator support
   - Excessive job demands on teachers
   - Providing supervised occupational experiences for students
   - Shortage of teachers
   - Other (Specify)

E. Leadership at the federal government level for vocational-technical education in agriculture is:

   1. (check one)
   - Very effective
   - Effective
   - Ineffective
   - Very ineffective

F. At the federal level, vocational-technical agricultural education could best be administered by:

   1. (check one)
   - U.S. Department of Agriculture
   - U.S. Department of Education
   - U.S. Department of Labor
   - Other (Specify)

G. Agricultural teacher education programs should be

   1. (check one)
   - Colleges of education
   - Colleges of agriculture
   - Other (Specify)

H. State-level supervision of vocational-technical agricultural education programs is:

   1. (check one)
   - Very effective
   - Effective
   - Ineffective
   - Very ineffective

I. The preparation of teacher education programs should include:

   1. (check one)
   - Very adequate
   - Adequate
   - Inadequate
   - Very inadequate

J. Teacher certification regulations are:

   1. (check one)
   - Very adequate
   - Adequate
   - Inadequate
   - Very inadequate

K. The best locations for secondary vocational-technical agricultural programs are:

   1. (check one)
   - In comprehensive high schools
   - In area vocational centers
   - Other (Specify)
Part II: Vocational-Technical Agriculture Curricula

A. The following components should be included in vocational-technical agriculture education: (check all that apply for secondary level programs)
   - Classroom/lab instruction
   - Supervised occupational experience
   - Student organization activities (e.g., FFA)
   - Adult/young adult education
   - Other (Specify) □

B. Supervised occupational experience programs should:
   - (check one)
     - Be required of all in-school students
     - Be optional for students who are interested
     - Not be a part of vocational-technical agriculture curriculum
   - Other (Specify) □

C. The kinds of supervised occupational experiences at the secondary level should include: (check all that apply)
   - Employer
   - Ownership
   - House
care
   - On-school laboratory (also known as directed laboratory)
   - Other (Specify) □

D. Adult/young adult instruction should be offered at the (check all that apply)
   - Secondary level
   - Postsecondary level
   - University/college level
   - Other (Specify) □

E. Instructional materials available for vocational-technical agriculture education are: (check one)
   - Very adequate
   - Adequate
   - Inadequate
   - Very inadequate
   - Other (Specify) □

F. How effective do you rate your school's curriculum guidance? (check one)
   - Very effective
   - Effective
   - Ineffective
   - Very ineffective
   - Other (Specify) □

G. The name of the Future Farmers of America (FFA) should be changed. (check one)
   - Agree
   - Disagree
   - No opinion
   - If you agree, what name would you suggest? □

H. FFA membership should be required of all students enrolled in secondary vocational-technical agriculture classes. (check one)
   - Agree
   - Disagree
   - No opinion
   - Other (Specify) □

I. A farm shop should be paid by: (check one)
   - Students
   - The local FFA chapter
   - The local school
   - Other (Specify) □

J. How effective is the National Parent Teacher Magazine in meeting the needs of FFA members? (check one)
   - Very effective
   - Effective
   - Ineffective
   - Very ineffective

Part III: Professionalism

A. The best teachers of vocational-technical agriculture are those who have: (check one)
   - Extensive industry experience, but no college degree
   - Extensive industry experience, with college degree
   - Completed college degree at an approved agricultural teacher education program
   - Completed college degree in some area of agriculture
   - Other (Specify) □

B. Were you required to take the National Teachers Examination (NTE) in order to teach? (check one)
   - Yes □
   - No □
   - If you were required to take the NTE, did you feel prepared for the exam? (check one)
     - Very effective
     - Effective
     - Ineffective
     - Very ineffective

C. In which of the following organizations do you hold membership? (check all that apply)
   - AFA (American Vocational Association)
   - AVA (American Vocational Association Teachers Association)
   - NC (National Education Association)
   - AFT (American Federation of Teachers)
   - State vocational association
   - Other (Specify) □

D. How effective is the AVA in meeting the needs of vocational-technical agriculture education? (check one)
   - Very effective
   - Effective
   - Ineffective
   - Very ineffective

E. How effective is the NYATA in meeting the needs of vocational-technical agriculture education? (check one)
   - Very effective
   - Effective
   - Ineffective
   - Very ineffective

F. Do you currently subscribe to The Agricultural Education Magazine? (check one)
   - Yes □
   - No □
   - If no, why? □

G. Articles in the The Agricultural Education Magazine should be written by: (check all that apply)
   - Vocational-technical agriculture instructors
   - State supervisors
   - Teacher educators
   - Graduate students
   - Research specialists
   - Other (Specify) □

H. What type of articles do you prefer in The Agricultural Education Magazine? (check all that apply)
   - Reports on research in agriculture
   - Reports on research in education
   - General trends and issues in vocational agriculture
   - Innovative teaching ideas
   - Descriptions of vocational agriculture programs
   - Book reviews
   - Articles on instructional agriculture
   - Other (Specify) □

I. List the names of three leaders of vocational-technical agriculture education in the United States.

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THE AGRICULTURAL EDUCATION MAGAZINE

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Teaching Tips

Hand Tool Safety Tips

Wrong

- Don't bend metal band on sharp edge.
- Don't use kids to hold metal object.
- Don't use metal sheet cutting rings to cut heavy wire. There are tools for this purpose.
- Don't use tools on a metal hard top.
- Don't stand on a tool box, shelf, or table.

Right

- Don't use a screwdriver or any thing sharp.
- Don't use a metal file or sharp object to cut leather or metal.
- Always wear safety goggles when using hand tools.

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The Agricultural Education Magazine
1800 Rural Point Road
Mechanicsville, Virginia 23111

MAY, 1982

23
Stories in Pictures

Teaching in the Classroom

Supervising and Instructing on the Farm

Supervising and Instruction in Horticulture

Keeping up to date through firsthand study of Agribusiness

(Top and lower left photographs courtesy of the National FFA Center, Alexandria, Virginia. Lower right photograph by the Editor.)