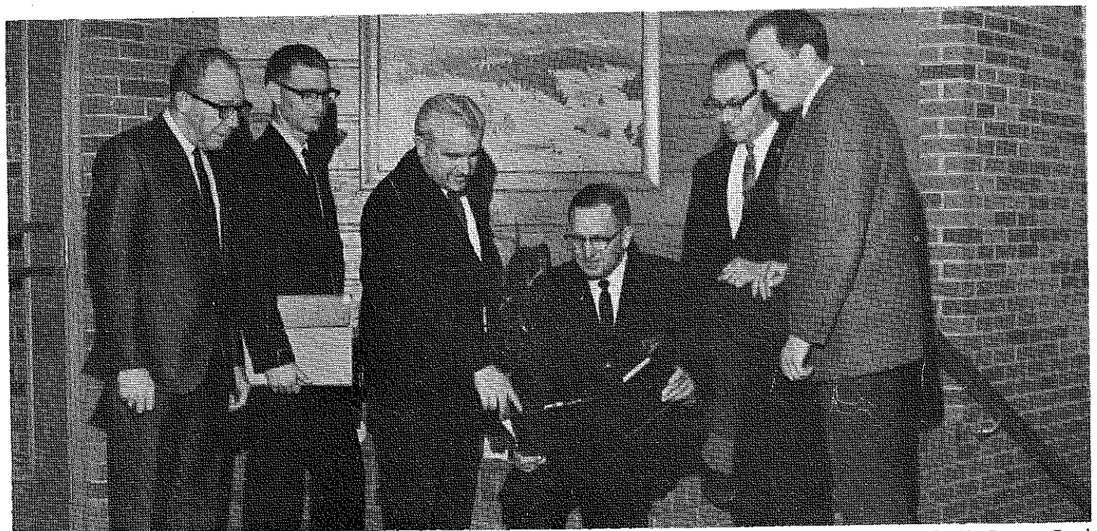
in Pictures

GILBERT S. GUILER
Ohio State University

There is no substitute for a summer home visit if the teacher wants to make his teaching relevant to the home situation. (Photo by Earl Wineinger, Kansas)

D. B. Sheffield (right), teacher of agriculture at Rock Ridge High School, Wilson, North Carolina, supervises a class of adult farmers during a course on Small Engine Repair. Charles Barnes (left) is the special instructor for the course.



Recipients of 30 Minute Club awards in Montana in 1968: (Left to right) Basil Ashcraft, State Supervisor; Dan Watts, John VanDaveer, Frank Westfall, and Luther Latum, Teachers of Agriculture; Max Amberson, Teacher Educator. (Photo by Max Amberson)

AGRICULTURAL EDUCATION

Agricultural Education

lume 41 — September, 1968 — Number 3

Featuring —

AGRICULTURAL EDUCATION FOR PERSONS WITH SPECIAL NEEDS

THE
AGricultural EDucation
MAGAZINE

Vol. 41 September, 1968 No. 3

The professional journal of Agricultural Education. A monthly publication managed by an Editorial Board. Publication office at The Lawhead Press, Inc., 900 East State St., Athens, Ohio 45701.

TABLE OF CONTENTS

Subscription price, $3 per year. Foreign subscriptions $3.25. Student subscriptions in groups one address, $1 for October-May. Single copies .50 cents. In submitting subscriptions designate new or renewal and address including zip code. Send all subscriptions to T. L. Faulkner, Business Manager, AGRICULTURAL EDUCATION MAGAZINE, State Department of Education, Montgomery, Alabama, 36104.
Articles and pictures should be sent to the Editor or to the appropriate Special Editor.
EDPRESS
Second-class postage paid at Athens, Ohio.

Editorials

From the Editor . . .

Onlookers or Active Participants?

J. Robert Warmbrod

Agricultural educators in general, and high school teachers specifically, can rightfully be proud of the emphasis given to the individual needs, characteristics, and interests of students in planning and conducting instructional programs in agriculture. But is this student-centered approach to teaching and learning sufficient to insure that agricultural education will meet its responsibility to serve "persons with special needs"? I doubt it. Generally, "standard brand" programs of vocational and technical education in agriculture, whether for high school students or adults, offer little to those "persons who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education program."

If we were to describe by commonly accepted standards the most successful high school programs of vocational agriculture, a good bet would be that these programs are also the most selective in terms of who is enrolled. The disadvantaged may not be prohibited from enrolling in these programs, but through a self-selection process the results are little different than if they were. The underachiever, the student with little or no encouragement from home, the student who is not motivated, and the potential dropout do not generally elect regular programs of vocational agriculture, for these programs and activities have little relevance to them. Conversely, if we were to describe the least successful high school programs of vocational agriculture, chances are that a high percentage of these programs serve as the school's "dumping ground" for those categorized as youth with special needs. In most schools, the "dumping-ground student" is probably an accurate operational description of those students we label as disadvantaged. Isn't it true that traditional programs of vocational agriculture have not served well those students who have been "dumped into" the program?

I believe a careful analysis will reveal that persons

(Continued on next page)

Guest Editorial . . .

A New Dimension in Agricultural Education

James W. Warren, Jr.

Since its inception, agricultural education has served persons with special needs in all instructional programs—whether programs for in-school youth, young farmers, or adult farmers. Agricultural educators recognized early that enrollees have varying characteristics and that some of these characteristics, especially those described as handicaps or disadvantages, necessitate special teacher assistance during organized instruction, supervised study, and supervised practice.

The rather frequent practice of high school principals assigning students with special needs to teachers of vocational agriculture verifies the fact that vocational agriculture has a tradition of paying special attention to students and their needs. Further evidence of the agriculture teachers' special assistance to students are the numerous cases where teachers have helped students to be successful when other teachers, principals, and sometimes parents saw little chance for the students. Past concerns and performance of persons in agricultural education clearly indicate that students who were not or could not benefit in regular programs were provided for by individual teachers of vocational agriculture.

The Vocational Educational Act of 1963 gave new impetus and significance for the development of programs for persons who have academic, socio-economic, or other handicaps that prevent them from succeeding in regular vocational education programs. This new dimension of vocational education has been received with growing acceptance by vocational agricultural educators.

Annual reports from the various states indicate that in 1967 the following activities are being undertaken in agricultural education: special activities for individual students in regular classes; separate classes for persons with special needs; the employment of teachers who are specialists in teaching persons with special needs; and the establishment of pilot and demonstration programs. Reports indicate that approximately 9,880 special needs students

(Continued on next page)

James W. Warren, Jr. is Program Officer, Vocational and Technical Education, Region III, U. S. Office of Education, Charlottesville, Virginia.

From the Editor . . .

who are academically, socially, economically, culturally, mentally, or physically disadvantaged are primarily onlookers rather than active participants in current, regular programs of vocational education in agriculture. High school programs emphasizing meaningful supervised experience programs have little attraction to students who have no facilities at home for a project, to students who are not readily employable, and to students who get little or no encouragement, financially or otherwise, from home. The contest and awards program of vocational agriculture and FFA have by-passed the student with special needs. It would be difficult indeed to argue forcefully that the program and activities of the FFA are attractive to or effective with students other than the mainline enrollee in vocational agriculture. Adult education programs for both farmers and nonfarmers are geared almost exclusively to the innovators and early adopters. How many adults in the laggard and late majority groups have you taught recently? Are the developers of post-secondary programs of technical education in agriculture paying much attention to the disadvantaged?

So what are our alternatives? The articles in this issue are explicit on two counts. First, persons with special needs are not one group but many subgroups with varying characteristics, needs, and levels of aspiration. So there is a need for not one but several special education programs in agriculture. And second, special education programs in agriculture are successful when designed for specific groups of persons whether for high school students, post-high school students, or adults.

It would be folly for us to expect to accomplish the task with present programs, staff, and facilities. What is needed are new programs designed for specific groups, not watered-down, regular programs. New programs must pay particular attention to the needs, characteristics, and aspirations of those served and to their potential for employment. The development of special education programs will require more teachers who are specially prepared or have special talents for teaching and working with specific groups of disadvantaged persons. Adding the responsibility for special education in agriculture to the load of the present teaching staff, particularly in schools with one-teacher departments of agriculture, is almost certain to be less than successful.

Several articles in this issue point out that the disadvantaged are frequently underachievers, are weak in reading and in verbal skills, and have limited facility in the use of numbers. Note that these characteristics relate to general education. The implication is that special education programs in agriculture must involve other teachers in the school. The vocational agriculture teacher cannot conduct successful programs alone. More emphasis should be placed on developing a school's program of special education involving instruction in agriculture rather than the agriculture department's special program. Similarly, many of the characteristics of the disadvantaged are related to family characteristics and situations. Perhaps more emphasis should be placed on involving the entire family in special programs.

To serve adequately the disadvantaged, schools must provide facilities and instructional materials for agricultural education to a greater extent than in the past. Laboratory facilities and provisions for sheltered and simulated occupational experience are necessities for students who have no home facilities for occupational experience and for students who cannot be employed as student-trainees. Specialized facilities are needed for students with mental and physical handicaps. Regular instructional materials are no more suitable to the special-needs student than is the regular program of vocational agriculture.

Instructional programs in agriculture—applied plant, soil, and animal science and related mechanics—are effective means of serving persons with special needs. To fulfill our responsibilities to these persons, we must provide special instructional programs rather than offering the regular vocational agriculture program to different groups. —JRW

Guest Editorial . . .

were receiving one or more services not provided for students enrolled in regular vocational agriculture classes in 1967. There were approximately 4,320 students enrolled in special classes of vocational agriculture for persons with special needs. Programs are being developed for all groups of persons with special needs: the physically handicapped; the mentally retarded or those with brain damage; the slow learners; those from environments that are not conducive to learning and where education is not adequate; and those who have been excluded from the mainstream of American society based upon national or ethnic origin.

From what vocational agriculture has done, is presently doing, and plans to do, there is ample evidence that the challenge has been accepted and that serving youth with special needs is of particular concern to vocational agricultural educators and administrators. The most recent evidence of the acceptance of this challenge was the emphasis given to programs for persons with special needs during the National Outlook Seminar on Agricultural Education held in St. Louis in May, 1968. I believe that vocational agriculture accepts its full share of the educational responsibility to persons with special needs and will fulfill its share of that responsibility by reclaiming this vital segment of our nation's human resources.

THE COVER PICTURE

Mr. Jonas Johnson, instructor in landscape horticulture at the George Washington Trade School, Detroit, Michigan, supervises Gregory Boswell as he operates a hand edger in one of the school's courtyards. Students in the landscape horticulture class take care of the school grounds. The George Washington Trade School provides educational training for students from the entire city of Detroit. (Photo furnished by Edwin St. John, Supervisor of Agricultural Education, Michigan Department of Education.)

WE MUST SERVE THOSE BEING NEGLECTED

T. L. FAULKNER, Supervision
Alabama Department of Education

T. L. Faulkner

Since the beginning of public vocational education in 1917, there has been a continuing effort to provide vocational programs to meet the changing needs of individuals in a changing society. However, there has been no concerted effort to meet the needs of those students who fail to fit the general pattern of studies in our public schools and who cannot succeed in regular programs.

SPECIAL NEEDS

Vocational leaders and teachers have struggled to prevent their programs from becoming the "dumping ground" for those students who could not conform to the general pattern of education. In doing so, rather stringent qualifications were developed frequently which prevented less able students from entering existing vocational programs. In turn, few attempts were made to adapt vocational or occupational training to fit the needs and abilities to those excluded or to develop specific vocational programs for them.

Any society which hopes to remain strong and viable must make efficient use of all its resources. One of the most valuable resources of any society is its people. We have long been concerned about the waste and destruction of natural resources, but only recently have we become particularly cognizant of the dangers of exploitation and waste of human resources.

Our founding fathers viewed education as one of the most effective means for insuring the individual a productive place in society. However, with the advent of a technological-based economy, the less able and poorly prepared individuals have fallen behind. Education in general has failed to help this group to become productive members of a changing society.

Over 35 million Americans are below poverty level. Unemployment is a major problem among these groups of less able, low-income workers. The many references to unemployment cite the lack of education and skills as the greatest drawback to employment for these individuals.

SPECIAL PROGRAMS

The 1962 report of the President's Panel of Consultants was one of the first national efforts to delineate the problems of a group labeled as "youth with special needs." It was from this report that the Vocational Education Act of 1963 evolved, which charged vocational education with the responsibility of providing special programs for persons who have academic, soci-economic, or other handicaps that prevent them from succeeding in the regular vocational education programs.

We can no longer tolerate this waste of human resources in our expending economy. We can no longer overlook the dropouts from our schools. Every student who desires vocational and technical education must be offered the best that our educational system can provide. If we reject the disadvantaged student, or offer him only an education so general that it will leave him unprepared to enter the world of work, we shall be responsible for his disillusionment with education. We can no longer ignore the rise of juvenile delinquency. Young people learning nothing, going nowhere, with no skills with which to claim a job, with no one to care what happens to them, and with no road to opportunity, are a rebuke to the inadequacy of our educational system.

But vocational agriculture cannot solve this problem alone. All vocational education and all other educators must work together in the formulation of programs. Community social service agencies should be called upon where personal problems are involved or where it is necessary to obtain a better understanding of the environment from which many of these students come. Industry and labor must be asked to give their support.

WHO ARE THE NEGLECTED?

Who then are the socio-economically handicapped youth of the United States? In general, they are the children of low-income parents who live in our affluent society but do not share its benefits. To draw a composite picture of these young people would be impossible. Each is an individual with his own aspirations, capabilities, interests, and dreams. But common to them all and setting them outside the mainstream of American life is the limitation on their opportunities to develop their abilities to the fullest. This limitation in most cases is the result of their family, educational, and occupational background.

Persons with special needs include youth and adults who have one or more of the following characteristics: low income; poor educational background and preparation; poor health and nutrition; family heads are semiskilled or unskilled and frequently unemployment; isolated from cultural, educational or employment opportunities; emotional and psychological problems which are not serious enough to require constant attention or institutionalization; lack of motivation for obtaining an education or acquiring

(Continued on page 59)

A PROGRAM FOR SLOW LEARNERS

DONNIE L. HARLAN and J. W. GRIMES
Teachers of Agriculture
Rogers, Arkansas

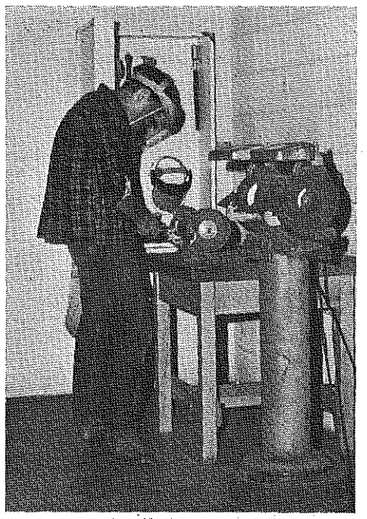

J. W. Grimes


Donnie L. Harlan

We have 200 students enrolled in vocational agriculture at Rogers High School. It was our feeling that the program was not meeting the needs of several of our students. Our study of the situation and conferences with the principal and counselor led to the establishment of a program designed to meet the needs of students with handicaps that prevent them from succeeding in the regular vocational agriculture program and in other courses in the school.

A NEW PROGRAM

We felt that students enrolled in the special program should not be referred to as persons with "special needs." We decided to call the new program Coordinated Shop. The program is organized to provide instruction in areas that are of particular interest to students.


In the Coordinated Shop program students learn the proper adjustment and use of the bench grinder. This student is using the grinder to sharpen a twist drill. (Rogers Daily News Photograph)

Instruction in shop serves as the stimulus for the program in helping students discover their interests. Other courses are then coordinated to the shop program. When a student indicates an interest in a particular area, instruction in English, mathematics, and science is coordinated to this interest. Students show a response to this type of teaching and are very enthusiastic about the program. Many of them begin to see, perhaps for the first time, how English, mathematics, and science, as well as shop, are of value in everyday life.

The program is designed to accomplish three specific purposes:

—To help students who are mentally and academically slow to participate with students of their own peer group.

—To help students overcome the poor attitudes they have developed as a result of failure by providing opportunities for achievement in areas that are of interest to them.

—To introduce students to the world of work by providing training in fields in which they can become successful, self-supporting citizens.

SELECTION OF STUDENTS

The teachers of agriculture, the junior high school principal, and the counselor have the responsibility of selecting students for the program. It was agreed that students selected would be those who were failing or had failed the ninth grade and had unfavorable attitudes toward the school, teachers, and other students.

We found that many of the students possessed one or more of the following characteristics: poor self-image, low reading ability, limited vocabulary and poor speech habits, engaging in nonpurposeful activity much of which is disruptive, slowness in the performance of intellectual tasks, indifference to responsibility, poor health and poor health habits, and limited experiences in the home environment and in contacts with social, cultural, and governmental institutions.

Since many of the students were slow learners thereby making a great deal of individual instruction necessary, we decided to keep the class relatively small in size. Sixteen students were selected to participate in the Coordinated Shop program the first year.

THE INSTRUCTIONAL PROGRAM

Our next task was to decide on the content of instruction and the learning experiences that the students would receive. Students in the Coordinated Shop program are enrolled in English, mathematics, science, physical education, and vocational agriculture. We decided that a cooperative teaching situation was most desirable with one teacher responsible for directing and coordinating the program and other teachers for teaching the specific areas in which they are best qualified. The vocational agriculture teacher was selected as the coordinator of the program.

The instructional program includes the following areas:

—Communication skills: reading, speech, and composition.

—Mathematics: fundamental skills and practical problems.

—Science: measurement, problem solving skills, health, and safety.

—Vocational agriculture: animal, plant and soil science; human relations; employer-employee relationships; and seeking employment.

—Vocational shop: tool identification, shop safety, woodworking, masonry, plumbing, sheet and cold metal, electricity, tool sharpening, power mechanics, arc and acetylene welding, gasoline engines, surveying, and drafting.

We do not attempt to make welders, carpenters, or scientists of our students. We feel, however, that through the cooperative teaching effort we can motivate students and help them become better students and citizens.

SOME RECOMMENDATIONS

The program is very successful. We have the following recommendations for schools considering a similar program.

—Keep classes small, not over twenty students per class.

—The selection of students must be flexible for not all students with special needs fit into a program of this type.

—A student should not be forced into the program but should be enrolled because he has a desire to do so.

—Teachers of students with special needs should possess characteristics such as the following:

- competence and skill in subject matter and field of specialization.
- interest in working with young people who have special problems.
- special training or knowledge for working with the disadvantaged.
- ability to reinforce slow learners and to refrain from responding only to students who respond to the teacher.
- patience to work with slow learners.
- willingness to use instructional materials and teaching techniques geared to the understanding of students.
- ability to work with other staff members to increase the effectiveness of the program.

We Must Serve Those Being Neglected

(Continued from page 57)

a job skill; dependent on social services to meet their basic needs; or have physical or mental handicaps.

Extremely handicapped persons are not included among the groups vocational education should be serving such as those who are so physically handicapped or mentally retarded that they require intensive diagnostic and corrective attention from the medical, psychological, or psychiatric profession.

It is estimated that 40 per cent of the youths who drop out of school are from families whose annual income is less than $3,000, the level of poverty. Half the dropouts leave school in the second or third year of high school; but almost one-fourth do not even reach high school.

Large numbers of young people are leaving school unprepared to find or hold a job. It is unrealistic, however, to think that dropouts can be eliminated completely. There will always be some students who leave school as soon as legally possible for financial, emotional, or academic reasons.

SCHOOL PROGRAMS

Schools with disadvantaged students should take unusual measures to help these students develop standards, values, and habits which lead to responsible and mature adulthood. This involves both personal and academic development. The schools will need to use every possible medium and method of instruction. Difficulties in reading, communication, and comprehension will have to be overcome. Each student's progress should be judged by his own rate of achievement. Educators should encourage every student to develop his talents to the fullest so that he may later put them to effective use. They should apply tests devised to measure potential rather than the tests that have been applied to measure intelligence. They should give each student the individual care, attention, and guidance he needs.

There are at least four ways in which schools can work to alleviate this situation. *First,* identify potential dropouts and counsel them so that they understand what it will mean to their future if they leave school before they receive a high school diploma and have some skill to offer a prospective employer. *Second,* provide special classes for such students, give them the remedial help they need to acquire some basic occupational skills, and teach them the social skills required in applying for a job and the attitude and conduct expected of employees on the job, including the ability to take orders and to get along with fellow workers.

Third, develop work-study programs to help meet the financial needs of these students to allow them to stay in school. This procedure has the added advantage of allowing them to get experience in the world of work while receiving teaching and counseling from the school. *Finally,* the school can encourage dropouts to return, whether they have left school recently or are now adults. This would involve creating a climate of acceptance as well as offering the courses needed and making available counseling they might require or request.

VOCATIONAL AGRICULTURE PROGRAMS

This brings us now to the difficult decisions in planning a state or local program for students with special needs.

In what grades will vocational agriculture courses be offered for those students?

How will classes be scheduled?

Who will teach these classes?

It is said that additonal funds will solve our problems. I do not think we will ever have sufficient funds to employ additional teachers in all schools for this instruction. This would almost double our budget for vocational agriculture since over 90 per cent of our programs are still one-teacher units throughout the nation.

It seems to me that the alternative is that most of the instruction in agriculture for students with special needs will have to be done by present vocational agriculture teachers. The larger school systems should employ additional teachers if and when possible.

The public and Congress are expecting vocational education to come up with a practical training program for students with special needs. The pressure and demands for us to comply are getting stronger every day. They expect us to serve successfully those now being neglected. I predict that we will comply with this challenge and responsibility.

AN EDUCATIONAL PROGRAM FOR DISPLACED FARM WORKERS

ROBERT C. HAYNIE, Teacher Education
Agricultural, Mechanical and Normal College
Pine Bluff, Arkansas


Robert C. Haynie

Two programs for post-high school students and young adults who have special needs are conducted at the Agricultural, Mechanical and Normal College, Pine Bluff, Arkansas. The program for regular post-high school students is funded partly by the State Department of Education under the provisions of the Vocational Education Act of 1963. The Displaced Farm Worker Training Program is funded partly under the Economic Opportunity Act.

Both programs are designed to help farm and rural people develop interests and abilities for work in occupations requiring less than a bachelor's degree. Another purpose is to encourage and prepare persons for continuing study and training beyond high school. Since the Displaced Farm Worker Training Program deals with the more academically and socio-economically handicapped persons, that program will be described in this article.

Displaced Farm Workers

The Displaced Farm Worker Training Program is intended to provide basic education and vocational training for 75 to 100 seasonal farm workers. Many of the displaced farm workers in the training program are the third generation of destitute farm tenants. The training program participants are from the Arkansas - Mississippi Delta Area where pockets of poverty and hunger exist. These students are not very far removed from a fixed attitude on the part of a power structure who believed that sharecroppers did not need education and training. Such disadvantaged students were destined from birth to have special needs that could not be met through regular educational programs.

The need for the program is a result of the rapid mechanization of the farming industry in Arkansas. For all of their lives, these workers and their parents have spent about one-half of every year as tenants. Before the minimum wage was extended to farm workers, the farm owners provided shelter and food the year round for these seasonal workers and assessed them for these services during the growing and harvest seasons. Because the planters must now pay the minimum wage, the workers are no longer able to spread the benefits over the long unemployed period. The planters are finding it more feasible to hire trained mechanics and machine operators thus leaving the untrained and unskilled workers no means of income.

The farm workers, who formerly worked only during growing and harvest seasons, now find themselves almost completely unemployed. This situation makes them the most disadvantaged persons in their particular communities.

The Program at A.M. and N. College

In organizing and conducting the Displaced Farm Worker Training Program, the College asked residents of the communities involved to aid in the identification, recruitment, and selection of trainees. As the program developed, local residents worked on advisory committees to determine areas of intense need and necessary program changes. Where it is possible to do so, local residents are given employment in the actual conduct of the program. The public assistance programs in the communities of the participants are urged to make available health and welfare services.

The program is conducted as a residential program at the Agricultural, Mechanical and Normal College. However, the occupational placement of the trained workers will be as near to their homes as possible. This aspect of the program is being coordinated with on-the-job training programs under the Manpower Development and Training Act and with Neighborhood Youth Corps programs.

Program of Instruction

The instructional program designed to meet the needs of the displaced farm worker includes:

—Basic education: communication skills, human relations, and agricultural mathematics.
—Vocational training: agricultural mechanics, ornamental horticulture, agribusiness, auto body repair and painting, automobile mechanics, masonry, carpentry, electricity and electronics, welding, tailoring, practical nursing, and secretarial training.
—Consumer education.

The most important need of the participants is employment. The success of the program depends on basic education which prepares the young, displaced farm worker for vocational training. The mass displacement of tenants from farms where they have made a living for many years on a subsistance level makes it mandatory that someone become concerned to the point where help is given not as a handout, but as an opportunity to develop skills that can make these ex-farm workers and their children self-sufficient.


This participant in the Displaced Farm Worker Training Program is enrolled in Auto Body Repair and Painting. Now 30 years old, he dropped out of elementary school in 1954 to drive a tractor. The trainee, his wife, and their eight children live on a subsistence allowance of $40.00 per week during the training program.

Realistic Adult Instruction Pays in Many Ways

A. J. PAULUS
University of Tennessee


A. J. Paulus

Dr. A. J. Paulis is Emeritus Professor of Agricultural Education, University of Tennessee, Knoxville.

Hardin County, Tennessee, began its "War On Poverty" in 1951 when the community of Walnut Grove was selected for special consideration. The first move came with the consolidation of all one-teacher schools into one large elementary school. To help weld the several smaller communities into the one new community, the county superintendent of public instruction instructed J. I. Bell, teacher of vocational agriculture at Central High School, Savannah, Tennessee, to "go to Walnut Grove and show those folks how to make a living."

WHICH CROP

A community survey showed that 250 farms had an average annual gross cash income of $768.00. The reasons for the low net returns were many. The highly eroded soil of coastal plain origin was basically unproductive. The timber had practically all been cut during World War II and there was little suitable land for pasture or feed crop production.

The redeeming feature of the existing soil was that it warms early in the spring. It was also responsive to fertilizer and therefore suited to truck crops. Which crop would depend upon available markets.


Farmers of the Walnut Grove community working at a grading machine at a receiving station.

SOME POSSIBILITIES

The first new crop selected was strawberries. At once an adult program was started giving detailed instruction on planting, fertilizing, cultivating, harvesting, and selling the crop. For several reasons, among which were high costs and delayed returns, the venture failed to succeed.

After more study, okra was selected as the cash crop for the community. With a grower's contract in hand and ready to sign, Mr. Bell began another series of adult classes on the production and marketing of okra. Fifteen farmers enrolled and agreed to try one acre. The yield was good, the price was high, the market was there, and all growers along with Mr. Bell were happy. The next year 150 acres were grown with equal success and satisfaction. The same was true for the third year. But the fourth year no buyer was interested in offering a satisfactory contract. Some other cash crop had to be found to take the place of okra.

ANOTHER POSSIBILITY

After much more study and many contacts, pimento peppers offered the best growers contract. Mindful of their success with okra, as many as 100 prospective producers turned out for the adult classes on the production and marketing of peppers. Since 1956 an average of $50,000 has been brought into the community from the sale of peppers. With rising production and prices it is estimated that this annual income may more than double. Production has now spread into the adjoining county where T. C. Story, teacher of vocational agriculture at Collingwood High School, is providing instruction and supervising marketing.

To insure united effort and to produce a uniform product for the market, a Truck Growers Association was formed. This cooperative serves as the marketing agency. The only requirement for membership is to grow peppers according to instructions.

SOME RESULTS

The added income has brought about many changes in the social, educational, and economic life of the community. New churches, stores, and houses have been built. Old dwellings have been replaced with attractive modern structures. Some 60 percent of the houses have been built in the last five years.

The county superintendent says, "There has been an increase in school attendance from Walnut Grove. The children are actually learning faster due to better home and health conditions. The drop-out rate has decreased. Requests for free school lunches have dropped 70 per cent." The county supervisor of instruction notes many improvements in the Walnut Grove community: the children are more alert in school, a larger number are going on to high school, and the cooperation with the school is improving.

Basic education classes for adults have been taught in the community for two years. They are drawing students from twenty to sixty and more

(Continued on page 63)

Education for Farmers with Special Needs

LOWELL A. GOUGH and HAROLD R. ROWE
Research Coordinating Unit for Vocational Education
University of Kentucky

As is true in other parts of the nation, an overwhelming number of the persons with special needs who live in Kentucky are far removed from crowded city ghettos. To varying degrees, they are deprived socially, psychologically and physically, but most of all they are economically deprived. Unlike the urban poor, the rural poor frequently own at least some real estate and more frequently they are likely to have strong psychological and emotional ties to the small strip of land which they either possess or share.

It has been shown in Kentucky that a number of small farm owners and share croppers tend to have net annual incomes of less than $1,200. From time to time some of these farmers abandon rural living and migrate to a city in search of employment, but more often than not they remain on the farm and fail to obtain sufficient income to produce an adequate level of living for their families. Their children seldom receive either an adequate diet or a high school education. When the children become of employable age, they are likely to migrate to a city in search of employment.

This article reports the results of a Manpower Development Training Act pilot project which suggests a feasible and partial solution to the rural poverty problem and consequentially a partial alleviation of the urban poverty problem. The programs were conducted in the Somerset, Kentucky, area.

The Pilot Project

The primary goal of the educational programs were to raise the farmer's income above the poverty level and thereby to improve his level of living. The trainees for the courses were selected by a group of county extension agents, vocational agriculture teachers, Soil Conservation Service technicians, and Farmers Home Administration supervisors.

All applicants for training were men with the special need—poverty. The typical applicant for training had four dependents, an annual income of less than $1,200, a sixth grade education, and few skills on which to rely in order to make an adequate level of living as a farmer.

Specialists from the University of Kentucky studied the resources of the area and recommended that specialty farming be introduced because the area is particularly suited to fruit and vegetable crops. It was thought that some of the farm owners and operators in the Somerset area could profit from the addition of fruits and vegetables to their farming programs.

Courses Offered

Preparation for change in farming crops began with a MDTA course that was designed to train peach growers. Another course trained a class to grow green beans, cucumbers, and tomatoes. In addition, some trainees learned how to operate profitably greenhouses for the purpose of growing tomatoes and watermelons. In another course the trainees learned to grow blackberries, blueberries, and strawberries. An important part of all of the courses was instruction in the use of services of government agencies and participation in marketing cooperatives.

In a typical course trainees are provided 33 weeks of instruction both in the classroom and on the trainees' farms. The trainees were taught ways of increasing productivity and ways of increasing business efficiency. Among the topics taught are the introduction of new crops such as fruits, berries, and vegetables into a small farming operation. Other topics include farm and home planning, money management, effective employment of family labor, land use, marketing procedures, and production of a home food supply. An important aspect of the courses was that all trainees practiced their learnings as a group on each trainee's farm and they practiced solving their farming problems cooperatively.

Evaluation of the Program

Interviews with the vocational education program coordinator, the area farm labor representative, and the course instructor with an analysis of the course outline identified farming practices that are indicators of expected changes in the behavior of trainees that could result from the instructional programs. Using this list of expected outcomes, interviews with nineteen trainees in one course indicated the following outcomes.

- The average net income per trainee increased from $618 before the course to $2,200 by the end of the second year after the course. The increases in net income ranged from $200 to $4,200. The increases show that generally the objective of the course was more than realized; however, some of the trainees' incomes improved more than others.
- The total gain in combined net incomes of all trainees was $30,050 by the end of the second year after the course. The total allocation of funds for the course was $35,505; therefore, 84.6 per cent of the allocation was recovered by the end of the second year after the course.
- The trainees whose increase in net income was above the median after the course had adopted significantly more desirable planning activities than did those trainees whose increase in net income was below the median.
- The trainees whose increase in net income was above the median after the course had adopted significantly more desirable farming practices than did the trainees whose increase in net income was below the median.
- Another significant difference was seen in the degree to which the trainees' new farming practices were adopted by neighboring farmers. The trainees whose increase in net income was above the median noticed a larger number of effects on other farmers than did the trainees whose increase in net income was below the median.

Willie Sheppard (right), a father of 12 who is enrolled in a MDTA farmer training course, shows his strawberry plants to Howard Selvidge, farm labor representative for the Kentucky Department of Economic Security. The production of strawberries raised Mr. Sheppard's income more than $1,000 last year. (Photo by Louisville Courier-Journal)

- All trainees expressed a need for further training in specialty farming practices and the need for an opportunity to work continually with other farmers to solve their current farming problems.

Summary

It is evident that ways and means for solving the rural poverty problem are needed. The general farmer training programs conducted under the MDTA in the Somerset area of Kentucky are good educational investments. Similar programs should be continued and enlarged. In addition, experimentation with other approaches to solution of the rural poverty problem are needed.

In the words of one MDTA general farmer trainee, the training is "just like a fire—it is helpful if you put it to use." In the absence of continuing education, the trainee who has managed to rise above the subsistence level may fail to put his learnings to use effectively and he may never fully develop to his maximum potential.

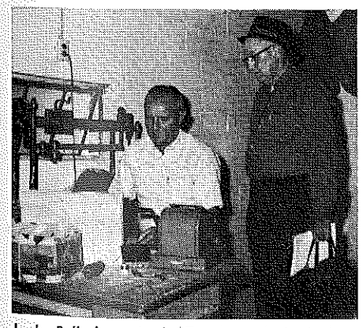
Harold R. Rowe

Lowell A. Gough

Lowell A. Gough and Harold R. Rowe are associate research specialists, Kentucky Research Coordinating Unit for Vocational Education, University of Kentucky. This article is based on "A Study of Factors Associated with Outcomes of MDTA Agricultural Education Projects in the Somerset Area," a research project conducted by the Research Coordinating Unit.

Realistic Adult Instruction Pays in Many Ways

(Continued from page 61)



J. I. Bell (standing), Teacher of Agriculture and County Director of Vocational Education, Savannah, Tennessee, and T. C. Story, Teacher of Agriculture at Collinwood, Tennessee, check records at a receiving station where farmers market pimento peppers.

years of age. Three of the teachers grew up in the community.

While the people in Walnut Grove give first credit to Mr. Bell for bringing about their "new way of life," they have learned to appreciate the various local fact-finding and service agencies for their contributions to the program. For example, the Soil Conservation Service for the soil map of the county which was widely used in adult classes; the ASCA for help in conservation and practices; the FHA for providing loans and plans to repay them; the county agents for group and individual contacts; and the local supply cooperative for making materials available at lowest possible prices.

SELF-HELP AND COOPERATION

In summary, we have here the story of a community caught in an economic squeeze and a teacher of vocational agriculture who dedicated himself to finding a way out. Behind him was a school system willing to adjust to meet the real needs of a special segment of its service area. Backing the school program were local agricultural fact-finding and service agencies ready to lend an effective hand in determining realistic objectives and in providing facts, materials, and credit to a people ready to do their part for a better living in their community. It is a story of self-help and cooperation which just might inspire others.

WORKING AS AN AGRICULTURAL MISSIONARY

GARLAND E. GINGERICH
Teacher of Agriculture
Millersville, Pennsylvania

Hondurans are starving! The ones that really pull at your chest are the children. Swollen bellies, the sign of starvation or a heavy infestation of worms, is a common scene in Honduras, but a scene that never becomes easy to look at.

There are vast opportunities in Honduras for agricultural education. Eighty per cent of the population is engaged in agriculture. Practically all of these persons still practice a shifting agriculture called "slash and burn" where a piece of jungle is cleared, burned, planted, harvested, planted again, harvested and than abandoned. They use two implements—a machete and a pointed stick. No animals are corralled; chickens, hogs, horses, and cows all roam at will throughout the villages sharing equally the house and kitchen table with the family. This system makes vegetable gardening impossible as well as continually reinfesting with worms the houses and yards where the children play.

A DIRECT APPROACH

One approach to agricultural education being used in Honduras is the direct approach; an agriculturist teaching the persons who will actually use the information. An example of this approach is a one-week vegetable gardening workshop held in Laka. It was typical of several held in Honduras during November and December of 1967.

Men from twenty different villages attended the workshop. Walking is their only means of transportation, so many of them walked four or five days.

Laka is a Mosquito Indian village of fifteen families. This village is located on a small sand dune of 100 yards square rising out of the swamps and lagoons of northeastern Honduras. There are an estimated 10,000 Mosquito Indians living throughout this vast area in similar villages with less than two persons per square mile.

During April and May of 1967 the rivers that feed the swamps and lagoons destroyed their rice crop which is one of their staple crops. Flooding is becoming an annual occurance in this area of an emerging coast line. Their other staple, bananas, is being attacked by a new disease—moko. There are no known controls for moko disease, only resistant varieties. But resistant varieties are not available to the poor campesino. The fruit companies that have developed resistant varieties need all they can reproduce for their own plantations.

WHAT WAS TAUGHT

In an effort to get the people to switch from a shifting agriculture to one of more permanence the following were taught about vegetable gardening: selecting a site for a kitchen garden of 1,000 to 1,500 square feet; making a compost pile from kitchen and animal wastes not presently being used; importance of garden vegetables in the diet; soil preparation including turning under a cover crop and preparing a fine seed bed; storing seeds to keep them viable; proper planting depths and distances; garden management practices: disease control; insect control; weed control; and starting seedlings in a seedbed.

A learning by doing method was used in teaching each of these steps. By the end of the week a compost pile and a model garden had been planted.

THE RESULTS

The illiterate Mosquito Indians responded to this type of instruction. Forty-year old men eagerly helped make the garden. They actually pushed each other out of the way with such comments as, "Let me turn the soil for the teacher so I know that I am doing it right. I will have to do it when I get back to my village" and "Let me plant that seed, I never planted a seed before in my life." At the end of the workshop each person was given a package containing fifteen different vegetable seeds of the type that were planted during the workshop.

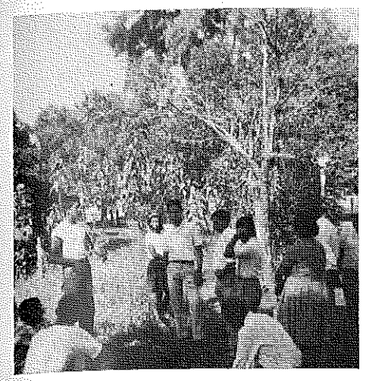
Recently a professional photographer making a world-wide trip photographing activities of agricultural missionaries found the best garden he had seen growing in Cauquira. It had been planted and cared for by one of the men who practiced the skills learned at the workshop in Laka.

ANOTHER APPROACH

Not all agricultural education in Honduras is with illiterate Indians. A second approach is being tried in the San Pedro Sula area of Honduras.

Garland E. Gingerich

During the 1967-68 school year, Garland E. Gingerich was on sabbatical leave from his position of teacher of agriculture, Penn Manor High School, Millersville, Pennsylvania. During that period of time, Mr. Gingerich served as an agricultural missionary in San Pedro Sula, Honduras (Central America). He served as an agricultural education adviser for a coordinated effort by three church groups to promote community development on the northern cost of Honduras. The project was administered by Agricultural Missions, Inc., New York. Persons interested in short-term or long-term work as an agricultural missionary should contact: Agricultural Missions, Inc., 475 Riverside Drive, New York, New York 10027.



(Above)
Community leaders are very interested in learning new skills during a vegetable gardening workshop.

(Below)
Individual instruction on how to plant garden seeds is given during a workshop in Honduras.

With this approach the agriculturist trains a corps of people who in turn will teach those who will actually use the information. For this approach lay leaders are commissioned by their churches as lay volunteer agricultural extension agents. These are literate men and women representing thirty different communities.

The volunteer extension agents enrolled in a one week training session during December 1967. At this workshop they were taught how to work with others, how to be a change agent, how to do things democratically, as well as technical agricultural skills including vegetable gardening and poultry, rabbit, and goat management. They learned how to conduct a community wide latrine program by actually doing each of the steps from recognizing it as a problem to getting community interest and cooperation to constructing a model latrine. Every effort was made to build an esprit de corps in the group.

By the end of the one week training session they had become inspired and dedicated. They were anxious to try their hand at being "change agents" in their own communities. When the volunteers received their certificates at the close of the workshop they were making comments such as, "These 'gringoes' have shown me how to live like and be a Christian." "Gringo" is used by Latin Americans as a loving and endearing term as well as a slam.

The volunteers were challenged to get the people of their communities to fence areas of 1,000 to 1,500 square feet for gardens. All in their villages who fenced an area and agreed to give 10 per cent of their garden produce to a community wide Thanksgiving Service would receive enough good seeds to plant their garden. This 10 per cent offering of food will be given to orphanages or other charitable institutions.

ADDITIONAL TRAINING

During the month of January a one day workshop was held for the extension volunteers. At this workshop instruction was given in how to plant and manage each of the fifteen vegetables included in the package of seeds.

At this stage of the training it was important to find out if the extension agents had become change agents. Were they able to convince the people of their villages to fence an area for a garden? They were! Nearly 500 packages of garden seeds had been distributed. Additional training was given to each of the volunteers during January with visits to each one in his own community. Visits that permitted help with the real problems they were encountering.

A similar schedule was planned for the teaching of poultry management during the month of February. During the one day workshop the volunteer agents were instructed how to make a simple chicken coop from local materials and how to brood and manage chicks. They were urged to show the people of their villages the need to pen their chickens and build similar coops, to show the need to feed the chickens a suggested ration, and to return one dozen hatchable eggs to the extension agents who in turn will use them to start other projects. Any person meeting these conditions would receive enough Rhode Island Red chicks to start a flock of chickens. They have responded with nearly 500 requests for starter chickens. Similar educational programs are planned for rabbits and goats.

AGRICULTURALISTS NEEDED

Everyone involved with the program is convinced that the training of local people is possible and makes a professional agriculturist more effective because it permits him to reach more persons. However, in large areas where few literate people can be found, a direct approach is required although it is less efficient.

The main problem is securing professional agriculturists. Agriculture Missions, Inc. is constantly seeking people with an agricultural education background to teach these kinds of programs. Opportunities that vary in length of service from one or two months, to one year, or a life time.


David A. Hamilton

Identifying the Educationally Handicapped

DAVID A. HAMILTON, Dean
School of Agriculture and Home Economics
Tennessee A. and I. State University

During this decade many studies have been directed toward identifying students who have special needs. The disadvantaged, the deprived, and the handicapped continue to be subjects of discussion which aim at providing programs which will correct, compensate for, and help to solve the problems occasioned by these deficiencies. Prerequisite to planning or implementing such programs is the necessity for identifying the specific needs or shortcoming of the students for whom help is intended.

Identifying Handicapped Students

In identifying educationally handicapped students so that a positive approach toward aiding them through vocational agriculture may be made, we must realize that many factors are involved—many deficiencies are present. Too often, the student who does not achieve is labeled as "slow" or of "low intelligence." In reality, intelligence is not the only determining factor. Students of average, above average, or below average intelligence may be educationally handicapped. To pinpoint the educationally handicapped student, Johnson[1] designates the student who is not achieving at or near his intellectual potential.

The educationally handicapped student has an obvious lack of facility in the basic skills. Weaknesses in language skills are evidenced in oral and written vocabulary and grammatical usage. The student's attention span is also very short. Most do not read adequately. These weaknesses, when occurring together, affect all areas requiring reading and communication skills as well as problem solving ability. The incidence of deficiency in only one of these skills may not affect mechanical competence. Lack of any or all of these skills usually causes the student to score lower on group intelligence tests than other members of the group who are not lacking in necessary skills.

Other Factors

Poor environment, cultural deprivation, and lack of educational stimulation are often factors causing low academic achievement. Frequent failure to succeed in school work stifles the student's ambition to strive for success. Absence of a variety of stimuli in the home to which the student could respond results in impairment of his basic learning equipment.

Substandard environments in most instances produce students with characteristics of apathy, withdrawal, and passiveness; or anger, frustration, and resistance. Hostilities toward school programs and personnel are built up that flare into open rebellion as the most active evidence and failure to do school work as passive resistance.

Limited educational opportunities are often found where homes are widely scattered, communication is poor, and schools are substandard as to physical plant and equipment, curriculum offerings, and instructional activities. Regardless of a student's intelligence or environment, if his opportunities for educational experiences and training are insufficient, educational handicaps will result.

Not Enough

These four factors — intelligence, basic skills, environment, and educational opportunities — are interrelated. Marburger[2] injects the "common denominator: not enough." We enumerate not enough information, not enough variety of stimulation. The student reflects this. He is poorly prepared and poorly motivated for school. School seldom seems important to him, therefore he does not achieve commensurate with his potential.

Obviously some significant adjustments need to be made. Students who upon investigation or observation portray evidence of being educationally handicapped can not be expected to survive educationally, nor to become viable components of the society of which they are a segment unless special help is given to them. Well planned, innovative, and functional programs of vocational agriculture could be a decisive factor in aiding such educationally handicapped students.

---

[1] G. Orville Johnson. *Education for the Slow Learner.* Englewood Cliffs, New Jersey: Prentice-Hall, Incorporated. 1963.

[2] Carl L. Marburger. "Considerations for Educational Planning." *Education in Depressed Areas.* New York: Columbia University. 1963.

Themes for Future Issues

October	***Agricultural Education in City Schools***
November	***Supervision in Agricultural Education***
December	***Supervised Occupational Experience in Agricultural Education***
January	***Teacher Education***
February	***Agricultural Education in Area Schools***

Preparing for Work as an Agricultural Missionary

JOHN L. STEVA and WILLARD WOLF
The Ohio State University

Students enrolled in colleges of agriculture or in high school vocational agriculture programs who are interested in agricultural mission service frequently need help in preparing for this work. Teachers likewise need to know how to best advise and help these students to reach their vocational objective.

Agricultural missionaries preparing to serve overseas need competence in technical agriculture as applied to the country where they will work. In addition they should be familiar with the customs and needs of other nationals. They need to know how to get along with the rural people, fellow workers, and personnel with other agencies.

PREPARATION FOR WORK AS AN AGRICULTURAL MISSIONARY

Agricultural missionaries recommend that agricultural education should be strongly considered as a major for the potential agricultural missionary because of the latitude allowed in selecting courses and the importance of extension and education in mission work. It has been found that extension education is an effective agricultural education program in missions due primarily to the individual nature of the teaching and work among the adult farm population in helping them learn productive and efficient farming.

In an effort to learn more about the preparation needed for work as an agricultural missionary, questionnaries were sent to 197 agricultural missionaries and rural development workers in twenty-one African countries south of the Sahara Desert. The major findings of this investigation are reported in this article.

SKILLS AND UNDERSTANDING NEEDED

From a list of twenty, agricultural missionaries listed the following as the five most important skills and understandings for pre-service education of missionaries.

—Learning the native language (especially after being assigned to a country.)
—Developing local leadership.
—Adjusting to local beliefs, customs, and living conditions.
—Improving local crops, seeds, soils, animals, tools, and controlling plant and animal diseases.
—Cooperating with government agencies.

After one term of service as a missionary, the agricultural missionaries indicated the most important skills and understandings were developing local leadership and improving local crops, seeds, soils, animals, tools, and controlling plant and animal diseases.

Almost all of the agricultural missionaries' wives were involved in activities in addition to homemaking. The most common role was directing or helping with women's work.

SOME GUIDELINES

The following guidelines should provide direction to those preparing for agricultural missionary service. But as one missionary warned, they do not insure success.

—Have an understanding attitude toward other people's customs.
—Learn the new language as quickly as possible. Effective communication will help with the work.
—Develop leadership ability to help people to determine their needs and to help themselves meet these needs. Recognize the natives' intelligence, even though some are illiterate. An outsider should not be a dictator; some but not all of his ideas will work. The local farmers know when the rains come, what plants grow best, and local conditions.
—Learn to involve local people in decision making; they are more likely to accept new ideas when they participate in decision making.
—Be able to use a variety of methods in teaching. If funds are low, train volunteer farmers in teaching methods to multiply the total teaching effort.
—Develop an understanding of improved tropical agricultural practices including soil conservation.
—Have an understanding of the geography and the history in the country.

(Continued on page 69)


Willard Wolf

John L. Steva received his M.S. degree in agricultural education from The Ohio State University in March, 1968. The study upon which this article is based was directed by Dr. Willard Wolf, Professor of Agricultural Education. Mr. Steva was appointed in June 1968 as an agriculturalist by the United Church Board for World Ministries. Following a five-month orientation period in Stony Point, New York, and six months of language study in Costa Rica, Mr. Steva, his wife, and their three teenage children will be in Honduras, Central America, for five years under the sponsorship of the United Church of Christ.


John L. Steva

Meeting Special Needs of Students Through Vocational-Centered Laboratory learning

ROBERT W. WALKER, Teacher Education
University of Illinois


Robert W. Walker

Future accomplishment is based upon past success. Most people will accept this statement, yet many schools continue to permit students to enter and remain in programs where they are destined to have a series of unsuccessful experiences. For these students the school and the school program is frequently an ordeal that must be accepted if they are good students or rebelled against if they are not. Unfortunately, the plight of the student may not come to the attention of the school until he is identified as a slow learner, an underachiever, or a potential dropout. How could any student who is not involved in a program to meet his needs ever hope to be a rapid learner, a high achiever, or a happy student?

A Look at the Problem

The superintendent of the Warsaw (Illinois) Community Schools and the teacher of agricultural occupations in the school became concerned about the needs of some students who were entering the agricultural occupations curriculum. The students were benefiting to some extent from the instructional program, but they needed special attention if their needs were to be met. These students lacked skills in reading, writing, and arithmetic. Their attitude toward school was poor. Something needed to be done to help these students with special needs.

A Cooperative Effort to Solve the Problem

A request for assistance to the Division of Agricultural Education, University of Illinois, lead to the funding of an experimental project by the Illinois Research Coordinating Unit. The project is a cooperative venture between the Warsaw schools and the University of Illinois. The project is designed to develop, implement, and evaluate an experimental program specifically to meet the needs of slow learners, underachievers, and potential dropouts —students who have dropped out of the normal educational stream because they lack competencies in certain basic skills. The main objective of the program is to change the attitude of the student toward school and learning so that they want to learn and achieve.

The responsibilities of the Warsaw Community schools for the project include: the identification of boys with an interest in applied biological science and agriculture who are slow learners, underachievers, or potential dropouts; the selection of boys for the program; the development of a land laboratory that provides an educational environment comparable with the interests of slow learners and underachievers; and the implementation of a course of study designed to focus on applied biological science and agriculture.

The responsibilities of the University of Illinois for the project include: consultant to the Warsaw schools for the development of the agriculture-oriented vocational facility; the development of the educational program, instructional materials, and teaching plans; and the evaluation of the program.

Implementing the Project

Twelve boys were selected to participate in the program in 1967-68. The project was named "The New Opportunity Program." It was anticipated that without a name the class would be labeled by students and faculty members. With the use of Walker's Argicultural Interest Inventory, interest in animals, plants, machanics, and outdoor activities was determined to be present for all boys. All of the boys were identified by the guidance counselor as underachievers. Many of the boys had a history of poor attendance. In general, their attitude toward the school and their teachers was poor.

An attractive four-room rural school building located on one acre of ground which is next to a 14-acre woodlot was chosen to serve as the land laboratory. Two of the four rooms are in the basement. The building is located approximately four miles from the high school near the Mississippi River. The woodlot is on high ground permitting a spectacular view of the valley.

Three staff members are involved in the project part-time: the director of the project who is an agricultural occupations teacher at Warsaw High School, a second agricultural occupations teacher, and an English teacher. In addition, the guidance counselor and a reading specialist assist as a part of their regular duties.

The Curriculum

Instruction is offered in the following areas:

—Applied biological science and agriculture: animal science, horticulture, basic mechanics, forestry and conservation, recreation, and FFA.

—Mathematics and finance control: computational skills and problem solving.

—Communication: listening, speaking, writing, reading, and human relations.

—Physical education.

Applied biological science and agriculture are taught at the land laboratory by the teachers of agricultural occupations for three hours each day. Transportation to the laboratory is by bus. Mathematics and finance control are also taught at the laboratory.

Communications is taught at the high school building for one hour each day by the English teacher. Her former experience in working with youngsters with special needs in Philadelphia, Pennsylvania, enables her to acquire the respect and admiration of each boy


Boys enrolled in the program prepare to incubate eggs as a part of the instructional program conducted at the land laboratory.

through the instructional program. The English teacher skillfully weaves the activities of the boys into her instruction on communications. At the end of the school day, the students participate in the regular gym classes.

Purposeful Activity

Each of the boys has an opportunity to demonstrate that he can achieve and be successful. But first he must want to become involved in some learning activity that he enjoys and accepts as being something worth accomplishing. At the land laboratory he performs many worthwhile tasks for which he receives praise and encouragement. One of the major concerns of those conducting the project is to make it possible for the student to develop a backlog of successful experiences to cope with years of failure and frustration encountered in a traditional program. The key to adjustment is enjoyable, purposeful activity that facilitates accomplishment and the desire on the part of the student to continue additional activities.

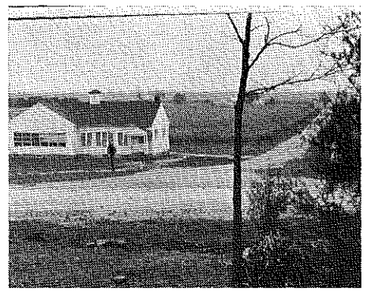
Learning activities center around the rabbits, chickens, brood sow and litter, and groundhogs kept in the basement of the school. Flowers are grown in the classroom. Bees are studied in an observation hive. Nature trails have been located in the woodlot and the students serve as guides for elementary children to explain interesting land forms and show off their plot of native prairie grass. Practical projects are constructed in the shop to learn basic skills.

There is time for fishing in the Mississippi. The fish are prepared and served in the land laboratory kitchen. All students enrolled are members of the FFA and participate in its leadership activities.

What Are the Results?

Now we come to the most important questions. How are the boys progressing? Are they learning rapidly, achieving at an acceptable rate and changing their attitude toward school, teachers, and learning activity?

They are and the changes taking place are very evident to those involved. First, the students come to school. Their attendance record is exceptional which indicates that they want to come to school. Second, they enjoy the program in which they are actively engaged.


The land laboratory facility and grounds used in the instructional program. Instruction in applied biological science and agriculture is taught at the land laboratory facility.

They understand the reason for performing each activity, and they work at their highest level of capability. Each student participates and feels that he is making a worthwhile contribution. He wants to cooperate. And third, he enjoys school. He likes his new teachers because they like him. He readily accepts and responds to the attention showered upon him.

All persons involved in the project are encouraged with the progress made by each student. Each student is anxious to continue into the second year of the two-year project; and if the behavioral changes continue to take place, there is no doubt that they will be ready to enter a vocational-technical program designed to develop further knowledges and skills that will qualify them to enter the world of work and become good citizens.

Preparing for Work as an Agricultural Missionary

(Continued from page 67)

—Recognize the importance in community development of maintaining clean air, water, and recreation areas.

—Be able to select crop varieties so that the people have an ample supply of good, nutritious food with concern also for yields, disease resistance and markets.

—Understand the importance of marketing, processing facilities, and storage.

—Know the agencies from whom one may receive help; for example, highly trained specialists for irrigation projects and building dams.

—Use caution when establishing cooperatives or credit societies. Be certain that managers are well-trained and honest so that members are capable of functioning properly.

—Be able to plan long range problem-oriented programs with the people. These are better than self-centered crash programs of a short duration.

—Be able to demonstrate the Christian way of life as a Christian ambassador exercising patience, humility, perseverance, conviction, and a sense of humor.

SOME RECOMMENDATIONS

Individuals preparing for agricultural mission service should understand and, if possible, experience methods of good teaching by working with high school and lay people in the adoption of approved practices. The potential agricultural missionary should have the ability and understanding to develop a program in community development through the procedures similar to those used by the agricultural extension service.

Prospective missionaries should learn of other agencies that could provide help in conducting a local program. A prospective missionary should contact people from the country where he will serve who are now on furlough in this country. He should learn from books about the country, its people, and climate.

The potential missionary should have his heart and mind set for mission service, not for glamor. He and his family should have examined and arrived at a family commitment for the work. They should also keep a very close affiliation with the organization that sends them. They should enter the service with serious prayerful thought.

Vocational Agriculture Helps Meet the Needs of Homeless Boys

GUY W. FINSTAD, Teacher of Agriculture
Cal Farley's Boys Ranch, Texas


Guy W. Finstad

When Cal Farley began his home for homeless boys twenty-nine years ago, agriculture was not the same as it is today. As the field of agriculture has changed, Cal Farley's Boys Ranch has grown and expanded. It began with half a dozen boys and 100 acres of land; now there are 350 boys and over 4,000 acres of land. Agriculture has become an important part of the program. Not only does it provide a working-learning situation for the boys, it provides food for the table. These boys learn where the food on the table comes from and what has to be done to get it there.

Learning by Working

They have had the opportunity to start from the beginning as they have recently cleared the mesquite and sage brush from the sandy hillsides, leveled the area, and worked the soil into a suitable condition for planting. Irrigation wells have been dug and they are learning the importance of water and fertilizer at the appropriate time. Grain sorghum is the main crop. There are also 70 acres of alfalfa and 35 acres of Bermuda grass.

All of the feed the boys are able to raise is fed to the livestock. It takes all they raise and more to maintain a herd of 55 Holstein dairy animals, 350 beef cattle, 400 swine, 700 broilers, and 60 horses.

The beef is slaughtered in our slaughter house by the boys. The fresh pork and broilers are also butchered here, but the cured pork is sent to town for processing. The boys also cut the meat and cook it for consumption in the dining hall, which serves an average of 1,200 meals each day. To keep the dining hall supplied, it takes 100 gallons of milk per day, three beef animals per week, and 40 hogs per month.

With newly acquired land we hope to develop a program of raising vegetables and put in a cannery. A limited amount of vegetables was planted on an experimental basis this spring.

The boys grind and mix all of the feed for the livestock. There are fifteen different rations. Over 100,000 pounds of grain sorghum are used in these rations each month.

A Job for Each Boy

Each boy has a job in helping to maintain the successful operation of the home and farm. Each is assigned a specific job for which he is responsible. As the size and ability of the boy increases, so does the job. The boys are given an opportunity to change jobs frequently thereby enabling them to learn a variety of jobs. Each boy receives a small salary for his work and has a bank account. He purchases his own clothing, school supplies, and personal needs.

Boys from Many States

The boys living at Cal Farley's Boys Ranch come from broken homes across the United States. We have boys from 37 different states. Most of them have lived in cities and have not had the opportunity to experience the joys and discomforts of farm life. They have been on the streets with nothing to do but now they never have to try to find something to do as there is always plenty of activity.

There is time for recreation also. There is always a baseball game, horseback riding, swimming, fishing, and other activities for the boys to enjoy. However, the boys learn there is enjoyment in accomplishment and they


These boys are the proud owners of their first project animal. Each boy will feed and care for his animal until it is ready for a livestock show or market.

are willing to work hard to receive recognition and praise.

The boys particularly enjoy their project animals. They may buy a calf or pigs with a loan from the bank. For many of them this is the first opportunity they have had to own anything of value. They are very proud of these animals and look forward to the competition in local and statewide livestock shows.

Vocational Agriculture Program

Training in the vocational agriculture shop is another phase of the program that has proven valuable to the boys in getting a job after graduation from high school. They are taught welding, woodwork, concrete, and mechanics. All the upkeep and repair on the farm machinery is done in the shop.

The FFA program is another phase of the program that creates a lot of enthusiasm and interest among the boys. The competition among the boys to be a member of a judging team is very keen. Through this training a boy receives instruction in leadership, citizenship, and cooperation that is very important in teaching him to become a good citizen.

Boys Ranch has its own twelve-grade state school system. Vocational agriculture is one of many courses offered. The boys receive the same type training in the classroom as they would in any school in the nation. But they have the advantage of their home being a supervised laboratory where the opportunities for learning are endless.

The purpose in providing a home for boys who have no home is not only to feed, clothe, and care for them, but to help them prepare for the future.

Greenhouse and Nursery Program for the Mentally Retarded

EDWARD ORTIZ, Supervisor Greenhouse Program
Vocational Training Center and Workshop
Hempstead, New York


Edward Ortiz

In 1963 the Vocational Training Center and Sheltered Workshop of the Nassau County (New York) Chapter of the Association for the Help of Retarded Children initiated the Greenhouse and Nursery Program as an additional vocational training area.

The Program

The grounds of the Educational Center in Brookville, Long Island, consists of approximately two acres of land and a three-hundred-foot greenhouse. We have established a vegetable garden and nursery, built a lath house, and repaired cold frames. Our tropical room contains orchids. In the fall we have Indian corn and pumpkins and in the winter we make Christmas wreaths. We grow and sell annuals, geraniums, begonias, coleus, and several varieties of house plants.

Landscaping is also part of the program involving raking, cutting lawns, and maintaining the grounds of a large estate which houses a nursery school and administration building.

Persons Served

Training the mentally retarded adult requires repetition of instruction, careful distribution of responsibility dependent on the client's ability to carry out his assignment, and constant and patient supervision.

Clients are taught safety procedures of gardening tools and equipment including the lawn mower, planting procedures and methods, soil preparation, landscape and ground care routines, and proper care of plants and flowers. In addition they learn about temperature control, watering, weeding, potting, spraying, planting, sterilizing, propagation, seeding, and balling and burlaping.

The business-like aspect of the program provides the client with a realistic setting in which he can not only develop the required work skills but, at the same time, see the rewards of his work.

Customers purchase the flowers, plants, and wreaths. Visitors admire the exquisitely kept grounds and each client takes pride in his share of the work. Here is his daily job; here he is needed; here he accomplishes a task for which he receives not only monetary compensation but also the knowledge that he has contributed to his community and is an integral part of it.

For those who can sustain competitive jobs, selective placement efforts are made by contracting local commercial landscape companies, private estates, county agencies, and private florists. We have recently placed eight clients in jobs in the community and several other boys will soon be ready to face the demands of a competitive setting.

The employer for the past two years of the first client we placed in a competitive position wrote, "I am happy to say that his work has been most satisfactory and he has steadily progressed and improved . . . We are more than satisfied." The success this client encountered was a source of pride to the other clients and served as a motivating factor in their future vocational goals.


Clients putting finishing touch on shrub used in landscaping a new school.

Of course, some of our clients will remain in our sheltered environment because of the severity of their handicap. But, they will continue to be useful and productive citizens.

A Challenge

When I started my position with this Association five years ago, I knew I would be confronted with a great challenge—instructing the mentally retarded to perform efficiently. While it is true that much effort, trial and error, and planning and re-planning, went into this project, I learned much from the experience and more from my handicapped clients. From them I learned that our disabled population, just as with any other individual, take pride in accomplishment, desire success and work hard to achieve it, and are capable of taking their rightful place in our society secure in the knowledge that they are responsible, capable, and self-respecting participants.

Encouraging the Disadvantaged

PHILIP EDGECOMB, Teacher Education
University of Massachusetts


Philip L. Edgecomb

What are the best approaches to help disadvantaged youth attain suitable employment? How do we make education desirable for youth who drop out of school? The approaches may differ, but the need is real. Greater emphasis is needed to help these young people acquire the knowledge, skills, and attitudes for obtaining and holding productive jobs.

Some of these students have waited at the doors of crowded vocational education facilities hoping to be admitted. Others are integrated into regular vocational education programs. Many of these youth require special programs in order to overcome their handicaps. Disadvantaged youth have a high risk potential for success when they enter school. Unfortunately, many of them continue with the high risk potential when they enter the world of work. Social, economic and cultural differences have contributed to their classification as students with special needs. Perhaps they should be classified as youth with un-met needs.

SELECTION OF STUDENTS

Schools have accepted a selection system of differentiating between the high risk and the low risk potential of students. Success potential has been thought to be based on intellectual ability. Research has shown, however, that many of our high risk students are not utilizing their intellectual ability. They lack the cultural advantages and attitudes desired in middle-class schools. Studies have shown that students achieve less when little is expected of them, and that achievement increases when teacher expectations increase. The challenge of succeeding with the high risk students of the early 1900's helped vocational education achieve a position of prestige in our society today.

We are sometimes questioned concerning our desire to accept the challenge of educating students with special needs. When vocational education facilities become overcrowded to the point where we have to reject some potential students, do we reject the students with a high or low potential for success in school? Do we tell the more gifted or the more disadvantaged that we are sorry that we do not have more room? When counseling students, do we encourage disadvantaged youth or their more success-oriented classmates to enroll in our courses? Are we afraid that our image will be tarnished if we enthusiastically emphasize education for the disadvantaged? Honest answers to these questions may provide some understanding of why it has become necessary to establish special programs for disadvantaged youth.

ADVISORY COUNCIL RECOMMENDATIONS

The Advisory Council on Vocational Education underscored the needs of the disadvantaged in their 1968 report. The report seems to indicate that the needs of many disadvantaged youth can be provided in regular vocational education programs. The Advisory Council recognized also that significant contributions to the education of the disadvantaged will require special programs.

Two of the Council's twenty-six recommendations pertain to special programs for the disadvantaged. They recommended that funds and permanent authority be provided to develop and operate expanded vocational education programs specifically designed for persons who have academic, social, or other handicaps. Also, the Council recommended that a Learning Corps be established on a pilot basis for economically disadvantaged youth, particularly inner-city youth. The Advisory Council emphasized that more financial support is needed for both regular and special programs in vocational education.

SPECIAL PROGRAMS IN VOCATIONAL AGRICULTURE

Vocational agriculture has made significant contributions to both graduates and drop-outs in veterans' training programs, youth farmer programs, adult farmer programs, and manpower development training programs. Now is the time to select successful practices and develop new practices that will interest potential drop-outs while they are in school.

Many vocational agriculture programs accept new students on the basis of the student's interest in agriculture. This has been a successful practice in the past. However, this practice assumes that every student has a sincere interest in some vocational area, and interest at this age may be based on previous environmental experiences. A verbal presentation of these opportunities to an eighth-grade class may not be enough.

The practice of career orientation classes that have been utilized successfully in some schools should be extended to students who do not enroll in a separate class in vocational agriculture. Agricultural experiences could be integrated into eighth and ninth grade industrial arts courses in some schools. Orientation classes conducted cooperatively by a number of vocational areas might provide for the needs in other schools.

Cooperative education programs can provide the reality of the world of work and basic educational needs for some of our youth. Some students may profit more from this experience than they would in a completely school-oriented situation.

School laboratory programs provide unlimited opportunities for providing sound educational experiences for the disadvantaged. Some students may not have gained enough proficiency for cooperative placement programs or regular supervised occupational experience programs. Placement programs conducted on school facilities can help bridge the gap between regular school experiences and employment experiences. One school has envisioned a public golf course that would be developed, maintained, and operated by vocational agriculture students. Development and management of camping facilities might be another possibility in addition to the many animal and laboratory programs that we have had in the past. Projects at public institutions other than schools have many possibilities. There are many opportunities for disadvantaged youth in regular or special vocational agriculture programs.

Shared-time programs offer opportunities for vocational agriculture departments that are located in separate vocational school facilities. Flexible scheduling provides opportunities for nonvocational students to be bused to vocational school facilities for specialized courses in flower arranging, lawn maintenance, or laboratory animal care.

NEW PROGRAMS

Vocational agriculture has provided students with a wide range of opportunities in the past. Enthusiastic support of new programs and extensions of present programs can provide interesting and valuable experiences for the disadvantaged and others in our school systems. Provision should be made for integrating the disadvantaged when possible, but we should also provide special programs for those who can not or will not profit from regular programs. Flexibility in staffing, scheduling, and student options will help the teacher of agriculture to increase his contributions to the public school system.

BOOK REVIEWS

CORRECTIVE READING by Miles V. Zintz. Dubuque, Iowa: Wm. C. Brown Co., 1966. 380 pp. $6.50.

The author, who is Professor of Education at the University of New Mexico, defines corrective reading as "remedial reading practices applied by the regular classroom teacher within the framework of the daily instruction . . ."

Agricultural education in the high schools has a commendable record for meeting the needs of pupils who have special needs. Agricultural teachers will find this book provides valuable information regarding the way in which pupils who have reading problems may be identified, means for analyzing the reading problems, and ideas for helping each pupil overcome his or her problem.

While the book is directed toward the elementary school teacher, most teachers of agriculture will recognize that they face many of the same problems in their classes. Any teacher who is seriously interested in meeting the special reading needs of individual pupils will find parts of this book useful. It provides practical ideas for a pupil-centered approach to both improved classroom teaching techniques and a school-wide program for pupils with special reading needs.

Gerald R. Fuller
University of Illinois

PLANNING MACHINERY PROTECTION by American Association for Agricultural Engineering and Vocational Agriculture. Athens, Georgia: Agricultural Engineering Center, 1968. 40 pp. $1.40.

This is a revision of an earlier publication entitled "Planning a Machinery Storage Layout." This new title is more representative of the content of the bulletin. *Planning Machinery Protection* is well illustrated with pictures, charts, tables, and drawings which is typical of the work of the American Association for Agricultural Engineering and Vocational Agriculture.

This text would be ideal as a reference in high school, area vocational, technical, or adult education classes in agriculture. It could be used either in a course in machinery management or a course in agricultural business management.

Chapter titles are: What Protective Measures Accomplish; What Type of Machinery Storage to Build; Where to Locate the Machinery Storage; How to Determine Space Requirements for Equipment; How to Determine Building Size; Where to Locate Entrances; and What Electrical Installations to Make.

Curtis R. Weston
University of Missouri

A GUIDE TO FLOWER ARRANGING IN TEN EASY LESSONS by Phyllis G. Shields. Newton Centre, Mass.: The Charles T. Branford Co., 1967. 117 pp. $4.75

A refreshing addition to the reference library of a garden club member is *A Guide to Flower Arranging in Ten Easy Lessons*. The author of this book is a widely known blue-ribbon winner in state and international flower shows as well as a national accredited life show judge.

The author, in ten lessons, guides the novice in floral arranging through the basic principles of space art governing good design. In simple language Mrs. Shields describes the basic principles of design and color harmony, the proper selection and hardening of plant material, the choosing of suitable containers, and the matching of the theme to the occasion and decor of the room.

After each lesson there is a listing of definitions which the student can enter into his permanent file reference and an assignment for the student who wishes to delve more seriously into the techniques of flower arranging.

Photographs through the book illustrate the various styles of arranging and the principles employed in their creation. This is an excellent book for any school library in which floral arranging for the home is included in the curriculum.

Mrs. Alice Dries
Danville Junior College
(Illinois)

Guidelines for Developing Vocational Agriculture Programs for Youth with Special Needs

JAMES B. HAMILTON, Teacher Education
University of Arizona

We often associate youth with special needs with the large metropolitan areas, the inner-city, with specific depressed areas of the nation, or with various cultural segments of the population. It is seldom that we in agricultural education consider youth with special needs to be an important consideration for the conduct of programs in vocational agriculture.

Rural Youth

There are, however, substantial numbers of youth with special needs in rural areas. In the non-metropolitan areas of Ohio one of every six boys in the ninth grade were identified as youth with special needs. This amounts to over 5,000 rural, ninth-grade youth with special needs in one state alone.

Serving the educational needs of rural youth with special needs is a problem of considerable magnitude. While the responsibility for meeting the educational needs of these students does not automatically fall to vocational agriculture, vocational agriculture must assume its share of this responsibility by providing programs for those who desire and can profit from instruction in agriculture. It is our duty to develop vocational agriculture programs which are designed to prepare these students for employment in agriculture where there is a need and where there is student interest and ability commensurate with the occupation.

Characteristics of Students

Recommendations concerning vocational education programs to serve youth with special needs must take into consideration the characteristics and background of the students to be served. When compared with other ninth-grade students, those ninth-grade students identified as youth with special needs were found to have the following characteristics:

—they were nearly a year older
—they were from larger families
—their parents had completed fewer years of school
—their parents' level of occupation was lower
—they were more likely to be living with only one parent
—the head of their household was frequently not working
—their occupational and educational aspirations were much lower than other students.

When compared with other ninth-grade students, the ninth-grade students identified as youth with special needs were found to have the following educational experiences:

—their reading level was two grades lower
—their intelligence quotient was lower
—their grades averaged one grade lower
—they were absent from school twice as much
—they participated in fewer school activities
—they were usually enrolled in general or vocational curriculums.

Suggested Guidelines

The following guidelines are suggested for developing and conducting vocational agriculture programs for youth with special needs.

"Identify the potential students early —before they enter high school. If the program is to be effective it must reach the youth with special needs before they drop out of school. The largest percentages of high school drop-outs occur at the ninth and tenth grade levels; therefore, if vocational agriculture is to prepare these students for employment we must be prepared to begin no later than when they enroll in high school. Youth with special needs can be identified early in school with a fair degree of accuracy. Although several sets of criteria have been developed for the identification of the potential dropout, teachers, guidance counselors, and principals know best which students will not be likely to achieve success in the regular school program.


James B. Hamilton

This article is based on Dr. Hamilton's Ph.D. dissertation, "Youth with Special Needs in Non-Metropolitan Ohio High Schools," completed at The Ohio State University in 1967.

Provide vocational guidance and counseling in the junior high school years to assist youth with special needs in making realistic educational and occupational choices. Prevocational experiences of an exploratory nature directed toward the discovery and development of interest and abilities should play a vital role in such a guidance program.

The vocational program should be designed especially for the type of students to be enrolled. Traditionally programs of vocational agriculture have been designed for the average or above average student who has developed satisfactory communicative, computational, and social skills. Youth with special needs show a lack in these characteristics upon which we ordinarily expect to build in the traditional vocational agriculture program.

Direct the program toward preparation for existing agricultural occupations which are realistic in the light of the student's potential. For some of these students the vocational agriculture program may serve as the catalyst for renewed interest and motivation for greater educational attainment. For most youth with special needs, the vocational program must provide the vital link between formal education and full-time employment. There are many opportunities for employment in agriculture in occupations which do not require high levels of technical knowledge.

Gear academic courses to the interest and ability level of the student enrolled. School administrators indicated that this might best be accomplished through integration of courses such as English, mathematics, and social studies within the vocational program. That is, teach each of these subjects in relation to and as a part of the students' preparation for earning a living. Operation and maintenance manuals, parts lists, catalogs and tax returns could very well find use as teaching materials in these courses.

Incorporate work for wages as an integral part of the vocational agriculture program. The supervised occupational experience program has long been one of the most valuable aspects of vocational education, for it provides students the opportunity for reinforcement of learning by putting into practice what has been taught in the classroom. Many youth with special needs are from homes without a father or without a working father. For those students whose parents are employed, parents have relatively low occupational status. When we consider these characteristics of youth with special needs, then opportunities to earn money, opportunities for growth in responsibility, and opportunities for building self confidence and esteem are also important aspects which should be provided through the occupational experience program.

Employ teachers who have special training or interest and ability to work with youth with special needs. As in any educational program, the success of the program is dependent to a greater extent upon the individual teacher than upon any other single factor. The willingness, the desire, and an understanding of the unique problems of working with the underachiever will be essential on the part of the successful teacher of youth with special needs. He must be prepared to work with the less able student and with the socio-economically deprived.

Develop special teaching materials for use in vocational agriculture classes for youth with special needs. Teaching materials and learning activities should be planned which are consistent with the lower reading levels, abilities, and educational and occupational aspirations of these students. Teaching by demonstration and learning by doing should characterize much of this instruction.

News of the Profession

Three teachers of vocational agriculture have been named National FFA Fellows for 1968-69. The fellowships for the FFA Executive Training Program are provided by Massey-Ferguson, Inc. to make it possible for prospective leaders to prepare for positions as state executive secretary and other leadership positions in the FFA. The program includes one year of graduate study in agricultural education at the University of Maryland plus part-time participation in the activities of the National FFA Office in Washington, D.C. The work of the FFA Fellows in the National FFA Office includes becoming acquainted with the responsibilities of that Office, the *National Future Farmer Magazine,* the FFA Supply Service, and other facets of vocational education in agriculture in the U. S. Office of Education.


Austin D. Bynum

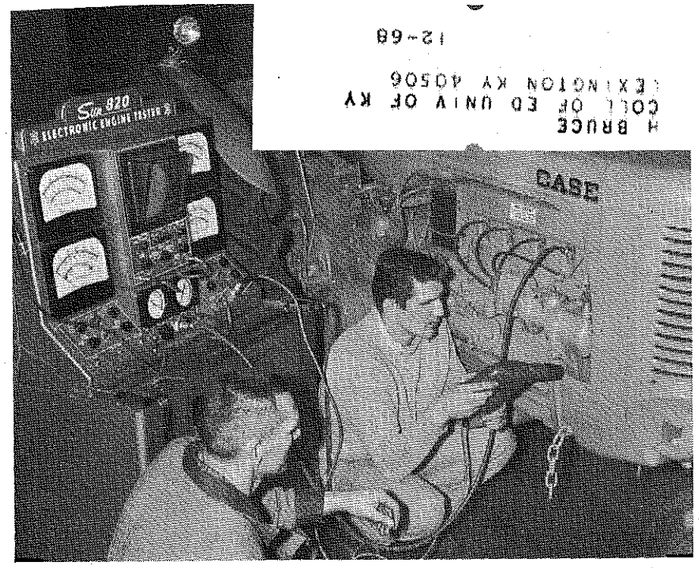
Austin D. Bynum is a 1964 graduate of Oklahoma State University. He has taught agriculture at Arnett and Beaver, Oklahoma. Mr. Bynum received the American Farmer Degree while in college. Eleven of his students have received the State Farmer Degree. Mr. Bynum will work toward a Master of Science degree in agricultural education.


Lewis M. Brubaker

Lewis M. Brubaker received his bachelor's degree in agricultural education from Virginia Polytechnic Institute. He taught vocational agriculture in Virginia for several years before moving to Florida. For the past five years he has taught agriculture in Lake County, Florida. Mr. Brubaker will work toward the Master of Science degree.


Harry K. Thornton

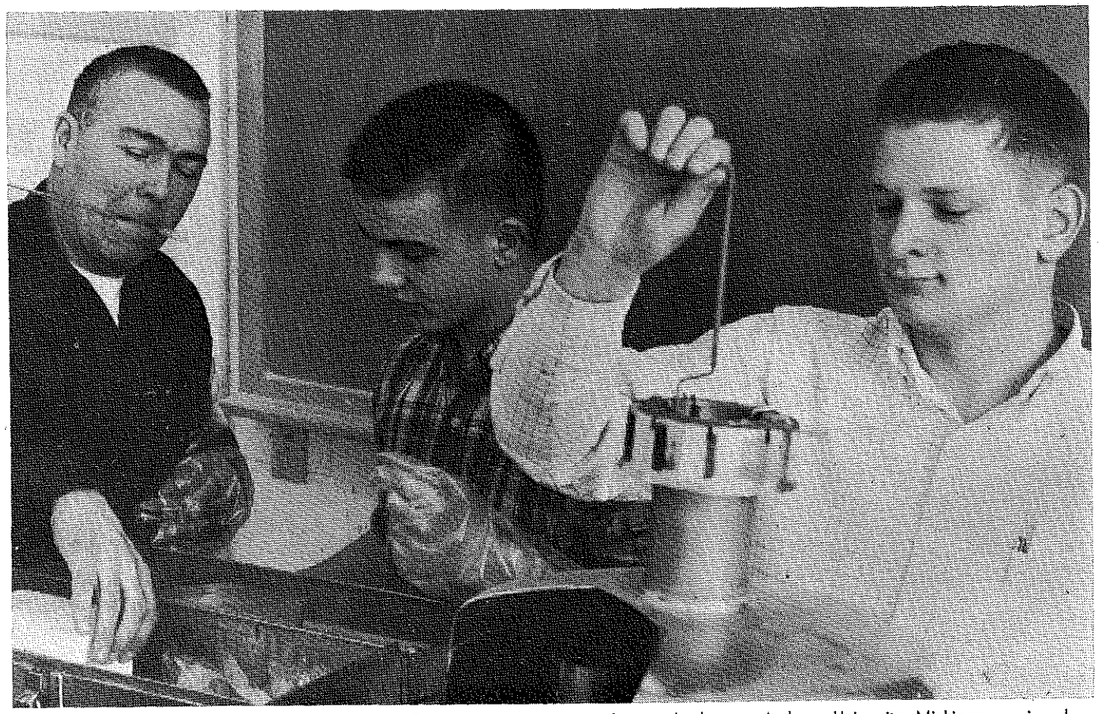
Harry K. Thornton holds B.S. and M. Ed. degrees from Sam Houston State Teachers College, Texas. He has taught agriculture at Gustine, Texas, since 1963. He was a member of the board of directors and district president of the Texas Vocational Agriculture Teachers Association. Mr. Thornton will be enrolled in the Advanced Graduate Specialist Program.



Students in a Manpower Development and Training Act program at Bay City, Michigan, learn complete overhaul and trouble shooting on tractor engines. Jack Monroe (right) is making a timing check under the direction of instructor Clayton Brice. (Photo by Edwin St. John, Michigan)

Stories in Pictures

GILBERT S. GUILER
Ohio State University

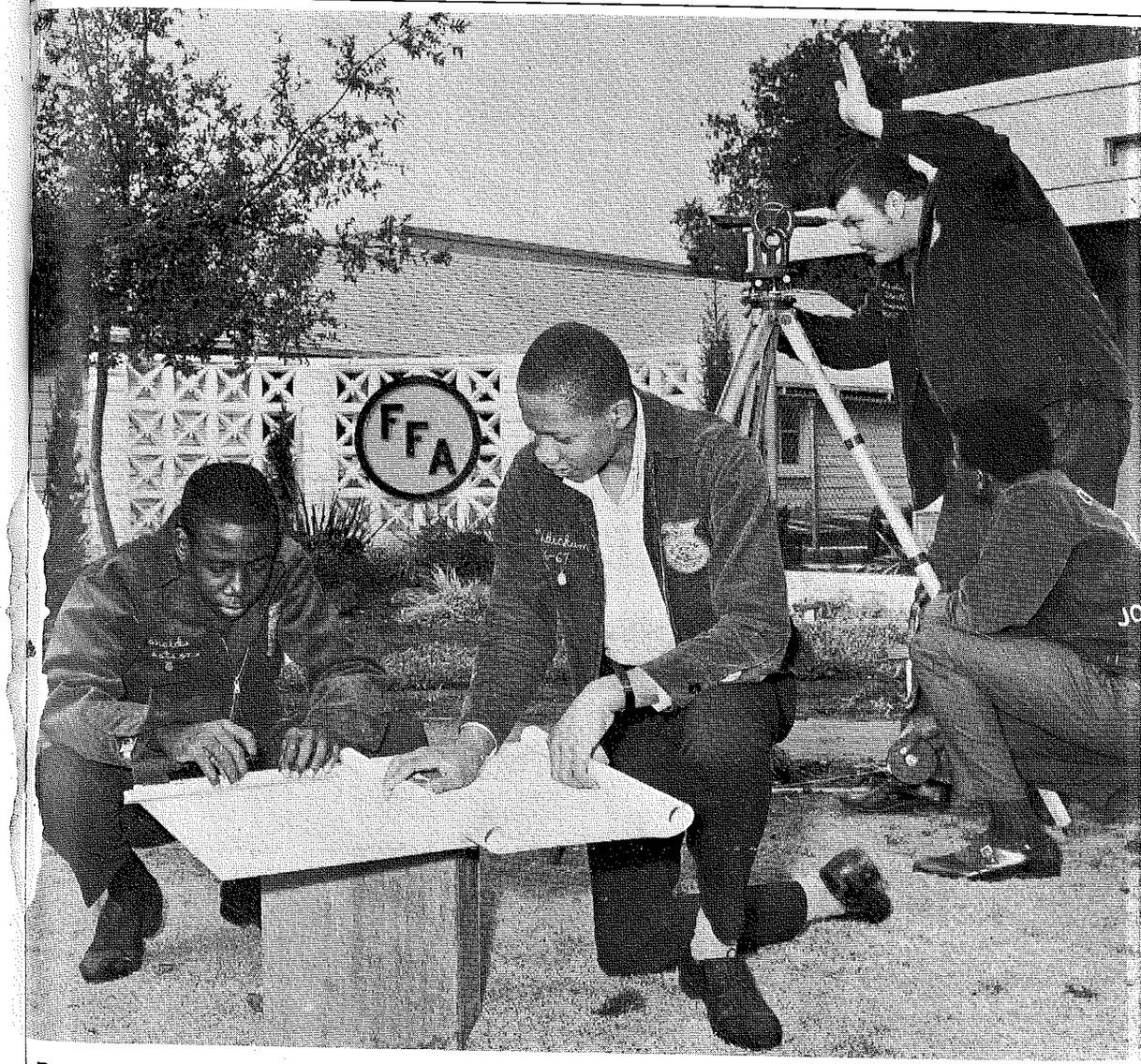


Students enrolled in a Manpower Development and Training Act program in dairy technology at Andrews University, Michigan, receive classroom instruction in artificial insemination. (Photo by Neil O. Snepp, Michigan State University)

AGRICULTURAL EDUCATION

Agricultural Education

Volume 41 October, 1968 Number 4



Featuring —

AGRICULTURAL EDUCATION IN CITY SCHOOLS