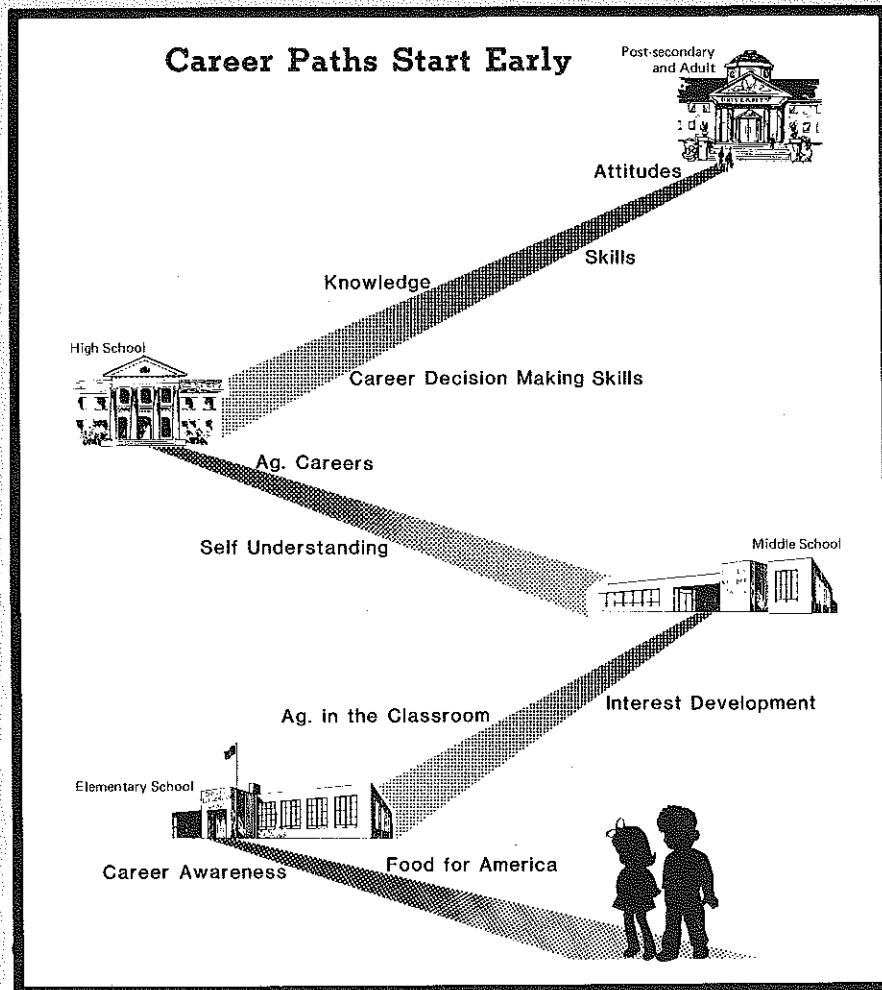


The

# Agricultural Education

October, 1985  
Volume 58  
Number 4

Magazine



**THEME: Elementary and  
Pre-Vocational Programs**

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DR. FLOYD G. MCCORMICK  
UNIV. OF ARIZ.  
6933 PASSED SAN ANDRES  
TUCSON AZ 85710



## Helping Plot Our Future



By LARRY E. MILLER, EDITOR  
(Dr. Miller is a Professor in the Department of Agricultural Education at The Ohio State University.)

Those who were professionally active during, or who have read extensively about, the Career Education movement have sensed the excitement which prevailed when the prospect of students becoming aware of and exploring agriculture before enrollment became a possibility. Professionals then, as now, noted that when such programs were lacking many students used the introductory courses in vocational agriculture for exploratory purposes.

### The Problem

The declining enrollment in vocational agriculture is a concern of many agricultural educators as is noted by several authors in this issue. The factors causing the decline are many with the overall decline in total student numbers surely being a major contributor. In agricultural education, we want to maintain our enrollments but at the same time do so ethically. We want students who have a legitimate career objective in agriculture. Having students dumped into the program who do not fit in elsewhere or recruiting students who do not have career goals in the field through high pressure tactics does not fulfill our measure of ethics.

The Career Education program has been followed by Agriculture in the Classroom. While the objectives of the two programs are generally dissimilar, the benefits of each to vocational agriculture can be great. We need to actively seek out opportunities to participate in the latter program in elementary schools, middle schools or junior high schools. The program is not a part of vocational agriculture, not funded by vocational legislation, and not a part of the job description of most vocational agriculture instructors. Extra efforts by teachers can produce many dividends for the program, however, whether the effort is expended on Food for America or Agriculture in the Classroom.

### The Benefits

Students who are aware of and have explored careers in agriculture are more likely to make informed course choices. When they select vocational agriculture, they are more likely to remain.

The profession has been criticized by those examining our enrollment trends when they observe the high attrition rate occurring prior to the junior year in high school. Students who have explored agriculture are less likely to fall among those dropping out of the program. Those that enroll are more likely to remain and while in the program be full participants in SOEP's and FFA because of their high levels of interest in the field. Further, one would speculate that they would be less likely to create management problems, be more likely to support the program to peers, and more likely to pursue careers in agriculture. The latter item is one of the criteria used in evaluating the overall effectiveness of our vocational agriculture programs.

### The Action Steps

Authors in this issue point out the many personal and professional benefits they have derived, the benefits to their current vocational agriculture students, the benefits to the field of agriculture, and the benefits to the elementary and pre-vocational students participating. While these benefits are true and plausible, we need to realize that such programs can be crucial to our future as a profession. Yes, we need to think beyond normal job descriptions. Our mission is to educate about agriculture and we need to actively seek out the opportunities to fulfill that mission.

The demographics related to agriculture and rural America are changing. Vocational agriculture is offered in a lot of urban areas. We need to fully consider all of the ramifications that awareness and exploratory programs in agriculture can have for our future in light of these changes.

Supervisors, teacher educators and local teachers need to aggressively take a positive stance on the subject. We need to work closely within each of these groups with our colleagues in early and middle childhood education to cooperatively facilitate the implementation of such programs. The same can be said for policy makers and administrators.

We need to lend our support to the agricultural industry which is encouraging the efforts. Our participation can provide an inlet into the school system and promote the successful realization of the goals and objectives of any of the programs.

### The Cover

Decisions made about one's career are best made with full knowledge. Students must assess their interests, skills and aptitudes. Elementary and pre-vocational programs in agricultural education can help students obtain an assessment of what future agriculture holds for them.

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### ARTICLE SUBMISSION

Articles and photographs should be submitted to the Editor, Regional Editors, or Special Editors. Items to be considered for publication should be submitted at least 90 days prior to the date of issue intended for the article or photograph. All submissions will be acknowledged by the Editor. No items are returned unless accompanied by a written request. Articles should be typed, double-spaced, and include information about the author(s). Two copies of articles should be submitted. A recent photograph should accompany an article unless one is on file with the Editor.

### PUBLICATION INFORMATION

THE AGRICULTURAL EDUCATION MAGAZINE (ISSN 0002-144x) is the monthly professional journal of agricultural education. The journal is published by THE AGRICULTURAL EDUCATION MAGAZINE, INC., and is printed at M & D Printing Co., 616 Second Street, Henry, IL 61537.

Second class postage paid at Mechanicsville, VA 23111; additional entry at Henry, IL 61537.

POSTMASTERS: Send Form 3579 to Glenn A. Anderson, Business Manager, 1803 Rural Point Road, Mechanicsville, Virginia 23111.

### SUBSCRIPTIONS

Subscription prices for THE AGRICULTURAL EDUCATION MAGAZINE are \$7 per year. Foreign subscriptions are \$10 (U.S. Currency) per year for surface mail, and \$20 (U.S. Currency) airmail (except Canada). Student subscriptions in groups (one address) are \$4 for eight issues. Single copies and back issues less than ten years old are available at \$1 each. All back issues are available on microfilm from Xerox University Microfilms, 300 North Zeeb Road, Ann Arbor, MI 48106. In submitting subscriptions, designate new or renewal and address including ZIP code. Send all subscriptions and requests for hardcopy back issues to the Business Manager: Glenn A. Anderson, Business Manager, 1803 Rural Point Road, Mechanicsville, VA 23111. Publication No. 07324677.

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## Elementary and Pre-Vocational Programs in Agriculture

Educational psychologists tell us that attitudes, values, and interests of children are formed at an early age, and that while this is a developmental process, much of it is completed by the end of middle school. This concept has important meaning to those of us in the agricultural education profession. In the early part of our history, many students came from agricultural backgrounds and thus developed interests and experiences in agriculture. However, as the demographics of our country have changed, fewer students have these opportunities. Therefore, if we are to continue to prepare enough people for agricultural careers and teach students about agriculture, it is important to introduce students to the field of agriculture early in their school career, with elementary and middle school learning activities and programs.

### The History

Teaching elementary and middle school students about agriculture is not a new concept. For example, Fox (1932) and Shively (1936) in the 1930's wrote about teaching agriculture to students in elementary school. More recently, Herr (1968) discussed an extensive program for elementary school students in Lancaster County, Pennsylvania and Wolfson (1970) described a comprehensive program for elementary and junior high school students in the Los Angeles public schools. Similar programs have been described in the literature by Peterson and Barduson (1973), Keenan (1970), Shepard (1970), and Swan and Donaldson (1970) to mention only a few.

Thus, agricultural educators have long believed that it is important to instill knowledge, attitudes, and skills about agriculture prior to high school enrollment and have conducted programs to accomplish these objectives. During the 1970's much more emphasis was given to career awareness, orientation, and exploratory programs primarily as a result of the career education movement initiated by Marland (1971).

### The Objectives

Elementary and pre-vocational programs serve important purposes. They help students explore their abilities, interests and aptitudes; become aware of careers; investigate career opportunities; develop their interests; learn how to work with others; and develop career decision making skills. In addition, students participate in "hands-on" experiences related to agriculture.

Activities vary from formal pre-vocational instructional programs for students in middle school to short term contacts with elementary school students through the Food for America Program. These activities are based on the premise that students will make better career decisions and wise choices of elective subjects if they are knowledgeable



By JIMMY G. CHEEK, THEME EDITOR

(Editor's Note: Dr. Cheek is a Professor in the Department of Agricultural and Extension Education, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, Florida 32611.)

about the areas from which they have the option of selecting.

### The Funding

In developing this theme for THE AGRICULTURAL EDUCATION MAGAZINE, state occupational program directors of agricultural education were contacted and asked questions regarding elementary and explanatory programs within their respective states. Forty-nine states responded to the survey. None of the states indicated having a formalized, funded, agricultural education program at the elementary level (K-6). However, four states indicated various kinds of involvement at the elementary level in addition to traditional activities conducted by vocational agricultural teachers such as the Food for America program. Eleven states indicated that they had formalized, funded, agricultural pre-vocational programs in grades 7 and 8. These states were: Florida, Wyoming, Nevada, New Mexico, Maryland, Rhode Island, Delaware, Texas, Alabama, Georgia, and Colorado. Three states; Wisconsin, Nebraska, and Illinois; were not formally recognized or funded.

For the 11 states that indicated that they had formal funded pre-vocational programs in grades 7 and 8, the following information was obtained. Program lengths varied from six weeks to one year. Eight states indicated that students are encouraged to participate in FFA and SOE at the pre-vocational level. Florida was the only state that had established certification standards for exploratory teachers. The pre-vocational courses were classified as vocational courses in six states. Four states; Florida, Georgia, Alabama, and Colorado; indicated that instructional materials have been specifically developed to support these programs.

### The Concept

In the early part of this century, Parsons (1909) reminded us that as a person selects a career, three processes are necessary. First, students must have self-understanding, they must understand and realistically appraise their abilities, interests, and aptitudes. Next, they must have

knowledge and understanding of occupations and of occupational opportunities. Finally, they must reason concerning the relationships between these two sets of information. Since Parsons conceptualized the career decision making process, the world has become more complex and occupations and occupational opportunities have multiplied greatly. Thus contemporary students need more help in self-understanding, occupational knowledge, and decision making.

This issue of THE AGRICULTURAL EDUCATION MAGAZINE is devoted to further describing agricultural education programs that are currently in existence to help accomplish career awareness and exploration as well as an article that provides a philosophical framework on which to further develop elementary and middle school programs. It also provides examples of what various people around the nation are doing to help students become more aware of the agricultural industry.

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## The Prologue to Vocational Agriculture

Vocational agriculture programs need a preliminary component. Elementary (grades K-5 or K-6) and middle schools (grades 6-8) must play a role in developing an understanding of today's agriculture, its role in the economy, and the job opportunities available in agriculture. Agricultural education in kindergarten through grade eight can provide the link necessary for a complete agricultural program. Students at the ninth or tenth grade level cannot be expected to know they want to enroll in vocational agriculture classes if they have not had the opportunity to learn what agriculture is and what it has to offer. If the primary objective of vocational agriculture is to prepare persons for jobs in agriculture, children must have the opportunity to become aware of, and explore the different aspects of agriculture before they are expected to develop specific job related skills.

The concept of agricultural education in the lower grades is not new. Davenport addressed an entire chapter in his 1914 book, EDUCATION FOR EFFICIENCY, to the role of agricultural education for elementary and middle schools. Through the years, the objectives for such programs have remained fairly constant. Let us take a look at these objectives for both agriculture in the elementary school and the middle school.

### Elementary Schools

The role of agricultural education at the elementary grade level should be one of awareness and orientation. Classroom activities in agriculture should be integrated into the existing subject areas in grades K-5 and should incorporate the following objectives:

1. Develop an awareness of, and an appreciation for the significance of agriculture, food, and food production.



By SUSAN F. EVERETT

(Editor's Note: Dr. Everett is an Assistant Professor in the Department of Occupational Education at North Carolina State University, Box 7801, Raleigh, North Carolina 27695-7801.)

2. Develop an awareness of the importance of agriculture to the world, nation, state, and local economies, and to the individual.

3. Develop an awareness of the types of jobs available in all phases of agriculture.

4. Develop an awareness of the environment in which agricultural jobs are performed.

5. Develop an awareness that different jobs in agriculture require workers with different talents, abilities, attitudes, characteristics, and educational and professional preparation.

6. Provide children with opportunities to develop a positive image of agriculture as a way of life and as a career.

7. Provide opportunities for children to have hands-on experiences, making them aware of the unique satisfactions in different agricultural related jobs.

8. Develop an awareness of the role of agriculture in meeting basic human nutritional, clothing and shelter needs required for everyday living.

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## The Prologue to Vocational Agriculture

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These objectives can be incorporated into several areas of study:

### SOCIAL STUDIES —

Population and food requirements  
How agriculture supplies basic human needs  
Economic importance of agriculture  
Effects of agricultural technology on society  
Comparison of rural and urban life styles

### HISTORY —

Agriculture's role in the history of the nation and the state  
Famous people in agriculture  
History of agricultural technology  
Politics in agriculture  
Changes in agriculture since the American Revolution  
History of transportation in relation to agriculture

### SCIENCE —

Study of plants and animals and their by products  
Conservation of natural resources  
Agricultural research

### MATHEMATICS —

Units of measurement such as acre, bushel, and board feet  
Measuring land  
Measuring crop production  
Weights and measures used in buying and selling agricultural products

### LANGUAGE ARTS —

Agricultural terms

### GEOGRAPHY —

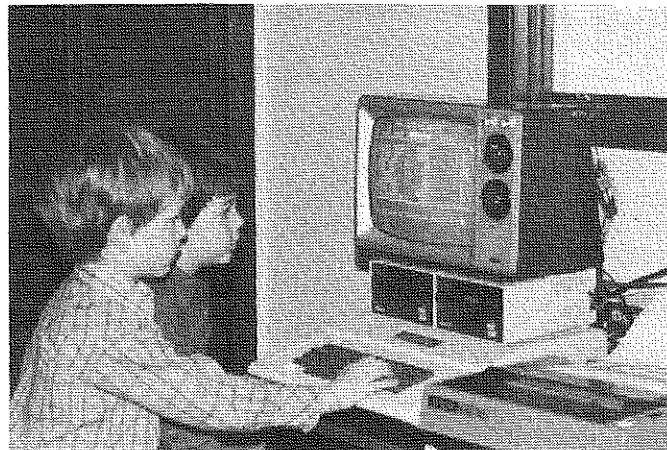
Relationships of climate, terrain and location to agricultural productivity  
Environmental and transportation requirements of agriculture  
World trade of agricultural products

### HEALTH —

Food processing  
Nutritional value and selection of food products

### Middle Schools

Classroom activities in agriculture for students at the middle school level should be exploratory in nature. A six



An awareness of agriculture can be created at an early age.

to nine week course in agriculture should be developed at this level, and included as part of an occupational exploration cluster. Similar objectives as stated for the elementary grades should be incorporated into the program, but developed more explicitly. Other objectives which should be included are:

1. Provide students with realistic and representative hands-on learning by doing, experiences in the eight U.S.O.E. agricultural clusters.
2. Develop an awareness of the economic factors affecting agriculture and agricultural jobs.
3. Develop an awareness of levels of employment in the working world of agriculture.
4. Develop an awareness of the types of job opportunities available in agriculture in the local community.
5. Provide opportunities for students to develop leadership abilities.

### Future Directions

Though the concept of teaching agriculture in the lower grades and the objectives for such programs are not new, the importance for such emphasis has taken on new meaning and has increasingly become more, not less, imperative. The need for, and the importance of instilling awareness of agriculture in the youth of our nation can be accounted for in the following facts.

Each year fewer people have direct involvement in production agriculture. Only three percent of the 235 million people in the United States live on farms. That means the vast majority of Americans grow up with little or no knowledge of where their food comes from or how it is produced.

Furthermore, 90 percent of the population has been non-farm for over 30 years. Yet, agriculture is considered the largest industry in the United States with nearly 70 million Americans or nearly one-third of the population dependent upon agriculture for their economic survival.



Natural curiosity about living, loveable animals can benefit awareness programs.

The Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 expanded the definition and emphasis of agriculture from solely production agriculture to also include agricultural supplies and services, agricultural mechanics, agricultural products, processing and marketing, horticulture, agricultural resources, forestry and other agricultural areas. However, most of our society still equates agriculture with farming. With the media coverage of farming today, no wonder vocational agriculture enrollments are dropping, which they have been since 1978.

The emphasis for the 1980's and beyond should not be solely one of career orientation as in the 1970's, but one of appreciation and cognizance of the impact of the agricultural industry on the economy and to the individual. What must we do to incorporate agriculture into the curriculum at the elementary and middle school level?

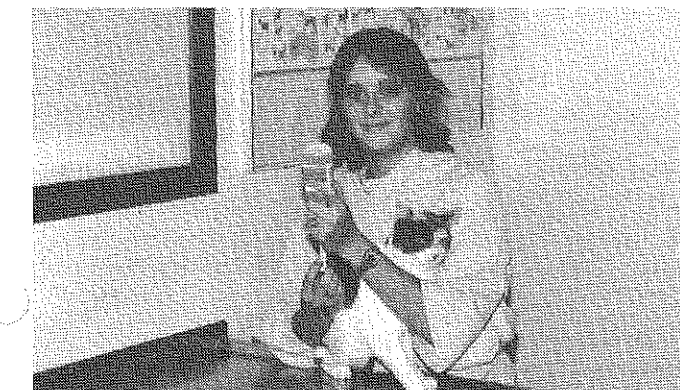
Ideally, we in agriculture would like elementary and middle school teachers to place a major emphasis of their curriculum on agriculture. Realistically, so would every other profession. There are always some concepts and materials that supposedly should be taught and integrated into the educational system. Finding the time and a place in the curriculum to incorporate additional material is a major concern of all teachers. Furthermore, teachers at the K-8 levels often lack understanding and knowledge about agriculture, so they are often hesitant to include agricultural activities or examples in their lessons. Davenport (1914) replied to this very same dilemma,

Even though the ideal cannot be attained, an honest attempt is well worthwhile, and if the teachers can be induced to combine, along with observation and record, the elements of usefulness and the human relation, then it will be well worth all its costs to stimulate as much as possible the teaching of agriculture in the grades of the public schools. (p. 144)

In other words, we need to at least attempt to encourage and assist teachers in grades K-8 to include agricultural content in the curriculum. Has an honest, forthright effort really been extended in the past?

### Using Food for America

What printed materials and other resources are available for these teachers to use? One often overlooked resource is the National FFA Foundation special project, Food for



Appealing to aesthetic values or the love of animal pets can foster the exploratory experiences of pre-vocational students.

America. The Food for America program is a service activity of the FFA to help explain to elementary teachers and their students about the production of food.

The objectives of Food for America need to be re-emphasized. They include:

1. To help elementary students understand how food is produced.
2. To develop an awareness that a wide variety of scientific, economic and mechanical resources are necessary to produce quality food at the least cost.
3. To develop appreciation for the activities and energy required to produce and process food.
4. To create a basic awareness of careers in the agriculture industry.
5. To assist elementary school teachers in an instructional area (agriculture) where he or she may have only limited knowledge.
6. To give FFA members an opportunity to practice communication skills.

A new Food for America program, including a presenter's kit and a grade 3-5 classroom kit, will be available in the fall of 1985.

In the past several years, additional materials on a statewide basis have been developed in response to a nationally supported effort, called "Agriculture in the Classroom." This program movement has similar objectives as the Food for America program, but the subject matter is more specific to each state's agricultural history and production.

There are many other sources of materials on agriculture for use in teaching elementary and middle school students. The Cooperative Extension Service, United States Department of Agriculture, and many agricultural commodity groups and associations publish brochures, classroom activities, posters and other materials either free of cost or at a minimum charge. Magazines, newspapers, seed catalogs and other readily accessible materials can be used to assist the teacher. Many computer programs are also being developed or exist on agricultural-related topics.

Who should be involved in the endeavor to promote agriculture in the K-8 grade curriculum? Vocational agriculture teachers, state supervisory department staffs and teacher educators should serve as coordinators and instigators of promoting agriculture in the lower grades. These individuals should also encourage and activate other

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## The Prologue to Vocational Agriculture

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groups and individuals including agricultural commodity groups, the Cooperative Extension Service, Soil Conservation Service, Farm Bureau, Forestry Service, Parks and Recreation Department, Agricultural lending institutions, farmers, agricultural businesses, agricultural agencies, FFA Alumni, individuals enrolled in adult classes, high school students, parents of vocational agriculture students, and any others that would be able and willing to support the cause.

### Role of the Teacher

What specific role should the high school vocational agriculture teachers, the agricultural teacher educators and the state supervisory staffs play in promoting agriculture at the elementary and middle school levels?

#### High School Vocational Agriculture Teachers

The high school vocational agriculture teacher should:

1. Recognize and respond to the need for developing an awareness and understanding of agriculture in grades K-8.
2. Contact teachers in the K-8 grade levels. Do not wait for them to contact you. Communicate with them to determine if and what they are teaching in relation to agriculture. Explain the importance of including classroom learning experiences on agriculture. Discuss how they could incorporate agricultural topics and examples into their history, math, geography, computer and other subject matter units. Knowledge of what is being done at these schools will prevent unnecessary duplication of the total agricultural program.
3. Assist K-8 grade teachers in collecting agricultural materials, identifying activities, potential resource people, and places to use or visit with their classes. Share any materials you may have that would be beneficial to teaching agriculture at this level.
4. Invite the classes from the lower grade levels to tour the high school agriculture classroom and laboratory(ies). Provide the opportunity for the children to participate in a hands-on, doing activity while there.
5. Participate in the FFA Food for America program. FFA sponsored mall exhibits, petting farms and kiddie barns are also good activities to use, but provisions should be made to include learning activities and career exhibits. In other words, provide some substance with these activities.
6. Allow high school students in agriculture, either as a class project or an FFA project, to develop learning activities and teaching materials for this age group, and to implement their plans, either in a classroom setting or on an individual basis. It could be something as simple as a bulletin board, nature walk, or a career display. Both the K-8 grade children and the high school students will learn from the experiences. If students plan a lesson, but have difficulty in getting to the elementary or middle school to teach it, consider video taping their presentations. Children like TV, and would still profit from the activity.
7. Provide teachers at the elementary and middle school levels the encouragement and assistance to improve their knowledge and skills of agriculture. This will help them feel more comfortable in discussing agricultural topics with

their students. Invite them along on a field trip, SOE visit, or FFA contest or activity.

#### Teacher Educators and State Supervisory Staff

Those individuals in agricultural education at the university and state level should:

1. Develop a list of materials available on agriculture for grades K-8 which are applicable to the state. Assist vocational agriculture teachers in securing these materials.
2. Develop an awareness and rationale in agriculture education students for incorporating agricultural information in grades K-8. Agricultural education students should be aware of the need for, and can support the cause of promoting agricultural education in the elementary and middle schools, whether they take a job in teaching, Extension, farming or agribusiness.
3. Provide examples in agricultural education pre-service classes indicating how specific activities can be incorporated into the local vocational agriculture program to promote agriculture in grades K-8.
4. Coordinate a summer program for elementary and secondary teachers and guidance counselors, on agriculture, providing them with a better understanding and appreciation of the people, the work, and the challenges involved in the production, processing, and marketing of food and fiber. Jim Durkee explained an excellent procedure for implementing this concept in an article in the May issue of THE AGRICULTURAL EDUCATION MAGAZINE. A five-week program, for five hours of credit is sponsored by the State Department of Agriculture, State Department of Education, agricultural organizations, farmers, ranchers and agribusiness persons for elementary and secondary teachers and guidance counselors. These organizations conduct the classes and provide the funds for tuition, field trips, and staff. The classroom material covers the livestock industry, crops, agricultural resources and people, through field trips, demonstrations and classroom presentations.
5. Encourage agricultural commodity groups, and other agricultural organizations to support the development and implementation of teaching materials for grades K-8.

Since agriculture seems to be so removed from our everyday lives, someone must do something to inform our nation's children about the components and individuals involved in the production of plants and animals for food and fiber, the provision of agricultural supplies and services, and the processing, marketing and distribution of agricultural products. We obviously cannot wait until students are in the senior high school to introduce them to agriculture. Vocational agriculture must have a prologue!

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## THEME

# Motivational Activities for Exploratory Agriculture

By JOHN R. ALTIZER

(Editor's Note: Mr. Altizer is a Vocational Agriculture Instructor at Turkey Creek Junior High School, Plant City, Florida 33566.)

### Agricultural Production

Another area that we explore is agricultural production. We show filmstrips concerning livestock, poultry, crops and fruit. Guest speakers are invited to come in and address the students. However, this does not seem to be enough to motivate the students. We are fortunate enough in our school to have a land laboratory. Our hands on experience in agricultural production is individual gardening.

Each student will be asked to make a garden marker. The marker is to be about eighteen inches tall and include the name of the student. Each student is given a plot of land to prepare for planting. After raking, weeding, and preparing the land, each student is given a container of seeds such a radish, mustard, turnip, or green beans.

The student will make a small furrow, using a hoe, and place the seeds into the furrow. The seeds are covered and watered. After the seeds germinate and get about four inches high, the students will apply a light band of fertilizer about three inches from the plants. The plants will be cared for as needed until they are harvested. The student may keep the vegetables. Students may take them home or sell them if they desire.

This activity creates much interest in farming and agricultural products. It gives the instructor many opportunities to discuss such problems as world hunger, insect

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Several years ago, a principal was observing my teaching and I thought I was well prepared. I had all my subject matter outlined and a good lecture prepared. After observing, the principal suggested that I do something other than lecture. I decided to try showing films, slides, and listening to a few tapes. These methods were all good, but there was something lacking. The students were always sitting passively and not being actively involved. Sometimes the students would daydream, become drowsy, create discipline problems, or do most anything other than reach the objective that I was trying to get accomplished.

I finally came to the conclusion that if students are going to learn, they must become actively involved. So I began to write lesson plans that involved hands on experience. I have been pleased with the results obtained. I am certainly no authority on motivational techniques but I would like to share some of the methods with you that I am using in the exploratory agriculture education classes at Turkey Creek Jr. High School.

The students perform and meet objectives in the following exploratory areas: forestry, agricultural production, ornamental horticulture, agricultural resources, agricultural mechanics, agricultural products, and leadership skills. I will attempt in this article to outline some of the activities used in the above areas.

### Forestry

In the forestry unit, we usually include a field trip to a nearby fire tower. While there, the students make rough sketches of the tower and later build models of the tower. Forestry personnel talk with the students during their visit and I feel that the students associate the model fire tower with a career in forestry. They at least begin to think about forestry.

Another activity is building a model of "Smokey the Bear". This is accomplished by the following steps:

1. Collect one large and one small hickory nut, one acorn cap, one oak leaf, two acorns, four pieces of pine cone scale, one piece of bark, and one stick.
2. Glue the hickory nuts together so that the large hickory nut is used for the body and a smaller hickory nut is used for the head.
3. Glue two acorns to the large hickory nut for legs.
4. Glue two pine cone scales for arms and two for feet.
5. Take the acorn cap and glue it into the oak leaf for the hat.
6. Glue the hat onto the small hickory nut.
7. Cut the bark so that it resembles a shovel and glue it onto the stick. Mount this onto the arm.
8. Discuss forest fires and fire control techniques.



## Motivational Activities For Exploratory Agriculture

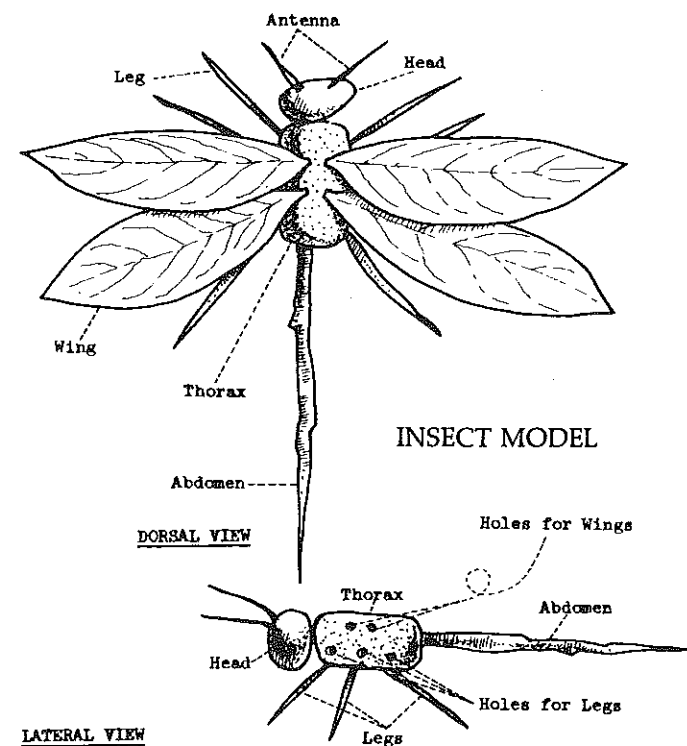
(Continued from Page 9)

control, or soil depletion. Hopefully, the students will associate this activity with a career involving agricultural production.

### Building Insect Models

After the gardens are planted, we usually touch on the insect problem. After a short lecture concerning human's rivalry with insects for survival, we mention various careers involving the control of harmful insects. We then become entomologists or chemical control technicians and go back to the gardens and check for harmful insects. In the classroom, we build models of insects using various materials. Following are the steps involved in building the insect model:

1. A block of styrofoam is used for the thorax. Sand the styrofoam until there are no square edges.
2. Push a small stick (abdomen) into the styrofoam. Put some glue on the sharpened end of the stick (abdomen).
3. Glue a blackeyed pea seed (head) onto the block of styrofoam (thorax).
4. Take a toothpick and make five holes on each side of the styrofoam. Three of these holes will be used for three legs on each side and two of these holes will be used for two wings on each side.
5. Take six twigs and dip the sharpened end into the glue and place the six twigs into the three bottom holes on each side of the thorax.
6. Dip the four oak leaf stems into the glue and stick them into the four top holes of the styrofoam.
7. Glue two hair-like twigs on the pea seed for antenna.
8. Paint the insect.



### Mini-Mist System

This activity is very popular and is quite interesting for the students. It is small and students realize right away that it is within their means to build. They can build this system and hook it up to a garden hose and begin to grow plants at home. The following parts are needed for this project:

1. A wooden box made of cypress or any other wood available to the student. Some students have even used soft drink crates.
2. Four feet of 1/2 inch PVC pipe
3. One 1/2 inch PVC to garden hose adaptor
4. One 1/2 inch PVC elbow
5. One 1/2 inch PVC cap (drill a hole in this cap for the mist head)
6. One mist head

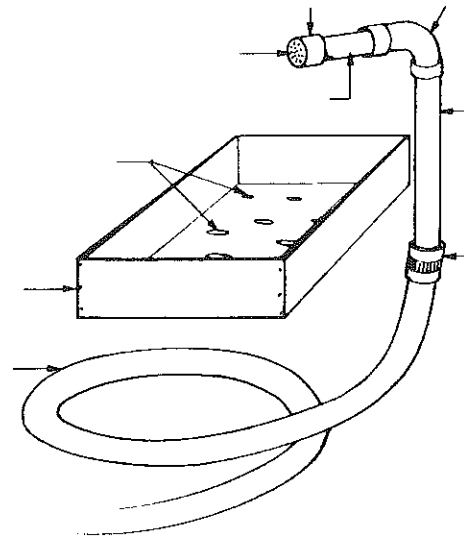
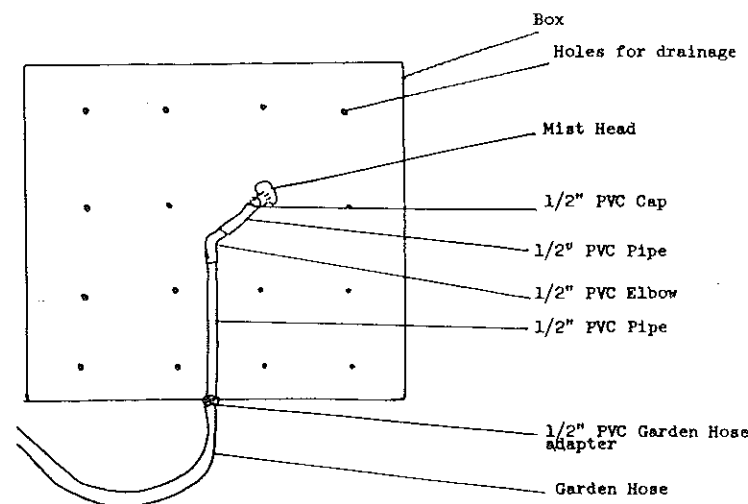


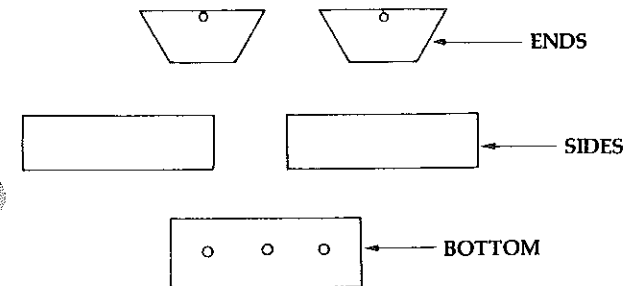
DIAGRAM OF MINI-MIST SYSTEM



### Ornamental Horticulture

There are many careers in all the areas of agriculture including ornamental horticulture. I could give the students a typed list of careers in ornamental horticulture and I usually do. We may spend one class period discussing some of the careers. I do not expect students to go home and memorize thirty or more careers because I am going to give them a test. We try to create an interest by having various hands on activities. Students mix a rooting medium of their own. They will play the role of a nursery worker in this activity. They will be asked to bring a half-pint milk carton to class in which to place the rooting medium. After this, the student will become a plant propagator and make cuttings, (usually of coleus) which is placed into the rooting medium. The cuttings are then placed under a mist system and left to root.

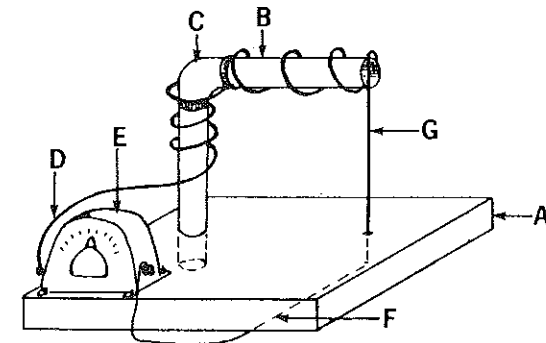
After approximately four weeks, the cuttings have rooted and we go into the laboratory and build a small rectangular box. The box is made from cypress slabs and makes a nice hanging basket. The student is now the proud owner of a product and may sell or keep it. After the completion of this activity, the student will be aware of some of the careers in ornamental horticulture.



### Agricultural Mechanics

There are many division of agricultural mechanics. I will discuss a few careers and have exercises in tool identification just to familiarize the student with a career such as a parts person. I have an exercise in plumbing and will let the students cut and thread a piece of pipe or glue a piece of PVC pipe.

One exercise that is most popular involves "electricity on the farm". I demonstrate a simple circuit by building a styrofoam cutter. A styrofoam cutter is a valuable teaching device. It may be used to build models of all sorts. Following is a diagram of a styrofoam cutter:



- A. 1/2" plywood base
- B. Galvanized pipe
- C. Galvanized elbow fitting
- D. Insulated wire
- E. Electric train transformer
- F. Insulated wire — under plywood base
- G. Nichrome wire

### Agricultural Resources

We usually spend five class periods in this area. If we can get a movie in this area, and we usually do, we show it. Since we will be attempting to make the students aware of careers in wildlife, fish and game management, or ecology, we try to have a wildlife officer or someone in this field to come and speak to the students. Our hands on experience involves an activity called plaque making. This activity could be used in conjunction with most any of the areas of agriculture. Each student is asked to bring in a piece of wood and a picture. The picture must be related to agriculture and the student will be asked to write a short paper relating the picture to a particular career in agriculture. The steps involved in plaque making are:

1. Measure and sand the wood.
2. Trim the picture or burn around the edges.
3. Paint a trim onto the edges of the wood. (Usually a soft black spray paint.)
4. Put a thin coat of glue on the wood. (Mod-podge glue works well.)
5. Glue the picture in place.
6. Roll out any air bubbles with a paper towel or your fingers.
7. Apply a smooth, even coat of glue over the picture and the wood. This serves to laminate the picture.
8. If you want to decorate the plaque, now is the time to add sticks, leaves, small twigs, pine needles, etc.
9. Let the plaques dry. (When dry, the glue will be clear.)

We usually display our plaques in exhibits at the school or the county agricultural fair.

### Conclusion

In this article, I have listed a few hands on activities that I feel helps to motivate students. More important, these activities provide opportunities for the teacher to work with the students on a one-to-one basis. You can build lines of communication and the students begin to open up and express their thoughts.

There is an old poem entitled, "You Seldom Hate a Fellow When You Know Him Very Well". I like to know my students very well. Through activities I get to know them. They learn that I care for their well-being. They in turn care for me and perform accordingly.



# Utilizing the Food For America Program

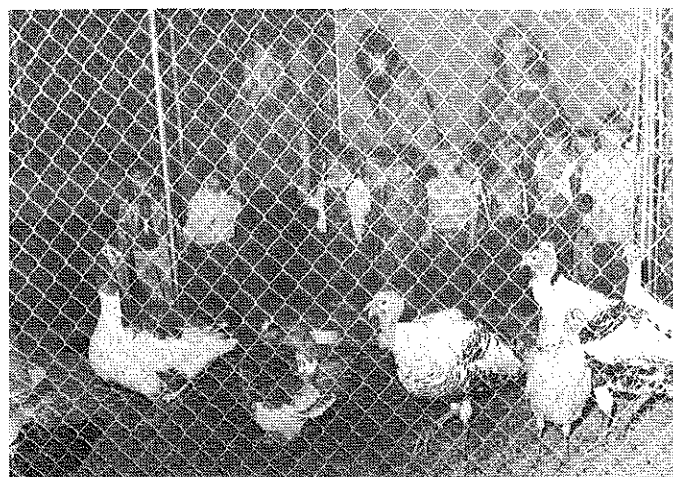
Has your agricultural education department in secondary schools shown a decline in enrollment recently? Does it seem that there are consumers and students who do not understand agriculture and the food chain? Are elementary students somehow excluded from contact with your agriculture department and the FFA? If the answer to one or more of the above questions is yes, then maybe the answer lies within a Food For America program.

I am privileged to teach in the leading agriculture county in Virginia, Rockingham County. So you are saying to yourself, "they really don't need a Food For America program in a rural, agriculture community." In my situation, we experience the same pressures of scheduling conflicts, increased requirements for graduation, that others throughout this nation are faced with when increased academic requirements are a reality that must be dealt with by incoming students. There are some students even in our county and city who do not understand agriculture.

## Our Efforts

All too often when programs are suggested many tend to conveniently misplace vital information, soft sell it to a point no one is interested, or it is conveniently filed away, thereby increasing the importance of the local trash collection operator. Rather than to dwell on the pros and cons of Food For America, I would like to present a possible working plan that can be adapted to almost any situation. I recognize situations and conditions are different, but what follows is a viable, working plan for introducing and educating youth about the production and processing of raw materials and the vital role agriculture plays in the food we eat.

The Rockingham County Food For America program is a joint effort among three high schools and four intermediate schools within the school system. The program is scheduled for all fourth graders in Rockingham County



Food For America provides many youngsters with their first close-up view of food animals. (Courtesy of J.C. Simmons, Supervisor, Louisiana.)



By CHARLES C. SHIFLET

(Editor's Note: Mr. Shiflet is a Vocational Agriculture Instructor at Turner Ashby High School, Dayton, Virginia 22821.)

and the City of Harrisonburg for the spring of the school year.

The key to success of a Food For America program lies with adequate prior planning and good communication. This adequate planning and communication begins with central office school staff and the principal and teaching personnel in the elementary schools. A well constructed plan of action and closely coordinated activities with school personnel well versed in the education program for their students, lends itself to approval by local elementary principals and teachers. The involvement of the superintendent and instructional supervisors insure that required activities such as standardized tests administration will not interfere with your program. This coordination and communication can occur at the end of a school year but by all means no later than September of the year for the program.

It is important that your Food For America program be on the approved list of activities so that elementary principals and their respective staff can adequately plan to participate.

At a summer meeting of all agricultural education instructors in Rockingham County, a yearly program of activities is planned and a date is established for Food For America. In mid September, a letter is sent to each of the



Young offspring frequently prompt the desire to touch the animals. (Photograph courtesy of J.C. Simmons, Supervisor, Louisiana.)

17 elementary principals in the county and city announcing the planned date of the program. If there are any conflicts or questions, this gives everyone plenty of time to reschedule or resolve any problems in planning.

As the year progresses, details of the program are pieced together for a working plan. Our fair association permits the program to be held on the fairgrounds using display and barn areas. Since there are seven schools teaching agriculture, the responsibilities are divided among the schools.

## The Program

The total educational program presented to the fourth graders has several parts. Plans are made with fourth grade instructors on the day the program is presented. Students in vocational agriculture and the FFA present the classroom part of the program which could include charts, games, film, posters, overhead projection and agricultural coloring contest. All these activities present the importance of agriculture to the food chain.

Following the classroom presentation a mini-fair is conducted with all fourth graders from the county and city being bused to the fairgrounds on a schedule.

The students are divided into small groups and an FFA member guide is responsible to lead students by seven displays. The displays for our mini-fair include horses, beef, sheep, hogs, dairy, poultry, and an agriculture equipment display. At each exhibit the fourth grade students are presented with information about care, use, feeding, and its importance to the food chain. All instructors and guides are FFA members from the seven chapters in the county. A time limit of about 10 minutes is allocated to each display. Refreshments are then served compliments of the FFA.

In presenting the Food For America program, it is important that the instruction be carried out by FFA members. All phases must be planned so that your program, even though it is broken down into parts, must fit and blend together as a picture puzzle. To insure a lasting impression that will promote the agriculture and FFA, the following should be carefully considered:

1. All FFA members must be in official dress while representing your school and department.
2. Members must conduct themselves as ladies and gentlemen.
3. FFA members must be hand-picked to accomplish the separate parts of the program.
4. The program must be geared to the grade level you are instructing.
5. Activities should be varied and the elementary students should actually accomplish something under the careful supervision and direction of the FFA presenters.
6. Always plan for an adult chaperone to accompany your teams of instructors to the elementary schools.
7. Make sure the teams which are sent present the program, increase the contacts, vary the presentation, and lend moral support to each other.

To assist in the planning stages and present a framework of activities by which instructors of agriculture can inject a local flavor to the program, the following are suggested. They are by no means all that can be accomplished nor are they the only ones to consider. In fact, there are some

situations and circumstances in which none of these would be completed. I am presenting these to ignite the imagination of possible activities and because they assist in accomplishing our program objectives. They are:

1. A short film that presents many phases of agriculture production as it relates to the food chain.
2. A coloring contest of agriculture scenes or production setting.
3. Each student plants a vegetable seed.
4. A mini-fair planned for another day following the classroom presentation.

The coordination between the FFA members and other school personnel provides exposure to adults with other than vocational backgrounds. These contacts with administrators and elementary instructors leave impressions about the planning and cooperation between secondary and elementary personnel.

In planning our program of Food For America, the local vocational director and supervisor of transportation become involved. Coordination of county and city programs to permit classroom instruction and also provide the transportation needed for the mini-fair is under their direction. The transportation supervisor assists in planning by giving travel times to aid in planning.

This information is helpful for breaking down groups for tours at the mini-fair. Obviously, 900 students at one time would reduce the effectiveness of the mini-fair setup and good instruction.

In our mini-fair, plans must include breaking down the total students into manageable groups. Also, these groups need to arrive at intervals so that when one group finishes the seven-stop exhibit tour another group is ready to begin. When these groups arrive at our fairgrounds, they are greeted, divided into tour groups, and guided by all educational exhibit stops by FFA members. At the end of the tour, light refreshments are served to the elementary students and teachers.

## Planning

When you are starting a Food For America program, several steps need to be accomplished before the program  
(Continued on Page 14)



Adults often find the Food For America program to be a learning experience. (Photograph courtesy of J.C. Simmons, Supervisor, Louisiana.)

## Utilizing the Food for American Program

(Continued from Page 13)

even begins. First, the agriculture instructor needs to become familiar with the resource material from the National FFA Center on Food For America. In presenting the program for acceptance, thorough knowledge of the anticipated program is essential to gain the support of administrators and elementary instructors.

Second, a centrally located facility large enough for displays, exhibits, and an area to serve refreshments is needed. In selecting a site, it must be accessible to buses, large enough so that displays are far enough apart so that they will not interfere with each other. Also, this facility should provide shelter in case of inclement weather.

Third, contact directly the elementary school principals and instructors to discuss the proposed program. Coordination of elementary instructional units could be arranged to enhance the Food For America program even further. Be willing to accept possible suggestions and comments from elementary personnel. With their past experiences, they may be able to keep you from some pitfalls that you may not be able to anticipate.

Fourth, be responsive to questions and possible problems that are presented. There may be more requirements for elementary than secondary students related to outside activities and field trips. Be sure you have correct information or seek assistance from other school personnel to solve possible problems.

In considering a Food For America program, a mini-fair is a tremendous learning experience when coupled with classroom instruction. In setting up a mini-fair, the displays and exhibits should reflect local agriculture products and production. It is easier to relate to local agricultural practices and production when explaining the food cycle.

If you are using animals to illustrate and display, consider using a female and offspring together. You accomplish two things. First, you acquaint youth with how a mature animal should look and, second, the appearance of her offspring. The offspring is a very good attention-getter with young students. With the animals, it is very easy to present care and feeding as well as exhibit the kinds of ingredients used to feed livestock.

To have a successful Food For America program requires additional time on the part of the instructor. Planning, preparation, attention to details, and presentations all take time. However, the results are very rewarding when your students present their information well, are prepared, and work closely with a plan to accomplish a task which provides an avenue of tremendous growth. Students realize that they can effectively communicate and become involved with others successfully. Your students provide an image and public relations tool that leaves a mark for many years to come.

In planning for this program there is one major guideline to keep in mind. Never attempt more than you can deliver. It is better to complete a small program successfully than to do a half-way job on a large program. A Food For America program that is started on a sound basis can be easily expanded upon as abilities and experience grow.

A Food For America program is an excellent tool to:

1. Promote agriculture in your community.
2. Permit contact between the secondary vocational agriculture program and the FFA with the elementary students.
3. Promote student growth and achievement while working with school personnel and elementary students.
4. Exhibit the effectiveness of the vocational agriculture program.
5. Encourage leadership development.
6. Expand a public relations program.

A Food For America program provides an opportunity to recruit students. In our program, we are enrolling students who participated in the program when they were in elementary school. In planning the program, it is very common to hear vocational agriculture students and FFA members remark "Oh, I can remember when the Food For America program was conducted," and reminisce about it. The contact and image your members leave on elementary students could well be the most effective way to maintain and increase membership in your department and the FFA.

It would be my hope that you would don the work clothes needed to take advantage of an opportunity to let the blue and gold of your department shine through and tell agriculture's great success story.

## THEME

# A Fun and Beneficial Program

Food For America is one FFA program where everyone can have fun and benefit. Teachers, FFA members, elementary teachers, administration, alumni, young farmers, community residents and elementary children all enjoy FFA's elementary agricultural education effort.

Food For America teaches the younger students the true basics about agriculture. They learn where their food really comes from, not just from a grocery store shelf. The program helps improve the image of agriculture and teaches children that agriculture is a hi-tech, sophisticated and broad industry, and not "Old MacDonald's Farm".

The program, introduced in 1975, has become an increasingly popular program with FFA chapters throughout the United States. Popularity has increased even more in the past four years with increased emphasis and interest generated from the USDA effort with Agriculture in America's Classrooms, introduced by Secretary John Block in 1981.

### Benefits for Everyone

The Food For America program is popular because it really is fun! FFA members and advisors enjoy working with the enthusiastic young children full of curiosity about agriculture. Members find that the children are fun to work with and appreciate the opportunity to learn about agriculture.

Agriculture teachers like the program because they recognize the value of the program in providing good leadership training for younger vocational agriculture students. Younger FFA members build their confidence of speaking in public and before large groups by addressing younger students about a topic they are knowledgeable about, agriculture.

The benefit of having older students teach younger students is recognized by elementary teachers and administrators. The younger students pay close attention and learn a great deal from the older students. In addition, the elementary teachers also benefit and learn about agriculture from the FFA members. The program aids and provides them with resources for incorporating agriculture into their classrooms.

FFA alumni, young farmers and community residents enjoy the programs which include a Food For America "graduation" activity. These activities often are an incentive for the elementary classes to complete the entire set of units offered in the elementary teacher's Food For America resource guide. Alumni and area farmers often help FFA members by bringing in live agricultural demonstrations for the students to see at the completion of their Food For America units. The demonstrations are sometimes brought directly to one school or in some cases where the FFA chapter or group of chapters are working with several schools, to a central location in the community such as a park or the fairgrounds.

The elementary children are the ones who benefit the most from the program and are the most appreciative of



BY CAMERON C. DUBES

(Editor's Note: Mr. Dubes is Director of Information at the National FFA Center, 5632 Mt. Vernon Memorial Highway, P.O. Box 15160, Alexandria, Virginia 22309.)

the FFA member's efforts. You would instantly agree, if you see the sight of children feeling, hearing, seeing, tasting and learning what agriculture is all about for the first time.

### A Good Recruiting Program

Many changes are occurring in agriculture today. There are less and less full-time farmers and the industry is becoming more and more specialized. Vocational agriculture students are not growing up on the diversified agriculture operations as many teachers have. So, it is important for future agriculture programs that younger students' interest in agriculture is peaked at an early age.

There are recruitment benefits from the Food For America program. Elementary students look up to older students. The high school FFA members presenting the Food For America program make lasting impressions on the younger children. Impressions continue to play a role when the elementary students reach junior high and begin exploring high school courses of study. This is the point where many decide whether to enroll or not in high school vocational agriculture classes and to join the FFA.

### A Great Public Relations Activity

The media love to cover human interest activities and FFA chapters know that when they inform the media about the Food For America program, there often is a newspaper photographer or television crew out to photograph the activity.

It catches the elementary student parent's attention as well. They appreciate the attention that their child receives through the FFA program. A side benefit of the program is that they learn from their child about agriculture around the dinner table in the evening.

### Research on the Program

Oklahoma State University's James White and Eddy Finley conducted a study in 1983-84 to gather, analyze and report on the Food For America program to the National FFA Board of Directors. The information was requested in order that the Board could review teacher and student responses regarding their perceptions of the Food For America program. It was conducted in order to aid in evaluating whether to continue the FFA program, and, if so, in which directions should it go. The study concluded:

(Continued on Page 16)

## 1986 Themes

|                    |                                                    |                     |                                                      |
|--------------------|----------------------------------------------------|---------------------|------------------------------------------------------|
| January . . . . .  | Vocational Agriculture and the Excellence Movement | July . . . . .      | Staying Current: Classroom and Laboratory Management |
| February . . . . . | Staying Current: Agricultural Mechanics            | August . . . . .    | Staying Current: Youth Organizations                 |
| March . . . . .    | Staying Current: Agribusiness and Farm Management  | September . . . . . | Staying Current: High Technology                     |
| April . . . . .    | Staying Current: Crop and Food Production          | October . . . . .   | Staying Current: Small Animals and Specialty Crops   |
| May . . . . .      | Staying Current: Forestry and Natural Resources    | November . . . . .  | Staying Current: Professional Affairs                |
| June . . . . .     | Staying Current: Animal Agriculture                | December . . . . .  | Staying Current: Horticulture                        |



## A Fun and Beneficial Program

(Continued from Page 15)

1. That respondents were enthusiastic about the program and felt it should be continued.

2. That the spring semester seems to be the time of year for presenting the program and that the third and fourth grade classes seem to be the more popular groups of which to present the program.

3. A class period of 40 minutes or more is needed to adequately conduct a preliminary Food For America program, while the optimum number of elementary classes involved seemed to be somewhere between one to four class groups.

4. That there was mutual agreement that films and/or more classroom activities would improve the program whereas the advantages of "using the real thing" offers an additional dimension to enhance the acceptance of the program.

5. That the program should maintain a national perspective while local chapters should localize the presentation to acquaint elementary students with agricultural products grown locally.

6. That there was sufficient evidence to conclude that FFA chapters providing incentives would generate a more positive response from elementary students and teachers.

7. That it is readily apparent that one to four Food For America programs during an academic year is a sufficient number.

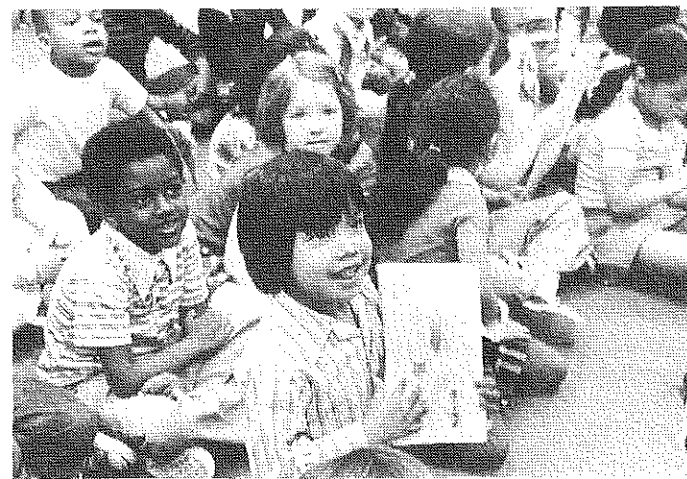
8. That promotion of agriculture seems to be the most important reason to conduct the program.

9. That the respondents who participated in the Food For America programs, during 1983, had done so for one to three years.

A special Food For America Review Committee of agricultural education professionals from the local and state levels, along with USDA representatives, national agricultural organizations and industry representatives were appointed to assist the National FFA Organization in evaluating the Food For America program.

The committee reviewed the research findings, current materials available on the program and made recommendations for the future direction of the Food For America program, sponsored by the Mobay Chemical Corporation, Agricultural Chemicals Division, as a special project of the National FFA Foundation.

Specific recommendations made by the committee include:



The children's smiles are the true reward for teachers and students presenting the FFA Food For America program. (Photograph courtesy of National FFA Center.)

1. To keep the objectives of the program the same, that of educating elementary students on American agriculture.

2. To develop and key new materials to grades three through five.

3. To utilize the eleven learner outcomes outlined by the National USDA Task Force on Agriculture in America's Classrooms in preparing the new materials.

4. To project a hi-tech, modern image of agriculture through the materials.

5. To include in a couple of the activities the opportunity of localizing the questions to local agriculture.

6. To develop a new presenter's kit with suggested activities, script, initial presentation activity and a take-home activity to leave behind for the students.

7. To develop a new elementary teacher's resource guide with ten activities to leave behind after the initial activity.

8. To develop a color double-sided wallchart to aid in the initial presentation and to also broaden the students' perceptions of agricultural careers.

9. To provide an elementary teachers/classroom certificate, elementary student award stickers and an FFA chapter certificate as rewards for completing the entire program.

10. To have all of the new materials developed for introduction and dissemination the fall of 1985.

11. To propose a new film for sponsorship to support the new materials for introduction in 1986-87.

## WANTED: Book Reviewers

One of the services that THE AGRICULTURAL EDUCATION MAGAZINE provides for its readers is the review of publications that address agriculture and agricultural education. The Book Review Editor receives current publications from over 50 publishers in the United States and from some foreign countries.

Individuals who are interested in reviewing publications should write for a

copy of the books available for review.

Upon receiving the list, the reviewer should choose 2-3 titles and send their request to the Book Editor. One of the books will be sent to the reviewer along with directions for completing the review. Upon the completion of the review, the book becomes the property of the reviewer who can then look forward to seeing their name in print in an

upcoming issue of THE AGRICULTURAL EDUCATION MAGAZINE.

Anyone interested in reviewing publications should send their request to:

Dr. Joy Cantrell  
Dept. of Ag. & Ext. Educ.  
Armsby Bldg.  
Penn State University  
University Park, PA 16802

## THEME

# Mr. Jay and Farmland



By GRACE McREYNOLDS

(Editor's Note: Dr. McReynolds is Director of Curriculum Development for the Department of Elementary and Secondary Education, Missouri Department of Education, Jefferson City, Missouri 65102.)

"I don't want cows' milk. I want milk from a styrofoam carton!"

"Why should I be concerned about the fact that farmers have had poor crop years?"

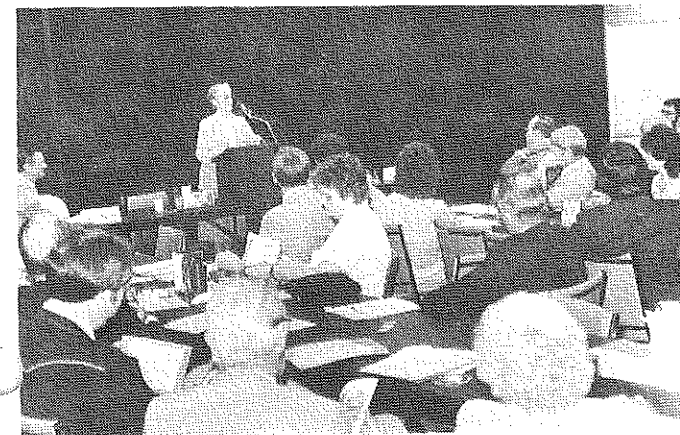
"I paid more today for fresh vegetables than I have been paying! What could cause that?"

Although all of us rely on the American farmer for the food we eat and the standard of living that we enjoy, how many of us are really aware of this dependence? How can we educate the public to the importance of agriculture in our daily lives? What role should the school play in this educative process? How can teachers who have never lived on farms deal with important questions relating to agriculture? What kinds of educational materials are needed to help educate school age consumers to concerns of farmers?

The U.S. Department of Agriculture posed these questions to representatives of the American Farm Bureau and state farm bureaus in June 1981. Those attending the meeting were asked to develop resource guides on agriculture and organize task forces to develop guidelines for teaching agriculture in the classroom. Annual conferences relating to agriculture in the classroom were held in 1982 and 1983. As a result, representatives of the Missouri Farm Bureau talked with Commissioner Arthur L. Mallory about an Agriculture in the Classroom project in Missouri.

### Curriculum Identity

When Commissioner Mallory and I discussed the possibility of suggesting the addition of agriculture to the curriculum of the elementary school, both of us had misgivings. Although children are interested in the farm and have curiosity that can be easily sparked, the curriculum of all schools is crowded with worthwhile activities to the point that additions are virtually impossible. If asked about adding another subject to the curriculum, teachers would likely resent the adjusting of time needed for teaching the many competencies that students should acquire or reallocating time needed for dealing with needs of individuals



A task force was utilized to aid the development project and is addressed here by the author.

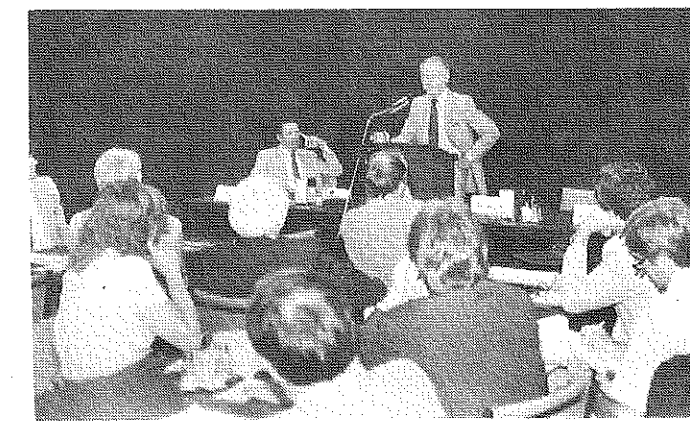
and groups. Another complication in adding agriculture to the elementary curriculum is the fact that many teachers have never lived on farms and have little practical knowledge or formal training to equip them for teaching about agriculture and the problems faced by today's farmer.

Having been a primary grade teacher, I know of the interest that young children have in areas that relate to their everyday lives. I also know and accept many of the criticisms of today's reading material for young children. We have heard that textbooks have been "dumbed down" in that their contents are insipid and lack luster for children. I believe that the earlier in life that we present information to children, the more receptive they are to accepting and applying wholesome concepts about the topic for the rest of their lives.

As we reviewed materials relating to agriculture that were appropriate for young children, we found picturesque, but not necessarily realistic material. Little material dealt with the dependence of the public on the American farmer. Nothing dealt with the needs of the farmer in such areas as purchasing new equipment, relying on others to get crops to market, and cooperating with other farmers.

Although young readers learned about the animals the farmer raises, they were not told that many farmers specialize in growing a specific type of animal. Although the farmer raises food for all to eat, no mention was made of

(Continued on Page 18)



The task force is addressed by Dr. Arthur Mallory, Missouri Commissioner of Education.

## Mr. Jay and Farmland

(Continued from Page 17)

the farmer's dependence upon the weather and quality of soil for an abundant harvest.

As Commissioner Mallory and I thought about the likelihood of preparing materials to teach agriculture in the classroom, developing a series of readers for children that would teach important concepts about agriculture; and, simultaneously, provide opportunities for children to apply reading skills they have acquired in regular curricular areas seemed a logical approach.

### Preparing Materials

When the Missouri Farm Bureau convened the first group to discuss Agriculture in the Classroom, we proposed a series of readers for primary grades starting with kindergarten and continuing through grade 3. In preparing materials for children, one must consider concepts to be taught and identify at least one major goal for each story to be prepared. The story must be told in vocabulary that the child can understand and, at levels beyond kindergarten, words that the student can read independently must be used.

Pictures that add to the attractiveness of materials can provide clues that can help with decoding new vocabulary as well as with clarification of concepts introduced in the story. Interest in the pictures also helps stimulate and sustain interest in the stories. A main character or characters with which young readers can identify is beneficial. Children are interested in outer space, and a space creature would likely appeal to them. Reading about children their own age who tell about agriculture in Missouri would also be appealing. Topics should deal with both aspects of farming about which children know and those with which they may be totally unfamiliar.

In addition to presenting agriculture in a realistic and informative way, materials had to be appropriate for those using them. Although materials for students are important, materials must also be provided for the teacher. Ways of introducing each story, procedures to follow in

directing the attention of students to new vocabulary and specialized terms, and questions to follow the story to reinforce and expand the concepts taught would be useful. Teachers must be provided enough background material to feel comfortable teaching the story and to answer questions that students may raise about the material presented.

Since Missouri is a diverse state agriculturally, we wanted to represent major agricultural activities of the whole state. Dairying is important in many parts of the state. Cotton and rice are important in southeastern Missouri but not in other sections. Fruit, although not a major crop in many areas, is grown throughout the state and is a money crop in portions of the state. Livestock is raised throughout the state, but farmers often specialize in one type of animal, such as beef cattle. As we talked with the various commodity groups, the diversity of agriculture within the state became apparent.

### A Story Evolved

During discussions with the Task Force, Jay was born. Jay (whose name will be easy for primary grade children to read and remember) is a fellow from outer space who accidentally landed his spacemobile in the yard of the Farmers, a mid-Missouri farm family. Children are interested in space and could relate to a space visitor. As the Farmer family show and explain the operation of their farm and those of relatives and neighbors, readers who might be reluctant to admit their lack of knowledge about farming could learn about agriculture in Missouri.

Mrs. Farmer discovered Jay as she looked out the kitchen window and spotted the strange-looking object on the lawn. The family was even more surprised when the door of the object opened and a little fellow walked onto the grass. He did not have a name, nor could he tell from whence he came. Mike and Jill, like most children, were glad for a new friend. They named him Jay because marks on his spacemobile and on his cap looked like the letter J. With the hospitality of many Missouri families, the Farmers invited Jay to have breakfast and to stay for an undetermined length of time.

Immediately after a good breakfast, Mr. Farmer went to work in the field. Since Jay has never been around the

farm, Mike and Jill explain that a farmer works hard all year round. Farmers care for the farm animals, plant and harvest crops, keep machinery in working order, and do many other things. Farmers work in summer and in winter. Weather changes the type of work but not the amount or importance of the tasks farmers perform. Mrs. Farmer works hard, too — from early morning until late at night.

Jay sees the family garden with plants growing in rows. The children tell how they help tend the garden and how they preserve food by freezing and canning. They tell Jay that some farmers raise vegetables to sell, but their garden is for providing vegetables for the use of the family.

Jay sees apple trees, peach trees and a U-Pick strawberry patch. Although some farmers raise fruit to sell, the Farmers raise apples and peaches for their own needs, but allow others to come and pick strawberries. When Mrs. Farmer gets ready to bake a pie, she tells Jay how Mr. Farmer grows wheat, how the wheat is taken to the grain elevator and sold, and how wheat is used to make food for both people and animals.

Jay learns the importance of weather to farmers as the children explain how they need rain as well as sunshine to allow crops to grow. Although this family does not raise horses, a neighbor named Mr. Brown raises horses and is glad to tell Jay about them. The Farmers raise dairy cows and sell milk, but neighbors raise beef cattle. Jay can compare the appearance of dairy and beef cattle and learn how each is needed for food. When Jill gets a new coat, a neighbor tells how he cares for the sheep he raises that provide wool used in making clothing and meat for food.

Although Mr. and Mrs. Farmer help many people by raising food, there are people who help the Farmers. Mr. Farmers must buy pesticides and fertilizer. When the tractor is worn beyond repair, the family must go to the bank and borrow money to buy a new tractor. After a hard rain, the Farmers and Jay see the erosion that has occurred and discuss the need for conservation of natural resources. During a walk through a woodlot, they see how trees provide homes and food for animals as well as wood for many necessities of all people.

To learn about cotton and rice, the Farmers go to the southeastern part of the state to visit Uncle Joe and Aunt Sue. Uncle Joe, a cotton farmer, is glad to share his information about cotton with Jay and with the readers. Jay sees a "field of water," which is a field planted in rice. He learns about farming in a different part of the state.

Jay learns about the use of animals for food as he enjoys a picnic and eats fried chicken, hamburger, and ham. He meets neighbors that are Mexican-American, Asian, and Black. He takes the Farmers riding in his spacemobile and sees terraces that help control soil erosion, a turkey farm, hay bales, and a railroad. Farms are fun to view from the air!

### Supplemental Activities

Artist Bob Wilson, who has been working to illustrate the stories, gave the series the title MR. JAY AND FARMLAND. The stories have been completed. The teachers' manuals are still in production. In addition to background information for the teachers, ways of integrating writing, arithmetic, oral language, etc., are suggested so that students can have opportunities to apply skills they have learned in all aspects of the academic program.

Experiments to expand the knowledge and interests of students accompany some stories. Art work to be done by students is often a part of the Other Things To Do at the end of each story. Literature for children — both prose and poetry — that could be read independently by students or read to students by the teacher will be suggested.

### Dissemination

The books and teachers' manuals will be printed and will be disseminated to school districts throughout the state by the various commodity and agricultural groups in the state. In previous Departmental activities, having a member of the community hand carry the materials to the school has been very helpful. This messenger can serve as a resource person if needed to help in discussing the content of the books and in answering questions that students and teachers may have.

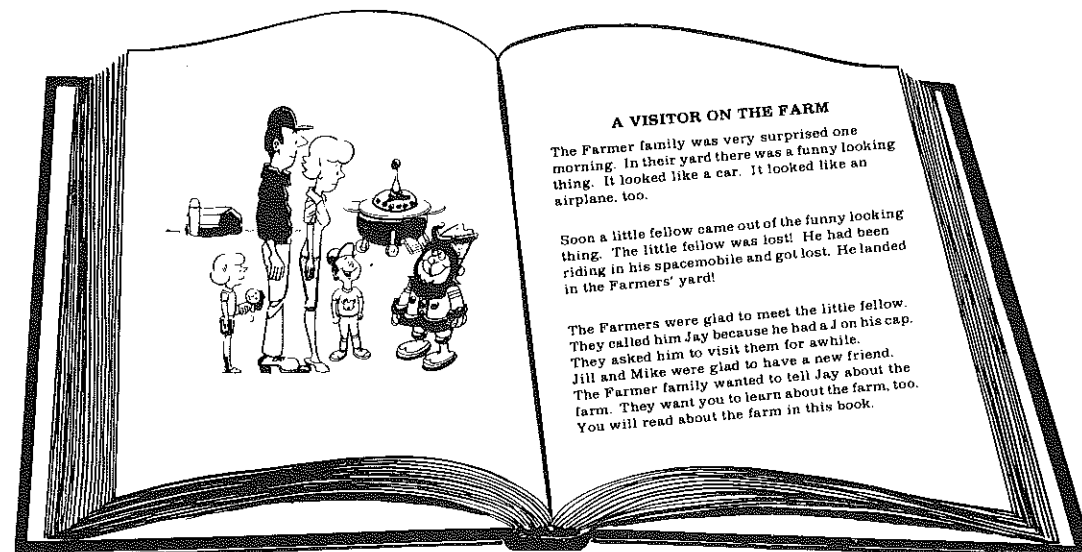
Target date for preparation of books is September 1, 1985. Although references are made to Missouri and farming in Missouri, the material included would apply to the entire Midwest region of the nation. Provision to sell books to out-of-state agencies and to provide for the number likely to be requested by school districts within the state will be made.

Interest and enthusiasm about Mr. Jay and Farmland are high in Missouri. Charles R. "Dick" Johnston and Margaret Schowengerdt of the Farm Bureau staff have hosted meetings of all commodity groups to review materials relating to the interests of each group. We have been concerned about the reactions of consumers of the books. We took sample copies of the stories to local elementary schools to learner-verify the materials. Students were fascinated by the stories and wanted to learn more about Mr. Jay, his spacemobile and the Farmers. Prior to the printing of teachers' manuals, committees of teachers will be asked to review the materials and make suggestions about information needed by teachers. They will also have an opportunity to add their favorite teaching strategies to those provided.

We are excited about our Agriculture in the Classroom project. We will be glad to share Jay and the Farmers with other states as soon as possible.

## AGRICULTURE

IN THE  
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# Vocational Agriculture for 7th and 8th Graders

Traditional vocational agriculture programs in grades 9-12 are not meeting the needs of the majority of present and future students. There are two reasons for this. First, modern technology has added new dimensions to agriculture. Students must learn the basics about agriculture, plus learn how to make use of modern technology. They must also have an opportunity to explore all of the career areas that are available in agriculture today. The short period of time available to students does not give them the opportunity to accomplish this. Secondly, students must make career choices at an earlier age.

As time goes on, more required courses are being added to the high school curriculum and in many cases the school day is not lengthened, thus giving students less flexibility in course selections. In some cases, high schools are also experiencing a declining enrollment without decreasing course offerings, adding complexity to the challenge of career selection.

In some school systems; however, students are required to take several vocational courses. A vocational agriculture course may be counted as a science credit. In some schools, the school day has been lengthened giving students more flexibility in curriculum choices and not forcing them to make career selections at an early stage of their high school career.

Career selection is defined as simply students selecting their electives in fields such as music, art, business, home economics, and vocational agriculture.

In our school system a freshman student who is enrolled in band or chorus has one period for an elective or study hall. As a seventh grader and an eighth grader, the student has been able to take courses in industrial arts, home economics, Spanish, art, band or chorus. If a student enjoyed any of those classes, they would simply sign up for



Exploratory agriculture experiences can aid future decision making. (Photograph courtesy of Joliet Junior College, Joliet, Illinois.)



By CLARA HEDRICH

(Editor's Note: Ms. Hedrich is a Vocational Agriculture Instructor at Chilton High School, Chilton, Wisconsin 53104.)

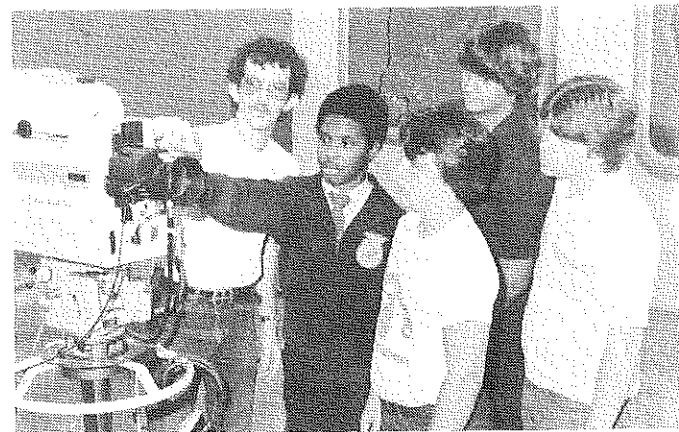
one of them in the ninth grade without exploring vocational agriculture.

Most instructors in vocational agriculture will agree with the fact that once students enroll in vocational agriculture the majority stay with the program for the duration of their high school career. The key is getting students enrolled.

## Exploratory Offerings

With the beginning of the 1983-84 school year our program was able to offer a one semester course that a student could take as a seventh grader or an eighth grader. Prior to that time we found that our students took vocational agriculture for one of three reasons: 1) they had already set their career goals in agriculture, 2) their parents had a strong influence in their choice, or 3) their friends were taking it. Unfortunately, because of the present day uncertainty among some regarding the future of agriculture, we found some parents discouraging students from pursuing careers in agriculture, thus placing even more importance for having exploratory programs in agriculture.

Ideally, since agriculture is such a large employer of our nation's population, every student enrolled in high school



Future career opportunities can be investigated through exploratory agriculture programs. (Photograph courtesy of Lindsey Keene, Southeast Lauderdale Attendance Center, Meridian, Mississippi.)

should be required to take at least one course in vocational agriculture. After all, what other course makes use of reading, writing, math, chemistry, science, physics, business, home economics, art, music, and develops leadership skills, and offers students many hands on experiences.

Since most states do not require all students in high school to take a course in vocational agriculture; what can instructors of vocational agriculture do to expose more students to this exciting career area? The first step is to teach an exploratory course for seventh and eighth grade students before they reach their freshman year. Due to time frames and schedules, many freshmen have to make some career choices at this early stage. They do not have time to try out a variety of career areas in high school. That is why it is so important for vocational agriculture to be offered at the seventh and eighth grade level while students have more flexibility in schedule choices. This age level is more willing to learn and more excited to learn than the freshman age level. Perhaps they are less inhibited.

The type of course offered at this level should be a general vocational agriculture course. It should by no means be a watered down course from the rest of your offerings. It should allow the student to explore the many facets of agricultural production, as well as agribusiness, and give them a true picture of today's agriculture. Too often students still relate a career in agriculture to one of production agriculture with many hardships and few rewards. This image needs to be improved and expanded.

An exciting aspect of the seventh and eighth grade program is that students can start their SOEP and use this year to start establishing their program, instead of using their freshman year to establish their SOEP. It gives them an additional year with their SOEP, plus they are recognized on the national level for FFA membership. If you are fortunate enough to be able to run this program both for seventh graders and eighth graders, it will give them two additional years of SOEP and the FFA.

## Our Program

Our seventh and eighth grade program at the Chilton High School runs for 18 weeks. Students may enroll in the course as either an eighth grader or a seventh grader. I encourage them to take the course as an eighth grader so that they do not have a one year lapse between middle school and high school.

The course is simply titled Vo-Ag Seventh and Eighth. Each student enrolled is required to have an SOEP. Students are helped to identify their needs and resources to design a program to fit their needs. Students are strongly encouraged to join the FFA and the Wisconsin Junior Dairymen's Association.

In these short 18 weeks, we cover topics on SOEP, FFA, the agriculture industry, dairy, sheep, hogs, poultry, fruits, vegetables, soil, agribusiness careers dealing with these areas, and the computer in agriculture. I try to incorporate as many hands-on experiences in this class as is feasibly possible. The biggest challenge I have with this class is trying to cover as many of the topics as I would like in the short period of time that I have.

The second challenge is to find a good general textbook for this type of class and good reference materials. There are very few good materials available for this type of class. Most of my reference material is from the Extension Service or from magazines. I have talked with a few textbook company representatives and their comments have been that there just has not been enough demand for this type of book. The reading level of most general exploratory agriculture textbooks I have been able to find is above the seventh and eighth grade or they just do not fit my needs.

We are in an exciting age for vocational agricultural education. As we have fewer people in production agriculture we find more and more people are losing sight of the importance that agriculture plays in our lives. It is our challenge to reinstate this importance. We have to reach people at a younger age and give them a chance to explore the excellent program we have to offer. We have to kindle their interest in grades K-6 through the Food For America programs, safety programs, and perhaps even develop a K-6 curriculum that can be incorporated into already full programs. Then, at the seventh and eighth grade level, students should be provided an opportunity to look at the many different career areas in the field of agriculture.

Perhaps with a multiple-teacher department, one can offer a semester or full year course to seventh graders and a semester of full year course to eighth graders. The seventh graders could be given the opportunity to look at the career aspects of production agriculture giving students a broad overview of production agriculture. The eighth grade students could be given an opportunity to cover the careers and various aspects of the agribusiness industry.

In the case of a single teacher department, one may be only able to offer one class to both seventh and eighth graders or may wish to split the students into their separate grade levels and run each class for only one semester. The main objective of both of these classes is to give students exposure to agriculture and the variety of career areas it has to offer. The 9-12 program should then pick up where the seventh and eighth grade program left off.

Offering an exploratory vocational agricultural program at the ninth and tenth grade level would not be as beneficial to a program in terms of attracting students as it would be in seventh and eighth grade because students at this age have already made choices and due to time frames or conflicts can not schedule appropriately.

Speaking from experience, I have found teaching an exploratory course at this age level to be very beneficial to my program. It has given students an opportunity to decide if vocational agriculture fits into their future plans. It gives them a head start on their SOEP's and it is a refreshing change from the high school student.

It is important that an exploratory program in vocational agriculture be tailored to fit the needs of your area and that your traditional vocational agriculture program fits the changing needs of agriculture as we approach the decade of the 1990's. The only thing stopping exploratory agriculture programs is your imagination, and with the help and support of your advisory council it is sure to get off to a good start.



# Agriculture In Black And White

One of the greatest challenges for the agriculture educator today is to change the public's image of agriculture. Today, the American public's image of agriculture is a kaleidoscope of leftover attitudes and images of what agriculture was during the 40's, 50's and early 60's. Agriculture is viewed as farming with no understanding of the impact of agriculture on other sectors of the economy.

The public perceives the agriculturalist as a producer of food with little need for technical know-how. Consequently, agriculture is not viewed as a glamorous occupation. Parents quickly suggest that anyone could be a farmer . . . an occupation to be tolerated or a necessary end of society, but not one to be sought after for a career. ("People Don't Want . . .," 1985).

## A Preventive Approach

One way of improving the image and understanding of agriculture is through our public and private educational system. We live in a country with the largest, most progressive agricultural system in the world, yet many children and adults believe that milk and eggs come from cartons in the grocery store. The lyrics of a popular song suggest "We are the world, we are the children, we are the ones to make a better day." If we are to change the image of agriculture, we must begin with the children.

We need to begin early to help students develop accurate and positive perceptions of agriculture and sources of agricultural products. Children's attitudes and career objectives are often formed at a very young age. Elementary students are learning about careers and occupations throughout their elementary years. Why not use this opportunity to teach some of the basics of agriculture? If they never formally study agriculture, exposure to agriculture in elementary and secondary school will make them better consumers of agricultural products and more supportive of the agricultural industry.

## Major Issues

When implementing agriculture in the elementary and secondary curriculum, the problem becomes one of time and resources. Pennsylvania educators have spent many hours and dollars developing useful agricultural materials for high school students. Can some of these instructional materials be adapted to elementary school children? Can teachers be given enough agricultural experiences to create meaningful lessons? Can time be found in the curriculum to reflect greater attention to agriculture? Can political issues encountered in restructuring the curriculum be overcome?

The answers to these and many similar questions are unknown. However, in spite of the concerns encountered, efforts must continue to improve the general understanding of agriculture.



By THERESA K. COON AND M. JOY CANTRELL

(Editor's Note: Ms. Coon is an Assistant Agent with the Lawrence County Cooperative Extension Service, New Castle, Pennsylvania 16101; Dr. Cantrell is an Assistant Professor in the Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, Pennsylvania 16802.)

## A Viable Resource

An immediate approach to reach students from fourth grade through high school is with the most inexpensive, current and widely read piece of literature published — the daily newspaper.

In 1984, a project at Penn State was developed to assist teachers in teaching agriculture in elementary schools. The specific objectives were:

1. to show elementary teachers that it is important to teach agricultural concepts in grades 4-6,
2. to illustrate to teachers innovative ways to use the daily newspaper in teaching agricultural concepts,
3. to motivate students to study agriculture, and
4. to motivate students to read the newspaper.

## A Teacher's Guide Is Developed

A teacher's guide, with student activities for using the newspaper to teach agriculture, *AGRICULTURE IN BLACK AND WHITE* (Coon, 1984) resulted from this project. Elementary teachers in school districts close to the University were given a guide and invited to participate in the project on a pilot basis during the 1984-85 school year. Participating teachers were instructed on use of the materials in a one-day workshop. A vocational agriculture teacher volunteered to serve as a resource person for the 1984-1985 school year.

Seventeen learning activities were designed requiring the use of newspapers. The agricultural learning activities ranged in subject matter from math to social studies. The guide also illustrates to teachers how to use various parts of the newspaper, from the editorials to the weather map.

## Industry Cooperated

Local editors donated copies of newspapers to each class providing one per student for a two-week period. The regional agricultural publication, *LANCASTER FARMING*, was provided to each student as an additional resource.

The newspaper industry is committed to education of youth in public schools (Whelan, 1971). In the United States, there are currently 350 newspapers supplying nearly sixty-eight million copies of daily newspapers annually for educational uses in the classroom. This support is extended to 47,000 teachers, 18,000 schools and 3 million students.

## Why the Newspaper?

The newspaper has been a documented source of learning in elementary schools (Flint, 1980). Advantages of using newspapers, reported by Flint, include positive participation and interest of students, increased reading levels and high motivation for reading the newspaper.

Teachers tend to focus on teaching strategies for subject matter they feel competent in teaching. Building on a familiar resource teachers have used before could potentially decrease their reluctance to integrate agriculture into their classes. With some basic agricultural knowledge, the newspaper provides an unlimited, continually up-dated text for a variety of subjects; a means of spanning the textbook lag.

In previous projects directed at preparing teachers to incorporate agriculture into the classroom (Cantrell and Coon, 1984), it was evident that teachers seek inexpensive and abundant instructional materials. More importantly, instructional materials should provide maximum flexibility within existing curriculum with minimum teacher preparation. The newspaper as a method of teaching agriculture allows for both of these.

The newspaper can easily be used in learning activities for individualized study, small groups and can help identify community agricultural resources to supplement class experiences. Newspapers deal in reality, thus, strengthening student understanding of the influence agriculture has on their daily lives.

## Conclusions

The nationwide need for the public to increase their understanding of modern agriculture and its problem of producing food and fiber can effectively begin with "Agriculture in Black and White." Teachers realized that if the newspaper had nothing specifically mentioning agriculture in it, they still had applicable information. For example, the weather report and weather map were used to point out what farmers may be doing on a given day all over the country. The grocery store ads and coupons were used to teach math and consumer skills. The "Help Wanted" ads were used to develop job search skills. Thus, agricultural lessons using the newspaper can be effectively integrated into numerous elementary subjects (i.e. reading, mathematics, art, vocabulary, spelling, social studies and science). The materials are flexible to customize topics into existing curricula, as well as useful for both group and individualized instructional needs.

This approach alone will not solve today's public image of agriculture. However, it may be one of the ways to integrate agriculture into the classroom influencing the image with the future generations.

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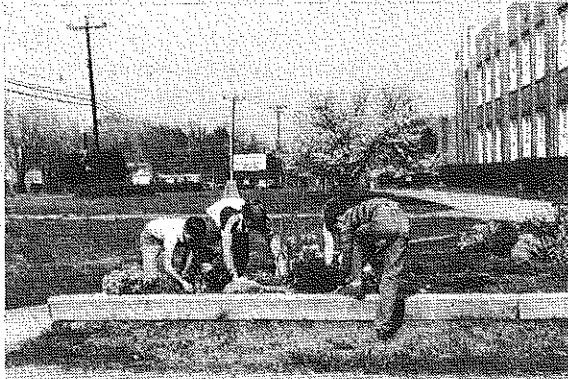
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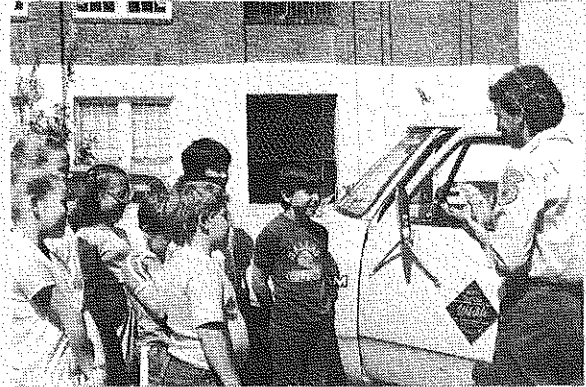
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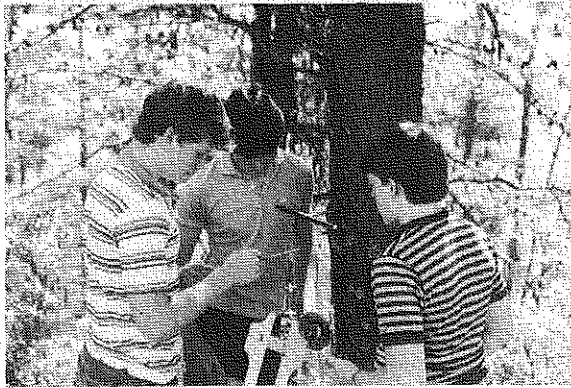
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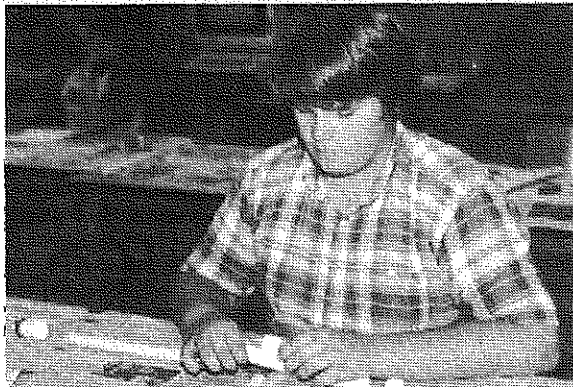
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