

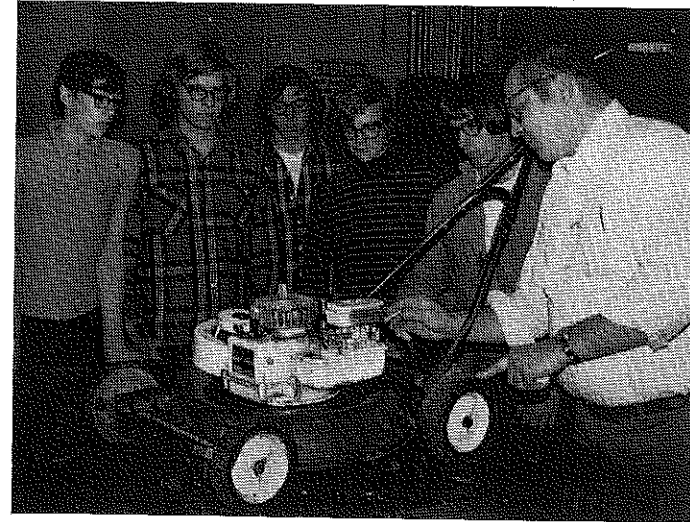
STORIES IN

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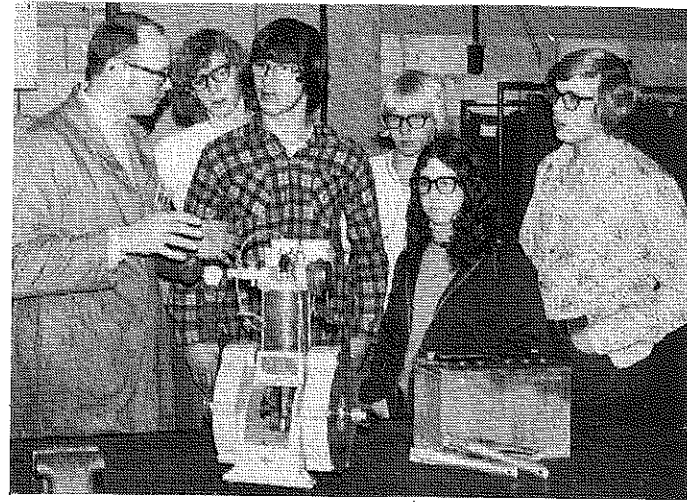
by
Jasper
S.
Lee



REALISTIC EXPLORATORY ACTIVITIES — Pupils enrolled in an exploratory agriculture class at R. E. Aylor Junior High School (Stephens City, Virginia) are shown participating in realistic activities. In the photo on the left, Larry Powell, exploratory agriculture teacher at the school, is shown demonstrating the threading of pipe. The photo on the right shows Wayne McAllister, also an exploratory agriculture teacher at the school, explaining a display at a nearby farm and garden supplies store. (Photo by Robert Veltri and courtesy Larry Miller, Virginia Polytechnic Institute and State University)



DEMONSTRATING ENGINE ADJUSTMENT — Students at Coopers Plains BOCES (New York) are shown observing the adjustment of a lawnmower engine by their teacher, James Katt. (Photo courtesy Richard Jones and Arthur Berkey, Cornell University)



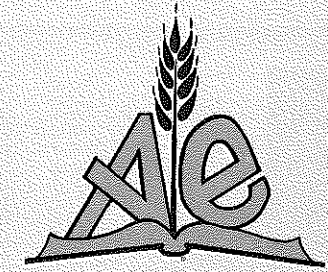
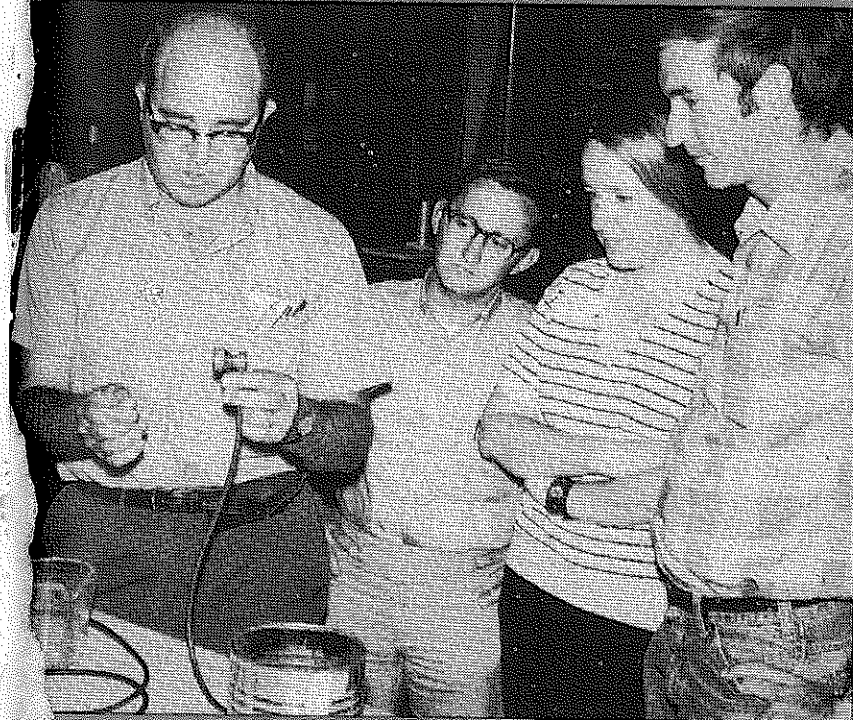
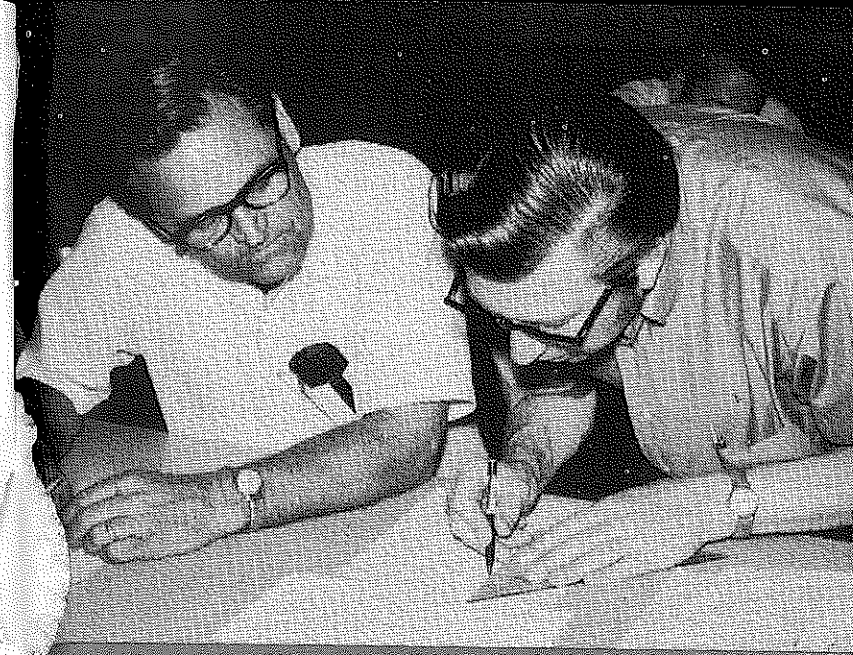
PRINCIPLES OF ENGINE OPERATION — Tom Giles, agricultural mechanization instructor at Schuyler-Chemung-Tioga County (New York) BOCES, is shown explaining the operation of a four cycle engine to pupils enrolled in Agriculture II class. (Photo from Richard Jones and Arthur Berkey, Cornell University)



ON-THE-JOB SUPERVISION — Jeff Bates, agribusiness student at Opelika, Alabama, is shown checking azalea buds under the supervision of his agribusiness instructor, Joe Pearson. Jeff is placed in Hall's Floral Growers, Inc., in Opelika. (Photo by Frank B. Killough, Alabama Department of Education)



MEDIA IN AGRICULTURAL EDUCATION — Mississippi State University personnel are shown reviewing new materials received for a funded project on Career Preparation in Agriculture. Project staff include (left to right) David Faulkenberry, graduate assistant, and John Oren, Jasper Lee, and Ronald Brown, faculty members, Department of Agricultural and Extension Education. (Photo by J. R. Hamilton, Mississippi State University)



AGRICULTURAL EDUCATION

Volume 48

Number 11

May 1976

Theme: In-service Education

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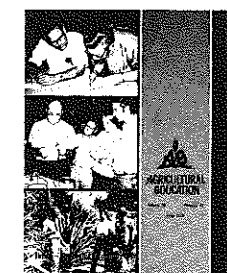
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The cover photographs depict three areas of activity in the "Skills Week" at California Polytechnic State University. The top photo shows Stan Lewis (right), Imperial College, preparing papers on surveying under the supervision of Glenn Solo, instructor in agricultural engineering. The center photo shows Ray Houston, ornamental horticulture instructor, demonstrating a liquid fertilizer proportioner. The bottom photo shows Wes Conner, ornamental horticulture instructor, discussing plant identification. (Photographs from Larry P. Rathbun, California Polytechnic State University)

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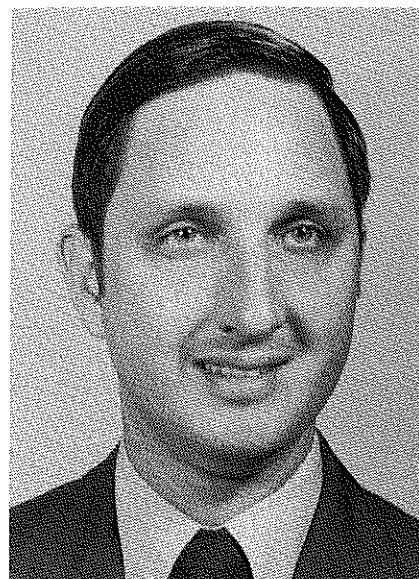
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GUEST EDITORIAL

GUEST EDITORIAL



Herbert Schumann

**Individual Responsibility
 for
 Professional
 Improvement**

*Herbert Schumann
 Teacher Education
 Sam Houston State University*

Are you satisfied with your program of professional growth? Have you attended at least one agricultural short course in the last year? Do you regularly read agricultural magazines and professional journals? Have you attended as many as possible of the professional meetings sponsored by the State Department of Education? Are you aware of all the innovations affecting the agribusiness sector in your local community? If you have a negative response to any of the above questions, perhaps you should ask yourself whether you are in danger of professional complacency and stagnation.

It is impossible during a baccalaureate program to receive all of the necessary pedagogical and agricultural competencies that are needed to become a successful vocational agriculture teacher. In fact, most beginning teachers contend that more was learned about agriculture and teaching skills during the first year on the job than was acquired during the entire undergraduate program. One of the key concepts of career education is that education must be a continual developmental process as contrasted to a terminal type program. Teachers should not forget that they must also be one of the clientele of this career education movement. With rapidly expanding technological innovations in agriculture, it is becoming increasingly critical that vocational agriculture teachers stay abreast of new developments in their profession.

The momentum of off-farm instructional programs necessitates an added impetus for in-service education. Many teachers are required to continue their formal education in order to acquire the certification necessary to teach in one of the emerging programs, while all teachers must continue to grow professionally if they are to be a viable force in agricultural education.

Historically, agriculture teachers have been recognized as educational leaders in meeting the challenge of maintaining professional competence. The profession, however, cannot rest on past laurels and must continue to face the challenges of a rapidly expanding agricultural technology.

The principal responsibility for in-service education must rest with each individual teacher of vocational agriculture. Many opportunities for professional improvement can be found by the individual who is sincerely interested in staying abreast in his chosen profession. Some of the traditional areas, as well as new concepts, which should be given consideration in planning a comprehensive program of in-service education are:

(1) Graduate courses have historically been, and will continue to be, a primary vehicle whereby professional educators up-grade their professional as well as technical skills. Teacher educators at colleges and universities have the opportunity to exchange ideas with colleagues from institutions both nationally and internationally and can assist teachers in keeping abreast of emerging and innovative concepts and technologies.

(2) Short courses which may be held either at the university level or in the local community are one of the best means for keeping abreast of new developments in the profession. Persons responsible for organizing short courses for vocational agriculture teachers have been heralded for separating the "chaff" from the "wheat" in selecting the most essential information for in-service meetings. Because of the usefulness and applicability of short courses, persons in policy making positions should consider adoption of a more liberal policy regarding granting advanced credit for participation in these activities.

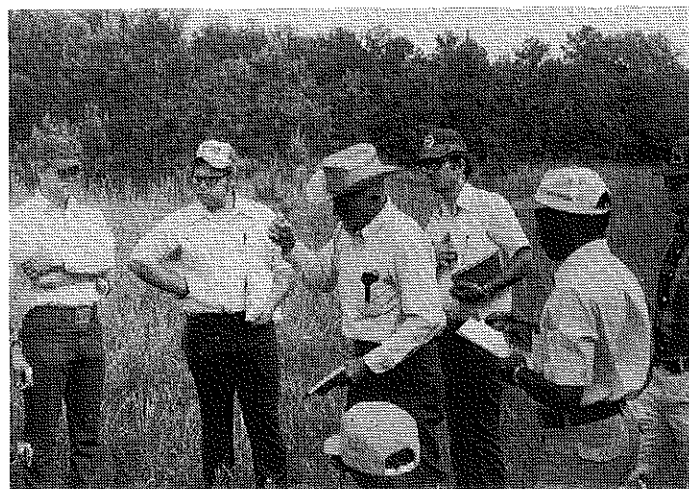
(3) The teacher who is sincerely dedicated to improving his professional competencies will find many opportunities within the local community. Utilization of local agricultural industries and similar resources can provide a rich reservoir of learning experiences for the local agriculture teacher. With the increasing emphasis on off-farm programs, leaders in the profession should give greater consideration to giving college credit to teachers for work experience in local agricultural occupations.

Adult farmer groups and advisory councils may provide
(Concluded on next page)

The principal responsibility for in-service education must rest with each individual teacher of vocational agriculture.

the means to "field test" the adaptability of agricultural practices in the local community. The astute teacher will avail himself of these opportunities to obtain practical agricultural experiences.

(4) Many teachers overlook an opportunity to keep current regarding new agricultural developments and professional trends which are discussed in agricultural magazines and professional journals. Regular reading of magazines and professional journals is characteristic of the professional teacher. This should be done on a systematic basis, or else this activity will take the lowest priority in the busy schedule of a vocational agriculture teacher.



Vocational Agriculture teachers participating in a summer workshop on pasture judging at Sam Houston State University.

COMING ISSUES COMING

COMING ISSUES

- JUNE — The Summer Program
- JULY — Attitudes and Values for Employment
- AUGUST — Secondary Programs for the Talented
- SEPTEMBER — Planning and Managing School Facilities for Ag
- OCTOBER — Preparing Teachers of Vocational Agriculture
- NOVEMBER — Teacher Organizations and Professionalism
- DECEMBER — More Effective Teaching

In-service education has critical implications for all who are involved in the educational process—local vocational agriculture teachers, state departments of education personnel, teacher educators, and local school administrators. Local vocational agriculture teachers must assume individual responsibility for professional growth. Teacher educators should bring a touch of the academe into focus for teachers. The state staff, responsible for vocational agriculture, must provide leadership at the state level for a successful program of in-service growth. School administrators who work with teachers on a daily basis must provide the climate necessary for a continual program of professional growth. In-service education can only become a reality through the cooperative efforts of all segments of the agricultural education profession. ♦♦♦

LETTERS TO THE EDITOR

Thank you for responding to my letter and for bringing me up-to-date on the issues affecting your readership.

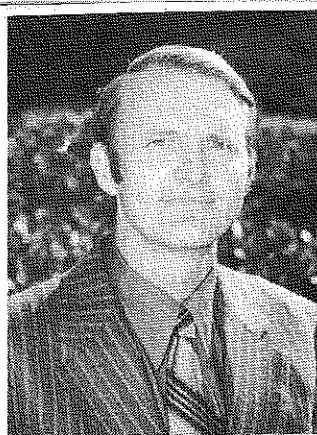
As I mentioned, I will be discussing the newly emerging urban/rural coalition in a series of speeches, position papers and articles for the rest of this critically important Bicentennial year.

I will send you copies of these papers. Some of the points that will be discussed will be controversial, but I believe that only by raising issues that confront both farmer and consumer in a frank, open way, can we establish a truly meaningful dialogue.

Along with whatever you feel would be suitable for publication, I should add that if any of your readers would like to receive the full texts, they can write me and ask to be placed on our urban/rural coalition mailing list.

Again, thanks for your cooperation. I will continue to read your informative publication with great interest. Your assistance will be of immense value to me in my deliberations on the House Agriculture Committee.

Yours sincerely,
Fred Richmond
14th District, New York
Congress of the United States
1533 Longworth House Office Building
Washington, D.C. 20515



O. S. Gilbertson

If vocational agriculture students are to be vocationally prepared in the instructional program areas, teachers must also receive training in those respective areas. All too frequently the preservice teacher preparation program does not have sufficient time to adequately prepare the teacher candidates.

Skills Week, four and one-half days of in-service training each June at California Polytechnic State University,



Cal Poly Crop Science instructor Wm. Troutner demonstrating grafting techniques to an attentive group of agriculture instructors.

San Luis Obispo, is programmed to provide instruction in each of the U.S. Office of Education agricultural program areas. The program, conducted in cooperation with the Bureau of Agricultural Education and the California Community Colleges, provides in-service training for both high school and community college teachers of vocational agriculture.

Annually, a minimum of 15 skills sessions are conducted for the purpose of training the inexperienced teacher, as well as upgrading experienced teachers in selected areas. Participants have the opportunity to select three separate skills offerings, each of which runs a total of 12 hours. The first session of classes is conducted on Tuesday, Wednesday and Thursday mornings, the second session is conducted on those afternoons, with the third session running all day Friday and Saturday morning. Classes which provide for skills training not easily conducted in a continuous session are scheduled on Tuesday through Thursday, whereas those types of

SKILLS WEEK

O. S. Gilbertson,
Agricultural Education
California Polytechnic State
University, San Luis Obispo

activities for which no break in instruction is necessary or desirable are reserved for Friday and Saturday morning.

A broad enough variety of subject matter is generally offered, providing all participants an opportunity to select areas of specific interest to themselves. Additionally, there is a sufficiently broad array of subject matter so that there will be some very basic skills provided for the novice as well as advanced skills for the experienced teacher.

Offerings provided in the 1975 Skills Week included:

- Session I:
 - Preventive Medicine for Livestock
 - Mini Crop Production
 - Meat Processing
 - Basic Welding
 - Tractor Ignition
 - Plant Identification
 - School Farm Design and Management
 - Parliamentary Procedure for Beginners
- Session II:
 - Fitting and Showing of Livestock
 - Viticulture
 - Meat Processing
 - Advanced Welding
 - Wildlife Management
 - Floral Design
 - Building Construction
- Session III:
 - Small Animal Practices
 - Agriculture Chemicals/Weed Control
 - Irrigation and Mist Systems
 - Record Keeping
 - Basic Shop Skills
 - Game Bird Management
 - Diesel Engines

Additionally, Parliamentary Procedure for Beginners was offered during the evening, for those interested in learning the fundamentals of parliamentary law.

This program of in-service training provides an excellent opportunity for teachers to become knowledgeable in areas which were deficient in their preparation. First-year teachers have this opportunity to pick up basic skills relative to the area in which they will be teaching. Not only do these beginning teachers benefit from the class instruction, but also from sharing ideas with other workshop participants.

Planning for Skills Week starts early in the winter when teachers are offered the opportunity to respond to a questionnaire while attending their regional agriculture teachers meeting. A tentative schedule is then developed and reviewed by the Bureau of Agricultural Education staff and the Community College Agriculture Specialist, resulting in the selected series of skills areas being put into a workable program.

(Concluded on page 255)

IN-SERVICE EFFORTS KEEP YOUNG FARMER PROGRAM ROLLING



Jack Pritchard

Dr. Jack Pritchard
Agricultural Education
Oklahoma State University

and Bob Mitchell
State Young Farmer Coordinator
Oklahoma Department of Education



Bob Mitchell

How do you convince a teacher of vocational agriculture that a major change in his program should be made? To be more specific, how do you convince a local vocational agriculture teacher to begin a Young Farmer program? In an attempt to answer this question, an annual event was begun in the summer of 1969 by the Agricultural Education Department at Oklahoma State University. The annual Young Farmer Tour attracts approximately forty (40) teachers of vocational agriculture and several local Young Farmer members each summer.

Brickell¹ seemed to believe that the way to encourage teachers to try something new is related to allowing them to see or visit a situation very similar to their own and thereby observe innovations and/or unusual educational activities. This solution focuses upon the concept that if a teacher could see a new technique or practice working successfully in a situation similar to his own, he would likely be convinced or would actually convince himself to put the idea into practice in his local program. Brickell states that "the most persuasive experience a school person can have is to visit a successful new program and observe it in action."

The above was the basic rationale used to support the annual Young Farmer tours of neighboring states. Visitations were made to states which had in operation, well established, viable Young Farmer programs.

The first tour was undertaken at the time when Oklahoma was just becoming aware of the Young Farmer Organization's importance in local programs of vocational agriculture. A major effort was being made by the State Department of Vocational Agriculture

and the Agricultural Education Department to bring this importance to the attention of local vo-ag teachers. The annual Young Farmer tours were only one of several promotional and educational activities used by these educational agencies to foster local Young Farmer associations in Oklahoma.

Tours of Kansas, Colorado, Missouri, Texas, and our own state of Oklahoma have provided approximately 250 teachers with very unique learning opportunities.

Teachers were tremendously impressed with the infectious enthusiasm of the members and officers of local chapters. Teachers are still discussing the enthusiastic commitment of Young Farmer chapters in Kansas and Colorado. They also remember quite distinctly the very active Young Farmer Wives of Kansas. The tour of Missouri Young Farmers convinced the Oklahoma teachers that the commitment of resources in the field of adult education will produce definite results. Seeing full-time Young Farmer advisors in Missouri was an impressive lesson. Specialist programs for Young Farmer organizations in Texas provided insight for similar programs in Oklahoma.

The following is an abbreviated list of impressions compiled by teachers involved in the annual tours. They are as follows:

1. Interested local advisors are definitely a major key to successful Young Farmer chapters.
2. Educational programs must be given major emphasis in every Young Farmer organization.
3. A good viable set of officers are especially important to chapter success.
4. Even though major emphasis must

be given to educational programs, community service projects help to build interest and pride in Young Farmer programs.

5. Family functions are very important. Social activities seem to cement families and communities together. (Kansas and Missouri Young Farmers are excellent examples of this process.)

6. Organizations of Young Farmer Wives are a complement to Young Farmer organizations. (Kansas Young Farmer Wives convinced us of this fact.)

7. Size of local chapters is not really a determining factor in chapter success. (Rifle, Colorado Young Farmers taught us this lesson.)

As you can see, many lessons have been learned from our friendly hosts and good neighbors. A great wealth of advice and counsel has been gained from our Young Farmer neighbors. It is rather difficult to determine the impact of the annual summer tours upon the rapid growth of Young Farmers in Oklahoma. It is a pretty safe bet that several of the 142 Young Farmer Chapters in Oklahoma owe their existence to the fact that a local teacher saw a neighboring teacher actively involved in a very successful Young Farmer program and said, "Say, that should work in my own community."

The reservation list now has 56 teachers enrolled for the 1976 Young Farmer Tour to our good neighbors to the north — Kansas Young Farmers. ◆◆◆

REFERENCE

1. Brickell, Henry M. "The Dynamics of Educational Change," *Theory Into Practice* (1962), p. 81.

The ART of In-service Education

James Albracht
Teacher Educator
Kansas State University

In-service teacher education programs take place while the recipients of the service are performing the teaching function. The recipient of the in-service instruction is actually engaged in the occupation for which he (she) is being trained which provides an ideal learning climate. What teacher educator would not relish the thought of serving in this position?

Technically the answer to the above question should be an emphatic yes, however there are problems which must be overcome before the question is so answered. The major problems of in-service education centers around the systems commonly used, which include economic and non-economic considerations. In-service education problems arise when inadequate emphasis is given to proper attitudes, resources, and time considerations. Conversely a successful in-service program in agricultural education is one which is conducted with ART i.e. with proper *attitudes, resources, and time.*

Proper *attitudes* for in-service education in agriculture involve a dedication to serving the teacher who is actively engaged in his profession. The teacher educator places a high priority and commitment on doing an effective job of in-service education. The goal is one of having no failures of teachers in the in-service teacher education program. The teacher educator must convey this goal and commitment to the teacher being served by the program.

It is most important to develop an attitude of confidence in the teacher being served. This is accomplished when the teacher experiences success in his teaching. It is essential that the teacher begins teaching in an area of his strength, and thereby begins to win the confidence of the students and other individuals who judge his teaching effectiveness.

It is also important to assist the

teacher in selecting realistic goals so that he will not become disappointed but will in fact increase his confidence and raise his aspiration level. Usually the higher the aspiration level the greater the achievement of the teacher. Another important consideration for an in-service education program is to increase the teacher's desire for involvement in activities, and to decrease fears of failure.

The development and use of available *resources* is an important key to successful in-service education programs for agriculture teachers. The resources are meant to include both the human and the non-human types. Parents, administrators, agricultural leaders in the community, state supervisory staff members, and especially students are important resources to help in the improvement of instruction. With adequate time, the in-service teacher educator can bring these resources to bear on the task of improving the effectiveness of the teacher who is participating in the in-service program.

The teacher educator assists the teacher in identifying resources available. The teacher educator also prepares teaching resources, and indicates how they may be effectively used by the teachers in the in-service program. In addition the teacher educator frequently demonstrates the proper use of the resources where appropriate. Care and attention is given to the successful organization of teaching resources and their adequate filing and storage.

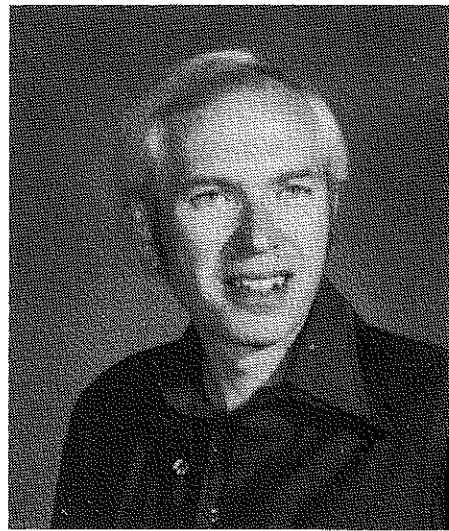
Every effort is exerted to discover teacher strengths and to assist in the expansion of the teacher strengths. By performing effective instruction the teacher establishes a reputation for being effective with his students and constituents.

Time is another important consideration in successful in-service education programs in agriculture. The teacher

educator assists the agriculture teacher in the identification of problems, and then in the determination of an effective plan to solve each problem. Obviously it takes time to see the results of the plan after it is adopted. A close working relationship between the teacher educator and the teacher is essential for successfully solving problems, and this takes considerable time. After the teacher becomes successful in identifying problems, developing a plan of action for solving them, and then accomplishing their solution, he will increase in confidence. The teacher will then become a self-starter, and attain continued growth throughout his teaching career. This continued growth of the teacher is the ultimate goal of teacher education.

In summary, in-service teacher education is essential for the improvement of agricultural education programs. Education of the teacher while performing the teaching function is the most effective and relevant instruction which can be offered. The efficient and effective in-service education program assists the agriculture teacher in turning out a successful end product — the graduate of the agricultural education program.

An effective in-service teacher education program involves successful activities which develop confidence and competence in the agricultural teacher as well as the confidence of students, parents, administrators, and agricultural education supervisory staff in him. Mutual confidence in the agricultural teacher and the agricultural program is developed over a period of time through assistance with the improvement of the teaching resources by the teacher educator. A mutual commitment to the improvement of instruction by the student, the teacher, and the teacher educator is also important for a successful in-service teacher education program. ◆◆◆



Larry Lockwood

What Are Your Priorities in Your Job?

Larry Lockwood
Vocational Agriculture Instructor
Grundy Center Community School
Grundy Center, Iowa

As years of teacher experience increased, young farmer and adult classes, and visits to young farmer and adult class members became more important.

There are more things that you, as a vocational agriculture instructor, *could* do than you possibly have time to do. How do you decide things *you will do* and what things will remain undone when all your available time is gone?

A beginning instructor is faced with the very frustrating task of deciding what he will be forced to leave undone. How many wives of young instructors have you heard say, "I never see my husband—I'm glad we don't have a family yet." It is my feeling that the high "drop-out" rate of our profession is due largely to that problem.

We seem to make more demands on instructors' time every year. In Iowa during the last 18 years, we have added at least eight new time-consuming activities in our vocational agriculture departments. They are: 1. the agriculturally related occupations program; 2. the postsecondary program; 3. many "speciality" courses (horticulture, exploratory 8th grade agriculture, etc.); 4. many FFA contests and agricultural contests; 5. the semester course concept; 6. the modular scheduling concept; 7. the FFA Alumni; and 8. the State Young Farmer Association. During those same 18 years, we have done only one thing that would help to lighten the demands on instructors' time. We have lowered the young farmer class requirement from 20 to 12 meetings.

After an instructor has been "softened up" by all the time-consuming duties of his job for several years, he probably has a very frustrated feeling caused by all the things that he has not been able to complete to his satisfaction. When some tempting job offer comes along outside of teaching, he is very apt to take it.

In Iowa we decided to determine what the job priorities of vocational agriculture instructors really are. At our 1975 Iowa Vocational Agriculture Summer Conference, we devoted an entire morning session to the setting of job priorities in teaching vocational agriculture. We developed a list of 35 activities that demand our time. Those activities included our entire week, not just time spent during our "working

hours." They included our families, our church, our leisure time—our entire use of all our available time.

Two hundred and three Iowa vocational agriculture instructors were given this list of 35 activities and 70 "markers" (kernels of corn). They were asked to distribute those 70 markers among the 35 activities according to the relative importance of each activity. We used a scale of no markers meaning very little importance and four markers meaning highest in importance of each item. Then those ratings of each individual instructor were analyzed by computer.

In Table 1 we have placed those 35 items in order from most important to least important according to the average ratings of all 203 participating instructors. Two of the three activities given highest priority by these instructors deal with family life, and one of these activities is a part of the teaching job. The five highest ranking priorities in order are: 1st—Teaching local day school classes; 2nd—Spending time with my family on weekends and vacations; 3rd—Finding time to do activities with my family every day; 4th—Working with supervised experience programs; and 5th—Working with local FFA chapter activities.

The five activities given lowest ranking in importance were: ranked number 31st—Having a second area of interest for personal monetary profit; 32nd—Working with activities of professional organizations outside of vocational agriculture; 33rd—Being a willing helper to others on staff who need help at any time;—34th Working with the Young Farmer Association; and 35th—Working with the FFA Alumni Association.

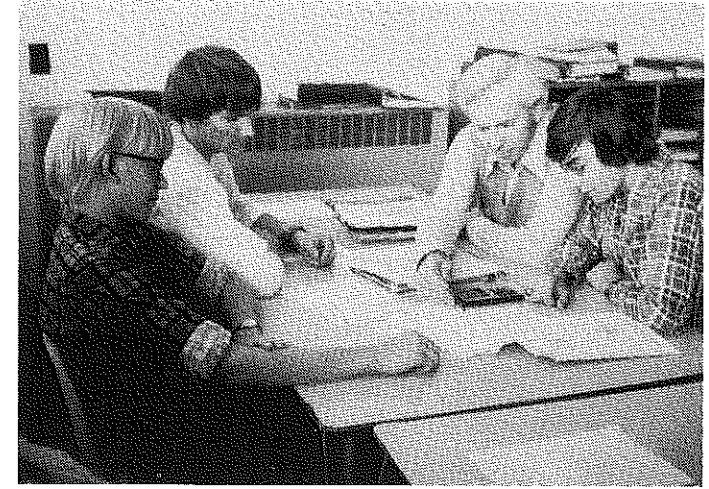
In a second comparison the group of instructors was stratified by years of experience in teaching vocational agriculture. We used 6 groups: no experience; 2 or less years of experience; 3-5 years experience; 6-10 years experience; 11-20 years experience; and over 20 years of experience. Some very interesting changes in priority are shown here with increased years of experience.

All groups listed day school classes as being most important to them—and all groups listed the FFA Alumni Association as being the least important. As years of experience increased, young farmer and adult classes, and visits to young farmer and adult class members became much more important. Also, local school records and local school administrator assigned duties became more important. As

we might expect, having a nice home increased in importance with increased years of experience. However, the importance of individual leisure time decreases with added experience. As teachers increased in experience, they seemed to feel that participation in fairs and shows decreased slightly in importance, and that service work in the community such as Lions, Boy Scouts, etc. increased slightly in importance.

Beginning teachers rated several items quite important, compared to teachers with any amount of experience. These items were: use of a department council; visits to agriculture work experience training stations; and attendance at in-service training sessions. Beginning teachers felt attendance at vocational agriculture professional meetings was less important than did those with experience.

Rank	Priority item
1	I feel that teaching local day classes is very important.
2	I believe that spending time with my family on weekends and vacations is very important.
3	I feel that finding time to do activities with my family every day is very important.
4	I believe that supervised experience programs are important.
5	I feel local FFA activities are very important.
6	I believe an effective public relations program is necessary.
7	I feel that FFA contests and conferences past the local chapter level are very important.
8	I feel it is very necessary keeping up-to-date in agriculture.
9	I believe leisure time activities are very important.
10	I feel that my work with adult and/or young farmer classes is very important.
11	I feel that teaching about careers and working with job placement in careers is very important.
12	I believe it is very important to have a nice home, lawn, garden, car, etc.
13	I believe neatness and organization of school facilities is very important.
14	I feel farm visits to potential members of all classes are very important.
15	I believe attendance at professional meetings is very important.
16	I believe it is especially important to take an active part in my church.
17	I feel farm visits to adult and/or young farmer class members are very important.
18	I believe it is very important to keep up to date on local reports, lesson plans, and other paper work.
19	I feel that field trips are a very valuable educational tool.
20	I believe it very important to keep up to date by attending training sessions, earning additional college credits, etc.
21	I want to be a good neighbor to everyone — I don't ever want to seem to be too busy to help.
22	I believe supervising my students' livestock exhibits at fairs is very important.
23	I feel visits to work stations of students in a work experience program are important.
24	I feel it is very important to coordinate my Vo-Ag program with all other agencies.
25	I feel working with the Vo-Ag Department advisory council is very important.
26	I believe I must keep up to date on reports and paper work required above the local level.
27	I feel working with activities of professional organizations in vocational education is very important.
28	I feel working on local school administrator assigned duties is very important.
29	I believe I should actively support, participate in, and attend school activities of all kinds.
30	I believe community service work is very important.
31	I believe having a second area of interest (for personal monetary profit) is very important.
32	I feel working with activities of professional organizations outside of Vocational Education is very important.
33	I want to be a willing helper to others on staff.
34	I feel working with the Young Farmer Association is very important.
35	I feel working with the FFA Alumni Association is very important.



Iowa Vocational Agriculture Instructors agree that the single most important activity for them is teaching local day classes. Day class activities include classroom, farm mechanics, laboratory, field trips and many other types of learning experiences. The author is shown helping members of a Vo-Ag III class plan a grain handling, drying and storage facility. This was the final activity of a unit where students first studied in the classroom about the topic, then visited six different farm installations.

Beginning teachers and long tenured instructors rated church participation much more important than did men in other experience categories, but their reasons for that importance may be quite different. A second area of interest for personal profit was considered more important during the middle years of teaching experience (3-10 years).

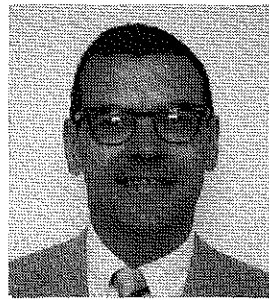
We also stratified the 203 participating instructors by their future plans. Those in the first group planned to make vocational agriculture teaching their life's work. Those in the second group felt they are in vocational agriculture teaching as a step toward their chosen career, probably in an agriculture-related area. Those in the third group felt they would take any job offered them that they considered to be a personal advancement.

All three groups considered day classes most important and the FFA Alumni Association least important of all items. As we compared these groups in order (from group one to group three), the importance of three items decreased: visits to young and adult class members; importance of local administrator assigned duties; and the importance of local records and reports. The importance of 3 other items decreased slightly: church activities; records and reports above the local school level; and keeping up to date by attending in-service meetings, earning additional college hours, etc. Two items increased in importance; the coordination of the vocational agriculture program with other agencies; and the importance of being a good neighbor and willing helper to everyone.

In summary, we found the importance of several items changed greatly with increased years of experience. We found the beginning instructor placed much higher importance on some items than experienced instructors, and much lower than experienced instructors on other items.

We believe you will be interested in comparing your own set of priorities with those of this group of 203 Iowa instructors. We hope you are better able to organize and set your own priorities after comparing your ideas with those shown in this summary.

A Joint Staff Approach to Meeting In-service Needs



Arthur Berkey

Arthur Berkey and William Drake
Teacher Education, Cornell University

Providing in-service education to teachers of agriculture in New York State is accomplished through the team efforts of the Joint Staff in Agricultural Education. The Joint Staff provides a leadership team approach to the overall direction of agricultural education in the State.

The Joint Staff Team

Composition of the Joint Staff includes the four groups primarily responsible for agricultural education in the State: (a) teachers of agriculture represented by officers of their professional association, "The Association of Teachers of Agriculture in New York" (ATANY), (b) two-year agricultural and technical colleges, represented by agricultural division chairpersons, (c) the New York State Education Department Bureau of Agricultural Education staff, and (d) the Agricultural Education staff in the College of Agricultural and Life Sciences at Cornell University.

Meetings of the Joint Staff take place throughout the year as needed to plan and coordinate activities. Chairmanship and secretarial responsibilities rotate annually between the Bureau of Agricultural Education and the Cornell teacher education staff. A number of Joint Staff subcommittees (e.g., In-service, Research) are used to delegate responsibility to provide background information and implementation of Joint Staff decisions. These subcommittees serve to make the Joint Staff both a policy and implementation team that functions throughout the year.

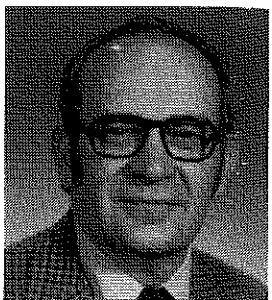
The steps followed by the Joint Staff in meeting the in-service needs of teachers of agriculture in New York State are described below.

Needs Assessment

A formal technical needs assessment is taken every three years. Each teacher of agriculture is asked to indicate his/her areas of in-service need from a listing of topics that make up the agricultural education curriculum. The topics are grouped by areas of specialization, i.e., Ornamental Horticulture, Farm Production and Management, Agricultural Mechanization, Conservation, Agricultural Business, and Horse Husbandry/Small Animal Care. The ATANY Professional Improvement Committee, in cooperation with teacher education at Cornell, conducts the survey. Summarization of the survey is in terms of numbers of teachers indicating a need for in-service education on each technical topic. Other data on in-service needs are provided on a less structured basis through the Instructional Materials Advisory Committee, staff visits to schools, and teacher requests through ATANY in the interim between the three-year needs assessment survey.

Professional education (pedagogical) courses are offered both as special, non-credit sessions, e.g., new teacher workshop, and credit courses, primarily during the summer, based on the certification needs of teachers. Certification needs data are available through the New York Basic Education Data System (BEDS).

The professional courses provided include methods and materials, curriculum, working with out-of-school groups, youth organizations, and the administration and supervision of vocational education. In addition, special topic seminars and individual study are offered.



William Drake

These needs assessment data are then used by the Joint Staff to set in-service priorities for the current year and to project a five-year plan for in-service programs. The five-year plan is tentative and provides essential lead time for curriculum planning. An effort is made to provide at least one summer technical course for teachers in each of the specialized areas.

Funding In-service Courses

The Joint Staff-determined priority technical courses are proposed through Agricultural Education Bureau staff for funds by the New York State Education Department, Bureau of Inservice. Funded courses provide teachers with tuition, fees, and a living stipend. Institutions offering the courses submit proposals for VEA funding to the New York State Education Department. Other technical courses and professional courses are offered on a paid tuition basis.

Providing In-service Instruction

The in-service courses are provided primarily during the summer at the College of Agriculture and Life Sciences at Cornell University, the College of Forestry at the University of Syracuse, and at two-year agricultural and technical colleges. Professional education courses are taught by Cornell teacher educators. Faculty in technical departments staff the technical courses. Also, some non-credit courses are offered by the Joint Staff, such as a workshop for new teachers.

The ATANY contributes directly to in-service instruction by providing to instructors information on specific

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Increasing Teacher Competency Through Relevant In-service Education

V. O. Martinson
Consultant, Agricultural Education
Madison, Wisconsin

Quality programs in vocational agriculture/agribusiness are the result of numerous inputs. It is commonly accepted that adequate facilities, sufficient financial support, committed support from the administration and the community are essential. The thrust of this article, however, is to focus on the most vital ingredient of a dynamic program — the local vo-ag teacher. To meet student needs, the instructor must be the product of a quality preservice college or university educational program. He/she must be vocationally certified to teach those courses currently being offered in the school in which he/she is seeking employment. Nearly all vo-ag instructors in Wisconsin are graduates of one of the three University of Wisconsin teacher training institutions — Madison, Platteville or River Falls — and, therefore, are well qualified to prepare young men and women for teaching in production agriculture and agribusiness courses.

An excellent preservice program, however, is not enough. Due to changing times, a rapidly changing agriculture technology and a changing world of work dictates that the teacher acquire competence in several agricultural areas.

One of the most successful means of assisting teachers to upgrade their skills, knowledge and understanding is a relevant in-service program. Wisconsin has for many years provided a series of intensive two-day workshops on relevant topics during the annual Wisconsin Association of Vocational Agriculture Instructors summer conference held early in July. This program is jointly planned by consultants from the Department of Public Instruction, the Vocational, Technical and Adult Education System and the head teacher educator from the University of Wisconsin-Madison. In recent years, an inter-disciplinary approach involving

several specialists has provided keener insights, created a greater awareness and interest, and provided a greater breadth of knowledge than when all presentations were made by one or possibly two specialists. One of the strengths of the workshop concept is that education can be provided to meet today's needs today. To be most helpful to our teachers, the material presented must be useful and practical so it can be easily infused into the curriculum. Workshop presenters, because of their close communication with consultants, are cognizant of student needs and have been most cooperative in preparing visuals, simulated problems and other relevant resource material that teachers can use in their instructional program. Other workshops have also been arranged for those instructors who have special needs based on recent or contemplated curriculum changes.

The aforementioned strategy, while very successful, did not accomplish all objectives. To provide needed answers to guide the committee in formulating a long range plan for in-service education, a questionnaire was prepared and circulated along with the monthly vocational agriculture/agribusiness newsletter. Returns revealed many and diverse needs, however, the greatest need for upgrading instructor competency centered in the area of agricultural mechanics. To assist in implementing a three-year program in agriculture mechanics, members of the Wisconsin Association of Vocational Agriculture Instructors Curriculum Committee, meeting with consultants and University of Wisconsin staff members, were asked to assist in identifying specific skills needed, develop schedules and select workshop locations. Currently, plans are being finalized to develop three-day workshops in cooperation with industry, the University of Wisconsin, VTAE schools, and local

high schools. Workshop locations throughout the state were selected based on the facilities available and teacher population in the area. Workshop course content for these events will be developed jointly with industry, UW, VTAE, DPI, and interested teachers. In the current year, tractors will receive the prime focus, followed by tillage and seeding implements and finally harvesting equipment will be featured. Unless a strong demand surfaces, this in-service program will not carry graduate credit, but will undoubtedly meet Board of Education requirements for continuing education.

Less extensive programs designed to meet the needs of experienced and inexperienced teachers alike include workshops in land judging, parliamentary procedure, curriculum, program visits by consultants and numerous meetings sponsored by UW Extension, livestock and industry groups. Due to a close working relationship with the above mentioned groups, much relevant material is obtained through participation in these events.

The University of Wisconsin at Madison, Platteville and River Falls has for several years conducted a graduate level agriculture education course for beginning instructors and for those who have returned to teaching after a short or extended absence from the classroom. Because the class members deal with current problems being experienced by class members such as curriculum planning, selecting teaching materials, funding, teaching strategies, discipline, community involvement, etc., the course is more relevant than others taken during their undergraduate experience. Classes are held bi-weekly and on one or more Saturdays throughout the academic year. The course is taught by university professors with assistance from DPI and VTAE consultants.

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IN-SERVICE EDUCATION THROUGH INDUSTRY



Charles Byers

Charles W. Byers and Rodney W. Tulloch
Teacher Education, University of Kentucky



Rodney Tulloch

In the summer of 1974, the Departments of Horticulture and Agricultural Education at the University of Kentucky joined together to conduct the first annual week-long workshop for Kentucky high school teachers of horticulture. This first workshop focused on floral arrangement and design; the second workshop conducted in the summer of 1975 focused on landscape design. Each of these workshops was supported financially by the Bureau of Vocational Education, State Department of Education.

Need for the Workshops

Kentucky has 50 or more teachers of horticulture, and some 1,400 high school students are enrolled annually in vocational horticulture classes. These teachers expressed the opinion that floral arrangement and design and landscape design should be an important part of the curriculum in horticulture. However, most of the teachers also indicated they had devoted little time to instruction in these areas. A survey of teachers indicated that their training and experience in these areas of horticulture were limited and that they, therefore, were not capable of providing instruction. The teachers expressed a strong desire for workshops to update their skills in these important areas of horticulture.

*Reports on the workshops may be secured by writing the Department of Agricultural Education, University of Kentucky, Lexington, Kentucky.

Note: Charles Byers directed the flower arrangement and design workshop and Rodney Tulloch directed the landscape design workshop.

Objectives of the Workshop — Floral Arrangement

The following specific workshop objectives indicating behavioral outcomes were established. Teachers would be able to:

1. Use basic principles of design and arrangement in making floral decorations.
2. Make corsages.
3. Make centerpieces.
4. Make large vase arrangements.
5. Make small container arrangements.
6. Make basket arrangements.
7. Make set designs.
8. Make spray arrangements.
9. Teach floral arrangement and design.

Objectives of the Workshop — Landscape Design

The following specific objectives indicating behavioral outcomes were established. The teachers would be able to:

1. Determine the need for people trained in landscape design at various levels, what these positions require, and other considerations about careers in landscaping.
2. Use the basic principles of design theory in making landscape designs.
3. Use the basic principles of the design process in preparing a landscape architecture design.
4. Construct a landscape design for a residence.
5. Determine the materials needed to teach landscape design and to determine the best sources to secure the needed materials.

6. Use effective methods and procedures in teaching landscape design.

Conducting the Workshops

The workshops lasted five days with approximately two three-hour sessions each day. Demonstrations or lectures were followed by the participants actually constructing the particular arrangement(s) which had been demonstrated or working on their landscape design. The instructors of the workshop were present to supervise the teachers in their practical work. The "hands-on" experiences were enhanced by an abundant supply of high quality flowers and materials with which the participants could work. The arrangements were analyzed by the instructor(s) who pointed out both their strengths and weaknesses.

In the landscape design workshop, references, pencils, pens, drawing paper, and other materials were provided. The participants took a field trip to a home for which a landscape design was to be prepared by each student. Half the class prepared their design with the assumption that a couple in their thirties with two young children would be the occupants. The other half of the class made their design assuming that a 65 year-old retired couple owned the home. All designs were explained in front of the entire class, and constructive criticism was offered by participants and instructors. Field trips were also taken to a landscape architect's office and to a nursery, after which participants compared and contrasted the work that each does.

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CONTINUED IN-SERVICE EDUCATION THROUGH INDUSTRY

Evaluation of Workshops

Upon completion, participants were asked to evaluate the workshops to determine: 1) how well the workshops were conducted, and 2) what changes took place in their attitudes, knowledge, and skill as the result of the workshops.

A close examination of the evaluations revealed that the participants were well pleased with the arrangements for the workshop and extremely satisfied with the instruction. In addition, they felt that their competence in making floral arrangements or in landscape design had improved significantly.

Comments made by the teachers were very revealing:

1. "We need the instruction to be combined with an experienced practitioner as well as the professor. This was done in this class and its results were excellent. This has been the best workshop I have ever taken."

2. "The instruction was excellent. I feel this type of instruction is excellent and we need more. I would recommend more of this type of workshop



Floral arrangement and design workshop participants and their instructors discuss some of the arrangements made in one day's class. The picture shows William Steele, Dr. Jack Buxton, B. H. Helton, Virginia Norris, Carol Mitchell, American Institute of Floral Designers, and Albert Lee.

in other areas of horticulture."

The University of Kentucky is planning to offer additional workshops in the area of horticulture for teachers. It is felt that the practice of involving the Departments of Horticulture and

Agricultural Education, along with the practitioners from the horticultural industry is a most effective way of providing the teachers with the technical skills needed for a good instructional program at the local level. ♦♦♦

CONTINUED A JOINT STAFF APPROACH . . .

teacher needs to be met in the technical courses. Another important ATANY contribution is the information provided by ATANY vice presidents to teachers in each specialized area about the availability of industry technical service schools.

Evaluation

All credit courses at Cornell University are evaluated by the teachers taking the course as to relevance for the teacher's own classroom. Funded courses are further evaluated through State Education Department staff visits and other assessment requirements for funding.

Summary

The Joint Staff approach to the delivery of in-service education has

proven successful in the following ways:

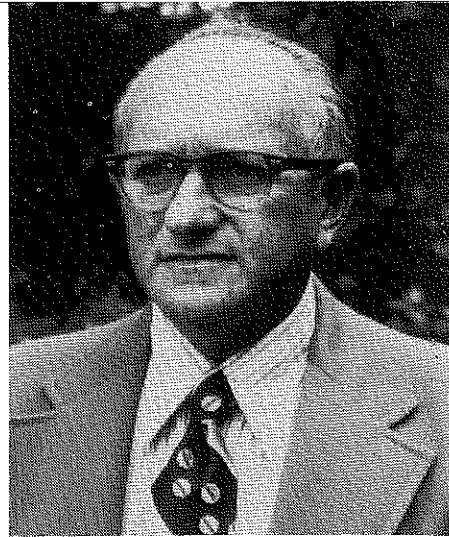
1. Joint Staff planning and cooperation has demonstrated a State-wide coordinated effort. This has been an important factor in obtaining adequate funding support for in-service programs.
2. The continuous needs assessment identifies priorities and keeps in-service offerings "in tune" with teachers needs.
3. Adequate funding is possible because of a State-level leadership team approach and priorities based on assessment.
4. Instructional staff and facilities are provided by the major institutions with technical departments in the specific areas of needed in-service education. The five-year plan allows lead time for instructional planning.

5. Curriculum specialization is provided by the needs assessment in all areas of agricultural education. The representative make-up of the Joint Staff assures coverage of in-service needs in all specialized programs.

The Joint Staff team approach to assessment and fulfillment of the in-service needs of teachers of agriculture provides opportunity for setting priorities and offering programs based on maximum information. Involvement of the major parties concerned builds cooperative relationships, provides meaningful information on needs, and makes maximum use of available resources for instruction and evaluation. The overall Joint Staff effort provides a cooperative environment for development of quality agricultural education programs. ♦♦♦

Skill-Shops in Horticulture in New York City

George Chrein, Coordinator
Agricultural Career Education
Board of Education — City of New York



George Chrein

THE SITUATION AND RELATED PROBLEMS

Programs in vocational ornamental horticulture in New York City and the nearby counties of Nassau, Suffolk, Westchester, and Rockland have literally mushroomed during the past five years. There was no such program in New York City in 1970. There are now eight programs, with 565 students taught by seven full-time and four part-time teachers. Similar growth patterns may be found in the nearby counties where there are now approximately 600 enrolled students and 28 teachers.

The initial thrust of the program is to assist our career oriented students develop the occupational skills necessary for immediate employment. An occupational cluster approach is used so that early in the program "hands-on" experiences are provided by teaching those basic skills common to the retail and wholesale florists, garden center operators, nursery producers, landscapers, grounds maintainers, turf producers and managers, arborists and golf course managers. It was soon discovered that there were tremendous variations in the occupational experiences and educational backgrounds among the teachers hired to present these programs. The most pressing need in helping the teachers implement their programs was to organize a series of "skill-shops" based upon those occupational competencies teachers wanted experience in perfecting. With the full cooperation of Mr. Lee A. Traver, Chief, Bureau of Agricultural Education, who arranged for the necessary funding and my colleagues, Assistant Superintendent Frank J. Wolff and Team Leader William Woehler, of the Nassau County BOCES, initial plans were formulated.

Some of the related basic problems and considerations were: 1) many of the teachers were on their first teaching assignment or teaching ornamental horticulture for the first time; 2) we did not want to "put on" a program for teachers—a way would have to be found to encourage the teachers to assume the burden of pursuing their own education; 3) teachers frequently expressed concern relating to the increasing demands being made on their free time; 4) consideration would have to be given to a central meeting place convenient to most of the teachers in the region; 5) the nature of the skill-shops tentatively planned would be such that "hands on" experiences would be provided for the teachers, enabling them to develop or perfect occupational skills which they would soon thereafter teach to their students. Thus, the skill-shops would have to deal with both

the development of technical skills and the best related educational methods; 6) there was full realization that such skill-shops would be at best a "stop-gap" measure and in no way represent a substitute for an in-depth college course in ornamental horticulture. As a matter of fact, nothing would please us more than to discover that as a result of the proposed skill-shops, teachers would be so motivated and encouraged as to enroll in courses at Cornell University or nearby Farmingdale.

IMPLEMENTATION

The idea of offering a few skill-shops based upon those skills teachers were most concerned with was a topic of discussion at two of our local or district meetings of the Association of Teachers of Agriculture of New York. Lively discussions followed; the teachers seemed enthusiastic. The enthusiasm was somewhat sweetened by the announcement that we might be able to pay a small stipend to each teacher attending the skill-shops. It was agreed to systematically survey the interested teachers to help plan the type of program which would best satisfy their skill needs.

A comprehensive questionnaire was prepared based upon, "An Analysis of Tasks Performed In the Ornamental Horticulture Industry" by Arthur L. Berkey and William E. Drake, published by the Cornell Institute of Career Education, June 1972. In addition to the usual identifying information, teachers were requested to check those skills or tasks which would be of the greatest help to them in meeting their immediate needs. An example of one *small section* of the questionnaire follows:

I. Retail Florist

A. Sales

- | | |
|---|-----------|
| 1. Identify horticultural plants | Check () |
| 2. Interpret plant and flower care instructions to the customer | () |
| 3. Identify flower and plant insect and disease manifestation | () |
| 4. Others (to be filled in by the teacher) | () |

B. Design

- | | |
|---|-----|
| 1. Selecting flowers and foliage for arrangements | () |
| 2. Spray painting floral products | () |
| 3. Decorating rooms with flowers and plants | () |

(Concluded on next page)

CONTINUED SKILL-SHOPS IN HORTICULTURE . . .

- | | |
|---|-----|
| 4. Constructing floral arrangements for store sales | () |
| 5. Set up displays at funeral homes and churches | () |
| 6. Design flower arrangements to meet customer specifications | () |
| 7. Others (to be filled in by the teacher) | () |

The returned questionnaires were then tallied to determine the skill needs most frequently checked. With only four skill-shops planned, an attempt was made to schedule broad but feasible areas which would encompass as many of the skills checked as possible. Thus, the following skill-shops were then scheduled: (1) Constructing Floral Designs for Store Sales; (2) Managing a Greenhouse; (3) Landscaping Services; (4) Identifying Common Ornamental Horticultural Plants and Common Disease and Insect Manifestations. Experts in each of these skill areas were solicited from the New York State College of Agriculture and Life Sciences, State University of New York at Farmingdale, and from the Cooperative Extension Service of Nassau County. At least one planning session was held with each instructor. The primary purpose of the skill-shop was carefully reviewed. It was stressed that we would *promptly start* each skill-shop by teaching HOW TO PERFORM and teach the WHY later! Suggested references, for further individual study would be distributed to the teachers at the end of the skill-shop. The Nassau County BOCES facility specially designed for the teaching of floral arrangements was selected as the site for our first skill-shop. The greenhouses and campus facilities at Farmingdale were selected for the sites of our next two skill-shops as indicated above. The Planting Fields Arboretum was selected as the site for our last skill-shop because of the excellent collection of shrubs, trees, ground covers, bulbs, annuals and turf. Two

Saturdays in each of the months of April and May were scheduled in accordance with teacher requests. Each skill-shop would start at 9:00 a.m. and terminate at 1:00 p.m.

EVALUATION

Approximately sixty percent of the teachers in the region participated in the skill-shops. Evaluation was really an on-going process. We were continually on the alert for evidences of skill mastery or at least improved performance and other behavioral changes related to enthusiasm, improved morale, and self-confidence. For example, teachers were permitted to take home any of the floral designs they constructed if it was judged "commercially acceptable" by the instructor. One good clue to the enthusiasm and interest of the participants was the fact that not one left the skill-shop devoted to constructing floral designs until 2:30 p.m. in spite of the 1:00 p.m. official ending.

The teachers were requested to complete a formal evaluation report at the end of the last skill-shop. In addition to what we have learned from the teacher evaluation reports, if we were going to conduct another series of skill-shops we would seriously consider (1) offering the program during the summer or early fall so that teachers would be in a better position to use what they have learned in conducting their own classes; (2) using actual business locations for the skill-shops to provide as much realism as possible; (3) soliciting "experts" from the "trade" as instructors, providing an agricultural education staff member assigned with the responsibility of coordinating the instruction as it relates to the best possible teaching methods and to a comprehensive ornamental horticultural occupational program; (4) providing some mechanism or technique for determining evidence of changes or improvements in classroom instruction. ◆◆◆

CONTINUED SKILLS WEEK

The aid of top-quality instructors is enlisted, drawing upon industry, qualified agriculture teachers and instructors from the colleges and Bureau staff members. Care is taken to insure that instructors cooperating with the program are familiar with high school agriculture programs and are cognizant of the needs and kinds of instructional materials necessary in vocational programs.

Depending on the class being offered, instruction may be primarily for the development of basic skills and/or understandings for the ag teacher participating in the workshop or it may also include development of instructional materials appropriate for high school or community college

in order to supplement their existing materials.

The acceptability of this program has been very good, averaging 195 participants in each of the past four years. The enrollees may obtain one and one-half quarter units of professional credit which will generally contribute toward advancement on salary schedules, but cannot be utilized for degree purposes.

At the conclusion of the Skills Week classes, each participant is asked to evaluate the respective classes in which he has participated. In addition, he is afforded the opportunity of identifying areas in which he would like to see in Skills Week classes being offered the subsequent year. ◆◆◆

CONTINUED INCREASING TEACHER COMPETENCY . . .

As the school and community continues to profit from this quality educational effort, support from the administration and local citizens will become increasingly apparent. The ultimate benefactors, however, are the boys and girls who are developing into

well-adjusted, participating members of our society.

As we continue to provide a relevant and continuous in-service program for our vo-ag teachers, we can expect that instructors will more likely reach their

full potential in agriculture education and receive greater satisfaction from their teaching experience. This probably will result in a lower rate of teacher attrition, more extensive curriculum offerings, and a more relevant FFA program of activities. ◆◆◆

The Illinois System of In-service Staff Development

by
Richard K. Hofstrand and Allan L. Utech*

The plight of in-service staff development is that most educators agree that it's needed, but few have substantive ideas on how to accomplish it. During the past few years, Illinois has worked on the "how to" of effecting meaningful change in the professional behaviors of vocational instructors, counselors, administrators, and others on the secondary and post-secondary levels.

To accomplish desired changes in the behavior of practicing vocational educators, Illinois has worked toward a system of state-wide and continuous in-service staff development. Illinois teachers and teacher educators of Applied Biological and Agricultural Occupations (ABAO) are an intricate part — both in delivery and receipt — of this system.

The emerging system has numerous facets some of which include the following.

First, there is cooperation and articulation among the four Illinois universities which educate and re-educate ABAO instructional personnel and the State Board of Education's Illinois Office of Education; Adult, Vocational and Technical Education (AVTE). This articulation maximizes resources by eliminating duplication of services. Services provided continuously by a university are not repeated from a state level. This articulation is accomplished through a Joint Council of university, state office, and professional association representatives.

*Dr. Richard K. Hofstrand is Head Consultant for In-service Education with the Professional and Curriculum Development Unit. Mr. Allan Utech is Consultant for Applied Biological and Agricultural Occupations with the Occupational Consultant Unit. Both are within Adult, Vocational and Technical Education of the Illinois Office of Education, State Board of Education.

Second, AVTE provides technical assistance to local educational agencies by providing three full-time staff members with expertise on ABAO educational programs. This service provides continuous, individualized assistance resulting in staff development.

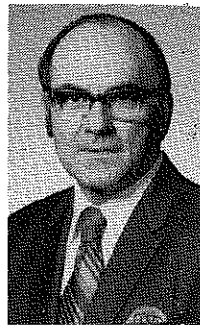
Third, special contracts are written out of the Professional and Curriculum Development Unit of AVTE. During FY 1975, such a contract resulted in the development of seven curriculum guides for contemporary ABAO instructional programs. The guides were developed in the areas of agricultural production, agricultural mechanics, agricultural products, agricultural supply and service, agricultural resources — including environmentally based occupations, forestry, and ornamental horticulture. That contract was followed in FY 1976 with another contract which disseminated these curricular guides through five, one-day workshops conducted strategically throughout Illinois.

Similar contracts have delivered workshops for inner-city and suburban ABAO teachers, ornamental horticulture teachers, and others.

Fourth, mini-workshops have been presented at each of the last three annual conventions of the Illinois Vocational Association. Over the three years 2,369 practicing vocational educators have participated in 58 mini-workshop sessions on 39 topics of vocational education. The net result has been the provision of 8,229 participant-contact hours of quality in-service staff development. Many of these persons were practicing ABAO instructors who participated in mini-workshops on such topics as utilizing community resources, individualizing instruction, vocational youth organizations, metric measurement, and cooperative occupational



R. K. Hofstrand



Allan L. Utech

education. Approximately one-half of the participants have elected to receive university credit for their involvement.

Fifth, Illinois has attempted to develop alternative vehicles for delivering in-service education. One such vehicle is self-instructional or auto-tutorial packages. Five such packages are constantly available on a three-week free loan basis from AVTE. Packages are available on such topics as (1) Preparing Measurable Objectives for Instructional Programs, (2) Preparing Measurable Objectives for Program Management, (3) Developing and Utilizing Self-Instructional Materials, (4) Metric Measurement in Vocational and Technical Education, and (5) Occupational Safety and Health Act.

Additional vehicles are also being developed. Examples include providing correspondence coursework from universities, encouraging and helping teachers to conduct "action research" on their specific problem areas, and developing "internal" consultants within a local educational agency which can provide local expertise on a problem area, and providing demonstration sites of exemplary educational programs.

Sixth, Illinois is now implementing yet another system for staff development. The SCILL SYSTEM (SCILL is an acronym for Staff Competence in ILLinois) provides partial financial support for the conduct of SCILLshops. SCILLshops are one-day workshops on locally-desired topics of in-service education for local vocational educators at their time and place and with their choice of SCILLshop leaders. The SYSTEM is managed by the local Superintendent of Educational Service Region (formerly the county superintendent of schools) through SCILLshop contracts with AVTE.

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In-service Education for Agricultural Instructors in Texas

Dr. Roger K. Arnold
Agricultural Education
East Texas State University

During the summer of 1975, there were 52 separate in-service workshops offered by the nine universities that have agricultural education programs in Texas.

In-service workshops have long been an integral part of the educational program in vocational agriculture. As a means of promoting this educational program in Texas, nine teacher education institutions are currently planning another summer program of highly specialized and technical in-service workshops for vocational agriculture teachers.

These workshops are on a non-credit basis and are designed to last from two to five days, depending upon the nature of the subject matter. They must, of course, be approved by the Texas Education Agency.

Each teacher is eligible to participate in a maximum of six days of non-credit education workshops approved by the Texas Education Agency, with the approval of the local school administration. In instances where a teacher qualifies for and attends six weeks of summer school for credit in any one summer, the teacher shall not be eligible (for that particular summer) to attend non-credit workshops.

Teachers of vocational agriculture are under constant pressure to keep abreast of current changes in curriculum. These curricular changes have been brought about by changing employment needs, local community needs, changing trends in production agriculture, expansion of agriculture-related job opportunities, and changing agri-

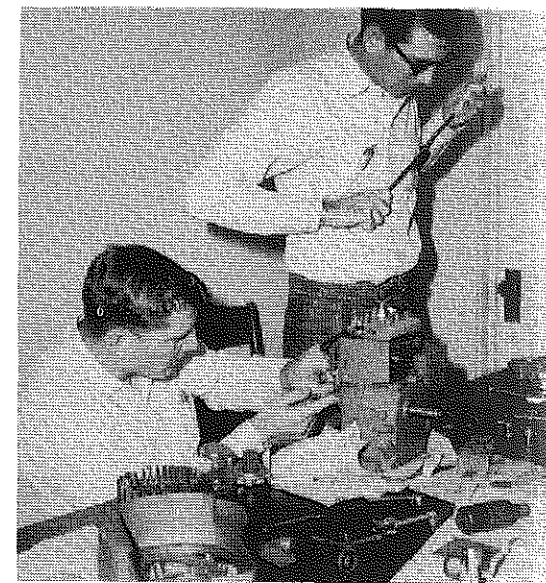
cultural innovations. Vocational agriculture instructors must meet these changes with new and up-to-date competencies in order to provide the training that is needed to supply well-trained agriculture employees.

The non-credit summer workshop can provide many of these new competencies needed to prepare the teacher to do a better job of instruction. In-service workshops include many subjects already being taught in vocational agriculture classes; however, new techniques are offered the teacher to enable him to upgrade his instruction. Most of the non-credit short courses deal with new areas of concern in agriculture not covered during the teacher's formal college training and offers a real opportunity to the teacher to develop new skills and competencies for instruction.

There has been a variety of workshops offered over the Lone Star State for vocational agriculture teachers. During the summer of 1975, there were 52 separate in-service workshops offered by the nine universities throughout the state. Among these offerings were 39 different non-credit workshops offered by these institutions. These in-service workshops were presented on the university campuses using faculty members of the various schools and vocational agriculture teachers of the state as resource persons.

Topics for these in-service workshops were:

1. Common Diseases and Parasites of Livestock
2. Preparing Leadership Teams for Contests
3. Animal Reproduction
4. Planting and Caring for Lawns, Shrubs, and Trees



Vocational agriculture teachers developing competencies during a non-credit workshop in Service and Repair of Small Gasoline Engines at East Texas State University Agricultural Education Department.

5. Record Keeping in Production Agriculture
 6. Preparing Teams for Pastures and Range Contests
 7. Showing Poultry and Training Poultry Judging Teams
 8. Swine Production
 9. Training Teams for Tractor Mechanics Contest
 10. Training Teams for Land Judging, and Pasture and Range Contests
 11. Woodland Clinic and Forestry Contest
 12. GMA (MIG) and (TIG) Welding
 13. Artificial Insemination
 14. Service and Repair of Small Gasoline Engines
 15. Selecting and Feeding of Show Animals
 16. Processing Pork—Freezing, Curing, and Sausage Making
 17. Fruit and Vegetable Processing—Freezing and Canning
 18. Agriculture Mechanics Contest Skills
 19. Greenhouse and Vegetable Gardening—Planning and Management
 20. Photography for Vocational Agriculture Teachers—Fundamentals and Printing
 21. Farm Slaughter and Processing of Beef
 22. Weed Identification and Control
 23. Poultry Science
- (Concluded on page 262)

INDIVIDUALIZE IN-SERVICE EDUCATION

James T. Horner and
Richard L. Douglass*

Psychological efficacy and numerical arguments strongly support the stand that "The Best Buy for the Buck" in teacher education is in-service education.

In recent years, only one half of all those qualifying, through the preservice program, to teach vocational agriculture have actually entered teaching. In contrast, one hundred percent of the in-service clientele teach.

Results, the measure of effectiveness of all education, are immediate from in-service education, while the effects are hoped for at some time in the future from preservice efforts.

The principle of "learning readiness" is epitomized in the teacher when the "shoe pinches." He faces real problems daily, to which he makes immediate application of his in-service learning.

Other valid arguments could be presented in support of the view that quality of instruction, content and methods, are best improved through in-service education. However, rather than justification, this article entreats individualization of in-service education.

Dr. Allen Tough¹ and others, in a new kind of research, present findings which have relevance for in-service agricultural education. Populations ranging from elementary teachers and factory workers to salesmen and social science professors as well as geographically from Toronto to Tennessee, Nebraska to New Zealand and from Atlanta to Africa, generally agreed.

The average adult spends more than 700 hours per year on major learning

1. Allen Tough, *The Adult's Learning Projects: A Fresh Approach to Theory and Practice in Adult Learning*, Ontario Institute For Studies in Education, 1971.

*Drs. Horner and Douglass are Professor and Assistant Professor respectively, Department of Agricultural Education, University of Nebraska, Lincoln.

efforts. More than two thirds of the time, the learner himself plans his own learning activities from one session to the next. The most common motivation is "some anticipated use" or *application* of the learning, ranging from better job performance to psychological processing of personal problems. Less than one percent of all adult learning effort is for credit. No more than twenty percent of the learning projects are planned by professional educators.

Adult learning methods vary vastly . . . from books to out-of-body (psychic) experiences to TV, tapes and travel.

Several principles have emerged from the literature, and from our experience with a three-year pilot program seeking different approaches to identifying and meeting in-service education needs. The pilot program was jointly conducted by the Agricultural Education staff at the University and the State Department of Education.²

1. Commitment of State leadership is a prerequisite. Supervisory and teacher education staffs must be convinced of the value of in-service education, to the extent of adjusting priorities, and thus dollar and staff resource allocation to the program (e.g., joint staff funding of in-service personnel and operations). State staffs must become involved at every point from needs assessment to conduct and evaluation of the program.

2. Commitment of University/College leadership is important. Involvement of staff members from technical agriculture subject matter departments should be by assignment. For example, the job description of a State Extension Specialist in Animal Science specifies,

2. The contributions of Richard Bringelson, In-Service Coordinator for the Pilot Program and Consultant on the article are gratefully acknowledged.

"30%-work with vocational agricultural instructors."

3. Clearly defined roles are essential. In addition to commitment of personnel and fiscal resources, joint staffs must maintain a unified effort. To communicate and coordinate they should meet on a regular and frequent basis. State Department staffs will be heavily involved with financing and organizing meetings. Teacher education staffs may find it necessary to adjust faculty loads and even modify graduate and undergraduate courses in major ways to accommodate the instruction.

4. Continuity is crucial. A comprehensive analysis of needs reveals some problems that can best be solved in the summer, while others are best attended to during the school year. This suggests the need for year-round efforts. It also yields more concerns than can possibly be treated with anything less than a long-range program. Long-range planning allows in-depth instruction and avoids a shallow "shotgun" approach.

Teachers are willing to delay, if they can plan for and expect, for instance, a five year agricultural mechanics cycle. Focus from year to year might be as follows: 1) Farm Power 2) Machinery 3) Soil and Water 4) Metals and 5) Construction.

Teachers are much more satisfied with in-service learning when it results in their feeling confident that they can apply it . . . integrate it into their own instructional programs. Assuming limited resources, it would seem more effective for teachers to be provided the opportunity for a three-day tractor overhaul workshop say once in three to five years than a half day each year. Half day workshops might focus on specifics, such as ignition systems.

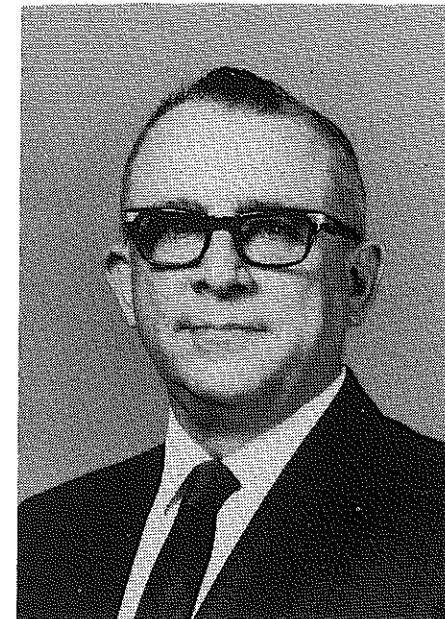
5. Variety is virtue. Flexibility is the

(Concluded on page 262)

Leader in Agricultural Education:

JAMES WALL

by Sam Stenzel*



To members of the National Vocational Agricultural Teachers' Association, the name "James Wall" and "NVATA" are synonymous. Professionally, he has maintained an NVATA leadership role since 1954. To those in agricultural education he is "Mr. NVATA."

Appropriately recognized for his professional leadership nationally, the agricultural educators in Nebraska also recognize Jim as one of the most successful teachers in their state. He taught vocational agriculture for 23 years; was elected NVATA vice president for region III in 1954; was appointed executive secretary in 1958; and was named full-time executive secretary in 1961.

Born near Elmwood, Nebraska, he attended the elementary and secondary schools in Eagle. R. M. Kildee was his vocational agriculture teacher and FFA adviser. He enrolled at the University of Nebraska in 1933 and earned a Bachelor of Science degree in agriculture in 1938. He has earned additional graduate credit since that time. He signed a contract to teach vocational agriculture at the St. Edward school in 1938. Other teaching positions have been at Aurora (1940-43), Crawford (1943-46), and Waverly (1946-61). As a Nebraska Vocational Agriculture Association district officer in 1951, he attended his first NVATA national convention at Minneapolis. He has not missed a national convention in 24 years.

Vocational agriculture and the NVATA have always been a family affair at the Wall household. Jim married Georgia Finigan in 1936. Connie was born while they were in teaching at Aurora. The three worked and traveled together whenever possible. With the exception of the 1951 convention, Georgia has attended every NVATA national convention. The Walls have two grandchildren, Lance and Jasmine.

Professionally oriented, Jim has served as an officer in the Nebraska Vocational Agriculture Teachers' Association, Nebraska Vocational Association, Nebraska NEA Department of Classroom Teachers, Waverly Teachers' Association and was an active member in numerous other education, civic, fraternal, service, and farm oriented organizations. He served as an Eagle Chapter delegate to the National FFA Convention in 1929. He has attended 25 national FFA Conventions.

Many organizations have recognized Jim with awards. Those include the Master Teacher Award from the Nebraska State School Board Association, the Outstanding Service Award from the American Institute of Cooperation, and the honorary State and American Farmer degrees from the FFA. He has been named an honorary member of

the Alpha Tau Alpha and the American Association for Teacher Educators in Agriculture.

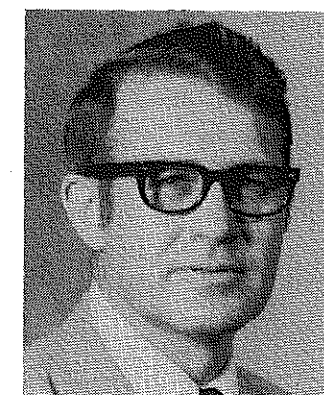
Wall has served as FFA adviser to 33 students who became State Farmers and two who attained the coveted American Farmer degree. Five of his students were elected state FFA officers in Nebraska. His FFA judging teams have won every state contest at least one time during his teaching career.

As the executive secretary for the NVATA, he works closely with the president and executive committee in coordinating the work of the national organization. A major responsibility is keeping the membership informed on trends, problems and developments in the vocational agriculture profession and agricultural education.

He has coordinated many activities between the NVATA, the American Association for Teacher Educators in Agriculture, and the National Association of Supervisors for Agricultural Education. He has participated in legislative activities on the state and national levels on practically every legislative bill affecting vocational education in agriculture. He has coordinated NVATA activities with the American Vocational Association in support of their legislative activities; has disseminated pertinent legislative information to NVATA members, and has encouraged members to contact their legislators on numerous critical issues. He is continuously concerned about the welfare of vocational agriculture teachers, furthering the causes for vocational education in agriculture, and promoting professional activities through the national organization.

Despite his personal efforts on behalf of the NVATA and agricultural education, his common answer when explaining the success of the NVATA as a professional organization has always been:

(Concluded on page 260)



Sam Stenzel

*Sam Stenzel is Assistant to the NVATA Executive Secretary at Lincoln, Nebraska.

IN-SERVICE EDUCATION IN VIRGINIA

Stanley R. Burke
Supervision, Virginia

There seems to be some agreement among teacher educators that it is virtually impossible for Agricultural Education students to receive all of the technical training needed for the agricultural teaching occupation at the undergraduate level. Similarly, it is a common objection heard among agricultural teachers that they have not received enough and/or adequate training in their degree programs to prepare them to do the quality teaching job expected by their employers and of themselves. To this writer, the difference between the technical training received in preservice education and the needs of the teachers in the field represent, in part, the vast importance of in-service education. In Virginia, continuous and extended efforts are being made to identify and provide the in-service training needed by teachers to bridge the gap between present deficiencies and the competencies needed to conduct quality instructional programs in agriculture. Here, in-service efforts are applied through a series of state, special interest and area workshops. It shall, therefore, be the purposes of this article to relate the procedures used in this state to plan and provide in-service activities for its teachers and to point out some of the difficulties which our in-service programs are facing.

STATE WORKSHOPS

In Virginia, the state in-service workshops are centered around the high school courses which are our basic Agricultural Science and Mechanics I and II, optional courses of Agricultural Machinery Service, Agricultural Business, Agricultural Production, Ornamental Horticulture and Natural Resources Management and special programs for Disadvantaged and Han-

dicapped, and Exploratory Agriculture/Career Orientation. State workshops are conducted for the benefit of all teachers in the Commonwealth who are teaching or planning to teach these courses. When an in-service workshop is to be conducted to improve teacher competence in a specialty area, invitations are extended to those teachers concerned by the State Supervisor of Agricultural Education to participate in that activity at state expense.

The planning of statewide in-service activities for teachers is done through state curriculum committees. Each of the basic, optional and special courses has a curriculum committee. One of the committees is to identify, plan, and conduct the necessary state in-service education activities for teachers of that program. These committees have from five to eight members with membership including representation from teacher education, agricultural instructors and the state supervisory staff. It is felt that the broad base of representation on each curriculum committee lends itself to receiving inputs that help identify the in-service activities which need to be immediately provided for teachers. The following description relates how curriculum committee members are kept aware of teacher in-service needs:

Teacher Educators—In Virginia, the two teacher education staffs have an advisory council composed primarily of agricultural teachers. Instructors who serve on this council are selected at random from each of the six supervisory areas within the state. Area representatives on the council give quarterly reports to their fellow teachers on meeting activities, and solicit teacher concerns and needs to be reported to teacher educators at subsequent council meetings. Frequently, concerns are expressed at

this level that give teacher educators an insight into the in-service needs of teachers. Also, contact with established teachers working toward advanced degrees, recertification, and supervision of student teachers in local departments are other direct contacts where in-service needs can be ascertained by teacher educators. **Teachers of Agriculture**—Every teacher within each supervisory area is assigned to at least one Agricultural Education standing committee. The main purpose of these committees is to receive teacher recommendations for improvement of the agriculture programs offered in the state. The chairperson of each area committee serves on the state committee, which meets at the annual teachers conference, and compiles a state report. An ex-officio member from teacher education or the supervisory staffs is appointed to serve with each standing committee. This ex-officio person submits the recommendations of his standing committee to a joint supervisory and teacher education staff conference. At this conference needs are identified for in-service education and are then referred back to the appropriate curriculum committees to establish priorities and take necessary action.

State Supervisory Staff—In Virginia, the state is subdivided into six geographical areas with an assistant state supervisor (area supervisor) responsible for each area. These assistant supervisors, also being chairmen of one state curriculum committee, play a decisive role in determining what in-service activities will be conducted for teachers. In addition to having recommendations from teachers and teacher educators and some-

(Concluded on next page)

CONTINUED IN-SERVICE EDUCATION IN VIRGINIA

times state subject area advisory councils, the assistant supervisors have their observations of local departments and teachers as a data base to help determine what in-service activities are necessary and should be conducted.

One of the unique situations in this state is the special assistance given to Ornamental Horticulture teachers. Here an extension specialist is employed through the Horticulture Department at VPI & SU with his prime responsibilities being to assist local horticultural instructors with individual in-service needs, help local school divisions in planning new horticultural facilities and programs, and he is in charge of planning and conducting regular in-service workshops for all Horticultural teachers in the state. We have found Horticultural teachers to be extremely pleased with this type of special in-service assistance and have found that teachers of other optional areas are envious of extension specialist assistance. As we look to the future for in-service assistance, this could be an important implication as to the kind of service that should be provided.

In addition to the state in-service activities planned and conducted by curriculum committees, there are workshops that are planned and conducted by teacher educators. These activities are usually special projects written and funded by EPDA funds with participation from teachers across the state and sometimes from other vocational services.

SPECIAL INTEREST WORKSHOPS AT ANNUAL TEACHERS' CONFERENCE

For the past two years, concentrated in-service activities for special interest subject areas have been an important part of our annual teachers' conference. These workshops have been aligned with the previously mentioned basic, optional and special courses of Vocational Agriculture offered in Virginia. However, during the 1975 conference, to serve the critical needs of some teachers, additional specialized workshops were conducted on Electricity, FFA Agricultural Mechanics and Tractor Troubleshooting, Livestock Judging, Dairy Judging, Crops Judging and Poultry Judging. The time allowed for

special interest workshops has been one day of the three day conference program, and, to add variety, the workshops have been conducted on two consecutive afternoons. During the 1975 conference, some of the workshops were of a two afternoon session duration while others were only one session in length. If an instructor chose or was assigned to attend a workshop of one afternoon's length, then he chose or was scheduled to attend a workshop on a different subject for the second day. Other teachers attending the two-day workshops did not interchange after the first day.

Based upon the instructor evaluations of the parts of the 1975 teachers' conference, the special interest in-service workshops were the most effective parts of the total program. Consequently, we in Virginia feel this is one sound approach to serving the in-service needs of teachers and have immediate plans to continue similar workshops as a part of our annual teachers' conference.

The process of selecting topics to be covered in special interest workshops is identical to that used in the statewide activities. The supervisory and teacher education staffs are responsible for planning, coordinating, and conducting each of these sessions with curriculum committee chairmen having primary responsibility for this part of the conference program. Since our teacher's conference is held on the campus of VPI & SU, the task of securing resource persons from the colleges of Agriculture, Engineering, and Education has been somewhat simplified, however, there have been many cases where resource people from industry and the expertise of teachers have been used most effectively in presenting special interest programs.

AREA WORKSHOPS

We have found occasions in this state when topics of a timely nature would emerge and teachers needed immediate in-service assistance. Our system of handling such situations is to conduct the necessary in-service education on an area basis. It has been possible in some cases to arrange such in-service needs into courses that can be taken for graduate credit or be used for certificate renewal.

Another setting used in this state to

provide some in-service education is in area meetings of agricultural teachers. There are at least three such meetings within each supervisory areas per year, at which time some types of in-service education can be presented. These meetings are from three to four hours in length, and lend themselves to presenting limited topics of in-service education. There is a commonality of effort on the part of all area supervisors in this state to include in-service topics on area meeting programs. The selection of these topics is up to the area supervisor in charge, however, the communications between him and his teachers, recommendations of VVATA officers, and general observations of in-service needs made during supervisory visits often suggest the priority in-service needs.

DIFFICULTIES IN PROVIDING IN-SERVICE NEEDS

In providing in-service education in this state, several situations have been noted that have made the task increasingly more difficult. These are:

1. Cost-crunch and release time. Some school divisions in this state are hesitant to release teachers for in-service participation due to cost of securing substitute teachers.
2. Unwillingness of some teachers to participate in in-service activities.
3. Failure to include enough hands-on instruction in in-service activities.
4. Scheduling in-service education at convenient times for most teachers.
5. Lack of administrative support.
6. More in-service needs are identified than services can be provided.

To me, the need of in-service education has never been greater. Technological growth, decrease in technical courses required for baccalaureate degrees, lack of practical experience in agricultural occupations among many young teachers, continued program specialization, and legislative mandates are factors which indicate the need for in-service assistance to teachers will continue to expand. I believe the challenges to those of us responsible for providing in-service education are to effectively monitor the teacher needs, establish the correct priorities and present the content in the most practical manner at the most accessible places for our teachers. ◆◆◆

CONTINUED LEADER IN AG ED

"The organization has been fortunate, through the years, to have many men elected to serve on its executive committee who proved to be dedicated individuals and kept the NVATA at the top of their priority lists. Very few

of those who served have neglected their responsibilities. Unlike officers of some organizations, most have not considered their election as a honorary position. They have rolled up their sleeves, gone to work and done their

job well." James Wall is a recognized leader in agricultural education. He too has "rolled up his sleeves, gone to work, and done his job well." ◆◆◆

ability to adjust programs to meet changing needs and/or to respond to changing conditions. Examples follow: 1) Different time-frames and sequences . . . a few hours or several weeks, not limited to the school year or academic calendar. 2) Different formats, methods and approaches, from mail-out materials to professional phone "helplines," to workshops and flexible schedule/credit graduate coursework. 3) Varying sizes of groups and 4) Wide range of subject matter, from technical to professional and, at times even personal.

6. Mediated/mailed materials are invaluable. Mail out (and carry out) materials, largely mediated provide excellent, and relatively inexpensive opportunities for in-service improvement for vocational agriculture instructors. Reactions from teachers have been excellent to such materials as these: 1) Mediated Career information . . . six minute (30 slides with tape) presentations describing 125 different jobs. 2) "Programmed" (slide-tape) agricultural mechanics units on "Care and Repair of Moldboard Plow," "Corn Planter Adjustment" and "Calibration of the Field Sprayer." 3) Electrical Controls Kit and 4) Video-taped "Model" Oral Reasons for various classes of livestock.

Scheduling and following up of such materials offer to the in-service staff member entrée for "helpline" phone conversations. These frequently lead

"naturally" into discussions of problems, concerns and needs. The timing of calls should be such that the teacher is "free" to talk, say from the end of the school day until the dinner hour.

7. Expressed need is solid basis for in-service education. Needs analysis is logically the first step in program planning. However, it is discussed last in this article for emphasis. It includes, but is much more than a checklist of topics. It is not sufficient for supervisory and/or teacher education staffs to provide materials, or to offer a course or conduct a workshop.

In-service education is a *personal* thing. The teachers are *individual* learners, and learning is not a one-step activity. All of the above funnel into the efforts at making in-service education relevant for individual teachers. The local agricultural educator must get involved early in the cycle . . . analyze his own limitations and prioritize his needs. He should be encouraged to initiate, organize, implement and evaluate his own in-service program. It is not always necessary, or even desirable to have a class meeting or workshop. Instructors of vocational agriculture, while noting their own needs often become aware of their individual strengths. They are usually willing to share them with others. District and state conferences, contests and conventions provide excellent opportunities to

get together, informally, in small groups and to share competencies, to help others and to receive help.

Most improvement in the quality of instruction, as reflected by the modification of methods and curriculum content, occurs when inputs are focused on the individual teacher and he makes personal application where he is . . . working with his students. For example, the teacher who is unfamiliar with the techniques for calibrating field sprayers may avoid the topic. But if, by a timely workshop, small group, or "programmed" instruction he learns-by-doing, he will teach it.

This kind of in-service education requires a belief that "learning-by-doing" is as good for teachers as for our students. Further, it requires a very personal/individualized liaison with each teacher.

In summary, the need for individualized in-service agricultural teacher education exists, and the results are excellent. Effective techniques have been demonstrated. Commitment as well as role clarification are essential. Continuity, with variety and flexibility are crucial . . . mailed/mediated materials are useful. One of the greatest potential resources is teacher shared information. It can be stimulated, even structured, both by local teachers and state level leaders. The time is right. The challenge is yours. ♦♦♦

Summary

Certainly in-service short courses are not new to teachers of vocational agriculture but new developments in the field of agriculture have caused a real need for in-service training. Teachers of Vocational Agriculture recognize the need for keeping current in today's fast-changing agriculture as evidenced by their great response in attending non-credit short courses. The variety of short courses offered by the nine teacher education institutions and by co-operating agricultural companies should be sufficient to keep Texas Vocational Agriculture Teachers adequately supplied with the necessary competencies to provide the skills needed for vocational agriculture students. ♦♦♦

BOOK REVIEWS

WEED SCIENCE, PRINCIPLES AND PRACTICES, by Glenn C. Klingman, Floyd M. Aston with editorial assistance by Lyman J. Noordhoof. New York: John Wiley & Sons, 1975, 431 pages, hardback.

The costly and harmful effect of weeds on mankind is described. Weeds cut crop yields and are costly to control. They poison livestock or slow their rate of gain. They increase the price of food. They infest our lawns and gardens. They are troublesome to industry. They cause allergies and create problems in recreation areas.

Weed Science covers the biology of weeds and weed seeds; plant physiology as related to selective control; relationships of herbicides to soils, including degradation and persistence; formulations; drifts; chemical calculations; and equipment.

Next, about one-third of the book explains more than 100 herbicides — presenting the general properties, uses, influences on the soil, and mode of action for each group. The last one-third describes practices and special techniques for major groups of crops: vegetable crops; fruit and nut crops; turf and ornamentals: field crops grown in rows; small grains and flax; small seeded legumes; pasture and range; brush and undesirable trees; aquatic weeds. There is a chapter on soil sterilants or total vegetation control.

Weed Science is completely updated since the 1961 edition entitled *Weed Control as a Science*. The authors are outstanding authorities in their field and the book is recognized as a leading reference by scientists throughout the country. It is recommended that the book be used as a reference by those teachers interested in doing indepth teaching for both high school and adult students.

Harlan E. Ridenour, Director
Ohio Agricultural Education
Curriculum Materials Service

HYDRAULICS, by J. Howard Turner. Athens, Georgia: AAVIM, 1974, 64 pp., \$3.95.

This manual has been proofread, researched, and written through the cooperation of the top leaders in agriculture education, leading university agriculture engineering departments, and farm equipment companies all across this nation.

Volume I of *Hydraulic Systems for Tractors and other Mobile Equipment* is the first volume of two volumes on hydraulics. Volume I is necessary for the operator. Volume II is for the technician with adequate service equipment.

Volume I uses vividly detailed and colorful drawings, photographs, and illustrations along with everyday language to explain basic hydraulics, trouble shooting, and servicing.

Part I deals with the basic principles and theory of hydraulics.

Part II is divided into three sections: Operating Systems, Servicing Systems, and Trouble Shooting.

Operating Systems explains the types of mobile systems and how they work. Most information is the step-by-step procedure checklist before operation after checking out the list, each type system's operating procedure is taken step by step for easy understanding.

Servicing System Section covers filters, screens, breathers, and fluids. Again, much care is given in explaining the step-by-step checklist in proper servicing. The Fluid division first explains the different crank case oils. Then, the various steps are outlined for the reader to check fluid levels, changing the fluids in each type system includes a carefully laid out checklist system.

Trouble Shooting is a difficult task, but the section on trouble shooting with its checklist of what to look for and its causes is helpful. The Trouble Shooting Guide uses a chart in outline form—complaint, symptom, source of trouble, cause, and corrective action. This section alone is worth the cost of the manual and takes much of the guesswork out of mechanics.

Hydraulic care and operation is a must for any school agriculture department, farm shop, or any business that uses tractors, dozers, trucks and mowers.

A. R. Clarke
Area II Vocational Center
Myrtle Beach, South Carolina

BEUSCHER'S LAW AND THE FARMER, by Harold W. Hannah. New York: Springer Publishing Company, 4th Edition, 1975, 452 pages, \$15.00.

Jacob H. Beuscher, the late professor of law and farm law at the University of Wisconsin prepared the first edition of *Law and the Farmer* in 1953. Professor Beuscher kept his work up to date by publishing a second and third edition of his work. There have been many changes in the law affecting farmers since the 1960 third edition. These changes have been reflected in the fourth edition with new materials being added by Harold W. Hannah.

Many costly mistakes are made by farmers due to ignorance of the law. Young people being trained for farming receive very little teaching about how to protect themselves from such mistakes.

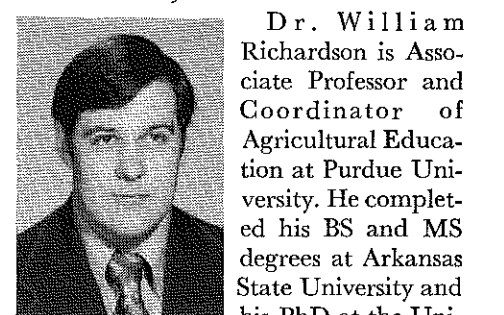
Law and the Farmer is quite readable and the technical terms have been kept well in hand. The book deals briefly with the role of law in our society and how our laws are made. There is quite extensive coverage of the legal problems involved when acquiring or transferring a farm including the public taking of farm land. Another part deals with the transfer of the family farm from one generation to the next.

The last part deals with the many legal problems facing farmers as they operate their farms. An example is the treatment of agricultural chemicals which has been changing rapidly during recent years.

This book should prove to be a valuable reference for those teaching farm management and adult courses.

Harlan E. Ridenour, Director
Ohio Agricultural Education
Curriculum Materials Service

NEW SPECIAL EDITOR FOR
INDIANA, MISSOURI, KANSAS,
KENTUCKY, AND IOWA



Dr. William Richardson is Associate Professor and Coordinator of Agricultural Education at Purdue University. He completed his BS and MS degrees at Arkansas State University and his PhD at the University of Missouri. He taught at Bernie, Missouri Public Schools from 1967-70 and has held positions as teaching assistants at Arkansas State, 1966-67 University of Missouri 1970-72. He joined the staff at Purdue University in 1972 and was appointed chairman of the section in 1975.

His responsibilities at Purdue include section administration, teaching the Special Methods Course, supervision of students teachers and research.

24. Land, Pasture and Range
25. Supervising Teachers' Conferences
26. Meat Grading and Identification
27. Building a Stock Trailer
28. Preparing Report Forms
29. Horticulture About the Home
30. Concrete and Plumbing
31. Arc and Oxy-Acetylene Welding
32. Organizing Courses of Study in Agriculture Mechanics
33. Land Economics and Land Appraisal
34. Developing a Course of Study for Production Agriculture
35. Judging Livestock and Meats to Meet Today's Market Demand
36. Innovative Techniques for On-Going Programs in Pre-Laboratory and Cooperative Training
37. Meat Evaluation Short Course

38. Feeding, Fitting and Showing of Swine

39. New Federal and State Pesticide Regulations and Insect Controls

In addition to the in-service workshops offered by agricultural education departments in the state, several companies have participated in the summer instructional upgrading venture. Included in these offering were:

1. Farm Electrification
2. Farm Harvesting Machinery
3. Electrical Systems and Testing Equipment
4. Two-Cycle Training Power Mowers and Chain Saws
5. Forest Resource Short Course
6. Farm Electric Wiring, Electric Motor Fundamentals, and Control Systems

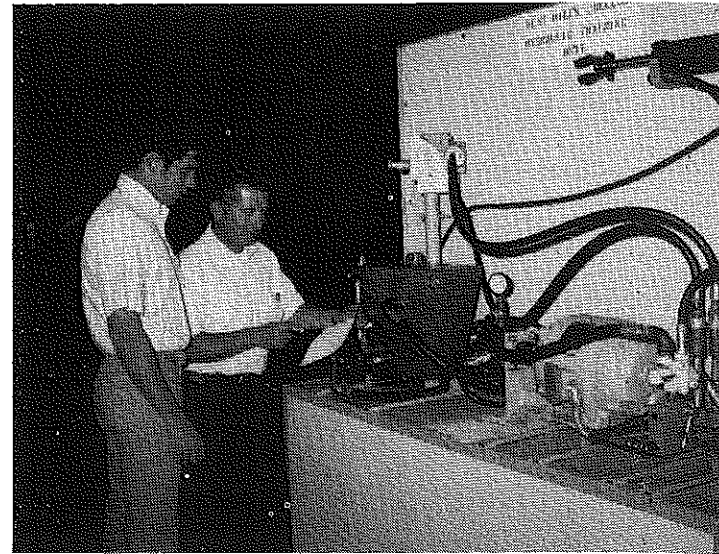
The Illinois system for in-service staff development continues to develop. A new effort in this regard is to encourage and assist local educational agencies (LEAs) to assume the responsibility for the authority they possess to facilitate the continuing professional development of all their respective professional, administrative, and support staffs. Such responsibility will hopefully result in the local development of one-and five-year plans for staff development. Such plans would include

(1) local identification of staff development needs and wants, (2) identification of internal and external resources including expertise and finances, (3) development and delivery of a local action plan of in-service activities, and (4) evaluation of progress resulting from the activities. Such efforts will continue to provide in-service staff development activities for ABAO instructors which will in turn improve the quality and expand the scope of vocational education in Illinois. ♦♦♦

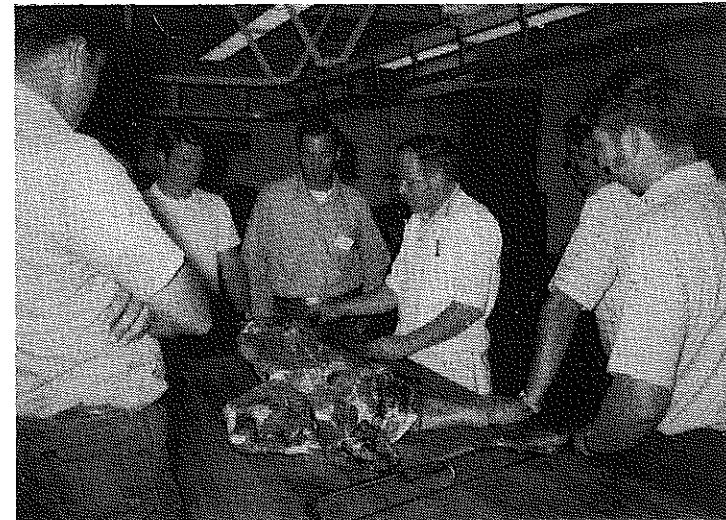
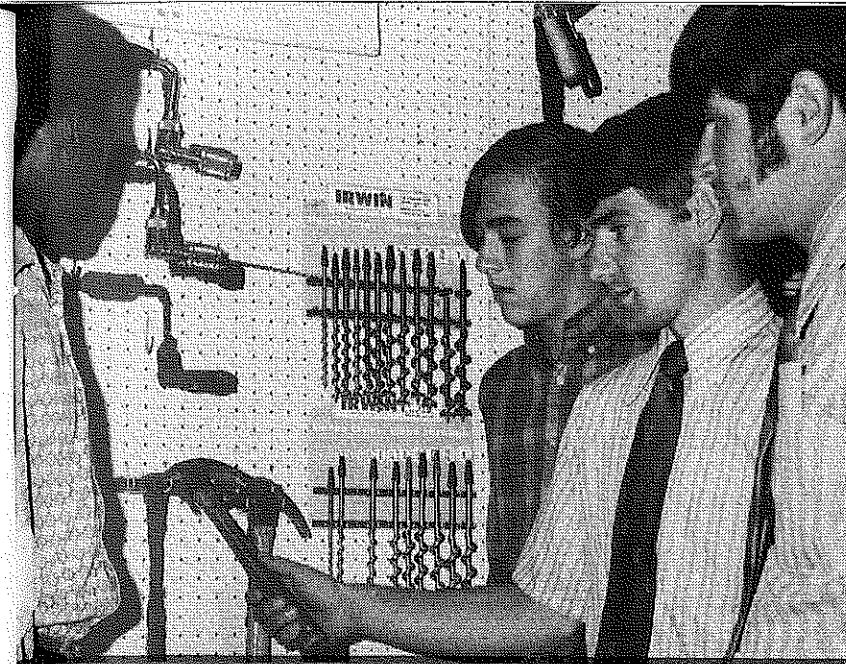
STORIES IN PICTURES

by
Jasper
S.
Lee

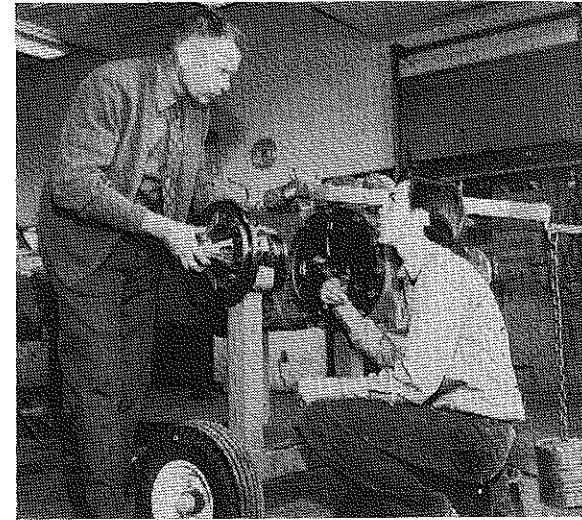
In-service Education



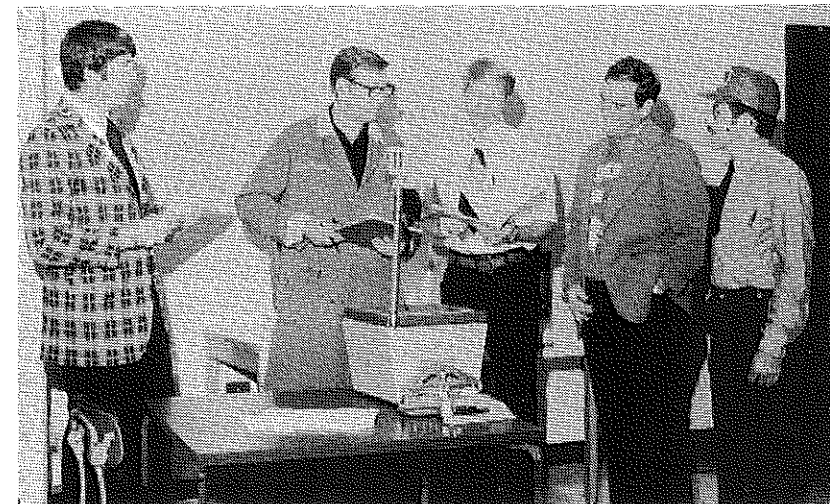
HYDRAULIC TRAINER — Jerry Hubbard (right), discusses a hydraulic trainer he designed and built for classroom demonstrations with a colleague during "Skills Week" at California Polytechnic State University. (Photo by W. D. Wills, California Polytechnic State University)



WORKSHOP ON MEAT CUTTING — Earl Cosma (center), Food Industries Instructor at California Polytechnic State University, is shown instructing agriculture teachers at a workshop on meat cutting. (Photo by W. D. Wills, California Polytechnic State University)



INSTRUCTION IN FARM POWER — Ray Austin, instructor at Clovis (California) High School, is shown using a tractor power train in teaching agricultural mechanics. (Photo by W. D. Wills, California Polytechnic State University)



KENTUCKY SKIT ON COMPETENCY-BASED EDUCATION — A popular feature of the Kentucky Vocational Agriculture Teachers' 1975 summer conference was a skit entitled "You Are There — Individualized, Competency-Based Education in Tractor Mechanics." The skit showed students using self-instructional modules and related audio-visual equipment, the role of the teacher, how the classroom should be set up, and the roles of school officials and employers.

"Actors" in the play were (left to right): M. J. Iverson, University of Kentucky — "World News Reporter;" Hulen Girdler, Laurel County High School, London — "The Teacher;" Frank Rowland, Barren County High School — "Guidance Counselor;" Ed Carney, Nelson County High School — "Principal;" and Frank Hicks, Clark County High School — "Tractor Dealer." (Photo from Maynard Iverson, University of Kentucky)



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Theme — SUMMER PROGRAM