(Bishop, from page 248)

existing gap in the educational continuum. To attain its rightful place, positive efforts must be made to bring about cooperative interface.

Summary

The task of the adult education during the 70's will be to provide appropriate education opportunities for those engaged in a dynamic society. Increased cooperation may well be the mechanism to remove many of the abrasive conditions which here-to-fore have limited the total effectiveness of adult education in agriculture. ◆◆◆

1. Malcolm S. Knowles, The Modern Practice of Adult Education.
2. James B. Allen, Phi Delta Kappan *Vol. 51, No. 8, April 1970, p. 449.*

(Cooper, from page 258)

To be sure, there are others; however, these articles, it would seem, give a very vivid picture of the author's feelings and concepts as related to teaching and people.

The attitude of the author towards the integrity of the individual and individual worth is brought into focus in "Clean The Window, A Critical Look At The NFA and FFA Organizations." "Ambition, A Spur to Success," March, 1956. Another such article is "Insanity Versus Stupidity," May, 1954.

Of the many poems written, I shall list only three which seem, to me, a vivid portrait of Dr. Floyd's concept of a way of life suitable to people of all walks of life; they are as follows: "The Road To Happiness," "Consecration," and "The Tide."

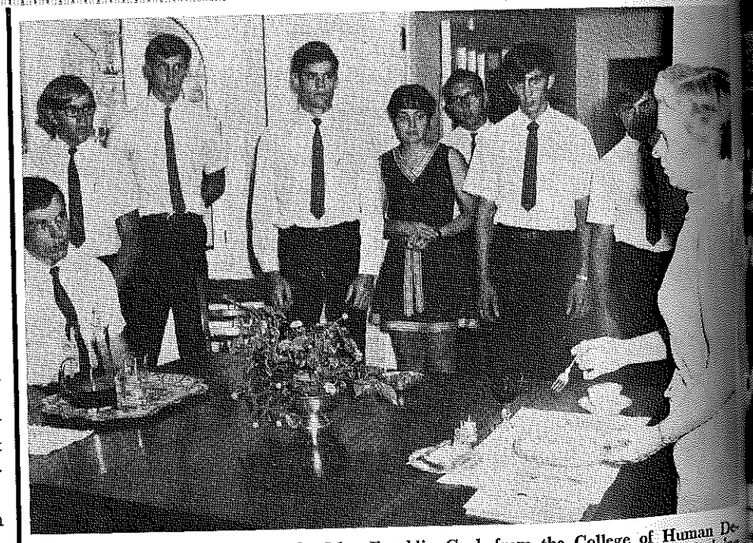
To say that he was a great teacher, a wise counselor, a humanitarian and a philosopher seem trite when these qualities are contrasted with the giant shadow of such an unusual benefactor. We are his debtors beyond our meager abilities to pay; however, the thousands whose way of life and deeds are praiseworthy, are eternal monuments to his life and works. We conclude, therefore, with this Biblical quotation: "By their fruits ye shall know them." ◆◆◆

Mr. C. Bourg, Manager of Agricultural Supplies and Marketing for U.S. Steel presents plaques to winners of the outstanding young teacher of agriculture award in each NVATA district. Shown L to R are: Mr. Bourg; Region I, Ed Strong, Payette, Idaho; Region II, Allen Nelson, Fort Morgan, Colorado; Region III, Lee G. Mendenhall, New Richland, Minnesota; Region IV, Gary Bauer, Sunburg, Ohio; Region V, James Watson, Smithville, Tennessee; Region VI, David A. Miller, Gaithersburg, Maryland.

NEW/AAVIM OFFICERS

Newly-elected officers for the American Association for Vocational Instructional Materials (AAVIM) are as follows: President, Clarence J. Rogers, Associate Professor, Agricultural Engineering, University of Florida; Vice President, Harlan E. Ridenour, Director, Ohio Agricultural Education Curriculum Materials Service, The Ohio State University; Secretary, J. B. Payne, Agricultural Mechanics Specialist, Teaching Materials Center, Texas A & M University; Fiscal Officer, Donald E. Wilson, Chief, Bureau of Agricultural Education, California. These officers for 1972 were elected by members of the board of Directors at their annual meeting in Memphis, Tennessee.

AAVIM is an interstate organization whose purpose is to develop instructional materials that meet the needs of teachers and students in 36 participating states. G. E. Henderson is Executive Director.



A class in social etiquette given by Mrs. Franklin Cook from the College of Human Development at The Pennsylvania State University was the topic of the Leadership Training Conference for the Pennsylvania State Association of FFA.
At the center of the photo is George Allen, New York, National Vice President of FFA; and, Miss Nancy Kozak, Director of Youth Organizations in Vocational Education for Pennsylvania.

Agricultural Education

Volume 44 May, 1972 Number 11

Theme-INNOVATION IN AGRICULTURAL EDUCATION

The
Agricultural Education
Magazine

EDPRESS Vol. 44 May 1972 No. 11

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THEME—INNOVATION IN AGRICULTURAL EDUCATION

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COVER PHOTO

Students studying aquaculture from recently completed ponds at Baldwin High School, Wailuku, Hawaii. Four ponds were constructed to raise Malaysian prawn, channel catfish, gobies and edible snails together with watercress, taro, rice, and water lilies.
The ponds serve as a laboratory for the class. Agricultural program at Baldwin High School also offers agricultural mechanics, poultry, ornamental horticulture, livestock production, truck crops.
(Photo supplied by Roy Yonahara, Vocational Agriculture instructor, Baldwin High School, Wailuku, Hawaii.)

Editorials

From Your Editor . . .

INNOVATION BEGINS WITH AN IDEA!


Roy D. Dillon

Today nearly 14,000 agricultural educators are planning and teaching agricultural-vocational classes. The success of these educational programs in preparing young people for continuing education and employment is varied, depending upon many factors.

Change, upgrading and revisions in present programs begin with an idea. The idea may originate as a teacher (1) thinks about how to solve an existing problem in the classroom, (2) listens to a presentation at a professional conference, (3) participates in an in-service activity, or (4) meets with colleagues, administration, or state consultant staff.

The implementation of an idea requires careful planning by the teacher, to (1) think through specifically what he desires, (2) describe why he believes the idea will provide a more effective educational program, (3) plan the procedure for implementing the idea, and (4) outline the needed costs to implement the idea.

Innovation in vocational education in the simplest sense may be to vocationalize teaching. The relating of classroom discussions to the occupations for which the content will be needed, and how the content will be used, is a procedure that is relatively inexpensive. Especially, elementary teachers can broaden the exposure of youngsters through the above technique. Young people in elementary school tend to idolize their teacher, particularly in the lower grades. As we teachers "manipulate the minds" of youth, are we "**taking seriously**" our "teaching responsibility?"

Junior high age young people are energetic and eager to explore ideas. As we teachers "manage the learning situation," we can structure the natural curiousity of the junior high age group by providing exploratory vocational observation experiences.

Secondary school vocational agriculture programs can also be vocationalized, modernized, innovated, changed, restructured, revised—**but,** whichever term you use, the most important factor is whether the innovations result in behavior change in young people, toward the program objectives planned.

Vocational agricultural education has done a superb job during the past 50 years in preparing production farmers and ranchers to manage the most productive on-farm agricultural industry in the world. All 14,000 of we agricultural educators have been given the "green light" from the Federal Congress through the 1963 and 1968 legislation to redesign vocational programs toward broadened objectives. Have YOU implemented innovative ideas to more effectively help young people?

—RDD

Guest Editorial . . .

INNOVATION CAN LEAD TO A "TOTAL PROGRAM"


Darrell Anderson

A new concept in continuing education for farmers has led to the development of a truly "total program" of agricultural education in many Colorado communities, as well as in other areas throughout the nation.

The Young Farmer Educational program is filling the void which has existed when a high school vocational agriculture department graduated its senior students as production farmers or in agricultural occupations without making provision for further educational assistance. The period of establishment is a critical time in the life of the young farmer, when he is groping to establish himself in his career, and begins to confront many problems for which there doesn't seem to be a solution. Management, in particular, has been a stumbling block for many young farmers.

The one person best adapted to assist the new farmer is his former high school agriculture teacher. The agriculture teacher knows the young farmer, and has the knowledge, experience and contacts with resource people to give him the assistance he needs. The teacher is familiar with the community and with the problems the young farmer must tackle.

The **"Young Farmer"** concept grew out of teaching methods and a curriculum developed in Colorado about 12 years ago by Dr. Irving Cross, head agriculture teacher trainer at Colorado State University, and Dr. Floyd McCormick, now head agriculture teacher trainer at the University of Arizona, but at that time an un-doctored vocational agriculture teacher at Berthoud, Colorado High School. The course has been taught at Colorado State University as a graduate course. In the spring quarter of 1972, the course will become a part of the undergraduate curriculum. For the past several years the Young Farmer Education course has been taught in several community and junior colleges as an off-campus summer course of Colorado State University.

The course has enabled high school agriculture teachers to provide useful instruction in farm management to young adult farmers in evening classes. In most communities, this has led to the development of a continuing education program, which includes specialized subjects in agriculture in addition to farm management. This has resulted in establishment of local young farmers educational clubs or chapters, and led to establishment of the Colorado Young Farmers

(Concluded on page 287)

Darrell Anderson is Supervisor, Agricultural Education, State Board for Community Colleges and Occupational Education, Denver, Colorado.

CHANGE FOR THE SAKE OF CHANGE?

Garry R. Bice, Director
Tennessee Research Coordinating Unit
for Vocational Education, Knoxville

Garry R. Bice

Change! Update! Redirect! Innovate! For several years now, educators have been hearing those demands on the public educational delivery system. "There is no need to change for the sake of change," is a defensive response often given to such demands. As a result of shifting population and occupational trends, agricultural educators, in particular, have been the targets of many of these demands.

As changes have been effected in the past, they will continue to be made in the future, but most likely, at a much more rapid pace. One of the reasons for this is that there is a growing reservoir of knowledge about who, how, what, when, and where to change. The Center for Vocational and Technical Education at The Ohio State University has been and continues to be one of the leaders in exploring the change process. Several studies have been completed at The Center, which have provided some valuable information for agricultural educators as they consider the means for making their programs more relevant.

Who Makes Changes?

Although the evidence is not yet conclusive, it is beginning to appear that those teachers who adopt changes more readily are the younger teachers (35-45 years of age) who have been teaching in the same school system for about 15 years and who have enrolled in a greater number of in-service training programs. These teachers also participate in more social and professional organizations and activities in their local communities. This suggests that these teachers are secure in their positions and are not threatened by impending changes.

How Are Changes Made?

Hearn has suggested several steps that one may use to assist with the problem of initiating change. Summarizing and applying these steps to the local situation, one might bring about changes by: (1) developing a viable relationship with the client system (students, parents, administrators, teachers) and establishing yourself in a helping role; (2) diagnosing and helping to articulate the clients' real needs; (3) retrieving relevant information and resources aimed at solving the problems, and (4) generating a range of alternatives and choosing a potential solution.

What Changes?

Although it is impossible to develop a generalized laundry list of what changes one should consider making in an educational program, there are several basic questions one could ask himself with the answers yielding some specific suggestions on what to change.

1. Are the graduates of my program becoming economically self-supporting?
2. Am I performing my job as efficiently as is possible?
3. Am I meeting the needs of all those who could benefit from my program?
4. How might I do my job more effectively and efficiently?

If one would answer these questions with more than just a "yes" or "no" answer, he would have no problem identifying "What changes should be made?"

When Should Changes be Made?

It is often said, *"No time is like the present,"* and *"Never put off until tomorrow, that which you can do today."* Contrary to the message in these cliches, there is a right and a wrong time to make changes. Hearn states that, "Most real innovators end up being transferred or fired." Obviously that condition doesn't accomplish our goal, so the real innovator might consider four opportune times for making changes, as Hearn suggests: (1) at the time of fiscal adjustments; (2) at the time of personnel change; (3) during media crusades — build while you have public attention; and (4) during crises — at critical points in all crises, the climate is right for major innovation.

Where to Change?

It is easy for the individual teacher to make minor changes and adopt innovations in course content, teaching techniques or methods and in other areas which "don't get beyond the four walls" of the classroom. But, when a change is needed that affects other students, teachers, administrators or parents there are some factors to be taken under consideration. For example, it is easier for the teacher who works in a larger school (1,500 to 2,000 students in grades 9-12) with a relatively high per pupil expenditure and a 10 to 15 percent turnover in teaching staff each year, to make changes than it is for the teacher who works in a smaller school with a low per pupil expenditure and little staff turnover.

Roadblocks to Change

Many innovations fail to be adopted by teachers not because they are poor but because they are not given a chance. On the other hand, we are often too hasty to chastise the teacher for not adopting innovations. Pulleyblank suggests that some of the roadblocks to change include the fact that there is a lack of clear, shared understanding of educational objectives, and a failure to evaluate proposed innovations in the light of those objectives. He also suggests that there is a lack of both resources and time to plan for innovations.

Summary

Something can be said for "change for the sake of change," particularly if we subscribe to John Gardner's philosophy of "self-renewal." At the same time, we do know much about the who, how, what, when, and where to change. We can, in fact, realistically effect change if we so desire. Perhaps it's time for change! ◆◆

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Hearn, Norman E. "The Where, When, and How of Trying Innovations." *Phi Delta Kappa*, Vol. 53, No. 6. (February 1972) pp. 358-61 and 374.

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INNOVATION-ANOTHER NAME FOR ELEMENTARY AGRICULTURE

Robert D. Herr, Chairman
Agriculture Department
Eastern Lancaster County School District
New Holland, Pennsylvania

One new area of emphasis in the field of agricultural education is at the elementary school level. There is growing interest in programs developed for upper elementary children for several reasons. Younger children are often enthusiastically interested in nature, the outdoors, conservation, animals, and other agriculturally related subjects. With the increased concern over the quality of our environment we have found that communities, schools, and children are clamoring to know more about how this affects them. Agricultural education should have a great deal of interest in programs in this area because it presents an opportunity for a more balanced presentation in the area of environmental quality than a strictly conservation orientated program might have.

Agriculture as a business and industry is directly affecting the lives of everyone. Therefore everyone should have some basic knowledge about the nature and scope of the agricultural industry.

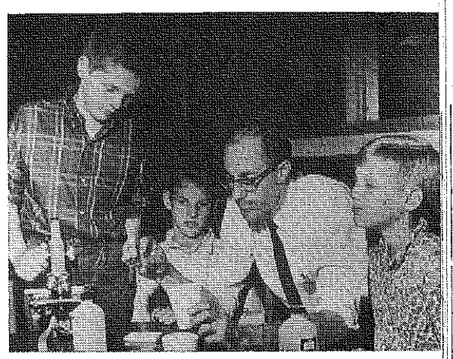
Several years ago an agricultural program for sixth graders was initiated in the Eastern Lancaster County School District of New Holland, Pennsylvania. The program was developed around three main interest areas: safety, sanitation, and conservation with attention devoted to various careers associated with each of these areas. Originally the program was offered on a voluntary basis to only sixth grade boys in selected schools, but so much interest developed that it was offered to all sixth grade pupils — a total of over 500. Each class met one hour per week throughout the school year, with several field trips and home visitation in addition to the regular class meetings.

• To determine the effectiveness of this program a study was conducted to discover to what extent the program affected the interest, attitude, and knowledge of the pupils involved. An attempt was also made to determine which of three teaching methods effected the most significant changes. The three methods included: a subject-matter specialist using a specially developed resource unit, the homeroom teacher using the specially developed resource unit, and the homeroom teacher using no specially developed unit.

• The findings showed that even the least structured program in elementary agriculture achieved significant improvement in knowledge about safety, sanitation, and conservation. The more highly structured programs using specially developed resource units and subject-matter specialists achieved more positive results in the knowledge area. The use of the resource unit also achieved significant positive change in the attitude concepts measured. Interest remained constant in all groups throughout the study.

• It can be concluded from the results of the study that a program of this type in the elementary schools is effective in increasing knowledge and improving attitudes. It can also be stated that the resource unit is a valuable tool in achieving the most significant improvement in knowledge and attitude about the various areas of safety, sanitation, and conservation covered by the program.

• The program studied was not rigidly structured and could easily be altered to meet the needs of any type of community, however rural or urban. Agriculture provides an interesting vehicle to teach children more about safety, sanitation, and conservation, especially on a level that applies to them. Some aspects of safety covered in the pilot program included bicycle safety; hunter and gun safety; safety around the home, farm, and school; fire prevention and control; and safety around animals. Conservation included soil, air, water, forests, and wildlife conservation as well as improvement of the quality of life by improvement of our environment. Sanitation included such items as rodent control, chemical and spray use, and an extensive water testing program involving the testing of home drinking water supplies for both nitrates and coliform count. Various types of people who work in each of these areas and an introduction to their jobs was included in the program. This gives children an orientation into the many kinds of careers in the natural resources areas that are available to them.



Testing water from the home water supply is a part of the sanitation phase of the Elementary Agriculture Program. Since some 50 per cent of the water supplies of Lancaster County are unfit for human consumption, one of the best methods of informing a family of this condition is through their son who not only has an understanding of why but also of what can be done to improve it. Other areas of sanitation included in the program are rat control, pasturization and testing of milk, and pesticide handling.

• The study demonstrated one procedure rather conclusively. All teachers involved in the program felt they were including the various important aspects of safety, sanitation, and conservation in their day-to-day lessons but the student group receiving no program of any type, other than the regular instruction, scored far below all other groups in the study in both the achievement and attitude areas. Thus, it can be said that it is necessary to have some specific structured program to teach children various important aspects of safety, sanitation, and conservation. Integrating the content into the general program simply was not getting the job done in the school district studied.

• When considering methods of expanding and improving agricultural programs, teachers should consider this relatively new elementary area. And elementary administrators seeking ways to include a valuable program of environmental or conservation education in their curriculum as well as an introduction to career education should investigate the possibilities of a program of this type. It can provide exciting challenges to all involved. ◆◆◆

STUDENT ASSESSMENT...
A Step Beyond Performance Objectives

Glen C. Shinn
Agriculture & Extension Education
The University of Florida
Gainesville, Florida

One of the most obvious needs of both student and teacher is the ability to recognize the desired destination.

Performance Objectives — a management tool

Glen C. Shinn

Clarity of direction is one of the essential ingredients if we expect to obtain our goals. If a traveler expects to reach his destination, it is essential that he not only know the direction of travel but several other tidbits of information like distance, required time, unusual obstacles, prerequisite equipment, and the ability to recognize the destination when he has, in fact, arrived! A parallel between the student and the traveler has been drawn many times and each time the comparison is very clear.

Prior to the departure, both the student and the traveler must do some pre-planning. The student should know the general direction of travel in terms of a desired career outcome. It is not essential that he identify a specific job but rather a cluster of careers which have a common route and allow some flexibility in planning. The time he is willing and able to spend enroute to the career is also an important consideration. If this is a problem, intermediate goals should be established to use as bench marks for progress. Other variables to consider prior to the trip are anticipated obstacles and required equipment. During this first phase of the career planning, the student should do a comprehensive assessment of both his strengths and weaknesses' and match these characteristics with the identified career qualifications.

If we as teachers are going to expect our students to arrive with a body of specified knowledge and skills, we must be explicit in our condition statements. The lack of such clarity leads to both students and programs which lack focus and to results which are difficult, if not impossible, to interpret. The statement of performance objectives represents only one step of the instructional process but a very important first step in terms of the management of learning. If these steps are going to be synchronized, a system must be developed which has usability.

A System for Assessment

Project Horticulture is a Florida-based applied research project which was charged with the development of a model which could be used in determining the competencies of workers during the training program in light of the required competencies for sub-managerial entry-level employment. The project developed a catalog of performance objectives, some 234 in all, which was thought to represent the majority of behaviors which are expected of entry-level nursery workers. Each of the objectives stated the conditions of the behavior and a minimum level of performance which is acceptable in the nursery business.

The catalog was then subjected to a sample of nursery owners and managers who evaluated each behavior included in the catalog in light of the requirements they place on their entry-level workers. They also had the privilege of adding any competency they felt has been overlooked. The agreement among managers was surprisingly high and they identified 57 of those objectives listed in the catalog as ones they expect their workers to possess when they assume employment. These objectives ranged in the level of sophistication but it included the practical tasks which must be in a basic instructional program. Each of these identified items had four criterion-referenced test items prepared which can be used in determining if the student can, in fact, perform this task.

As you can immediately see, these 57 items which were identified will not fit every situation found in a state. However, using this concept of an identified bank of objectives available to all, each teacher can subject the catalog to the requirements of the businesses where his students find employment and select the minimum behaviors which they will need to obtain a job. Since the criterion is written into the objective and the item, the student either can or cannot perform the behavior at a level satisfactory for the industry. Upon completion of the course — or at any intermediate point — the student can leave the program with a listing of the behaviors he can satisfactorily perform and the employer can evaluate the applicant in light of job requirements. If the worker wishes to improve his job — or move to another level, he can cycle back into the instructional program for additional training.

Evaluation of the Teaching-Learning Process

Using this system of learning management, each teacher can not only assess individual performance but also can determine the progress of the group. If the learning problem is an individual one, the teacher can diagnose the source and prescribe either alternate strategies of learning or additional practice time with a correct example of the performance. Using this approach, much of the learning could be individualized to fit into a modular scheduling scheme.

(Concluded on page 280)

The student can leave the program with a listing of those behaviors he can satisfactorily perform so the employer can more effectively evaluate the applicant in light of job requirements.

MAKING SUMMER INSTRUCTION MEANINGFUL-
- Via Mobile Vo-Ag Classroom

Irving C. Wedeking
Vocational Agriculture Instructor
Aurora, Nebraska

Irving Wedeking

One of the greatest challenges facing the Vocational Agriculture Instructor is maintaining a sound educational summer program. Because of the high degree of technological change in agriculture, it is very difficult for an instructor to maintain an educational summer program by using a car or pickup to make on-farm instructional visits to his students, especially during the time of the year when the instructor should be most effective in his teaching. It is felt there are more needs, problems to be solved and the **application of formal learning** that should be be done during the summer months. Also many areas of agriculture can only be partially taught during the school year, because of being out of season, of not being able to use live or growing material, or the normal operations which are completed during the summer months. Some examples are: irrigation well efficiency, crop disease identification, fertilizer management, and livestock improvement.

In this article I will describe the use of a Mobile Education Unit in the Aurora school district to meet the above challenge.

Community Background

The Aurora school district, located seventy-three miles west of Lincoln, includes 516 farm families with an average farm size of 306 acres. The farms are mostly row crop, beef fattening, swine fattening, swine production and beef cow operations. The population of Aurora is 3,180 with most businesses being agriculturally related.

Objectives

The specific objectives planned in this project were:

1. To provide a complete program in Vocational Agriculture by implementing a formal summer education program to fulfill the needs of students enrolled in the supervised experience programs in Vocational Agriculture.

The greatest challenge facing the vocational agriculture instructor is maintaining a sound summer educational program.

2. To provide special entry skill level occupational preparation to those students who are socioeconomically or academically handicapped and place students on-job when skill level is reached.
3. To assist students to make career choices and decisions regarding future educational and occupational plans by using on-location study of occupations.
4. To reduce the unemployment percentage among students of this ability and age level grouping by providing on-location situations and skill entry study during the summer months.

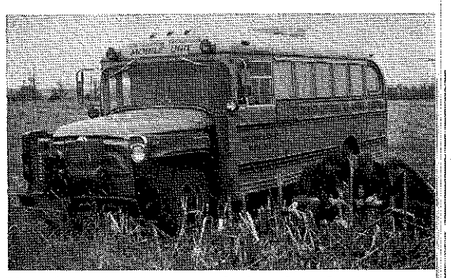
Mobile Classroom Equipment

The mobile classroom started with a stand-by 1958 I.H.C., 42 passenger, school bus. The bus was wired for 110V, carpeted, curtains installed, air conditioning, electric heating, and a 7.5KW, 110-220V power unit was installed.

Educational equipment and materials placed in the Mobile Unit are as follows: four student desks and chairs, filing and storage cabinets, resource material rack, instructor's station, two tape recorders, video-tape camera, recording deck and monitor, wide angle overhead projector, film projector, slide and filmstrip projector, overhead viewing screen, five wireless listening headsets, calculator, two-way business band radio, textbooks and resource materials, student files, 21 Kodak carousels and 16 hours of video tape which have complete lessons, demonstrations, skills, occupational information, etc. for mobile classroom use. All equipment, fixtures, and teaching aids are mounted or stored as to prevent movement or resist shock during road travel.

Mobile Classroom Procedure

The 222 square mile district was divided into 24 teaching areas by using the following criterion: (1) a teaching area is no more than twenty square miles, (2) no student travels more than three miles to Mobile Unit, (3) students in area are grouped by needs, interests and grade level, (4) special needs of students are to be considered on individual basis, (5) eight students will be considered an area. Teaching areas are altered to meet criterion on June 1st of each year.



Use of Mobile Classroom during the school day. Students measuring and calculating field loss on actual location.

Area schedules are sent to the students one month in advance and they are expected, but not required to attend summer instruction. Formal instruction is given from 9 to 11:00 A.M. and from 2 to 4 P.M., four days each week. Ten hours of formal instruction are given to students with special needs each week. Students are given school credit for each ten hours of instruction.

Day School Students

The Mobile Unit is used eight hours

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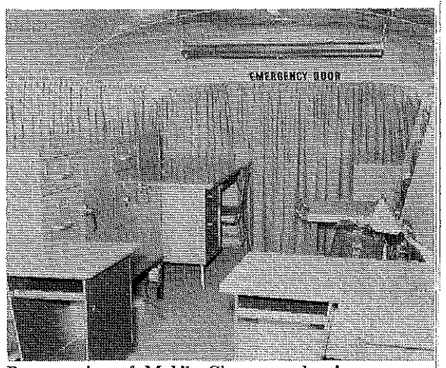


Rear portion of Mobile Classroom showing part of students' desks, storage and filing cabinets, instructor's station, resource materials rack, and equipment storage.

(Wedeking—from page 275)
each week for day school students. Instruction is given to groups or individually in the supervised experience program of Vocational Agriculture.

Young Farmer Education

The Mobile Unit is used ten hours each week, on an individual basis, to implement the Nebraska Farm Business Analysis Education and to assist the young farmer in highly technical management decisions.

Testing Program

A five part test of agricultural achievement, developed by the Nebraska Agricultural Education Project, is being used for testing and evaluation of the project. The five part test will evaluate the students' achievement in management, plant and soil science, animal science, mechanics, and a general interest test. The summer program tests have been evaluated and the results are promising. Complete results of the project will be published at the end of the two year testing period.

Two-Way Radio

A business band radio is used between the County Extension Office and the Mobile Unit. The purposes of the radio are: (1) if a student is in need of assistance, he may telephone the County Extension Office and they will relay the message by radio, (If the need is in the same area the Mobile Unit is operating, assistance is given to the student after or before scheduled class sessions are given) (2) if a problem cannot be solved because of lack of information or knowledge, the County Extension Agent is radioed for assistance, (The County Extension Agent can be reached by radio-phone when not in the office and information is then radioed back to the Mobile Unit by the office personnel).

Future Mobile Classroom Use

Research and studies are being made to broaden the use of the Mobile Unit during the school year after the completion of the pilot study. It is hoped that by the 1973-74 school year the unit will be on one-half time for young and adult farmer education, and by the 1974-75 school year one-half time for young and adult farmer education and one-half time for high school students. It is also hoped it may be used for a program to educate drop-out students to a high enough skill level that they may apply for entry-type occupations in agriculture.

Funding

A total of $7,497.00 of exemplary funds will be used during the duration of the project which began on April 1, 1971, and will end on June 30, 1973. A total of $9,190.00 of local funds will be used during the duration of the project.

Summary

During the period from June 1 to September 1, 1971, a total of 217 student contacts were made and a total of 471 mobile classroom hours of instruction was given.

A total of 82 percent of the student enrollment scheduled actually attended the Mobile Classroom Unit.

The learning areas completed during the summer were not structured as complete courses but were planned to complete the practical application aspect of courses studied during the school year. Examples were: (1) crop diseases, (2) insect identification, (3) weed identification, (4) pasture improvement, (5) career opportunities in agriculture, (6) record analysis, (7) irrigation management, (8) livestock management, (9) job placement and skills training, and (10) home improvement.

The instructor devoted 580 hrs of time to this project from June 1 to September 1. Since the mobile unit construction was not begun until April 1, 1971, the resource materials were not as complete as desired on June 1. The needs of the students were much different than the traditional methods of summer education and much time was spent preparing resource materials to fill student needs during the summer. The instructor's time may be reduced during the summer of 1972 but it is felt the high school students, young and adult farmers, will ask for more assistance because of the effectiveness of this Unit filling the needs of agriculturalists in this community.◆◆

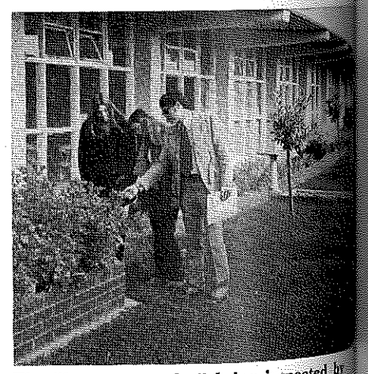
E. M. Juergenson
Teacher Education
University of California, Davis

"FRAGRANCE GARDEN" —A City Agriculture Project

E. M. Juergenson

A unique program in agriculture is developing in the heart of the Capital City of California: Sacramento. Encina High School lies in a complete city environment, yet is developing an enviable program in agriculture which is meeting the needs of that community. Through the insight and determination of its administrator Mr. Golden, and head vocational agriculture teacher, Ray Klinefelter, a thriving Vo-Ag program is developing. The program includes ornamental horticulture, wildlife biology, natural resource conservation, and home gardens. Many city students are finding a home in this department and a career door opening to them.

One of the novel and appealing projects is the development of a "fragrance garden" located between two wings of buildings and attractively landscaped with lawn, shrubs and flowers. One of the unique features is that the flowers and shrubs are labeled in Braille so the blind can learn to associate proper names with what they feel and smell. An attractive garden meeting place is located at one end of the garden so local garden clubs, women's groups, etc. can hold meetings there while school is in session. What better use of facilities and building of sound public relations? ◆◆◆



The "fragrance garden" being inspected by Don Brodnansky and two students at Encina High School, Sacramento, California. It is labeled so the blind can use it for their enjoyment.

HOW CAN THE TEACHER OVER 40 BE ENCOURAGED TO CONSIDER CHANGES?

Henry M. Davis, Head
Agricultural Education Department
James Wood Senior High School
Winchester, Virginia

Henry M. Davis

The older I become, the more important it is to keep abreast, study, and plan for the future.

The Agricultural Teacher must stay alert to the ever changing conditions of the vast and varied industry of Agriculture if his department is to meet the current agricultural educational needs of the area. This awareness may be less on the part of an older teacher than a younger one, however, it is essential if the agriculture education program is to be successful and meaningful to the people of the Community.

I have seen 35 years come and go in Agricultural Education and can appreciate many valuable changes in the teaching techniques, approaches to new options, and services offered through the various programs. I am now 62 years of age.

Frederick County, located in the Shenandoah Valley of Virginia, is one of the fastest growing counties in the State, ranking first in fruit production of Virginia and about seventh in the nation. Winchester, the County seat, is often referred to as the Apple Capital of the world. Fruit and livestock production are the main agriculture enterprises of the county. In the past 10 years considerable industry has moved into the area, providing more employment. The county provides many job opportunities for both **on** and **off** farm workers who have been trained in the needed skills. It was because of the need for new and additional educational skills that we decided to expand our program here in Frederick County by incorporating the Agricultural Machinery and the Horticulture options in addition to the Production option being taught.

During the summer of 1965, at a meeting in the Agricultural Education Department with the Superintendent of Schools, the Director of Instruction, the Principal, Area Supervisor, and the three Agricultural teachers — a decision was reached to expand our program. The three teachers made surveys, contacted leading farmers, farm machinery agencies, nurserymen, agribusinessmen and business leaders. After obtaining these men's views we decided to add the Farm Machinery Option for that fall. This was done with the help of the guidance department by setting up one two-hour class that year and adding another two-hour class the following year, giving us two levels of instruction, I and II. Mr. A. H. Clark conducts this phase of the program.

Two years after discussions with the school administrators, farmers, agribusinessmen and the Advisory Council we decided there was a need for an option in Horticulture, if our educational program was to be kept abreast of the needs in the area. With the help of these people, the School Board with matching funds from the Federal Government built and equipped a greenhouse for instructional purposes. Mr. E. H. DeHart developed this option.

I have the responsibility of continuing on with the Agricultural Production Option with 60 students enrolled, however, Mr. Clark helps with the agricultural mechanics section of the production option. All three teachers work with the Future Farmer Organization alternating as advisors from year to year. Each teacher, also, conducts an adult class within his option.

On basis of my experience during the past several years, I offer the following suggestions to any teacher who wants to consider the varied changes in the industry of agriculture for the purpose of keeping abreast and planning for the future educational needs in his community:

1. **Ask yourself the question — Am I teaching subjects and demonstrating skills that are meaningful to the students** and helpful in meeting the current and future agricultural employment needs both on-farms and off-farms?
2. **Ask leading adult and young farmers,** agricultural machinery men, agri-businessmen and students themselves **what they feel should be taught.**
3. **Visit other agricultural education departments** in the area and talk to the teachers who are working with various options.
4. **Take pictures, 2″ x 2″ slides of** your activities, demonstrations, enterprises, etc. Show them and discuss them at banquets, educational and civic meetings. Talk it up. Sell your program. Tell them what you are doing and what you need to do to improve the department. Ask for their support; you will be surprised how helpful this can be to your Department and the school system.
5. **Make sure those whom you must work with are well informed** of your plans and objectives — people in the guidance department, superintendent, principal, director of instruction, school board members, and supervisors.
6. **Become a student of your occupation** through self-study, in service training courses, and help from resource people of the community. In multiple-teacher departments, divide the responsibilities among the teachers for concentrated study, planning and teaching.
7. **When employing or changing personnel consider the qualifications and interests of the**

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teacher in terms of agricultural options needed in the department.

8. **A good Advisory Council** consisting of farmers, agri-businessmen, and educators **can be very helpful through** guidance and support.
9. **Work closely with any Junior High School Departments that may be feeding you students for your program.** This is very important where options are being taught in the Senior High departments. It can encourage enrollment and help you to be more selective of students and better coordinate the instructional programs of the two school levels.
10. **Don't become discouraged if things fail to work out just right.** There will be problems — it will take time, but if you are sold, work ahead; others will soon help you.
11. **Develop a good "Public Relations" program.** Get your instructional program going, have open house, take pictures of outstanding activities, "toot your horn" a little and be proud if you have done a good job along some line in the community. Place some good students in key places if possible. These activities will help you to further develop your program and carry it on. Help some adult or young farmers to overhaul a motor or do some worthwhile job for themselves in the adult mechanics classes, place some poinsettias or flowers from the greenhouse on the desk of the principal, guidance office, school board office, etc. Let the people know what you are doing by telling educational and civic groups to include in their agenda for some night meeting a tour of the greenhouse and mechanics laboratories — invite a few groups this year and a few next year. Once you get a challenging program going, you will find your work easier and more interesting by helping students to develop worthwhile working skills, while better meeting the educational needs of the community. ◆◆◆

SCHOOL FARMS AND COUNTY PARKS— Do They Go Together?

Steve Orhwall
Vocational Agriculture Instructor
Rio Linda Sr. High School
Rio Linda, California

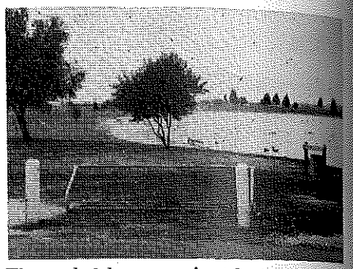
Steve Orhwall

An interesting approach to a school farm concept of a vocational agriculture program is currently in progress at Rio Linda Sr. High School in Rio Linda, Calif.

The Grant Joint Union High School District has entered into an agreement with the Sacramento County Parks and Recreation Department concerning the use of their facilities at the Gibson Ranch County Park to serve as a school farm for the Agriculture Department at Rio Linda, located four miles west from the park.

The Gibson Ranch County Park was originally part of a 1500 acre cattle ranch with all the accompanying facilities including a horseshow arena. The actual park now encompasses 245 acres which surround the homestead. The Department of Parks and Recreation, in keeping with the original use of the ranch, has maintained it as such with the addition of picnic areas, horse boarding facilities, riding trails, fishing areas, and a museum depicting the early history of the ranch and surrounding areas.

Under the direction of Donald Brown, head of the Agriculture Department, the ranch is being used to the fullest extent. A two hour vocational agriculture class is taught each day at the ranch, titled **Agricultural Practices.** Numerous projects belonging to the students are kept at the Gibson Ranch, including cattle, sheep, and hogs. The Future Farmers of America Chapter also keeps a flock of 35 sheep at the ranch which provide practical experience for the livestock classes taught at the high school as well as the agricultural practice class taught at the ranch. An arrangement exists with the county whereby those students who keep a project on the ranch pay a fee per animal for each month on the ranch.



The park lake, approximately ten acres in size, is used for boating, fishing, picnic area and general aesthetic reasons. However, the rural recreation and wildlife management classes also find this a valuable lab facility for field trips or experiments.

The Agriculture Department this year raised twenty-five acres of barley as well as five acres of oats and vetch. The Plants and Soils classes in the department raised a vegetable garden in the spring, each student being responsible for the planting and caring for one row. All the hay on the ten pastures was mowed, raked, and baled by the students during the summer. This provided them valuable experience with the use, operation, and maintenance of farm equipment.

Both the school and the Department of Parks and Recreation benefit from this arrangement in that it provides the

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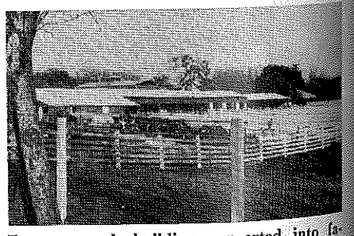


Former ranch building converted into facilities for horses or other vocational agriculture student projects. A fee is charged for use of buildings. Park officials like the idea of livestock, which adds to the attraction for visitors and parents.

A PROGRESS REPORT ON... Iowa's First High School Horticulture Program

Allen Blezek
Vocational Agriculture Instructor
Hamburg Community Schools, Iowa

Allen Blezek

Vocational Agriculture students in the Hamburg, Iowa Community Schools have a two track Vocational Agriculture program available to them. They may take option A—the Farm-Agri Business program, or option B—the Horticulture-Agri-Business program.

The Horticulture option was started four years ago. A comprehensive study revealed a total of 815 full-time employees employed in horticultural business firms in the Fremont-Page County area of Southwestern Iowa.* The study also pointed out there would be an annual need of 40 new employees. These figures do not include part-time employees of the business firms.

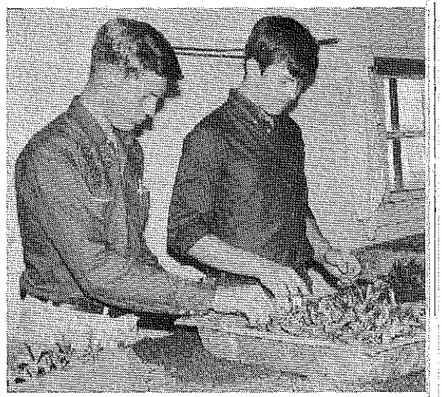
The Horticulture program, the first of it's kind in Iowa, was started after consulting with, and receiving help from, many of the states that had already initiated horticultural programs. Use was also made of a special local Horticultural advisory council. Course outlines were developed, texts selected, and plans for conducting work experience programs established. Full cooperation was solicited, and has been received, for the program.

During the first year, and each year thereafter, the class has been limited to twenty students. Each year from thirty-five to forty-five students have applied for admission to the class. Various selection procedures have been employed to select those persons who will enter and participate in the program. The local guidance counselor has provided much help in the selection of students.

All freshman students, both boys and girls, take crop science. In their sophomore year, students elect to take option A or option B. Vocational Agriculture II and III are offered on an alternating (every other year) basis as is Horticulture I and Horticulture II, therefore the program has been designed so that a student can take Vocational Agriculture III before Vocational Agriculture II or Horticulture II before Horticulture I. This alternating plan is used in order to keep the teacher load of classes within reason. All students, both option A and option B students, take the Off-Farm Agricultural Occupations class during their senior year. During their first semester, the seniors study generally related occupational materials — money management, insurance, taxes, co-worker relations, applying for a job, personal hygiene, etc., and then in their second semester they work on specifically related materials — the Farm-Agri-Business students work in their specialized area of interest as do the Horticulture students.

Students are permitted to take both options in their sophomore and junior years, however they are encouraged to take only one of the two options. Since many of the students come from town, some of their practical work experience is gained in greenhouse space provided by a local cooperating nursery on a no cost basis to the local school district. The greenhouse provides practical experience for all students as a school laboratory. Students grow plants thru the various procedures of plant propagation. The plants are cared for by the students and later taken home and planted to be cared for and enjoyed during the summer months. Students also gain experience and insight into horticultural business operations and opportunities thru timely field trips. Many of the students are placed for work experience at the local nurseries, as well as in other horticultural business firms. Some work only during the summer months, others only during the school year, while still others work the year around. At regular intervals, representatives of the horticultural industry speak to the class on specialized topics.

Even though there would be educational value in marketing the products of the class, no plants are marketed. An agreement, when the program was initiated, stated that the program would, in no way, compete with local horticultural business firms.



Students are shown potting plants in the workroom in the local greenhouse.

Class members participate in a local horticultural organization known as the "Hort. Club," operating as a division of the local Future Farmers of America. Their activities have been centered around community improvement. A few of the projects of the organization during this past year have included: Earth Day activities — cleaning up selected streets and roads entering town, planting trees, shrubs, and flowers as well as the sponsoring of a newspaper article concerning the importance of all citizens doing their part in keeping America beautiful; sponsoring a field day for seniors to our State University's Horticulture Department; planting various trees and flowers around our school buildings; helping to man the booth of the American Association for Horticultural Science at the National FFA Convention in Kansas City, Missouri this past year; and the delivery of flowers, grown by class members, to persons in the local hospital. ◆◆◆

Blezek, Allen. "A Study of The Full-Time Horticultural Occupational Opportunities For A Two County Area of Southwestern Iowa," Thesis, M. S., 1969, The University of Nebraska, Lincoln.

ENVIRONMENTAL EDUCATION: OUR RESPONSIBILITY

John R. Zubler
Teacher of Vocational Agriculture
Penns Valley Area High School
Spring Mills, Pennsylvania

John R. Zubler

Teachers of agriculture have a great deal of expertise in natural resource management, which is the core of environmental education.

Earth Day, April 22, 1970 focused the attention of large segments of our population toward a concern for environmental problems. The impact of Rachel Carson's "Silent Spring" eight years earlier aroused both the pros and cons on the issue of chemical sprays being used in insect, disease, and weed control. Still earlier small groups of agriculturalists began a crusade toward "organic farming" and trumpeted the evils of increasing use of chemical fertilizers and pesticides. More and more people began to question the depletion of our natural resources, the pollution of our soil, water, and air and the despoilation of our landscape.

There is little doubt that increasing emphasis will be placed on environmental problems and the quest for solutions to these problems. The establishment of the Environmental Protection Agency in December of 1970 indicated the resolve of Congress to initiate new approaches of research and regulation leading to mandatory control of environmental problems. Pennsylvania has organized a Department of Environmental Resources which encompasses all the related agencies.

Within the last five years there has emerged a term known as Environmental Education. At a meeting of the Congress for recreation and Parks held in Washington, D.C. in 1966, Laurance S. Rockefeller stated, "If we accept a national commitment to a decent environment and man's responsibility as its steward, it is essential to educate our young people to this goal. Quality of the environment, like freedom, must be protected and achieved anew by each generation."

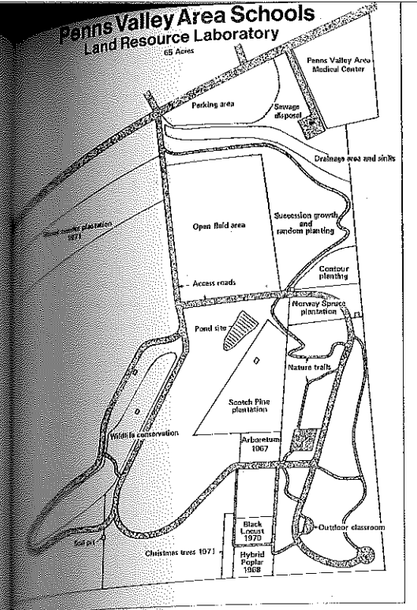
The foregoing description of events was presented in a narrative form to best describe a developing program using an outdoor laboratory. In retrospect, many educational opportunities became available to students in the most practical way possible, actual experience with many of our natural resources and the agencies and personnel who are the specialists working with these resources. The soil scientists, the district foresters, the gameland managers, the conservationists, the land-use planners, and many others welcomed the opportunity to become involved with the educational program of the schools. Students became aware of existing organizations and agencies and the programs which they are advancing. Vocational courses of instruction in landscape design, establishment, and maintenance; woodland establishment and management; wildlife conservation; soil science, land-use and conservation were constantly improved by using the land laboratory. The development and use of the laboratory tended to make the department of vocational agriculture an integral part of the total educational program offered by the school district.

It is my personal conviction that teachers of vocational agriculture do have a responsibility to help design programs and offer courses of instruction to all students in all areas in which we are competent. Because of our training, background and experience we have a great deal of expertise in natural resource management which is the core of environmental education. Planning, establishing, and using an outdoor laboratory is an excellent method to fulfill this responsibility.

The following steps were undertaken as a result of the above plan:

1965—The name "Penns Valley Area

Student observing a specimen shrub (lespedeza natobe) in the wildlife conservation area. The bark supplied food for rabbits during heavy snow cover.



Land Resource Laboratory" was selected to designate the facility. The 11 acre wooded area was placed under a complete woodland management program in cooperation with the Pennsylvania Department of Forest and Waters and the Pennsylvania Game Commission.

1966—Nature trails were established which lead to each teaching station and included 35 tree species marked for identification.
Eight pits were dug in representative areas to demonstrate the variations of soil characteristics. The area became the center for a three county area for training and competition in land judging and forestry.

1967—Hybrid poplar demonstration plot established.

1968—Classes in biology and special education departments, nature and travel clubs and 4H forestry club began to use facilities in addition to the agricultural department.

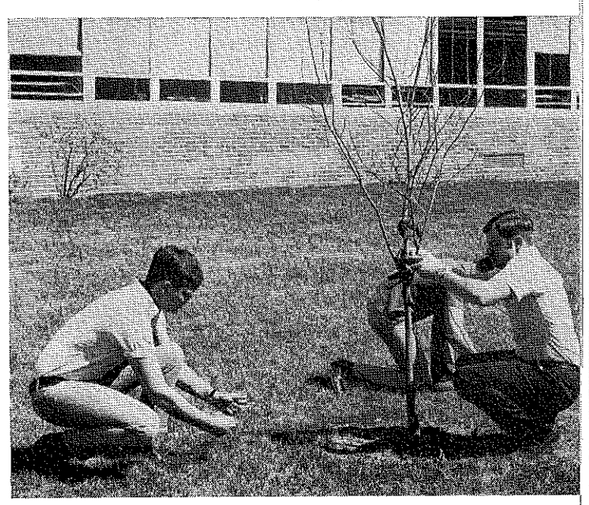
1969—Nature trails were doubled in length and included open field areas.
Conservation Day was established for all sixth grade students, which has continued to be an annual event.

1970—An Earth Day program was organized jointly by the social studies and vocational agriculture departments.
Twenty additional species of ornamentals were added to the landscape plan.
Black locust and Austrian pine plantations established.

1971 Christmas tree demonstration plot and two acre mixed conifer plantation planted.
Special programs presented on Arbor Day.
An elective course in environmental education added to the school curriculum for twelfth grade students taught by the teacher of vocational agriculture.
Tour of the area as part of an in-service training program for all elementary teachers.
Plans for the immediate future include:
An outdoor classroom to be located in a natural amphitheater setting.
A small impounding dam to establish an area for water ecology observation.
Directional markers and signs to designate all the major areas including the dates they were first established.

This is certainly not a novelty subject to those engaged in agricultural education. For years we have emphasized soil conservation, water conservation, wildlife conservation, forest and woodland management, the wise and safe use of pesticides. Perhaps we have done enough to congratulate ourselves for being among the front runners in resource education. Perhaps we should re-examine our role and determine if we have exerted the leadership in our schools and communities of which we are certainly capable.

During the past fifteen years, efforts to implement a program of natural resource education have been in a developmental and organizational stage at the Penns Valley Area High School located in central Pennsylvania. In the spring of 1957, the department of vocational agriculture began a program of planting various areas of the 118 acre secondary school campus. A two acre wildlife habitat plot was established by planting all the shrubs recommended by the Pennsylvania Game Commission. Planting was also started on three acre scotch pine and two acre Norway spruce plantations. One year later, a complete landscape plan for the school grounds was designed and established and a one acre red pine demonstration plot was planted. Annual additions were made to the demonstration plots and in 1965 a complete soil and water conservation plan was established in cooperation with the Centre County Soil and Water Conservation District. The educational aspects of the entire area was the foremost consideration in developing the plan. Both the vocational training and general education possibilities were included so that maximum utility by all school and community groups might be enhanced. ◆◆◆



Students place stakes and guy wires as the final step in planting an ornamental.

Texas Pioneer: GEORGE HARVEY HURT

George Harvey Hurt

The late George Harvey Hurt, former director of public school occupational programs for the Texas Education Agency, never laid claim to being able to predict the future of agricultural education in Texas and the United States, but he must have had prophetic ability, for the huge agricultural education structure which he helped plan, design, and erect is still marching in perfect time with state and national farm development.

Although Texas' total number of school districts and units of vocational agriculture have dropped sharply in recent years, as 70 to 75 percent of the rural and small town population has moved into highly industrialized urban areas, the total number of people involved in various phases of agriculture-business has continued to increase. Many of the present areas of endeavor did not exist 47 years ago when George Hurt entered the field of agricultural education. He knew mule power and coal oil lamps, churned his share of butter and helped make sausage, but he was flexible enough in thought to span the gap to the 70's to cope with modern day problems of agriculture. He experienced the tremendous impact of the farm tractor, rural electrification, hydroponic truck farming, mechanical milking, all the way from the cow to the ultimate consumer, the expanding west Texas feedlots, where feed bills run around a half million dollars a month or six million dollars each year on a single unit operation. These and many other changes have occurred in the 47 years Mr. Hurt served agricultural education.

During this span of years, the farm fraternity has moved farther away from the original problems of uncontrolled production, unlimited quantities of food and fiber to the necessity of controls, subsidized production or non-production. The changes have brought on a more scientific agriculture which resulted in an expansion of vocational agriculture programs in Texas.

Into the picture came courses in ornamental horticulture, meat processing on a commercial scale, careers in feedlot management, the chemistry and effects of agricultural chemicals and fertilizers and their future in an ecologically-minded generation.

The many eventful years with the Texas Education Agency and Texas public schools could not have been successful without the cooperation and assistance of thousands of vocational agriculture teachers, administrators, and hundreds of students. Mr. Hurt did have a way with these students and teachers. One key to this accomplishment may have been 12 years of close relationship and working with Texas orphans . . . five years at the Odd Fellows Home for Orphans in Corsicana and seven years at the State Orphans Home.

For many years Mr. Hurt was recognized for the contributions he made to agricultural education, but above all else he was an able administrator carrying out a total educational program. He served on the National FFA Foundation board of directors and helped chart a course that continues to be sound. Through his efforts and encouragement he caused the Texas Young Farmers organization to be one of the leading programs in the nation.

Six years ago he had the vision to help establish a **Teaching Materials Center** for Agricultural Education at Texas A&M University. Since its inception, the Center, with the guidance and counsel of vocational agriculture teachers, state staff members, teacher trainers and state advisory committees, has made a valuable contribution to the total program. It came about the time programs were being redirected to include cooperative part-time training and pre-employment laboratory training. Teaching materials have been developed for all phases of the program, resulting in a smooth expansion into agri-business.

He initiated the **adult specialist program** which supplements the efforts of vocational agriculture teachers on the local level. Certain phases of agriculture have become so technical that it is beyond the common knowledge of a well informed teacher. The areas covered by the specialist include swine production, beef production, farm electrification, farm arc-welding, tractor maintenance, oxy-acetylene welding and pastures. These men are assigned on a rotating basis by the 10 area supervisors serving in ten field offices located throughout the state. The local teacher organizes the class for the specialist who comes in and teaches night classes during one week for a minimum of fifteen hours. These programs strengthen adult and young farmer education in Texas and are very much in demand.

Some idea of the immensity of the Texas Vocational Agriculture operation may be gathered from the fact that it includes 54,378 students at the high school level, with 1,207 teachers in 879 departments.

The passing of George Hurt on May 13, 1970, at the age of 67 will be remembered with regret by the entire vocational agriculture fraternity in Texas. ◆◆◆

J. A. Marshall is Director of Agricultural Education, Texas Education Agency, Austin, Texas.

J. A. Marshall

VOCATIONAL AGRICULTURE AND THE FUTURE FARMERS OF JAPAN

The Future Farmers of Japan is an authorized organization by the Japanese Ministry of Education as a method of agricultural education. The teacher's guide issued by the Ministry of Education declares "FFJ is an effective method to promote agricultural education for young people."

Over 166,000 boys and girls, students of Vocational Agriculture, make up a total of 613 local chapters under the control of State associations and the national association.

FFJ was first launched in 1950 as a nation wide organization. The aim of the organization is that "FFJ serves well to help members successfully conduct their club activities, and develop their knowledge, technique and experiences which are required in operation of a farm or industries related to agriculture, whereby a contribution may be made for improvement of agriculture of Japan."

The goal of the member's experience is symbolized with 3 points, namely, growing up "leadership," "social character" and "scientific character."

In order to obtain these characters, the members plan various activities and join willingly in them. Public speaking contests, judging contests of cattle and farm products, meetings, conferences, awards, and publication services are the main activities in the local, State and national level.

The national convention is held every year in October or November. This is the culmination point for many activities that are begun in local chapters. In 1970 the FFJ national convention was held in Tokyo in celebration of the 20th anniversary of FFJ.

FFJ organizes a board of officers at each level which is managed by the members themselves under the supervision of the adult officers. The staff of the national board of officers are; president .... 1, vice-presidents .... 4, directors .... 15 (including 9 directors), and auditors .... 3. As for adults, representative .... 1, national advisers .... 2, technical counselors .... 5, and other business staff members.

These officers keep their position for one year and may be renewed in May at the annual delegate conference.

FFJ issues a monthly magazine entitled *"Leadership."* This is largely subscribed to by the members and contributes to the promotion of the cultural level of the members. For information of the members an organ newspaper "FFJ News" is also issued and distributed to all members 3 times each year.

The emblem of the FFJ is made up of 3 symbols; the pigeon, Mt. FUJI and an ear of rice. These symbols signify friendship and good harvest.

For the education of teachers and adult leaders, a leader-training course is held each summer, where teachers and leaders discuss how to improve their teaching methods related to the club activities.

For the past 20 years FFJ has been developing many young people in agriculture and sending them into the rural country or agriculturally-related-industrial field. They have realized their ideal of farming and spread the new technical skills which they received through their FFJ experience, consequently, they have greatly contributed to development of agriculture of Japan.

FFJ exchanges information with the other future farmer organizations of the world. It is hoped that the existing friendly relations between these organizations and FFJ will contribute greatly toward solution of the world food problems and improvement of human living.

Hajime Kenjyo

Mr. Hajime Kenjyo is principal of the Tokyo Horticultural High School and a representative of the Future Farmers of Japan. He has served as a principal of a Japanese Junior High School for eleven years and principal of Agricultural High School in Japan for the past six years.

A land-survey contest is a part of the Future Farmers of Japan Competative Activities.

The school education system in Japan consists of four levels, namely primary, junior high, senior high, and college or university. Primary school (6 years) and junior high school (3 years) are compulsory education. After junior high school the students can select ordinary or vocational senior high school (3 years) according to their own future program. If they want to take agricultural courses they can select an agricultural high school.

The agricultural high school is divided in two types. One is the school of agriculture exclusively, the other is one including agricultural courses along with some other vocational courses such as commercial, home economics and technical course or sometimes non-vocational courses. In college or university the students can obtain a higher degree of agricultural education.

These agricultural high schools have an affiliated school farm respectively where the students acquire farming technique or learn new skills. ◆◆◆

A judging contest of farm products is a part of the Future Farmers of Japan Program.

Agricultural Education For Elementary And Secondary Teachers And Counselors

Jim Durkee
Assistant Professor of Vocational Education
and teacher of Vocational Agriculture
University of Wyoming, Laramie

Jim Durkee

"Agriculture on Parade" is the name of a unique summer school program in Wyoming designed by agricultural organizations and coordinated through the University of Wyoming. The five-week session provides teachers with a better understanding and appreciation of the people, the work, and the challenges involved in the production of food and fiber.

Farmers and ranchers, agri-businessmen, state government leaders, commodity representatives, and agricultural organization officers make up the teaching staff. They cover the livestock industry, crops and range lands, agricultural resources including land, air, water, and people through field trips, demonstrations and classroom presentations.

Art Esponda, sheep rancher and instructor for the wool and sheep industry segment of the "Wyoming Agriculture on Parade" summer school, discusses quality in a fleece with elementary and secondary school teachers.

Forty Wyoming elementary and secondary teachers and guidance counselors are selected each summer by representatives of the various farm and ranch organizations to participate in the summer school.

The Wyoming State Department of Agriculture, the Wyoming Farm Bureau, Wyoming Stockgrowers, Wyoming Wool Growers, State Soil and Water Conservation Committee, Wyoming Association of Soil and Water Conservation District, Wyoming State Department of Education, and the Wyoming Agriculture Unity Group (Grange, Wheatgrowers, Dairy, and other commodity representatives) are the sponsors for the five-week summer school. They conduct the classes and provide the funds for tuition, field trips, and staff for the "Wyoming Agriculture on Parade" program. The University allows five hours of credit for the five week program.

While the primary aim of the leaders of Wyoming Agriculture is to provide a quality program in agriculture for teachers and counselors, it is doubtful if any state has ever had such a coordinated effort among the varied interests of this complex industry to achieve a specific goal.

The objectives of the program are to provide teachers and counselors with an opportunity to learn more about agriculture and conservation so they may feel better qualified to discuss the production, marketing, conservation, economics and opportunities in agriculture in their normal teaching program.

Specific objectives identified by the sponsoring committee include:

1. To appreciate the contribution agriculture has made to the educational, social, and economic developments in Wyoming.

2. To understand some of the problems of management and labor peculiar to agriculture and related industries.

3. To recognize the important role of conservation in the use and protection of our national resources in agriculture.

4. To understand the revolutionary scientific and technological changes that are taking place in agriculture.

5. To recognize the potential of agriculture towards improving the well-being of mankind.

6. To appreciate the many contributions that scientific research in agriculture has made to our society.

This will be the third year that the program has been offered to Wyoming teachers. A topical outline of the summer school shows the scope and depth of the agriculture and natural resources subject matter that is presented to the participants.

First Week—
Registration and Orientation
The Wyoming Agriculture Industry, 1890-1972
Agriculture Economics—Land—Labor
Capital—Management
Producing and Marketing Food and Fiber

Second Week—
Natural Resources in Agriculture
Wyoming's Soils
Field trip on Conservation
Wyoming's Air and Forests
Wyoming's Water

Third Week—
The Cattle Industry in Wyoming
Production
Field Trip
Economics and Management
Marketing—Processing, Distribution and Service

Fourth Week—
The Dairy Industry
Horse and Swine
Dryland and Irrigation
Cooperatives on Agriculture Scene

Fifth Week—
Wool and Sheep Industry
Sheep Business Analysis
Field Trip—Range Sheep Operation
Contribution to Economy
Federal and State Lands
National Wool Acts
Range Sheep Operation
Retailing and Merchandising Lamb and Wool
Evaluations

Whether the topic of discussion was Ecology of the Rangeland, the Use of Agricultural Chemicals, Government Farm Programs or a field trip to visit with a young college girl herding 1,500 sheep on high mountain summer range, the teachers were enthusiastic about having an opportunity to learn so they could relate some of the information about the agriculture industry to their students when they returned to the

(Concluded on page 287)

RECOGNIZING OPPORTUNITIES FOR TEACHING AGRI-BUSINESS

Bruce McKinnon
Vocational Agriculture Teacher
Southwood High School
Shreveport, Louisiana

Teachers of vocational agriculture are often found sitting on a virtual keg of dynamite, this dynamite is the **unlimited energies and willingness to accept challenge by their students.** Every businessman and farmer today is moaning over labor problems while at the same time teachers of agriculture are surrounded by young men who are chomping at the bit, wanting to "do something."

When a boy asks "why don't we ever do anything," we need to understand what he means, he is wanting a challenge, a job, a chance to perform. Most every community possesses opportunities in agriculture, which if properly developed could supply this chance to do something, something educational, something constructive and something often profitable. We as teachers should be alert to these opportunities and recognize them when they come along. A good agriculture teacher should keep this in mind in his dealing with others and in his travels, just as a good insurance salesman is constantly looking for leads, we as teachers should be alert for opportunities to teach agriculture. They are all around us. A good agriculture teacher should be like a good fisherman, he should be able to find his own "favorite spots," not just fish aimlessly or in places where he sees the other guy catching fish. Wherever there is a "need" there is an opportunity.

When the Louisiana State Fair ended in 1970, there was much dissatisfaction, the exhibitors were unhappy about the availability of needed feed and supplies, the parents of young showmen complained of certain regulations pertaining to the operation of the feed store, and the feed company which had operated the store had lost money. The board of directors for the fair were concerned and could find no company willing to operate the concession for this year's fair. The **NEED** was clear.

After thoughtful consideration, the teacher of vocational agriculture at Southwood High School in Shreveport went to the fair officials and asked for their consideration in letting his students manage and operate the feed store for the coming fair. The officials were reluctant, they doubted the ability of a group of high school boys with minimum supervision from their teacher as being capable of handling such an undertaking with all of its involvements. After lengthly debate, they decided to give the boys a try. Before accepting the contract, arrangements with the school administration had to be obtained, it was granted that small groups of students would be permitted to work at the fair on a rotational basis for the purpose of receiving educational experience in agri-business. Student response varied with the awsomeness of the undertaking. With the plan clearly explained and risks identified, students divided into two distinct groups. The smaller group were those who expressed confidence that we could do it, the larger group were willing but were unsure of their own abilities.

The ground work was laid, now it was up to us to organize the business and make the necessary arrangements for carrying it out. This began in the classroom with a discussion of how we might finance the business. We decided that two methods of financing would be necessary. Some materials would have to be purchased outright: for this we would need a loan, other items could be secured on consignment.

The normal procedures for setting up this type of business began to unfold, and before the project would end the students would go through every essential procedure used in establishing a business.

First we obtained a legitimate lease on the business, which covered our obligations and those of the leasor. Next we went to the bank and secured adequate financing under terms we felt that we could meet. After we secured the loan, we began locating the straw which we would need for bedding; students learned to bargain and were successful in getting a good price on some 2,000 bales on a guaranteed delivery basis. We leased an improved coastal bermuda hay meadow and bought the necessary fertilizer to grow our own hay, paid to have it cut and baled and stored it until needed. Students made agreements with local feed companies to deliver four lines of feeds and purchased them at dealer cost, this gave us a good selection to offer our customers who had complained before of a lack of selection. Other animal needs were also anticipated and consignment purchase was arranged with a supply house for veterinary and grooming supplies and equipment.

A system of billing was devised and the boys kept each account current at all times. Inventories were made each day to insure that all merchandise was maintained in stock. After the fair was over, the merchandise on assignment was returned and the books were closed, just as when any business is closed out.

The final step in the summation of the business endeavor was to determine its profitability. Students then were made aware of the meaning of gross and net profit. They figured all their operational costs, for labor, equipment, insurance, office supplies, etc., and then paid the fair association 25 per cent of the net profit.

A survey was made of the exhibitors with whom we had done business. Returns from the survey indicated that in their opinion the feed store had been operated more satisfactorily than at any other state fair they had attended over the nation. Parents of young exhibitors expressed high approval at the new management of the store, the officials of the fair were enthusiastic in that not only had they heard of everyone's satisfaction, but also they appreciated the publicity given to the undertaking by the local news media. The students were most pleased with having accepted a real challenge and having mastered it, they feel that the experience offered in the learning situation was more meaningful than anything they had ever participated in. All of our initial goals were achieved and as it turned out, the venture was also profitable.

This is just an example of the innovations that can be found in teaching agriculture; others are available in any community. The point we must all keep in mind is that these young men have the **energy and ability,** they just need someone to give them the chance to put it to work, guide them and demonstrate their confidence in their ability. Put them to the test, they will always come through when the chips are down. ◆◆◆

A Declaration About Teachers

Charles C. Drawbaugh
Professor and Chairman
Department of Vocational-Technical Education
Rutgers University

Chas. Drawbaugh

Four components contribute extensively to the total success of any local agricultural education program. They are teachers; students; curriculums; and instructional facilities, equipment, and materials. This declaration, on the teacher component only, is structured in terms of statements set forth for developing sound local programs in a changing agricultural education. The statements are not intended to be all-inclusive; but rather a beginning upon which teachers are encouraged to build a more complete declaration.

The teacher is a major influence in any sound local program in vocational agriculture. The teacher of agriculture is a subject matter specialist. He is also a professional educator who should prepare his presentations well, teach in a meaningful and interesting manner, and evaluate his accomplishments. The foundation of a sound local program is an effective teacher of vocational agriculture. While attributes of a "good" teacher are many, only four statements will be made.

The teacher must want to excel in the profession he has chosen. "Show me a good local program and I'll show you a good teacher." This statement must have been made by state supervisors and teacher educators in agriculture millions of times during the past fifty years. With just cause, it can be repeated because it is a truth.

Teachers who excel do so by exerting enough extra effort to do the very best. The additional effort makes a professional who by virtue of his success has reason to enjoy teaching. Teachers of agriculture may excel at county, regional, state, and the national levels. They may be known and recognized as outstanding judging coaches, good mechanics instructors, or as exceptional classroom organizers. There are many roads to excellence in teaching.

Some teachers have not a claim to fame. They are constantly in a position whereby they are urged to try harder. This is not a pleasant position in which to be. The less successful teacher can develop an area of expertise or he can take the easy way out by criticizing school administrators, blaming the situation on poor students, or citing the lack of instructional equipment and supplies for his substandard showing.

All that is being said is that some teachers of agriculture view "excellence" as an opportunity while others see it as a challenge which requires work. The excellent teacher gets rewarded doubly-in satisfaction and dollars. The poor teacher gets rewarded in dollars only. It is well to add here that **help comes to those teachers who request it.** Help comes more quickly and willingly when it is shown that an ultimate effort is being exerted by the teacher to excel. Much of the success of the teacher depends upon his attitude toward teaching.

The teacher should keep himself updated technically and professionally. The opportunities are many but to keep up-to-date is becoming increasingly difficult. The rapid obsolesence of some practices and the constant introduction of new ones in both pedagogy and agricultural technology evidence themselves at an alarming rate. Are teachers of agriculture really changing fast enough to keep up with the times? Do they lead the field in rejecting the old which is no longer applicable and by adopting the new which has proven to be effective?

Opportunities to learn present themselves from many directions. Universities offer advanced degree programs and in-service training courses and workshops in which attendance is encouraged. Local schools sponsor faculty meetings and professional activities for teachers. County agricultural organizations hold meetings which result in the dissemination of technical information. Professional associations such as AVA and NEA and their affiliates hold conferences and conventions which merit attendance. Opportunities for professional and technical growth through planned programs, courses, meetings, institutes, conferences, seminars, and conventions are readily available to teachers of agriculture. The challenge remains for all to actively participate in them.

Teachers of agriculture must also be ardent consumers of the printed word. How does one discriminate from among the books, magazines, bulletins, circulars, and other forms of literature being offered? How much should the teacher read outside his field? Knowledge is accumulating so rapidly that one could read constantly in the fields of agriculture and education only to find himself getting further behind each day, week, and year. In addition to being selective as a consumer of printed materials and as a participant in professional activities, a teacher may wish to specialize and thereby, limit his field to study. The accumulation of knowledge in a limited field may be the answer on how to keep updated.

The teacher must exert leadership in and outside the classroom. There was a time when vocational agriculture was governed by laws and mandates which specifically benefited it and guided the teacher. Vocational agriculture is no longer mentioned in the federal laws nor is there staff at the national level to supervise programs. State departments of education are following the patterns set in the U.S. Office of Education. The result is that vocational agriculture is without earmarked funds and identified leaders except in token numbers. The responsibility for leadership in vocational agriculture in the future will rest heavily on the teacher of agriculture.

In exerting leadership the teacher will have to become more active in

(Continued on next page)

community and school affairs rather than withdraw from them as it appears he has been doing in recent years. The decrease in dedication to the agricultural profession demonstrated by some of the newer teachers in particular, unless reversed, will result in the closing of many departments of vocational agriculture. The continued pressure by general educators to de-emphasize agriculture and dilute its programs must be countered. The teacher may have to write proposals for funds to operate his local program. He will have to use diplomacy to keep his twelve-month contract.

The teacher of agriculture will get little help in promoting his program. He should get support from his advisory committee and possibly help from the Vocational Agriculture Teachers Association of which he is a member. He will have to promote his program and at the same time maintain in others a favorable attitude toward vocational agriculture, even though he is an exceptionally good teacher.

Teacher effectiveness is a prerequisite to a sound local program. Measuring and evaluating teacher effectiveness is not a clearly defined process; nor is there such a being as an ideal or model teacher under all circumstances. School administrators, students, and fellow teachers are sources of feedback to the teacher on his apparent effectiveness. The teacher of agriculture should be quick to pick up attitudes and behaviors of others in terms of their overt reflections on his instructional program.

A force causing many teachers to re-think and evaluate their own effectiveness is the recent figures on supply and demand of teachers. When there are well prepared players on the bench, those players in the field are under considerably more pressure to do a better job. A supply of teachers which is greater than the needs should strengthen agricultural education. The unqualified and the incompetent need to and will be culled from the profession if teachers are in surplus and salaries remain competitive.

Another force influencing agricultural education at the secondary level are teachers' unions and bargaining agencies. Agricultural teachers are being limited as to what they can and cannot do to the point that often they are doing a job which is less than satisfactory. The teacher's contract often maintains that extra work requires extra compensation while the administrator finds that he is unable to provide the supplemental salary and other resources. As a result, effective summer and evening activities associated with the vocational agricultural program of the past must be eliminated or negotiated. The teacher of agriculture can resolve the problems peculiar to his program or he can use the situation as an excuse to do less. If he chooses to do less his program will be relegated to mediocrity and the students will be limited to general agriculture. The next step is to phase out the program because it is not meeting the objectives for which it was established.

So this declaration maintains that the teacher is the key to a sound local program of vocational agriculture. Where teachers have vision coupled with drive, programs will be sound; when there is complacency, programs will perish. ◆◆◆

INNOVATION CAN LEAD TO A "TOTAL PROGRAM"

(Darrell Anderson—from page 271)

Educational Association in 1969. Recently, the association held its third annual institute at Colorado State University with 160 in attendance. The association has a total of 15 chapters with 360 members.

The term "young farmer" is something of a misnomer, as any farmer, no matter what age, can participate in the courses. Colorado has "young farmers" ranging up to 67 years old.

Those high schools which now have young farmer chapters and continuing education courses for farmers can state for the first time that they are providing complete educational services to the agriculture of their respective communities.

(Durkee—from page 284)

classroom.

Teachers, in evaluation of the "Wyoming Agricultural on Parade" summer school stated, "Five wonderful weeks of learning experiences," "this class can't help but bring learning and understanding between different farm groups," "With the abundance of propaganda and emotional scare tactics in newspapers, both adults and students must become informed so they may make the right decisions — decisions that might make the difference between life and death in the near future," "More qualified to bring the farm and agricultural environment into the classroom," and "plan to work up some problems to be used in the classroom using agricultural language to make students more aware of Wyoming's second most important industry."

With the cooperation of the agricultural industry, the interest and enthusiasm of elementary, junior high and high school teachers, and guidance counselors, this is one approach that Wyoming is using to add careers in agriculture to an over-crowded public school curriculum. ◆◆◆

(Orhwall—from page 278)

county park with animals for visitors to see, machinery and equipment to accomplish the farming of the park, and a working ranch concept that the Park Department has tried to encourage. The school benefits in that the park provides the outdoor laboratory that is inherent in any agricultural curriculum. The students get a chance to practice what they have learned in the classroom. The Agriculture Department at Rio Linda offers Livestock, Plants and Soils, Ornamental Horticulture, and Wildlife Management in its course offerings. Each course is well adapted to utilizing the Gibson Ranch for field trips and outdoor laboratory work.

The basic argument that I have always heard against school farms is that they take too much time away from the teachers instructional program in the form of maintenance. This county park has maintenance provided, as well as security at nights, holidays, and weekends. The Gibson Ranch has added a valuable dimension to the overall agricultural program offered at Rio Linda Sr. High School. ◆◆◆

VO-AG STUDENTS ADD MANPOWER TO KENTUCKY CONSERVATION DISTRICT

Gordon S. Smith
Public Information Specialist
USDA-Soil Conservation Service
Upper Darby, Pennsylvania

"We think we've found an ideal way to improve the effectiveness of Soil and Water Conservation Districts."

In Winchester, Kentucky, several high school students have more than an academic interest in environmental problems. As Junior Supervisors for their Clark County Soil and Water Conservation District, they have active roles in planning and promoting natural resource developments in their county. The newly formed six-member supervisory group, all Vo-Ag students and Future Farmers of America members, now assist their adult counterparts in the actual operation of the conservation district.

"Our Junior Board, a 'first' for Kentucky, became an official organization in November, 1970," according to Soil and Water Conservation District Chairman William A. Thorn. "Vo-Ag students had been working with us for years. They joined us for an annual dinner for the past nine years. This created a close youth-adult relationship that lead to the formation of this Junior Board."

Last year William B. Adams, soil conservation technician for the USDA Soil Conservation Service in Clark County, heard about the formation of a junior district board in a neighboring state and proposed a similar relationship for Clark County. The idea appealed to both the district supervisors and the students. Within a matter of weeks, six Vo-Ag boys were elected as junior supervisors by their fellow students. They immediately signed a formal agreement with the district to make the action official.

This lush stand of Kentucky fescue and clover planted by Vo-Ag students, has replaced the deep gullies that scarred this field behind the high school. From left to right are: Vo-Ag students Ronnie Glover, James Pasley, David Hall and Herb Devary.

James Pasley became the first chairman of the Junior Board. Herbert Devary was named vice chairman, Ronnie Glover, treasurer; and Larry Gabbard, secretary. David Hall and Gayle Shimfessel, as supevisors, completed the six-member board. Three senior students will serve only one year. Then each new supervisor will serve a two-year term. Three new supervisors will be elected each year. Any high school student is eligible to serve on the Junior Board but, to date, only Vo-Ag students have been candidates.

The first official duty of the new junior supervisors was to formulate a plan of operations for their first year's activities. With guidance from their three Vo-Ag teachers, Mr. Larry Lynch, livestock specialist, Mr. Frank Hicks, farm mechanics specialist and Mr. Jack Wise, soils specialist, the group pinpointed 20 major objectives for the coming year. The plan, approved by the senior board, included the activity goal, the way it would be done, the leadership and the tentative completing date.

A badly eroded field behind the high school became one of the first projects to benefit from the Junior Board of Supervisors. Topsoil had been removed from the 50-acre field during construction of the high school. Knee-deep gullies scarred the sloped land. Tons of silt had washed from the field into the drainage ditches below. With the help of a Vo-Ag tractor, a plow and considerable labor, the boys reshaped the land, filled the gullies and seeded the bare acres to Kentucky fescue and clover. With a generous helping of fertilizer, green vegetation soon replaced the scarred acres. Future plans for this field include the possible extension of the school's Vo-Ag tree nursery or even an outdoor conservation classroom.

The school's Vo-Ag nursery provided the material for another Junior SWCD conservation effort. The boys selected 150 pine trees from the nursery stock and transplanted them to a field bordering the main entrance of the Clark County Fairgrounds. With nearly 100 percent survival of the seedlings, this land protection and beautification project will give the fairgrounds a new look in a few years.

Promoting community tree planting, the Junior Board prepared and sold packets of tree seedlings to local landowners. Available only in packages of 500 seedlings from state nurseries, the students repacked the trees in smaller packages containing a variety of hard- and softwood trees. Nearly 100 packages were sold to community residents for $1.50 per package.

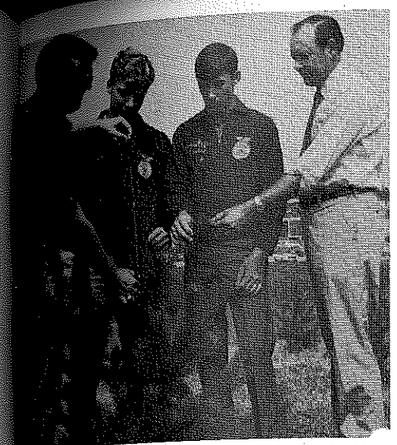
When Kentucky's annual conservation essay contest started early in the school year, the Junior Board made it their business to see that student participation reached a record high for the school. Likewise, when annual Soil Stewardship Week material became available, the boys assisted their senior supervisors by delivering the information to 15 local churches. Next year the boys plan to handle the entire Soil Stewardship effort for the district.

A new water system has been proposed for Clark County. Success of the improvement depends on the majority of local residents supporting the project by signing up as members of the Clark County Water District. The Junior Board volunteered to help obtain the needed memberships. To date, they have signed up well over a hundred names.

Other Junior Board conservation

(Concluded on next page)

"We wanted to give our younger citizens first-hand experience in resource conservation work, and in one year's time the effort has gone far beyond that goal."



SCS District Conservationist Jimmy Childers points out excellent growth of pine trees to Vo-Ag students, Ronnie Glover and James Pasley, and Vo-Ag Instructor Jack Wise. Trees from this nursery were planted by the Vo-Ag students at the county fairgrounds entrance as part of a beautification project.

projects undertaken in their first year of operation included reseeding eroded roadbanks in the area, organizing a soil-judging contest, assisting the district in a county fair exhibit, promoting a school grounds cleanup campaign, raising money to send a 4-H member to camp and even helping to promote a county fair king and queen contest which was unexpectedly won by one of the junior supervisors and a "Sweetheart of the FFA."

The Clark County Junior Board of Supervisors attended the annual meeting of the Kentucky State Association of Soil and Water Conservation Districts. During that meeting a recommendation encouraging all districts to form junior boards was adopted. Many are already considering the move.

In similar action in Winchester, one church has already organized a junior board of deacons modeled after the successful SWCD Junior Board.

"We started this Junior District Board with the idea of giving our younger citizens firsthand experience in resource conservation work," says William Thorn. "We wanted to develop a group of young adults who could serve as future supervisors for this district. But, in one year's time, this effort has gone far beyond that goal. Our Junior Supervisors have helped us accomplish many things we couldn't have done alone. We think we've found an ideal way to improve the effectiveness of Soil and Water Conservation Districts."

"STAND UP AND BE COUNTED"

The foundation of the National FFA Alumni Association will be laid on May 12, 1972 when the first national meeting is held in Chicago, Illinois. An attempt is being made to "corral" the thinking and enthusiasm of everyone in molding this new organization together. All states are requested to be represented and all members are invited. The states who charter state FFA Alumni Associations before that date will become the "Founding States" of the National FFA Alumni Association. All members who join prior to it will become the "Charter Members." The meeting will be held at the O'Hare Inn adjoining the airport from 9:00 A.M. until 3:30 P.M. Annual dues are $4.00 and life membership is $100.00. To join and for further information write to the National FFA Alumni Association, Box 15058, Alexandria, Virginia 22309.

However, if the problems are common throughout the class, immediate feedback is provided to assist in making changes in the instructional techniques. The student may either work as a team or as an individual and the system has the mechanism built-in for each to perform the task of self-evaluation in light of expected performance. Since the minimum criteria for satisfactory performance will change several times during the students lifetime, possibly the most important task the student will learn to perform is the ability for self-assessment in light of correct examples. Put differently, this could mean that the key to efficient learning is a set of images, concepts, or sensorimotor affective patterns which will serve as internal standards for the learner. Once the student has the model, it will guide the corrections of his trial responses.[1]

1Brody, Harry S., 1963, Historic exemplars of teaching method, *Handbood of Research on Teaching*, ed. N. L. Gage, Chicago: Rand McNally and Company.

BOOK REVIEWS

FARM FIELD MACHINERY by Marshall F. Finner. Madison, Wisconsin: College Printing & Publishing, Inc., 1969, 122 pp. $4.00. (paperback)

Important characteristics of the ferrous metals, basic terms and definitions dealing with the laws of physics, power transmission devices bearings and hydraulics as each is related to and used in farm machinery are covered in the early chapters of this book.

The commonly used farm machines, their basic operating principles, troubles, causes and remedies are covered in separate chapters. Ten machines are covered in this manner.

Another section has been devoted to problems common to operating farm machinery such as land area, machine adjustment and costs.

The book is a result of the author's teaching outlines used in teaching Farm Short Course at the University of Wisconsin. It is well illustrated and has received recognition as being outstanding in originality and effectiveness from the American Society of Agricultural Engineers.

Doyle Beyl
Wisconsin, Dept. of Education

PRINCIPLES OF LIVESTOCK FEEDING by John Henry Baumgardner, Department of Animal Sciences, Texas Tech University, Lubbock, Texas; Kendall/Hunt Publishing Company, Dubuques, Iowa 1969.

The book is a student workbook comprised of eleven exercises covering most areas of livestock feeding. The exercises cover basic concepts in livestock feeding and specific exercises on the feeding of beef cattle, sheep, dairy cattle, swine, horses and poultry.

Teachers using this workbook will require most of the references listed in the bibliography and will need to prepare much material before using the exercise. Students using the workbook will need access to many of the references in the bibliography and will be required to do many mathematical calculations.

The workbook is designed so that only exercises pertinent to student needs be completed, others can be omitted. In general, this would be a very good book for use with advanced students or adults who have need for information about livestock feeding and feed formulation.

Robert T. Benson
Clemson University

Themes For Future Issues

August — Evaluation
September — A Guidance Role
October — In-Service Education
November — Agricultural Education in Transition
December — Post-Secondary Education
Coming Next Month—The 1973 Themes
12 Issues on "Career Education"

MODULAR PROGRAMMING FOR VOCATIONAL AGRICULTURE

Rex Cunningham
Agriculture Instructor
Arcadia High School
Arcadia, Ohio


Rex Cunningham

What reactions would a vo-ag teacher expect to receive if one taught small engine power, multi-engine power, electrical power, electronics, surveying and fluid power, soils and farm management, advanced welding and farm machinery operations all in nine week blocks called modules? Add to this element that students, including girls from other vocational and college preparatory programs, were allowed to enroll up to maximum class size, while vocational agriculture students could enroll in modules offered in industrial arts and home economics.

Modules are specific durations of time for certain subject matter. This could vary from a mini-course of six weeks to eighteen weeks. Nine weeks became the most desirable for a 36 week school year at Arcadia.

If you are teaching in a school not affiliated with a joint vocational school I believe you will be more nearly meeting the needs of vocational agriculture, vocational minded and college-preparatory students.

The following is the modular program offered at Arcadia High School in which students may take as many or few courses as they desire:

Staff members find these definite advantages to modular programming for vocational and associated curriculums.

1. **Permits team teaching in a small school system.**
2. **Provides a better use of facilities and equipment if operating on limited budgets.**
3. **Allows the student latitude in course selection.**
   (a) **Vocational agriculture students without farm backgrounds can broaden their spectrum in drafting, graphic arts, nutrition and family relations.**
   (b) **College preparatory students may apply mathematics and physics in electrical power and surveying, while normally they did not want or could not schedule the course.**
4. **Student discipline problems are very minimal because of course length and personal selection by student.**
5. **Student guidance becomes more effective by providing students opportunities for exploration.**
6. **Increased rapport with the total school community because more students become exposed to the opportunities in vocational agriculture.**

Disadvantages to vocational agriculture are scheduling teaching sessions on occupational experience programs and working with FFA activities.

First year outcomes from this program reflect the following: Fifteen percent more students enrolled in vocational and associated programs, 36 percent more students being served by vocational agriculture (based on fact that 24 students other than in vo-ag I & II enrolled in two or more modules) and a 5 percent increase in FFA membership.

Requirements for a successful modular programming include these criteria.

1. **Determining student needs resulting from a study involving students, conducted by the guidance counselor in co-operation with departments offering modules.**
2. **Critique of student module selection.**
3. **Prepare a modular curriculum by considering teacher qualifications, facilities, equipment and job opportunities in community.**
4. **Incorporate the modular program into high school schedule.**
5. **Make a course description for each module.**
6. **Present plan to advisory board and school board for adoption.**
7. **Work closely with the guidance counselor in aiding student module selection.**
8. **Have guidance counselor and high school principal evaluate modules after a student survey.**

The total outcome can be very gratifying because of student and parental response, but prepare to co-operate with other staff members until the full advantages of modular programming can be reflected. ◆◆◆

VOCATIONAL AND INDUSTRIAL TECHNOLOGIES

(For Junior Students)				
Dept.	1st Module	2nd Module	3rd Module	4th Module
Vo-Ag	Ag. Machine Power	Electrical Power I	Electronics I	Surveying & Fluid Power
I. Arts	General Metals I	General Metals II	Architectural Drawing	Graphic Arts
Home Ec	Foreign Cookery	Family Health & Nursing	Home Equipment	Family Housing
(For Senior Students)				
Vo-Ag	Engine Power I	Engine Power II	Diesel & Small Engine Power	Computer Science Logic
I. Arts	Woodshop I	Woodshop II	Labor Relations	Carpentry
Home Ec	Family Relations I	Family Relations II	Family Nutrition I	Family Nutrition II

INNOVATIONS IN PREPARING TEACHERS OF AGRICULTURE

Herbert Bruce, Director
Instructional Materials Laboratory
University of Kentucky, Lexington


Herbert Bruce

Intelligently selecting a vocation for life is a big decision to make. Young people thinking about teaching must understand the possibilities and limitations of becoming teachers of agriculture. In addition to this, they need to understand their capabilities and weaknesses. Since the job of teaching agriculture has changed, there is a need for a different kind of teacher today than was needed a few years ago. This being the case, innovations should be made in our teacher education programs.

The Job of the Teacher

The teacher of vocational education in agriculture is an important person in the community. His first responsibility is to teach. His teaching should improve the agriculture and the general welfare of the people in the community. In most instances, he is a teacher of high-school students of vocational agriculture. However, several teachers, in addition to their high-school teaching, work with out-of-school groups. When they do, the job becomes more complex.

The teacher of agriculture teaches through organized classroom instruction, laboratory work, and supervision of occupational experience programs. He is the local FFA adviser and guides the students in the development of leadership, character, cooperation, thrift and citizenship.

Characteristics of the Teacher

Situations on the farm, in other agricultural businesses, in the home, in the school and in the community continually confront a good teacher of agriculture. If one is to succeed as a teacher, he must be able to diagnose and use good judgment in working in these situations.

The teacher must be capable of teaching as well as being competent in the area of human relations. To put it another way, to be a good teacher of vocational agriculture one must possess (1) certain personal qualities, (2) agricultural experience, (3) general and technical education, and (4) professional training.

The following are some personal characteristics that should be possessed to a fairly high degree:

(1) **Willingness to work**
(2) **Ability to get along with people**
(3) **A knowledge of agriculture and the related sciences**
(4) **Ability to teach agricultural mechanics**
(5) **Interest in people**
(6) **Ability to talk fluently and distinctly**
(7) **Willingness to assume responsibility**
(8) **Initiative to plan and to execute the plan**
(9) **Optimism**
(10) **A sense of humor**
(11) **A belief that teaching is important**
(12) **Ability to teach**

Teacher Preparation

Innovation in preparing teachers should begin in the undergraduate program. The agricultural curriculum should be changed. Technical agriculture courses which relate to farming and other agricultural areas are needed. The professional courses should include methods of teaching, educational psychology, and direct experiences (student teaching) in the area where they will be teaching.

Teachers need help in the area of motivating students, individualizing instruction, programmed instruction and modular teaching using instructional television. Since there is a vast amount of curriculum materials and aids for teachers, they should also know how to support their teaching by using these modern up-to-date aids. Either in their preservice or inservice program the competencies needed in this area should be taught.

In addition to the preparation program, workshops, special short courses, institutes and other inservice programs should be used to constantly teach new knowledge and skills teachers need to know.

Summary

Good teachers today need to know more than how to teach students to farm. All the areas of agriculture should be included. To prepare these persons our teacher education programs must be changed. One needs to know agriculture, methods of teaching, how to work with people, how to use all kinds of curriculum materials, and how to work with many kinds of students, including the disadvantaged and handicapped.

The requirements are much different than were needed a few yars ago. Are we changing our program to meet these new needs of teachers? ◆◆◆

GUY E. TIMMONS

April 19, 1912 — February 1, 1972

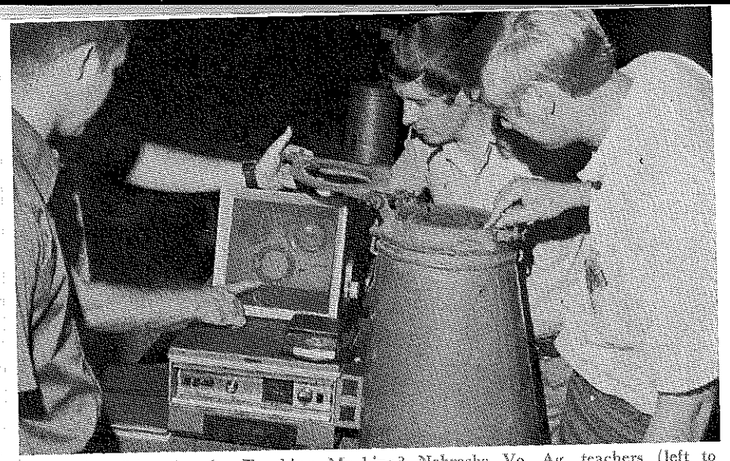
The many friends and colleagues of Dr. Guy E. Timmons were shocked and saddened by his sudden death the afternoon of February 1, 1972. An outstanding teacher, an energetic and dynamic individual, he is missed by students, fellow educators, friends and his family.

Guy, as he was affectionately known, had been at Michigan State University since 1948 and had been promoted to professor in 1966. He taught vocational agriculture in Saxton, Pennsylvania from 1935 to 1942; and was assistant to the associate dean of students at Washington State College from 1946 to 1948.

Dr. Timmons was interested in international education and served one year as chief-of-party for a project in the Philippines under the sponsorship of Stanford University.

Guy Timmons received both the Bachelor of Science and Master of Science degrees with majors in agricultural education from Pennsylvania State University. His doctorate with a major in supervision and administration was awarded by Wayne State University in 1954.

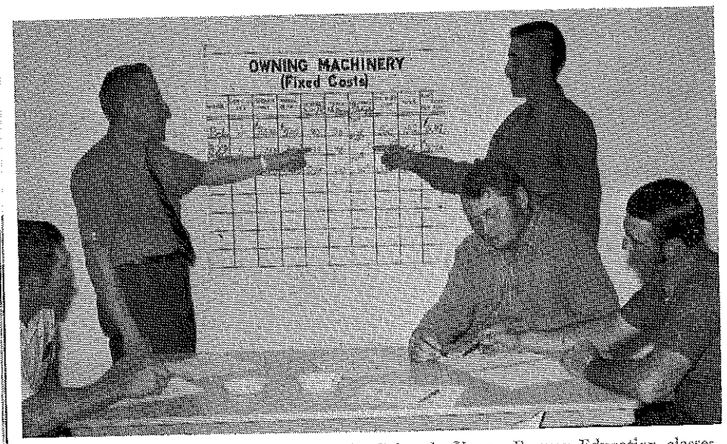
His immediate family includes his wife, Willeen and two sons, Mike (age 24) working on a masters in landscape architecture at Harvard and Dave (age 19) in his second year at Lansing Community College; and his mother and one brother.



Inservice Education by Teaching Machine? Nebraska Vo. Ag. teachers (left to right) Carl Brown, Gerald Dux, and Gene Wissenberg improve their skill at machinery calibration and adjustment VIA Teaching Machine. This approach seems to be a popular and effective way to introduce new skills to Vo. Ag. Teachers in Nebraska. The additional feature that really sells this approach is that the instructor can pickup new skills while he is using the media with his own students. (Photo supplied by Richard Bringelson, Coordinator, Inservice Agricultural Teacher Education, University of Nebraska.)

Stories in Pictures

by Richard Douglass



Home and Farm planning is stressed in Colorado Young Farmer Education classes. A series of charts compiled by the State Division of Agricultural Education is used as a guide for work sheets in classes on this subject. Instructor Jack Annan (standing, left) is explaining to Gary DeSoto, Iliff, Colorado, how interest and other charges are assigned to specific items of farm machinery. This particular chart enables a young farmer to determine whether it is cheaper to rent or to own a particular machine.
(Photo supplied by Agriculture Education section, Colorado Board for Community Colleges and Occupational Education.)

Students at Waipahu High School discuss propagation of pot flowers with their instructor, Mr. Charles Chong. Ornamental Horticulture is becoming popular with the co-eds in the urban schools. Besides ornamental horticulture, Waipahu High School also offers an agricultural technology course. The suburbs of Waipahu are located in the City and County of Honolulu.
(Photo supplied by Tom Hatakeyama, Program Specialist, Agricultural Education, Department of Education, State of Hawaii.)

L to R — Lowell Johnson, Vo-Ag Instructor, Stanton, Nebraska, and adult students Mr. and Mrs. Landon Hansen of Stanton review the 1971 records of the Hansen farm during an on-farm instruction visit by Mr. Johnson. Mr. and Mrs. Hansen are two of nearly 300 family persons in about 25 local Vo-Ag departments participating in the 1972 Nebraskaland Adult Farm and Ranch Management Education program.
(Photo from Cliff Vrieze, Coordinator, In-Service Ag. Teacher Education in Ag Business Management, University of Nebraska.)

Ron Vargas, right, Vo. Ag. instructor, Madera High School, California, explains to Wildlife Management students, Greg Michalls and Alvin Matlock, how to cull birds from the school pheasant flock. The birds are raised on the school farm and later sold to restock the local farms.
(Photo by William D. Wills, Agricultural Mechanics Specialist, California State Polytechnic College.)

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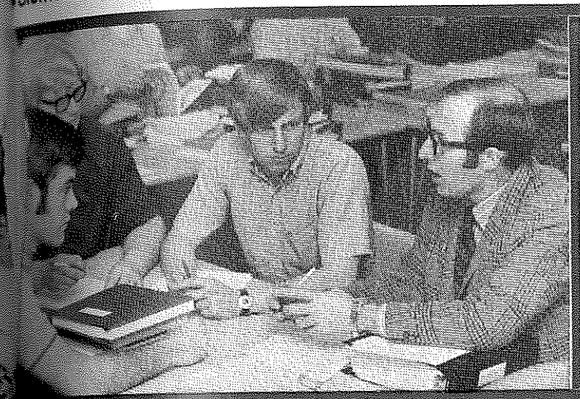
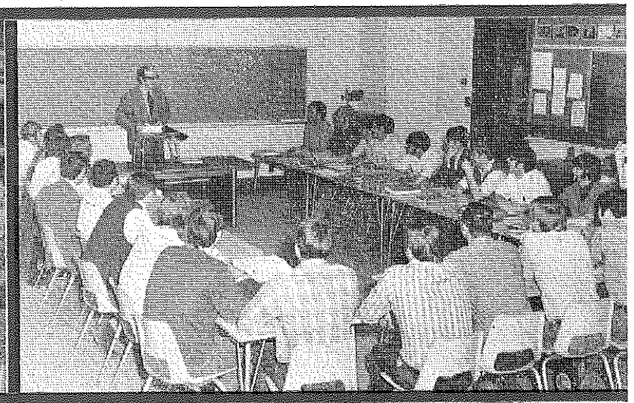
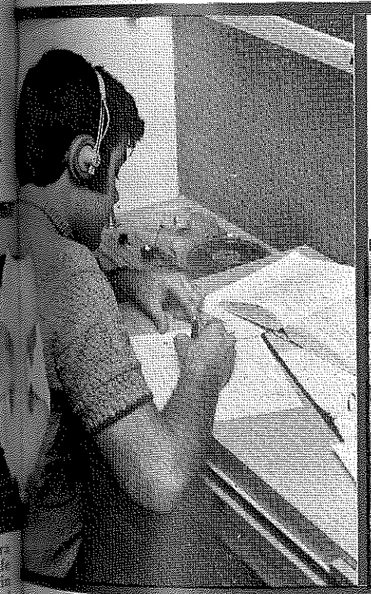
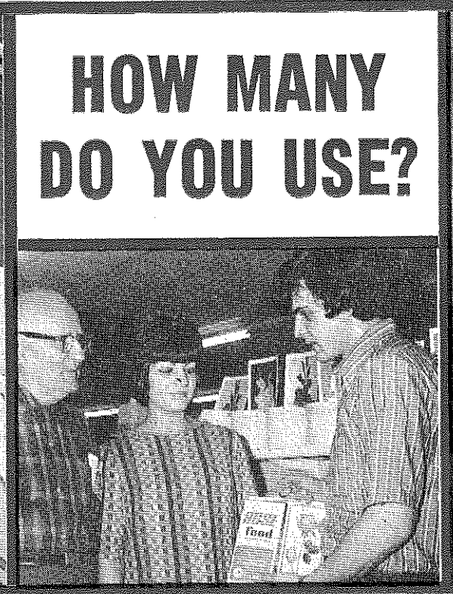


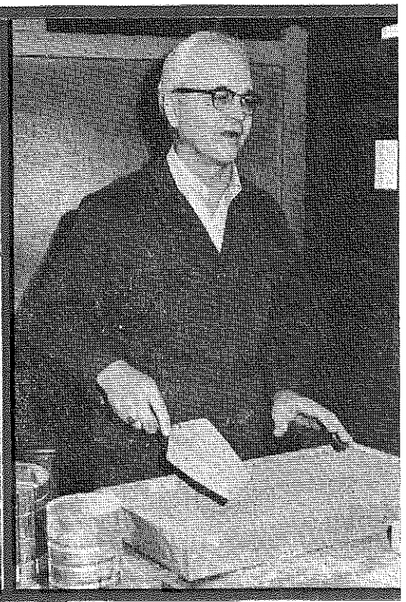
Small Group Instruction



Large Group Instruction







Individualized Instruction

On-Job Instruction

Demonstrations

Theme— TEACHING METHODS