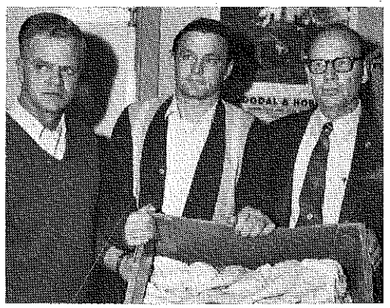
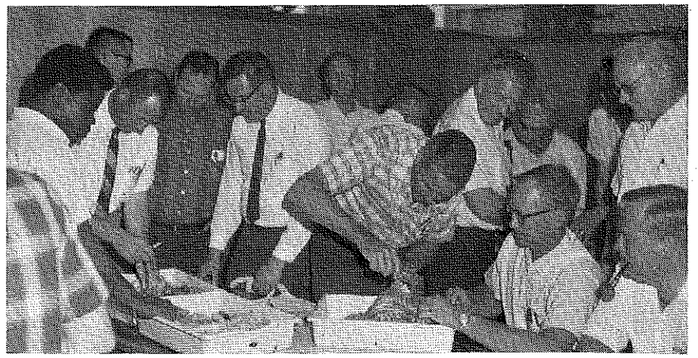


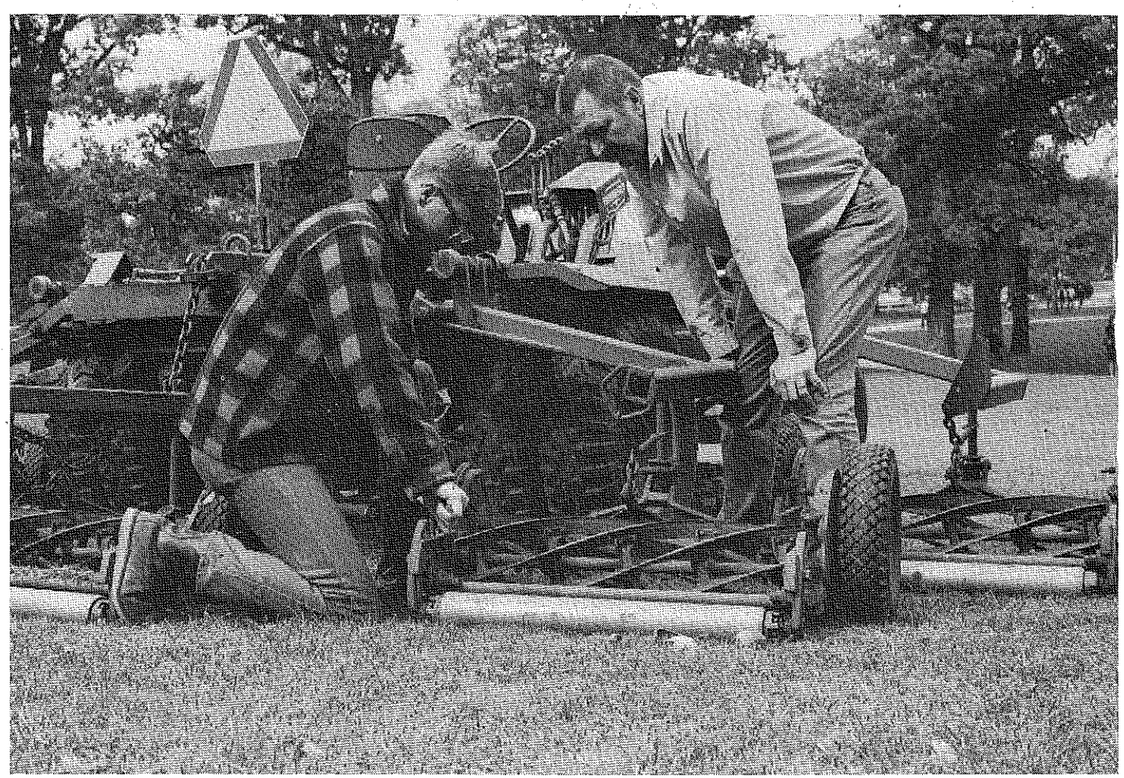
Eldon Witt (left) and E. L. Bosomworth (right), Executive Secretary and President, respectively, of the Illinois Association of Vocational Agriculture Teachers, present dressed poultry to the Superintendent of Cunningham Children's Home on behalf of IAVAT. (Photo by Howard Knight)



Colorado vocational agriculture teachers participate in a summer workshop on Animal Reproduction. Each teacher had an opportunity to identify the parts of the male and female reproductive tracts of beef cattle, sheep, and swine. (Photo by Stanley Lancaster)

Stories in Pictures

ROBERT W. WALKER
University of Illinois

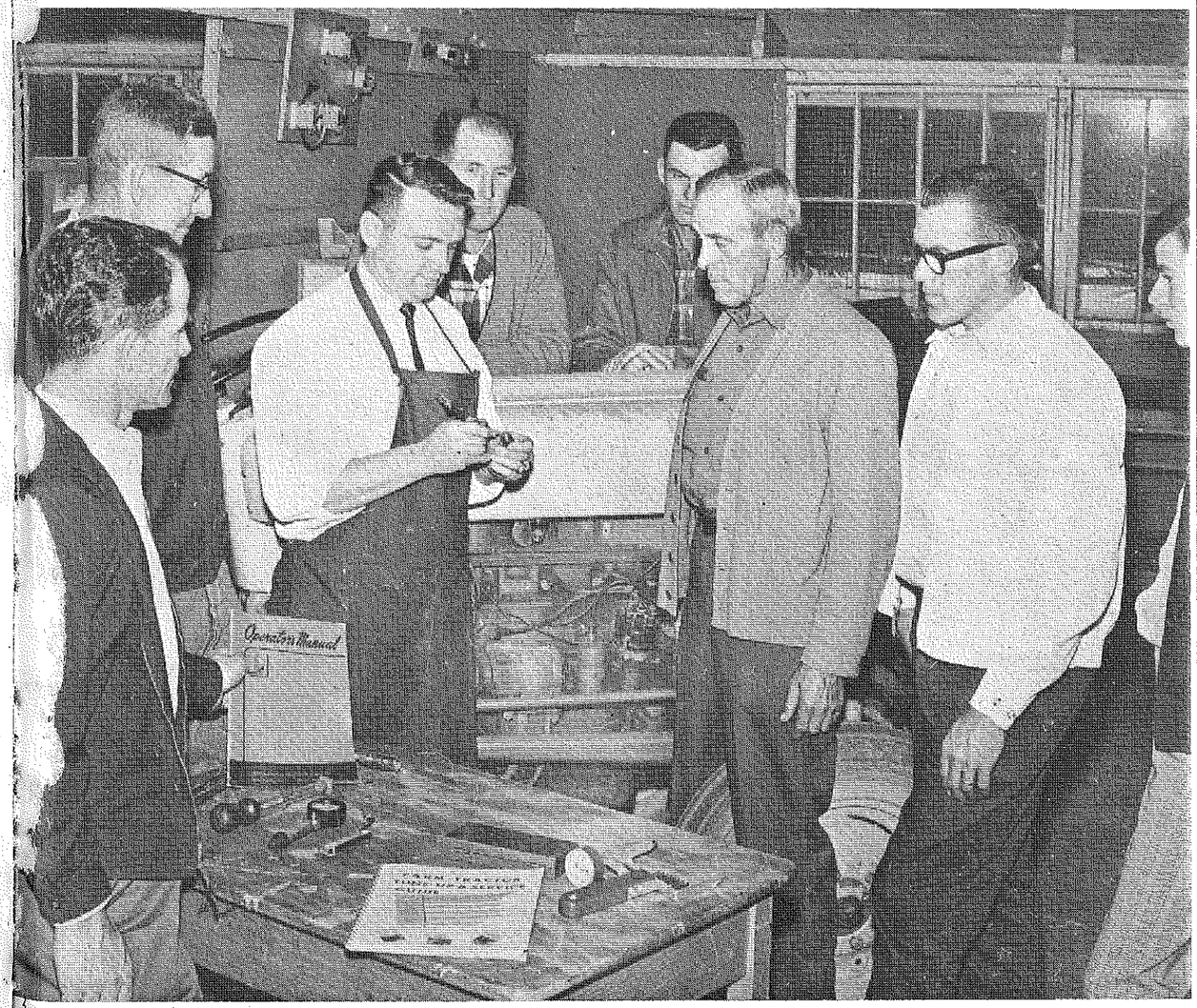


Students learn to adjust, maintain, and operate equipment used in the horticulture industry in Michigan. (Photo by Rodney Tulloch)

AGRICULTURAL EDUCATION

Agricultural Education

Volume 43 August, 1970 Number 2



Featuring —

AGRICULTURE

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EDPRESS

Editorials

From the Editor . . .

What Priority for Adult Education?

J. Robert Warmbrod

The sixties was a period of renewal and reorientation for agricultural education. High priority was placed on expanding and broadening secondary school programs to include courses for agricultural occupations other than farming and ranching. Preference also was given to the development of new programs of technical education in post-secondary technical institutes, junior colleges, and community colleges. Again programs emphasizing the off-farm aspects of agricultural education were given priority. A distant third in the race for reorientation and expansion during the sixties was adult and continuing education for persons who are no longer in school and are employed in or are in the process of becoming employed in agricultural occupations.

Enrollment data indicate progress toward reorienting vocational agriculture in secondary schools and in establishing technical education programs in post-secondary schools. Data from the U.S. Office of Education indicate that 30 per cent of the secondary students studying agriculture in 1968-69 were enrolled in agribusiness courses—supplies and services, mechanics, products, horticulture, resources and conservation, and forestry. In 1968-69, two-thirds of the post-secondary students in technical education programs were enrolled in courses other than production agriculture. The rapid growth of post-secondary technical education is illustrated by the fact that enrollment in 1968-69 was double the enrollment in 1966-67. Enrollment data also support the contention that little has been done to expand or reorient agricultural education for adults during the last ten years. The Office of Education reports that some 52,000 fewer adults were enrolled in agricultural education programs in 1968-69 than in 1959-60. Slightly less than 10 per cent of the adults enrolled in 1968-69 were in agribusiness and other off-farm oriented courses.

Several speculations can be advanced to explain the lack of expansion and reorientation of adult education dur-

(Continued on next page)

Guest Editorial . . .

The Need for Full-Time Teachers of Adults

John T. Starling

Instruction for young and adult farmers has always been an important part of vocational agriculture. Data from the U.S. Office of Education indicate, however, that enrollment in adult and young farmer programs has decreased from 359,000 in 1963-64 to 288,000 in 1968-69. This reduction in enrollment is taking place at a time when adults need and want organized instruction more than ever before. It is happening in spite of the fact that state supervisors and teacher educators continue to preach the importance of young and adult farmer education.

Many teachers report that they enjoy teaching adults and young farmers more than teaching high school students, that there is a real need for adult education, and that adult education involves people who are actually engaged in the business of farming. Teachers are generally enthusiastic about adult education, yet enrollment continues to decline. So, why is enrollment in vocational agriculture programs for young and adult farmers declining?

The reasons most often given by teachers for not conducting adult education programs include a lack of time and competence required to conduct programs that really meet the needs of adults. We tend to rationalize and say that some teachers have the time and competence to conduct adult programs, so all teachers could conduct adult programs if they really wanted to. We say this without giving serious consideration for the teacher of vocational agriculture and the real world in which he operates.

If a teacher does a thorough job of teaching high school classes and advising the FFA, it is doubtful if he has the time to conduct an adult program that will meet the real needs in the seventies. Agriculture is undergoing rapid and accelerating changes due to technological and scientific developments and improved methods of organization and management. Today a key need is farm business analysis which emphasizes record keeping, summary and analysis of records, and using the analysis as a basis for farm plan-

(Continued on next page)

John T. Starling is Supervisor, Agricultural Education, Ohio Department of Education, Columbus.

From the Editor . . .

ing the last decade. Perhaps the most obvious is that we have simply been preoccupied with other things, namely, getting an out-of-date high school program refurbished and initiating a new model of agricultural education in post-secondary schools. Traditionally, vocational agriculture teachers in rural secondary schools have provided adult education as a "beyond the regular school-day," noncontractual responsibility. When teachers in these situations are encouraged, helped, and sometimes pressured to improve, broaden, and expand high school programs, an accompanying decline or lack of growth in adult education should not be too surprising. The likelihood of this trend is particularly probable in schools with only one teacher of agriculture. Also, part of the decline in adult education in local schools is related to or a result of the argument that farmers and persons employed in agricultural business and industry require highly specialized instruction which many high school teachers of agriculture are not equipped to provide.

So what are the prospects for the rejuvenation of adult education in agriculture? My argument is that the prospects for reorientation and expansion are related directly to the priority which states and local schools place on adult education as a part of vocational and technical education in agriculture. The continuation of the traditional model where adult education is regarded as an incidental and noncontractual responsibility of high school teachers holds little promise. If substantial strides are to be made in the further development of adult education, policies must be formulated which provide for adequate funding, including the establishment of teaching positions specifically for adult education. Provision must be made for the recruitment and preparation of teachers who have both the technical and professional expertness for teaching adults. Policies must encourage adult education as a significant part of agricultural education in multi-teacher departments in high schools, area vocational-technical schools, and post-secondary schools. There is ample evidence to indicate that many secondary and post-secondary teachers of agriculture have or can develop the degree of expertness in agriculture and education needed to teach adults. As the writer of the guest editorial points out, the more frequent problem is the lack of time to either prepare for or teach adults. It is a good bet that if positions for teaching adults are made professionally and financially attractive and rewarding, teachers of agriculture will develop the competencies required.

In the final analysis, the story of adult education in agriculture during the last ten years is a relatively accurate reflection of the priority we have placed on it. The prospects for the next ten years depend to a considerable extent on the degree to which policies are revised to place a higher priority on adult education in agriculture.—JRW

THE COVER PICTURE

James Watkins, Teacher of Agriculture at Anderson Creek High School, Bunnlevel, North Carolina, demonstrates gapping a spark plug to a group of adults following televised instruction on Agricultural Machinery Maintenance. (Photo by J. B. Boone)

Guest Editorial . . .

ning and reorganization. This is "where the action is." The high school teacher of vocational agriculture is in an excellent position to provide this kind of instruction either in a local school or in an area vocational center. In order for the teacher to provide in-depth instruction through classroom, small group, and on-the-farm instruction he must have the time and competence.

One teacher reported a farmer asking this question: Can I afford to buy that 65-acre farm for $600 per acre and go into the turkey business? It is obvious that the farmer had confidence in this teacher and it is just as obvious that this teacher had a lot of homework to do before he could answer the question and support the answer with reasonable facts. Many examples such as this could be cited which make it necessary for the teacher to have time to do a thorough job which will command the respect of adults.

If we want adult education that helps people and if we really mean what we say about the importance of adult education, we need to have full-time teachers of adults. Teachers express a concern that they are spending time with high school students who do not intend to enter farming. Many teachers contend that their time could be better utilized if a more careful selection of high school students was made and a part of the day spent working with adults. If we are going to meet the real needs in production agriculture and improve adult education, it is imperative that we move in the direction of full- and part-time teachers of adults.

This has many implications for supervisors and teacher educators. The program must be adequately financed and administered; teachers must be prepared specifically to teach adults. Since lack of competence is one of the main reasons given for not conducting adult programs, all departments in colleges of agriculture must work together to provide the technical competence needed by teachers. If the proper climate is provided, the status of vocational agriculture can be improved, teachers will gain the respect of adults with whom they are working, and they will feel they are making a genuine contribution to agriculture.

Themes for Future Issues

September	***FFA: Past—Present—Future***
October	***Ideas for Effective Teaching***
November	***Research in Agricultural Education***
December	***Innovations in Agricultural Education***
January	***Work Experience Programs for Agricultural Students***
February	***Placement and Follow-up of Agricultural Students***
March	***Environmental Science Education in the Agricultural Curriculum***
April	***Agricultural Education for the Disadvantaged***

Teaching Adults Via Educational Television

H. W. GREEN, Supervision
Alabama Department of Education

A continuing need for adult and young farmer education is recognized; however, with increasing enrollments of high school students, teachers have less time to devote to this important phase of their work. Technological advances demand more specialization and depth in solving adults' needs and interests. This coupled with the shortage of time makes teaching of adults increasingly difficult.

Television Instruction

Methods of teaching adults vary depending on the needs, interests, and area to be served. In addition to the traditional methods, educational television is rapidly becoming an accepted method. Since the Alabama Educational Television network has a potential of reaching 90 percent of the state's population through three UHF and four VHF transmitters, this seemed to be a logical means of reaching larger numbers of adults. It also had the added advantage of providing highly qualified instructors who were recognized authorities in their fields.

With this in mind, the vocational agriculture supervisory staff of the Alabama State Department of Education initiated a state-wide series of programs in 1968. Recognizing that the subject selected should be of interest to a wide variety of people and fill a recognized need, the first series of programs dealt with Farm Law and Legal Problems. During that year 250 vocational agriculture teachers met with organized groups of adults. After observing the telecasts the local groups discussed program content and made local application of the material covered. This series of programs was highly successful as evidenced by a total enrollment of 3,500 adults.

The second series of programs, conducted in 1969, dealt with ornamental horticulture and gardening. An enrollment of 5,375 adults was reported by the 216 vocational agriculture teachers who conducted the course.

Money Matters

The 1970 series of programs using educational television was sponsored by a grant from the National Association of Life Underwriters and consisted of a ten-program series on the basic concepts of personal financial planning. Eventually this series is to be adapted for national television distribution. Preparation for this series of programs extended over a period of about a year. First a steering committee was appointed which included representatives from vocational agriculture, the State Bankers Association, and the State and National Association of Life Underwriters.

The committee selected the topic "Family Money Management" and the ETV programs were entitled "MONEY MATTERS." The programs included practical information on budgeting, consumer credit, life and health insurance, home buying, social security, law, and other subjects of concern to those who want to spend, save, and invest their money wisely. Lession topics were:

—Overview of family money management
—Effective buying
—Variable expenditures
—Planning for the future
—Banking services and savings institutions
—Consumer credit and consumer credit counseling
—Housing for family needs
—Investing money for best returns
—Estate planning

Although the programs dealt with problems of concern to everyone, emphasis was given to financial problems occurring among young married couples in the 18 to 35 age group. These people have incomes that approximate

H. W. Green

H.W. Green is Specialist in Continuing Education and Subject Matter, Alabama Department of Education, Auburn, Alabama.

$5,000 but rarely exceed $15,000. No matter how much the income is, it rarely stretches over their standard of living.

Class Sessions

After deciding on a subject and a target audience, members of the steering committee were asked to develop program content in their fields of experience and training. This material was edited and consolidated into a resource manual consisting of a chapter for each program. This information served as a guide in writing scripts for the programs. The manual, a teacher's guide, and promotional material were distributed and discussed in teachers meetings throughout the state. Five thousand copies of a viewers manual were made available by one of the larger state banks. The series of ten weekly programs was presented by educational television beginning in January, 1970.

In the local schools the program was conducted under the supervision of teachers of vocational agriculture. The thirty-minute telecast lesson, presented at 7:00 p.m. weekly, was supplemented by the local teacher to make the information more meaningful to the members enrolled. Classes assembled at 6:30 p.m. During the thirty minute period

(Continued on page 31)

AN ADMINISTRATOR'S ROLE IN ADULT EDUCATION

RALPH C. DOBBS, University of Missouri
and
WILLIAM J. ROSE, Central Missouri State College

Adult education is becoming one of the "growth industries" in American society. The administration of agricultural education programs which involve the education of adults is increasing in importance with each passing day. In this article administration is defined as a process which operates within a group and tends to motivate and guide the group toward a common goal. A study of the principles of administration, not only by present administrators but by those who serve in staff positions, is vital to a successful program of adult education in agriculture.

• Defining Areas of Responsibility

The area of responsibility for which an administrator of an adult education program must plan, direct, coordinate and exercise control should be clearly outlined by the policy-making body. The administrator should never attempt to make policy. His duties include meeting with and advising the policy-making group; however, the implementation of policy is up to the administrator. The governing body, having delegated this authority, should then leave the administrative function to the administrator. Increased complexity of institutions and their educational programs require administrators who are professionally prepared.

Once the areas of responsibility have been delineated, the administrator should delegate to his staff those tasks for which they have responsibility. Just as the administrator should be allowed to execute his duties to the best of his professional ability, so the staff member has a right to carry out his duties with minimum interference. This is not to say, however, that the administrator should not stand ready to lend assistance if necessary.

• Establishing Objectives

When clearly defined goals are lacking it is impossible to evaluate a program efficiently, since there is no sound basis for selecting appropriate materials, content, or instructional methods. The administrator is responsible for making certain that objectives are established. However, most objectives are more meaningful at all levels if they are established cooperatively. From the institutional goals to the classroom objectives, better relationships will result if all who are involved are allowed to help determine the objectives. This type of operation leads to shared concerns.

• Involving Staff and Others

The competent administrator may spend many hours in preplanning and laying out the ground work, but he should involve other people in planning before attempting to carry out a program. The qualified administrator should keep lines of communication open to facilitate the exchange of ideas so necessary to the implementation of any program.

An administrator who is respected by his colleagues and staff members will recognize that problems and criticism will occur. In planning, he will establish high standards and expect them to be carried out. He will accept responsibility for decisions made and will expect others to do the same. Unless a gross error on the part of a staff member calls for discipline, the fair administrator will use occasions of this kind for instructional purposes.

• Encouraging Staff Improvement

Perhaps one of the most profitable tasks an administrator engages in is that of securing, developing and upgrading a staff of competent instructors. To be in charge of a program of adult education is to be always on the watch for qualified teachers. The administrator should be concerned that the teacher knows how to instruct adults and is also interested in self improvement. It is also profitable to recognize and reward outstanding effort. There is much to be said for the administrator who recognizes initiative and potential administrative ability and who is not afraid to delegate administrative authority and to promote from within the staff.

The able administrator will establish an atmosphere of firm, fair treatment for all. He will maintain high ethical standards, values, and expectations. He has respect for the rights of others and will not use his power for power's sake. Administration by authoritarian methods may at first seem more efficient, but in the long run the efficiency and team effort developed by the democratic process will result in a more productive program.

Ralph C. Dobbs

Ralph C. Dobbs is Major Adviser in Adult Education, University of Missouri, Columbia. William J. Rose is Assistant Professor of Agronomy, Central Missouri State College, Warrensburg. Both authors are former teachers of vocational agriculture.

William J. Rose

• Making Sound Decisions

To maintain the respect of his staff and fellow workers, the administrator must not make too many decisions that turn out wrong. Not all decisions are going to be perfect. If a baseball player maintains a .300 average, he is considered a good hitter. An administrator must score a "hit" more often. He can more nearly achieve the perfect batting average if he does some pre-planning and also involves others in planning the program.

Staff members who have helped in formulating programs are less likely to blame the administrator for weaknesses that occur. Plans based on combined intelligence, attitudes and objectives can be carried out with less involvement in emotions and undue sensitivity.

• Evaluating the Program

An integral part of the process of program development is the formulation of a system of continuous evaluation to ascertain the effectiveness with which the objectives of the program are being realized.

An administrator can be sure that his program will be evaluated by students, instructors, the public, and many other groups. It is important that he develop a system of evaluation which allows participation by the people involved, including students and teachers. He must see that this is done frequently and early enough to help avert any problems that might arise. A good administrator arranges for feedback to himself and those who helped establish the program and its objectives. If evaluated on the basis of objectives, a well-planned and coordinated program will usually stand the heat of public inspection.

• Implications

The act of administering has relevance to any profession. Because of the intangible nature of administrative action, many people feel that just about anyone can be a good administrator. Modern adult educators cannot fully subscribe to such a claim. Rather, they hold that many administrative skills must be practiced and learned. More administrators should become involved in group participation training and discussion workshops, whereby they can develop these skills while gaining respect for the rights and responsibilities of others.

We have listed a few characteristics and principles which we feel are necessary for good administration of programs in adult education in agriculture. Today's emphasis on programs in post-secondary and adult education in agriculture would seem to indicate the following implications:

—That there is a need in adult programs for administrators who have a background in agricultural education.

—Objectives of programs in adult education in agriculture should be formulated by students, staff members and administrators who have empathy for and are actively participating in such programs.

—Supervisors and agricultural educators should encourage teachers with administrative ability to participate in workshops and courses in educational administration.

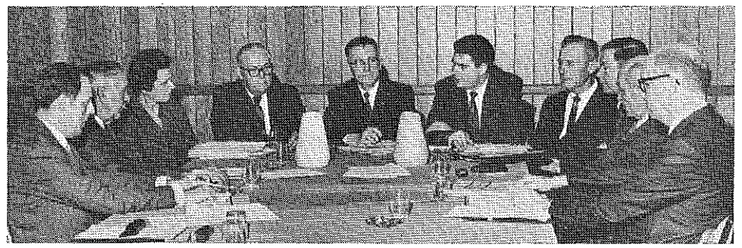
—Adult education programs in agriculture will not continue and keep pace with the expanding need without promotion from within the ranks of agricultural education.

Teaching Adults Via Educational Television

(Continued from page 29)

prior to the telecast, an introduction was given to the lesson. Following the telecast, additional time was spent by the teacher or a resource person to discuss practical application of principles outlined in the telecast.

Follow-up visits were made to members' homes as is done in all adult work. At the conclusion of this series of meetings certificates were awarded to 4,225 adult class members by the 178 teachers of vocational agriculture who conducted the course.



Members of the steering committee who developed plans for the statewide educational television program on "Family Money Management."

Some Conclusions

Several conclusions can be drawn from the results of the series of programs.

—Educational television can be used to provide a recognized authority as a teacher of the course.

—The television instructor should have personality that is compatable to televised broadcasts. The subject selected should meet the needs and interests of a wide variety of people.

—The use of capable resource people in the community adds to the following discussions.

—The awarding of certificates and other recognition to the members help promote attendance.

—The use of educational television serves as an innovation to attract some members who would not otherwise attend.

—Members should receive home instructional visits as a follow-up to the course.

—The use of mass media conserves a teacher's time and makes it possible to reach more people.

—Educational television assists teachers in developing the concept that their role in the future will be organizer of the group and they will need to get experts or resource people to provide much of the instruction. The teacher will still maintain his role as leader of the group.

Community-Oriented Adult Education

JACK F. LAWRENCE, Supervision
California Department of Education
and
RICHARD THOMAS and T. W. JEFFERY
Teachers of Agriculture
Healdsburg, California

Meeting the needs of adults in agriculture through a systematic year-around program of vocational short-courses has produced an innovative impact upon young and adult farmer education programs in California. One school, Healdsburg Union High School in the picturesque Redwood Region of Northern California, focuses on a co-operative concept of community involvement.

In a community of some 8,000 residents, Healdsburg's 100 orchard and vineyard growers have literally returned to the classroom. An estimated 60 percent of the growers in the vineyard industry and their permanent employees and 30 percent of those with orchards have been involved in one or more of the twelve different vocational agriculture courses offered. Course attendance has averaged twenty-three enrollees per class. Each course involves at least three different resource specialists and four different sponsors representing both public and private concerns.

Planning

Behind this concept, most importantly, is a supportive administrator whose philosophy regarding adult education is "if there's a need, meet it." However the real responsibilities for meeting the demand for adult education programs fall on the vocational agriculture department manned by two full-time teachers with over 200 students. And in order to accomplish the need for adult courses, the use of a "community task force" has become the motivating tool behind the success of the program during the past three years. Members of the task force include growers, agribusiness personnel, members of the Farm Labor Service, University Agriculture Extension staff as well as the vocational agriculture teachers who have assumed a promoter-coordinating role primarily.

Courses

A recent and dramatic example of the adult courses offered is an 18-hour vini-culture course that averaged 103 trainees for six sessions. Topics included planning, training, and management, and involved as instructors and consultants a local vineyardist, an extension specialist from the University of California, Davis, the farm advisor, and a local grower.

Courses which have been offered are:

—Orchard pruning techniques
—Grapevine propagation-budding
—Fundamentals of vine pruning
—Service and preventive maintenance of farm machinery
—Farm labor supervision
—Vineyard grafting techniques
—Basic farm welding
—Fundamentals of orchard pruning

Projected adult education courses for 1970-71 include the above plus courses for assistant farm foreman (for high school students), fork lift operation, winemaking, and a language adaption of the farm welding and vineyard care courses in order to meet the needs of the Spanish speaking members of the community.

The courses have evolved from community needs. The courses are monitored by the Farm Labor Service staff, whose responsibilities reflect their role in recruitment, referral, and placement of farm labor trainees. A basic aim has been to include both growers and workers in the same class. Instructors have had to realign their methods to deliver both the "why" for management and the "how" for labor. A side effect has been a definite increase in communication. The background of enrollees covers a board spectrum involving permanent and seasonal laborers, growers, and retired persons. Each enrolls for a specific training need.

Funding for the courses is from two main sources: adult evening school funds (public reimbursement) and self-help or community sponsored. Under the high school adult program, instructors are paid $5.00 per hour and enrollees are charged a small registration fee of $2.00. The community sponsored source of funding varies from vineyard employers contributing $25.00 for each employee attending the grapevine propagation course to outright donations of time, equipment, and facilities.

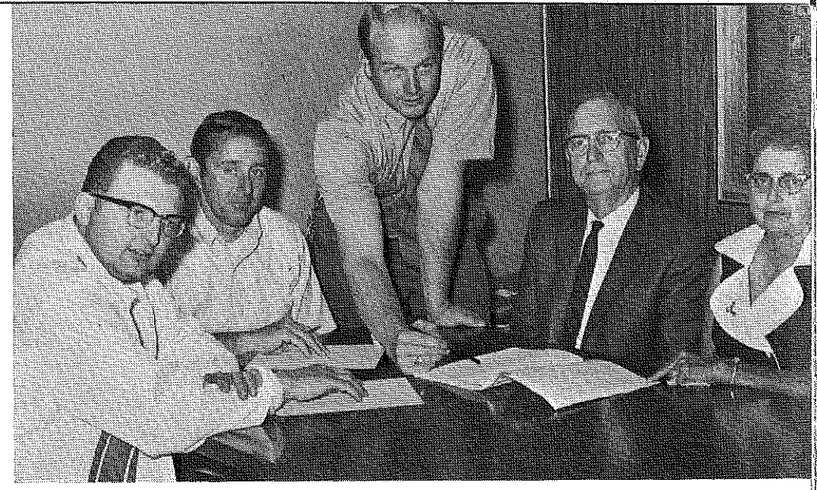
Key Characteristics

Underlying the successful adult education program are these key characteristics:

—Short course concept, averaging 18-24 hours from start to finish
—Proper timing of course to meet the need for specific skills
—Selective use of resource specialist as instructors
—Inter-agency coordination to accomplish training objectives
—Variable funding including community involvement and the self-help approach to funding
—Resource-manager role for vocational agriculture teachers to promote and coordinate the program
—"Learn by doing" curriculum

Need for Adult Education

A statewide agricultural liaison committee based the University of California, Davis, is documenting the role adult education in agriculture can play.



Vocational agriculture teachers T. W. Jeffrey (seated left) and Richard Thomas (standing) work with the Community Task Force including growers and Farm Labor Office representatives in planning the adult education program.

This inter-agency committee's task of determining what schools should be doing to meet job-training requirements has revealed data reflecting industry's opinion that vocational farm training, or even education that will enhance on-the-job training, is not being adequately provided by the school system.

Of the more than 4,000 farm industry employers and employees interviewed in 10 California counties, more than half the firms involved offered no regular "in-house" training programs. Twenty-five percent of the employees contacted believed that to advance in their jobs, they must voluntarily meet their own educational needs by taking community college or high school adult courses. Both of these findings reflect an obvious challenge to the educational system.

In talking about permanent workers, the things that worried growers and agribusiness leaders alike were all functions of education: the need to train workers, the time to train and the lack of good trainers, and the lack of what they feel are qualified workers who can be trained. The need for adult education is dramatized by the committee's chairman when he says, "Demands for trained people in agriculture and agribusiness would completely swamp the school systems if we could half fill the need in the next five years."

Reflecting this concern to meet California's needs for adult education, the California Bureau of Agricultural Education recently assigned a special supervisor to assist high schools in the area of adult education. The supervisor's duties include identifying innovative programs, surveying the present California scene in adult education, and assisting young farmer advisors with short-course programs.

Healdsburg Union High School is amply demonstrating the value and effect an aggressive community-involved adult education program in agriculture can have in meeting the training and retraining needs of its number one industry through a year-around program of adult courses.

BOOK REVIEW

EXPERIENCE PROGRAMS FOR LEARNING VOCATIONS IN AGRICULTURE by Harold Binkley and Carsie Hammonds. Danville, Illinois: The Interstate Printers and Publishers, 1970, 600 pp., $7.95.

The book deals with experience programs for students of vocational agriculture who are preparing for either farming or non-farm agricultural occupations. It is organized into three parts with a total of thirty-four chapters.

Part I deals with "Vocational Agriculture." Included are chapters dealing with Agriculture and Its Significance, Vocational Agriculture — What It Is, How People Learn, How We Study Vocational Agriculture, Why We Have Supervised Experience, Some Characteristics and Competencies Needed in an Agricultural Occupation, and Planning an Experience Program.

Part II consists of thirteen chapters dealing with "Experience Programs in Farming Vocations." Included are chapters on purposes, planning and conducting farming programs, together with material on record keeping, financing and analysis of farming programs. The final chapter in this section deals with the "Value of Experience and Training in Farming for One Who May Not Farm."

Part III describes "Experience Programs in Off-Farm Agricultural Occupations." Fourteen chapters are included in this section. Seven of these chapters deal with occupations in various non-farm agricultural fields such as agricultural sales — supplies and equipment, ornamental horticulture, agricultural mechanics, outdoor recreation, and others. The remaining chapters of Part III provide very good material to assist teachers and students in planning and carrying through meaningful experience programs in non-farm agricultural occupations.

The book is well organized and clearly written. It should be very useful to vocational agriculture students at high school and vocational-technical school levels as well as to teachers and teacher educators. Students preparing for teaching careers in vocational agriculture will do well to give this book a prominent place in their libraries.

Raymond M. Clark
Michigan State University

NEEDED: More Young Farmer Education

HAROLD R. CRAWFORD
Iowa State University

For too many years educational programs for young farm operators have been neglected. They are a formative group who need help. Why is it that we do not have more young farmer programs? These young men have real problems and will adopt the practices taught.

Number of Young Farmers

When a high school graduate is asked "what are you going to do next year?" frequently the reply is not that he is going to farm. This response is normal and should be expected because the young man has other things to do before beginning farming, namely, post-high school education, military obligation, or other work. This response, however, leads many people to believe that young men are not starting or becoming established in farming. Vocational agriculture teachers are also guilty of developing this image because when they are asked about the young farmers in their community, they reply that there are not enough young men to have a young farmer program.

Even though farm size is increasing and farm numbers are decreasing, Iowa still has 25 to 30 young farmers in nearly every school district, which should be adequate for a young farmer program. The number of young farm operators who are 20 to 30 years of age varies according to economic areas of Iowa and by county and by townships within counties. The estimated mean number of young farmers was 8.5 per township, 137.6 per county, and 2,726 per economic area for a total of 13,630 young farmers in the state in 1968.

Establishment in Farming

The data reveal a changing pattern in the age of young farm operators at the time of entry into farming. The mean age of all young farm operators was 21.6 years of age when they began farming. However, those who started between 1956 and 1960 had a mean age of 19 years; the 1961 to 1964 group had a mean of 21 years of age; and the 1965 to 1968 group had a mean age of 23 years when they began farming.

This information supports the finding that in more recent years beginning young farmers hold other occupations prior to farming. Only 20 percent went directly into farming. Twenty percent held only agricultural occupations, another 20 percent had only non-agricultural occupations, and 40 percent had both agricultural and non-agricultural occupations before starting to farm. This information has relevance for the high school vocational agricultural program also. If teachers know that graduates who plan to farm will be performing other work before farming, students' training in related occupations will be more meaningful.

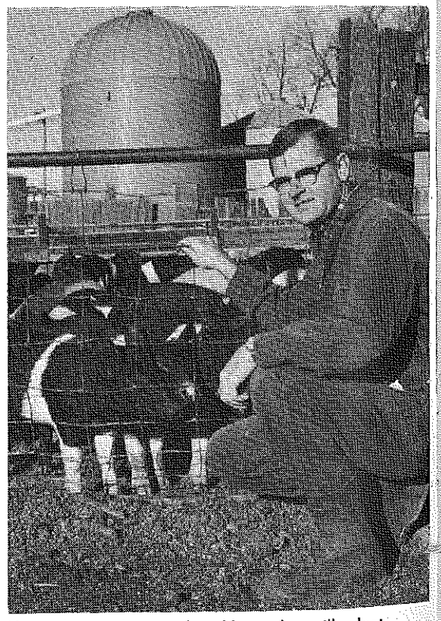
Fathers and wives are credited with being the most helpful persons in assisting young man to become established in farming. In many cases the father loans equipment, assists with labor, and provides his son with capital and managerial help during the first years. In some instances an uncle, grandparent, neighbor or even a stranger serves in this capacity to the young farmer.

Wives are helpful in many ways including everything from doing chores to keeping the farm records and doing field work. Their positive attitude toward farming was considered to be a great asset in overcoming the trial years of beginning to farm.

Lack of Programs

The young farm operators who were interviewed were not very active in educational programs. Over one-third never attended young or adult farmer courses. However, several did not have the opportunity since there was only a mean of 56 vocational agriculture departments in Iowa that offered young farmer programs in the years 1958 to 1968. There is a definite need for increased emphasis by vocational agriculture teachers to make young farmer programs an integral part of the overall vocational agriculture program.

The number of vocational agriculture departments conducting young farmer programs has been limited. Reasons for the lack of emphasis on young farmer programs include: vocational agriculture teachers are now conducting programs for adult farmers in which young farmers have been included: the number of young men under 30 years of age who are farming is limited when compared to the number of high school students and adult farmers; vocational agriculture teachers believe there is not a sufficient number of young farmers in their community for an effective program; and in most instances, the vocational agriculture teacher has a full-time teaching load without additional work.



Young farmers have real problems; they will adopt the practices taught.

More multi-teacher vocational agriculture departments may help to alleviate this situation. All educational agencies need to explore new ways and means for assisting with the education of young farm operators. This heterogenous group of young men may be difficult to reach, but they have a need for more education than they are receiving at the present time.

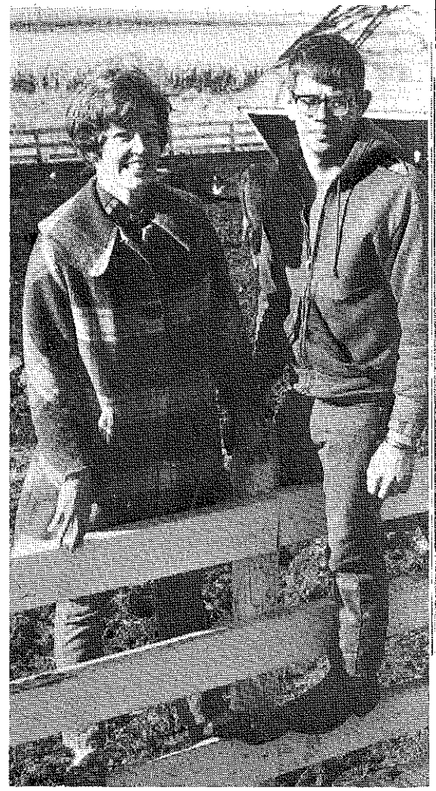
Implications

The educational implications for vocational agriculture teachers from the study include the following: each vocational agriculture department in Iowa should have a young farmer program; programs need to be organized on a year-around basis; the year-around program should include group educational projects, tours or trips, recreational activities, family events, and on-farm instruction as well as instruction in agricultural mechanics and technical agriculture; and emphasis of these programs should be in the areas of money management, record analysis, crops and livestock management, machinery management, legal transactions, and family living.

Young farmers are truly a rewarding group with which to work. They need your help and will be responsive to your efforts. Now is the time to organize your program for next year.

Harold R. Crawford

Harold R. Crawford is Assistant Professor in charge of Farm Operation, College of Agriculture, Iowa State University, Ames. This article is based on Dr. Crawford's Ph.D. dissertation, "Factors Affecting the Establishment of Young Farm Operators in Iowa and Their Implications for Agricultural Education." The research was directed by Professor Clarence E. Bundy.



Young farmers' wives aid in becoming established in farming including everything from doing chores to keeping farm records.

BOOK REVIEW

AMERICAN COOPERATION 1969. Washington, D.C.: American Institute of Cooperation, 1969, 502 pp. $8.00.

Billed as a yearbook on the business of agriculture, the book is a report of the proceedings of the 1969 meeting of the American Institute of Cooperation which was held at the University of Illinois. The institute held annually serves as a review of the goals, accomplishments, problems, and management techniques of agricultural cooperatives. The yearbook includes speeches by national leaders in agriculture, papers presented, a listing of the 1969 award winners, membership of the A.I.C., and sections on credit, marketing, production, and education.

Sections of the book which will be of particular interest to agricultural educators include Research and Education, Training, Youth and Cooperatives, and Young Farmers and Their Wives. The section on training deals with manpower planning and training programs for employees and prospective employees of agricultural cooperatives. The youth section contains reports by representatives of youth organizations in agriculture and descriptions of the accomplishments of the four FFA Chapters which won national A.I.C. awards.

A section entitled "Target-Youth and Vo-Ag" reports the result of a project to develop and disseminate a unit of study on the four ways of doing business. The unit was designed for use in vocational agriculture, economic, and social studies courses. A review of the packet of materials appeared in the August 1969 issue of *The Agricultural Education Magazine*. Teachers of vocational agriculture will want to become familiar with these materials, some of which are available from A.I.C.

American Cooperation 1969 should be a welcome addition to every vocational agriculture teacher's reference library. Students at the high school level and above who are interested in studying agricultural cooperatives in depth will find the book useful.

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Planning and Conducting Adult Education Programs

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Wayne W. Wolfe

Teachers of vocational agriculture have conducted adult education for farmers for many years. Much has been written about problems and guidelines for conducting vocational agriculture programs for farmers. In this article I present some principles and practices which I have found successful in organizing and conducting adult farmer programs.

Planning

Planning and organization are essential for a successful adult farmer program. Some teachers' lack of success in teaching adults is due to a failure to recognize the importance of planning and organization.

Adult education must be planned as a result of the felt and expressed needs of farmers. Surveys, personal observation, and discussions with farmers, community leaders, and personnel of community and governmental agencies should be used to establish and determine the needs of farmers. Personal contact cannot be over-emphasized in planning the program. The farmers must be convinced that the program meets their needs rather than being a program conceived by the teacher.

Planning should result in specific objectives for the entire program as well as for class sessions. Objectives should indicate what is to be taught, the period of time in which it is to be taught, the period of time in which the farmer will be using what is taught, and the level of proficiency at which the farmer is expected to operate.

An advisory committee is extremely important for detailed planning. This phase of planning must receive a great deal of attention. With most programs, it is essential that an advisory committee be used, whether informal and on a short-term basis or on a highly organized basis.

Involve Administrator

Planning should involve the school administrator if possible. At least he should be kept informed. Administrators need to know what is being planned. If the program has a sound foundation and administrators are kept informed, they usually cooperate to the fullest extent. Written policy needs to be developed with administrators. They must continually be supplied reports about what has been done, what is planned, the financial situation, and evaluation of results.

A successful practice is to get and keep administrators involved in the adult program as much as possible from planning through evaluation. Make administrators a part of the program, then it becomes "their" program and "their" responsibility. Administrators are very sensitive to teachers' relations with other agencies and groups. Special attention needs to be given this fact. If possible have other agencies or individuals inform administrators of their approval of the program.

Systematic Instruction

It is generally accepted that the responsibility of vocational agriculture in adult education is that of providing systematic continuing education in agriculture. If that is our role, adult farmer courses must be designed to carry out this function. If systematic instruction is to be provided, there must be specific enrollees for each course, specific units taught as a part of each course, and a definite and regular sequence of courses providing continuity between courses.

Individual Instruction

It is essential that on-farm or individual instruction be a planned part of adult education for farmers. On-farm instruction related to group instruction will be accomplished only if the teacher is convinced of its value. The ideal situation is to plan and organize the program so farmers request on-farm instruction. Contacts before the course is started can help to bring this about. Group instruction should include specific suggestions where individual instruction would be worthwhile.

Methods used for individual contact are very important. Definite purposes should be developed by the teacher before the contact is made. Farmers should be helped to define their problems and goals; they should be complimented on some phase of their operation.

Individual instruction should be limited to one or two improvements at any one time. Farmers should be guided to determine solutions to their problems even in thoses cases where the solution is not what the teacher desires. Encouraging farmers to go with the teacher to other farms, to meetings, or to demonstrations is usually effective. Key farmers or members of the advisory committee can also be used effectively in helping individual farmers.

Written records of on-farm instruction should be kept. Sometimes it is a good practice to give the farmer a copy of the written suggestions. The teacher should use the written report to refresh his memory and plan the next instructional visit.

Most teachers enjoy and believe in the value of individual instruction, but it is the weakest part of many adult programs because teachers feel that what is accomplished is not worth the effort. Procedures and methods used in the entire program will help farmers recognize and desire individual instruction. The teacher's methods of individual instruction will determine the degree of success of the adult education program.

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SUCCESSFUL Use of Advisory Committees

KEN HOWARD, Instructor
Three Rivers Junior College
Poplar Bluff, Missouri

The use of advisory committees in agricultural education is not new. Successful agricultural education programs usually reveal the use of advisory committees. The not-so-successful programs frequently reveal the lack of advisory committees. There is a close relationship between the use of an advisory committee and success in agricultural education. Agricultural education programs are benefitted by the use of an advisory committee even if the committee is not as functional as it should be.

Recently a stigma has been attached to a precise set of guidelines for selecting members and using and organizing advisory committees. Perhaps this is why some committees have not been beneficial. Guidelines should only be used to direct and not to be accepted as exact policies to follow.

Factors for Success

From my experience with advisory committees in secondary and post-secondary agricultural education programs, I believe some factors can be associated with success and some with failure of advisory committees.

- Permission should be sought from the board of trustees or school board to organize an advisory committee. The official board should not be asked to approve the teacher's selection of members or to delete or add to the list of members. The selection of members should be the responsibility of the teacher or coordinator who will be involved with the committee. It ceases to be your committee when someone else places members on it.
- The size of the committee should vary with the programs. Large advisory committees with twelve or more members contribute to failure more than anything else. My most active and functional committee was made up of only three members. Five should be the maximum number. It is much easier to orient five members than a dozen. More harmony prevails, assembly can be quicker in emergencies and there is a feeling of honor among the five individuals.
- Who should be selected to serve? The committee should be comprised of a small number of the most dedicated men representing the vocational area for which you propose to prepare employees. For example, in agribusiness you should select the best agricultural businessmen in the service area of your school. In production agriculture, you should select the most progressive farmers.

School administrators are much too busy to be members. Civic club members are not knowledgeable about the program nor are they generally interested. Newspaper men are interested only in news and will attend only one meeting—the first one. Labor union personnel will likely be bored stiff. State employment personnel are, by law, noncommittal. Yet these groups can be helpful. When the need arises, invite them as special guests to meet with your committee for a specific purpose. Do not ask them to pledge their time to be active members of the committee.

- How often should the committee meet? You can kill the committee by too many meetings. A committee requested to meet once per month indicates poor management on the part of the coordinator and the inability of the committee to get the job done. The number of meetings required will vary with the program, but no more than three regular scheduled meetings per year should be attempted. Remember, these men are businessmen who are employed full-time. How would you like to work in their business one day per month? Here is another thing to consider. A committee of twelve or more members meeting once per month will require as much time as it would to conduct a good adult or young farmer program. Where do you place their priorities?
- We must recognize and acknowledge approved and effective policies that come from suggestions of committie members. Nothing stimulates a member's ego more than to let him know that some of his ideas become established policies of the program. Let us not be quilty of informing the members they have no policy-making authority. Why do we ask for their advice? Let them know that we reserve the right to use or to reject their ideas. However, never fail to give credit to members of the committee.
- Personal contact should be maintained with the committee members. My objective is to visit each member at his place of business at least four times per year. Usually a member will be much more cooperative with his ideas in the privacy of his office than in a group meeting. Some of the most sound advice originates during individual visits. Individual contact helps to maintain a social atmosphere between you and the committee members. If an individual cannot socialize, the group usually cannot compromise.
- What does the committee actually do? The committee should be asked to do only those things the instructor or coordinator cannot do. They may help you do the things that tend to re-enforce your own ideas. When members are asked to help conduct community surveys, evaluate the results of a program, or publicize the program, we are asking too much. The major objectives of an advisory committee should be to help the institution better prepare students to accomplish the major objective of gainful employment of students.

(Continued on page 43)

Education for Young Farmers

DOYLE BEYL, Supervision
Wisconsin Board of Vocational, Technical and Adult Education


Doyle Beyl

One of our greatest undeveloped resources is the people living in rural areas. With today's emphasis on innovative job-oriented programs, this idea may not be emphasized enough.

Funds invested in preparing people to maintain and operate farms generate both tangible and intangible financial and other rewards. Frequently the theme is recited that disadvantaged people move into the country and become valuable workers. Also, more affluent members of society are moving to the country. It is my belief that adult education for neither of these groups will return dividends based on agricultural education as we have known it. They require a type of program not normally associated with production agriculture.

Young Farmers

This article deals with educational programs for persons becoming established as farm operators. Many are called young farmers. Age is not the criterion in the definition; degree of establishment in farming is a more accurate criterion. These beginning farm operators have several characteristics. They often require a great deal more credit than is good according to the rules of thumb used by bankers and other credit agencies. Frequently their families are very young, with pre-school and elementary school children making up most of their dependents. Willingness to discuss mutual problems, an interest in the new technologies associated with farming, and a desire to learn are other characteristics of this group.

Experience in Wisconsin indicates there is a desire by these individuals to learn. Programs of this nature increased by ten during the 1968-69 school year with enrollment increasing by 600. In 1969-70 the number of instructors increased by seven and enrollment increased by over 400.

Instruction

The learning situation for young farmers must have relevance. Much of Wisconsin's program is based on one of the oldest and truest of educational concepts — one teacher to one pupil — which is illustrated by individual on - the - job instruction. On - farm instruction averages about one and a half hours per month or 18 hours of individual on-the-farm instruction per year for each of the first two years. As enrollees become more adept at solving problems, on-the-farm instruction is reduced to one hour per month the third year and to one and a half hours each two months the fourth and fifth years. At the end of five years most enrollees have "graduated."

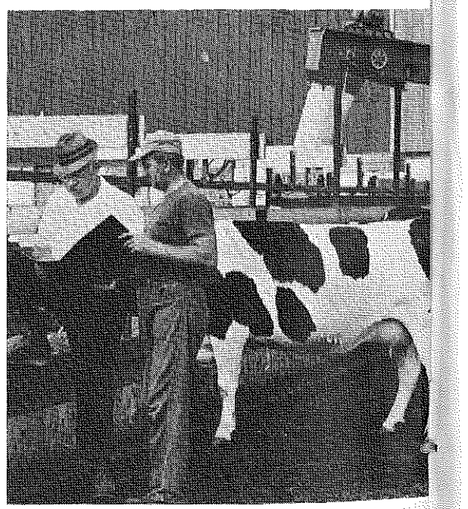
During the five-year enrollment, at least ten classroom sessions are offered each year by the instructor. Classroom instruction ranges from units as short as one session each year on income tax law changes to four or five sessions on a unit needing major emphasis during the initial year and to short reviews on new developments during ensuing years.

Curriculum

The curriculum is designed to meet the agricultural needs of local areas. A student may enroll at any time which allows him to complete the entire program five years later. The curriculum is not designed to disseminate the latest research information or to accommodate a desire to learn one subject in depth. Only basics are covered. This is not by accident. A beginning farm operator often lacks a knowledge of the basic skills, techniques, and concepts which will allow him to incorporate new research into his operation. Hopefully, he will learn basic skills and problem solving methods which will enhance his farm income, his family's stability, and his community tax structure and give him confidence to try new ideas.

Typically an enrollee's farm and farm operation are surveyed during one of the first individual instructional sessions. This allows the instructor to determine where the enrollee is insofar as establishment of a sound farm operation is concerned. It also allows the enrollee and the instructor to develop a realistic training program geared to individual needs.

Often an enrollee begins receiving instruction no later than the second meeting. If he enrolled in August, the second meeting in September or October may be on "determining corn yields," which involves estimating yields. The calculation of yields may point out a poor plant population, need for a soil test, insect and disease problems, and possibly a harvesting problem. On the basis of this lession, two or three more individual lessons may be developed which are spinoffs from discovered deficiencies.


Accurate and complete farm records are the basis for individual on-farm instruction.

Detailed management records are important. Also important is the instructor's ability to use records with the enrollee. If the enrollee believes his records and present recording system are perfect he cannot be helped and must be dropped from the individual instruction program. Because dairying is important in Wisconsin, the herd must be on test.

Some Questions

Two questions must be answered. What happens to the graduate? We hope he continues his education through enrollment in an adult farmer class. These classes may be taught by high school teachers whose primary responsibility is to secondary school students. These instructors may teach skills, or if they are interested in a particular area and have expertise, they may teach new techniques. Also they may look to outside people as resource persons.

Their programs must have objectives and not be arranged only to accommodate guest speakers. Units must be taught over a period of several sessions when a subject cannot be accommodated in one session. Usually a single lesson unit, such as winter feeding of dairy cattle, is reviewed relating back to experiences and problems of the previous season. University Extension specialists serve a class very adequately.

This brings up the second question. How is liaison and good working relationships with the University Extension Service maintained? Certainly the efforts of the extension and vocational education programs must be coordinated. The young farmer instructor must meet with the person representing extension frequently to ensure that each group knows what the other is doing, to eliminate conflict of meeting dates, and to gain maximum use of extension specialists.


Prevention of insect damage can be prescribed through field inspection.

Successful Use of Advisory Committees

(Continued from page 41)

Activities of the Committee

Some things the advisory committee is asked to do in helping develop a program in Agribusiness Technology at Three Rivers Junior College, Poplar Bluff, Missouri are listed.

—When it comes to selecting equipment for the classroom and laboratory, we could make some mistakes that would be unpardonable. We ask the committee to advise us when selecting the kind of equipment needed, the amount needed, the cost, and source of particular brands or types. For example, one of our members manages a grain buying station, so we ask him to select the most popular types of moisture meters for testing grain. Who could be better qualified?

—We request information relative to a particular training station. Businessmen know their competitors better than the coordinator. If you need a character reference, ask your advisory committee member.

—The advisory committee can provide outstanding resource personnel. We provide our committee members with a calendar of our courses in order for them to match the resource personnel with the proper class at the proper time. Knowledgeable men are available through industry. Ask your advisory committee to provide you with one of these men.

—The advisory committee can help accomplish our objective of gainful employment of the trainees by providing information leading to job opportunities.

—A good advisory committee can help keep the course material practical and applicable. We provide our committee with a course outline and ask them to delete from it or add to it. They place priorities on the instructional units based upon actual needs. They should not be asked to give advice on methods of instruction, but they can help plan what should be taught and in what sequence it should be offered.

Some Problems

Some of the common problems that exist when using an advisory committee can be avoided if special attention is noted. Here are some things to be on guard against.

—The members will have a tendency to agree on everything. They soon realize the easiest way to solve a problem is to compromise with each other. Be on the alert for this.

—The committee may become indecisive.

—The chairman of the committee may try to rule with an iron first.

—Be careful that the committee members do not chose sides and become deadlocked on all issues.

—Prevent absenteeism by recognizing the cost in money and time.

—The minority can control the group by withholding their vote.

Many rewards can be realized if you are privileged to work with a functioning and effective advisory committee.

Adult Education for Animal Technicians

STEWART S. McDONOUGH
Walter Biddle Saul High School of Agricultural Sciences
Philadelphia, Pennsylvania

The Walter Biddle Saul High School for Agricultural Sciences (Philadelphia) offers eight courses in vocational agriculture. In addition to agricultural production, courses are offered in machinery sales and service, resources management, floriculture, landscape horticulture, meat cutting, turf technology, and laboratory animal technology.

Adult Education

In Philadelphia there are well over 2,000 animal technicians involved in some way with the production, care, or use of experimental animals. These man and women are employed by animal breeders, hospitals, universities, drug and research corporations, veterinarians, the zoo, and other firms where laboratory animals are kept. The demands of their jobs are equally varied and range from semi-skilled labor to managerial responsibility. A need for better trained technicians resulted in an adult education course for individuals who work with laboratory animals.

The evening course was the result of a cooperative effort between the high school and the Philadelphia branch of the American Association for Laboratory Animal Science. This organization gathers and disseminates information related to laboratory animal care and provides a valuable link between the scientific and educational communities.

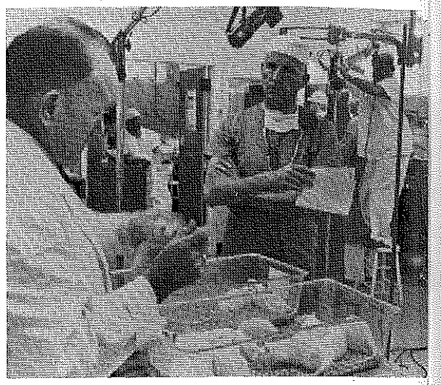
At the national level the Association provides for recognition of technicians with advanced skill levels. One purpose of the course was to fulfill one of the Association's requirements for certification as a senior animal technician. This qualification often means promotion, pay increase, and greater self-esteem.

The Course

In the planning stages questions arose as to the need for such a course, the manner of presentation, and the specific abilities and understandings that are to be emphasized. Although enough diversity would probably exist among the students to cause a comprehensive overview to be less than ideal, it was felt that an introductory course was needed as it would provide widely based appeal and usefulness. Thus a lecture series taught by a number of outstanding authorities and speakers was decided upon. Experience thus gained would pave the way for more specific programs in the future.

By using the influence of the research community, thirteen outstanding speakers were recruited from as far as Oak Ridge, Tennessee, St. Louis, and Boston. The glamour their names gave the course was probably a significant factor in its success. Honoraria and traveling expenses were provided when necessary, however, most speakers from commercial organizations were presented with gifts of appreciation. Tuition of $35.00 for the entire course or $5.00 for audit of any given lecture was charged to cover expenses.

The course outline included the following units of instruction: role of the laboratory animal technician; life, living matter, and biological organization; genetics and mating systems; breeding data for laboratory animals; nutrition and metabolism; handling; animal health and disease; sanitation; animal facilities and design; bedding materials; administration, management, and record keeping; safety; and animal experimentation.



Industry can provide equipment such as videotape which can be used in adult education programs.

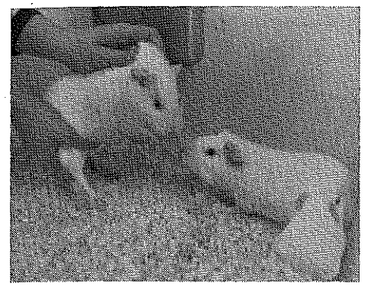
Enrollment

Extensive publicity began three months before the course was to begin. All salesmen who belonged to American Association for Laboratory Animal Science were asked to carry the word in their daily visits. Notices were carried in a number of professional journals and in many allied industry publications. Local news media cooperated by publicizing details, and over 500 printed programs were mailed to members of the New York, Washington, and Philadelphia chapters of the American Association for Laboratory Animal Science.

It paid off! Fifty-three people representing seventeen institutions from three states enrolled. The tuition fee for all but six pupils was paid by their company.

Stewart S. McDonough

Stewart S. McDonough is Instructor, Laboratory Animal Science, Walter Biddle Saul High School of Agricultural Sciences, Philadelphia, Pennsylvania.



Demonstrations and student participation are important in developing proper animal handling techniques.

Of the forty-seven students who completed the course, age was distributed from less than twenty years to greater than sixty. Formal education ranged from six students without high school diplomas to three who held bachelor's degrees. Experience in animal care varied from less than one year to greater than ten years with over half of the students having worked fewer than five years in animal care.

Evaluation

Ninety per cent of the students stated that their reason for taking the course was to better understand animal care and to increase technical skills. While only 32 per cent indicated employer based motivation, 78 per cent wished their supervisors to be informed of their participation in the program.

A majority felt that a text would have been helpful. Many also stated a preference for a few select instructors to many guest lecturers. Many felt that the course should have been augmented by additional movies, slides and demonstrations, increased student participation, and more frequent quizzes.

Most students wrote favorably when asked anonymously for their comments. In general, they thought that the course provided new and meaningful information which was easily understood, that it dealt with their interests, that it was well organized, and that speakers were well prepared. The majority indicated an interest in advanced programs and felt that the $35.00 tuition fee and their time were well invested.

Although the format of the course was not optimal, it is doubtful whether any single technique could effectively meet the varied educational needs of those enrolled. Furthermore, differences among the entire community of animal technicians are even greater than among those enrolled in the course.

Future Planning

When vocational objectives are identical, it is debatable whether the grouping of students is worth the effort. However, when the desired level of achievement is not consistent and when students need to develop different skills and understandings, it becomes evident that they should be grouped according to their needs.

Future training programs should be carefully geared to the needs of the participants and their employers. Long, broad spectrum courses should be deemphasized in favor of concise units dealing with selected topics and problems. These units would be more adaptable and thus better able to utilize the resources of the animal care community and would enable technicians to strengthen areas of weakness and to increase knowledge in their areas of interest. Since new knowledge would be put to immediate use, employers should be willing to send a greater percentage of technicians to units concerning special skill areas and dealing with specific problems.

This experience has shown that cooperation between schools and employers can result in dynamic and useful courses for adults. The industrial community will offer many resources to educators who are willing to expend the time to organize and conduct worthwhile programs. Industry will arrange tours of facilities, encourage employee participation, pay for many course related expenditures, and provide qualified consultants. Schools must reciprocate by providing direction, organization, and teaching.

Information on Vocational-Technical Education

With the growth of vocational and technical education and the related disciplines, there is an increasing need for accessible information that can be shared in developing logical chains of reasoning for research activities, for improving school practices and for shortening the theory-practice gap. The ERIC Clearinghouse on Vocational Technical Education (VT-ERIC) located at The Center for Vocational and Technical Education, The Ohio State University, specifically serves agricultural education, business and office occupations education, distributive education, health occupations education, home economics education, trade and industrial education, technical education, and related disciplines including industrial arts education, occupational psychology, occupational sociology, and manpower economics. Appropriate publications contributed from these areas such as curriculum studies, instructional materials, research reports, research reviews, information analysis products, monographs, bibliographies, conference proceedings, papers, and current speeches are abstracted, indexed and given national visibility through the ERIC publications *Research in Education* (RIE); *Abstracts of Research and Related Materials in Vocational and Technical Education* (ARM); and *Abstracts of Instructional Materials in Vocational and Technical Education* (AIM).

All persons are invited and encouraged to forward materials to the clearinghouse for possible inclusion within the ERIC system. The clearinghouse is interested in receiving complimentary or gift copies. Two copies of each publication are needed and they may be forwarded to:

Acquisition Specialist, ERIC Clearinghouse
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road
Columbus, Ohio 43210.

Developing Human Resources Through Adult Education

LAMBERT SCHILLING
Detroit Lakes Area Vocational-Technical Institute
Detroit Lakes, Minnesota

One of my greatest enjoyments in teaching has been observing farm families work together. Observing a father and son shingle a roof, observing a father showing a son how to adjust machinery, observing a mother and father assisting in preparing an animal for a 4-H or FFA show, the genuine interest of the wife in the farm operation, and the general happiness of families even though the returns are meager at times are examples of families working together. It is good to have a part in developing boys and girls with a farm background to take their place in society.

My greatest disappointment has been the gradual deterioration and disappearance of the small farm. Present farm programs are not helping the small farm; in fact, they have helped create its downfall. The resulting social upheavel is beginning to show. This is the reason for our program and my story.

The Program

Forty farm families are requesting services of the Detroit Lakes Area Vocational-Technical Institute in specialty crops production consisting mainly of small fruit and vegetable production. The program includes approximately 90 per cent of all producers in a 50-mile radius of one of the greatest resort regions in the nation—Midwest Minnesota. The slogan for the area is "412 Lakes Within 25 Miles."

Statistics label the counties in the area as economically depressed. This is basically due to low income derived from farming because of higher initial costs, costs of operation, poor management, and marketing problems. Young farmers are disappearing from the land, farms are being sold to absentee landlords, and many farmers are looking for work elsewhere which leads to other unsolved problems. In many cases, farms deteriorate further since there is no economic gain.

The area has a very strong element of hardy, hard-working people with very large families who are determined to stay on the land even if the father has to work away. Many families are at a very low poverty level of $500 income per year. Many fathers travel to the mines in Fargo or the Twin Cities.

This is plainly an existence of travel, subsistence, and family hardships. Most would much rather stay home with their families even if income is low. Many feel that the best place for their family is on the farm. Their hope is something which would increase their income enough to make this possible. With education and material help, the Specialty Corps Program is designed to meet this objective.

Lambert Schilling

Lambert Schilling is Specialty Crops Instructor at the Detroit Lakes Area Vocational-Technical Institute, Detroit Lakes, Minnesota.

Objectives

The general objective of the Specialty Crops Program is to establish the small fruit and vegetable growing industry in the area as an organized and recognized industry of commercial growers dedicated to quality produce which contributes to a sound economic force and a better community. Some specific goals of the program include the following:

—Help save family farms which can adapt to change and improvement

—Raise net incomes from $500 to $2,000 per farm

—Increase efficiency of farms by record keeping and by producing quality produce

—Less unemployment payments

—Enable fathers to stay home and earn a living

—Furnish housewives extra spending money and income to teenagers

—Increase economy in surrounding towns and increased labor demand by a processor which will be attracted to the area

—Establish an organized marketing system

—Establish an organized education plan

There are several reasons why the Specialty Crops Program will succeed. We are located in a series of resort areas which has a high demand for fresh fruits. The specialty crops are produced in the season when there is a great influx of people. Markets can be expanded into areas of population concentration including Fargo-Moorhead, North Dakota, and St. Paul-Minneapolis. There are ample water resources and soils which are ideal for irrigation and specialty crops. The low income farmers in the area have large families; they seek added income.

There is cooperation among agencies including the Mahube Council, an Office of Economic Opportunity program. Sixteen of the participating families qualify for financial assistance under the Office of Economic Opportunity guidelines. The financial assistance provided has made the difference in the program for these people

On-farm instruction is provided this family on insect control in specialty crops.

through assistance in buying seed, plants, fertilizer, and irrigation equipment. An agricultural technician of the Office of Economic Opportunity assists in the program with Mahube enrollees.

Long Term Goals

The following long-term goals have been established.

1969 - 70: Enroll forty producers; establish new strawberry and raspberry acreage; establish farm record system; build six marketing sheds for berries; establish one experiment per farm; design and test irrigation systems; add fifteen irrigation systems; establish weed control plot with University of Minnesota cooperation; and hold organized classes and business meetings.

1970 - 71: Enroll fifty producers; establish a "Farmers Market"; organize into marketing cooperative; attract outside buyers for produce; establish refrigeration at market sites; add new specialties; have forty irrigation systems in area; have an experiment on every farm; analyze records of farms that are diversified; assist in other farm production areas; hold organized classes and business meetings; and cooperate with University of Minnesota in conducting experiments.

1971 -72: Enroll seventy producers; attract processors; secure refrigeration trucks; build greenhouse; build complete facilities at Vocational-Technical Institute for housing sprayers, irrigation parts, and classroom facilities for area seminars; establish permanent market stands at outlying areas; secure contracts for production; consider joining wider marketing area; have publicity stands at fairs; use a marketing label for quality; cooperate with University of Minnesota in experiments for blueberries, variety trials, and chemical trials; secure marketing specialist as full-time employee; have irrigation systems for all producers; and establish production quotas.

Producers enrolled in the Specialty Crops Program will elect officers and form committees dealing with cooperatives, publicity, finance, and irrigation. Each committee will develop a program of work. The group will select a name and symbol. Regular classes will be held from October to April. There will be one business meeting per month and at least one officer meeting per month.

Accomplishments

Twenty class sessions have been held relating to all phases of fruit and vegetable production. Twenty additional sessions of officer and committee meetings have been or will be held this year. Attendance at class meetings has averaged forty-five with wives generally participating. The farthest participant drives 55 miles one way. Four Indian or part-Indian families are enrolled. Nine families have over nine children each. One family has fourteen children. Five families had net incomes under $500 before enrolling.

Four power sprayers, three mechanical planters, and other equipment purchased by the Mahube Council has been in continuous use. Portable irrigation is also planned for those who have not yet secured their own systems. The devotion of the families to the program has been tremendous. Twenty families attended a class session when it was over 40 degrees below zero. Thirty families participated in drawing trade symbols for marketing products from which a selection will be made.

Already after short duration of the program, family working relationships have improved. The wives see some money returns for their efforts. Dads are beginning to taper away from off-farm work and taking much more interest in their small farm operations. General housecleaning about the farmsteads is showing improvement since class members will be visiting projects on class tour. Best of all, the program is recognized by the Detroit Lakes Industrial Development Corporation.

Our philosophy is not to remove the small farmer but to save him.

Is Agricultural Mechanics Instruction Up-To-Date?

ROBERT L. WOLFF
Texas A & I University


Robert L. Wolff

Robert L. Wolff is Instructor of Agricultural Mechanization, Texas A & I University, Kingsville. He is currently pursuing graduate work in agricultural education at Louisiana State U.

In the early years of vocational agriculture, "farm mechanics" was commonly referred to as "farm shop" and was designed to teach boys how to perform the common repair and construction jobs around the farm. The teacher concentrated on developing skills in the use of mechanical tools and materials and in doing practical farm repair jobs. This was the philosophy of the role of farm mechanics through the 1920's.

In the 1930's the shop program changed somewhat. Skill development through shop exercises and projects became the major objective. A typical program included areas such as forge work, carpentry and woodworking, saw fitting, tool fitting, cold metal work, plumbing and water supply, harness repair, rope work, concrete work, and a little electricity and machinery repair.

Nail Box Era

During this era of the shop program we saw the introduction of the building of "trinkets," or as they are called by some "survival kits" — the shoeshine box, the nail box, the bread board, the cedar chest, the picture frame, the gun rack, and others. During this same period of time, 1930 to 1960, we saw a skyrocketing in mechanizing the farm with tractors, complex field machines, crop processing equipment, electrical equipment and controls, and more sophisticated farm structures.

During this period we also saw a mass movement of the farm population to urban areas and the rapid development of the nonfarm businesses. Yet the objectives and teaching of farm mechanics did not keep up with the changes that were occurring. Little teaching was directed to the more complex areas of the mechanization of farming. The farm mechanics program has been in many cases shop skills which are a vital part of the program, but shop skills should not be considered to be the total program. The big question at hand today is who is going to teach about modern machinery and mechanization?

There has always been some question whether making nail boxes, hog troughs, chicken feeders, or putting a bottom in a wagon box were the most important things to teach. Teaching skill in the use of hand tools is important, but it was not so important that the entire effort of the program be directed in that direction. The real problems are in the areas of electricity and power and machinery.

Terminology

What about the terminology of the program? Terminology has possibly, in part, directed the program toward a shop skill oriented program. It has never been clear exactly what the term "farm mechanics" means since "mechanics" has reference to the science that treats forces and their effect. A mechanic, on the other hand, is a person who performs manual skills.

Today the scope of vocational agriculture has expanded to include preparing students for employment in nonfarm occupations and for pre-professional training. The majority of job opportunities exist in the services and other nonfarm related areas. A subcommittee of the American Society of Agricultural Engineers which is comprised of teacher educators and agricultural engineers has in the past established the trend in the total program in agricultural mechanics. The new program is referred to as agricultural mechanization which is a more descriptive term and has reference to instruction related to the machinery and automation of agriculture and related concerns. The new program includes six areas: processing agricultural products; agricultural power and machinery; soil and water management; agricultural electricity and controls; agricultural buildings and conveniences; basic processes or skills — shop work.

Progress?

Let's reflect on how the mechanization phase of vocational agriculture has expanded through the 1950's and 1960's. We must admit that it has done so in large by adding more welders and a few more woodworking benches. Is this a progressive move? This is expansion, but the progressiveness is in question. How about building more nail boxes or more cedar chests? Is this progress?

The time has come when teachers must re-evaluate the broad objectives in this area. Building trinkets and welding generate enthusiasm among students and parents, but how can a teacher justify spending most of his time doing this? We must raise our sights higher toward the more important and more technical areas which will help prepare students for jobs in this highly technical world.

What to Teach

The basic problem in teaching agricultural mechanics today is not how to teach but what to teach. Teachers are usually well qualified in the methodology of teaching, but the total concepts of the program are vague. There is evidence that the mechanization phase of agriculture is probably the most neglected.

From a national picture, 20 to 60 per cent of all teaching time is earmarked for the teaching of mechanization. However, from observations, the program is somewhat anemic. Why is this? Could it possibly be that we have not properly prepared ourselves; is this area too difficult to teach; are we satisfied with the knowledge we have in this area and refuse to learn more about it; is it that we have not defined our objectives?

There is no one prescribed way to teach this area of vocational agriculture. The main point to remember is to teach the basics of the whole program — not just farm shop work.

Vocational teachers have for years rationalized by saying that they didn't have the facilities, funds, or background to teach in specialized areas. There is some question whether these are justifiable excuses. Instructional material has been scarce; however, today there is ample teaching material available and much of it can be acquired for the asking. Some must be purchased. The teacher may, in some cases, have to use his own money to buy books and other instructional materials.

How to Teach

How do we start teaching agricultural mechanization? The old concept is that the shop is the place to teach. This, of course, is true with the skill aspects of the program, but we must not forget that this is only a part of the total program. Students learn about agricultural mechanization no differently than they do anything else.

How about those areas that are not in the curriculum today — processing, power and machinery, and the other areas? The time has come when we must at least add them. It will be necessary often for the teacher to learn with the students. Few dispute the fact that doing something results in the most permanent learning experiences.

"Learning by doing" will no doubt continue to be the best way to teach. Lesson plans, problems, illustrations, and visual aids must be prepared in all areas of agricultural mechanization. Much can be done in all areas of agricultural mechanization.

HOW TEACHERS USE ADVISORY COMMITTEES

ROY D. DILLON, Teacher Education
University of Nebraska


Roy D. Dillon

The State Plan for Vocational Education in Nebraska requires that local education districts involve lay advisory persons in examining vocational education needs and in the planning of local programs of vocational education.

The involvement of lay people in the planning and evaluation of vocational education programs can build sound local support, and enable the school to plan a comprehensive educational program that will prepare a young person for his or her next pursuit whether a job, technical school, or college.

The Problem

The problem was to determine the extent to which Nebraska teachers of agriculture are using citizens advisory committees in planning and evaluating local agricultural education programs.

Questionnaires were sent to 110 Nebraska secondary schools which offer vocational agriculture programs. Responses were received from 94 percent of the schools.

Major Findings

Twenty-six percent of the schools indicated they had a formal citizens advisory committee. An additional 37 percent of the schools indicated they use an informal consulting group. So 63 percent of the schools responding use local citizens as advisors in planning vocational education programs in agriculture.

Of the schools which have formal advisory committees, 70 percent were organized during the past three years. One-third of these committees meet on a regular basis, while the others meet on call. Membership on the formal committees ranges from three to thirteen persons, with seven members being the most common.

Of the schools which have informal advisory committees, 29 percent were organized during the past three years. One-fourth of these committees meet on a regular basis. The membership on the informal committees ranges from three to fifteen persons, with seven members being the most common.

Major Tasks

Major tasks being studied by formal committees are:

—Course of study changes, need for new programs, overall program objectives, and identification of community needs.

—Adult education program.

—Agribusiness or off-farm agricultural occupations courses and placement experience programs.

—Agricultural mechanics and shop facilities, curriculum, and activities.

—Facilities for the agriculture program.

—Agricultural department budget.

—FFA activities and contests.

—Evaluation of vocational agriculture program.

Major tasks being studied by informal committees are:

—New or reorganized program needs.

—Course planning including agribusiness courses, agricultural mechanics courses and adult and young farmer courses.

—Specific problems needing study.

The results show a definite increase in the organization and use of formal advisory committees over the past three years. It appears that Nebraska teachers of vocational agriculture see the need for lay participation in program planning and evaluation if meaningful vocational education programs are to be provided.

Demonstration Plots Aid in Teaching Adults

DON JENKINS
Teacher of Agriculture Occupations
El Paso, Illinois

Plots should be marked with signs that are attractive and clearly visible.

Don Jenkins

The man advertized for in the accompanying ad is you — a teacher of agriculture. The persons placing the ad are the farmers in your community. If you do not believe it, drive out into the country and look for yourself. How do farmers in the community greet you?

WANTED

A man to live in our community to assist a large group of farmers to make wise production decisions.

Job Includes: Teaching and helping farmers select and plant hybrids correctly; control weeds, insects, and diseases; analyze and solve harvesting problems; and provide other information of value.

Working Conditions: Office space will only be used in the winter. All of the other time will be spent in the field.

Salary: Gratitude for someone who cares paid on the following scale: if the man ignores our problems, we ignore him; if the man says hello, we offer the same; if the man is concerned enough to help us, we will pound on his door at 7:00 a.m. to give him a chance to help us.

The preparation for the job described in the ad doesn't come from a textbook primarily but through diligent work and practical experience. One way to gain the practical experience is through research land laboratory plots. The size of the plots isn't as important as your desire to find answers to problems.

Problem Solving

Be open to suggestions and jot down questions that students and farmers have asked. Then seek the answer by applying the problem-solving method: define a definite problem; set goals and objectives; gather materials, information, available research, and references; apply methods of experimentation; evaluate and make an analysis; and set up additional study.

Work on a single problem, that is, don't mix herbicides with hybrids in one plot. Do only what can be done well. You won't have all of the answers but hunt like the devil for those that you are trying to find.

Define definite problems that farmers have and work on those a few at a time. Let people know that the plots exist. Teachers should not be afraid to be seen in the plots during, and sometimes after, working hours. If this is not worth extra hours of your time, don't start it. Conduct tours of the plots for groups and individuals.

Top Notch Plots

If you are going to have plots, have top notch plots. Poor plots reflect on your students, school, community, and you as a teacher. They also reflect on all teachers of agriculture.

After you decide on the problems, measure the plots and map out detailed plans on paper where every herbicide, hybrid, soybean variety, or other treatment will go. When rows of hybrids or herbicides are planted, put in identifying stakes then and there to avoid any possible mix up.

Have hybrids in envelopes or sacks with name, number, and position number in the plot. Make stakes to match and put the name on the front of the stakes and the position number on the back. There should be wide alleys between plots. Chemicals should be applied on the alleys to keep them free of weeds and grass. All of the plots should be free of weeds and grass except the herbicide plots. Nothing will ruin the plots and you quicker than weeds.

Seek help and equipment from good operators who are happy to assist. Keep accurate records of the plots and record data as things occur. Teachers should supervise all operations and be there when they are done. It is important to write up evaluations and the analysis very carefully and have others read and evaluate it before printing.

News and Views of NVATA

JAMES WALL
Executive Secretary

The following was written by Roy Hallstrom, President, Washington Vocational Agricultural Teachers' Association, Cowiche, Washington, and appeared in the Association's Newsletter in November 1969. I believe, like Roy, that even with the many uncertainties of our day, there is an even brighter future ahead for vocational agriculture and the FFA.

We are living in a confused age with many traditional concepts, ideas and procedures being questioned. Maybe this has always been and always will be the state of man however uncomfortable it may be. Education and society itself seems unsure as to what course to go. We are in education which is unsure of itself, and our particular branch of education in agriculture is even more unsure because of the dynamic change that is taking place faster than we can comprehend or adapt to it.

We are in the process of undergoing organizational spasms that leave us unsure of what to expect. It is more comfortable to cling to the certain and more comfortable past.

However, I feel that shining through the clouds of uncertainty is a brighter future than vocational education and certainly agricultural education has ever seen. In my limited area, enrollments seem to be at an all-time high. I have one hundred and twenty students enrolled and more wanting in in spite of the handicaps of fitting any elective into the traditional high school program which is still oriented to college preparation only. I have the handicap of having a very poorly equipped shop, and I am almost overwhelmed with the teaching of six classes a day let alone engaging in all the other activities that vocational agriculture and FFA offers. I cite this as an example because many others have the same situation.

We have one of the finest educational programs ever devised, filled with relevant material gathered from the students' environment. We have flexibility to quickly adapt to different needs and situations. We have subject matter that covers the broad spectrum of human learning and experience geared to future needs.

We have had the strengthening experience of searching examination and criticism. We have the knowledge that the traditional high school curriculum has changed too little from the days of the Greeks and does not fill the needs of many students.

We have the knowledge that man is on the stage of becoming an extinct species if he does not follow the ecological principles that we have long taught in plant and animal science. We know that he faces mass starvation for over three fourths of those now living in the next quarter century. We know that our environment is becoming so polluted and damaged that it will not furnish the conditions and materials necessary for life by the lowest acceptable standards.

The opportunities in food technology and environmental science seem to me to be without limit. Even if many of our students do not plan to follow agricultural careers, it is necessary that as participating members of a democratic society they must be made aware of the ecological problems facing mankind. After all, no problem is solved until the problem is recognized as a problem and defined.

Perhaps the change needed, as seen from the eyes and perceptions of this one lonely individual, is that we need many more teachers of the dedicated kind that the vocational agriculture teacher seems to be. We need more well equipped shops, school farms, animal laboratories, and greenhouses. We must recognize that a great part of our work will be with the lower achieving student who has little parental guidance and attention. We must recognize that the best public relations program is a good teaching job done by sincere and dedicated teachers who are willing to work the long and extra hours demanded in this challenging, frustrating and often rewarding profession.

BOOK REVIEW

NOW YOU'RE TALKING! by Harrison B. Karr. Danville, Illinois: The Interstate Printers & Publishers, Inc., 1968, Second Edition, 230 pp. $4.95.

Improving *your* personal ability in oral communication is the central emphasis of the book. Problems of talking at home, on the job, at a party, and in group discussions are identified and used to focus suggestions. Only one chapter is devoted to organizing the formal speech. Suggestions, tips, and "practice selections" cover the general concern of self control, preparation, voice control, vocabulary and grammar.

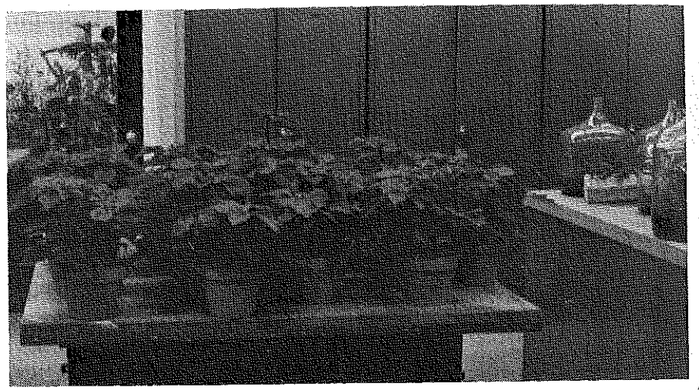
Now You're Talking is relatively easy to read, making it adaptable to various age groups. The choice of examples and materials would appear most satisfactory for adults. The lack of selections from the current scene could be compensated for by an alert teacher. In general, it would seem to be best suited for adults and for limited use in secondary school classes. It should prove a most helpful reference for students in vocational education engaged in a cooperative type of training program.

W. Howard Martin
University of Connecticut

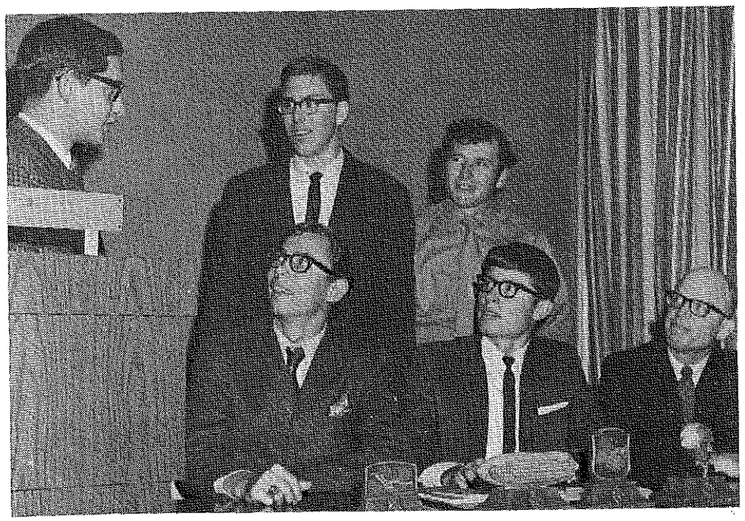
Five members of the Charles Harms family are enrolled in the young and adult farmer program at the Southwestern Wisconsin Vocational-Technical School, Platteville, Wisconsin. A sixth member of the family is enrolled in vocational agriculture at Platteville High School. Pictured are Mr. Harms and his five sons. (Photo by Bryan Dugdale, Instructor)

Stories in Pictures

ROBERT W. WALKER
University of Illinois



Facilities for teaching floriculture in the high school at Jackson, Michigan. (Photo by Walter McCarley, Michigan State University)



Richard Hiatt (left), President, and fellow o ficers of the Southern Illinois University Co legiate FFA Chapter discuss plans for turni over the organization's leadership to a n set of officers. Other officers are (seate Thomas Schertz, Vice President; David Kels Treasurer; William Doerr, Faculty Advise (standing) Larry Jansen, Reporter; and Larry Kraft, Sentinel (Staff Photo, Southern Illinois University)

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Featuring —

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