NEWS TO ME

In the March 1971 issue, credit for the article *Employment Opportunities and Educational Requirements for Jobs in Outdoor Recreation* should have been given to two individuals—Dr. W. H. Annis, chairman, Occupational Education Program, University of New Hampshire, Durham and Richard G. Floyd, Jr. At the time of the study, Mr. Floyd was a graduate assistant in Occupational Education at the University of New Hampshire. He returned to Essex Agricultural and Technical Institute, Hawthorne, Massachusetts as head, Department of Natural Resources. He is currently employed as Recreational Planner, Department of Natural Resources, Commonwealth of Massachusetts, Boston.

* * * * * *

One part per billion is about one minute in time since the birth of Christ, or 1 penny in 10 million dollars.

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A study of the "Influences of Vocational Agriculture in the Kiel, Wisconsin, community," by Bjoraker and Kramer showed that high school graduates were more apt to enter farming with more years of instruction in vocational agriculture. Only 7% of the graduates with 1 year of vocational agriculture entered farming compared with 15% with 2 years, 19.6% with 3 years and 26.6% with 4 years. A similar trend was noted for drop-outs. Students who dropped out of school with only 1 year of instruction in agriculture represented 11.9%, whereas 28.5% of the drop-outs with three years of instruction were farming.

The 112 enrollees in adult classes, at the time of the study, had an average attendance of 9.8 years since 1948. This sustained attendance indicates that adult instruction is an essential part of a total program and provides opportunity for continuing education for those engaged in farming.

Ignorance of the benefits of vocational education is a cause for student/parent misunderstanding. A positive image through immediate and sustained public relations program is termed vital by the Indiana State Advisory Council for Technical Education. —*1970 Annual Report.*

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The U.S. Department of Agriculture and the National Aeronautics and Space Administration plan to study the extent of damage from southern corn leaf blight by a joint remote sensing research project.

The experiment is intended to show the capability of remote sensing rather than to provide information on corn blight itself. The aim is to give crop reports from a camera in an earth-orbiting satellite. This will be a big help to farmers because it will make crop information more accurate and timely than that which is now available.

Among the expected capabilities of remote sensing are the following:

* Classify land by major use category.
* Delineate earth characteristics.
* Determine changes in crop development or acreage over time.
* Detect those plants under stress because of mineral deficiency, salinity, disease or insect infestation.
* Study land forms and predict agricultural land use.
* Obtain data from unmapped regions and correct ground survey maps.

Basically, remote sensing works by gathering data in the ultraviolet, visible, infrared and microwave regions of the electro-magnetic spectrum. The information is recorded on tape and fed into a computer. The computer is programmed to extract certain features and it prints out a map of the area surveyed. Each crop appears as a different letter on the map. The temperature of a plant stressed by disease, for example, is higher than that of a healthy plant. These temperature differences are shown in infrared images. The cause of the stress, however, must be determined by a man on the ground. At this time all remote sensing can do is indicate variations from the norm.

-Agri-News April 1971

Honorable James A. Rhodes, former Governor of State of Ohio, in his acceptance of a citation at the 1970 AVA Convention for his contributions to vocational education stated: "We have got to be realistic that not everyone is college material, and then do something about it. That 'something' is to provide job education and job training on a large scale." He added that his idea of providing for those not going to college includes getting to the students by the 9th or 10th grade. "If you wait until a kid graduates from high school, it's too late. We've got to get to them before they even think of dropping out of school."

* * * * * *

Russell Kirk, in his syndicated column wrote, "Nowadays some well-known authorities of the schools are recommending that teacher-certification requirements be abandoned altogether by state boards of public instruction or state legislatures. Instead, these reformers would leave appointment of teachers and administrators entirely to local school boards and school officials, enabling those local authorities to recruit the ablest candidates, whether or not those applicants have labored long in the dreary vineyard of the educationist establishment." Formerly, California was the most rigorous of states in such matters but last year, California's legislature passed an act which reduced "certification" for both administrators and teachers.

* * * * * *

A graduate study from the University of Indiana reported that a successful manager assigns priorities to each of his problems and to each of his jobs. The same applies to a successful teacher according to my observation.

* * * * * *

Japan became the first country to import more than $1 billion of U.S. farm products in one year. Over half of this 1970 import was in feed grains and soybeans.

Agricultural Education

olume 44 August, 1971 Number 2

Featuring —

MAINTAINING PROGRAMS OF HIGH STANDARDS

The
Agricultural Education
Magazine

EDPRESS Vol. 44 August, 1971 No. 2

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THE AGRICULTURAL EDUCATION MAGAZINE is the monthly professional journal of agricultural education. The publication is managed by an Editing-Managing Board and is printed at The Lawhead Press, Inc., 900 East State Street, Athens, Ohio 45701.

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COVER PICTURE. Harold Clark (center), a sophomore at Dover High School, Dover, New Hampshire, proudly shows his agricultural instructor, Russell Browne, and a fellow student, Stanley Kalishman, the plants he has grown as part of his work in vocational agriculture. (Photo by McCarty/Serotkin, Durham, N.H. Submitted by Martin L. Mitchell, State Consultant)

From Your Editor

DON'T REST ON YOUR LAURELS


Harry W. Kitts

Vocational and technical education has much to contribute to the expansion and improvement of our national economy. At our junior colleges and area vocational-technical institutes, prospective enrollees are inquiring about the job opportunities after attending the school for one or two years whereas a few years ago they asked about the acceptance of credit as a transfer student to another institution. Inquiries are being made as to the availability of specific types of training.

Administrators, at all levels, are being called upon to examine their educational programs and justify the costs. Vocational and technical education requires greater investment in facilities and instructional supplies. Class size is generally smaller so the per capita expense is greater than for the core academic subjects. Most of our critics are dollar conscious and accept facts such as the extra cost for vocational programs as a basis for recommending their elimination or reduction. We can only respond positively if we have the information regarding our programs.

Vocational education is under surveilance from the taxpayer, the potential student, and the employer. The U.S. Office of Education and most state departments of education urge the evaluation of vocational education offerings at all levels. Evaluation is the first step to determine the quality of your program. Changes in your program should be based on sound analysis of the existing offerings. Evaluation is needed to identify and upgrade the weak programs and improve the stronger ones. Evaluation should be a continuous process. Our guest editor, Dr. Harold M. Byram, was project leader for a national study on evaluation of programs of vocational education in the public schools. This study "presupposes that the initiative and operation of program evaluation is a responsibility of the local or area school and community and that leadership for it is to be provided locally." The term evaluation was used in the report to indicate "making judgments about the worth or value of a . . . program . . . It involves primarily the determination of the extent to which previously established goals and objectives are being or have been attained."

Why local evaluation? Because the people responsible for the program are involved. They are the individuals who have to implement any recommendations. They have to prepare the data for presentation if outsiders are brought into a system to pass judgment. If local people assemble the facts, why not do the evaluation themselves? Every teacher of vocational agriculture should evaluate his local program. He is the individual who planned the program, established the objectives or goals and conducted the program. He knows the details more intimately than any other individual. He does not hesitate to evaluate student's progress or achievement; why should he hesitate to assume the leadership and evaluate his own program.

The implementation of new programs or the adoption of change or innovations is not readily accepted or easy. Agricultural Education has contributed much to our educational program in the past half century. We are proud of our achievement. But let us not rest on our laurels. We need less adherence to the long-established program of training for farming. We have no place for inefficient, outmoded programs that have become so diluted that they fail to give the student the training demanded by the modern labor market.

As long as we have a demand for more individuals with agricultural training than are now enrolled, we need to increase the enrollment in vocational agriculture classes at the secondary and post-high school levels. Agriculture should be introduced into the curriculum in many high schools which do not offer this instruction to students in their community. We need more multiple-teacher departments, first to expand the program to serve a broader clientele; and, secondly, to enable teachers to specialize and provide better training for their students. We need more teachers trained in specialized fields, rather than generalists, to meet the demands for instruction in the many aspects of agri-business. We need to emphasize job-oriented instruction to prepare some individuals for immediate entry into the labor market and others for advancement to more specialized training. We need to present a united front. Vocational education is essential for the welfare of our nation. We, in agriculture, must join with those in other fields of vocational education to retain our identity and fight for the programs and funds for vocational education. To maintain programs of high standards we must expand and improve the program.

Harry W. Kitts
1914-1971

Public education, agricultural education in particular, has suffered a grievous loss with the passing of Harry W. Kitts. A master teacher and teacher of teachers, the death of Dr. Kitts leaves the profession with a sense of loss not yet fully realized. His boundless energy, sense of humor, and his capacity for productive endeavor made it inevitable that he would become a respected force in his chosen field. As we mourn his passing, we give thanks for his contributions.

A man of many talents, Harry Kitts was an organizer *par excellence*. He was an outstanding speaker, incisive writer, civic and professional leader, craftsman, family man and an asset to every community in which he lived and worked.

Courageous and fearless in pursuit of improved education in agriculture, Harry Kitts never dissembled. His word was his bond. Harry Kitts was an honest man and a gentle man. We will miss him.

Milo J. Peterson

Guest Editorial

STANDARDS OF PERFORMANCE

Harold M. Byram
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Most teachers want to attain and maintain high standards of performance in teaching and in planning and organizing the several components of an effective program. Those individuals who do not maintain these tend to leave the profession, either voluntarily or involuntarily.

Standards with a basis of little more than tradition have not exerted a strong influence on programs nor on instructional improvement. Many of these have related to quantity or scope of teacher performance. Examples would include enrollments, number of supervised practice visits, number of adult class meetings, number of state FFA degree winners, and contest-winning teams. The shortcoming of these is that the attainment of them is strongly influenced by characteristics of the community and the people in it. Requirements for degrees in the FFA cannot be regarded as standards, but rather as minimal attainment. Only a few can win in the competitive system prevailing. Therefore, winning contests cannot be regarded as representing attainable standards.

The common, and still current methodology in vocational agriculture appears to assume group instruction, with only token consideration for special needs and interests within groups assigned to or recruited into the program for instruction. Recognition of high quality performance appears to come to those who succeed with students not having special needs and to accomplishments with groups of such persons.

Who are the ones who should provide the bases for high standards? The employer knows what competencies he needs in those whom he employs. These can become known if appropriate techniques of information retrieval are employed. Then, there are the parents who, like school administrators, are often less interested in *what* is taught than in *how well* it is taught. Other teachers in the same field sometimes provide part of the basis. This is true whether in organized competition or not. Teacher A reaches a level of achievement which may become, in effect, the basis for a standard of performance by Teacher B. Actually, every professional educator has the privilege of setting his own standards and should exercise this privilege.

Most of us, if pressed, would say that we already know better than we actually perform. What are the basic elements of high quality performance that have surfaced in the more than half century of vocational agriculture? We know how to use problems as a basis for instruction-problems drawn from both group and individual situations of students. No other field of vocational education has a better record of this than vocational agriculture. This method can help to achieve high quality instruction on either a group or an individual basis.

We know how to provide for practice as a *part of* instruction. Here, too, vocational agriculture can claim leadership. The approved practices of guiding learning of students in relevant work experience are known.

Another area in which vocational agriculture has taken the lead and, in effect, set high standards, is in identifying performance objectives to use as a basis for instruction. These objectives have not always been as succinct and representative of feasibly measured attainment as the "behavioral objectives" advocated by Mager. Every teacher, teacher-educator and supervisor could improve his instruction and leadership by setting as a standard the statement of performance objectives before planning the instructional activities.

One difficulty experienced by many is that too often the suggested standards of program or instruction relate to process, or input, rather than to product, or outcomes. These may come from state or national leaders or state agencies, as well as from agencies for accreditation. The difficulty is that one has little basis for accepting such standards without information that would indicate that the desired outcomes will follow the recommended inputs.

What I have been leading up to is the thesis that standards should be realistic and attainable. If this is accepted, then each educator should assume major responsibility for setting his own standards. This can be better done if we were to find out what parents expect or hope for their youth, and expectations of students, at whatever levels they are dealt with, and what the employers expect of the program, and of the instruction provided in it.

Do we want to maintain high standards? Yes, of course. But high in relation to what? Not in relation to other teachers or to other states, but high in relation to levels reached last year, and the year before in the same school; and high in relation to the people with whom we work. Year-to-year comparisons can be made in part through the use of follow-up of former students.

If 50 per cent reach a given level of performance, then a question can be raised as to the acceptability of this as something to be maintained, or whether the standard should be raised to 60 per cent. If differences among the clientele of the program are known and if they affect the results, then standards should vary for different individuals.

Let us, then, be about the important business of maintaining high standards, but let us not blindly accept those recommended by others. Rather, let us review these standards, and be active in establishing our own realistic levels of attainment.

A WOMAN VOCATIONAL AGRICULTURE TEACHER

Howard R. Bradley
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Is there a place for the female in the field of vocational agriculture teaching? The answer to this question is often "yes" in certain areas of our program, namely in the area of ornamental horticulture. How about the animal science and the plant science area? The answer by some agricultural education professionals would probably be "maybe." But if one delves further in the Agricultural Education curriculum and were to ask, "How about the agricultural mechanics area?," the answer would probably be a definite "no."

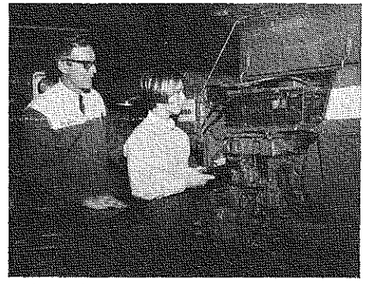
Kansas State University recently graduated a woman in the Agricultural Education curriculum. She is certified to teach Vocational Agriculture in the state of Kansas. Her transcript shows 48 semester hours in the area of technical agriculture, 50 hours in general education, 20 semester hours in professional education, and 14 semester hours in agricultural mechanics. She completed her student teaching in one of our Kansas schools and was evaluated as a very good student teacher. Her student teaching included the areas of agricultural welding, farm power and livestock selection.

How did this female come out with her first interview with a Kansas school superintendent looking for a beginning vocational agriculture teacher? The superintendent stated after interviewing our woman candidate, "I question whether our community, or other communities in the state of Kansas, is ready to hire a woman vocational agriculture teacher." When the applicant indicated that if she were hired the low enrollment of boy students in their vocational agriculture department would probably increase due to her influence of adding girls to the vocational agriculture department, the school administrator was considerate, kind and admitted that this could be true but was still skeptical of hiring a woman vocational agriculture teacher even though her academic credentials and agricultural and mechanical skills were above the average in her classes, competing against Kansas rural boys.

Kansas is one of the states that has needed additional vocational agriculture teachers for the past five years, yet the opinion of one Kansas school superintendent would probably be similar to most superintendents in the state and, probably, similar to other school administrators in the midwest. They are not ready to hire a woman vocational agriculture major, with the exception in the area of a multi-teacher horticulture department. The midwest will not offer many opportunities for employment in the animal science, plant science, or agricultural mechanics vocational programs.

The women's liberation movement has not moved in the direction of vocational agriculture teachers. Does the fact that the male has completely dominated the vocational agriculture teaching field since 1917 mean that the male would be a superior vocational agriculture teacher? What research tells us that the male is the only one who can do a top job of teaching vocational agriculture?

The July 1970 Readers' Digest, in a condensed article from the U.S. News and World Report, stated that the



Earl Baugher, assistant professor in agricultural engineering, observes the first female agricultural education student to graduate from Kansas State University as she explains to him how to use the dwell-tach meter.

American women are up in arms over what they regard as an intolerable economic discrimination against them. In the professions women charge that they are hired last, paid least, passed over for promotions, and held to the drudgery of routine jobs.

One of our western states that has a large teacher education program reported that they have not been able to place a woman Agricultural Education major graduate in the vocational agriculture teaching field in the past four years. In Kansas our first woman Agricultural Education major has taken a teaching position in 7th grade science. She was not able to find employment in her teaching major.

SPECIAL NOTICE

At the time of his sudden and untimely death on June 16, 1971, Editor Harry W. Kitts had edited copy for this issue and planned its layout. Due to Harry's excellent organization and planning, it was easy to pick up the editing tasks and publish the issue as he had planned it.

The Editing-Managing Board is currently in the process of appointing a new Editor. It is anticipated that the new Editor will begin work no later than the January 1972 issue. In the interim, the *Magazine* will be edited by Harry's colleagues in the Department of Agricultural Education at the University of Minnesota, St. Paul. Articles should be sent to Dr. Milo J. Peterson at the University of Minnesota.

J. Robert Warmbrod
Consulting Editor

AGRICULTURAL EDUCATION IN TRANSITION: A NATIONAL SEMINAR

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A national seminar concerning agricultural education was held in Denver, Colorado May 11-14. A total of 281 leaders in agricultural education and friends of the program representing 47 states and Puerto Rico took part in the meetings sponsored by the Division of Vocational and Technical Education of the U.S. Office of Education. Mr. H. N. Hunsicker, Program Officer in Agri-business Education and National FFA Advisor, was the General Chairman of the seminar.

The seminar was divided into nine discussion groups. Each group made summary reports on their various areas. The functions of the various committees were advisory, however, it is expected that many of the recommendations will be acted upon and accepted.

The following is a summary of the various committees, their purposes and their recommendations.

Committee I **Manpower and Training Needs in Agri-business and Natural Resources**

Purpose: Determine what information is needed, its importance and use, what steps should be taken to obtain and use it, and by whom?

The question was asked, "Should we address ourselves to a national manpower and training needs data gathering or to a total system?" The committee considered we did not need more research but action. The following steps were suggested by this committee:

1. Determine the "core" manpower and training needs data which should include number employed, occupational opportunities, quality of education required and entry level salaries.
2. Synthesize a standardized taxonomy of job titles in agriculture.
3. Delegate states to develop job descriptions through job analysis coupled with competencies needed.
4. Coordinate dissemination of data essential to the local agencies.
5. Coordinate efforts with Employment Security.
6. Coordinate and articulate data and national efforts in compiling manpower training needs data to insure compatability.

Committee II **The Scope of the Total Vocational Education Program for Agri-business and Natural Resources Occupations**

Purpose: Agree upon a replacement name for "Agricultural Education" and the courses or major categories that should be included. Identify and establish the main objective of the training at various levels (elementary through post high school). Identify who should be served and action steps required.

The committee and the conference participants were in general agreement that a change in use of the name "agricultural education" or "vocational agriculture" was needed. Among the several alternatives receiving support were agri-business, agri-business and natural resources education, and agricultural occupations. No conscensus was reached so no change from agricultural education was suggested. The committee recommended the following parameters for the program:

1. Maintain present program with high standards, extend existing programs and develop new programs.
2. Career orientation and exploration should be available for all students in school.
3. Conduct programs for youth and adults.
4. Develop programs for people with needs. The committee suggested a K through adult program which would include the world of work in K-6, career orientation in the 7th and 8th grades, career exploration in the 9th and 10th grades and specific vocational training in the 11th and 12th grades that could lead to post-high school technical education, adult education, college and/or employment following high school. In agriculture classes this could mean a core curriculum in the 9th and 10th grades followed by specific technical agriculture and occupational training options in the 11th and 12th grades.

Committee III **Transitions in Leadership Development Organizations for Students**

Purpose: Agree upon the type of Leadership Development Organizations needed to serve agri-business students enrolled at the various levels. Suggest action steps. Recommend ways to insure the involvement of all students enrolled in agri-business programs in Leadership Development Organizations. Recommend apppropriate action regarding amending P.L. 81-740 and in modifying the FFA Constitution and Bylaws, including the organzations' name.

Changes in the FFA are needed was the general feeling of this committee. The current structure of the FFA has been a limiting factor, in the view of some, in serving all of the potential members of the organization. The committee made the following suggestions to the FFA Board of Directors:

1. The youth organization should be designated FFA with no words attached to the letters. The letters would be followed by "national organization of youth preparing for and advancing in careers in agribusiness occupations."
2. Changes in the Aims and Purposes should be considered.
3. Degrees and national contests should be made available to all students regardless of type of agricultural instruction program.
4. Minimum standards for local, state and national degrees should be considered rather than years of instruction.
5. Amendment of Public Law 81-740 should be considered so the FFA can serve its broadened clientele.
6. A national task force be appointed to consider modification of the constitution and aims and purposes of the FFA.

Committee IV **Providing Information and Obtaining Public Understanding of the Program**

Purpose: What should the public know about training for Agri-business and Natural Resources Occupations? Develop appropriate and realistic action steps in obtaining and releasing such information at the local, state and national levels.

One of the basic problems in public information is the profession itself. Educators in agriculture have a tendency to become defensive and apologetic. Every time that farmers are pointed out to be only 5% of the population we go into "reaction." Agricultural Education has a good product. The product should be sold by positive action to the people who do not know the program rather than to ourselves. The committee suggested that by July 1, 1971 a person on the national level be designated to head up public information and that by September 1, 1971 that every state vocational agriculture teachers' association appoint a state-wide committee for public information to reach the student, the school administration, legislative bodies and the prospective employer. It was also proposed that a national seminar on public information be held during the summer of 1972.

Committee V **Training and Improving Professional Personnel**

Purpose: Identify the high priority needs and problems in this area and develop solutions. Consider personnel needed to work with adults, YFA, and FFA, as well as with elementary through post secondary levels.

The principal goal identified by this committee for teacher education was to provide sufficient education for individuals entering the profession. The program should include guidelines for preparing teachers, improved reporting systems, provision for certified teachers, teacher aides, technicians and specialists needed for the agricultural education of tomorrow. Potential professionals should be made aware of the opportunities in schools, extension, industry and business for Agricultural Education graduates. The committee suggested that a variety of modules be made available to prospective teachers to meet their individual needs. Inservice education should be based upon evaluated criteria. Emphasis should be placed on recruiting sufficient numbers of students to enable the program to grow and remain viable.

Committee VI **Meeting the Needs of People in Target Groups**

Purpose: Develop specific and realistic ways and means for reaching, at an accelerated rate, target groups such as the disadvantaged, the handicapped, ethnic groups, and girls, with instruction, youth organization involvement and occupational experience in agri-business occupations.

Development of a nation-wide data gathering system was considered critical for the reaching of target groups. Identification of individuals in target groups must be done in a manner so all schools may identify students in these groups and can develop "visible" programs to aid these students. In addition, employment machinery and effective employment data must be developed on a nation-wide level. Special effort must be made to provide adequate training for prospective teachers of target groups. New experiences and models must be developed to serve the needs of these teachers. A critical need is for teaching materials. A national effort must be made to see that appropriate materials are developed and put into the hands of teachers.

Committee VII **Providing Supervised Occupational Experiences**

Purpose: Determine its importance and role at various levels. Provide guidelines in establishing standards for supervised occupational experience for specific instructional areas.

Appropriate supervised occupational experience programs are essential for all students enrolled in agricultural courses. The program may include projects, cooperative work experience and/or laboratory experiences. The total agricultural and business resources of the community should be identified and utilized. The teachers should use a local advisory group to assist in effectively organizing and managing the total resources to provide occupational experiences for students.

Committee VIII **Setting Students Performance Standards for Program Evaluation**

Purpose: Establish guidelines for developing student performance and behavioral objectives for each of the major instructional areas in agri-business and natural resources.

This committee recommended the appointment of a national performance standards committee and employment of an executive secretary to coordinate and implement the work of the group. Specific recommendations were that terminal performance objectives should be sequenced through structural analysis, procedures and instruments for measuring student performances should be developed, pilot studies should be encouraged and that student achievement and instructional programs should be evaluated in terms of employee performance.

Committee IX **Providing Instructional Programs for Adults**

Purpose: Identify the importance of post-high school education to those in production farming and agri-business. Identify current trends. Identify problems in developing programs.

The purpose of adult education is to upgrade people to better prepare them for their current employment, to prepare them for entry level employment, to retain individuals for jobs in agribusiness and prepare people for positions of more responsibility. The committee urged continuation of current programs, expansion to serve people who are not being served and increasing emphasis on retraining people in agribusiness occupations.

Summary

The spirit of the seminar was *action now*. Participants were positive in their approaches to "Agricultural Education in Transition." People in the profession will be called upon in the near future to examine the suggestions and possible directions for agricultural education and to help implement the results of these activities.

MAINTAINING QUALITY PROGRAMS BY ESTABLISHING EDUCATIONAL PRIORITIES

Hollie Thomas
Agricultural Education Division
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The maintenance of quality programs becomes increasingly difficult as the priorities established in the past become obsolete or are superceded by new priorities. Reasons for new priorities include: (1) administrative expectancies change; (2) societal pressures change; (3) funding procedures change; (4) needs of students change; and (5) the industries served by a vocational program change. Thus programs designed to meet 1940 priorities may not meet the current educational needs of a given agricultural community, indicating that educational priorities are fluid and in a constant state of change depending on the impinging forces. Today taxpayers are demanding a bigger "bang for their buck" than in any time in the past.

What are priorities?

Courses, programs and curricula all have objectives, whether written or tacit. These objectives may be expressed as goals or outcomes that the teacher or administrator expects to get from a program, whether it be approval from the board of education or a conviction that career programs in agriculture are desirable for students and the community. From this example it can be seen that priorities can be either based on clearly defined objectives, based on feelings about the worth of the program, or upon a combination of values and objectives. Hence, priorities may be based on attitudes, such as the attitude of a teacher of agriculture toward mechanics. If he likes mechanics, he is apt to place agricultural mechanics high on his priority list when resources are to be allocated. Priorities may be based on values; for example, a teacher may place high priority on the development of citizenship, not teaching a single unit on citizenship per se, but emphasizing attitudes toward citizenship in all activities he sponsors or teaches.

Educational priorities, although highly susceptible to subjectivity, can be measured objectively. Data concerning attitudes, values, as well as objectives can be collected. In the final analysis, an individual's priorities is the order in which he would place things from "must have" or "must do" to "would be nice to have" or "would be nice to do." If an activity or item is not needed or wanted, it is not a priority; thus it has no place in the relative importance scale.

How to determine priorities?

Priorities are established by a combination of factors from the emotional "gut-level" feelings that a teacher or administrator has of the strictly objective needs of a program. Examples of the extremes are (1) the teacher operating on "gut-level" feelings that his instruction would be improved if the school would buy a new truck for agricultural department use and (2) the teacher who indicates that he needs additional classroom tables based on the rationale that his largest class of 25 freshmen exceeds the seating capacity of the classroom. The difference here is that the emotionally based priority does not have a logical rationale as a basis; no reasons are given as to why the truck would improve instruction.

Priorities are often based on discrepancies. Thus, the greater the discrepancy the higher the priority a particular item receives. If a teacher of agriculture who has been content with a total of 30 students in his Vo Ag I, II, III, IV program finds that his program no longer has credibility and thus must collapse his Vo Ag III and IV into one class and teach a course or two in biology, then the priority of changing the structure of his program to meet a broader spectrum of student interest in agriculture attains a higher position on the priority list. Another situation in which priorities are changed rapidly is when a state plan for vocational education no longer requires teachers of vocational agriculture to be employed during the summer. Teachers in this situation often find it necessary to scurry around to improve their summer program in order to establish credibility rather than be cut to a nine-month appointment. Hence a change occurs in priorities from the laissez-faire attitude toward summer programs to an attempt to develop a program that will justify an 11- or 12-month appointment. Thus, when the discrepancy between what an individual teacher wants in his program and the apparent directions that an administrator is directing the program becomes large enough, the teacher changes his priorities in an attempt to offset the undesirable cuts that a program which lacks credibility may receive.

How can you establish realtistic priorities?

In order to maintain a quality program, realistic priorities must be established by the teacher serving, in this case, as the agricultural program planner. Priorities established solely by the teacher may easily lack credibility among community members, school administrators, and the board of education. The optimum situation would be to change program objectives into priorities—such is not always possible. Hence the teacher may rely on his own ability to establish priorities, look to a text, or use a guide produced by a university. All of these choices are dependent on the teacher's own expertise of evaluating what the community and students need. A more desirable evaluation, at least as far as accountability goes, is to involve students, parents, citizens, community leaders, curriculum specialists, school administrators, and guidance counselors, as well as teachers, in establishing priorities for the agricultural program. Each of these individuals will have different values, thus bringing a different point of view to the priorities. In addition, when the advisory committee is utilized, the probability of community support for the program is much greater. It is essential that the program developer be cognizant of the credibility of his program. A quality program that does not command support does not have credibility. Hence the best possible list of priorities for an educationally sound program may not have community support.

Priorities are based on a variety of values or objectives. When an administrator looks at the priority of a program, he most likely asks:

1. How important is each aspect of this program in comparison to each of the other programs in the school?
2. How much time should be allotted to this program?
3. How much money should be allocated to this program?
4. How much space should be allowed for this program?

The basic quandry of the administrator is: "How important is each aspect of the program?" Once this question is answered, the time, money, and space questions are relatively easy to answer. Thus in establishing priorities for a program the teacher must consider what is important to the administrator as well as what is important based on his own value judgments of what constitutes a quality program. Key factors administrators normally consider in determining the desirability of an elective program are: (1) the number of students enrolled, (2) the community support for the program, and (3) the desirability of the educational aims of the program. A program in modern languages, the object of which is college preparation, with a total of 20 students enrolled in four classes, may receive high priority from the administrator if he places high priority on admission to a college requiring a foreign language while a program in agriculture may be phased out when the enrollment deteriorates to 20 students. From this example it may be seen that the factors at which an administrator looks are all weighed by a somewhat unknown scale of value. While one program of equal cost may be held as a desirable program with only 20 students enrolled, another program with the same number of students may be phased out or dropped without notice. On the other hand, few elective programs will be dropped which have an enrollment of over 100 students. The question here is where between 20 and 100 students is the magic point at which a program gains credibility. Of course, this depends on the value system of the school officials who determine the budget allocations for all of the school's programs.

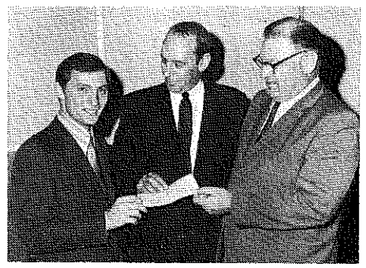
If a school is operating on unlimited resources, there is little need to consider priorities. Few schools today, however, are operating on unlimited resources. Thus to add a new elective course or a second teacher in agriculture may be at the expense of another course or program. For this reason it is important that the agricultural department have the credibility not to be the program that gets cut when another elective course is introduced.

Conclusions

"Gut-level" priorities may be appropriate for the administrator who holds the purse strings but are rarely appropriate for the program planner. In order to have lasting credibility, a program planner's priorities must be based on objective educational goals. Data needed by the agricultural planner to establish objective educational goals on which his priorities should be based include:

- Local, state, and national employment opportunities in the various areas of agriculture.
- Measures of the student interest in agriculture, preferably obtained by use of an interest inventory.
- Measures of community support in the form of advisory committee minutes.
- Indication that the agricultural industry in the community will support the program, e.g., their willingness to accept and pay students for placement experience.
- Information regarding the funding patterns of the state department of vocational and technical education.
- Information regarding the necessary skills that employees need for entry level in the various agricultural occupation areas.
- Information concerning the type of educational program that will be needed to meet the educational objective.

With this type of data at hand the program planner is prepared to give sound reasons why a program should exist rather than based on what he thinks. If a program is based on sound current educational objectives which are converted to priorities based on the relative importance of the current goals of the program, a quality program will most likely result.



Dan Lehmann, National FFA President accepts a check for $10,000 from General Motors Corporation representative Arthur Bellano, District Sales Manager for GM of Denver, Colorado. Don McDowell, Executive Director of the FFA Foundation (right) looks on.

SUPERVISION INCLUDES GUIDANCE

Larry Selland, Assistant State Supervisor
State Board for Vocational Education
Bismarck, North Dakota

A supervisor's primary goal is to help the local teacher improve himself and his work. To achieve this goal, a supervisor, in his work with local teachers, must include and be ready to offer a number of guidance oriented services.

The vocational agriculture instructor looks to his supervisor for such indirect guidance services as providing sources of information, sharing techniques, assisting in keeping records, using community resources, and evaluation. The local teacher also looks to his supervisor for direct counsel on such problems as work adjustment, personality improvement, community participation, professional improvement, and personal problems.

The guidance activities of the supervisor of vocational agriculture will depend upon the individual needs of the teacher. It will depend on the teacher's background as well as the problems he is faced with in his local situation. The beginning teacher may need more help in this area than the established teacher.

Regardless of who needs it and what is needed the supervisor has a responsibility to provide a service that will satisfy the needs of those he supervises.

Indirect Guidance Activities

The supervisor's guidance activities may be divided into two categories — direct and indirect guidance services. The indirect services may include such activities as:

Educational and Occupational Information. In providing educational information the supervisor should be concerned with (a) current and (b) technical information. New developments, things that are going to happen and things that have happened that bear on his work should systematically be told a local teacher by his supervisor. The major role of the vocational agriculture teacher in guidance has shifted from recruitment of farm boys into the program to guiding students into occupations. This necessitated guidance to include such matters as personal requirements of workers, economic and social aspects of jobs in these occupations, avenues of promotion, and relation of these occupations to possible careers. The area of occupational guidance is conceivably one of the most important activities of the vocational agriculture teacher. The supervisor should be ready to assist the local teacher in this.

Sharing Techniques (how-to-do-it). Techniques used in guidance work vary with the kind of task, and a helpful supervisor should have a checklist for each task and be sure his teachers get them as they are ready for them.

System of Records. What the vocational agriculture teacher uses the records for determines the kind and amount of records needed. The supervisor cannot make this decision. He should, however, make sure the teacher is aware of the uses of records for guidance purposes, and he should make available guidelines and/or samples of record forms.

Using Community Resources. No one teacher can possibly satisfy all the needs of his students. The supervisor should encourage the local vocational agriculture teacher to identify and use his community resources.

Guidance Studies. There is an ever increasing amount of research being conducted in the field of guidance. The supervisor can be of great help to the teacher by making these findings available and assisting in their interpretation.

Evaluating Local Guidance Activities. The supervisor's greatest contribution in the area of evaluation could be in providing guidelines for the local teacher to follow.

Direct Guidance Activities

The direct guidance activities of the vocational agriculture supervisor would be that of an individual counseling nature. A minute's time in direct counsel with the local teacher may make the difference between the success or failure of a vocational agriculture program.

Personal Problems. In dealing with personal problems the supervisor would be a person who is willing to listen. He would not attempt to pass on judgements nor make decisions. Should the problem be such that it cannot be solved by simply talking about it, the supervisor should be able to recommend professional personnel or services which could be of help. The mere fact that the supervisor is interested and willing to listen to his problems and that it will be kept in confidence is of great service to the teacher. Many personal problems can be solved by simply talking about them. The supervisor should make it known to those he supervises that he is interested in them and their problems.

Work Adjustment. In helping the teacher solve work adjustment problems the supervisor would, through the counseling interview technique, help identify the cause of the problem. It may be necessary for the supervisor to consult with the school administration and/or other people with whom the teacher is in close working contact.

Early identification of the problem and its recognition by the teacher will in most cases provide the solution. The supervisor as an outsider and a person in whom the teacher has confidence and trust is in a position to function effectively in identifying work adjustment problems and in turn to provide counsel for the teacher.

Personality Improvement. Assisting with personality improvement requires very skillful handling. Every individual has shortcomings, and almost everyone will admit having some, in general. A vocational agriculture teacher is entitled to help from his supervisor on his weak personality points. A thoughtful supervisor sees to it that he gets help and encouragement, and guidance in this direction, and that it is adjusted to the teacher's weaknesses. It is a wise and helpful supervisor who can stimulate his teachers so that they want to improve. Often, simply recognizing a job well done and showing appreciation will go far in motivating self-improvement.

Community Participation. The vocational agriculture teacher, more so probably than any other teacher in the school system, becomes involved in community participation. The nature of his work brings him in contact with the parents of his students, community leaders in agriculture, young and adult farmers, and local agricultural businessmen of his community. To carry out his job effectively the teacher must accept his community responsibilities.

For some, the business of meeting and working with people of the community comes easy; but for others it may be a difficult task. The difficulty may be due to excessive workload, poor organization of time, or it may be due to personality and lack of interest.

The supervisor should be ready to assist the vocational agriculture teacher in carrying out his community responsibilities. It might involve providing assistance in planning and organizing the teacher's workload. Calling attention to setting up priorities and scheduling activities so as to make efficient use of time may be the solution. It might mean visiting about the importance of maintaining community relations.

In order to carry out a total vocational agriculture program, the instructor must be ready and willing to serve the expectations of the community. To do this most effectively the teacher will, in many cases, need some guidance. The supervisor should provide this guidance.

Professional Improvement. Teaching a complete program of vocational agriculture in our complex society and with our rapidly changing science of agriculture, necessitates constant attention to professional improvement. It is impossible to become adequately proficient in performing all the diverse duties through preservice training alone.

The vocational agriculture supervisor has a responsibility to encourage professional improvement and to provide information on the various methods of improving.

Some teachers may need guidance in setting up and selecting graduate courses. Some may need assistance in developing area or district workshops. The supervisor would be the logical person to provide this help.

The first step the supervisor would follow is to help the teacher identify his areas of greatest weakness and then help him select the most suitable method for improving. His greatest service is helping develop a desire on the part of the teacher to want to improve.

Summary

The function of the vocational agriculture supervisor's guidance program is to help the local teachers help themselves. The guidance activities will be as varied as the individual teachers he supervises. This calls for a broad range of guidance services to meet the needs of each teacher.

Even though each teacher is different, there are certain needs that are basic to all. These needs can be met through the indirect guidance activities of the supervisor. The direct guidance services are designed to meet the individual or personal needs.

As the supervisor offers these direct and indirect guidance services, he must be ever mindful of the fact that he is assisting — not directing; that he is sharing — not telling; that he is helping to decide — not make decisions. The supervisor should not impose his services upon the teacher, but should let him know that he is ready and willing to be of assistance in any way possible.

Naturally, unless a person is going somewhere under his own power, he cannot respond to guidance, just as a boat cannot be steered unless it is under way. This means that a teacher must be expected to do as much as he can, himself. Then, and only then, can a supervisor help him.

Contributions to Agricultural Education

Dr. Herbert M. Hamlin
1894-1968

Excellence as a teacher of teachers, significant research activities in the fields of evaluation, program planning and policy development, prolific writing and a multitude of professional services rendered at the state and national levels characterize Dr. Herbert M. Hamlin.

Born March 23, 1894, in Brookings, South Dakota, Dr. Hamlin grew up on the family farm in Minnesota. Graduating in 1912 from a high school pioneering in offering agricultural education, he continued his education first at Carleton College and later at Iowa State College where he graduated with a B.S. degree in 1916, one of the first graduates in the newly formed agricultural education curriculum.

He returned to Minnesota, teaching high school agriculture and science at Le Sueur High School for nearly two years when he left to become the first county extension agent in Le Sueur County. He held this position a few months and then enlisted in the United States Marine Corps. After his discharge he again returned to Minnesota, teaching high school agriculture in Chatfield.

Following one year at Chatfield, he began his long, distinguished career as a teacher educator in 1920 with an appointment as assistant professor in agricultural education at his alma mater, Iowa State College.

He continued to improve his professional competence, receiving his M.S. from Iowa State University in 1922 and a Ph.D. in education from the University of Chicago in 1931. He moved to the University of Illinois in 1938 following his appointment as chairman of Agricultural Education, a position he held until his appointment as chairman of the Vocational and Technical Education Department in 1961. He retired in 1962.

After his official retirement from the University of Illinois, he was appointed Professor at North Carolina State University, Raleigh, North Carolina. He also served as a consultant to the Vocational Education Department for the State Department of Public Instruction, North Carolina.

Professor Hamlin was the author or shared in the writing of 42 books and monographs and more than 175 articles for professional journals. Among his more widely known books are *Agricultural Education in Community Schools, The Public and Its Education, Public School Education in Agriculture, and Citizens Committees in the Public Schools.* His articles appeared in such professional journals as *American Vocational Journal, Adult Education Bulletin, Better Farming Methods,* the *Nation's Schools,* the *School Executive, School Review, Journal of Educational Research* and *Education Digest.*

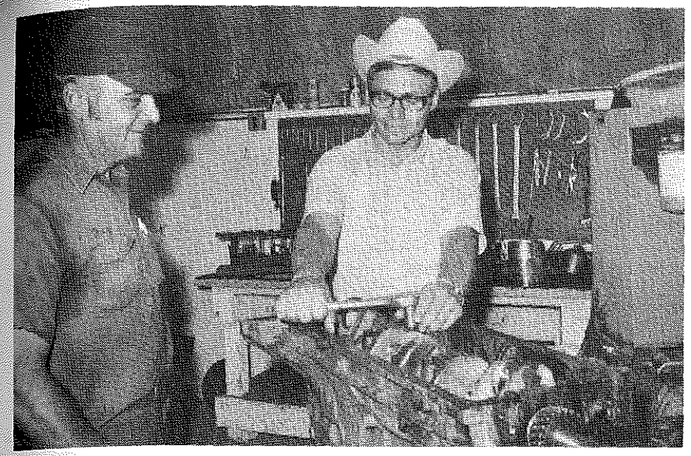
His many professional services rendered included serving as one of the founders and the first editor of *The Agricultural Education Magazine.* He wrote more than 100 editorials and articles for this magazine. Dr. Hamlin organized and served as chairman of the AVA Public Information Committee and served on the AVA Research Committee. He served six years as chairman of the National Research Committee for Agricultural Education, helped organize the Central Regional Research Conference in Agricultural Education and was instrumental in having summaries of studies in agricultural education published by the U.S. Office of Education.

Dr. Hamlin continuously emphasized that agricultural education should be a part of total educational program, not a separate entity unto itself. Agricultural education needed to be balanced with the total educational curricula and fully integrated in the public schools. He was concerned that agricultural education not be restricted to secondary school pupils, but become an integral part of the elementary, junior high and junior college curricula. He strongly believed in active citizen participation in the development of school policy through the vehicle of advisory councils. Dr. Hamlin was always concerned with the welfare of people rather than programs.

In 1962 Dr. Hamlin received the first distinguished service award presented by the American Association of Teacher Educators in Agriculture. He was the recipient of the Honorary American Farmer Degree and AVA Distinguished Service Award. He was listed in "Who's Who in Education," and "Leaders in American Education."

This leader of men died at the age of 74 on December 14, 1968, at his home in Raleigh, North Carolina.

This article was prepared by Lloyd J. Phipps and Everett W. Harris of the Department of Vocational and Technical Education, University of Illinois, Urbana, Illinois.

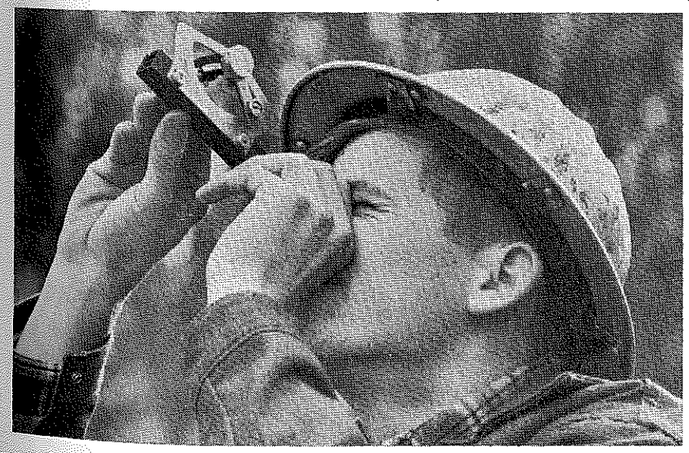


A South Dakota agricultural instructor, Bob Johnson, gets experience in motor repair in a machinery establishment as part of an in-service internship workshop conducted by South Dakota State University. (Photo by H. W. Gadda, South Dakota State University)

Stories in Pictures

Robert W. Walker
University of Illinois

Richard Waybright (left) and his son, Doyle, talk over a management decision that must be made in the operation of one of the Mason Dixon Farms near Gettysburg, Pennsylvania. The Mason Dixon Farms compose a family corporation with Richard, his brother Horace, and brother-in-law, Luther Smith, as main shareholders. They are currently milking over 300 Holsteins. Seventeen employees, in addition to the family, operate the farms. Nearly all the feed is grown on 1100 acres of rich soil, originally purchased from the Penn family. (Photo from National FFA Center)



A vocational agriculture student, Leo Schilter, measures tree height with the Abney level on the Arlington School District's forestry tract that covers 240 acres. (Photo by Alex Crewdson, State Supervisor, Olympia, Washington)

PROGRAM EVALUATION — QUESTIONS AND STRATEGIES

Alfred J. Mannebach
Research Coordinating Unit
University of Kentucky
Lexington, Kentucky

Program improvement in agricultural education takes place when those responsible for, involved with, and affected by the program critically evaluate its outcomes. Modification of programs can be facilitated more easily if everyone concerned will periodically discuss the basic purposes and objectives of the program. Programs of high standards can be maintained if those responsible for the program will discuss the following questions.

1. WHY WAS THE PROGRAM INITIATED? In evaluation, we should ask the question, "Why was the program established in the first place?" If a similar program were being initiated to meet the needs today, what kind of program would be established?

If we are still teaching to obtain the goals developed when the program was established initially, we are more than likely on the wrong track. As the needs of agricultural business and industry change, as the needs, interests, and aspirations of our students change, our programs must be modified. Agricultural educators must continue to adjust their programs to the changing needs of society. Program modifications must be made with the assistance of advisory committees, student committees, and agricultural leaders in the community. An interesting task for a teacher, a teacher and his citizens advisory committee, or a group of teachers might be to discuss the problem, "If we could develop an ideal program, what would be its composition?"

2. WHO IS THE PROGRAM DESIGNED TO SERVE? In maintaining, modifying, and improving our programs of agricultural education, we must consider the total population we have a mandate to serve in our communities, and determine whether or not we are offering a comprehensive program of agricultural education.

Are we serving all of the high school students who want, need or can profit from instruction in vocational agriculture? Do we have a pre-vocational program for students in the elementary and junior high schools? Are we serving young farmers, adult farmers, and those engaged in agri-business? What is our role in pre-vocational and adult education programs in the school system? When we look at the total population that we have a mandate to serve, we see the need for more multiple teacher departments to meet all the needs for agricultural education.

3. WHAT IS THE PROGRAM TRYING TO ACCOMPLISH? What do we want the outcomes of our programs to be? This question relates directly to the first question which we attempted to answer, "Why was the program initiated?" This is a difficult question to answer. For the most part, we, as teachers of agriculture, inherit programs. We continue to operate the programs, many times without considering seriously just what we are trying to accomplish.

Do we know what the desired results of our programs of agriculture are? If we identify the desired outcomes of our program, then we will be in a better position to attain those outcomes. The first step is to describe the general goals of the program. We should state the program objectives in performance terms. At the same time, we should help each student formulate realistic long-range goals which they can strive to attain. Using the long-range goals as a basis, short-range objectives should be developed. If we can show that both the program goals and objectives and the students' goals and objectives have been attained, we can describe in detail what the program accomplished.

Looking at the question in another way, we might consider two additional questions. First, what are the present characteristics of our students? What are their interests, aptitudes, and aspirations? Second, what performance is desired from our students? What knowledges, skills and attitudes do we want the students to exhibit at the end of each lesson, unit, course, program, or period of time when our influence over them is terminated?

How well is the program of agricultural education equipping the student with the knowledges, skills, and attitudes necessary to be commensurate with his interests, aptitudes, and aspirations? How well is the program preparing students for entry and advancement in agricultural business and industry? These are basic considerations for discussion as we attempt to identify what the program of agricultural education is trying to accomplish.

4. WHAT SHOULD WE DO DIFFERENTLY TO FACILITATE THE DESIRED OUTCOMES OF THE PROGRAM? After the desired outcomes have been established, what are we going to do to attain them? We have programs in operation. We have been involved in certain teaching and supervisory activities and we have been getting certain results. Once we establish new goals, identify the desired program objectives, and assist the students in specifying their objectives, then we can consider new ways and means for attaining the program and individual objectives specified. Different strategies may be employed to help each individual attain the desired level of performance. Attempts should be made to identify alternatives and to select those most feasible in terms of time, cost, and performance. Resources needed to attain the objectives specified should also be identified.

5. HOW WILL WE KNOW WHETHER THE PROGRAM HAS MADE A DIFFERENCE? What evidence will be collected to show that the program has made a difference? This is a crucial question in evaluation. As educators plan and develop new programs, or as they revise and modify existing programs, they should specify the evidence that they are willing to accept as indicators of the success of the program.

The indicators may be such things as decreased truancy, a lower dropout rate, an improved attitude of students as evidenced by teachers' perceptions, or an increased number of students continuing their education or attaining immediate employment as evidenced by follow-up studies. Other indicators of success may be a larger percentage of students reaching their occupational objective or positive measurable improvements in knowledges, skills, and attitudes. In any event, the evidence that will be acceptable as indicators of the success of the program should be specified.

After these five questions regarding the local program of agricultural education have been discussed thoroughly, those responsible for maintaining quality programs should possess valid indicators of the kind of program that should be offered. Free discussion of these questions by all concerned with the future of the program can lead to successful planning and implementation. Based upon the results of the discussions, teachers should be able to follow a four step plan that will assist them in maintaining quality programs of agricultural education. The four steps are:

1. State the program objectives in performance terms.
2. Specify the activities that will lead to the accomplishment of the objectives.
3. Identify the resources needed to conduct the activities and accomplish the objectives.
4. Specify the evidence that will be collected to show whether the objectives have been accomplished.

INVOLVEMENT OF PEOPLE IS CRITICAL IN MAINTAINING PROGRAMS OF HIGH STANDARDS

Floyd L. McKinney
Research Coordinating Unit for Vocational Education
University of Kentucky
Lexington, Kentucky

Each year about five billion dollars are spent by the Federal Government on education and an estimated fifty billion dollars are spent on all public schools in the United States. How many dollars does your state or community spend on agricultural education each year? Whatever the amount, as the dollar investment of the public increases for education, there is a growing concern for maintaining educational programs with high standards.

There are points on which one could focus in regard to maintaining programs of high standards. But in our technetronic world there is perhaps no problem more serious than the involvement of people as it relates to maintaining a high quality program.

The educational enterprise, of which agricultural education is an integral part, is a complex system. In nearly all of the program improvement efforts conducted in the educational setting, there is one key lesson. Unless citizens, students, and educators are personally involved in the process of designing and conducting program improvement efforts attempts to improve the program will not be likely to result in much success. There is little doubt but what we can master the technological barriers to educational program improvement; the big hurdles will be those barriers in the minds of people. We can assist in breaking down these barriers when we involve people to the extent that they have full knowledge of the needs for program improvement. Involvement of people should broaden their perspectives and assist in breaking down those rigid attitudes most of us possess regarding change.

Relating systems theory to maintaining high quality agricultural education programs may be a helpful way of looking at the problem of involving people. If we think of the agricultural education programs as a subsystem of a larger suprasystem we can get some idea of the other systems and the people within these systems to whom we should relate. The agricultural education program may be a subsystem of the larger department of vocational education. The department of vocational education may be a subsystem of the Senior High School which is a subsystem of the local school system. The total educational program is actually a subsystem of the local community. If we think of the community as the suprasystem we have to realize that there are many subsystems other than the school system. We must remember that agricultural education has subsystems of its own — Vocational Agriculture I, FFA, etc.

Should we involve people from all of these systems to assist us in maintaining a high quality program? Help-

ful in answering this question is the need to realize the importance of maintaining an open system rather than a closed system. In an open system there is a free exchange of ideas and interaction between the agricultural education program and its environment. In a closed system there would be no exchange of ideas nor would the agricultural education program relate to its environment. In the interest of program improvement none of us desire the sterile atmosphere of a closed system. Change, which is usually necessary in program improvement, receives its major impetus from outside the immediate subsystem.

Who should be involved in assisting the local teacher in maintaining a high quality program? We need to relate to our environment in order to discover the solution to the question. If we accept the idea that we operate within a suprasystem, commonly identified as the community, it would logically follow that we need some means of effectively interacting with the suprasystem. The most effective means found to date is the citizens advisory committee. Citizens are generally eager to assist their schools in a meaningful way if those of us professing to be educators will assist and guide them in fruitful activities.

Another segment of the system to which we must relate is the student population. For far too long we have failed to involve students in program improvement. Perhaps no group of educators has done a better job with youth groups than teachers of vocational agriculture, but we seldom involve students to the extent we should in total program improvement efforts. Students are frequently a neglected group when we consider topics related to planning and evaluating programs of agricultural education. No group of individuals is likely to be more affected by changes in educational programs than are students. The advice of students should be a valuable input for improving programs.

We need to remember that the agricultural education programs does not exist in isolation from other school programs. The agricultural education program is one subsystem of the educational system. If we maintain programs of high quality it will be necessary to have the assistance of educators in other subsystems of the educational system. Administrators, counselors, general education teachers and other vocational educators within the local educational system can make a valuable input in assisting the teacher of vocational agriculture plan and evaluate the local program.

Involvement of citizens, students and educators in the program improvement process is a matter of maintaining a dynamic program of agricultural education. Citizens, students and educators are concerned about the program of agricultural education. They have a right to be included in an advisory capacity.

IS VOCATIONAL AGRICULTURE A CHALLENGE IN YOUR SCHOOL?

Fred F. Glancy, Jr.
Director of Vocational Agriculture
Delaware Metropolitan School District
Muncie, Indiana

How many times have you heard these statements in the past few years? "Vocational Agriculture is on its way out of high schools"; "How soon do you think we should drop agriculture from our curriculum?"; "There aren't many farmers anymore." I would guess you have heard these or similar statements many times. The writer has had the opportunity to visit and be in many schools in the past few years and talk with many administrators and superintendents. When agriculture was mentioned, the attitude was negative. Vocational agriculture was being dropped or not included in many instances where a new school building was being constructed.

We need to consider these questions in order to improve our vocational agriculture program:

How long has it been since someone has challenged your teaching or your vocational agriculture program?

When did you last review your agriculture curriculum?

How much is your department being talked about in your school and community?

Is the emphasis on vocational agriculture in your community declining?

If someone has not challenged your program, or you have not made changes in your curriculum, or your department is not being talked about in your school, and you are satisfied you are doing a good job, then I'd say the department may be headed for disaster. You may ask now, "Okay, we know all this, but what do you suggest we do?" My first suggestion would be: You must believe in agriculture as the basis of education.

There are as many ways to improve and conduct a vocational agriculture program as there are teachers of vocational agriculture. Following are ideas and philosophies of the writer that he used to improve and update the vocational agriculture program in the Delaware Metropolitan School District. This is but one of many ways that we might approach improving the vocational agriculture program.

First, let's look at some of the basis for this philosophy and what is back of the direction we are following in this community. We'll begin with the child when he is very young, still at home, and has not been exposed to school. Watch what happens when he is around something alive, plant or animal; he will leave, in most instances, any toy to go to an animal or watch it perform. We introduce most young people, male and female, to a pet and say, "This is yours." They may not take care of it properly, but ask them and "it's mine."

Next, look at the pre-school books at home and school books of the elementary grades. They are basically agriculture centered. We, in agriculture, might write, or help write, or advise the writers of elementary books to show agriculture and its related areas as it is today. That is, to show the image of agriculture as an industry with many, many varied occupations and not just Farmer Brown on his farm. Think what is said to youngsters as a family drives along the highway. "That's a cow." "See the tractor." "Say tractor." "That's a cornfield." "Those are pigs." "Do you know how a pig sounds?"

Visit a grade school Science Fair and see what the projects are like. The last one the writer attended, all but two projects could be considered vocational agriculture and this was in a city school. Wherever a child goes or whatever he does during his elementary years, things are basic to life and pretty much agriculture centered.

With this picture in mind, would you agree we already have most of the student's interest and curiosity aroused and have set the stage to tie all this into a vocation related to agriculture in some way or another.

The students now enter high school and we immediately switch away from all this agriculture centered life and go to the Arts and Sciences. If at this time or earlier, the opportunities in agriculture and its related areas were explained and examples given based on the interest of the student, one would be surprised at the number of students wishing to further pursue the field of agriculture. Now, ask yourself the following questions. Have I, as an Agriculture teacher, talked with all students and parents individually or as a group? Have I explained vocational agriculture in detail to the guidance personnel who will be talking with these students? Are the counselors informed and has the information I have available been put in their hands? Do they understand the total scope of agriculture and its related areas as it exists today? These are things we do in our district to broaden the understand-

COURSE OF STUDY FOR 1971-72
VOCATIONAL AGRICULTURE

Introduction to Vocational Agriculture: 2 semesters, 2 credits
- Freshman only, only class for Freshman
- To acquaint students with opportunities in Agriculture
- To acquaint students with activities in FFA
- Prerequisite for students majoring in Vocational Agriculture

Classes in PRODUCTION AGRICULTURE

Soil Science: 1 semester, 1 credit, suggested for Sophomores
- To show soil as the basis of life
- To develop skills in soil judging
- To develop skills needed in soil conservation
- To develop skills in basic soil management to insure the most profit from soil without depleting nutrients

Crop Science: 1 semester, 1 credit, suggested for Sophomores
- To follow the semester of Soil Science
- To teach students the identification of major crops and weeds
- To develop skills in the production of major crops
- To develop skills in the proper use of pesticides and insecticides used in crop production

Animal Science: 1 semester, 1 credit, suggested for Juniors
- To teach the uses and identification of animals
- To develop skills in efficient production of meat, milk, eggs, and other animal products

Farm Management: 1 semester, 1 credit, suggested for Juniors
- To follow the semester of Animal Science
- Prerequisites needed are the above Production Agriculture classes
- To develop skills needed for the proper use of land, time, and capital in the production of crops and animals for the maximum return on the investment

Ag. Science: 1 semester, 1 credit, suggested for Seniors
- To identify and control diseases and pests in Agriculture
- To utilize individual study for student's individual study about his farming program

Classes in ORNAMENTAL HORTICULTURE

Hort I: 1 semester, 1 credit, suggested for sophomores
- To develop proficiency in plant identification
- To develop skills in the propogation of plants
- To acquaint students about occupations in Hortieulture
- Each student to complete one project on Horticulture

Hort II: 1 semester, 1 credit, suggested to follow Hort I
- Prerequisite — Hort I
- To develop skills in plant care and management
- To develop skills in floral arrangement
- To develop skills about care and management of fruits and vegetables
- To develop skills needs to maintain a home garden

Landscaping I: 1 semester, 1 credit, suggested for Juniors
- Prerequisite — Hort I
- To acquaint students about occupations in Landscaping
- To develop basic skills needed in Landscape Archi.ecture
- To develop skills in designing the homeground
- To develop skills needed in lawn care
- To develop skills in the care of plant materials

Landscaping II: 1 semester, 1 credit, suggested to follow Land. II
- Prerequisite — Landscaping I
- Applying skills and principals from Land. I in the drawing of actual plans
- Acquiring sources and prices of the materials to be used in completing the work from the plans completed

Advanced Landscaping: summer course, 1 credit
- Prerequisite — Landscaping II
- To obtain the equipment needed to landscape
- To select materials used to landscape
- Doing actual landscaping projects

Ornamental Horticulture Management Specialities: summer course, 1 credit
- Prerequisite — Hort I and Hort II
- To develop skills in greenhouse management
- To develop skills in turf management
- To develop skills in nursery management
- To develop skills in orchard management

Conservation: 1 semester, 1 credit
- To develop an understanding of the proper use of our natural resources
- To study the ecology of our community
- To develop skills in wildlife conservation
- To develop skills in aquatic life conservation
- To develop skills in forestry conservation
- To develop skills in controlling air pollution

On-the-job Training Program

Public Relations: 1 semester, 1 credit, suggested for Juniors
- To prepare the student for work experience
- To review state and federal laws and regulations about student employment
- To develop skills in making a job interview
- To develop skills in keeping a job

Agriculture Occupations: summer, 1 or 2 semesters; 2 credits per semester
- Prerequisite of Public Relations plus appropriate classroom preparation for the specific occupation in which the student will be placed
- Requires classroom experience plus work experience
  - —1 hour per day in classroom plus 2 hours free for work during regular semester
  - —5 hours per week in classroom plus time for work during summer session
  - —125 hours of work minimum for credit per semester or summer session
- Class deals with problems from the work experience of the students

Classes in AGRICULTURAL MECHANICS

Small Gasoline Engines I: 1 semester, 1 credit
- To provide experience in the theory, operation and application of small gas engines
- To provide experiences in the selection, identification and use of tools
- To impress upon the student the importance of safety in the operation of gas engines and tools

Small Gas Engines II: 1 semester, 1 credit
- Prerequisite — Small Engines I
- To provide experiences in the tune-up, repair and reconditioning of small gas engines
- To provide the student with experience in the total area of establishing and operating a small gas engine repair shop

Welding I: 1 semester, 1 credit
- To familiarize the student with the basic arc and acetylene welding techniques
- To familiarize the student with the various types and sources of welding equipment
- To impress upon the student the value of safety in using welding equipment

Welding II: 1 semester, 1 credit
- Prerequisite — Welding I
- To instruct the student in all welding positions
- To familiarize the student with the repair, maintenance and construction of labor saving devices
- To familiarize the student with experiences in reading and drawing of project designs

Electric, Plumbing and Concrete: 1 semester, 1 credit
- To develop within the ability of the student the basic skills — selection, layout and use of electrical equipment and tools needed
- To familiarize the student with the basic tools, selection, and installing fixture in farm structures
- To familiarize the student with the buying, mixing and forming concrete

Farm Carpentry: 1 semester, 1 credit
To familiarize the student in the —
1. Selection of tools and their use
2. Making plans and reading blueprints
3. Selection of materials of construction
4. Basic skills in measuring and cutting materials to size

Farm Structures: summer, 1 credit
Prerequisite — Farm Carpentry
To develop the skills needed in the selection and buying of materials
Actual construction of farm buildings needed in the production of crops and livestock on the farm
No pay

Farm Mechanics: summer, 1 credit
Prerequisite — Small Engines I and Welding I
To provide experiences in the actual set-up, maintenance and repair of farm machinery
No work on tractors will be permitted

Any student enrolled in Vocational Agriculture wishing to major in Agricultural Mechanics must complete the following curricula:

1. Introduction to Voc. Agriculture I	1 credit
2. Small Gasoline Engines I	1 credit
3. Welding I	1 credit
4. Electric, Plumbing and Concrete	1 credit
5. Farm Carpentry	1 credit
6. Farm Structures or Farm Mechanics	1 credit
7. One other course of your choice	1 credit
	7 credits

ing of our vocational agriculture program.

A person does not have to be from a farm to have an interest in agriculture or its related areas. Almost everyone is working to help us build an interest in the students for agriculture. All we need to do is offer the student what he wants that is related to his interests.

Our school district is in a rural-urban community with three small towns within its boundaries and a city of 75,000 bordering one of its boundaries. The four high schools originally within the area are now reorganized into the Delaware Metropolitan School District. We still have two high schools and are in the process of planning new facilities for one high school for the district to replace the two. Our school population is approximately 3700 students, Kindergarten through grade 12.

Each of the superintendents and boards have asked for a review of the vocational agriculture program. Some of the board members were not knowledgeable of a vocational agriculture program and none knew of the program in total and what was being done at that particular time. After each presentation and review, our program was allowed to expand as proposed by our original plans.

Because of the questions, the selling of the program, the changes in administration, and the rationale, the writer has become more knowledgeable of vocational agriculture and how to improve, increase and sell a program than ever before in his life.

Look at our vocational agriculture program while keeping in mind what has been mentioned. A few years ago, unless you were from a farm, it was difficult to be accepted into a vocational agriculture class, if at all; however, we tried to work with any student interested in agriculture. When our State Department gave us an opportunity to write a program to be used as a pilot program certain ideas were incorporated.

First, and most important, a complete program of orientation for community, school, and administration was planned. All media were to be used — television, radio, newspapers, written reports and talks. Guidance and Vocational Agriculture were tied together with complete understanding of the program, so vocational guidance becomes a must in this program. The student files built by the guidance department were used for vocational counseling by the agriculture department. Conferences were held by the guidance department with every student in grades 8 through 12 and his parents to consider a vocational choice. If their vocational interest and the information on the student showed an interest toward vocational agriculture or its related area, the program was explained in detail by the vocational guidance counselor or vocational agriculture teacher. An orientation meeting of all students and parents interested in vocational agriculture is held each year and the total program explained. The vocational agriculture curriculum is built around the student and his needs instead of fitting the student into the program. This calls for flexibility and takes more work and closer contact with the students at all times. The guidance department is used constantly to help us understand each student and how to meet his needs.

We try to appear on every type of program in the community and reports are made to the administration, teachers, parents, superintendent and school board as often as needed to keep them informed. They are invited to attend meetings, banquets, etc., so as to know the activities in which the vocational agriculture department participates. We are planning a building program and at this time, the board, the superintendent, and administrators are seeing to it that the architectural plans are adequate for the agriculture department and its growth because they are fully informed of the program and understand what is trying to be done. When the program was explained at a recent board of education meeting, the members who were not acquainted with the agriculture program before, stated they never realized agriculture was so broad and there seemed to be no end to what could be achieved in the related areas.

The agriculture curriculum has moved from Agriculture I, II, III, and IV plus shop to the following:

We have expanded from a department of 55 students to 366 students. Eighty-eight students transferred out of the agricultural curriculum. We have not introduced agriculture into one of the high schools because of lack of room, but we anticipate a large enrollment when we move into our new facilities.

We have 20 girls in the department taking Horticulture, Lanscaping, Animal Science and Introduction to Agriculture. We hope to add courses in Floral Arranging and Rural-Urban Development as space permits. Approximately 30 students will receive on-the-job training this year and it is anticipated that approximately 50 will be placed next year.

A positive attitude must be maintained at all times. Vocational Agriculture must be promoted each and every time the opportunity arises. A close contact with student, parent, counselor, and teacher at all times is a must.

Because of the way our schools are organized today, if the guidance personnel is not completely informed and as knowledgeable about agriculture opportunities as the teacher, then the program may never move ahead. The responsibility rests with both the guidance counselors and vocational agriculture teachers in keeping informed; however, if the agriculture teacher is sincerely interested in expanding his program, he should take the initiative to keep the guidance department informed about vocational agriculture at all times.

Be flexible with the student! Remember how many times you've changed your mind.

How About That Farmer?

Richard P. Arter
Crestline, Ohio

Richard P. Arter farmed for 21 years from the time he quit The Ohio State University in 1948 until he returned to college in 1969. He received his B.S. in Agricultural Education at Ohio State University in June 1970 and plans to teach after completing his Master's program.

Hire a farmer to teach vocational agriculture! Well, maybe not just any farmer, but one of your local successful farmers. Perhaps he is that successful tenant farmer of long standing on the "ole Beam farm," or an equally successful farmer who decided to rent out the farm and get a job in town rather than continue expanding to keep up with the economy. Finances are getting tight now for many farmers and this might be just what he is looking for to bolster his income. He has the occupational experience, and, to top it off, the kids have left home and Mom has a job in town.

Has this idea made its way to your school board? It would seem that the thought must have crossed the mind of more than one board member these last few years as schools have had their troubles finding qualified personnel to fill vacant positions in their vocational agriculture departments. Even when they found a young teacher just out of college, the draft has taken him . . . or soon will. An Ohio State University study made in 1970 showed that 52 vocational agriculture departments in the United States could not open their doors in the 1969-70 school year because of lack of qualified teachers.

At the present time, new agriculture education graduates are the major source of vocational agriculture teachers. But there are other sources of teachers, one being that of former vocational agriculture teachers who have left teaching for other occupations. The 1968 National Seminar of Vocational Agricultural Educators sponsored by the Agricultural Education Department of the Ohio State University suggested the tapping of graduates of other departments in the College of Agriculture who are willing to become certificated. They also suggested persons with agriculture occupational experiences who have become skilled in a particular field and who are willing to meet the qualifications of certification.

Why should a school administrator consider hiring a successful farmer to teach vocational agriculture? He has the necessary experience! The school wouldn't want to hire just any farmer, but perhaps one who has a degree or some college credit. In addition he should have an altruistic feeling toward children (e.g., he may have been a 4-H leader, Boy Scout leader, Sunday school teacher). The farmer should have been a successful farm operator for a number of years, someone who has raised his children and is now free to make a change in his life if he so desires. There are many men of this situation who might be interested in teaching what they know best . . . production agriculture.

After World War II many young men began farming with the aid of the GI Bill. These men are now in their 40's and 50's and have reached a point in their lives where they no longer have the physical stamina they once had, but they do possess the intelligence and desire to teach others what they know. Many are hard pressed by economic and technological changes to expand farther than they would like. Here is a source of teaching personnel barely tapped.

You ask, "Why would a man that age want to quit a successful farming operation and place himself under the stress of a teaching situation?" Or, "He's too old to make the change! He'd have to take a terrible cut in income to complete four years of college . . . . if he were indeed able to get through it at all. And would it be justifiable to certificate him without asking him to meet the certification requirements that others have to meet? Just because he's a good farmer doesn't indicate that he will be a good teacher. And how would you interest him in the position in the first place?" These are valid questions which deserve frank answers.

In the first place, there are many reasons a man would quit farming at the ages of 40-50 to enter other employment, including health, family pressures, economics, or any combination of these. He has not necessarily been defeated by any of these reasons, but realized that there are other things in life which are as challenging as farming. With proper screening, the chances are good that certain of these farmers may make excellent vo-ag teachers.

Assuming that a local board of education is interested in adding another teacher to its department, where might it find a farmer who is interested in such a position? The present vocational agriculture teacher should know of qualified persons in the locality. He has a number of contacts working with the young adult and adult farm programs. He also has contacts through other vo-ag teachers in the area.

Before employing farmers as teachers, there should be a screening process comparable to that of prospective college students enrolling in agricultural education. The farmer can help screen himself too. Being an older person, and preferably a father, he should have prior knowledge of the possible situations that may occur. Not many persons will deliberately lay themselves open to a disagreeable situation.

This leads to one last argument, "Why hire an older man who doesn't have as many years left to work as does the younger man?" This argument may appear sound to some, but there are two factors which are in favor of the older man: 1) he will teach with an understanding of his subject, and 2) he is more likely to continue teaching once he begins as he is more apt to have set a goal for himself than the younger man.

Vocational agriculture needs additional teachers and some successful farmers with much agricultural experience are looking for other jobs. Why not consider this untapped reservoir if you are unable to find qualified teachers?

DEVELOPING AN AGRICULTURAL CURRICULUM WITH MEASURABLE OBJECTIVES

Marcus Juby
Agricultural Education
Oklahoma State University
Stillwater, Oklahoma

and

Bob Patton
State Department of Vocational and Technical Education
Stillwater, Oklahoma

Vocational education in agriculture is changing. Fewer students are returning to the farm while more are entering the field of related agricultural occupations. Students of today, who will be the agriculturalists of tomorrow, need to become well-educated individuals, constantly seeking information on which to base the many decisions they will be required to make.

In Oklahoma, teachers of vocational agriculture, faced with the continuing problems as to what to teach and whom to serve, are hampered because of lack of instructional materials to assist them in meeting the needs of students. This has created a challenge for curriculum personnel. The Curriculum and Instructional Materials Center of the State Department of Vocational and Technical Education accepted this challenge by instituting a new and unique method of teaching vocational agriculture with an extensive use of measurable objectives.

Measurable Objectives

A measurable objective is a description or statement of anticipated change in student behavior, subsequent to his having successfully completed a learning experience. Objectives are the most important part of any instructional program. When clearly defined objectives are lacking, it becomes difficult to evaluate the teaching program effectively. A means of selecting appropriate instructional materials becomes impossible or impractical. Most teachers have, at one time or another, unwittingly used objectives as a means of teaching various areas within a course; however, in general the objectives used were not stated in terms of expected student behavior. For example, "To develop an understanding of the history of the FFA," is an objective which is unclear, both to the teacher and to the student. Who is expected to exhibit the behavior — the student or the teacher? How can one determine when the objective has been reached? Even a cursory review of this problem convinces one that in order for teachers of vocational agriculture to become effective in teaching, they must devise instructional units that are clear both to the teacher and to the student. For example, the above stated objective could have been written in the following manner: "The student will be able to identify the legislative act which expanded and made possible effective growth and development of the FFA."

Basic Core Curriculum Guide

In 1968, Oklahoma vocational agriculture teachers adopted a Basic Core Curriculum Guide outlining four years of instruction in vocational agriculture. From this basic core, units of instruction have been developed for Vocational Agriculture I to cover six sections: Careers and Orientation, Leadership, Supervised Farm Training, Animal Science, Plant and Soil Science, and Agricultural Mechanics.

The instructional units are designed to account for 60 per cent of an instructor's time in teaching vocational agriculture. The remaining 40 per cent is left to the individual instructor for him to have freedom to use his own initiative in making content selection compatable with the demands of his local community.

Additional units of instruction for Vocational Agriculture II, III, and IV will eventually be developed in keeping with the established Basic Core Curriculum Guide. (Figure A). Plans call for completion of these units within the next two years using the format developed and used in compiling instruction in Vocational Agriculture I.

Instructional Units

Each instructional unit includes objectives, suggested activities, information sheets, job sheets, transparency masters, a quiz, and answers to the quiz.

All instructional units are written with *measurable objectives.* Such objectives state the goals of instruction and learning in a way that both teacher and student will know the changes in behavior *expected to occur* as a result of instruction. In short, objectives are a means of providing a sense of direction and accomplishment *for the student.*

Vocational agriculture teachers reviewing units of instruction in animal science. Left to right: Harold Troutman, William Bradley, Jim Rucker, John Kusel and Glen Gardner.

Three divisions are used in stating measurable objectives: *general objectives,* stating the subject matter to be covered within a section; *terminal objectives,* stating the subject matter to be covered in a unit of instruction within a section; and *specific objectives,* stating the performance of the student in order to reach the terminal objective (Example A). These specific objectives clearly state *who* is expected to exhibit the change in behavior as well as the means of measuring the behavior.

In order to reach the measurable objectives of instructional units, information sheets, job sheets, and transparency masters were developed. Information sheets present brief summations of what is to be included in the class presentation; these are usually constructed in outline form. This accomplishes the need to provide information both to the teacher and student in a concise form. In addition, teachers are encouraged to expand information sheets into greater depth, depending upon needs as may be evidenced in his local situation.

As a means of measuring the expected change in behavior of a student, a quiz was developed for each instructional unit in relation to each specific objective. As an aid to the teacher, answer sheets for each quiz were provided.

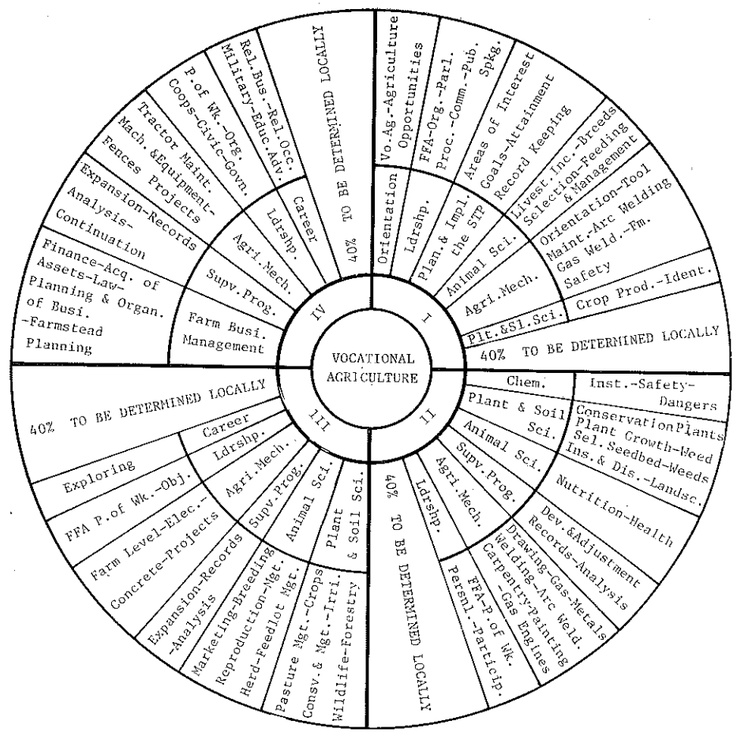


Figure A. Basic core guide for a four-year course of instruction.

Summary

The development of this curriculum should prove most useful to teachers of vocational agriculture. To the best of our knowledge, no other state or institution has attempted to develop a complete curriculum in vocational agriculture using *measurable objectives* as the basic undergirding structure.

It is anticipated that the approach taken in developing this curriculum will insure success through the cooperation and combined efforts of the Agricultural Education Department, State Supervisors of Vocational Agriculture, and teachers of Vocational Agriculture, which served as an advisory committee.

The core curriculum developed should make quality instruction possible for all vocational agriculture instructors in Oklahoma. The 60 per cent of instructional time allocated through the curriculum should make possible standardization of instruction while still providing for the exercise of individual initiative and choice, which has for many years been a distinctive mark of successful vocational agriculture programs.

Example A —

The Future Farmers of America
Unit I

Terminal Objectives

After completion of Unit I, the student should be able to apply the fundamentals of the FFA to his membership in the local chapter. He will possess concepts related to organizing and operating a local chapter and will recognize the importance of the history and purposes of an organization. Eighty-five per cent of the students should score at least ninety per cent on a post test.

Specific Objectives

Upon completion of instruction, the student should be able to:

1. Write a 300 word paragraph describing major events in the history of the Future Farmers of America.
2. List the requirements for membership in the FFA.
3. Name the officers of the local chapter and one duty of each.
4. Name the officers of the state association.
5. Select from a list of names the state FFA advisor.
6. Identify the FFA colors.
7. Write the FFA Motto.
8. Recite the FFA Creed.
9. List the aims and purposes of the FFA.
10. List the five symbols which make up the FFA emblem and the meaning of each.
11. Select from a list of terms the four degrees of active membership.
12. Identify the types of membership in the FFA.
13. Write the eight essentials of a good chapter.
14. List five areas that should be covered in a program of work.
15. State who appoints and who directs FFA committee work.
16. List the purposes for which committees are formed.

In-Service Education in California

Larry P. Rathbun
Agricultural Education Department
California State Polytechnic College
San Luis Obispo, California

In-service education for California teachers of vocational agriculture has long been a high priority item for California State Polytechnic College, San Luis Obispo. Under the leadership of H. H. Burlingham, professor and head, Department of Agricultural Education, the vo-ag teachers in California have had the opportunity to participate in a wide range of professional improvement activities. These vary from a mini-workshop (one afternoon or a Saturday) on horse husbandry to a three-day workshop on improving the administration of multi-teacher departments of vocational agriculture.

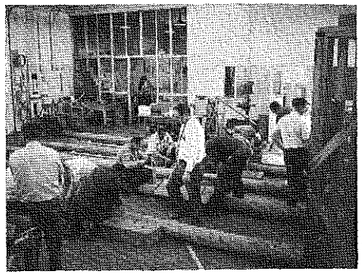
The workshop technique of in-service education is widely used by Cal Poly because of its flexibility in providing opportunity for presentations by experts in the subject being studied, while simultaneously allowing time for practical "learn-by-doing" skill development which is a trademark of the Cal Poly philosophy.

Many of the workshops have been conducted in cooperation with the Bureau of Agricultural Education, California State Department of Education. This cooperative arrangement has been particularly valuable in the planning, operation and follow-up for the individual workshops. Through the regular meetings of the California Agricultural Teachers' Association, the staff members of the Bureau of Agricultural Education assist in identifying the need for various areas of professional improvement. The Bureau also assists in providing the funding for some workshops through funds allocated under the National Vocational Education Act of 1968.

As a result of the efforts of a full-time Specialist in Agricultural Mechanics, William D. Wills, a total of 17 workshops serving 289 teachers have been conducted during the last two years. The specialist is responsible for coordinating the services of an industry representative in the field under study, who then serves as the workshop "expert" under the guidance of the Bureau specialist.

Workshops are normally conducted on a Friday evening and all-day Saturday session followed by another all-day session. For attending the full 27 hours of class, and submitting lesson plans covering the topic of the workshop, a teacher may earn 1 ½ quarter units of professional credit. Workshops have been conducted on Small Gas Engines, Rural Electrification, Use of the Ford Power Train, Basic Hydraulics, and Diesel Engines. An additional series of mini-workshops centered around the development of a single skill have been conducted on an individual and group basis ranging from 3-8 hours.

Another type of workshop cooperatively conducted for many years by Cal Poly and the Bureau of Agricultural Education is the annual Skills Week held each June on the San Luis Obispo campus. Vocational agriculture teachers may elect to attend any three of the 12-15 sections offered each year. Each section is 2-3 hours in length for 4-4 ½ days and each teacher participates in a minimum 27 hours of skill development workshop activity during the week in such areas as basic or advanced welding, nursery practices, farm machinery operation, livestock skills, safe use of pesticides and others. In each session, the class activity is centered around the skills and curriculum which are readily adaptable to the local school situation, whether it be a high school or community college.



Teacher at work in a rural electrification workshop.

Another area of current involvement is a series of three-day workshops funded under provisions of the Education Professions Development Act conducted by Cal Poly in cooperation with the Bureau of Agricultural Education. The two areas receiving attention under this program are: (1) the Improvement of the Administration of Multi-Teacher Departments of Vocational Agriculture, and (2) the Involvement of Youth With Special Needs in Effective FFA Programs. The participating teachers have an opportunity to associate with recognized leaders in the area of study as well as develop through workshop activity a set of guidelines for their use in their school.

The workshop principal of in-service education is widely used in California. Based on the previous success of this technique, many more are planned for the professional improvement of California teachers of vocational agriculture.

News and Views of NVATA

JAMES WALL
Executive Secretary

NVATA was well represented at the Denver Seminar by 7 members of the Executive Committee and about 40-50 other teachers of Vocational Agriculture. This is the first time that teachers of Vocational Agriculture were invited to participate in a National Seminar. Another "score" for NVATA. From all reports—the teachers made many excellent contributions. Most of those involved felt the Seminar to be very worthwhile, others are assuming a "wait and see what happens attitude."

DID YOU KNOW???

Any person who lives in the United States (other than those persons residing in the District of Columbia) can send a "personal opinion message" to the President of the United States, the Vice President, members of Congress, or other public officials who hold high office. Such a message should give the individual's personal opinion about any matter of concern he may have, including legislative issues, and it may be sent for a cost of $1.00.

The telegram must not contain more than 15 words and the sender must be sure to specify that his message is a *Personal Opinion Message*. After the message, the sender may sign his name and give his address if he desires to do so. These kinds of messages may be sent at any time during the year.

* * * *

The secondary enrollments in agribusiness reached an all-time high of 550,823 in 1970, or an increase of approximately 14,000 over FY-1969. Of this enrollment 338,173 were enrolled in production agriculture classes and 212,650 in off-farm agri-business classes. The percentage of students enrolled in off-farm agri-business courses in 1970 was 38.4 compared to 30.2 in 1969 and 10.7 in 1965. This may appear old but the situation probably has not changed considerably. The January 1951 issue of *The School Review* carried an article reporting the difficulties of beginning teachers. Eight types of difficulties, ranked in descending order of the number of times reported, were:

1. Handling problems of pupil control and discipline.
2. Adjusting to deficiencies in school equipment, physical plant conditions, and materials.
3. Adjusting to the teaching assignments.
4. Adapting to the needs, interests, and abilities of pupils.
5. Motivating pupil interest and response.
6. Keeping records and making reports.
7. Handling broader aspects of teaching techniques.
8. Being able to establish and maintain proper relations with supervisors and administrators.

Let us hope that the new members who joined our teaching profession this year will have a minimum of difficulty. If you are confronted with problems, discuss them with your administrator, with other teachers, with members of NVATA.

A NEW START

I will start anew this morning with a higher, fairer creed;
I will cease to stand complaining of my ruthless neighbor's greed;
I will cease to sit repining while my duty's call is clear;
I will waste no moment whining and my heart shall know no fear;
I will look sometimes about me for the things that merit praise;
I will search for hidden beauties that elude the grumbler's gaze;
I will try to find contentment in the paths that I must tread;
I will cease to have resentment when another moves ahead;
I will not be swayed by envy when my rival's strength is shown;
I will not deny his merit, but I'll strive to prove my own;
I will try to see the beauty spread before me, rain or shine;
I will cease to preach your duty and be more concerned with mine.

Anonymous

BOOK REVIEWS

CONSERVATION EDUCATION: A SELECTED BIBLIOGRAPHY SUPPLEMENT compiled by Joan Carvajal and Martha E. Munzer. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1971, 38 pp. $.75.

This supplement to the CONSERVATION EDUCATION: A SELECTED BIBLIOGRAPHY has been prepared to bring you up-to-date on the additional materials which have been produced since the bibliography was published in 1968. It contains selected titles from among the many published between 1967 and the summer of 1970.

LOCALLY DIRECTED EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS, by H. M. Byram and Marvin Robertson. Danville, Illinois: The Interstate Printers & Publishers, Inc., 1971, $3.00.

LOCALLY DIRECTED EVALUATION OF LOCAL VOCATIONAL EDUCATION PROGRAMS, edited by H M. Byram and Marvin Robertson, is a manual for administrators, teachers and citizens to use in evaluation of local or area programs. It is also a reference for state leaders to use in preparing local and area administrators and leaders to plan and direct such evaluations.

Why conduct a locally directed evaluation? An evaluation ought to be done by those who are responsible for improvement of the programs. While in some states the responsibility for local program development and improvement may lie with the state, or a subsidiary agency, in most states local boards, administrators, and teachers have a large share in this responsibility.

The Table of Contents shows the complete coverage of the book:

CHAPTER I. FRAMEWORK OF LOCALLY DIRECTED EVALUATION
CHAPTER II. A SYSTEM FOR ORGANIZING AND CONDUCTING AN EVALUATION
CHAPTER III. ORGANIZING AND USING RESOURCES FOR EVALUATION
CHAPTER IV. STUDYING THE LOCAL PROGRAM
CHAPTER V. CONDUCTING FOLLOW-UP
CHAPTER VI. IDENTIFYING PROGRAM NEEDS
CHAPTER VII. ANALYSING, INTERPRETING AND REPORTING INFORMATION
CHAPTER VIII. EVALUATION AND PROGRAM PLANNING

A locally directed evaluation presupposes that the initiative and operation of program evaluation is a responsibility of the local or area school and community and that leadership for it is to be provided locally. Cooperation with a state-wide evaluation is to be expected, but the primary focus is on locally directed evaluation. The term "evaluation," as used in this manual, refers to the task of making judgments about the worth or value of a total program or vocational or technical education. It involves primarily the determination of the extent to which previously established goals and objectives are being or have been attained. This book provides the guidelines needed for such evaluation.

POPULATION RESOURCES ENVIRONMENT, ISSUES IN HUMAN ECOLOGY, by Paul R. Ehrlick and Ane H. Ehrlick, Stanford University, W. H. Freeman and Company, San Francisco, 1970.

This book treats areas of great importance to all men. It is not a text for classroom use in high school but the material contained in the book can help teachers in preparing for some classwork. There are much data and some charts which can be used in classroom presentations.

In general, this would be a very good teacher reference book since much of our future work in agriculture must be planned with consideration toward its ecological and environmental effects. Certain students may benefit from the use of this reference book when preparing special reports.

Most people would benefit from reading this book as it presents many of the problems affecting the world today in understandable terms. Much of this information should be considered when preparing teaching outlines.

Robert T. Benson
Clemson University

NEWS TO ME

Dr. A. Webster Tenney, former National FFA Executive Secretary from 1943-1957 and National FFA Advisor from 1961 to 1965, has taken an assignment in Jamaica with the International Labor Office. He will work with five international experts from ILO to help develop vocational and technical education programs, development and supervision of preservice and inservice teacher education programs and work with business, industry and the Jamaican ministries of education and labor.

* * * * * *

The Kansas Agri-business Students Association will provide the staff for an exhibit at the Agricultural Career Show at the 1971 National FFA Convention in Kansas City. States have been requested to supply brochures by September 1 describing available post-secondary education agri-business courses. Encourage your delegates to visit the exhibit.

* * * * * *

We anticipate or remember but never are.

—W. H. Odden

* * * * * *

Agriculture has long served as a classroom example of pure competition. The industry is composed of millions of small firms.

—Earl O. Heady in
FARMERS IN THE MARKET ECONOMY.

* * * * * *

Few of us ever stop to think about how much food we eat in a year. You may find it hard to believe, yet each of us eats nearly three-quarters of a ton every 365 days! This amounts to nearly 3 tons a year for a family of four and a whopping 150 million tons to feed us all.

Donald D. Durost in
FOOD FOR US ALL.

* * * * * *

Despite all the research on creativity currently under way in many places, it does not appear likely that there will ever be a single, widely accepted test for creativity. What is more probable is that we will become much more sensitive to aspects of students and their environments that have previously been overlooked. Once the characteristics of creative people have been defined more clearly, research will probably place major emphasis on investigating those conditions or methods of instruction that increase the creative capabilities of students.

—Educational Testing Service
Annual Report, 1965.

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In 1950 a farmer had to have a gross income of $20,000 to net $8,000. Because of a combination of inflation and a diminishing margin of profit, the average farmer now needs a gross income of $48,000 to have the equivalent of $8,000 net income.

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G. T. Ward, McGill University, Montreal, Canada, speaking at the 1970 meeting of the American Society of Agricultural Engineers in Minneapolis, Minnesota, predicted a source of electricity in the future is from the collection of concentrated solar radiation with satellites in space and transmitting it to earth in high-density beams of selected wave lengths.

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There are no reports of individualized instruction programs (independent study, self-directed etc.) resulting in less achievement. Individualized instruction may not help — but it won't hurt, either.

—Report on Educational Research,
October 1970.

Feeding ground newspapers blend with molasses to farm animals may one way to reduce their competiti with man for cropland that suppli direct human needs. Scientists Beltsville Experiment Station fou that newsprint could replace 8 to per cent of the roughage in a ratio It was part of a study to make rum nant animals more efficient users materials that man can't eat an which may pose potential pollutio problems. Newspaper may be good f the digestion — how about the circu lation?

—Agricultural Research, Februar 1971

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Maybe it is time for ecologists and other well-meaning individuals to pause in their efforts to bring changes for environmental improvement to consider whether their actions could change our food balance from one of bountiful plenty to one of abject famine. Dr. N. C. Brady, Cornell University, estimated that all of the food stored in U.S. warehouses and government surplus storage would feed our population for only 90 days if all food production was stopped.

—Land O'Lakes Mirror, February 1971.

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Farmers are faced with the reality that today they must deal with city Congressmen who are not opposed to them but who are a lot more concerned with other matters. Only 85 of 435 seats in the House of Representatives are filled by individuals with more than 15% of their constituents living in rural areas.

Senator Ted Kennedy, in a most beautiful eulogy of his brother, asked that the late President be remembered simply as "A good and decent man, who saw wrong and tried to right it, saw suffering and tried to heal it, saw war and tried to stop it." He quoted his brother as saying, "Some men see things as they are and say why? I dream things that never were and say, why not?" What a wonderful world this would be if we each adopted this philosophy.