Stories in Pictures

GILBERT S. GUILER
Ohio State University

Effective teaching can be done by outside agricultural agencies. A District Wildlife officer displays a “skeet” garter to Charles Palmer and Larry McCroney, Florida.

Students in Alabama Vocational Agriculture departments benefit effective teachers through actual practice in reporting that range practices of wildlife management.

Innovative programs in Maryland’s Vocational Agriculture departments include facilities for Greenhouse management, separate library, and an applied science research laboratory.

FEATURING INNOVATIVE PROGRAMS

1917 .......................... 50th ANNIVERSARY .......................... 1967
1st National Vocational Education Act
Innovator or Late Adopter?

Merrill research has been done on the adoption of improved practices by farmers. Research on the adoption process by teachers of vocational agriculture is more limited. None of this knowledge has gone for enough to characterize teachers as Innovators or Late Adopters, however, it appears obvious that vocational agriculture teachers vary widely as to their AQ (Adoption Quotient). Let's assume, for purposes of this discussion, that there is a close relationship between teachers of vocational agriculture and farmers in their adoption of new techniques. The description of their personal AQ would be something like this:

The Innovators would be about 25% of the total number of teachers. They are the first to adopt new practices, and have a reputation for doing so. They are willing to take the risk of the new practice rather than waiting until the new practice is proven to be better than the old. If the climate is not favorable for changing ways of teaching, then the innovator will not be the most popular teacher among his fellow teachers. Innovators are usually alert and looking for new ideas; in fact, they do not wait for the new ideas to be brought through the usual meetings, but may by-pass the usual channels of communication and go to original sources, such as research. They not only have a master's degree but are usually taking teaching courses, not always in agriculture or even Ed. They are usually not past middle age, but some older teachers continue to be innovators while some younger ones are not.

The Early Adopters would be about 15% of the teachers. They have many of the same characteristics as the Innovators but are not as vocal. They tend to follow channels of communications rather than seeking their own. Usually teachers with the organization. They too have above average education and continue their education but along more conventional lines. Usually not past middle age.

The Majority Adopters would be about 70% of the teachers, but there would be considerable differences within this larger group. They could be divided into Early Majority, in terms of their readiness to adopt a new practice. The earlier ones are conservative and traditional while the later adopters are skeptical of new ideas. These teachers would not readily obtain information readily available. Study of the more progressive of this group would enroll in classes for their professional improvement at least half of the group would enroll in a class unless their own interest to enroll in the group is low. The Late Adopters would be about 15% of the teachers, the last to adopt a new practice. In fact, some of the Innovators and Early Adopters would have already discarded the idea for a newer one before some of the Late Adopters are discussing the previous idea. Some call these Aggards. They are usually older, but some younger teachers "get behind" only and never catch up. New ideas are rejected because: "they won't work in my situation." Never enroll in any course unless forced to do so. Do not subscribe to professional journals and have as little as possible to do with the organization.

As stated, this description is imaginary, based upon the adoption process among farmers, and may not prove useful until some research on the adoption of improved professional practices. In the meantime, maybe a close look at your own reaction to a new idea might indicate whether you are more nearly an Innovator or a Late Adopter.

Cyrce Scarrow
How Is the Climate Where You Work?

As indicated in your first study of geography, climate goes a long way toward determining the way of life in an area. In determining the way a teacher goes, this is particularly noticeable with respect to innovation or creativity on the part of a teacher. If the climate is not right, it is difficult for a teacher to be creative or even try out a new idea. Some research in this area indicates that teachers can make changes within the classroom, or in programs such as the College of Education, and that the teacher must have support from the leadership of the administration. What determines this climate which is such an influence on educational programs, particularly on the teacher interested in innovations?

Professor Harold Anderson, Michigan State University, suggests that school systems can be seen, with respect to encouraging creative, in two systems, The Open System and The Closed System.

The Open System permits originality experiences, opportunities, and innovation on the part of students as well as teachers. Such a system recognizes and encourages uniqueness in perception and approach. Emphasis is placed on the opportunity of each individual to find his way to success and to find his own direction. Teachers are encouraged to help students reach their potential. The Closed System is one in which students are more closely supervised and are given less freedom to develop their own interests. Teachers are expected to help students develop their own interests and to guide them in their development.

Obviously, if there is interest in developing creativity, which seems necessary for innovations, some openness must be provided. How does this relate to vocational agriculture? This is especially timely, since most states are making widespread efforts to revise and improve the curriculum in vocational agriculture. These efforts may be needed, likely they are. However, any statewide effort may become a Closed System before it gets started. Thus far, we have rejected a national curriculum but it would seem that a state curriculum might help the isolated and difficult problems that a local school or a local teacher may have.

Appropriately, if a major aim in developing a curriculum is to develop there can be little creativity on the part of a teacher. Certainly in the climate that exists there can be little creativity if any innovation. It seems that leaders in vocational agriculture, particularly in curriculum development, should consider the fact that progress involves doing something different which may prove better than the old, whether it is a new plant, a new tool, or a different way of teaching vocational agriculture. Maybe we should consider an award to teachers who develop new ways of doing their job, "most likely to be better than the old." Might even substitute this award for the 30-year award for doing business at the same old stand.

Cayce Scarborough

Letter To The Editor

Dear Mr. Scarborough:

This is in response to Jim Hansen’s letter of May 29 in which he responded to my “What Would Happen if” column in the Agricultural Education Magazine, May issue.

Mr. Hansen, it seems to me, is confusing the issue at two points. First, he offers some generalizations about agriculture and farming being used synonymously. This does not show up in the article, and raising the point does not add clarification to the issue. Secondly, the column refers to vocational practices and Jim counters with programs. It is a rather loose use of logic. I support and encourage the development of occupational programs. We must be extra careful as we develop these programs because we use Jim’s own words, “learning activities do not always coincide with requirements.” Jim, thanks for supporting my position.

Jim, I am deeply appreciative of your letter, comments, and your response. Keep up the good work at Michigan State and please respond to any further material.

Sincerely,

John F. Thompson, Assistant Professor
University of Wisconsin

Glad to get your response to Jim’s response. John’s letter both are in this month’s but differ on emphasis. CCS

Themes For The Agricultural Education Magazine

December 1967 - February 1968

Volume 40

December— TEACHER PREPARATION AND CERTIFICATION

(Requirements B.S., M.S. Special Trends)

January— GRADUATE STUDY AND IN-SERVICE EDUCATION

(Scholarships available. Summer Institutes. Other In-service education for teachers.)

February— TECHNICAL EDUCATION IN AGRICULTURE

(Post-secondary programs)

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State Department of Education

Montgomery, Alabama 36104

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The Editor
By definition, an innovation is perceived as something new or different from the commonplace and familiar. Consequently, most people react to any idea or program perceived as "new," cautiously, sometimes suspiciously, until the idea has proven itself. Any person or group initiating a new and different method of achieving common goals should expect criticism for not sticking with "tried and true" methods. Echols and Rogers postulate six different kinds of rejection responses in a study of individuals who were encouraged to adopt an innovation. The investigators developed a framework for identifying forms of rejection.

Occupational experience programs for off-farm agriculture have been legitimized by the 1983 Vocational Education Act. This mandate along with many of the innovative methods used to obtain its objectives have been viewed as a threat by some successful teachers of production agriculture programs.

In addition to newness of an idea, an innovation's acceptance has been impaired by the norms of the social group. The existence of formal or informal leaders in a community who are in favor or opposed to occupational placement of students can enhance or decrease the adoption of occupational education programs. Another feature of an innovation particularly emphasized in these examples attended the 1966 Institute.

In Ohio

The unique location of the Marysville Vocational Agriculture Department in close proximity to the O. M. Scott and Sons turf grass research station has provided Odel Miller, Vocational Agriculture Instructor, an excellent teaching location. During the 1966-67 school year he placed five of thirteen cooperative occupational students from the institute. The five students were Mrs. Lucille Patton, new Teacher Educator in Name of Agriculture. Oklahoma State University, and Mrs. Laver Wendler, Teacher Educator for Blacktop Educational. John Marshall High School, Oklahoma City.

At the station, among whom was Bill Wenger, Ohio's star award student in agriculture for 1985, last year's Miller's third with the cooperative placement program. He has served on Ohio teachers advisory committees to request off-farm agricultural occupations section of the state course of study. This program has proven that the school was looking for a second full-time agriculture teacher to begin this fall.

In Pennsylvania

The Portland High School Agricultural Department, under the direction of the Pennsylvania Department of Education, has succeeded in a pilot program in off-farm agricultural occupations. Serving as project director, Harold C. Gregory, Vocational Agricultural Instructor, constructed a training laboratory on the Portland High School campus. The laboratory included fifty feet of display area and a showcase for featured items. In this laboratory, students simulated customer sales to enhance professional in sales techniques before becoming trainees in an agricultural business. Last year, Gregory taught twenty students in Distributive Education as well as ten senior agricultural occupations students in the community. Another feature of the Portland pilot program was the hiring of special teachers for instruction in mathematics, typing, and extension and teaching units alternated in cooperation with the school. Two Vocational Teachers have been hired to complete this fall.

High school students took mainstream tests to determine their interest in off-farm agriculture courses. A full-scale guidance program interpreted their teacher's counseling with occupational information.

In Arizona

The Glendale public school system includes two Vocational Agricultural Departments within the city limits of Phoenix. Brian T. Modr, Vocational Agriculture Instructor, teaches suburban students, most of whom have limited backgrounds in agriculture. He attends to this by providing a land laboratory for the participation of classroom instruction. Last year, the FFA organized a cooperative steel working project. It paid land lease dividends to students who held shares in the enterprise.

Even in the Glendale school system of 2,000 pupils, there are many evidences of agriculture class efforts: flower beds tended by agriculture students; concrete stairs and wall, and a small greenhouse for classroom experimentation. This fall the class plants a one-hole golf course near the Vocational Building. Like many vocational agriculture departments, the program has developed the school plans to hire an additional agriculture teacher. With the additional teacher we can see the initiation of a separate class in agricultural distribution. A few students participate in the excellent occupational experience in excellent training stations last year. But Modr feels that supervision and better quality instruction can be provided with a more specialized program.

The four programs noted in this article characterize many efforts of vocational agriculture instructors throughout the nation. It is true that two of these four programs were originally started with the help of non-local monies provided on a short-term basis. But the outstanding feature of each effort is a dedicated aggressive teacher of agriculture who organizes departmental resources to improve the instructional content of his or her program.

Each of the four departments has a community with unique features which enhance or inhibit the development of a strong program of cooperative education in agriculture. The key ingredient remains the teacher of agriculture. In each of the cases cited, the instructor has from five to ten years of experience teaching vocational agriculture and exhibits a commitment to improving people through agriculture.

In the instance of a superintendent and/or principal sympathetic to innovative behavior provides an important impetus to a quality program of vocational education.

It behooves teacher educators and supervisors to include teacher organization committees, or individual teachers themselves in plans for diffusion and evaluation of innovative programs.

In the final analysis Educational Agricultural suffers or fails due to the influence of the practicing educator.
A New Concept
In Visual Aids . . . .

JOHN BLESSING, Vo Ag Teacher, Champaign, Illinois

Are you using visual aids to their best advantage in instruction? Here is a way to increase the scope and effect of visual aids in the classroom and shop.

If you need something to help increase the class interest in your teaching material try varying figures or models of the subject you are using in instruction. An example is the use of figures of a steer, barrow, or sheep in units on judging, animal selection, or wholesome cuts of meat. On one side the figures mark off in different parts and use to teach the students the names and parts of the animal. After the students have learned the parts, the opposite side can be used for a test or quiz by marking off and numbering the parts of the animal. This method can also be used on a chalkboard and instructions or additional material can be written around the figure.

List of Materials Needed for Construction

- Thin Masonite, hardboard, or heavy cardboard 18 x 24 in. or the desired size.
- Chalkboard paint or flat wall paint with an abrasive added.

BRACKET FOR CHALKBOARD

- 6 small rubber suction cups (available Western Auto Stores).
- 1/8 x 1 x 16 in. metal
- 1/8 x 1 x 4 in. metal
- 1/4 x 1 x 2 in. metal rod or bolts
- 2 rubber elastication bands or heavy rubber bands

BRACKET FOR TABLE OR DESK

- 3-3/8 x 1 x 12 in. metal or heavy cardboard 9 x 36 in.
- 2 rubber suction cups (optional)

Instructions for Construction

FIGURES

- Trace figure from pattern or use a slide in film strip projector to make outline figure.
- Make two 1/4 in. holes 12 in. apart centered located near the top of the figure.
- Paint with chalkboard paint on both sides.

Using the Model

The following are some of the advantages of using figures for a visual aid:

1. Attractive colors can be used in presentation of teaching material.
2. Preparation of the figures can be completed before class.
3. Figures can be used on either chalkboard, table, or desk.
4. The figures can be used overall again for different teaching areas.
5. One or both sides of the outline can be used for instruction.
6. More than one figure can be used at one time.
7. Students can help in the presentation of subject material.
8. The figures are flexible in allowing the instructor to use them to fit the teaching situation.
9. Figures are not difficult to construct and are relatively inexpensive.

The following is a list of ways the figures can be used:

- Illustration in teaching of subject matter.
- They can be used for test and quizzes.
- Figures can be used by students for independent study.
- Demonstration of subject matter can be accomplished by either student or instructor.
- Figures can be used on bulletin boards or in displays.
- The construction of figures could be a class or shop project.
- The figures can be used as a guide for tracing an outline of figure on a chalkboard or other material.

The Agricultural Education Magazine

G. Allen Sherman, Dean, Mount San Antonio College, Walnut, California

A Third Need

In the past few years we have seen a great deal of study and a definite change in the curricula offered to meet the third objective. More honors programs have been initiated. College admission requirements have brought about the tightening of academic standards. Has the same consideration been given to the twenty to thirty percent of the students who wish to continue in a post high school technical program? Does either the vocational or college preparatory program meet the needs of this considerable group of students? The answer to most high schools is no! Perhaps some of the vocational courses would help develop needed skills, but they could not meet the level of math or science required. The college preparatory program may include some of the subject material, but the present teaching methods and equipment may not be the most desirable for this group of students.

It is to be recognized that there is a wide variation of knowledge needed in jobs in the technical areas. There are also common areas of experience for jobs in agriculture, business, and industry. What type of program can be devised to realistically meet this need? Such a program can come only after a serious consideration of goals in the light of present practices and desired changes.

The Problem

When studying this problem, it is not necessary to consider agricultural programs in urban high schools. Yet, many of the technical jobs in agriculture do not require a farm background. On the other hand, a rural high school may have fine programs in agriculture or home economics, or in a very small business or trade and industrial education. Where is this school meeting the needs of the farm boy who will not be able to stay on the farm and need training in other areas?

(Continued on page 82)
MEAT ARTS PILOT PROGRAM

ROSEBY SAY, Vo Ag Teacher, Belmont, Wisconsin

During recent years most agriculture instructors have been faced with the problem of keeping the vocational programs in tune with changes that are coming about in the agricultural industry.

Some students enrolled in Vocational Agriculture do not possess a farm background. As agriculture instructors, we have to be especially watchful if we are to keep these farm-living boys in the agricultural field. It is known that 35 - 40% of all jobs in the U.S. are agriculture-related. In the area around Belmont, Wisconsin, this figure is closer to 95%.

To many students, a voca- tional agriculture in high schools today, the word, "agriculture" should mean not farming, but the study of animals and crops housed by veterinary and animal services. Statistics show there has been a decrease in the number of farms since World War II and a decrease in the number of workers in this field. These changes have brought about new careers not only for those interested in the field of agriculture, but also for students interested in non-agriculture careers.

This is proof that vocational agri- culture in our high school is no longer just the teaching of agricultural methods, but a real occupation served in agriculture with farm life as well as for those interested in our changing field of agriculture.

Program Establishment

Ideal for the present program was the idea of a farm student taking a trip to Paducah, Kentucky, in April of 1965. This trip was sponsored by the Kentucky University Agricul- ture Department under the supervision of Dr. Charles DeNure and Mr. Charles Sanders. The program was designed to show the students a possible career in agriculture, the teaching of agriculture and the benefits of being a teacher.

The Junior Agriculture Club participated and their classes were scheduled for the first hour of the morning. This got us to the process of teaching the program.

In Paducah we visited the Redland High School under the direction of Mr. Clayton Raley, director of the meat processing program. Mr. Raley explained to us how one of the large department stores would add an added department by adding occupational courses to the curri- culum, with the community getting a better understanding of the true needs of the program. The Redland High School curriculum was developed and designed to meet the needs of the students.

While there, we visited a meatpacker and saw a typical meat packing plant. We were given a tour of the plant and were able to see how the packing plant is organized and functions. The plant was designed to handle the daily slaughtering of beef and pork.

Mr. Raley talked to us about the meat packing industry and the opportunities for employment in this industry. He also talked about the importance of having a good education and being prepared for the job.

Mr. Raley said that the meat packing industry is an important part of the economy and that there are many opportunities for employment in this industry. He encouraged us to consider a career in meat packing and to work hard to get a good education.

Evaluation

The students receive 1/2 credit for the course and the grades are recorded on their permanent records. Students can refer to this record when applying for college programs. Employment is also available in the processing plant.

The students were required to attend two one-hour meetings a week on the preparation of the meat packing plant. This included discussions and study in depth on the operations of the plant. Each area was divided into the following topics:

1. Types of meat
2. Feeding methods
3. Housing
4. Diseases and sanitation
5. Breeding and selection
6. Market values
7. Cure study

Students received an average of 80% on the meat packing plant. Students were required to attend the classroom for two weeks of instruction by a specialist on the processing of the meat packing plant. This period was provided by the pro- cessing manager and the cleaning and

The AGRICULTURAL EDUCATION MAGAZINE

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SOME GUIDELINES — INNOVATING PROGRAMS IN OFF-FARM AG OCCUPATIONS

WILLIAM HAMILTON and JOE BAE, Teacher Education, Cornell University

Professional and lay people planning new educational programs in off-farm agricultural occupations can benefit from the results of recent findings concerning the identification of characteristics of emerging programs. The study identified and assessed practices followed by educational programs in ornamental horticulture, agricultural business, agricultural mechanics, and horticulture in public and private schools in New York and Connecticut.

After obtaining a commitment from the school and principal, the teachers were contacted for their willingness to serve as a member of the study panel. Each school was visited by a project staff member. A series of two-hour interviews were conducted by one of the investigators to identify the concerns of the teachers in innovating the programs in their schools. These interviews were recorded and transcribed, and a checklist was prepared that included the following: the concern to ascertain the magnitude of various aspects of the programs.

From the hours of these interviews, a questionnaire was developed and used with administrators, teachers, guidance counselors, and mem-

GUIDELINE NO. 1. A Great Deal of Help Is Available from the State Department of Education

Help in planning, survey form, in securing personnel for meetings with officials and the public, and other consultative services are available. Printed materials from state and national sources may also be provided free of charge in getting new programs started.

GUIDELINE NO. 3. Joint Meetings of Administrators, Guidance Personnel, Teachers of Agriculture and Adult Members Are a Must

The involvement in planning of all groups who will be affected by the teaching and implementing the program goals is essential. The people involved should not only provide goodwill support of the program. In addition, they will help the instructor to the goal of the program and the people come into contact with the school work. Good public relations can be improved in this manner.

GUIDELINE NO. 4. Enthusiastic Participation Will Be a Useful Tool in the Planning of a Local Program

Existing new programs provide the initiative for innovation among teachers who are responsible for such programs. In addition, the enthusiasm displayed by the participating group of students and promoting group helps to "sell" a number of such individuals who are interested in new and different programs.

GUIDELINE NO. 5. Work Experience Is a Valuable Part of the School Program

The traditional viewpoint that learning is a self-actualizing activity has been demonstrated through the traditional practice programs in agriculture. A real job setting is a possible world of service rendered a special program.

GUIDELINE NO. 6. The School Should Help Students Find Work Experience Stations

The School of Education is composed of the students who are the future teachers. The work experience program helps the students locate work experience stations. Among reasons given are:

(a) The school has too much to do, and it is impossible for the students to locate work experience stations.
(b) A large number of students are not interested in the work experience stations.
(c) The school does not have enough personnel to supervise the work experience stations.
(d) The work experience stations are not located in the students' area of interest.
(e) The students are not interested in the work experience stations.

To increase the students' job experience, the school should make the work experience stations more accessible to the students.

GUIDELINE NO. 8. Instructive Statements Should Be Provided for the Students

The statements should provide the students with a list of activities and responsibilities that are required of them. These statements should be provided to the students before they begin their work experience stations.

GUIDELINE NO. 10. Adequate Equipment Is a Must for Successful Programs

In planning for new programs, pupils should be given the opportunity to handle equipment properly. In addition, the equipment should be kept in good condition and stored properly. This will help the students to learn to use the equipment properly and to keep it in good working order. A well maintained and properly stored equipment will help the students to be more successful in their work experience stations.

GUIDELINE NO. 11. Teachers Must Be Aware of Necessary Materials, Their Sources in the Specialized Area

The teachers of the specialized area should be knowledgeable of the necessary materials and their sources. This knowledge will help the teachers to better plan for the students' work experience stations.

GUIDELINE NO. 12. Community Specialties Should Be Used in Speciality Programs

The community's specialties should be used in the speciality programs. This will enable the students to gain experience in their areas of interest and to learn more about the community. The teachers should also be aware of the community's specialties and how they can be used in the speciality programs.

GUIDELINE NO. 13. The Inclusion of Specialty Programs in the School Curriculum Helps Fill Community Needs

The inclusion of specialty programs in the school curriculum helps fill community needs. This will enable the students to gain experience in their areas of interest and to learn more about the community. The teachers should also be aware of the community's specialties and how they can be used in the speciality programs.

GUIDELINE NO. 14. Local Dealers and Trade Organizations Should Be Involved About Special Programs

Local dealers and trade organizations play a vital role in the success of special programs. They can provide the students with valuable information and resources. In addition, they can help with the planning and implementation of special programs.

GUIDELINE NO. 15. Teachers Should Be Paid

The teachers should be paid for their work. This will help to attract and retain qualified teachers for their work.

GUIDELINE NO. 16. Wide Publicity Is Needed in Starting Special Programs

Wide publicity is needed in starting special programs. This will help to attract students and community members to the special programs.

GUIDELINE NO. 17. Exhibits Are Useful Tools in Promoting Programs

Exhibits are useful tools in promoting programs. They provide an opportunity for students to demonstrate their work and for others to learn about the programs.

GUIDELINE NO. 18. Teachers Should Be Involved in Public Relations Activities

The teachers should be involved in public relations activities. This will help to promote the programs and to attract more students.

GUIDELINE NO. 19. Demonstration Films Can Be Used to Advantage in Promoting Programs

Demonstration films can be used to advantage in promoting programs. They provide an opportunity for students to demonstrate their work and for others to learn about the programs.

GUIDELINE NO. 20. Insurance and Liability for New Programs Should Be Checked with the School Master Policy

Teachers should check with the school master policy to see if insurance and liability for new programs are covered.

GUIDELINE NO. 21. Transportation of Students Is a Concern in Starting New Programs

Transportation of students is a concern in starting new programs. Teachers should make sure that transportation is available for the students.

GUIDELINE NO. 22. The Moveover of a Teacher Between Centers Can Be an Important Concern

The moveover of a teacher between centers can be an important concern. The teacher should be aware of the needs and concerns of the students at the new center.

GUIDELINE NO. 23. Development of Entry Level Skills Must Be a Primary Objective

The development of entry level skills must be a primary objective. This will help to prepare students for entry level jobs in the field.

GUIDELINE NO. 24. In Multiple Teacher Programs, Sharing of Responsibilities of the Instructor Is Essential

In multiple teacher programs, sharing of responsibilities of the instructor is essential. This will help to ensure that all students receive equal attention.

GUIDELINE NO. 25. Differences in Feeder School Programs Should Be Considered

Differences in feeder school programs should be considered. This will help to ensure that all students receive equal attention.

GUIDELINE NO. 26. In New York, the Board of Cooperative Education Could Perform Some of the Functions of the Community College

In New York, the Board of Cooperative Education could perform some of the functions of the Community College.

GUIDELINE NO. 27. Careful Attention to Scheduling is Needed

For students who may later consider attending a community college, careful attention to scheduling is needed. This is especially true for students who are involved in dual enrollment programs.

GUIDELINE NO. 28. Careful Planning and Attention to Scheduling in Working Experience Programs

Careful planning and attention to scheduling in working experience programs is essential. This is especially true for students who are involved in dual enrollment programs.

GUIDELINE NO. 29. Follow-Up Records of Graduate Students Are Valuable in Program Planning

Follow-up records of graduate students are valuable in program planning. This is especially true for students who are involved in dual enrollment programs.

GUIDELINE NO. 30. The Concept of Status of Graduate Students As a Possible Modifying Factor is Important

The concept of status of graduate students as a possible modifying factor is important. This is especially true for students who are involved in dual enrollment programs.

GUIDELINE NO. 31. Teachers Must Be Aware of Necessary Materials, Their Sources in the Specialized Area

The teachers of the specialized area should be knowledgeable of the necessary materials and their sources. This knowledge will help the teachers to better plan for the students' work experience stations.

GUIDELINE NO. 32. Community Specialties Should Be Used in Speciality Programs

The community's specialties should be used in the speciality programs. This will enable the students to gain experience in their areas of interest and to learn more about the community. The teachers should also be aware of the community's specialties and how they can be used in the speciality programs.
Horses And The New Look

BRUCE W. EMANUEL
Vo Ag Mag., 1925
Greenwich, N.Y.

Looking at it another way, the number of new thoroughbreds registered in 1916 was 26,041, in contrast to 416,000 in 1924, a 95% increase. In fact, one brood showed increases registrations of 3,954%. And remember that these new horses are grudges, or crossbreds. In 1939 there were 137,051 4H boys and girls enrolled in horse projects, in contrast to the 1905 figure of 170,000 enrollees.

The expansion of the horse industry covers many areas—development of breed associations, field service and breed associations, personnel, a knowledge of horse, training, farm management, teachers of horse and horse science, feed company employees, horsemen, farmers, and many others to meet the needs of the population expanding in horses.

Knowledge Needed

The successful horse manager must be a good working knowledge in the fields of nutrition, breeding, physiology, animal health, and sanitation. The man who is familiar with the industry has a finished performance horse. You must realize, too, that many "fast operators" are right now paying for the mistakes they make in the handling of the uniformed horse owner, and more likely than none of your students fall into this category.

Interest High

Interest in light horses is at an all-time high, at least in this country. Local and regional horse associations are staging up-riding clubs, rodeo teams, drill teams and shows, are developing and expanding their facilities. FFA and 4-H projects have increased in tremendous numbers, and it is gratifying to see recognition given these young people, as illustrated in recent articles of this Missouri Farmer, Farmer Magazine. More than during a previous farming visit, an outstanding dairy farm, I have found myself working a pleasure horse on a student on steeplechase or other training maneuvers.

HORSEMANSHIP

Grooming; tack; natural and artificial aids; mounting and dismounting; riding; walking; controlling the reins, using the helmet, cooling out processes; preparing a horse for stowing.

HORSE BEHAVIOR AND TRAINING

Horse psychology; lead training; handling and horse handling; training to feed, preparation for riding; riding; skeleton riding; preliminary training; advanced training; finished horse.

PHYSIOLOGY OF REPRODUCTION

Mammalian physiology of the sow and female reproductive tract; hormones that control reproduction; uterine factors that affect fetal development in farm animals; breeding season management.

NUTRITION

Dietetics of feeds; feeding the horse; digestive diseases; and proper use of proper nutrition.

BASIC FARRIER SCIENCE

Hoof examination; control of the horse's anatomy of the hoof; basic pathological observation and explanation.

SUGGESTED PROGRAM

I realize that in order to know something it would be necessary to develop a concentrated program on horses. Perhaps to start you should try to spend only one week with a introductory unit for eight freshmen. However, once formal instruction begins, a full second year course, in which must be taken, should be a part of the curriculum. Listed below are several areas of instruction easily initiated in a course of study.

A three or four track system now seems more realistic. The tracks would be as follows: one, university or junior college transfer for those who wish to complete a four year program for a professional career; two, junior college or technical school for those who wish to continue training for a two years technical program; three, vocational for those who wish to enter gainful employment following high school graduation; four, modified or continuation school for those who have to work part time and go to school part time until graduation from high school.

A study of one suburban high school in southern California showed that this type of student group would emphasize survey. A study of the student population in this school in 1965 showed the following breakdown:

<table>
<thead>
<tr>
<th>Tracks</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Graduates</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Work and Military</td>
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<td>15</td>
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<td>Tech and Spec. Sch.</td>
<td>10</td>
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<td>Tech to four yr.</td>
<td>10</td>
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<td>Four Year College</td>
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<td>Undecided and No Plan</td>
<td>10</td>
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<tr>
<td>Total Students</td>
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<td>15</td>
<td>10</td>
<td>10</td>
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</table>

SELECTING AND JUDGING HORSES

Principles of judging horses and types; equestrian history and fashion; horse as an investment; pasterns.

HEALTH AND DISEASE PREVENTION

Animal health management; types; causes, prevention and removal of illness and parasites.

GUIDELINE NO. 31. A Written Policy for the Operation of the Program is Desirable.

GUIDELINE NO. 32. Students Should Be Elect to a Specialty in Having Had Previous Agriculural Courses

The chart indicates that 25% of the students plan to enter a post high school technical program. Another 17% plan to take the preparatory program at the junior college and 22% plan to enter a four year college. It is done! A total of 54, 21% of the students plan to complete a four year college program. Perhaps half of these students will—or should take the technical program at the post high school level.

It is my opinion that if educators turn their backs on these related topics, our rural youth will have missed a vital part of their training. Study of the modern light horse industry offers an opportunity for the vo-ag instructor to revive both vocational and recreational interests of his students.

NUTRITION

Dietetics of feeds; feeding the horse; digestive diseases; and proper use of proper nutrition.

BASIC FARRIER SCIENCE

Hoof examination; control of the horse's anatomy of the hoof; basic pathological observation and explanation.

SUGGESTED PROGRAM

I realize that in order to know something it would be necessary to develop a concentrated program on horses. Perhaps to start you should try to spend only one week with an introductory unit for eight freshmen. However, once formal instruction begins, a full second year course, in which must be taken, should be a part of the curriculum. Listed below are several areas of instruction easily initiated in a course of study.

A three or four track system now seems more realistic. The tracks would be as follows: one, university or junior college transfer for those who wish to complete a four year program for a professional career; two, junior college or technical school for those who wish to continue training for a two years technical program; three, vocational for those who wish to enter gainful employment following high school graduation; four, modified or continuation school for those who have to work part time and go to school part time until graduation from high school.

A study of one suburban high school in southern California showed that this type of student group would emphasize survey. A study of the student population in this school in 1965 showed the following breakdown:

<table>
<thead>
<tr>
<th>Tracks</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Graduates</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
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<tr>
<td>Work and Military</td>
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</table>
Focus on Evaluation

John Creighton, Vo Ag Teacher, Woodbury, Connecticut

In making this comparison, areas that the program does not serve, and activities that no longer serve its purposes can be discovered. In this way, possible alternative activities that can be selected to light of program objectives. The end result of this comparison is goal clarification. Through the evaluative effort, in discovering alternative activities, future program goals or areas of potential development are identified. In other words, at the community's and individual's needs change, so should the vocational agriculture program.

Action

The model (opposite page) focuses evaluation in terms of possible change or improvement of the local program. It is through program planning that these areas are accepted or rejected, and a new program developed. Evaluation then becomes an integral part of program planning.

Explanation of the Model

A—Community and Individual Analysis (A) is the basis for the discovery phase of evaluation. This involves an analysis or discovery of the needs of the community and the individuals in that community that vocational agriculture program are designed to serve. The study takes into account the level of vocational knowledge, type and amount of employment, number and type of populations in the community, and number of individuals, etc. We must know these in order to determine the areas of potential development or change.

Once the analysis of (A) is complete, the results should be discussed in conference with the consulting committee and administration to redefine program objectives. These objectives should be stated in terms of trends in the community, as well as present needs.

The arrows indicate that the community and individuals need change. This means that evaluation has to be a continuous process to keep the program in line. As needs and opportunities change so should the program.

B—Analysis of the Present Program

This aspect of the model indicates study of the vocational agriculture program as it exists at the present. It takes into account all phases of the program such as occupational experience, classroom instruction for both adults and youth, leadership-PF-A, public relations, laboratory facilities and the consulting committee.

As in (A), there must be a basis for analyzing the present program. The analysis, in order to yield desired information may be conducted in three phases.

1. Total Program Make-up: The purpose is to supply information for answering the following question: How well does the total vocational agriculture program serve the needs of the community and individual?

2. Effectiveness of the Total Program: The analysis should yield information as to the effectiveness of the program. This then serves as a check on the merit of those areas that were previously improved or incorporated into the program.

3. Efficiency of the Total Program: Efficiency really is a program management problem. It is concerned with the problem of resources as related to results. Evaluation should also help answer this question. How can the program be managed to achieve maximum results?

4. Weak Alternatives for Serving (A): These are those individuals that no longer are served in view of the need and objectives. Through careful planning they may be discontinued or changed.

5. Strong Alternatives for Serving (B): These are the remaining areas of (B) that still serve a vital function. Though careful planning, these areas might be further strengthened.

6. Promising Alternatives in (C): These are those individuals that seem feasible to incorporate into the present program. They mark the actual amount of progress or change that might take place once they have been introduced.

7. Doubtful Alternatives in (D): These are areas of (C) that seem incompatible at the present moment. Because of the changing characteristic of (A) they should not be discarded, but postponed for consideration at a future date.

THE AGRICULTURAL EDUCATION MAGAZINE

PROGRESS THROUGH EVALUATION

COMMUNITY AND INDIVIDUAL ANALYSIS

PROGRAM OBJECTIVES

POSSIBLE DEVELOPMENT

NEW PROGRAM

WEAK

STRONG

PROMISING

DOUBTFUL

POSTPONE

NO PROGRAM
BOOK REVIEWS

Raymond M. Clark, Michigan State University

The following hypotheses were accepted as a result of the study:

1. Taiwan vocational agriculture graduates in agricultural occupations are more likely to continue farming than the rural reconstruction program graduates. Developed in China, most applied in the Philippines, and then extended to Guatemala and Colombia.

2. The vocational agriculture graduates consider the vocational agricultural schools to be positive forces for helping change agricultural practices.

3. Levels of agricultural occupations attained needed to be positively correlated with the levels of education attainment.

4. Education in agriculture, if limited to the junior vocational agriculture school level, was significant only for entering into farming occupations.

5. Farm residence at the time of entrance into a vocational agricultural school was positively correlated to entrance into farming and non-farm agricultural occupations.

The conclusion, which the author deems sufficient, was that many of the graduates now look to the vocational agricultural schools to provide opportunities for changing practices in agriculture. At the same time the authors believe the schools are not doing as much as should be done. It is necessary for the schools to strengthen their relationship to other agricultural agencies and organizations as well as strengthen the internal program of the school. Obviously this will require coordination, communication, and cooperation among educational and agricultural agencies and organizations at all levels of government and within the communities.

Raymond A. Ogden Kansas State University


The purpose of this book is to give the reader a greater insight into the great constructive power contained in our agricultural richness. Yet, as the gap between the developed nations and the underdeveloped nations widens, it becomes important for policies to be developed regarding food distribution. The authors feel that the United States will not be able to feed the world and that choices as to who get the food will need to be made. The prediction is made that by 1975 a great famine will face the world. Our advanced technology will be unable to increase food production in time to avert the deaths of millions of people by starvation. This is the greatest problem facing mankind.

The book is divided into the following three parts: (1) Inevitability of famine in the Hungry Nations; (2) Noc can the Resources and Talents of the Developed World Avert Famine from the Hungry Nations; and (3) Potential Role of the United States During the Time of Famine.

This book should be a valuable reference for high school students, community college students or university students studying agriculture or the Social Sciences.

The authors are brothers, one served in the U.S. Foreign Service; the other an experienced agronomist formerly associated with Iowa State College and presently doing private consultant work on tropical agriculture.

Walter W. McCrory Michigan State University

October 1967

Iowa State University Center for Agricultural and Economic Development


This book is a report of a conference sponsored by the Iowa State Center for Agricultural and Economic Development.

Participants at the conference agreed that the world is faced with the problem of how to feed our hungry world. It is optimistic one, if the necessary policies are activated. They state that nations and world organizations must adopt vigorous programs directed at both increasing food supply through agricultural development and increasing food supply through population control, and that it is especially important that underdeveloped nations faced with population problems, and the United States which is deeply involved in food aid programs, take these steps.

Outlining the steps needed to accomplish these goals, the book opens with a critical look at two simultaneous exploitations - the much discussed population explosion and the income explosion. The latter, while less well known, is an equally important factor in the expanding demand for food. The authors explain how rising incomes cause increased pressure on food production by generating an additional demand for meat and other animal products, as opposed to grain products. Two chapters are devoted to these problems and their solution.

One looks at the research being done in the development of protein substitutes, the other deals with the increasing role of fish and fish products in alleviating protein malnutrition.

Other topics dealt with include rigorous and ethical aspects of the food problem, patterns of food consumption, institutional obstacles to the problem, and the "human side" of the food situation. Long-run policies such as education, technical assistance, loans, social security, and agricultural development are also suggested as solutions to the food crisis.

Guay E. Timmons Michigan State University

Page 11
AGRICULTURAL EDUCATION RESEARCH
STUDIES COMPLETED IN 1966

A national list of studies by authors, title, and institution.

Attention is drawn to problems in a wide distribu-
tion of fields in which there is an evident need for addi-
tional information for vocational education. It is clear that
the report, prepared by committee under the leadership of
Robert J. Warnke, Chairman, and Lawrence P. Collins
Secretary, at the request of the Dean, College of Agri-
cultural Education, Pennsylvania State University, con-
inuous the report for the previous year as pub-
lished in the A. E. R. A. Journal, Volume 26, October
1965 issue.

In a few cases each of four regions were assembled in manuscript form by the Research Committees of the Agricul-
tural Education Division of the American Association for the Advance-
ment of Science. These reports were con-
tained in J. R. Warnke, Chairman, the mast of which is
North Central Region, U. S. Grant, Oklahoma City, Okla.; Mid-
west Region, U. S. Grant, University of Illinois, Urbana;
Pacific Region, R. A. Baker, Oregon State University, Corvallis;
and D. Y. Shoate, University of Idaho, Moscow.

The 301 to 500 word abstracts briefly state the purpose, method, and findings. They provide complete information on where the research was made, in how many states, and the number of subjects on which the findings were based. Master's theses are available on microfilm from the University of Wisconsin, Madison.

This list is not complete. Those researchers are encouraged to submit additional information on studies in the subjects of the list that follow. Usually it is practical to send the most recent reports to the Office of Agricultural Education.
Stories in Pictures

GILBERT S. GUILER
Ohio State University

New facilities for vocational agriculture mechanics in Maryland include the latest recent engineering tools for effective teaching.

A Michigan post high school student at vocational technical programs for employment in the farm elevator business through means of on the job experience. Photo — Ray Clark.

OCCUPATIONAL EXPERIENCE

1917 - 1967
50TH ANNIVERSARY

1st National Vocational Education Act