

● **Theme**
Supervised Experience
Programs - Learning By Doing



AGRICULTURAL EDUCATION

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COVER PHOTOS

In the top photo, student teacher, Sandra Dawson, supervises students in the Ornamental Horticulture class at Chenango County Area Occupational Center, Norwich, New York, on making corsages. (Photo courtesy Richard Jones and Art Berkey, Cornell)

The center photo shows a senior at Chillicothe, Missouri, practicing skills in salesmanship learned under the supervision of his employer and teacher. (Photo courtesy Robert Hayward and Lee Fitchett, Chillicothe)

The bottom photo shows an Oklahoma Voc. Ag. Teacher supervising a student with his wheat project. (Photo courtesy Paul Newlin)

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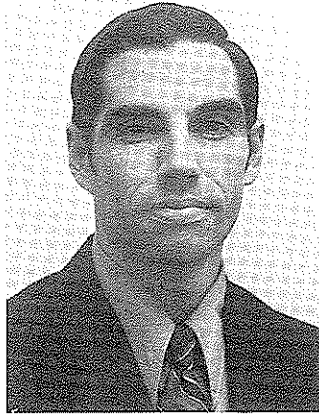
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Supervised

Experience

— ESSENTIAL —



FROM YOUR EDITOR

James P. Key

If there is any part of Vocational Agriculture which is an indispensable, essential component, it is the supervised experience program. When John Dewey pointed out the pragmatic philosophy of "Learning by Doing," he uncovered one of the most basic and important concepts of education. Vocational education and especially vocational agriculture have built their entire approach around this philosophy because it works! Students learn best when they get a chance to actually experience what they are learning.

As is quite evident from the variety of articles in this issue, there are quite a variety of types of supervised experience approaches in agriculture. They could probably be categorized into supervised farm experience, placement for farm experience, supervised occupational experience in agribusiness, and supervised experience in the classroom, shop, laboratory.

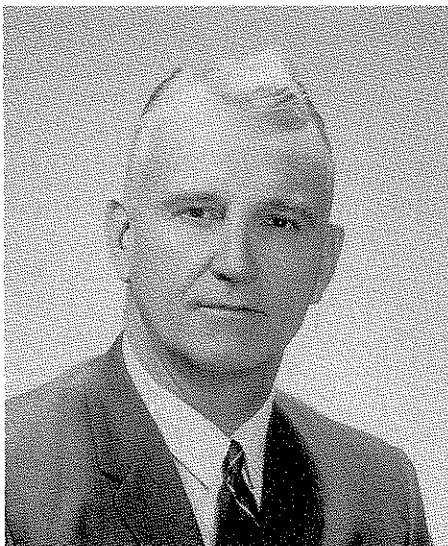
Supervised farm experience and placement for farm

experience would include all those experiences a teacher would supervise having to do with production agriculture—farming and ranching. They would include experiences from growing livestock and crops to maintaining farm machinery and facilities. The difference between these two approaches is that supervised farm experience is with students who live on a farm or ranch, or have access to one through their family. The placement for farm experience program is set up to place youth, who do not have an opportunity to work with their own or their parent's farming operation, as a worker on a farm where they can get this experience. Sometimes schools also have farms where students can raise animals or crops and gain farming experience under the direct supervision of the vo ag teachers. These experience programs in farming and ranching are familiar to most teachers since they were the foundation upon which the vocational agriculture program was based in the beginning.

(Concluded on next page)

GUEST EDITORIAL

*Harold R. Binkley
Teacher Education
University of Kentucky*



Harold R. Binkley

Supervised Experience Programs in Agriculture — A Must — And Standards For Them

We have reached a point in vocational education in agriculture where the profession needs to take a serious look at the supervised agricultural experience programs of students. This topic will be dealt with in terms of a philosophical base for students having experience programs, followed by suggested standards for experience programs — standards worthy of a group of professional people.

BASIC PATTERNS OF INSTRUCTION IN VOCATIONAL EDUCATION

According to the pattern of instruction for vocational education in agriculture starting with the Organic Act (Smith-Hughes Act) and continuing in all acts and amendments, "there must be directed or supervised practice or experience in agriculture." Has the profession really accepted that part of the basic pattern of instruction in vocational agriculture today? If we, the profession, have not

(Continued on next page)

CONTINUED EDITORIAL

A newer approach is the supervised occupational experience program in agribusiness. This program includes a wide variety of occupations in the broad field of agribusiness, in which students can be placed to work under the supervision of the employer and teacher. The classroom instruction is coordinated with this experience program to cover general skills which cut across occupations with the entire class and to allow students to work individually on skills unique to their specific occupation. A flexible teacher is a necessity here as the occupations of the students may range from ornamental horticulture and forestry occupations to ag mechanics and sales occupations. This program has expanded rapidly in the last few years as schools have recognized the value and necessity of supervised occupational experience in agribusiness and worked it into their vocational program.

Another important phase of the supervised experience program is those experiences supervised in the classroom, shop, or laboratory. As a teaching tool, this experience approach, where the teacher gives each student a chance to try that skill, is indispensable. How many times have you seen the light turn on for that student, who was having trouble understanding the theory, when he or she got a chance to actually try it? Getting to actually strike that arc, vaccinate that calf, plant that seed, make that sale, or experience any other of the many skills under supervision teaches more than we could in weeks of lectures, tons of audio visuals, and hours of demonstrations. Supervised experience is the approach which can motivate and teach students most effectively. Let's use it! ◆◆◆

CONTINUED GUEST EDITORIAL — STANDARDS

learned that a reasonably adequate amount of quality supervised practice is a necessity in vocational agriculture, how can we expect school administrators to accept it? *There can be no adequate training in agriculture that does not have its foundation in participation in the tasks for which the abilities are needed.* Not just any participation in these tasks will do. Participation may be miseducative; it may be of the wrong kind. Through it further learning may be arrested or distorted; one may learn errors, poor performance, or wrong procedures. For these reasons and others, students must have experience programs in agriculture, and supervision of the learners by the teacher is a must. Teachers have a responsibility for doing just this and in making administrators aware of these facts. We are accountable.

HAVE EXPERIENCE PROGRAMS FOR STUDENTS DROPPED TO A LOW EBB?

Some five years ago, I had the opportunity to travel to the west coast by car going a northern route and returning by means of a southern route. During this trip I prearranged and visited more than a dozen departments in an equal number of states. The thing that really shocked me was the lack of a genuine concern on the part of the teachers for their students having good experience programs — experience programs in the agriculture to be learned. If I had taken the time after returning from that trip and visited a dozen departments in my home state, I am sure I would have found the same situation. If we can generalize from this, what does this signal to the profession as to the importance it is placing on students having experience programs?

I shall pose two questions for intelligent reflection. The mental answers might be embarrassing if made public. Are teachers developing in freshman students a depth of understanding of *the need* for them to have good supervised experience programs? And question number two: Are teachers supervising students so they will make good arrangements for their experience programs and will succeed in carrying out these experience programs? Or, are all of us dodging the issue by talking about everything else except the experience programs of the students, which is basic to training in vocational agriculture?

GOOD EXPERIENCE PROGRAMS JUST DON'T HAPPEN

It takes a great deal of the teacher's time and energy to get students with good experience programs and to give reasonable adequate supervision to the experience programs. Has this truth really "soaked in" on some of us in agricultural education, and have we as teachers in turn caused school administrators to see, understand, and believe this important fact?

THE CHALLENGE IN THE DECADE AHEAD

As a professional in agricultural education, I am tremendously interested in experience programs for students of agriculture. Experience programs are the foundation stones in our instructional program. It is the real fabric of a program of training people in agriculture. Quality experience programs are a must. Truthfully, we in the profession cannot be happy in our work unless we feel the importance of experience programs and get students with good ones and push for quality in them.

(Continued on page 237)

COMING ISSUES

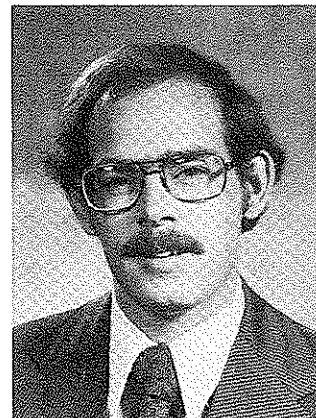
- MAY — Agricultural Products — Preparing Agricultural Processors
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- DECEMBER — Ornamental Horticulture Occupations — A Growing Field

COMING ISSUES

COMING ISSUES

Learning By Doing Through Cooperative Student Projects

Tony Price
Vocational Agriculture Teacher
Overton, Texas



Tony Price

The principle of learning by doing has been the backbone in the development of the Vocational Agriculture Program. Teachers in this program have always felt this was the most enduring form of learning. The Supervised Experience Program has been the best area for students to do jobs and develop skills. *Since more and more of the students are coming from an urban environment or background, the Supervised Experience Programs in many departments have suffered.* Both rural and urban programs have students who live in town and need special assistance in project development.

Advisory Committee Action

During a regular meeting of the local Vocational Agriculture Advisory Committee, the problem of projects for town students was heatedly discussed. This Advisory Committee is made up of four adult supporters, appointed by the school board. The job of this committee is to offer guidance to the local Vocational Agriculture teacher, so the needs of the students and community are adequately met. The committee was very concerned about the project program of many of the students who lived in town. After researching the problem, they found that 88% of the students living in town had a financial loss on their projects. These students performed 60% less skills than students who lived out of town. The out of town students made a profit on 83% of their projects and developed a significant number of different and important skills. The town students not only lost money and developed less skills, but much trouble was caused in the community by the noise, smell and disturbance of town students' projects.

The Vocational Agriculture Advisory Committee felt that the program was not being as beneficial to the town students and that these students were handicapped for a number of reasons.

Some of the reasons the out of town students had an advantage were:

1. Easier access to land
2. Better facilities
3. Student background
4. Parents' support and interest
5. Profit from past projects to invest in new projects
6. Had volume to cut unit cost
7. Projects held greater economic value

Student Investment Program

The Committee determined a program should be developed which would offset the disadvantages of living in town. After a study was made to determine community needs, the Committee held a meeting to give birth to the Overton FFA Student Investment Program. The criterion of the program was:

1. Must be governed and operated by the students
2. Must teach a variety of usable skills
3. Must be based on a fair market value and require no gifts or inflated prices for a profit
4. Must require a small amount of equipment and facilities
5. Must be practical for this region

The second stage was to determine the attitude of the students regarding such a project. During the next two weeks the possibility of developing a cooperative project for the students was discussed with classes, FFA members at a meeting, school administrators and local supporters. This selling stage was climaxed by a meeting of all interested students and their parents. The members of the Vocational Agriculture Advisory Committee were present to answer questions and show support. The meeting lasted a little over an hour and a number of pertinent questions were asked and answered. The committee agreed that there appeared to be enough interest to warrant a pilot project for one year.

The following week, contracts went on sale to interested students. These contracts cost the members \$50 and each contract represented one share of the operation.

This contract was an agreement between the student, his parents and the Student Investment Program. It required the shareholder to accept one share of the profit or loss, do one share of the work, abide by decisions of the Board of Directors. Parents of the students agreed to accept any responsibility not taken by the student. The contract called for the Student Investment Program to lease a pasture for the operation, borrow money to finance the project, set up a two signature checking and savings account, distribute one share of profit or loss at the end of the operation and set up a Board of Directors to make decisions for the group. This contract was signed by the student, parent, FFA Advisor and Student Investment Program Board Chairman.

Action

Twenty-five shares of the Student Investment Program were sold during the next two weeks, after which a board of directors was elected. The shareholders agreed that the Board should consist of five members and a chairman. This group was elected by secret ballot. The chairman of the board was required to sign the contracts and was made co-signer of checking and savings accounts with the FFA advisor. The chairman also became responsible for the performance of the other members of the board.

The shareholders were divided into three groups with two board members in each group. Each group was responsible for the total care and upkeep of the pasture, fence and herd for seven days and then another group was to

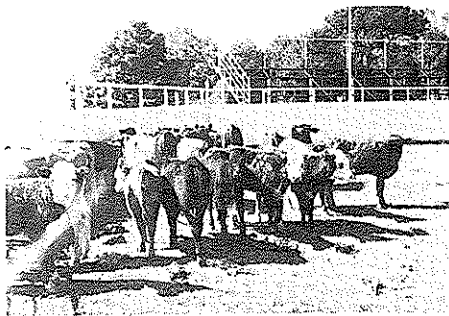
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CONTINUED LEARNING BY DOING . . .

take charge. The board members recommended a grade for the shareholders in their group at the end of each week. During peak problems or work situations all students could be called in to work or help out.



This board of directors of the Student Investment Program became the governing body for the group. They met and considered some plans designed by the Vocational Agriculture Advisory Committee. They discussed the type, size and extent of the program and then voted. The primary responsibility of the Advisory Committee and FFA Advisor was to make recommendations and to suggest courses of action. The criterion called for the program to be governed by the students. The FFA advisor acted as manager for the operation and carried out the wishes of the group.



The directors selected a feeder calf on winter pasture operation. This program was selected for the following reasons:

1. Provided basic skills in livestock management
2. Contributed experience in pasture planning
3. Offered economic potential
4. Required minimum amount of equipment and facilities
5. Project would close out near the end of school
6. Was practical and typical for our area

7. Created interest in students

The directors leased 16 acres of land suitable for winter pasture and hired an order buyer to purchase calves. The pasture was planted by a custom operator because the FFA did not have equipment. The pasture was planned through recommendations from acknowledged experts.

The Student Investment Program made a loan from the local bank at current interest rates for \$3,600. This money was put into a checking account which required two signatures. The \$1,250 collected from sale of shares was deposited into a savings account to help secure the note. All expenses were paid out of the checking account and a record of all checks was kept. The board of directors received a complete list of expenses each week and all shareholders received a financial report bi-monthly. The checkbook and records were open to all members at all times.

Results

The students involved in this project not only made money, but more importantly, they learned by doing. The students began to listen to market reports, because they became involved in that market. They were more aware of weather trends because the weather affected them.



After the calves were purchased, the student became involved in preconditioning them. This developed skills such as handling, restraint, vaccination, worming, branding, ear tagging, dehorning, etc. The nutrition of the calves was cared for by students. They learned about different types of feed, amounts needed, effects of Protein %, importance of fiber and much important information. Once the calves were placed on pasture, the skills required were basically ones of herd management.

The Board of Directors kept up with market trends and in May they decided that we should get ready to sell, instead of taking the calves to a feed-lot. The directors selected a buyer and made the transaction.

The Student Investment Program made a substantial profit at the end of its first year in operation, but more importantly, the students actually learned by doing. The committee determined that making money should never be the main measure of success, but that the education of the members should have priority over all matters.

Summary

The development of nearly any agriculture operation can be organized into a cooperative student project. One priority is that the operation must fit the area. Regardless of the project to be used, the following guidelines must be met:

1. Define community project problem and extent
2. Seek advice from adult supporters
3. Sell idea to students and parents
4. Organize governing body and delegate power to operate
5. Create financial situation which is open and make regular reports to members
6. Allow student to select type of project
7. Make students responsible and allow them to receive praise for success
8. Keep community well informed
9. Have students develop reward system for good work and punishment system for failure to do share of work

The teaching approach to learning by doing has never been easy, but as more and more urban students come into the Vocational Agriculture Program, the job can become more difficult. The Student Investment Program has worked in our community but it is not suitable for every situation. The challenge is for every teacher of Vocational Agriculture, with the help of his local Vocational Agriculture Advisory Committee, to establish some program which will meet the needs of the students in town. The principle of learning by doing is sound, but the involvement of the town student in this process requires a little imagination and work.

THE CHANGING FACE OF SUPERVISED OCCUPATIONAL EXPERIENCE PROGRAMS

by
Roy D. Dillon
Professor, Agricultural Education
University of Nebraska-Lincoln

Important changes have taken place in supervised occupational experience programs of vocational agriculture in Nebraska over the past several years. A seven year study of the kinds and numbers of supervised occupational experience programs carried by students enrolled in secondary vocational agriculture have shown a marked change since 1969-70.

Table 1 shows the number of students enrolled in vocational agriculture in Nebraska during the period 1969-70 through 1975-76. The data shows a steady increase in enrollments through 1974-75, with a slight drop in 1975-76.

TABLE 1
Secondary School Students Enrolled in Vocational Agriculture in Nebraska

Year	No. of students
1969-70	5712
1970-71	6003
1971-72	6639
1972-73	7512
1973-74	7952
1974-75	8722
1975-76	8460

Source: Nebraska State Department of Education

The local vocational agriculture teacher who has not studied community needs and student interests recently in agriculture, may be shortchanging students in both curriculum and occupational experience program opportunities.

Table 2 outlines the number and percent of students carrying supervised occupational experience programs in the eight USOE agriculture occupational areas, for each of the seven years studied. The number of students carrying agriculture production experience programs remained nearly the same, but their percent of the total dropped from 90.1 percent in 1969-70 to 60.7 percent in 1975-76. Agriculture mechanics experience programs increased from 146 to 1457, for an increase from 2.5 to 17.2 percent of the total. Agricultural supplies and services experience programs increased from 176 to 774, or from 3.4 percent to 9.1 percent of the total. Ornamental horticulture experience programs increased from 25 to 230, or from .43 percent to 2.7 percent of the total. All other categories also increased.

The data show that the profile of supervised agriculture experience programs in Nebraska is changing, indicating that students are receiving the benefit of broadened vocational agriculture programs. Some vocational agriculture departments have retained production agriculture-oriented curriculums, based on community needs and advisory council recommendations, but have broadened the opportunities for students in occupational experience programs.

One rural Nebraska high school, nestled in the heart of the northern sandhills, where cattle are highest priority, has a well organized plant growth room built inside the shop area, totally climate controlled and artificially lighted. Today, both young men and women are taking advantage of the animal, plant, mechanics, and management oriented semesterized multi-teacher vocational agriculture program. The vision and leadership in program planning given by the local vocational agriculture teacher, and support by the Board of Education made the broadened program possible.

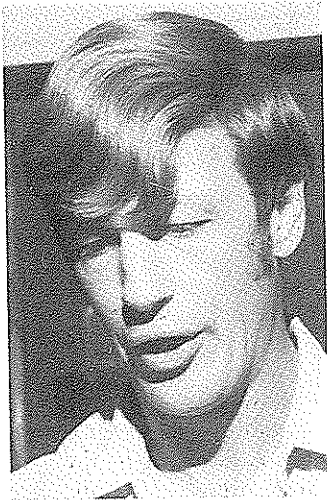
As a teacher of vocational agriculture, are you taking advantage of all the possibilities for occupational experience programs for your students? ♦

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TABLE 2
Number and Per Cent of Nebraska Vocational Agriculture Students Carrying Supervised Occupational Experience Programs, in the Eight USOE Agriculture Occupation Areas, From 1969-70 Through 1975-76

Year	Number and Per Cent															
	Agr. Prod.		Agr. Supplies		Agr. Mech.		Agr. Process.		Orn. Hort.		Agr. Resourc.		Forestry		Other	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1969-70	5148	90.1	176	3.4	146	2.5	151	2.6	25	.43	12	.21	1	.01	36	.63
1970-71	4396	73.2	222	3.6	718	11.9	274	4.5	60	.99	66	1.0	46	.76	220	3.6
1971-72	4956	74.6	230	3.4	527	7.9	189	2.8	67	1.0	35	.52	26	.39	314	4.7
1972-73	4530	60.3	328	4.3	596	7.9	360	4.7	112	1.4	114	1.5	113	1.5	284	3.7
1973-74	5264	66.1	425	5.3	1557	19.5	206	2.5	99	1.2	142	1.7	63	.79	40	.50
1974-75	4668	53.5	758	8.6	1043	11.9	242	2.7	133	1.5	122	1.3	79	.90	356	4.0
1975-76	5139	60.7	774	9.1	1457	17.2	229	2.7	230	2.7	89	1.0	35	.41	137	1.6

Source: Nebraska State Department of Education



James A. Woodard

AGRICULTURAL WORK EXPERIENCE PROGRAMS AT THE SECONDARY LEVEL

by
James A. Woodard
Vocational Agriculture Teacher
Alden, N.Y.

Vocational Education at all levels seems to be putting more emphasis on preparing students to perform, and succeed, at a specific job. The task of equipping a shop, or classroom, to resemble these varied job situations would seem impossible when you consider the cost of equipment and hiring of trained personnel to teach the various skills.

Therefore, as a vocational educator, if you believe in "learning by doing", it would seem the only possible way to teach many of these skills would be through supervised work experience programs.

Work experience programs are nothing new to the teacher of agriculture. All of us who came through a high school agriculture program 15 or 20 years ago will remember that a home project was part of our school program. It was the ag teacher and parents who oversaw and supervised the program. Even though this program was limited to specific areas, such as dairy cattle, hogs or chickens, the basic idea of learning a job by actual performance is the basis for the work experience program.

I teach in a high school whose student enrollment is about one thousand. This school is located about 20 miles east of Buffalo, New York. Twenty years ago this would have been considered a rural school, but today it resembles a centralized suburban school. We have a two man agricultural department, teaching eight different ag courses. This is the third year of our ag work experience program. The first

year the course was offered eight students enrolled. This year we have seventeen students in our program. Because of the increased enrollments alone, I would say our program is successful. However, I believe our students, our ag program, the school and our community all benefit from this program.

Need Development

Good salesmen will often develop a need before they present their product. We recognized a need for a program such as the ag work experience. This took place about 5 years ago when one of our students had an opportunity to take over his home farm. In order that he might assume the responsibility of this role, this boy had to be dismissed from school early. However, being an eleventh grader, he also needed credits to graduate. This student dropped out of ag class and began attending a vocational school. Here he took work experience, was released early, got his two credits and was able to manage the farm. However, he lost out on FFA awards as well as agricultural instruction in his junior and senior years.

Many ag teachers and principals do not see a need for ag work experience programs. In talking to other ag teachers and suggesting they start such a program, their candid reply is usually, "I'm already too busy. I don't have time or we don't have the need." I see by the latest statistics that the number of students in the ag work experience program are declining. I personally believe there is a greater need for this program. I also recognize that until ag teachers are aware of the benefits they might be reluctant to become involved.

The Program

Our program is open to all juniors and seniors who are majoring in agriculture and have earned at least two credits in agricultural subjects. These students must be employed in farming or agricultural related industry. They can earn one or two credits, depending on the number of hours they work along with satisfactory class work. The class meets once a week to complete work study outlines, discuss "on the job" problems, study labor laws, and work out decision making processes.

Students like the idea of earning money while they learn. Six of the eighteen students who graduated from the program have gone on to college or technical schools. In most cases, they couldn't have done this without the money they had earned. For eight students their job became full time upon graduation, so during a time when unemployment was 10-12 percent in our area, these students had jobs waiting when they finished school.

Finding Jobs

How and where do students find their jobs? Most students in our program find their own jobs. Of the seventeen students this year, thirteen have found their own employment. Because of large class size and a full teaching load, I have free only one period a day to oversee and operate this program. Therefore I am limited in searching out jobs for the students. It is an interesting observation that since the program has been in effect, we seem to have more employers getting in touch with us, requesting our students. Consequently, we have more jobs than students.

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CONTINUED AGRICULTURAL WORK EXPERIENCE

I believe that matching the student the job and employer is the most critical aspect of a successful program. In a small community the reputation of any school related program is highly publicized, if people feel it isn't functioning properly. Students' finding their own employment seem to have a much better relationship with their employer and a more realistic and enthusiastic approach to their job. I have had only two boys, out of 35, drop out of the program. In both cases I had found employment for these boys.

Only about one third of our pupils are employed on farms. The other two thirds work in various agricultural related areas. One boy has over two hundred colonies of bees which he takes to Florida during the winter. Another student works at the raceway (Batavia, New York) where he has his grooms license. This same boy is also learning to become a farrier. Still another pupil is the head of the frozen food department of a large grocery store. His duties include ordering, buying and pricing. I mention these occupations because the place of employment in each case located outside our school district. This shows the students are much more successful at finding their own employment than we often times give them credit for.

Results

I try to visit each student once every six weeks, on the job, and discuss the student's progress with his employer.

In this way I hope to have an accurate evaluation of the student's work habits and at the same time build a good rapport with the employer. This contact with the employer will also lead to potential jobs for future students. I have had two employers of past students contact us and we have been able to place our pupils in both of these vacancies.

The school and community should be brought closer together through a work study program. About three-quarters of our work-study students are employed within our own school district. This allows me to sit down with employers from our community and prepare a suitable training program for the student employees. This builds a spirit of cooperation and interaction between the community and school which strengthens our ag program, as well as the total school program. Whether discussing a student's work attitudes, or planning his next on the job training area, I have found genuine concern on the part of the employer. When these individuals see our concern and willingness to give extra time to a worthwhile cause, they wholeheartedly support our program, as well as our school in an active way.

Cooperation

You need the cooperation of your guidance and administrative personnel to incorporate an ag work experience program. Guidance directors will need course outlines, objectives and goals.

Materials available to us from the state Ag. Ed. Department in Albany along with information we gathered from other programs were most helpful to us in our situation. Another concern for school administrators is the cost of such a program. Our school furnishes me with a car to make employer calls. I am also excused the last period of the day for making employer contacts. The Chief Administrator, High School Principal and Guidance Counselor have been most cooperative with us in getting our work study program initiated. Their interest for the program and concern have continued.

Worth?

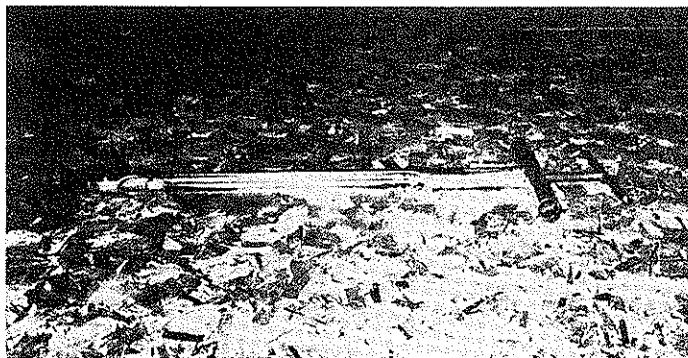
To implement an ag work study program into any present ag program will require added work for the ag teacher. Is the program worth the extra work and effort? Is this program a sound educational endeavor? Will the benefits to the students, ag program and school be worthwhile? Ten or fifteen years from now I will have more factual information and possibly better answers. If you believe students' learning of employable skills is what Vocational Education is all about, and an opportunity to earn money towards further education is helpful, then this program should be seriously considered. A work-study program of this sort is where your students can learn first hand about career opportunities in their chosen fields. This is the pinnacle of individualized instruction. ◆◆◆

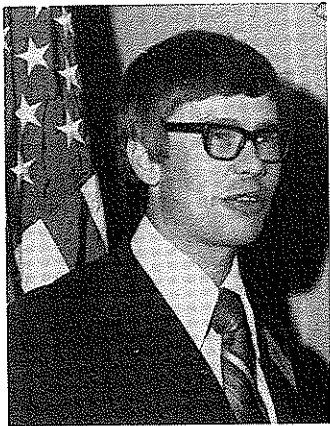
★ ★ ★ THIS WORKED FOR ME! ★ ★ ★

Having worked with a number of veterans this past summer and autumn, I had ample opportunity to assist in soil sampling. We use a Nasco Soil Sampler and of course while using equipment, one finds room for improvement of said instrument. This soil sampler was no exception. It required the use of a screwdriver to force the soil out of the sampler once the probe had been accomplished.

In revising our sampler, I drilled a hole (three-eighths bore) through the center of the handle and inserted a rod with an attached T handle. This rod passes through a washer midway down the inside of the barrel of the sampler. This washer is fixed in place with a brazing process to keep the rod from popping out of the opening in the sampler when soil is forced out of the sampler. At the end of the rod another washer has been brazed in place to help force the soil out of the sampler acting as a plunger. Soil sampling now is relatively simple and requires only a container in which to expel the soil. ◆◆◆

by John Wangberg
Veterans Farm Management
Pipestone, MN





Robert Bell
Assistant State Supervisor
Agricultural Education
Brookings, South Dakota

DO IT ALL YEAR LONG

The supervised occupational experience program is one of the most important components of Vocational Agriculture.

"How do you do it?" I asked a Vo Ag teacher friend of mine, "How do you help your students win Agricultural Proficiency awards at the state and national level?" That teacher has had the privilege of helping several of his students receive the highest FFA honors for their accomplishments in supervised farming and agribusiness programs.

His reply to my question was simply, "Farm visits, farm visits, farm visits." Those visits served to help students and their parents set goals, plan enterprises, secure quality livestock and seed, and, possibly most important . . . indicate to that student and that family that you care about them. Yes, I know that 100% of your students cannot be the state's Star Farmer or win the top award in an Agricultural Proficiency area. However, your visits to students will be beneficial because you have a better understanding of the home situation and how you can assist that student.

Here are other potential benefits to you and your program:

- outstanding public relations for the school, for you and for your Vo Ag program
- attendance will improve at your adult meetings because the farmers will know you, have more confidence in your ability, and feel at ease in your classroom

—student interest will increase during your classroom teaching when you can tie in what you and a student have seen and discussed during a farm visit or a visit to a student employed at an agribusiness training station

—you will be more knowledgeable of the agriculture in your community, and new farming practices; and therefore, be a better classroom teacher

To illustrate the last point, please allow this personal example. During my first year of teaching, while on a typical farm call, a farmer asked me questions about how to identify corn rootworms and what to use as chemical or cultural controls. In another situation a farmer was planning to build a confinement swine finishing building and he asked me how many square feet to allow per animal. I did not have the knowledge to answer those questions. The end result of those embarrassing situations was that I did my homework to learn the answers, and, in turn, I became a better teacher . . . a teacher who tried to keep up to date on the dynamic field of agriculture and I did a better job of keeping my instruction practical and not tied to often out-of-date text books.

As I have visited the Vo Ag programs in our state, I have gained the impression that most teachers concentrate their farm visits in two summer months. In the guidelines for South Dakota Vo Ag, we have recommended an average of four visits per student per year—four visits to be made on a need-basis throughout the year.

One man asked me, "Why should I visit a student in December if that student has a crop enterprise as his supervised occupational experience program?" *First*, I suggest that you can assist that student with his record book or budgeting for the new year, and help the student select and learn about crop varieties and marketing. I do not agree with the concept that visits can only be productive when the crop is growing in the field or only when a cow has recently dropped a calf.

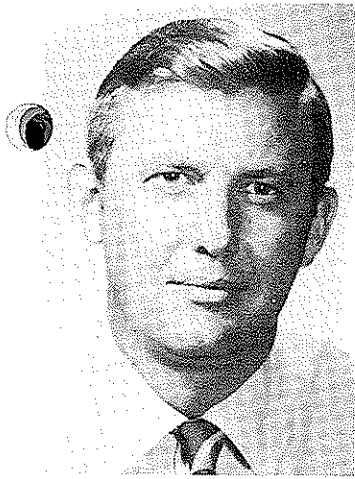
Secondly, a supervised occupational experience program in production agriculture should include improvement projects, supplementary practices and approved practices, all of which can be the basis for farm visits as you teach and encourage both students and parents.

With the many demands on the time of a Vo Ag teacher, you may find it necessary to establish the "self discipline" to get out and supervise students, and you must pace yourself so you don't spend an excessive amount of time on low priority or unproductive tasks. A case in point is one teacher who related that he spent four hours at one farm. I doubt that he can justify, as productive, very many four-hour visits. When the occasion demands, it should be done, but it is the exception rather than the rule.

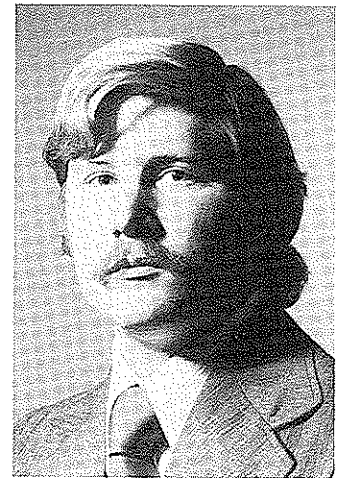
Farm visits or visits to students placed for training in agribusiness should be an important part of all Vo Ag programs, and our supervising teachers should make an effort to instill this philosophy in student teachers and teach them how to make farm visits during their student teaching experience.

You will be a better teacher because of your visits and, yes, more students will build sound programs deserving of recognition in the FFA's incentive award program. ◆◆◆

Teacher Roles in Experience Programs



Richard F. Welton



Gary L. Reakes

Gary L. Reakes
Graduate Assistant
Agricultural Education
Southern Illinois University
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Richard F. Welton
Teacher Education
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One of the most identifiable characteristics of the vocational agricultural program has been the out-of-school experiences of students, supervised by the teacher and referred to as "the project." Even though projects have evolved into contemporary supervised occupational experience programs, reflecting the diversification of vocational agriculture, the relationship of the teacher to students' occupational endeavors has not changed over the years. As supervision and assistance is provided in making the many decisions directly related to project development and success, the vocational agriculture teacher has remained a constant essential.

Unfortunately, some teachers do not fully appreciate their experience program role and are uncomfortable in this phase of the vocational agriculture program. Perhaps this uneasiness is reflected in the findings of a recent national study which reported 26 percent of the vocational agriculture students involved did not have an occupational experience program of any kind. An even more alarming statistic was reported by the United States Office of Education which indicated only 11.5 per cent of the 327,974 agribusiness students in 1975 were involved in a cooperative education program. This low percentage may be another indicator of the magnitude of a problem facing agricultural education.

Within recent years, vocational education in agriculture has realized many successes. The walls of our classrooms, shops, and laboratories are bulging with a record number of students enrolled in an ever increasing variety of pro-

gram offerings in agriculture and agribusiness. This is a proud accomplishment; however, increasing enrollment should not influence us in such a way that we lose sight of students' supervised occupational experience programs. If the figures cited earlier are indicators of the state of experience programs, someone is paying a price for this success. If our students are to have the advantage of learning in a realistic situation provided by a supervised occupational experience program, the vocational agriculture teacher must assume a variety of roles which call for the wearing of many hats.

Teacher

First and foremost, there is the hat of a *teacher*. In this capacity, whether it can be on-the-farm, on-the-job, or in the classroom, it is the teacher's responsibility to check student progress toward program objectives. One method which is widely used to check experience program progress is a supervisory check sheet. This form is devised to provide the teacher with information regarding all areas of the experience program—the size or nature of the experience, progress made on improvement projects and supplementary skills, record book condition, instruction needed to be covered in the classroom, possible agricultural mechanics projects which could be completed, comments of the parents or employer, and teacher recommendations. This form serves as a handy reference for both students and teacher.

Coordinator

The next hat the teacher wears is that of a *coordinator*. Supervisory visits

provide the teacher with much of the information needed to plan classroom and laboratory activities to coincide with the educational needs of students. Another important coordination function the teacher should perform is to make advance arrangements with students prior to a supervisory visit. A phone call, a post card, or a word to a student in the classroom before the visit will aid in making the most effective use of time.

Crusader

Another hat the teacher wears is that of a *crusader*. The teacher is essential for a successful outcome of the experience program. This may be particularly true in off-farm agricultural occupations. If students are to become involved in on-the-job training experience, it is the teacher's responsibility to take the initiative in promoting, locating, selecting, and arranging for cooperative work situations. In other words, the teacher must believe in what is best for the program and then follow through on these views with meaningful implementation.

Other hats the vocational agriculture teacher might wear include: That of a *planner*—It is essential for the teacher to become involved in the planning of experience programs. It cannot be assumed that students, parents, and employers are aware of what is to be done and how to do it. In planning, a program of sufficient scope and difficulty to be challenging to the student should be provided. Planning should also provide for the development of needed abilities that lead to establishment in an agricultural occupation.

(Concluded on page 231)



Richard A. Rawson

PROFESSIONALISM

by
Richard A. Rawson
Agricultural Mechanics Teacher
Chautauqua County BOCES
Ashville, N.Y.

I have just returned from attending the American Vocational Association and National Vocational Agricultural Teachers Association Convention in Houston, Texas. While at the Convention I heard the AVA referred to as a circus with multiple "rings" to keep in operation simultaneously. I feel we in Agricultural Mechanization will often find ourselves in the position of ring-master as we attempt to keep the wheels of our programs turning. We need to be constantly up-dating ourselves and our programs in the following three areas: Professionally, technically and in the new emerging teaching trends.

Professionally

Vocational Agriculture teachers have much to be proud of in the professional arena. Our local, state and national organizations for Vocational Agriculture are well organized and have purpose to their meetings. However, we still have many non-members who are not convinced of the value to be gained from joining our professional agricultural organizations. We need every member if we are to realize our potential for effecting changes desired from the local to the national level. We need to encourage more involvement and activity from the members we have.

Any organization is only as successful as the members work to make it successful.

We live in an age of fast paced living and multiple time demands. Each of us must now choose carefully the organizations and efforts to which we will devote our time, talent and financial

support. As teachers, we urge our students to take the time to "do it right" as they perform in our classes because only in this way can they feel the pride that comes from finishing a job well done. Why then do we as teachers not take our own advice more often when it comes to working for and within our professional agricultural organizations?

Vocational education of all types is receiving considerable political scrutiny and action. New legislation has and will be passed which will have far-reaching effects on our programs in vocational agriculture. No teacher is so isolated as to be immune from the effects of this legislation. Since each of us will be affected, it makes good sense to get involved in the political process and make our views known *before* legislation is passed. Our professional organizations provide the channels to assure that our views are heard at all levels of government. Stronger and more active memberships will lead to better representation for the vocational agricultural community in the halls of the legislatures across our great well-fed land.

Another concern which received considerable attention at the AVA-NVATA Convention is the national shortage of qualified teachers of vocational agriculture. This shortage would not exist if more teachers did *less complaining* in the presence of their students and did *more encouraging* of qualified students to pursue a career in teaching vocational agriculture.

Each of us has students each year who possess the qualities necessary to become good teachers, but we fail to impress upon them the joys of teaching.

Too often our students hear only the negative side of teaching as we go about our daily duties and never hear about our moments of joy and success. Teacher shortages are the responsibility of the teachers in the field as much as the teacher training institutions. Let's get together and solve the problem. Being a teacher of teachers is like being a father; it creates great responsibilities and great joys.

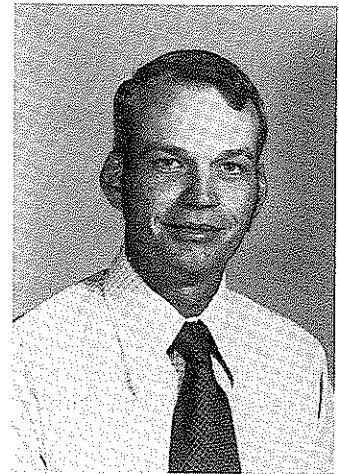
Why is it teachers are quick to recognize other teachers who are technically out-of-date, but often fail to see this process happening to themselves?

Technically

I was once told that upon retiring I would either have gained 20 years of teaching experience or one year of teaching experience repeated 20 times. Which teacher will you represent? In-service training and retraining is available from many sources and each of us should make an honest commitment to attend as many of these as we feel will benefit us and our programs. Trade and industrial organizations ranging from General Motors to the National Automotive Parts Association to Briggs & Stratton Corporation sponsor training sessions which are open to teachers of vocational agriculture. Colleges and universities sponsor many summer programs and workshops all aimed at keeping teachers up-to-date technically and professionally. Next to our families, our profession should have top priority on our time and resources. Teachers who are confident of their technical expertise will be happier in the classroom, and perhaps this joy will reflect itself in more of our students becoming interested in teaching vocational agriculture because they see the joy that can be theirs.

(Concluded on page 231)

COOPERATIVE EDUCATION IN AGRICULTURE



W. D. Spradlin

*W. D. Spradlin
Agribusiness Education
Cullman, Alabama*

What are some common elements that may make the concept of cooperative education a success or a failure? Let's look at some of these factors and see if we in agribusiness can't avoid some of the pitfalls of the program.

What Kind of Student?

First let's look at the key figure in the success of this program, the student. Many times in our desire to establish a cooperative education program, we may place more stock in the number or quantity of students than in the quality of students. It is my experience that you are not going to change a student's basic qualities by placing him on a job. A student who requires constant supervision and correction in classroom and shop work is not going to be very different when placed on a job. Probably every teacher involved in this type of program has had some unpleasant experiences in the area of student responsibility and dependability. Does this sound familiar? "I would like to work some of your boys, but those last two boys had to be under such close supervision and had to have every move pointed out to them; so, I don't believe we can use any boys this year." You have probably heard this before and this work station may be lost unless the instructor can remove some of the doubts of the employer.

What Are Their Reasons

Why does the student want in the co-op program? "I need a part-time job in order to stay in school. My parents say they just can't afford the expense of school for all the kids in our family and it looks like I might have to drop out." "I'm interested in this type of work and think I would like to work in it when I finish school." "Dad owns the business and wants me to help out in the afternoons. I'll probably be running the business (or farm) after dad retires." In my opinion, all are excellent reasons.

"I've got bills to meet. My car insurance is coming up and I need a new set of tires for my car." "My sister and I are going to buy a car as soon as we get jobs. She is already in Industrial Cooperative Training." "None of the courses interest me much and I would just as soon be work-

ing as goofing off in school." These may not be reasons for placing a student on a job. He may or may not need a car or tires or be interested in school. These factors alone do not mean that he would or would not make a good employee. The deciding factor would be the student himself and not primarily his motive for being in the co-op program. If a student is industrious, dependable, and conscientious, I say place him. In the co-op program he may discover a real vocational interest through which he and the society would be rewarded, that he otherwise may have overlooked. On the other hand, if a student has all the right motives but is not sufficiently dependable, etc., careful consideration is warranted.

What Kind of Employer?

The second key to the success of the program is the employer. Does he understand the program? Is he willing to offer an opportunity for learning the job? Does he have a basic understanding of young people? Does he support the school in general? Has he raised children of his own? Is he looking for some cheap labor? Does he need someone to do the less pleasant jobs that his regulars don't want to do? If the employer is not willing to make the program a profitable experience, the co-op student may be discouraged from an occupation that he is well suited for and one in which he would find happiness and success.

What Kind of School Personnel?

The third key includes the agribusiness teacher and administrators. Is a co-op program really desired at a particular school? Does the agribusiness teacher really want to get "that" involved in a student's activities? Does the administration feel that the program could benefit the students or should all learning take place at school? Can "good" prospects be routed into the program?

These are some of the major "keys" that will determine the success or failure of any co-op program. All of the keys have to fit or the door to success in this program is not going to be easily opened, and the benefits to the school, community, and individuals are going to remain unclaimed.

Cooperative Agribusiness

*John Porior
NVATA Region VIII
Sperry-New Holland Award Winner
Oshkosh, Wisconsin*



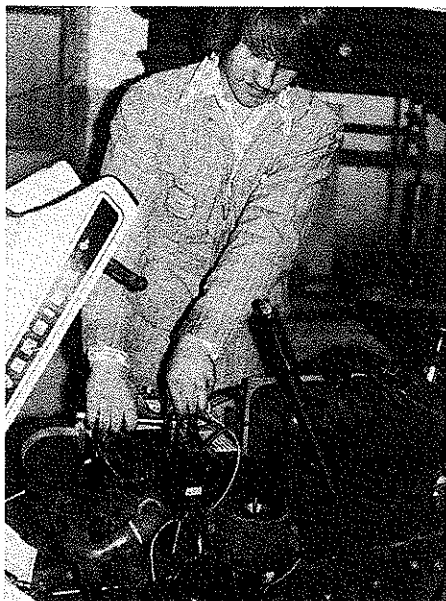
John Porior

The Oshkosh Public Schools offer a cooperative training program in thirteen different career areas. Agriculture was the first to initiate such a program. It set the stage for many other programs. These training programs include: Motor Mechanics, Drafting, Welding, Food Service, Graphic Arts, Electronics, Secretarial Science, Nursing, and Marketing.

Agribusiness Program

The Oshkosh Agribusiness program has grown from one hundred and fifty students in 1972 to the present seven hundred and fifty students enrolled today. There are presently thirty-six agriculture co-op students and six and one-half agriculture instructors. In 1972, we had two instructors and no co-op program.

When a student enters ninth grade he can enroll in an introductory agriculture class. The class is designed to explore subjects and careers in short units. The units include: Dairy, Horticulture, Mechanics, Animal Science, Soils, Crops, Chemicals, Conservation, Pets and Plant Science.

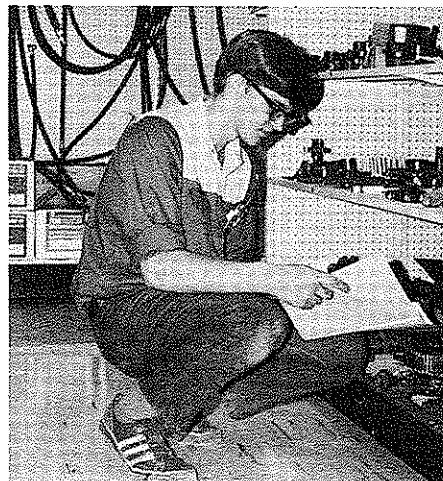


Pat Cartwright's co-op program was at a garden tractor repair shop.

The following two years, the student can select semester courses in thirteen different areas of agriculture. The semester courses study in depth the designated area and the careers in this area. These courses include: Animal Science, Soils and Crops, Forestry, Wildlife, Greenhouse Management, Landscaping, Farm Management, Farm Machinery, Farm Diesel and Hydraulics, Dairy Science, Meat Cutting, Agribusiness Management, and Independent Study Programs in Agriculture.

The classroom instruction is supplemented by many hands-on experiences. This includes extensive use of the FFA's sixty acres of land laboratory. This land is for the student to practice actual crop planning, planting, and harvesting. The students also plant and harvest various grain test plots.

Those students interested in horticulture are transported to North High School for study and work in a nine hundred foot greenhouse. The meat cutting classes are taught at Fox Valley Technical Institute. The other hands-on experiences taught in the agriculture shops include: motor overhaul, painting, welding, electricity, plumbing, diesel timing, machinery set-up, and concrete work.

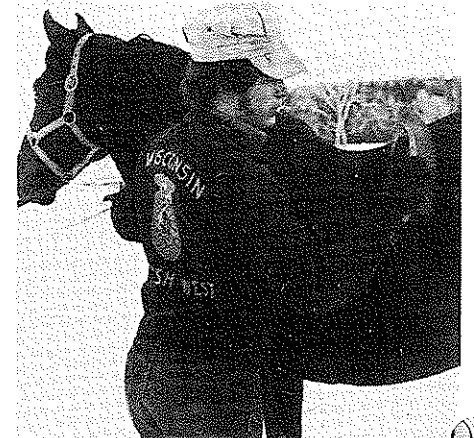


Ron Culver's co-op program was at an implement store. Ron received a first place proficiency award in the state for his program.

Cooperative Training Program

The senior year of agriculture emphasizes career exploration and actual on-the-job training experience. Students enroll in the cooperative training program which is designed so they can attend classes in the morning and go to the work station in the afternoon. Each agriculture cooperative student must attend the agribusiness class. The agribusiness classroom curriculum is mainly discussing the problems encountered at the work station. The course of study also includes job attitudes, career explorations and emphasis on training skills for the individual work stations. The on-the-job training stations are assigned one student for the year according to student interest. The training stations include: a feed mill, a greenhouse, two golf courses, a riding stable, numerous dairy farms, a fertilizer plant, a hardware store, a canning company, an aerial applicator, a landscaping and turf business, and two machinery implement dealers.

(Concluded on next page)



Doug Irvine grooming one of nine of his horses. Doug was a horse trainer on his co-op program. Doug received a first place Proficiency Award in the State for his program.

CONTINUED COOPERATIVE AGRIBUSINESS

A survey of three hundred graduates from the cooperative program in the last five years showed the following results:

1. No unemployment (marriage is considered employed).
 2. Ninety percent of the students were still actually working in an agribusiness related job.
 3. Ten per cent were in the service or still in post secondary school.
- In summary the agribusiness cooperative program is successful for the following reasons:
1. The agribusiness cooperative program was suggested, planned and implemented by the Agriculture Advisory Council.
 2. There is complete support of the program by the school administration.
 3. The community provided excellent training stations continually in a variety of different fields.
 4. The agribusiness coordinator is allowed time during the school day to visit each training station to offer assistance and guidance to the student.
 5. The other agriculture instructors are given time each day to make student visitation. These visitations stress career goals and projects related to these goals.

6. A strong FFA is used to supplement classroom training in project development, leadership, and community service.
 7. The Fox Valley Technical Institute agriculture program provides advanced status for the cooperative student to ease their entry in a post secondary school.
 8. The State Department of Public Instruction Agriculture Supervisors guided the program with additional funding for the beginning years. They also provided guidance and excellent workshops in curriculum to update classroom training material.
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CONTINUED PROFESSIONALISM

New and innovative teaching methods will be required if we are to teach these students effectively.

Teaching Trends

New and emerging teaching trends challenge each of us to review our teaching methods. The Modular Design developed in New York is proving to be an effective and innovative method for teaching vocational agriculture. The modules allow for greater individualization of instruction, varying occupational goals, and emotional differences. Modules encourage more detailed planning on the part of both the teacher and the student. This planning is made easier because both the teacher and the student know why the planning is being done and what short and long-range outcomes will be expected. We seem to be dealing with increasing numbers of students who find reading,

writing and mathematical calculations difficult to say the least.

Increasing use of audio-visual aids is one method to reach non-readers. Educational Television and the use of specific subject matter video-tapes create more flexibility in teaching students who have varying competencies and learning rates. Commercial companies have quickly developed this idea of having a student doing work on a bench as he is shown step by step from the small TV unit using cassettes. We may not all agree that this is going to result in workers who can solve problems which they have not been shown, but we should at least investigate new ideas with open minds before deciding.

Probably our greatest challenge in teaching for the next few years will be to continue quality teaching under reduced budgets.

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Many schools are facing financial problems created by inflation, rising costs and often decreasing sources of revenue. We should all be thinking about accountability and making our courses relevant for our students and our communities.

When people try to find a single word to describe today's agriculture they often choose the word mechanized. Agricultural mechanization is just beginning to come into its own as a very important aspect of today's agriculture and today's programs of vocational agriculture. *Let's all keep the wheels turning in our programs and communities by becoming better, more informed and active — professionally, technically and in our teaching methods; so that when it is time for us to leave, we can turn our programs over to young teachers who are well qualified to take our place because we trained them!*

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CONTINUED TEACHER ROLES . . .

Catalyst

That of a *catalyst*—It is important to provide counsel, encouragement, motivation, and inspiration to students while working with them individually. The good teacher is not one who only imparts knowledge to students, but one who awakens their interest and makes them eager to pursue knowledge for themselves. The teacher gradually and orderly moves the student out of the protected realm of dependency into the realm of self-sufficiency and produc-

tivity. The teacher needs to be a spark plug, not a fuel pipe.

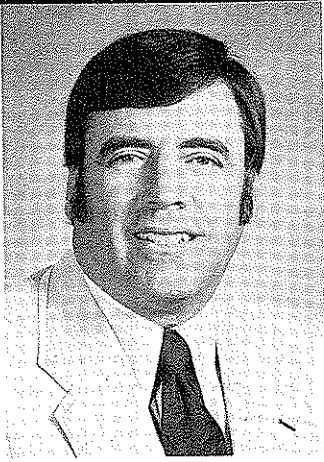
Public Relations Expert

That of *public relations expert*—The necessity of a sound public information program in working with students, parents, and businessmen in the community must be recognized. It should be kept in mind that more teacher time may be spent arranging for the job in which to place the student than is spent in teaching. A teacher without a public information program is like working in

the dark. You know what you are doing, but nobody else does.

Many additional hats could be identified for the vocational agriculture teacher to wear in working with students in carrying out a supervised occupational experience program. Each of us has tried on one or more of these hats for a fit. The outcome of experience programs in the future may depend upon how well they are sized for increased utilization in the total program of vocational agriculture.

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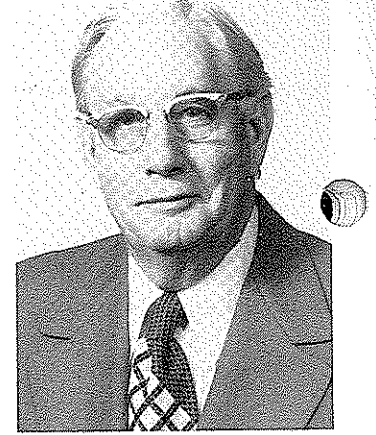


Jerry Stockton

Young Farmer Chapters

Jerry Stockton
Teacher Education
Texas Tech University

Robert R. Price
Teacher Education
Professor Emeritus
Oklahoma State University



Robert R. Price

One of the recurring and very puzzling questions with which we are continually faced is that of attempting to explain why vigorously operating Young Farmer Chapters are established in certain schools, while in neighboring schools, teachers have either not been convinced that a chapter is needed or report having attempted establishment and subsequently have experienced failure. In the state of Texas only 77 out of 143 chapters functioning during the 1973-74 school year had a persistence record of 10 years or more.

In Oklahoma, of the 67 chapters chartered in 1969, only 42 were still active members of the state association in 1975. Are teachers unwilling to assume needed leadership? Do they consider Young Farmer programs to be of low priority in terms of responsibilities to be assumed? Or, is there a lack of knowledge about the relative value of certain techniques and organizational maintenance procedures? Furthermore, has the agricultural sector of our society become more or less concerned that answers to problems of production, marketing, and servicing can best be secured through individual effort rather than through group learning experiences?

A number of studies have been implemented to perhaps shed some light upon associated factors related to establishment or non-establishment, while others are addressed to factors of continuance or discontinuance. There are some definite factors which now appear as identified and certain association established. In the past, many reasons have been advanced by teachers, teacher educators, and supervisors as to why Young Farmer Chapters did not occur more frequently and particularly in certain states as to why chapters established and functioning at a high level did not achieve greater longevity. Two

studies, one completed recently, the other made some years ago, are presented in this article as findings which might contribute to the growing body of knowledge about Young Farmer program implementation and maintenance.

FIRST STUDY

The first and more recent study¹ included some 77 Young Farmer Chapters of Texas that had endured, having been in operation continuously for a period of 10 years preceding the study. Responses to an inquiry regarding judgments as to effective practices and procedures were received from 68 advisors, this representing slightly more than an 88 percent return. Responses to a very similar questionnaire were received from 87 randomly selected Young Farmer Chapter members. A major portion of the questionnaire was devoted to judgment statements as to the importance or effectiveness of practices, procedures, and suggested activities which were recognized as frequently implemented and used in Young Farmer Chapter meetings and operations. A primary source for identifying these practices and activities was the *Texas Young Farmer Manual*. Responses were solicited through use of a Likert scale. In the collection and analysis of data, major dependence was upon assigned values given to the Likert scale categories reflecting the degree of agreement or disagreement expressed by the respondent. Rankings of the various directed practices and activities were then determined on the basis of the mean values determined from ratings made by the individual.

In addition non-directed responses were secured from a number of respondents. Findings were thus dependent upon respondent judgments in

terms of relative values and were expressed as a mean response and consequent ranking. Reflection upon these findings clearly indicate that *developing and maintaining a group sense of pride and accomplishment* is to be considered vital to chapter persistence, since both teachers and members gave this item first ranking. The social worth of strong continuing Young Farmer programs would seem inherent in the high ranking given by both teachers and members to the practice of *holding one or more meetings involving families*. As might be expected, teachers tended to value the *establishment of challenging programs* of work slightly higher than did members, although rankings of third by teachers as compared to fifth by members would certainly emphasize the apparent mandatory nature of the procedure of maintaining a high quality chapter program of work. In considering findings of the total investigation, it is most interesting to observe that while teacher-advisors may tend to adopt a stance of some depreciation of the importance of their role in chapter success, members much more readily recognize the nature and extent of *advisor performance as the key to chapter success*. Members ranked this item fourth among the 19 directed items as compared to a ninth (tie) ranking by advisors.

Strengthening this expressed difference of role importance still further is response to item 13, 'advisors stay in background in advisory role.' Members ranked this negative statement last among directed responses, while modest teachers ranked it within the upper third of the 19 practice/procedure items. Members apparently value *chapter involvement in community activities* of somewhat more importance than do teacher-advisors who gave this practice

(Concluded on next page)

¹Stockton, Jerry Don. "Factors Associated with Longevity of Texas Young Farmer Chapters." (Unpublished Ed.D. dissertation, Oklahoma State University, 1975).

CONTINUED YOUNG FARMER CHAPTERS

a ranking of 12th (tie) as compared to a combined member ranking of sixth. However, both groups felt that *close work with FFA-related activities* was to be given high priority. Perhaps somewhat surprisingly, members tended to feel that *hold one educational meeting each month* was of greater importance than did teachers, while members differed with teachers in a reverse manner with regard to *utilization of state specialists when available*. In view of the fact that responses were secured from members and teachers in a number of chapters which had been recipients of a sizable number of area and state awards, it was not anticipated that both teachers and members would give the item *apply for area and state awards each year* such relatively low rankings. In summarizing, study findings evidence would appear clear that members and advisors in our more persistent chapters tend to recognize the relatively high value of (1) *promoting chapter pride*, (2) *the key role of the teacher-advisor*, (3) *involvement in community improvement activities*, (4) *stressing high dependence upon the nature and extent of educational offerings*, and (5) *avoidance of over-stressing emphasis upon the area and state award programs*.

SECOND STUDY

In many ways the study described above sustains and supports findings of an older study² seeking to identify factors associated with the occurrence of young-adult farmer programs in two states, Pennsylvania and Oklahoma. This study was structured in such a manner as to test a number of null hypotheses. These hypotheses were

²Price, Robert R. "Factors Associated with the Occurrence of Local Programs in Young Adult Farmer Programs in Vocational Agriculture in the States of Pennsylvania and Oklahoma." (Unpublished Ed.D. dissertation, The Pennsylvania State University, 1956).

predicated upon the assumption that no significant differences exist between local departments of vocational agriculture maintaining viable young-adult farmer programs and those departments not maintaining such programs. Data were obtained through personal interviews with teachers and administrators in each of 30 schools having and in 30 schools not having young-adult farmer programs in Pennsylvania and similar groups consisting of 40 schools per group in Oklahoma. Groupings of 36 factors studied included (a) *community characteristics*, (b) *school characteristics and facilities and equipment for vocational agriculture* (c) *enrollment characteristics of all-day classes in vocational agriculture*, (d) *nature and extent of the program of vocational agriculture*, (e) *nature and extent of the local FFA program and activities*, and (f) *characteristics and background of the local teacher(s) of vocational agriculture*. Findings were reported in terms of the disposition of null hypotheses tested with regard to each of the 36 factors studied. In a summary of these findings, it can be said that at the time the study was completed the investigation (1) emphasized the fact that in both the states of Pennsylvania and Oklahoma very adequate and effective programs of young adult farmer education were functioning in a sizable number of schools as compared to a slightly larger group reporting no organized instructional program; (2) *provided evidence that the geographic location of the school is not associated with the occurrence of such educational programs*; (3) *refuted the assumption that age, years of experience, or years of tenure of the teachers are associated with the occurrence of Young Farmer programs*; (4) *indicated that teachers teaching out-of-school courses for Young Farmers also provide equal or*

superior programs of vocational agriculture and FFA chapter activities for all-day students; and (5) *present a challenge to teacher educators and supervisors in emphasizing recognition of the important role which they play in the recruitment, training, and supervision of teachers of vocational agriculture*.

The implication is quite strong that, as far as the local teacher of vocational agriculture is concerned, the occurrence of young adult farmer programs is due to some motivating force that is much stronger and more deeply seated than the opinions held by the individual. Perhaps, since, as is revealed by this study, teachers of out-of-school farmer groups were found also to have exhibited more activity in extra-curricular and campus leadership events, the possession of a more extroverted personality, or initiative to engage in situations involving social interrelationships, may be indicative of a greater tendency to implement and maintain instructional programs with out-of-school young farmers.

COMBINED IMPLICATIONS

Summarizing the combined findings and implications of the two studies, it would appear as a strong implication that *the belief in and a positive interest and attitude toward the Young Farmer program held by the local teacher is of paramount importance. Members, perhaps both consciously and unconsciously, sense this and thus are motivated to a more continuous active participation. Again, the teachers' self image, that of being actively associated with and occupying a leadership position in an organization having a primary concern for group and community improvement would seem vital to the implementation, the persistence, and the continuation of any Young Farmer Chapter.*

EVERYTHING YOU WANTED TO KNOW ABOUT FARM MANAGEMENT CONTESTS, BUT DIDN'T KNOW WHERE TO LOOK, by K. C. Schneeberger and D. D. Osburn. Ageco, Inc., Columbia, Missouri, \$4.50/copy—9 or less; \$4.00/copy 10 or more.

The content of this book consists of many examples of various types of problems by unit classifications that should be taught by everyone teaching a good Agricultural

Business Management course. I found that the units as listed correspond very close to what I teach throughout my senior Management Course.

I think that these two authors are well qualified from their educational background, which is evidenced by the material found in their book as well as their involvement with State High School Management Contests and their practical application as well.

This book is certainly what I have been looking for in working with my students in teaching, as well as preparing them for our State Contest. I only wished I had something like this to have used this fall in preparing my team for the National Con-

test. I have much literature and materials, several texts, as well as other items I use, however, I find this book to contain some excellent, real and actual problems that are not only aimed at production agriculture students but to urban and city students that are interested in an agricultural career. These problems have many applications.

I think the title of this book is aptly named as everything is in this book with very few changes needed to adapt to all students.

Wendell C. Mitchell
Green Bay Preble High School
Green Bay, WI



Johnny M. Johnson

EFFECTIVE OCCUPATIONAL EXPERIENCE PROGRAMS

by
Johnny M. Johnson
Teacher Education
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On-the-job training for agricultural occupations in Texas is accomplished through a program entitled Cooperative Part-Time Training. The program involves junior and senior level students and a wide-range of job opportunities. It is realized that on-the-job training programs in agriculture may vary somewhat from one state to another and that types of occupations will deviate considerably. However, certain components must exist before any program can be entirely successful.

1. The student must have an interest in and a vocational need for such training.
2. The selection of a training station must be based upon realistic facts concerning working conditions and career opportunities.
3. The training must be pertinent to entrance and progression within the career area.
4. The student must eventually obtain employment that is satisfactory to him.

Regardless of the type of on-the-job training program or the innovative nature of the approach, a teacher of on-the-job type programs will encounter a common set of obstacles that stand between him and a completely successful program as described above. Awareness of these obstacles, an anticipation of their occurrence, and positive action to overcome them should result in a well trained young person on his way to a productive and happy career of his choosing.

In an attempt to identify the specific aspects of cooperative training that present the greatest problems to on-the-job training coordinators, an investigation was conducted involving the opinions of some fifty coordinators. The investigation was accomplished in two series of interviews. One set of teachers was interviewed individually and asked to name all areas of the program that had presented problems. Once this identification task was accomplished, an interview schedule containing all problem areas named one or more times was devised. The instrument was field tested to assure that items meant the same to all respondents. The final schedule had the problem areas listed and a set of teachers other than those involved in the initial stage was asked to indicate the degree of difficulty they had encountered in the performance of skills in each problem area. The difficulty scale employed ranged from *one* to *ten*. *One* denoted that the teacher had no difficulty at all in the performance of the skill. *Ten* indicated that the teacher felt that he had encountered so much difficulty in the performance of the skill that he had been completely ineffective.

The area between *one* and *ten* was used to determine the relative degrees of difficulty. Once the teachers had marked the degree of difficulty they were asked to describe the approach that had been taken in performing each skill. After comparing the degree of difficulty encountered with the method employed in the skill performance, certain trends emerged which indicate the most effective methods.

The skills that were studied are listed below from the highest degree of difficulty to the lowest. A brief summation of the most effective approach to skill performance is given after each skill.

1. *Getting employers to follow training plans received a 9.78 difficulty rating.* The way to success seemed to be the involvement of students, employers, parents, and teachers in the planning of the training program.
2. *Placing students upon completion of the program received a 9.50 difficulty rating.* The more successful teachers were those who were providing realistic training and those who had done adequate jobs in informing local and area businesses about the purpose of the program.
3. *Determining working conditions within an occupational field received a 9.23 difficulty rating.* Since sufficient research has not been done on working conditions, the more successful teachers did not depend upon literature alone. They enlisted the help of school counselors and their advisory committees in accumulating occupational information.
4. *Understanding and complying with labor regulations received a 9.12 difficulty rating.* Teachers who faced the most difficulty included those who attempted to interpret laws and regulations on their own. Better understanding and less difficulty were experienced by those who took time to talk with state staff members and persons in charge of those labor regulations for a particular region.
5. *Conducting effective visits to training stations received a 8.89 difficulty rating.* Efficiency was improved when coordinators had made advance plans with the employer concerning busy and slack periods of work and when the purpose and objectives of visits were explained early in the program.
6. *Developing criteria for the selection of training stations received a 8.87 difficulty rating.* The more successful teachers enlisted the aid of the businessmen on their advisory committees in setting up training center requirements.
7. *Maintaining student interest in the classroom received a 8.78 difficulty rating.* Difficulty was encountered because students were working on variety of occupations and individualized printed material was used excessively. A combination of
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Leader in Agricultural Education:

ALFRED H. KREBS

by

Martin B. McMillion*



Alfred H. Krebs became a teacher educator in Agricultural Education in 1950 and by 1967 had held most of the important leadership positions in the profession including the presidency of his professional association, the American Association of Teacher Educators in Agriculture. Soon thereafter, his ability to lead and make sound decisions thrust him into the offices of the vice presidents of a major university having an enrollment of over 19,000 students.

This leader, like most people in our profession, was a farm reared student of vocational agriculture and member of the FFA. A native of Medina, New York, he attended Cornell University on a Regents' Scholarship while earning sufficient grades to be admitted to Phi Kappa Phi as well as several other honorary fraternities. Completing the B.S. in Agricultural Education in 1941, Al embarked upon his first agriculture teaching job at Hinsdale, New York that same year. Two more years of teaching at Callicoon, New York preceded his induction into the Army—not to fight but to talk. He makes it a point to tell people, even now, that he talks for a living. In the Army, Al went to Yale University to an Army Japanese language school, after which he used his training in the POW camps the Philippines. After the Army duty, Al was a Veterans' Administration training officer for one year before going back to Cornell to obtain a

M.S. in 1948 and a Ph.D. degree in 1950 in Agricultural Education.

Dr. Krebs began his teacher education career in the book writing climate of the University of Illinois. He soon gained the unofficial title of "Mr. Problem Solving" while teaching the methods classes and writing the first edition of *For More Effective Teaching*. He moved steadily through the ranks from instructor to professor, doing so without being a researcher. A lack of research would have held lesser teachers, leaders and writers back.

Al was editor of the *Agricultural Education Magazine* four years, 1957-1961, and he was consulting editor and a member of the Magazine's Editing-Managing Board the next four years. He was National First Vice President of Alpha Tau Alpha Fraternity, the professional-honorary fraternity of Ag Ed, from 1960-1964. His *Agriculture in Our Lives*, a popular high school text, was first published in 1964 and was revised in 1973. Other

important publications have been the second, expanded edition of *For More Effective Teaching*, 1967; *A Study Guide for Placement-Employment in Agricultural Business* (with Hemp); *Organizing and Working with Departmental Advisory Councils*; a chapter, "Graduate Programs for Teachers of Agriculture," in *Teacher Education in Agriculture*; and the 1972 AVA Yearbook—*The Individual and his Education* which he edited and which included a chapter written by Al and his wife.

Between 1966 and 1969, Dr. Krebs was at the University of Maryland in Agricultural and Extension Education where he began the doctoral program, attracted several outstanding doctoral students, and did research in evaluation and follow-up.

Having "a few ideas he wanted to try out," he moved to Virginia Polytechnic Institute as the head of Agricultural Education in 1969. The fast-growing institution required a Director of Summer School as well as other administrative help; so, other members of the agricultural education faculty had to "try out the ideas." From his position as Director of Summer School, Al was gradually given more duties in central administration until his entire appointment was in administration by 1972. In seven years, he has held four positions in central administration. He jokingly says, "they can't find anything I can do over there." Actually, "Mr. Problem Solving" is just the trouble shooter needed in several different offices. His titles have been Director of Summer School, Assistant Vice President for Academic Affairs, Acting Vice President for Academic Affairs, and now Vice President for Special Projects. He has recently picked up many of the duties of the recently deceased Vice President for Administration. This

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Martin B. McMillion

*Martin McMillion is a teacher educator in Agricultural Education at Virginia Polytechnic Institute and State University.



Sandra Sheradin

FFA—

A LINK TO EMPLOYMENT

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The Future Farmers of America is a program to help unite the class activities into a real life experience. Intra-curricular means that the FFA program is designed to work mutually along with the lessons taught in class. This is of utmost importance to any Agriculture teacher because it helps the class become a close knit group, learning to guide and help each other in their area of study.

The members learn that by working hard together they can earn money, meet new friends and practice skills taught in class. The student has a chance to invest club money into a raw product and see this product become saleable, giving a profit for the club. They soon realize that what they are learning in class can become their life's income.

ACTIVITIES

Too many times the school and its teachers seem to be only alive from 8:30 a.m. 'til 2:30 p.m. and then the students are shoved out the door. But FFA provides a link for the student and school to be involved beyond the normal classroom day. Projects for fund raising are often after school events as well as group tours or sports. The student gets over-whelmingly involved and often feels more at home in the school system when he is involved in group activities.

Most FFA groups have a parent's night banquet which helps the student learn responsibility of ordering, financing, planning and the joy of entertaining. This gives them a chance to step out and say, "Mom, Dad look what I can do." The involvement of parents with the school is so important and this gives them a chance to see what is happening. Here FFA links not only the class lessons to real life experience but also gives them recognition from adults.

Students soon begin to feel more at ease in the school program and ready to take the next step by becoming in-

involved with the community events. Going to professional organization meetings representing FFA or setting up exhibits for county events. These activities are all steps in the right direction. The students are proud to show people what they have learned in class by demonstrating. The more recognition they get from strangers about their quality of work the more confident they will feel. This confidence makes them want to study harder in class so they can learn more plus gives them a better chance toward employment. Therefore the intracurricular activities of FFA improves the quality of teaching in the Agriculture class.

Lets take the FFA motto for example:

- Learning to Do
- Doing to Learn
- Earning to Live
- Living to Serve

In the classroom we can teach a student how to do a certain task but then FFA comes in to help the student do this task as a project. Here he is doing to learn and to earn money or recognition for the club. The student then realizes he can earn a living and serve his community by performing the tasks efficiently as covered in the class. FFA must be an intracurricular activity to be of the best benefit to the student. The more involved FFA gets with the day by day classroom activity the more enjoyable the class will be for the students.

The Future Farmers of America chapter in an Agriculture program if properly intertwined with class activities can become the vital link for the student to an employer. The goal of all teachers is to see their students succeeding in the profession for which they have been trained. This is where FFA as an intracurricular activity can be a giant step in the direction for all of mankind. ◆◆◆

CONTINUED LEADER . . .

chapter on administrative duties is likely far from complete. The advice he gives others about doing one's homework and knowing more about the problem than anyone else on the committee is obviously practiced as well as preached.

Al feels that money spent on professional dues, subscriptions and buying books is money well spent. He is a member of the usual professional associations as well as the American Association of University Professors and the Rural Education Department of NEA.

Honors and awards include Distinguished Service Award, Southern Agricultural Education Conference, 1972; Outstanding Service Citation, NVATA, 1973; Honorary American Farmer Degree, 1970; being listed in *Leaders in Education*; New York State Regents' Scholarship; and membership in Phi Kappa Phi.

This modest man has given dozens of speeches all around the United States, and has been a tireless professional who has pursued the betterment of Agricultural Education and the peo-

ple associated with it as well as the betterment of all of education and all people.

Al and Jean Krebs, a family of two since 1944, are both professional educators. Jean, also from New York State, was a school assistant principal in Illinois and now teaches at VPI while pursuing graduate studies. The profession looks forward to several years of their continued contributions to education. ◆◆◆

STANDARDS FOR EXPERIENCE PROGRAMS

Standards are needed to challenge students and teachers—minimum standards in terms of what each student enrolled in agribusiness should have in the way of an experience program. Standards for experience programs are very much needed today.

We need to proceed to set up state and local standards for experience programs to include those for freshmen, sophomores, juniors and seniors, and at the same time include all occupational areas—production agriculture, ornamental horticulture, agricultural mechanics, supplies and service, forestry, and others.

For the first two years the standards for experience programs could be set up in any one or all of the following areas: (for scope see Chart #1)

1. Productive projects (crops and livestock)
2. Placement for farm experience
3. Home improvement projects (which could include a whole host of things, including home beautification)
4. Supplementary experiences in agriculture
5. Group projects to include activities at school, outside of regular classroom instruction, on school farm, in a greenhouse, or on the school grounds and the like.

CHART #1

STANDARDS FOR EXPERIENCE PROGRAMS

I. Agriculture/Agribusiness I and II (Freshman and Sophomore Years)	<i>Minimum Scope (Hours of Student Self Labor, per Year)</i>
A. <i>Productive-enterprise Projects</i> (Individual Student)	
Crops (including horticulture)	50
Livestock	50
Other	50
B. <i>Improvement Projects</i> (Individual Student)	
Crops	50
Livestock	50
Home Beautification	50
Home Landscaping	50
Agricultural Mechanics Shop (home)	50
Servicing and Repairing Farm Machinery	50
Conservation	50
Farm and Home Safety	50
Farmstead Improvement	50
Land Improvement	50
Pasture Improvement	50
Farm Forestry	50
Home Food Supply	50
C. <i>Supplementary Experience in Agriculture</i> (Individual Student)	
Minimum of 10 practices	50
D. <i>Small group projects, such as:</i> 200 hours for group	
- Landscaping a home	
- Landscaping a public building	
- Landscaping and caring for school grounds	
- Caring for livestock enterprises, school laboratory	
- Operating school greenhouse	
- Operating a school farm	
- Caring for school nursery	
- School or department show or fair	
- Construction of agricultural equipment	
- Assembling agricultural equipment	
- Repair of farm machinery	

NOTE 1: The combination of productive-enterprise projects, improvement projects, supplementary experiences in agriculture and agricultural experiences on group projects should total at least 200 hours per year, per student.

CHART #2

STANDARDS FOR EXPERIENCE PROGRAMS

II. Agriculture/Agribusiness III and IV (Junior and Senior Years) For those students taking courses in:	<i>Minimum Scope (Hours of Student Self Labor, per Year)</i>
A. <i>Agricultural Production</i>	
An experience program made up of a combination of productive-enterprise projects in crops and livestock, improvement projects, and supplementary experiences in agriculture (See Agribusiness I and II)	500
B. <i>Specialized and Diversified Areas of Agriculture</i>	
1. <i>Agricultural Mechanics</i>	
An experience program made up of a combination of experiences at school (outside of regular class time), improvement projects and/or placement for a supervised occupational experience program in an agricultural machinery business.	500
2. <i>Ornamental Horticulture</i>	
An experience program made up of a combination of experiences at school (outside of regular class time), production or improvement projects and/or placement for a supervised occupational experience program in a horticultural business (Nursery or florist or greenhouse or a similar type business).	500
3. <i>Agricultural Supplies and Services</i>	
Placement in an agricultural business for an occupational experience program in sales and service.	500
4. <i>Forestry</i> (Same as B, 2 above)	
5. <i>Agricultural Resources</i> (Same as B, 2 above)	
6. <i>Agricultural Products</i> (Same as B, 1 above)	
7. <i>Diversified Program in Agriculture</i>	
Individual students in this course may be placed for supervised occupational experience programs in a diversity of agricultural businesses, agencies, organizations, and industries. The course of study is usually designed to spend 50-60 percent of the time for group instruction and 40-50 percent is devoted to individual study related to where each is placed for his experience program. The diversity might include 15 students in eight of the following areas:	500
- Placement for experience in farming on a good commercial farm	
- Horticultural businesses (Nursery, florist, greenhouses, etc.)	
- Employee in an agricultural construction supplies business	
- Forestry aide	
- Butcher's helper	
- Feed mill employee	
- Veterinary laboratory	
- Soil conservationist helper	
- Custom spray operator	
- Agricultural machinery business	
- Aide to teacher of agriculture (to help with freshman classes)	
- Grain and seed business employee	500

NOTE 2: The teacher is responsible for getting each student with a good experience program. This responsibility includes guiding students to select, plan, carry out, and evaluate experience programs individually or as a group, whichever is appropriate.

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CONTINUED GUEST EDITORIAL


The test of the decade ahead is wrapped up in how deeply the profession (teacher educators, supervisors, and teachers) believe in students of vocational agriculture having good experience programs. "Outside pressure" has been and will continue to be brought to bear by administrators, other teachers, and lay people to place less emphasis on the experience programs in agriculture, but we must develop our "inside braces" and stick to the basic philosophy of vocational education in agriculture. This must be kept clearly in mind if we are to improve present programs and develop sound new programs in the off-farm areas of vocational agriculture.

The best defense is a strong offense. The profession must develop a strong offense for the experience programs of our students. We had them at one time; we need them now. If we don't use the experience programs, we will lose them and end up teaching general agriculture.

At the junior and senior years the standards should be much higher for productive projects (farming programs). A minimum number of student hours of self labor should be prescribed for an experience program in an agricultural business or industry to include such off-farm agricultural occupations as horticulture, agricultural machinery, agricultural sales and supplies, forestry, and the like. See Chart #2 for suggested standards for students at the junior and senior years. The standards should be modified to meet the local situation, but at levels which will challenge students.

A certificate provided by the local FFA chapter should be presented each student who completes a standard experience program in agriculture (see suggested certificate).

FUTURE FARMERS OF AMERICA



CERTIFICATE

This certifies that _____ has completed
A Standard Supervised Occupational Experience Program
in Agriculture at the _____ High School
for the Year of 19____-19____
Presented the _____ day of _____ 19____

_____ <small>ADVISER</small>	_____ <small>FFA PRESIDENT</small>
_____ <small>SUPERINTENDENT</small>	_____ <small>PRINCIPAL</small>

CHURMAN, SUPERVISED AGRICULTURE COMMITTEE

IN SUMMARY

"Turn our back on politics and we are destined to work with the laws made by your adversaries." Let us paraphrase this for experience programs: "Turn our backs on experience programs for students with adequate standards and we are destined to work as general educators in agriculture (not vocational) by policies established by school administrators." If we don't use experience programs, we will lose them; and if we lose them, we will lose the heart of our program in vocational agriculture.

BOOK REVIEWS

PULPWOOD PRODUCTION, by W. S. Bromley. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1976, Third Edition, 294 pages, \$7.95.

This book deals with every aspect of production forestry from stumpage acquisition to marketing and then some. It does not presume to be a manual on Forest Biometrics or Mensuration even though it touches lightly on these subjects enough for background information. It addresses itself to the production of pulpwood at a more basic and hands on level.

The author presents the material in five basic parts:

1. Orientation to Pulpwood Harvesting
2. Basic Mechanical Considerations
3. Harvesting Procedures and Equipment
4. Planning, Selection, and Management
5. Administrative and Business Aspects

Part one has five chapters dealing with pulpmills and pulpwood procurement, renewable forest resources, stumpage acquisition, forest products, marketing, and safe logging essentials. Basic mechanical considerations such as principles of engine operation, hydraulics, and wire ropes and fittings make up Chapters in Part 2.

In view of the revolution in forest mechanization, the author covers harvesting method from the use of a chain saw to the new processors and feller-bunchers in Part 3. Part 4 is directed toward forest harvesting systems, and environmental management in

harvesting. The last part, Part V involves money and equipment management, labor regulations, insurance and record keeping. A glossary of terms and an index are also present.

The quality of the technical material covered is top notch and well illustrated. The author, W. S. Bromley, has had over 35 years of forestry production experience and has been Executive Vice-President of the American Pulpwood Association for more than 20 years.

The book is well suited for students considering the pulpwood industry as a career. I would recommend this book as a text for High School level Vocational Forestry classes.

Steve Maniaci
Alpena High School

COMFREY: FODDER, FOOD & REMEDY, By Lawrence D. Hills, Universe Books, 1976, 253 pages, \$4.95.

This book rather thoroughly discusses the unique crop known as comfrey. The plant comfrey carries a dictionary definition of, "Any of several usually hairy or bristly plants of the genus *Symphytum*, native to the Old World, having clusters of variously colored flowers, (*American Heritage Dictionary of the English Language*).

The book relates a large number of personal testimonials concerning the effectiveness of the comfrey crop on all types of animals from pigs to people. Typical of these testimonials is from Vernon Stephenson, famous English horse trainer. Mr. Stephenson was able to care for at least fifty mares a year feeding them a comfrey ration and returning them to their owners in the

pink of condition. Also Mr. Stephenson was able to better care for his stallion Anatom by feeding him comfrey. Concentrates made Anatom extra frisky, but comfrey had a tranquilizing effect on him.

A very interesting feature of the book is the terminology used by the English author. Words such as the pigloo, piggery and baconers repeatedly make the book an interesting one to read.

The book has a total of eleven chapters which cover various topics on comfrey. Topics covered are (1) comfrey history, (2) modern comfrey growers, (3) comfrey research station, (4) analysis of comfrey, (5) cultivation and conservation of comfrey, (6) comfrey for pigs and poultry, (7) comfrey for grazing animals, (8) comfrey in the garden, (9) comfrey for human food, (10) comfrey in medicine, and (11) the future of comfrey.

The author is considered one of the world's leading exponents of organic gardening methods. Lawrence Hills is director of the Henry Doubleday Research Association which specializes in research on the cultivation of comfrey. He is also a well known horticultural journalist and the author of many successful books on gardening.

This book will make a relatively inexpensive reference addition to most high school vocational agriculture department libraries. It will have limited use as a classroom reference for each student.

John Hillison
Book Review Editor

group discussions, field trips, and study guides seemed to work best. Also, students showed more interest when the printed material was more closely coordinated with their job assignments.

8. *Establishing an effective student evaluation form for the employer to use received a 8.77 difficulty rating.* Early in the program, the more successful teachers discussed with the employers those factors necessary for satisfactory job performance. These factors became a part of the evaluation form and a simple rating system was developed.
9. *Integrating the cooperative program with the total schools operation received a 8.76 difficulty rating.* The primary problem in this area seemed to be a result of the student missing too many extra-curricular activities and not feeling as though he was a regular student. Scheduling working hours so that pep rallies, club meetings, and the like could be attended seemed to relieve the problem.
10. *Working with the advisory committee received a 7.87 difficulty rating.* The successful teachers used the advisory committee to good advantage. If the committee understands that its role is to "advise" and not to dictate, working relationships are vastly improved.
11. *Returning cooperative students to the regular school curriculum, if they withdrew from the program, received a 7.78 difficulty rating.* This problem occurs after a student has spent several weeks in the cooperative program and for one reason or another desires to drop the course. Naturally, he is behind in any academic course in which he wishes to enroll. Many of the teachers are of the opinion that the student should simply be given a failing grade and

no attempt be made to get him enrolled in academic courses. There are many ways to approach this problem, but the point to be made is that provisions for this situation should be made in the beginning of the program.

12. *Maintaining training stations received a 7.50 difficulty rating.* The difficulty was more accentuated when employers were not given more than one student to choose from and when he did not understand the purpose of the program. A coordinator should anticipate the loss of a few training stations as a result of saturation by former cooperative students.

The problem areas mentioned to this point represent those which presented the most difficulty. There are several more which presented some degree of difficulty to a few teachers. Consequently, they are listed below in an effort to make beginning coordinators aware of them.

1. Grading cooperative students
2. Completing state reporting forms
3. Developing procedure regarding absence reports
4. Conducting pre-registration of students
5. Explaining the programs to students, parents, and employers
6. Maintaining student interest in FFA activities
7. Providing individual instruction
8. Maintaining student interest at the work station
9. Securing adequate facilities for the program
10. Coordinating student transportation
11. Completing applications for awards
12. Conducting group discussions appropriate to all occupations
13. Constructing an enrollment application form

THE BACK POCKET GUIDE TO ORNAMENTAL PLANTS, by E. Wesley Conner. San Luis Obispo, CA: California Polytechnic State University, 1976, 317 pp., \$5.95.

The author has given a one-paragraph description of some 270 commonly encountered ornamental plants, to include herbaceous and woody perennials, annuals, as well as selected house plants. The species presented are listed alphabetically by scientific name. Common names, growth zones, plant family and size are also presented. Each paragraph is divided into two sections: Identification, and Uses and Care. Fine line drawings by Marcia Kier-Hawthorne accompany the plant descriptions. To aid the lay person with identification, a small glossary is provided. An index of common names as well as botanical names directs the reader's attention.

The author is an Associate Professor of Ornamental Horticulture at California Polytechnic State University. He is well traveled and an experienced landscape architect. From 1958 to 1963, he designed and supervised the landscaping of Yosemite Park and Curry Company, Yosemite National Park.

One would surmise that this book is designed for casual reading or reference by home owners or other lay people. The scope is much too broad to be of professional value. The author would have provided a

much more usable text by limiting his book to woody ornamentals, for example. Without a key for identification, one must match sketches with plant materials.

Ronald I. Kiser
Hillsboro, IL

HIGH - QUALITY PROTEIN MAIZE, edited by Purdue University. Dowden, Hutchinson and Ross, Inc. 523 Sarah Street, Stroudsburg, PA 18360, 1975, 524 pp., \$28.00.

This book presents a very readable and thorough summary of the proceedings of the 1972 CIMMYT-Purdue International Symposium on Protein Quality in Maize held at the International Center for the Improvement of Maize and Wheat in El Batan, Mexico.

This book offers a complete compilation of information available on the subject of protein quality in maize. Coming less than a decade after the discovery of Opaque 2 Maize, it provides a detailed look at (1) the latest breeding efforts and nutritional studies on high-quality maize, (2) commercial production aspects of this maize, (3) chemical and biological evaluations of maize protein quality, (4) economic implications of high-quality protein, (5) progress in the breeding of high-quality protein in other cereals, and

(6) results of the symposium workshops (breeding methodology, chemical and biological analytical techniques, methods of introducing improved protein varieties at the farm level, and economic and social factors in the acceptance of improved protein varieties.)

Comprehensive documentation and extensive graphic presentation of research findings makes the reading, study and interpretation of the material meaningful and impressive. Of particular interest was the inclusion of the "feed back" sessions including questions and answers from the participants. One has the feeling of actually being there.

The book will find ready acceptance in all college reference libraries where the search for more complete information on the vital subject of meeting world food needs exists. In underdeveloped countries, this book would seem an absolute necessity in addressing the food problems which exist and in charting corrective programs—both governmental and private undertakings. The student of plant breeding, the laboratory worker, or the humanitarian will find this book stimulating as well as enriching; informative as well as challenging. It is difficult to do justice to a book so comprehensive in a statement such as this.

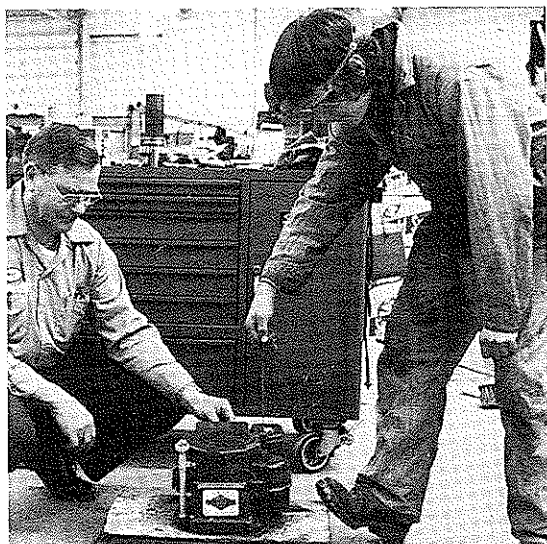
William W. Stewart
Muscatine, Iowa

STORIES IN PICTURES

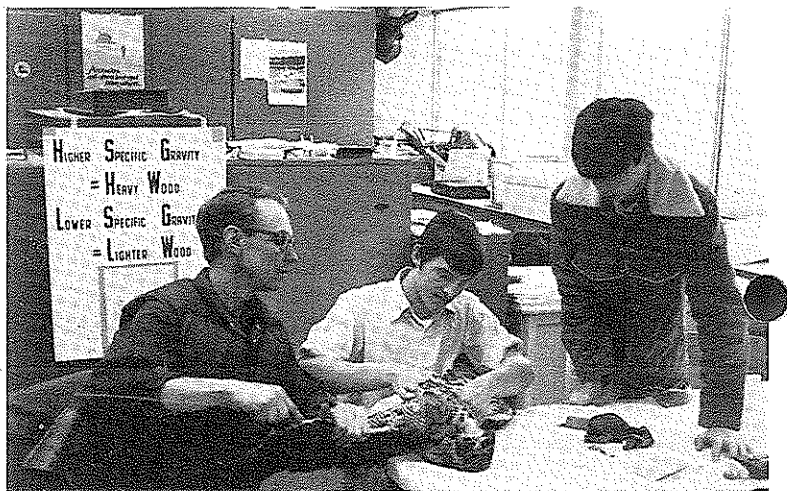
by
Paul
W.
Newlin



Conservation teacher Ronald Hay at the Chenango County Area Occupational Center, Norwich, N.Y. instructing students on use of the log cabin built by the class. The portable cabin is used in making maple syrup. (Photo courtesy Richard Jones and Art Berkey, Cornell)



Agricultural mechanization instructor, Mr. Arthur Ives, at Chenango County Area Occupational Center, Norwich, N.Y., supervises a student in troubleshooting a small gas engine. (Photo courtesy Jones and Berkey, Cornell)



Conservation teacher Ronald Hay of the Chenango County Area Occupational Center, Norwich, N.Y., supervising students learning by doing the mounting of a great horned owl. (Photo courtesy Jones and Berkey, Cornell)



Special NVATA citations for significant national contributions to Vocational Agriculture were awarded by John J. Murray, NVATA President, Jackson, Minnesota (center) to: Dr. Hilding W. Gadda, Professor Agricultural Education, South Dakota State University, Brookings, South Dakota (left) and Dr. Travis T. Lofton, Professor, Agricultural Education, University of Florida, Gainesville, Florida (right). (Photo courtesy NVATA)



The National Vocational Agricultural Teachers' Association, (NVATA), began their 29th year of professional service and leadership with the conclusion of the 70th AVA Convention in Houston December 8, 1976. Pictured are the members who will serve on the 1976-77 NVATA Board of Directors.

Seated (left to right): Sam Stenzel, Associate Executive Director, Lincoln, Nebraska; John J. Murray, Past President, Jackson, Minnesota; Richard C. Weber, President, Larose, Louisiana; James Wall, Executive Director, Lincoln, Nebraska. Standing (left to right): John Mundt, Vice President for Region I, Meridian, Idaho; Albert Timmerman, Jr., Vice President for Region II, Rockdale, Texas; Quentin Christman, Vice President for Region III, Rugby, North Dakota; Robert McBride, Vice President for Region IV, Kenton, Ohio; W. A. McLeod, Jr., Vice President for Region V, Red Springs, North Carolina; Richard Strangeway, Vice President for Region VI, Grahamsville, New York. (Photo courtesy NVATA)