Stories in Pictures

by Richard Dougherty

Members employed in the WVUCAE Office at Lake Park, P.O. Box 11, Morgantown, WV 26506, ready to depart for the WVUCAE Convention, Morgantown, WV. They are (left to right): Frank J. Briley, M. D. Roberts, J. C. Lassiter, Vargas, Ph.D., and John E. Low.

Agricultural Education

Volume 46

December, 1973

Number 6

Theme —

CAREER EDUCATION:

Accountability in Evaluation

Agricultural Education

Extension

690 Gault Lane

ANABO 2, W. Va. 26249

12-12

Press Release

Approximately 47,000 copies of this issue will be distributed to members of the WVUCAE Office in 1973-74. This includes Sam Staggs and James Wall to inform you that the November 1974 issue of the WVUCAE Newsletter will be sent to you along with this issue. The mailing address is 690 Gault Lane, ANABO, WV 26249. If you have any questions or comments, please feel free to contact us at 690 Gault Lane, ANABO, WV 26249.
**TABLE OF CONTENTS**

**THEME—CAREER EDUCATION: ACCOUNTABILITY IN EVALUATION**

The New Editor

Editorials

A Challenge To Use Our Journal

More Effective—Use Options

For Future Issues

Let's Quantify Our Walking Instruction

Career Education: Accountability to Evaluation

Factors That Affect the Earning Power of Vocational Graduates

Revising Supervision Programs

Supervised Experience Programs in Career Education: A Must

In Agricultural Education

Making Lessons Relevant Through Evaluation

Occupational Orientation: A Necessary Step in Educational and Vocational Planning

The Soil: A Contemporary Program in Environmental Education

Farm Business Analysis Programs Accountable in Upgrading Adults

Using Field Trials in Career Education

Characteristics of Successful Young Farmer Chapters in Texas

What Are You Standing On?

Book Reviews

Agriculture—Globe: Book Notes

From the Research Editor's Desk

Book Review

Stories in Pictures

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THE AGRICULTURAL EDUCATION MAGAZINE


**Advisory Board**

Dr. Martin B. McMillon, Associate Professor of Agricultural Education at Virginia Polytechnic Institute and State University, assumes the editorship of The Agricultural Education Magazine beginning with the January 1974 issue.

He was special editor of this magazine in the Central Region for Editors Warming, Kitts and Dillon while a faculty member at the University of Minnesota. Another editorial duty has been editing the Alpha Tau Alpha, the newsletter of the Alpha Tau Alpha Fraternity, during his four year term as national secretary-treasurer which ended in October, 1973.

From Your Editor...
Most teachers teach and supervise the ways they have been taught or as the "system" prescribes that they teach and how they supervise. In the process, an overwhelming majority of teachers in Agricultural Education are excellent candidates for professional in-service education or graduate programs in Agricultural Education in order to teach and supervise more effectively. The ACRE, which is currently in the process of directing agricultural education with a career education twist.

Career education consists of the knowledge, understanding, skill and attitude aimed at enhancing the students' abilities to cope with the problems of living to live, learning to learn and learning to make a living. It correlates theory and practice by providing curricular options and alternative assignments to each individual to assist the student to adapt in the work-a-day world.

We have countless success stories of successful vocational agriculture career education programs. However, there is a strong belief that a majority of teachers that teach agriculture and supervisors who supervise the projects have been born and raised in a media oriented environment, and have heavily been influenced by instructional technology for teaching and learning.

Media and instructional technology have aroused more excitement and controversy than any other pedagogical development of recent years. The big question is how to exploit new technology — television instruction, computer assisted instruction, programmed instruction, cassette, GMHM films, single concept films, overhead projectors, learning laboratories, etc.

Teacher educators must employ instructional technology in the interest of expediency, diversity and efficiency in teaching and learning for teachers for the 70's.

INDEPENDENT STUDY: The idea that colleges use independent study in instruction of courses is not new. What is new is its position or priority as a major development in college teaching. Independent study as a concept has been regarded historically as a peripheral concern of the superior student in honors and tutorial courses. It is now being used by all students and is being made available at the beginning rather than the close of the college calendar year.

FIELD EXPERIENCE AS A WAY OF LEARNING: Historically, field experiences in teacher education have been limited essentially to student teaching. Teacher educators have failed to use the larger community as a resource for educating college students in career education. As a consequence, students do not get a chance to test their ideas against experience. The future teacher's personality and skill development are imputed substantially because the field experience is not exploited.

Several colleges are adopting new calendars that require students to spend part of their student teaching in industries, businesses and related fields in order to order that students may acquire some of the valuable skills that are beyond the scope of the various jobs and the kind of work that could be done by a teacher that only had a single shop class. In the classroom, several research studies have shown that practice does effect terminal performance but only when the student can be examined by the student in light of a correct concept. Practice without knowledge of results has appeared to have very little effect upon individual performance. By using the two tasks described, each student can individually assess his performance either in a formal class setting or at the home farm.

Have you ever been in a situation where you are trying to evaluate the welds from either a secondary student or an adult and wound up with a friendly argument based on opinions? At that point, each of us wishes for a simple shop test which would solve these "dissensions." A second problem which arises during the teaching of arc welding is how much time to allocate for practice of each position. This question is especially critical with adults who have a limited amount of time to spend in the classroom. Several research studies have shown that practice does effect terminal performance but only when the student can be examined by the student in light of a correct concept. Practice without knowledge of results has appeared to have very little effect upon individual performance. By using the two tasks described, each student can individually assess his performance either in a formal class setting or at the home farm or job.

During a symposium dealing with weld defects, several defects were listed which were special consideration for: (1) cracks, (2) lack of penetration, (3) incomplete fusion, (4) slag inclusions, (5) porosity, (6) entrapment weld spatter, (7) undercut, (8) concavity, and (9) center line crevice. In an attempt to evaluate the effects of a variety of weld defects and joint conditions on performance, Randall and Meister (1966) divided the defects into three groups. Group I included those defects which did not affect weld fatigue. This included root oxidation, center pits, required burn through, and upper slag inclusions. Group II, those which were consistent with degrading, included lack of penetration, root undercut, incomplete fusion, and root concavity. Group III included undercut, excessive weld reinforcement, porosity, and lower slag inclusions.

These factors were degrading in some tests but not in others. The nickel-brakweld test was introduced as a simple evaluative instrument during the latter part of the 1960's to improve industrial welding. The test is primarily used to investigate the internal characteristics of the weldment. The weld is made in position and air cooled. It may either be a single or multi-pass depending on the thickness of the material. The recorded material was 3/16 x 5/16 x 1/2" multi-pass. A 15° coupon is cut from the cross-section of the weld sample with an oxygen-acetylene cutting torch. The coupon is then nicked with a hackaw approximately one-eighth inch on the edge at the center line of the weld. The coupon is then struck with sufficient force to cause the weld to shear exposing the weldment for visual examination.

Using the Evaluation Score Card, shown in figure 1, each student can evaluate his own weld coupon and determine the source of the problem.
Each of the four sections does involve some arbitrary judgment on the part of the writer. A competent machine with few errors, there should be a high correlation between your score and the students scores.

After the welder is consistently scoring in the high 90s and low 90s, the stick-bend test should be administered in favor of the guided-bend test. This is a go or no-go test which requires more weld examination, but does not require a stringent test. The same weld coupon should be cut from the weld sample and placed in a guided bend machine with the weld face down and the bend in the top for a bend as pictured. Any crack which appears over one quarter of the coupon is classified as a failure. A more detailed description of this test is available from the Lincoln Arc Welding Research and Development Company, Bulletin No. 38. Needless to say, the latter test is not recommended for the novice welder, but if properly used, it can form a challenge necessary to produce quality welds.

The local advisory committee should play a key role in the measurement of accountability.

When we evaluate accountability in career education, certain questions come to mind: what are we accountable for, and to whom are we accountable? In order to get the best possible answers to these questions, an occupational task analysis of the occupations for which the individuals are being trained must be completed. From this information can then be developed a basic curriculum. The accurate measurement of accountability to the industry, students, and school community members must result. Teachers can also measure their own accountability, using the technical competencies and evaluate themselves to determine their additional instructional needs.

Personal vocational education in Ohio have developed what could be described as an effective system of evaluation for accountability. It has been named PRIDE, program review for improvement, development, and evaluation. The key to this process is the formation of a local advisory committee for this purpose. This committee should be composed largely of persons from the area of agriculture for whom the local program is designed to train individuals. There should be representation on the committee from the school administration, the county cooperative extension office, and from private business areas. Selection of these persons must receive careful consideration. They are to be the determinants of the need for the program in terms of manpower and economic occupational training opportunities so that students can complete the acquisition of entry level skills, knowledge, and abilities. They must enter successfully into jobs in the area of training if we are in agricultural education are to meet accountability requirements. When manpower need and placement opportunities are available the committee is ready to move on to the review assignment. They must meet and be informed relative to the four main program areas. These include, as mentioned, the curricula, the facilities, including equipment and tools; the students in terms of their interests, and the teacher. Past placement of students into the agricultural area of training receives major consideration.

After the local advisory committee reviews the local situation in regard to these four basic program areas, they are then ready to prepare their suggestions for program improvement, development, and expansion. As a state staff member then reacts to the review and a final draft of the recommendations is prepared and forwarded to the assistant director of the school administration and the Board of Education. PRIDE becomes the delivery system for supervisors.

Persons in agriculture education where such a review has taken place, and will continue to take place, are thus assured of more effective instruction and experiences that go into the kindergarten through grade six career education and the grades seven and eight career orientation programs. We in agricultural education are also responsible for the instruction and experience that go into the career exploration program for students in grades 9 and 10 other than those who are enrolled in agricultural education programs. Obviously, agricultural education programs for grades nine and ten are vocational in nature because of the in-depth occupational experience programs which are the basis of the instruction. In Ohio, we have identified eight or nine broad areas with which to open the door, adding the bee market to the teaching that led to the honey bee market. The additional breadth of such a program in agriculture as compared to other areas of information causes us some difficulty. Much time is needed in agriculture to teach each area separately and then evaluate them in that manner. Additional career program development in career education in Ohio assists us as $100,000 more per year than did females. There were 149 males and 140 females in the sample.

Post-secondary vocational programs have as their primary objective the preparation of an individual for the occupation of his choice. Implicated in this objective is the fact that graduates of a vocational program will have a marketable skill that will demand a wage in the labor market, which effects the added investment in post-secondary training. The question that often comes to mind is, “What factors affect that quantity of that wage?”

A research study of junior college vocational programs in Missouri attempted to analyze the factors that affected wages of vocational graduates. Two hundred and eighty-nine vocational graduates enrolled in the Missouri Technical College Program were studied. These individuals were graduates of seven vocational programs (Agriculture, Automotive, Business, Construction, Electronics, Food Processing, Distrбуutive Education, Health Occupations, Trade and Industrial Occupations). The study surveyed individuals enrolled in a vocational program chose which they attended during the entire period of study. The analysis showed that each additional week in the program, the graduates received $48. The 289 individuals worked an average of 47.9 hours weekly.

Year of Graduation. The graduation data were examined to determine if the year that the vocational graduate had completed the 289 responses was $100,000. Monthly earnings before taxes and other deductions were used to indicate the value of a vocational education. The study then hypothesized that several factors influence the earnings both positive and negative of these graduates. Multiple regression techniques were used to develop a statistical model that had earnings. The model explained 68 percent of the variables observed in monthly earnings of junior college graduates.

Sex. One would expect that male graduates earn significantly more than females. This conclusion was validated in that the males in this study earned $300,000 more per year than did females. There were 149 males and 140 females in the sample.

The vocational program area in which the student trained would supposedly be related to the amount of money they earned. With the exception of Data Processing, there was no significant difference in earnings of graduates of the various program areas. This is to say, the program area the individual graduated from did not influence their earnings. Data Processing was an exception since their graduates earned significantly less than other vocational program area graduates.

Father’s Educational Level. The socio-demographic background of an individual may influence job selection and labor market performance. Father’s educational level was specified by a 1 or 2 where 1 is high school and economic, social, and educational influence of the student. The educational level of the father of the 289 respondents was 10.6 years. The analysis showed that the number of years of education the father had did not influence the earnings of the vocational graduate.

Job Relatedness. One would expect graduates who are employed in occupations related to their training would earn more than graduates who are employed in occupations unrelated to their training. The graduates were asked to determine the degree of job relatedness. They were given three choices: (1) fairly related, (2) moderately related, and (3) not related. Of the 289 responses, 76 percent or 185 graduates were working in occupations highly related to their vocational training. Another 23 percent reported that they were working in occupations moderately related to their vocational training and their occupation. This hypothesis was validated in that there was no relationship between related vocational training and occupation.

Job Satisfaction. It was hypothesized that if the graduate liked their job, productivity would be enhanced.
REVITALIZING THE VOCATIONAL AGRICULTURE DEPARTMENT

J.C. Atcherson
Teacher Education, Louisiana

Occupational education in agriculture must keep pace with the changing needs and circumstances in which it is a part. It should be more responsive to these needs than the community faces as it attempts to provide for the education of its youth and adults. This includes the preparation of individuals to engage successfully in productive useful occupations. This group of individuals is no longer confined to agricultural education; it must be changed.

One should beware of the temptation to shelve following past patterns, patterns, and traditions. Constant review is needed to see the setup is fulfilling its function and that it is retained only so long as it proves useful to the ongoing educational program.

The organizational set-up should be that which is responsive to the changing needs and circumstances the educator encounters in the fulfillment of his overall goals.

The temptation is often to hang onto an activity long after it has served its purpose and is no longer compatible with needs and interests of those who are assigned to serve. There is a continual need, however, for the personnel to review and diagnose the situation simply because it was once a vital role of the work. When its usefulness is no longer apparent, it is abandoned, but not without some loss of the additional, more worthwhile activity. In other words, the setup should be one that is sensitive to the changing needs of the circumstances the educator encounters in the fulfillment of his overall goals.

It is not anticipated that there will be many alterations in the overall objectives of the educational program. Preparation for citizenship and employment seems to be the basic point of view. However, there are some changes apparent in the areas of agricultural education. While the basic themes appear to be the same, there is a shift of emphasis in the areas of educational and vocational education.

The same need to be aware of changing needs and the importance of the agricultural education in the community is recognized by the agricultural education programs for the state. This is also evident in the current trend toward the development of cooperative educational programs.

Improvements and change should be related to the present educational opportunities and the needs of those who will be the participants in these programs.

(Concluded on page 140)

December, 1971

SUPERVISED EXPERIENCE PROGRAMS IN CAREER EDUCATION: A Must in Agribusiness Education

Harold Binkley
Teacher Education, University of Kentucky, Lexington

Career education is the "in thing" today in agriculture, since in beginning in 1917, when supervised experience programs began. Vocational education in agriculture (agribusiness) was sound in the beginning and is sound today—that of "class instruction followed by supervised occupational experience in the agriculture to be learned." Experience Programs Are Basic

There can be no adequate training in agricultural occupations in the classroom; training in demonstrated (and participation) in the tasks for which the abilities are needed. That is why the individuals in every group should have experience programs: the high-school group, the young- farmer group, and the adult-farmer group. (For young and adult farmers the experience program is called farming operations.) Sometimes, in agriculure education (teacher educators, supervisors, and teachers) proceed as if it were not. What one practices, what he experiences, what he participates in, he learns not something else.

Teachers, supervisors, and teacher educators must be committed to quality in agriculture programs if the programs are to provide the training desired by the present day and future employers of the agricultural industry. Quality in experience programs in farming has been dependent upon the teacher and the student deciding on a good experience program to have, and on developing a good understanding and a close working relationship with parents as to what a good program is and what students need to have them.

The same understanding and close relationship must be developed on the part of other cooperating educators who are involved in the operation of the agricultals programs in the broad spectrum of agricultural occupations. The difficulty of doing this will not keep it from being a must.

More Experience Program Possibilities

A whole new world is open to the leadership in agriculture education, with opportunities for significant contributions and service to the total agricultural industry and the development and growth of local programs. Prior to 1965, very few of the students were involved in the farm group of the students in arranging experience programs. Today many teachers are making use of the total agricultural resources of their communities to provide a diversity of experience programs in agriculture education, to meet the individual needs of their students. In some departments, the teacher(s) are providing opportunities to work with policies, programs, and services with placement of students in agricultural businesses. Still other depart

ments offer a diversified agricultural occupation (DAO) program in agriculture education in which the teacher places students for one or more years in agriculture businesses in the community and provides personalized instruction for each student based on where each student is placed for occupational experience. Other teacher educators are on the "cutting edge" of program development in agriculture education.

Teacher Guidance in Selecting and Planning Experience Programs

Students need guidance, by the teacher, in selecting and planning their experience programs. And, before guidance, the teacher needs to know where he is going to guide his students or groups of students in their experience programs. This is the operation of the "blind leading the blind." The teacher must know what experience program possibilities are available to students in the community and then guide them to select and discover these possibilities. The business of guiding students is built upon the teacher developing in his students a series of fundamental understandings which are basic for students to wisely select and plan appropriate and challenging experience programs.

Memoranda of understanding and individual training plans based on the kinds of jobs and responsibilities each student will perform at his respective training station are basic to guidance in agriculture programs in agricultural businesses. Both of these instruments should be developed cooperatively by the student, the parents, the teacher, and the cooperating employer. To do less than this, is likely to end with students just working in a place of business, with earning, not learning, as the primary student goal.

Teacher Supervision Needed for Student Success

"Learning to do by doing" is not a safe philosophy for the director or supervisor of the learning process unless he knows what the learning process is. Not just any doing—not just any activity—produces desirable change in behavior. If it, then, who have been farming for 40 years should be appropriate, professional, and armed with all his experience and more. The whole question of supervised experience and its necessity in vocational education in agriculture is closely related to the utilization of the educational opportunities of teachers and students. The teacher does not have to do all of the supervision of his students, particularly those that are placed for experience programs in agriculture, but the teacher must be aware of his responsibilities and the teacher must visit each training station frequently to show his genuine interest in the student and his training. Another approach is the cooperation of the cooperating employer for providing progressive training to the student.

(Concluded on page 139)
D. M. Hall
University of Illinois, Urbana

"Career Education" is merely a fancy name for teaching something useful." This means goals, and goals give rise to questions: "what?" and "how much?". Without goals students "dilly-dally." The number one rule for building and maintaining interest is to give the student objective measures of progress. No one can evaluate until he knows what you are trying to do. The old numeric system was based upon passing 75 percent of the subject matter. The alphabetic system was based upon reading, writing, and speaking. Now "pass-fail" and "no-grade" systems are being recommended. Instead of objective evaluation we are merely judging symbols.

Teachers have no right to give grades. Grades are earned by specific accomplishments and attitudes, in areas of health, vocation, socialization, effectiveness, and recreational activities. The 24 criteria codes below were established in conferences with parents, students, and teachers. Scores are assigned to keep all concerned informed about "how well" each student does in learning essential facts, reference facts, physical skills and attitudes.

Codes used in evaluation
A (a) Attendance
B (b) Punctuality
C (c) Cooperation
D (d) Dinamation
E (e) Group work
F (f) Interest, class, community projects
G (g) Evaluation
K (k) History, K2 Sciences, etc.
L (l) Leadership role
M (m) Miscellaneous essays, news
N (n) Notes
O (o) Reading
P (p) Problem solving
R (r) Reports, Library research
S (s) Skills
T (t) Text reference books
U (u) Use, practices adopted

(b) Ratings by peers and parents on items, C,D,G,L,T,k,J,Z.
E (c) Behavior other than those ended above.

Scoring — Points are assigned for each accomplishment according to its difficulty and scope. The range of values may be agreed upon by the clas by the instructor. In some cases each paper may be graded by three students selected at random, or by a student and teacher and averaged. In other cases all students may be assigned to score all others during a class period under the direction of D, O, J, or E. Students teach each other by discussing how to score.

File systems permit scoring reference facts. Each student keeps a 3x5 card file in which he records useful reference facts. Each week he uses these cards in class and checks each item scored by the teacher. Then the teacher gives oral exams with files and note books permitted. The idea is to select some facts not easily remembered and test the ability to find these facts in the student's file system.

To encourage outside readings scores are awarded for summaries with author and publication made on 3x5 cards. No limits are imposed on items ended F, O, R, T. Scores are weighted by scope and difficulty. Some graduate students have compared this procedure to a "rat race" but it permits the class to set its pace. The more one knows the more points he earns.

Those who want to "just get by" may not make it.

Problem sheets are pages from the student's note books with the following headings: 1. Problem, 2. Assignment comments, 3. Essential facts, 4. Conclusions and 5. Applications. Headings 1 and 2 are filled in as the problem develops. In class facts with reference are added during the study period.

Applications are developed during the first and second discussion periods. Applications are statements about the use the student expects to make of the information taught.

Local editors often accept news stories about pertinent topics or practices the students have studied especially if they are local problems. Students eagerly re-write when told, "If I pass on it and the editor likes it a poor copy everybody in town will know you are." You'll note improved writing as stories are accepted for publication.

Judging Score Carcs. Score cards for judging, baking, sewing, livestock and shop work are prepared for scoring items J and S. A demonstration rating scale is shown below.

Other rating sheets on this same format may be prepared for, example: 1. Shop Project Evaluation Sheet — (with headings as follows) Design Craftsmanship Usefulness Variety of learning experiences Utilization of materials 2. Student rating sheets (for students to rate each other) on present knowledge of the problem at hand on quality of participation projects 3. Sociograms. Students asked to check names of class members with whom you work or chum. Double check those you consider to be leaders (from answers you may score this chart). Make sure that classes are known.

Score cards for ratings by employers, parents and peers (Students will learn much in developing and comparing these sheets as well as seeing others score their abilities and achievements.) Attributes coded B, C, D, G, S should be scored frequently, others as occasionally arise. These ratings should be kept in confidence. Only average scores are entered on each student's Evaluation Chart.

Weekly totals from each student's Evaluation Chart are plotted as accumulated grades and total grade points. At the end of the year each student may see his standing in the class.

OCCUPATIONAL ORIENTATION: A NECESSARY STEP IN EDUCATIONAL AND VOCATIONAL PLANNING

Paul R. Hemp
Professor and Chairman
Division of Agricultural Education
Illinois State University

The choice of an occupation is a series of progressive steps that should begin at the start of a child's formalized educational involvement in pre-school and kindergarten and go on through elementary, junior high, and high school, and may continue throughout the working life of an individual. In a recent article by Walker in The Agricultural Education Magazine, the Illinois Career Education Model was illustrated. The model showed these progressive steps of career development as follows:

1. Awareness of the world of work (K-3)
2. Awareness of self (4-6)
3. Exploration of occupational clusters (7-8)
4. Orientation to selected occupational opportunities (9-12)

Preparation for entry into a chosen occupation (9-14)

The fourth step in the model is an occupational orientation. Orientation is defined by Winkel as the "determination or sense of one's position with relation to some particular field of knowledge." This definition is good. The process of career development is recognized. Educators implementing the model can make the assumption that a knowledge of the world of work, one's self, and a comprehensive overview of occupational opportunities has been acquired by the student when ninth grade is reached. Now the student is ready to determine a position from which a career can be made. The orientation is an inventoryary and educational development. The occupational opportunities plan must be formulated that are in keeping with his or her aspiration, interest and capability. Now is the time to match the student with an educational program and curriculum.

To illustrate further the orientation phase, this point in the student's progress is not unlike the experience of a student who had learned to fly airplanes and was feeling good about his ability to maneuver the plane during take off, flight and landing. One day while practicing a maneuver that was simple to fly an airplane, maintaining a constant altitude, the instructor suggested that the student fly directly back to the airport. The student had no idea where he was going, he only knew there were landmarks to the north, west, south and east. He lost his position before any attempt could be made to head toward a destination.

The Current Status of Occupational Orientation

A formalized program for occupational orientation exists in very few Illinois schools at the present time. A need for a formalized approach has been determined through a statewide evaluation program that has been in operation for three years in Illinois. Teachers, guidance counselors, administrators, and students have a relative degree in the evaluation process have stressed the need for a program designed to help the student make informed career choices. In response to the need, the Illinois Department of Vocational and Technical Education, State of Illinois contracted with several Illinois Universities to develop and test orientation materials for the first time.

At the present time, the orientation materials developed at the University of Illinois for Applied Biological and Agricultural Education are undergoing further testing in 25 selected Illinois schools. During the 1974-75 school year, all five orientation curriculum packages will be offered to all students in a school to be selected in the near future.

How Orientation Fits into the Total Career Education Program

In deciding how and when occupational orientation units or courses should be incorporated into a career education program, it is clear that there are at least two major considerations. One is the basic assumption that all students should receive occupational orientation prior to the time when occupational preparation begins. Occupational education in the high school is a career education model should be defined in broad terms to include both the academic and vocational courses which contribute to occupational preparation. For example, decisions regarding which mathematics course or which science course to take at the tenth or eleventh grade level can best be made if the student has received some kind of occupational orientation. The second major consideration is that the major reasons why schools should install occupational orientation programs at the eighth-grade level.

A second assumption regarding occupational orientation programs is that students should be informed about occupational opportunities in all five major occupational areas not just one. In other words, the orientation program in agriculture should be part of the larger orientation program which includes health occupations; industrial occupations; business, management, and marketing occupations; and personal and public service occupations.

One plan for installing orientation instruction in the five occupational areas into the curriculum is shown in Figure 1 and labeled as Model "X" - a three semester program. Under this plan each student would be required to spend ten weeks in orientation to each of the five occupational areas. Two-weeks of orientation at the beginning and the end of the program would be used for a self-inventory unit and a career plan unit. Guidance counselors would be involved in the teaching of the self-inventory unit and the career plan unit.

An alternative plan, Model "Y" is shown in Figure 2. Under this plan, the student would spend the first two weeks of the first semester on a self-inventory unit. The next eight weeks would be spent on occupational orientation in the area of the student's first preference. All five occupational areas identified previously would be offered. The next six weeks of the first semester would be devoted to a comprehensive module which would include seven or eight days on each of the four occupational areas not previously covered by the student.

The student would be encouraged to identify occupations in each of the four areas to which he has a relative degree. He would be encouraged to interview students who had been to occupations studied during the first eight weeks. For example, the student who has learned about agricultural occupations would interview students interested in becoming a veterinarian or in veterinary medicine. The veterinarian may discover occupational opportunities of equal interest when studying occupations about the health care area. Agriculturists may also be interested in the different branches of veterinary medicine.

The model for Model "Y" is the self-inventory module, the comprehensive module, and the career plan module. The self-inventory module is a team taught. Guidance counselors and occupational teachers are involved in the teaching of the self-inventory and career plan modules.

Figure 1

OCCUPATIONAL ORIENTATION PLAN
Model "X" - Three Semester Program

<table>
<thead>
<tr>
<th>Program</th>
<th>First Semester</th>
<th>Second Semester</th>
<th>Third Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of Career Plan</td>
<td>2 Wks.</td>
<td>10 Wks.</td>
<td>8 Wks.</td>
</tr>
<tr>
<td>Personal and Public Service Occupations</td>
<td>2 Wks.</td>
<td>8 Wks.</td>
<td>8 Wks.</td>
</tr>
<tr>
<td>Industrial/Occupational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business, Management, and Marketing Occupations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied Agricultural and Occupational</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Inventory</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The question concerning what to teach in orientation modules is of primary concern to teachers and guidance counselors. In a pilot program conducted in the Illinois Schools in 1972, certain learning activities and teaching techniques emerged as "successful" components of the agricultural occupations orientation program. They were as follows:

1. Field trips, tours, work activity samples and field demonstrations were given high evaluation ratings by students.
2. An overview of the total field of agriculture and its importance to the national economy was provided. This overview was included in the student followed by a study of job opportunities and careers in ornamental horticulture, agricultural supplies and products, agricultural production, and natural resources and forestry.
3. Contact and assistance from business people and others in the community was an essential part of the program. An advisory council composed of industry people can be used to solicit and organize community involvement.
4. A pass-fail system of grading was preferred over a letter-grade system.
5. Parents should be involved in the student's career preference decisions and in the development and/or review of career plans.
6. In an activity-oriented program students may become involved in the class activities that they forget to imbalance these activities into a career orientation program. Teachers must understand that the purpose of the orientation unit is to learn about career opportunities and job requirements and to orient themselves to a particular career or group of occupations.

"SID SUTHERLAND" ---
Innovator, Pioneer in Teacher Education

Sydney S. Sutherland

It was a lucky day for California when Sydney S. Sutherland left his native Montana to become teacher educator in his new home. In those early formative years, vocational education was growing and developing into the great force it is now and "Sid" joined the goads of that era, including Nichols, Haldin, Hammon, Bruner, Stewart and Getman, all pioneers that made it happen.

With his wife Edel and 3 children he arrived in California in 1931 in a Model A Ford, but his ideas were not slow to mature. He developed a system of teacher education admired and copied the nation over, and which is functioning today in much the same structure he originated.

He became professor of agricultural education and chairman of the department at the University of California at Davis and was state teacher educator for 26 years until his retirement in 1963.

A graduate of Montana State University, he first taught agriculture in South Dakota before joining the faculty at Montana State, first in agricultural engineering, then as professor and head of agricultural education. That same institution honored his accomplishments by conferring upon him the "outstanding alumnus award." In 1963. That same year, at the American Vocational Association Conference, he received the National Distinguished Teacher Educator in Agricultural Education award. It was a great year for the Sutherlands as that year his son became a teacher of agriculture after graduating from Montana State.

Professor Sutherland was recognized as a great teacher and master of the "problem solving" approach to teaching. Nationally, as well as at home, he was in constant demand as a consultant and conference leader without peer. His imagination, initiative, and interests knew no bounds. In 1915 he initiated teacher education in home economics on the Davis campus of the University of California. Later he started programs in teacher education for both secondary and elementary teachers, a program that has since grown to a major force in the university system.

The Master of Education degree for teachers of agriculture was also the result of his insight and efforts. Recipients of this degree have advanced to positions of high responsibility in various state and national: nine are university professors; three are university administrators; thirteen are state university and college professors; twenty-three are junior college teachers or administrators; three are dean of colleges; and one is a college president. This degree is also held by regional supervisors and the presidents of state supervisory and agricultural, two city supervisors of agriculture, and three superintendents of high schools. Sutherland indicated the summer session program on the Davis campus and served as director of summer instruction throughout his university career.

While professionally always busy, he was active in his local community as well. For many years he was a member of the local school board, an elder in the Davis Community Church, and president of the Davis Rotary Club as well as being active in many profession- al organizations allied to teacher education.

He could write poetry as a profession- al article with equal ease, apparent- ly. One of his books "When you praise" is still a popular best seller used both by professionals and the general public.

Avocationally he was best known as a fisherman and hunter and expert outdoorsman. He fished all the northwestern states testing their trout streams, except his favorite ones in Montana. Hundreds of persons profited from his skill as he regularly conducted clinics and gave demonstrations to coaches, Future Farmers, Boy Scouts, sportsmen, teachers, and civic groups.

He was active in seminars and taught college classes on campus throughout the nation from Washington to Texas and coast to coast. When the need for a center for research in vocational education became apparent, he was instrumental in getting the con- cept accepted and was appointed a member of the original committee which established the National Center for Research in Technical and Vocational Education at the Ohio State University.

In 1962 he received a grant from the California Council of Growers to find a way to upgrade supervisors, especially those working with rural labor. The outcome of this was a method of instruction that was adopted by the state vocational education of the Employment Development Division of a special Bureau staff member to im- plement the program. Simultaneously he developed a teaching concept based on the "principle approach." The result of this was the development of a set of The Selkirk Story: A Contemporary Program of Environmental Education

Keith R. Flesch

Agricultural Education Washington State University, Pullman

Selkirk High School took a bold step in 1971 when an innovative program of environmental education was developed. The Outdoor Demonstration Center was designed and developed as a Model Environmental Education Laboratory. The program utilized a leased tract of forest land in its natural setting as an instructional resource to study environmental educa- tion.

The Community

Selkirk High School is located 95 miles north of Spokane in Eastern Washington. The Selkirk School District serves the communities of Fairbanks and Metzler Falls, Washington. The population of the school district is approximately 2,500 persons. The land comprising the school district is predominately forested; there are only three farms in the 270,000 acres con- tained in the school district. Approximately 90 per cent of the student labor force is employed in the forest industry. The School District is considered public land in that it is either owned or controlled by the United States Forest Service, Washington Department of Natural Resources, and other public agencies.

The Box Canyon Dam and Reservoir is also located in the Selkirk School District. The dam and reservoir were constructed for the production of electrical energy primarily, but it is of tremendous importance in the environmental setting of the region.

Mr. George Fisher, Vocational Director and teacher of Agricultural Education and Mr. John Rodine, teacher of Agricultural Education of Washington State University, Pullman.

Approximately 75 students at Selkirk High School were involved in the development of the environmental education program.

Dr. Flesch, receiving the Presidential Citation for his participation in the Selkirk Project, this citation was presented by Mr. Donald B. McPherson, Deputy Administrator of the U.S. Department of Agriculture. The idea of the demonstration center was to enroll elementary and secondary schools to visit the Environmental Education Laboratory. During the 1972-73 school year there were approximately thirty schools that visited the Demonstration Center. Several schools have initiated plans to construct Environmental Laboratories at their own schools as the result of the success of the Selkirk Program.

In preparation for the visiting schools, the students in the Selkirk Program developed several teaching and touring procedures. A map, the tour of the center was developed and distributed to each visiting person. Items of ecological importance were emphasized on the map. Several species of forest plants and animals were identified and discussed on the tour. At the completion of the tour, a packet of "Henry and Joe" was presented to the visiting student, the packet of Henry was in tune with the environment; he loved and protected nature. In contrast, Joe was a careless destroyer of nature. The pantomime developed by the students of Selkirk High School was a very effective teaching instru- ment to the visiting students.

3. Extension of the classroom in a natural setting. Students at Selkirk High School have learned much from (Concluded on page 141)
The Situation Accountability has become an important word in the area of vocational education across the country. Simply stated, it means we spend money for an educational program we are responsible for the product or the measurable results of this program.

In order to be accountable in a vocational education program one of the first steps is to take a look at the occupation for which we are providing training and determine the educational needs for success in this occupation.

Half a century ago, agriculture's major inputs were labor and land. Higher production normally brought higher profits, and the way to higher production was to put more labor to work on more land. The picture has changed because land and labor are both more limited and expensive. They have been overshadowed in importance by other inputs—capital, management, and technology.

The capital requirements of the average American farm are increasing rapidly. In the picture below one can see that a farmer has spent several thousand dollars for silos, automated feed tanks, and a waste disposal system. This expenditure was necessary to expand a cattle feeding operation and keep the labor requirement at a minimum.

<table>
<thead>
<tr>
<th>Table 1: OVERALL CROPS SUMMARY of OHIO CROP FARMS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General Crop Acres</td>
<td>744</td>
</tr>
<tr>
<td>Soybean Acres</td>
<td>644</td>
</tr>
<tr>
<td>Total Crop Acres</td>
<td>1,340</td>
</tr>
<tr>
<td>General Crop Value per Acre</td>
<td>$10.10</td>
</tr>
<tr>
<td>Special Crop Value per Acre</td>
<td>$12.69</td>
</tr>
<tr>
<td>Wheat and Corn Value</td>
<td>15.77</td>
</tr>
<tr>
<td>Grain Sorghum Value</td>
<td>17.61</td>
</tr>
<tr>
<td>Many other Crops</td>
<td>33.60</td>
</tr>
<tr>
<td>Total Power and Machinery</td>
<td>12.78</td>
</tr>
<tr>
<td>Farm Crop Machinery</td>
<td>$36.20</td>
</tr>
<tr>
<td>Machinery Cost per Crop Acres</td>
<td>$33.40</td>
</tr>
</tbody>
</table>

When we consider that an acre of land may cost more than $1,000 and the cost of a new tractor often exceeds $20,000, it is obvious that farmers cannot finance their operations by themselves. They have to turn to other sources of capital. A system of state and federal capital is increasingly a requirement of good farm business management.

Management means making the right decisions at the right time, and today's farming is full of decisions. The decisions farmers make have as many factors as when they sell, when to buy, what to buy, and whether to speculate. The decision to build the new ewes to keep on the farm or to sell him out. He needs education in good decision making because knowledge by experience may cost the whole farm operation.

Technology brings the development of new feed varieties, better livestock, disease resistant crops, vaccine and other medications for livestock as well as improved production technology. Technology is the result of research efforts by universities, agricultural companies and farmers themselves. Current competition and slim profit margins mandate early adaptation of promising technological developments.

The Plan of Action
In order for the farmer to secure capital, make sound decisions, and introduce the needed technology he must have a complete analysis of his farm operation. He said a policy of "A farm without records is a farm without stock without hands." The Ohio farm business analysis program emphasizes the keeping of complete and accurate farm business records which can be analyzed and used as a basis for making decision on the operation of the farm business.

The Results
Teachers who have been conducting farm business analysis programs can display some very favorable results. For example, the teacher who was conducting a farm business analysis program on one farm indicated that, "A...rarely will..." The name of the farm problem at low production per cow. By emphasizing such practices as: (1) Improved forage quality and raising the protein level of the ration, (2) Improved feeding practices to attain a better conception rate, (3) Culling low producing cows and (4) Increasing the feed for high producing cows, the result was an average increase of 1,614 pounds of milk per cow with 38% improvement over last year, an increase of 531,861 pounds of milk and if we assume a price of $6.00 per cwt., this would mean an increased income of $31,901.

"Agriculture is a large and vital industry in this country, in my opinion, it has a high multiplier effect" in its secondary benefits throughout the state's economy. Each $3.00 in increased income from agriculture will produce at least $3.00 in personal income for other people." If we apply this multiplier effect to the increased income from the dairy enterprise and multiply this $31,901 by 3 this means a total increase of $95,703 for the community.

Farm operators are constantly faced with the dilemma concerning which of their crops is the more profitable. This is the case when choosing the greatest return. They need to be objective when making business decisions and they need to decide what they want to strive for. There is another old saying that "No wind is favorable if you know not where you would go to." For Ohio farm business analysis helps to determine (Concluded on page 142)

Arthur L. Berkey
Associate Professor of Agricultural and Occupational Education
Cornell University, New York

Use of community resources becomes increasingly necessary and important at occupational educators development and emphasis on community education. The school should not oppose but rather community programs can provide a basis for the development and implementation of the curriculum plan and during the trip.

Field trips into the community can also teach individual and multihabitual activities toward which work which are also important for career choice. Students who find simulated classroom situations not relevant are often motivated by actual situations.

Thus, through field trips and other community-based activities, the orientation — exploration — education — placement and follow-up plan can become a continuous process in which the field can be an important teaching tool. As on most teaching methods, however, effective use of the community environment and resources does not occur by chance; planning, implementation, and evaluation are required.

The teacher must know the experience program possibilities available in the community and students to discover these possibilities.

Deciding to Use Field Trips
The professional decision to use a field trip should be based on educational objectives to be achieved. Once this decision is made, selection of the trip, type, location, time for the trip are determined by a combination of objectives and administrative considerations. This leads to the first three essential steps of (1) planning, (2) conducting, and (3) evaluation and followup for field trips. For purposes of this article, a field trip is defined as a planned visit by a class or one or more groups to an out-of-school location that involves student participation and is based on specific behavioral objective(s).

Planning the Trip
Students should share in planning the field trip for study in the community and the planning in the process is in itself an important source of learning. Cooperative student-teacher planning to select the "best" resources to visit provides students with information on the type, location and nature of the occupational opportunities available to them as agricultural business and industry in the area. This provides an opportunity for first-hand followup of the agricultural programs, provides the opportunity to obtain information on future placement opportunities. Trips to employers where students are placed for occupational work experiences provides another link between the school and the community.

The student on placement experience can provide a valuable contemporary perspective for both the individual and for the vocational education environment and objectives may well be optimal for different objectives or for special interest study by individual students.

Another important element of planning is the development of the student skills necessary for community study. Field trips typically require keen student observation and visualization skills in order for students to "see." The time for application of competencies demonstrated or observed on a trip is usually limited at best. Many students have information as a primary purpose making effective observation skills necessary in order to make the trip worthwhile. Dakis' describes development of "sight" into "insight." Different skills with a few of these tape recorders, note taking and picture taking (motion and still) are also often necessary for students to "see" and retain detailed information. Students need to be prepared to achieve certain skills before the field trip method is used.

The community offers a wide range of opportunities for study for community study. A field trip may involve individuals or small groups of students, large groups or even the entire student body. The type of study to be determined by the objectives for the study trip, the maturity of students, the number of students, the nature of supervision and direction, and the type and location of resources to be utilized.

The principal difficulties encountered in field trips are time required for travel arrangements, scheduling of field trips and other classes, weather conditions, required weather, and preparing students who may be inexperienced in our school location that involves student participation, planning, however, these difficulties may be overcome. Some points to consider.

★ Review and follow school policy on approval and procedures for field trips
CHARACTERISTICS OF SUCCESSFUL YOUNG FARMER CHAPTERS IN TEXAS

Dorr I. Stealey
Assistant Professor
Teacher Education
Tarrant State College
Stephanie H., Texas

EARL S. WEBB
Professor
Teacher Education
Texas A&M University
College Station, Texas

Much research has been conducted to identify problems associated with young farmer education. A popular approach in many of these studies has been the identification of characteristics associated with successful programs. The approach has failed, however, to identify characteristics common to the most and least successful alike or the ones peculiar only to the most successful. According to research conducted at Texas A&M University by the Department of Agricultural Education, the most successful young farmer chapters (local programs) of today are quite different from ones that are least successful.

The Study

The purpose of the study was to identify characteristics that contributed to the operation of the most successful young farmer chapters in Texas. Area supervisors of vocational agriculture rated chapters within their respective areas into three groups, according to their perception of their high level of performance in achieving the objectives of the State Association. Thus, 44 chapters were rated at performance level I (highest rating), 44 at performance level II, and 40 at performance level III (lowest rating). Chapter ratings were utilized as the dependent variable. Level II chapters were not considered in drawing conclusions since they served basically to broaden the distinction between characteristics of chapters rated at levels I and III.

Findings

1. The level of performance at which young farmer chapters were rated was not significantly associated with the number of years teachers had served as advisors to young farmer chapters, the number of years they had taught vocational agriculture, or the number of years they had taught at the school where they were located at the time of study.
2. Neither the age of advisors nor the number of graduate hours completed was significantly associated with the level of performance at which chapters were rated.
3. Teachers of vocational agriculture who sponsored chapters that were rated at a high level of performance assigned a significantly higher level of importance to young farmer chapters in achieving the objectives of vocational agriculture than did teachers of chapters rated at a low level.
4. Chapters of teachers who assigned a high level of performance were significantly younger than were the members of chapters rated at a low level of performance.
5. The age mean of members in Level I chapters was 18.8 years compared to almost 35 for chapters rated at Level III.
6. Chapters of a larger number of members who had completed high school or one college degree were rated significantly higher than chapters comprised of members who had achieved only less levels of education.
7. Young farmer chapters comprised of a larger number of members who were engaged full-time in agricultural occupations other than production agriculture were rated significantly higher than chapters that were comprised of members with fewer numbers employed in this occupational category. Significant associations were found between the number of members enrolled in agricultural vocations and the number of members employed in non-agricultural vocations. Chapters that conducted a larger number of educational and social meetings were rated significantly higher than chapters conducting a smaller number of such meetings. Chapters that conducted a larger number of educational meetings in the subject matter areas of production agriculture, farm management, and agricultural mechanics were rated significantly higher than chapters conducting a smaller number of such educational meetings. The number of meetings conducted as local field days was not significantly associated with the way chapters were rated.
8. Chapters rated at a high level of performance had a significantly larger membership than did chapters rated at a low level. The mean number of members enrolled in performance level I chapters was almost 32 compared to 19 for level III chapters.
9. Young farmer chapters rated at a high level of performance had a significantly higher number of members in the chapter than did chapters that conducted a smaller number of meetings, attended a larger number of meetings, and received more awards. Experience programs are the training and development arm of the program in agricultural education. In some departments, experience programs have been dropped in recent years. Teachers of agriculture are not employed during the summer months—no experience programs to supervise, therefore, no need for a teacher. Experience programs are available in the fall. Experience programs are the training and development arm of the program in agricultural education. In some departments, experience programs have been dropped in recent years. Teachers of agriculture are not employed during the summer months—no experience programs to supervise, therefore, no need for a teacher.
10. Teachers of agricultural education who sponsored the highest number of community-service activities were rated significantly higher than chapters that conducted a smaller number of such activities. Chapters sponsoring the most local awards programs was not associated with the ratings assigned young farmer chapters.
11. No significant relationship was found between the number of members visited by advisors and the ratings assigned chapters.
12. Utilization of an advisory committee for planning young farmer programs and time schedules used for planning meetings were not significantly different for chapters rated at high or low levels of performance.
13. Chapters rated at a high level of performance had a significantly higher number of meetings taught by persons other than advisors, members, or Texas Education Agency Adult Specialties, than did chapters rated at a low level.
14. Neither the method used to notify members of meetings nor the method used to recruit members was significantly associated with the level at which chapters were rated.
15. The perceived attitude of school administrators, sponsorship of a variety of homemaker classes, and the number of students involved in vocational agriculture were not significantly different for chapters rated at high and low levels.
16. Chapters rated at a high level of performance had a significantly larger number of teachers of vocational agriculture than did chapters rated at a low level.
17. Chapters located in young farmer districts where the major source of income was agriculture were not rated significantly different from chapters located in industry or business based economies.
18. Chapters located in communities with a larger number of other agricultural and civic organizations were not significantly different from those located in communities with a smaller number of such organizations.

Conclusions

Chapters considered to be highly successful had significantly higher ratings assigned to the importance of young farmer chapters by advisors, (b) younger members, (c) more members that had completed high school and one college degree than other chapters engaged in agricultural occupations other than production agriculture, (e) larger numbers of social and educational meetings conducted with the educational meetings of consisting of higher numbers of production agriculture, farm management, and agricultural mechanics classes than did members in attendance at area and state meetings, more community service activities, larger numbers of resource persons used for teaching young farmer programs, and more teachers of vocational agriculture employed in schools.

Recommendations

1. A concerned effort should be made to improve the attitude of teachers of vocational agriculture toward the importance of young farmer programs in meeting the educational needs of young men in agriculture.
2. One or more educational meetings should be conducted monthly. The subject matter should consist of production agriculture, farm management, or agricultural mechanics, in accordance with the needs of the membership. Social meetings should be held occasionally throughout the year.
3. All chapters should be employed in all segments of agriculture should be encouraged to become members of young farmer chapters.
4. Members should be encouraged to attend area and state meetings.
5. Chapters should be involved in community service activities.
6. The establishment of multiple teacher departments should be encouraged so that additional time can be allocated to the educational program of young farmer chapters.
7. Extensive use should be made of resource persons available for teaching young farmer classes.
8. Research should be conducted to determine effective methods for improving teacher attitude toward the young farmer program.
9. A study should be made to identify factors influencing participation in young farmer chapters.

BINKLEY: Supervised Experience Programs in Career Education—from page 129

A Precaution and a Challenge

There are many critics of our educational system, and it is possible, very possible, that good experience programs, necessary to learn agricultural occupations, can be progressively displaced by work in other areas. For example, experience programs are the training and development arm of the program in agricultural education. In some departments, experience programs have been dropped in recent years. Teachers of agriculture are not employed during the summer months—no experience programs to supervise, therefore, no need for a teacher. Experience programs are available in the fall. Experience programs are the training and development arm of the program in agricultural education. In some departments, experience programs have been dropped in recent years. Teachers of agriculture are not employed during the summer months—no experience programs to supervise, therefore, no need for a teacher.

With the increased involvement in career education, leading assistance to "Ag Progress Phase" — K-4 grades, the "Orientation and Exploration Phase" — grades 7-9, and the "Graduate Education Phase" in the upper grades, what may this do to the goal programs of his high school students in agricultural education? This involvement could take more than the total of the teacher's time and energy and leave him with little or none of the time to superintend the all important supervising the importance of his program of agriculture education — high quality supervised experience programs. By spreading one's time too thin, it is possible to achieve immediate gains and end up with some important long-term losses.

It is entirely possible for programs in agriculture to end up in The Educational Museum. The profession must be united in its belief and conviction that supervised experience programs are a must for the students of agriculture and provide the teacher time to develop and supervise them. The profession must make it clear that "high school agriculture is right." Goals to develop high quality in occupational experience programs in agriculture education must be increased enough to pay the price, and criticism.

Dedication, determination, and enthusiasm will enable the profession to develop the kinds of experience programs in agriculture that students and school systems want. These three characteristics of "aggressive action" must be brought into sharp focus to the total leadership of the profession if agriculture education is to meet its challenges and maintain its capacities of the future.
BOOK REVIEWS

A COURSE IN HORTICULTURE

Agribusiness and the Environment

Glen Mills
Instructor
Boise State University
Boise, Idaho

An agricultural career is one of the few career choices one can make that are not only rewarding, but also directly involved with natural resources.

The two basic programs of agriculture has promoted the opportunity for students to enter career.

The basic program in horticulture is one that is not only rewarding, but also directly involved with natural resources. This course in horticulture

A Course in Agriculture (XXVIII), by Roy D. Dillon, Lincoln, Nebraska, The University of Nebraska Extension Division, 1973. Price for complete syllabus described (including all references and set with mimeograph paper) is 1.30.

Although the basic course in horticulture is similar in design to this author's first course, the second completely self-contained course includes a number of special features that are not included in the first course. The second course includes a number of special features that are not included in the first course.

In the first course, the student was required to obtain special permission to obtain special permission to purchase the course materials. In the second course, the student was required to purchase the course materials.

The first course was a self-contained course that included a number of special features that are not included in the first course.

The second course included a number of special features that are not included in the first course.

In the first course, the student was required to purchase the course materials. In the second course, the student was required to purchase the course materials.
(Starting-from page 136)

when goals are realistic and reason-
able. A farm business analyst in
northern Ohio spent several hours
with a young farmer budgeting and
analyzing alternatives in making the
decision as to whether he should invest
in his own grain drying and storage
facilities. After budgeting several al-
ternatives the farmer invested in plat-
form scales, dryer, and 40,000 bushel
storage facilities. A budget saving min-
cum storage changes in the area re-
vealed that the farmer would have an
increased profit of $9,272 per year.
In addition to the increased profit he
will reduce harvest time by allowing long
lines at the elevator and he will gain
greater flexibility of marketing.

FARM BUSINESS ANALYSIS SHOWS OTHER
CAREER OPPORTUNITIES SUPPORTED BY
FARMING

A recent Ohio Title publication "Farm Business Analysis Report of Programs Conducted by Teachers of Vocational Agriculture" presents factual informa-
tion which shows that farming sup-
ports other agricultural careers. Some
examples of this can be seen by an
analysis of Table 1 below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Income from Sales of Crops</th>
<th>Income from Sales of Livestock</th>
<th>Income from other sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$56,000</td>
<td>$48,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>2013</td>
<td>$59,000</td>
<td>$50,000</td>
<td>$22,000</td>
</tr>
<tr>
<td>2014</td>
<td>$61,000</td>
<td>$52,000</td>
<td>$24,000</td>
</tr>
<tr>
<td>2015</td>
<td>$63,000</td>
<td>$54,000</td>
<td>$26,000</td>
</tr>
<tr>
<td>2016</td>
<td>$65,000</td>
<td>$56,000</td>
<td>$28,000</td>
</tr>
</tbody>
</table>

In addition to the income from the
sale of crops, crop farming operations
provide other income in the form of
provide jobs for the community. For
example, the $12,000 expenditure for
income and $11,000 for additional local
businesses do not directly benefit the
community. However, the greatest
benefit is the income in the form of
income and $11,000 for additional local
benefit. A well planned and conducted
program has the potential to build and
maintain a viable school-community
partnership for career education.

Summary

Use of community resources will be
a necessary part of education for ca-
ergies. All levels of students need to
be taught how to learn in the community
where much of their learning after
graduation will take place.

FROM THE RESEARCH EDITOR'S DESK:

J. David McCracken
Assistant Professor of Agriculture
The Ohio State University
Columbus, Ohio

Since 1967 research
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on the Educational
The Trip

Qualifications

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EVALUATION TO IDENTIFY NEEDS—Cooperation between citizens in the community, school officials, and the progressive teacher of Vocational Agriculture and his students created the Thomas High School (La.) obtaining a modern new Vocational Agriculture Department. Billy Ray Crain, Vocational Agriculture Teacher, is shown standing (left) at the door of the old department and in front of the new facility (right). Patrons, parents, and Vocational Agriculture students from Thomas High School all assisted in the actual construction of the building during the summer months. The building 20' x 72' in size and contains the classroom and a well-planned and equipped shop. (Photo from J. C. Shumate, Louisiana Area Supervisor).

THE ROLE OF EVALUATION AND ACCOUNTABILITY

Teachers are accountable for many roles. Minnesota FFA Executive Secretary, W. J. Kietzmann, is wearing his illustrating the responsibilities of the Agricultural educator. “Kurt” and this technique to impress FFA members with many jobs to be done in each chapter. (Photo from the Minnesota State Department of Education).

ACCOUNTABLE FOR STUDENT PROGRESS—J. D. Richmond, second from right, Vocational Agriculture Teacher at Clinton High School (La.) is shown evaluating students at one of the skills in plumbing. Observing are East Feliciana Parish Superintendent James V. Sallen, right, and Harry Tyree, Parish Supervisor. (Photo from J. C. Shumate, Louisiana Area Supervisor).

ACCOUNTABLE FOR FACILITIES—Vocational Agriculture Teachers are expected to use and care for well equipped Agricultural Mechanics labs and Horticultural facilities. Well designed tool content and student cooperation make this possible. (Photo by Richard Douglass).

Stories
in
Pictures

by Richard Douglass