

# AGricultural EDUcation

*Featuring—Occupational Experience and  
Farming Programs*

Department of  
AGRICULTURAL EDUCATION  
UNIVERSITY OF ARIZONA  
TUCSON, ARIZONA

AUGUST, 1963



A monthly magazine for professional workers in Agricultural Education. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Interstate Printers and Publishers, Danville, Illinois.

THE INTERSTATE  DANVILLE, ILLINOIS

# The Agricultural Education Magazine

Volume 36

August 1963

Number 2

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 Second-class postage paid at Danville, Illinois.

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## The Cover

### Occupational Experience or Farming Program?

It's obvious that the young Nebraskan in this picture is gaining useful experience—We can't tell from the picture, however, whether he is on work experience, carrying out an improvement project or working on a school owned farm. Several writers in this issue contend that all of these are good means of providing useful occupational experience. The teacher? Who do you think took the picture?

# Editorials

## Guest Editorial

### Planning Agricultural Experiences

GEORGE W. WIEGERS, JR., Teacher Education  
University of Tennessee, Knoxville



Differing interpretations have been made of the statement in the Smith-Hughes Act relative to supervised practice in agriculture. The Commission designing the Act was of the opinion that each school offering vocational agriculture should provide opportunities for practice in agriculture not only on students' home farms but also on a farm operated by the school.

Today most schools place the burden of finding opportunities for practice in agriculture upon the student and his parents. This system has been very successful down through the years even though the Smith-Hughes Act does not require each student to carry out a supervised farming program. There is increasing evidence, however, that the school must accept more responsibility for providing the needed practice. This is in keeping with the increase in agricultural occupations other than farming.

Only rarely does one find a school operating a farm for educational purposes. Schools operating farms for students to obtain supervised experience have been looked upon with disfavor by some leaders in agricultural education. Attitudes are changing concerning the use of school farms or laboratories to provide agricultural experiences that can be supervised. School farms may be the answer for some areas where students cannot gain adequate experience in farming at home or in the community.

Some people believe that supervised farming programs constitute the heart of vocational agriculture. This belief has contributed to the development of many excellent programs, but at the same time it has given shelter to those accepting and using programs narrower than they might be. More importantly, one should grasp the meaning and significance of the principle giving support to farming programs. The principle is embodied in these words: "supervised practice in agriculture." Translated, this means that the student learns through his own experiences with the supervision of the teacher. Farming programs are actually tools which enable students to learn through real experiences in agriculture.

It is not news that farming is now merely a part

## From the Editor's Desk

### Farming Programs Not Enough

The success story of many a farmer and not a few in the agricultural professions began with a sow and litter or a dairy heifer.

Many a vocational agriculture student, parent and teacher will testify as to the value of carefully selected, wisely planned and carefully executed individual farming programs. For boys who come from farms where such programs can be developed there are opportunities for a rich agricultural education plus a toehold in farming.

For the student who has a genuine interest in agriculture but lacks an opportunity to develop a home farming program other types of occupational experience should be made available. A number of these possibilities are described in articles from several states appearing in this issue.

Granting that farming programs will continue to be the best means providing occupational experience for most high school students of vocational agriculture, for some time to come, it's time to think of needed supplements.

The following suggestions seem to be in order:

1. Clarification should be made of the legality of supervised experience in farm related occupations.
2. Student interest rather than student facilities for farming programs should become the major criterion for guidance and selection of students in any and all departments of vocational agriculture.
3. A wider variety of occupational experiences should be available in many departments. Occupational experience might be obtained not only through farming programs but also through work experiences on farms in the community and on school farms or land laboratories.
4. Farming programs must be made as realistic as possible in terms of changing patterns in farming and farm living.

In 1918 vocational agriculture began with the "project" requirement. This in turn grew into the project program and finally emerged as the farming program. Each of these stages of growth have added significance to the educational experiences afforded by vocational agriculture. Broadened opportunities for securing occupational experience in agriculture seems to be the next step.

*Ralph J. Woodin*

## Planning experiences

of agriculture, but it may be news that vocational agriculture must change soon if it is to help train youth for various related careers in agriculture. The core of the new instructional program must continue to be experienced centered, but some students must begin to capitalize on work opportunities other than those provided through traditional farming programs. Some pioneering work has been done in providing training in the horticulture industry and in combining agriculture with business, but to date there has been no significant breakthrough in discovering and developing new approaches through pilot programs for the typical high school.

A pilot program most promising at the moment seems to be one that could be designed to use the opportunities within the school area for supervised work experiences with farmers, dealers and other agriculturally related workers. It seems safe to predict that former vocational agriculture graduates and others who understand the problem would be happy to offer their facilities and supervision to give a real boost to dependable boys in the direction of their established goals. □

Sir:

**SHOULD WE DROP VOCATIONAL AGRICULTURE?** That is the question asked by a letter in the May 1963 Farm Journal.

New problems facing Vocational Agriculture present challenges requiring greater leadership at all levels of our society. Rural students are being taught to build upon their rural backgrounds to serve America not only in farming, but in the many and urgent rural related jobs and occupations.

The letter states that the counselor urged students that did not do well in other studies to "take" Vocational Agriculture. This does not seem to be good counseling. The day has long since passed when lesser intelligence should be shunted into any facet of agriculture. Most students do not do well because they do not recognize a challenge or are not willing to put the effort into learning something they do not see a near opportunity to use. This should present a greater challenge for the teachers of the more academic subjects.

Vocational Agriculture teachers who are alert to the needs of the community will adjust their subject material, methods of instruction and outlook to the areas they serve. When a teacher is really effective the problem of dropping Vo.-Ag. will generally disappear.

Donald Bealer  
Vo.-Ag. Instructor  
Milford, Iowa

Sir:

At our state FFA convention a fellow Voc. Ag. instructor and I were discussing the merits of the official Advisor's jacket. We felt the jacket to be appropriate for most occasions but not quite *sharp* enough for dress-up events such as conventions, short courses, etc.

We would like to propose, in addition to the present jacket, a dark blue blazer with the FFA emblem as a patch. This blazer could be available on a national level through the FFA Supply Service and would be quite appropriate and impressive at the more formal occasions attended by FFA Advisors.

We have submitted the above proposal to the FFA Supply Service and would appreciate hearing the reactions of other FFA Advisors in regard to this proposal.

Sincerely,  
Fred Hitzhusen  
Story City, Iowa

Sir:

The article "California Considers New Direction for Agriculture Education" pointed out the need for distinguishing between what we can do and cannot do in light of teachers' abilities and existing laws. It is my opinion that many times there has been a lack of program development and expansion of the Vo-Ag curriculum for fear of the possibility of non-compliance with regulations or laws. Prof. Sutherland has identified some avenues of direction that are certainly worthy of consideration.

I was glad to learn at the Central Regional Conference of Vocational Agricultural Education of the exploration and research being undertaken by several of the states. We need answers to the many questions being raised regarding Vocational Agriculture. I believe that Agricultural Education can and will rise to the challenges of changing agriculture and program evaluation.

R. A. McKinney  
Indianapolis, Indiana

Sir:

I am concerned about the possible meaning in step number one of the term "redirecting vocational education" as expressed in Taylor's article on the President's Panel on Vocational Education.

The favorable image that vocational agriculture now enjoys is in large measure related to the individual excellence of dedicated instructors who taught with the goal of "establishment in farming." We must not allow the current deemphasis of farming to swerve us from this goal for those students who are to be the farmers of tomorrow. We need to be aware that we have not produced an over supply of competent farmers.

Redirection of vocational education in agriculture probably calls for an addition to cover the area of "related occupations," but in no sense should this new emphasis detract from evolved and improved instruction in farming that will continue to be needed by a very sig-

nificant segment of our national population.

I agree with the author that we must continue to exercise initiative and plan with confidence in our local spheres of influence.

Mark Z. Henderson  
Des Moines, Iowa

Sir:

The article, "Public School Education in Agriculture—Before and After Federal Aid," presents an interesting historical sketch of public school education in agriculture. I would like to compliment the writer on the manner in which he has traced the development of this type of education in our public schools but as is the case in so many discussions of this type, the writers feel compelled to inject their personal ideas and conclusions into what is primarily a historical treatise, which seems to be the case with this particular article, wherein the author, although making no direct charges, infers that Vocational Agriculture, as it is interpreted today, deals with farming rather than the total concept of agriculture.

I am sure that anyone who is familiar with the Vocational Agriculture Program, as it is conducted today, would agree that even though considerable emphasis is given to techniques of production, or as the author terms it, "farming," the boys in these classes receive a wide variety of training and experiences, not only in production practices but also in those things that go toward contributing to the development of a well-rounded individual capable of taking his place in any society where he may locate.

The people in Vocational Agriculture will be the first to admit that they are not solving all the problems in education but do feel that through the work they are doing, they are making a real contribution toward the educational experiences of the boys enrolled in their classes and only ask that if there are criticisms, that they be specific rather than those that deal in generalities.

Sincerely yours,  
H. E. Urton,  
Pierre, S. Dakota

## From Former Issues

The December, 1931 issue reported the program of the Agricultural Section of the American Vocational Association. The conference theme was "The Implications of Economic and Social Trends in Teaching Vocational Agriculture." It was stated that this conference would be conducted as an informal discussion of the significance of economics and social trends in American life with special reference to the selection of content in teaching vocational agriculture."

# Our Graduates Operate Dairy Farms

ROBERT L. MITCHELL, Teacher of Vocational Agriculture, Ripley, Oklahoma



The Ripley, Oklahoma, Chapter of the Future Farmers of America was chartered in the fall of 1949 with a goal of establishing young men in farming but in checking the records back as far as we could, we found that not one single boy in 14 years had stayed in the Ripley community to farm.

The first time I called the chapter together I asked the boys, "How many of you would like to live on the farm if you could make a good living there?" Most of them agreed that they would. So, we set out to see what we could do. It takes at least three to four years to establish a boy on a farm, and our first four-year boys graduated from vocational agriculture in 1954. In the last eight years we have established 31 boys on the farm doing full-time farming, and not one single boy we have established so far has quit or gone broke. We know that as long as this holds true we can continue to have boys coming back to the farm in this community.

We started first with swine, because no one knew anything about vocational agriculture and swine re-

quired a small investment. However, I interested two boys in dairying and these boys helped sell this program to the rest of the community.

## Survey Shows the Way

Our survey showed that no farmers in the community were making a living from raising swine. We checked to see what kind of enterprise was best for our situation of small farms—mostly pastures and alfalfa, plenty of water, and unsuitable for wheat or other feed crops. We found from figures we obtained from county offices that in our county we had 1700 farmers, 500 of whom were full-time farmers making their complete living from the farm. Of the 500 full-time farmers, 98 percent of them were Grade A dairy farmers. To us this meant that in our county one was going to either dairy farm or not make a living from the farm.

The boys of the chapter met and decided to go into the dairy business. We sold all of our swine and converted the money into dairy cattle, and in recent years we have spent as high as \$65,000 in one year for dairy cattle.

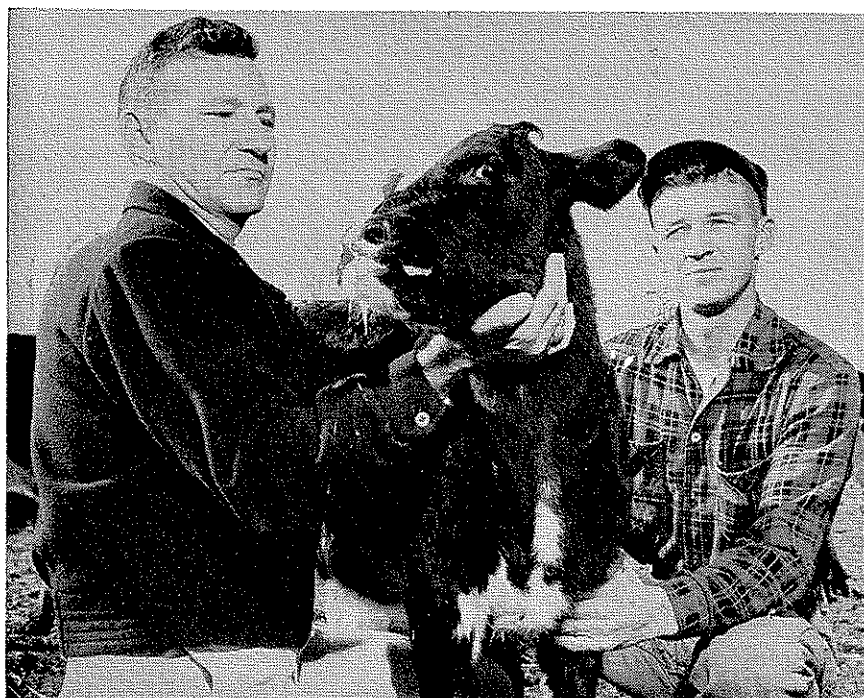
The first good dairy boys we had were the key. I helped them borrow the money to buy heifers; helped the boys select their animals, feed them, manage them and market their milk, which helped in our problem of financing. After the local banker saw that we knew what we were doing, he began to go along with us, because he knew it was a sound program. We try to have a boy's investment as close to \$10,000 as possible when he graduates from high school and some of our boys upon graduation have a net worth of \$170,000.

## Credit for Investment in Cattle

Investments of our 31 young farmers range from \$10,000 to \$170,000, therefore financing has been the largest problem. They all started with bank loans, but as they increase their investments and need more land, machinery and cattle, they usually turn to the Federal Housing Administration or the Federal Land Bank. We have borrowed from production credit associations, insurance companies, and occasionally from private individuals. Some of our dairymen produce over 1400 pounds of milk daily and are milking as many as 125 head of dairy cattle. Out of our 31 young established farmers, 27 are dairy farmers and 4 are beef and general farmers.

Since the first boys graduated in 1954, went in debt on their own, and came out as good farmers making money, we have had no problem "selling" the parents, school, community, or the boys that farming is a good business. We take a boy and start him in business and never let him go. We stay with him by visitation and young farmer classes, and we all work out our problems together as we come to them.

An ever-increasing problem to us right now is land. When older farmers move out, we move a new one in; however, we have more boys waiting than we have land. Consequently, some of them are having to find land in adjoining communities but are still



tied to us by our classes and other activities.

#### Our Graduates

The Ripley Chapter has been averaging four boys per year going into full-time farming. Many of them go to college, and then come back to the farm. We have an average of 75 percent of our graduates in agriculture going into farming or into work directly connected with agriculture.

In my opinion the steps needed to establish a young man on the farm are:

1. Interest the boy and show him farming can be a successful and profitable business if operated correctly.

2. Make sure the enterprise he chooses is suitable for the community and its future looks good.
3. Help him finance the enterprise.
4. Help in his selection, selling, management, and finding land.
5. Stay with him, out of school because it is then that he needs help the most—he has so many more problems trying to become independent.

The Ripley Chapter is graduating 12 boys this year; 8 of them are applying for the State Farmer Degree, and collectively they have an investment of \$29,407.25. All eight of these boys plan to go into farming as soon as land is available. The other four

boys graduating are applying for agricultural scholarships in dairying at Oklahoma State University.

We do not buy many show cows but buy production cows which we exhibit. We intend to keep the cows for a business venture, and the product we sell is milk. We try to give our FFA members recognition by judging contests, and at the same time they learn to select their products. We feel that if every chapter adviser would ask his chapter members how many would like to farm, survey their community to see what possibilities are there and then try to do something about it, every chapter could establish young graduates in the business of farming. □

## Six Types of Supervised Practice For Virginia High School Students

EVANS G. THOMPSON, Agricultural Education, Virginia Polytechnic Institute  
Blacksburg, Virginia



#### Primary Purpose of Vocational Agriculture

The instructional program in vocational agriculture in Virginia is in the process of being redesigned to more effectively meet the needs of those individuals who plan to farm or seek employment in the other segments of the agricultural industry where a basic knowledge of agriculture is needed or desired. In general, this includes those individuals who desire to prepare for opportunities in the production (farming), processing and marketing, or supply and service segments of the agricultural industry, as well as, those who plan to enroll in a college of agriculture to prepare for a professional career in agriculture.

#### Adjusting the Instructional Program

The many changes that have and are occurring in the total industry of agriculture, including the increased emphasis on the application of science to agriculture, indicates a need for more emphasis in the instructional program on the fundamental sciences involved in agriculture. The instructional program in vocational agriculture in Virginia has been revised in terms of these changes. The teaching units (basic units and enterprise jobs) have been organized under four

broad fields of agriculture, namely: animal science, plant science, farm management, and farm mechanics, plus the related areas of supervised practice, leadership training, and farm family living. Some 42 basic units have been developed in the various fields of agriculture. These units cover a broad field of agriculture, such as plant science. They include the basic science necessary for the development of the student's understanding of the fundamental principles and procedures involved that apply to the various segments of the total industry of agriculture.

The following is an example of how a study of the basic unit, *Fertilizers and Nutrients*, would apply to individuals who may desire to work in the various segments of the industry of agriculture.

In studying the basic unit the student would develop an understanding and basic knowledge of: (1) sources of fertilizer ingredients, formulation, and analysis, (2) functions of plant food elements, (3) plant food requirements of various crops, deficiency symptoms, and balance, (4) effects of soil acidity levels on the economic utilization of fertilizers, and (5) fertilization practices for various crops on specific soils in terms of expected yields and economical returns.

A study of this unit would develop

fundamental understandings that would be used by those who plan to enter the various segments of the agricultural industry in the following ways:

#### A. Those Who Plan to Farm

To produce crops economically it is necessary to constantly adjust practices in terms of the most recent research. In order to make sound decisions in selecting the correct practices for specific farming situations, it is necessary to have a basic understanding of:

- (1) The functions of various plant food elements
- (2) Plant food requirements for specific yields of various crops on specific types of soils
- (3) Characteristic symptoms of plant food deficiencies
- (4) Economical sources of various plant nutrients
- (5) The effect of soil acidity levels on the economical use of fertilizers
- (6) The principal of diminishing returns in terms of fertilizing crops.

#### B. Supply and Service Segment of Agriculture

Those who plan to work in the fertilizer supply and service area need a basic understand-

ing of the functions, sources and requirement of plant food elements for various crops in order to formulate and prepare fertilizers of the proper analysis to meet the needs of various crops in the most economical way possible. A knowledge of the methods, rates, and time of application is needed by those who may apply the fertilizer for the farmer. Service and supply people would be better qualified to counsel with farmers in providing appropriate services.

#### C. *Processing and Marketing Segment of Agriculture*

Those who plan to work in the processing and marketing segment of agriculture need a basic understanding of the functions and effect of various plant food elements on the quality of various crops. Improper fertilization may lower the quality of farm products and may have an effect on procedures to use in processing (grading, packaging, and storing) and marketing certain products. For example, high nitrogen fertilizers applied too late may increase the size and softness of some small fruits and berries to the point where normal grading machines cannot be used and may reduce the time that the product can be kept in storage. Fertilization practices also affect the maturity and quality of grain crops. It is necessary to recognize these conditions in order to determine a reasonable price to offer for the products and to determine the most economical procedures to use in processing and marketing.

### Louisiana Scores Judging Contests with Digital Computer

Automation has come to the livestock judging contest. An electronic digital computer was used to select the winners in an FFA Judging Contest April 6, 1963, at Louisiana Polytechnic Institute, Ruston, Louisiana. The computer graded individual contestant cards, totaled individual and team scores, and selected winners in about one hour.

#### D. *Those Who Plan to Study Agriculture in College*

Colleges of Agriculture have increased the requirements in the basic sciences which has generally necessitated a reduction in the hours required in technical agriculture. This has been accomplished at Virginia Polytechnic Institute by dropping practically all of the introductory and beginning courses in technical agriculture as a requirement in the various curricula. This, in effect, starts the student on a higher level in technical agriculture courses which is similar to the changes that have taken place in English, Mathematics, and some of the basic science courses in college. Thus, a student who has studied a basic unit such as *Fertilizers and Nutrients* in high school, will be better qualified to perform satisfactorily in higher level technical courses in agronomy, horticulture, and other areas of plant science.

#### *Supervised Practice Programs*

The concept that participation experience is necessary in learning to perform in a vocation is fundamental in learning to perform in the vocations in agriculture. The supervised practice program of a student enrolled in vocational agriculture, if properly planned and carried out, will provide the means by which he can develop understandings, skills, and abilities that are needed by one preparing for work in the industry of agriculture. The primary purpose of a supervised practice program for a high school student enrolled in vocational agriculture is to provide experiences that will contribute to the development of the abilities needed

for efficiency in the type of work in agriculture in which the student is likely to engage. It provides an opportunity to develop deeper understandings through application of practices and principles in actual situations.

When we take a serious look at the students we have enrolled in vocational agriculture, we must recognize that many of them have very limited or no facilities for carrying out a satisfactory supervised farming program. Also, only about one-fourth of the students enrolled in vocational agriculture in Virginia go into the production (farming) segment of the agricultural industry. It is imperative that we broaden our concept of supervised practice in terms of changes taking place in the total industry of agriculture. Too often, we have assumed that a supervised farming program is the only way for a boy to secure the necessary participation experiences. With proper planning and supervision, there are many ways for a student to secure participation experiences.

Since space will not permit me to discuss the various ways in which supervised participation experiences may be secured, I am simply listing below the various types of supervised practice programs that a student enrolled in vocational agriculture in Virginia may have:

1. Supervised farming program on the home or other farm.
2. Placement for farm work experience.
3. Placement for agricultural work experiences (in an agricultural business other than farming).
4. School-owned laboratories.
5. Cooperative work experience program in agriculture with Distributive Education.
6. Combination of any of the above supervised practice programs. □

In past contests, 15 to 20 people worked several hours doing the same job. The Louisiana Tech Computing Center and the Agricultural Engineering Department cooperated in preparing the contest and the computer program.

Five hundred contestants were involved. There were six different contests with from one to seven classes per contest. A total of 1500 score cards were graded and processed.

Three card punch operators worked for 1½ hours punching the contestant placings into the cards. The punching rendered the contestant's performance intelligible to the computer.

In addition to the tremendous time-saving involved, the chance for human error in grading and tabulating and computing scores were eliminated. □

F. E. Beckett  
Department of Agricultural  
Engineering  
Ruston, Louisiana

# Non-Farm Agricultural Occupations and Curriculum Planning

E. WAYNE COURTNEY and JOHN K. COSTER<sup>1</sup>

## INTRODUCTION

During the past decade, agricultural educators, in increasing numbers, have advocated program expansion in vocational agriculture, both in terms of the clientele to be accommodated, and in terms of the objectives set forth for the program (cf. 3, 9, 10, 13, 17). Studies have been reported which show that both teacher trainers (4) and vocational agriculture teachers (14) favor a "modernization" of the program. It has been indicated (1) that approximately 10 per cent of former vocational agriculture students are engaged in nonfarm agricultural occupations (e.g., 2, 7); (2) that vocational agriculture instruction is judged to be valuable preparation for these occupations (e.g., 1, 16); and (3) that approximately 20 per cent of the workers in 327 California agricultural businesses held positions for which some measure of agricultural training was considered desirable (18).

A functional conception of the work of the farm has the effect of extending the sphere of concern for the preparation of workers beyond the boundaries of the farm, to persons who are engaged or who may be engaged in off-farm agricultural occupations. Obviously, it is neither possible nor practicable for programs of vocational education in agriculture to nurture to the occupational requirements of the total population of workers employed in the agricultural industry, a population which has been estimated to represent approximately 40 per cent of the labor force (21). Kennedy reports the identification of 786 occupations associated with farming or with agriculture, but immediately suggests that these occupations may be ranked on a continuum in terms of the knowledge of farming required or desirable for these occupations (11). As was indicated previously, Sutherland and Thompson report that approximately 20 per cent of more than fourteen thousand persons em-

ployed in 327 California agricultural businesses require some degree of agricultural training (18).

The purpose of the present article is to develop and advance a rationale for curriculum planning in existing secondary school programs of vocational agriculture designed to accommodate students who eventually may enter agricultural occupations other than farming.<sup>2</sup>

The basis for curriculum planning, as set forth herein, is the concept of relatedness in the commonly used term "farm-related" occupations. Here it is contended that relatedness refers to related abilities, or, as Courtney has stated,

"A nonfarm but farm-related occupation is one in which there is an interchange<sup>3</sup>, or overlap of abilities between farming and the other occupation under consideration. Thus, what the worker does is made the criterion for classification as a farm-related occupation, rather than where the worker works. Therefore, by definition, occupations in the agricultural industry, broadly conceived, which have no point of common concern with farming insofar as ability requirements are concerned, are not considered "farm-related" occupations. On the other hand, the definition does not restrict farm-related occupations to those which require performance abilities identical or even similar to abilities needed by farmers. Thus, occupations requiring workers with a knowledge of farming are placed in the farm-related occupations category." (5, p. 9).

## Two Approaches to Curriculum Planning

Essentially, there are two basic approaches to curriculum planning for the range of agricultural occupations described above. These approaches may be described as the "centripetal"

approach and the "centrifugal" approach. The latter approach is preferred by the writers, but the centripetal approach is presented as a basis for comparison of alternatives.

In the centripetal approach, there is a search for the least common denominator of the agricultural occupations of interest. Or, stated otherwise, there is a search for a common core, a moving inward process, and, hence, the use of the term "centripetal" to describe the process. This process is illustrated schematically in Figure 1, which shows a number of overlapping circles, with one circle representing the occupation of farming. Curriculum planning is centered on identifying the elements of the core. The elements are likely to resemble fragments of abilities, and may tend to approximate the instruction commonly offered in courses in the natural, physical, and social sciences, in courses such as biology, chemistry, and economics. Hence, the instruction is apt to be general, rather than specialized, and fail to deal effectively with the ongoing experiences of learners and with the directed experience aspect of instruction. This approach may appeal to educators who see the need for a "general vocational" program at the high school level (cf. 22, pp. 32-37), but, it is contended, this approach is not directed toward equipping a student with saleable skills, nor does it satisfy the basic requirements of vocational education.

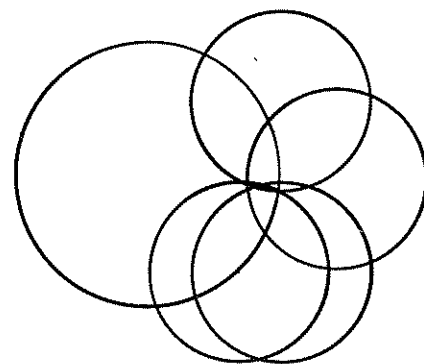


Figure 1. Schematic Illustration of the Centripetal Approach.

The centrifugal approach starts with the assumption, that the farm-related occupation is based on the relatedness of abilities. The core of the instructional program, therefore, is the abilities required for farming. Figure 2 shows a central circle, representing abilities required of farmers, with a series of overlapping circles, representing abilities required of

<sup>1</sup>Dr. Courtney formerly was a teacher educator at Purdue University, and currently is at Stout State College in Wisconsin. Dr. Coster is a teacher educator at Purdue.

<sup>2</sup>The term "advance" is used in recognition of the product of many writers. In addition to references cited previously, special recognition is given to Clark (5), Hoover (8), and Wall (20).



other agricultural occupations. Where there is no overlap, the occupation is not described as a farm-related occupation, even though the person may be employed in the agricultural industry. The amount of overlap may be assumed to vary with different occupations, and, further, the specific abilities defined by the overlap are likely to be specific, rather than general. The centrifugal approach may be thought of as a moving outward process, with the process starting with farming, and moving outward to the related occupations.

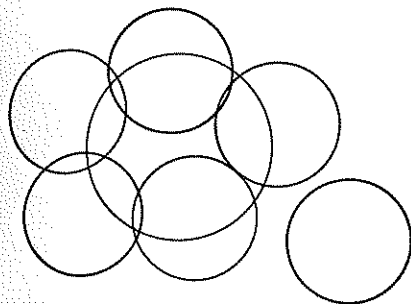


Figure 2. Schematic Illustration of the Centrifugal Approach.

It should be pointed out and emphasized that the abilities represented for each related occupation not overlapped with farming may require specialized educational programs which are of concern in the broad field of vocational education. The centrifugal approach to curriculum planning for nonfarm agricultural occupations, therefore, serves as a framework for cooperative vocational programs. But it is doubtful whether the vocational agriculture teacher should be expected to deal with the abilities outside the farming circle within the context of his instructional program.

#### Specific Aspects of Curriculum Planning

Within the context of the centrifugal approach to curriculum planning for farm-related occupations, selected aspects of curriculum planning may be identified for more extended consideration.

1. Curriculum planning for vocational agriculture involves the identification and selection of abilities required for farming, appropriate for vocational agriculture at the secondary level.

2. For each ability selected for inclusion in the course of study, the application of the ability to occupations other than farming should be identified, and the applicability of

the ability to other occupations should be pointed out and underscored as part of the instructional program. The ability to identify market classes and grades of grain, for example, may be judged to be required of farmers and of grain elevator managers. The responsibility for pinpointing the overlap of abilities is one to be assigned to the research specialist. In the absence of exhaustive research, however, the general curriculum planner, the teacher, must of necessity rely on his own personal knowledge of and experience with other occupations as a basis for demonstrating the relatedness of abilities.

3. The possibility of cross use of abilities, and application extended beyond farming, is not unlike transfer of training. If appreciation for the extended use of abilities is desired, then specific illustrations of the use of the ability in other situations should be incorporated in the instructional plans. Stated otherwise, high school students are not likely to perceive the transfer possibilities of acquired abilities unless the possibilities are pointed out definitely to them (cf. 19, p. 1542).

4. It is necessary to heighten the importance of the guidance function if full advantage of the possibilities of application of abilities to occupations other than farming is to be achieved. The guidance function may be divided into three parts. First, the entire high school vocational agriculture instructional program should be viewed both as occupational exploration as well as occupational preparation (cf. 12). Each new unit of instruction, therefore, becomes the basis of an exploratory experience to the extent that attention is directed on helping the student decide whether the ability suggests a possible area of specialized occupational interest. A unit centering on the use of farm credit, for example, may stimulate occupational interests in the area of farm finance.

Second, the guidance function in relation to curriculum planning for nonfarm agricultural occupations is made more effective if objective data regarding the interests and aptitudes of students are made available to the teacher. It is natural and logical to expect students who have a background and experience in farming to enroll in vocational agriculture upon entering high school. Later some of these students may discover that immediate opportunities for employment in farming are limited. If the teacher

has adequate information about his students, he may assist them in selecting occupational goals which utilize their background and experience in farming and their training in agriculture.

Third, the guidance function involves attention to specific educational needs of the students. There are three possible alternatives for students who are interested in nonfarm agricultural occupations. One alternative is to assist students in planning for additional formal education at the post high school level, either at the technical or collegiate level. A second alternative is to assist the student in selecting additional courses in the high school program of studies which are related to the nonfarm agricultural occupation of interest. A third alternative is to suggest that the student transfer out of vocational agriculture and concentrate on other areas.

5. Curriculum planning for farm-related occupations does not alter the basic requirement for institution directed experience. If the abilities developed as part of vocational agriculture instruction are required in farm-related occupations, then it follows logically that directed experience on school farms or other farms in the community, to assure mastery of the abilities to the point of occupational proficiency, also is to be required. Work experience in the farm-related occupation may be desired, but this experience should be in addition to, not in place of, on-farm directed experience, unless, of course, the student transfers out of vocational agriculture.

#### In Retrospect and Prospect

Program planning in vocational education in agriculture does not end with the minor adjustments in existing programs suggested herein. New occupations demand new programs, and the possibilities of cooperative educational programs are great. Here the argument is centered on (1) that program expansion is possible within the framework of existing law and policy, and (2) that quality of instruction is based on concentration of instruction, and that the teacher of vocational agriculture should concentrate on assisting students to develop the abilities which he is qualified by training and experience to perform. □

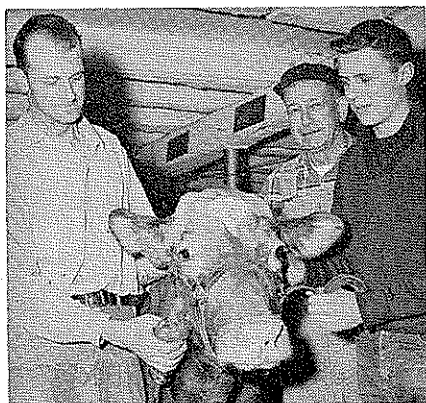
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## Farming Programs Are Basic to Occupational Experience in Agriculture

DALE C. AEBISCHER, Supervisor, Wisconsin Board of Vocational and Adult Education, Madison

The development of a competent farmer or a competent worker in one of the many related agricultural occupations which provide services for the farmer is a complex process. Training for a job which requires



Effective student farming programs involve parent cooperation in teaching. This three generation farming team in Wisconsin reflects the possibility of such cooperation.

managerial decisions and a broad knowledge in many technical areas cannot be compared with training programs for jobs which require a specific skill or cluster of skills which are performed under close supervision.

Learning by doing has been more than a slogan in vocational agriculture. It has become the heart of a process of education by which vocational agricultural students develop competence in applying the science of agriculture, the economics, the managerial techniques, and other competencies acquired through group instruction to the art of farming in specific challenging circumstances. Capacity to plan, work habits, constructive attitudes toward problems, effective use of knowledge and resources, fortitude in discouraging situations, and dedication are among

the qualities which are tested and improved in farming program activity.

The competencies in farming and the related qualities of good work habits and attitudes which are developed by vocational agriculture students have not only made good farmers, but have been recognized as the most valuable assets which a boy can carry into related off-farm occupations.

A common error in current thinking of people both in and out of agriculture education is that a sound background of understanding of farming and of farm people is not essential to those students who plan to go into related off-farm occupations which provide products and services to farmers. Such an erroneous premise in the recommendation that nonfarm agricultural students can develop adequate understandings to enter such

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## MISCELLANEOUS

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N.V.A.T.A. News—Appeared in 11 issues	July 1962 through June 1963
Letters—Appeared in 9 issues	October 1962 through June 1963

News & Views—Appeared in 11 issues	July 1962 through June 1963
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The Editorial Policy of the Agricultural Education Magazine—Ralph J. Woodin, Teacher Education, Ohio State University, Columbus, Ohio	July
Subscription Rate Increased—August-September Issues Combined—R. W. Canada, Chairman, Fort Collins, Colorado	Aug.-Sept.
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## \$52,000 Worth of Credit for Farming Programs

MAYNARD J. IVERSON, Teacher of Vocational Agriculture, Minot, North Dakota



The vocational agriculture department at Minot Senior High School, Minot, North Dakota, has an important aid in solving the ever present problem of getting boys to establish strong supervised farming programs. Noting that home (Dad's) financing and chapter revolving profits and loans are often inadequate and limited in scope, Norman Howe, vocational agriculture instructor at Minot Senior High, decided to secure outside help.

In the fall of 1958, Howe met with Raymond Skorheim, agriculture representative of the First National Bank of Minot, and past vocational agriculture instructor at Minot, to set up a Future Farmer-First National Bank Loan Program. The purpose of the program was five-fold:

1. To provide establishment of large, sound, supervised farming programs.
2. To establish credit at an early age with an established lending agency and thus
3. To provide experience for the boys in use of bank services and procedures and the necessity of agricultural finance.
4. To provide financing of projects at a reduced rate of interest.
5. To utilize community resources to the fullest extent.

### Loaning Procedures

With the approval of the administration, the following procedure was used in setting up the loan program:

1. A chapter loan review committee consisting of the adviser, chapter president and a member from each vocational agriculture class was set up to review all applications for loans.

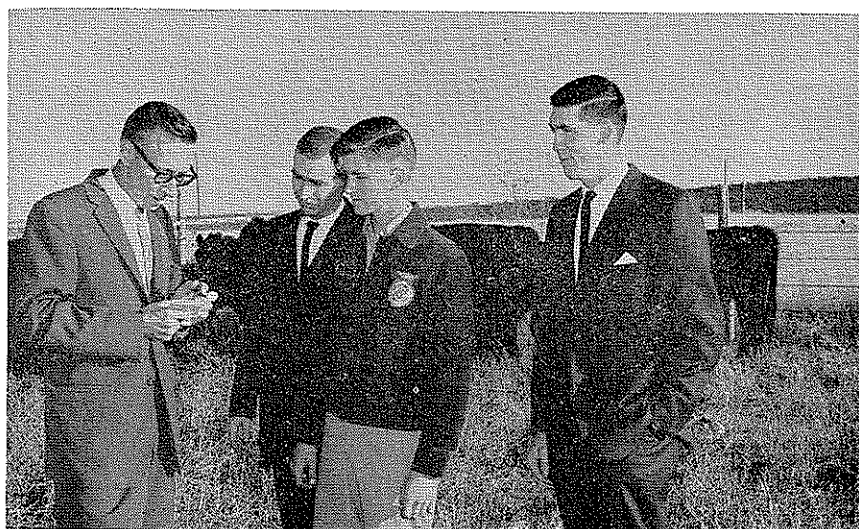
2. An agreement was made with the bank including a lower interest rate of 5% and the assurance that each loan would be treated in a businesslike manner.
3. The agriculture instructor and bank representative met with boys and parents to explain the procedure and availability of the loan.
4. To insure continuity and continued responsibility for an adult on each loan, the bank (agricultural representative) and vocational agriculture instructor share joint responsibility for the loans including visits, checks on records and advisory comments.

With the setting up of the loan program, interested vocational agri-

culture students have only to apply using a prepared form indicating size of loans, use, plan for repayment and parents' signature. The application is reviewed by the chapter loan committee where it may be approved, turned down or changed on the basis of committee criteria. When the committee has signed the approved application, the boy takes it to the bank where each request is discussed with the applicant and processed using normal bank procedure.

### Loans Produce Results

The majority of the loans have been made for livestock which generally make up the security for the loan. Beginning FFA members often secure 100% loans. Many boys secure the help of their advisor in purchase

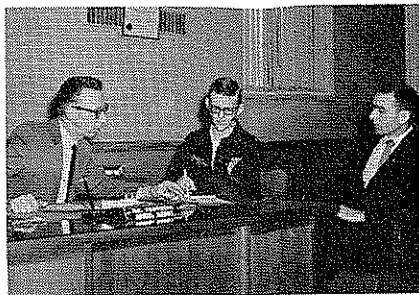


The Vocational Agriculture instructors and the bank share responsibilities in visiting loan participants for progress checks and any advice needed. In this photo, Skorheim and Luverne Mikkelson, Minot High Senior and fourth year FFA member discuss the fine herd of Aberdeen Angus which Mikkelson has built up through use of the loan program. Howe and Maynard Iverson, the second Vo-Ag instructor at Minot High, take part in the inspection.

of the animals from the local sales ring. By pooling of the orders, the instructor's time is thus saved.

As the young farmer progresses with his herd and expands his farming program, all livestock increases and other security he may acquire becomes a part of the mortgage. Some boys have applied the increased collateral of their herds toward purchase of farm machinery. One early participant in the program is paying his way through college with his livestock earnings. Payments of the loans are made from sale of part of the herds.

What has been the impact of this program in Minot? The results are convincing of its worth. Total loan



Each applicant for a Minot Chapter of Future Farmers of America—First National Bank loan takes his chapter-approved request to the bank for processing—Here, Ray Skorheim, bank Agricultural representative, discusses a loan with James Fjeld, center, FFA member. FFA advisor Norman Howe looks on.

value at present is \$15,608.23 with a perfect record of no loans "gone bad." The loan total has about doubled each year, going from a beginning of \$2,000 to \$52,057.71 this past year. Forty-five boys have participated. In at least two cases, the fathers were completely tied-up financially, so the boy and the loan program "took up the slack."

"This program has had the greatest impact on the supervised farming program of anything I've encountered," stated Howe. "It is accomplishing all we hoped it would, plus aiding in development of father-son partnerships and saving me valuable time—it's a great help!" □

## Providing Occupational Experience for Boys with Limited Opportunities

E. M. JUERGENSEN, Teacher Education, University of California

Since the very beginning of the vocational agriculture program, supervised farming has been regarded as the key to this educational effort. While justified primarily on the basis that it supplements classroom instruction, a host of important fringe benefits have been derived from this activity. Originally it served as a start in farming which, as a student progressed through four years of agriculture, grew to such large proportions that establishment in farming became a reality when high school graduation took place. For some students this is still true, but other values, such as developing responsibility or providing agricultural experience and background for related occupations, are being recognized as additional benefits of supervised farming program. This trend in no way detracts from the impact of the project or supervised farming program; rather, it highlights the need for it in the program of vocational agriculture. On the other hand, as the need goes up and up the facilities for traditional farming programs become available to fewer and fewer students, so that other avenues of meeting this need must be explored in order to provide every student with the maximum opportunity. Keeping this viewpoint in mind, a search was begun for new and unique programs which might assist with the problem.

### Purposes of This Study Were

1. To discover how teachers are meeting farm practice needs for students with limited space and opportunity.
2. To find out what kind of projects are available which require small acreage and limited investment.
3. To determine the scope and range of work experience available to students with limited or no home facilities for projects.
4. To learn if there are new or unique programs being experimented with in order to meet goals of supervised practice.

### Securing Information

A pilot survey was initiated with thirteen selected schools in the Central Region of California. The results of this first effort are reported in the summary which follows:

A covering letter was sent to each school outlining the scope, objectives, and the need for a pool of ideas and suggestions regarding project opportunities for students with little or no chance to participate in conventional farm programs. This letter emphasized the fact that each department probably had one or more unique or unusual projects which, though commonplace to them, might be new and equally productive elsewhere. With this background the following ques-

tions were asked, with the request that a brief description be included.

1. Successful projects which take only a small amount of space or acreage.
  - a. Productive (ownership)—livestock or plant. For example, raising avocado seedlings to sell to nurserymen.
  - b. Nonproductive (nonownership)—livestock, plant, processing, mechanics, etc. For example, a managerial project on parents' farm.
2. Work Experience Projects. For example, in the southern region "workerships" have been awarded just like scholarships. Deserving students are awarded an opportunity for employment during the summer months, with cooperating agriculturists, thus giving them the opportunity to learn as they earn.
3. Experimental Projects. Include those ideas which you are initiating on a trial basis, or ideas that you would like to initiate or see others initiate.
4. One new or unique way you use to initiate a project.
5. One new or unique way in which you supervise projects.

### Promising Possibilities

Cooperation and response from teachers was excellent. As might be expected, considerable duplication oc-



curred, but the net result was encouraging. The following is a brief resume of the results obtained.

1. Fifteen different projects were suggested requiring only a small amount of space. Included were the usual rabbit and broiler projects, but in addition new ideas were suggested, calling for the raising of pear or black walnut seedlings (where disease is a problem), raising sugar beets, producing bulbs (gladiolus), raising pigeons, growing cut flowers, and producing rose plants. One student cut wood on a neighboring ranch and accepted payment in calves. Another project consisted of a boat rental business. This latter is probably in the twilight zone of classification as farm practice, however, the whole area of recreation and its relationship to agriculture is a currently important topic which agricultural education can well afford to investigate for future planning.
2. Regarding productive (ownership) type projects, seven ideas were mentioned, including raising tomatoes for transplants, raising "backyard" sheep for show or as foundation stock for other students, growing roses for resale, and for students living in town, raising livestock on other students' rural facilities. This category could easily be combined with questions raised in number one.
3. There were eleven suggestions for nonownership type projects. These included the usual record management for a neighboring farm or keeping records on a single crop, and keeping fertilization records and results. Others consisted of one boy taking another in as a helper and caring for neighbors' fruit trees.
4. Many persons feel that the use of work experience, with all its implications to vocational education, is only in its infancy. Seven different types of work experience were reported, including summer work on ranches, employment at produce and processing plants (of which a record is kept), boys working for tractor dealers (for mechanically inclined boys), and milking away from home before and after school. One teacher reported a student developing a regular route for doing yard work in the city.
5. A number of teachers reported on projects with which they were just beginning or were experimenting. Six ideas were suggested. One school reported initiating a group project of town boys collectively raising livestock on school land and operating the venture like a corporation. Others suggested students leasing small plots (two to five acres) and raising crops using FFA equipment, or raising tomato plants for transplants.
6. Teachers were asked how they initiated and supervised such projects. The following ideas were expressed on initiating a project:
  - a. When visiting after school, take boys without projects to view successful projects.
  - b. With no preliminary discussion, put the summary of estimated income from previous records, using dollar signs, on the blackboard; continue putting figures on board until a student asks what they are for, then describe the project.
  - c. Start projects with club loans, utilizing town clubs (Rotary, Native Sons, Elks, etc.).
  - d. Urge individual boys to work on farms, in return for which they receive the use of a small plot.
  - e. Keep mentioning project ideas and materials available and eventually some students will take advantage of their opportunity.
7. Unique ideas for project supervision included:
  - a. Have "project successful" boys accompany the teacher on visitations.
  - b. In making suggestions, use previously successful projects as examples.
  - c. Telephone frequently to see if supervision is needed.
  - d. Use bulletin board progress reports, including use of pins to mark dates of visitation.
  - e. Find out which days and hours are most productive for visitation and supervise only on those times.

Without doubt many teachers throughout the nation have used one

or more of the suggestions reported. In fact, the variety of practices in operation indicates that many additional and valuable ideas might be uncovered. In order to accomplish this, the questionnaire is being reorganized, erasing flaws evident in the first one. Only thirteen schools were in the original pilot survey, so plans are in operation to retake the survey on a statewide basis. After this statewide survey has been accomplished and all ideas collected, specific information and details for operating the most promising kinds of supervised practice for "limited opportunity" students will be summarized and reported, thus allowing all teachers to take advantage of these ideas. □

### Prentice-Hall Scholarship Winners Announced

The winners of the Agricultural Education Scholarship sponsored by Prentice-Hall, Incorporated, were recently announced by R. C. S. Sutliff, Vice-President of the American Vocational Association. They include Richard L. Barker, Northwood, New Hampshire, North Atlantic Region; Carl E. Nagy, Jeromesville, Ohio, Central Region; John W. Showalter, Abbingdon, Virginia, Southern Region; and Ellsworth R. Wolfe, Merced, California, Pacific Region. All of the recipients are successful teachers of vocational agriculture who will be engaged in summer school study. They have good scholarship records and have assumed leadership roles in professional organizations in addition to serving their respective communities well. The \$125.00 scholarship provided to each of these men is an annual award from Prentice-Hall.

The judges were R. W. Cline, Arizona; George Wieggers, Jr., Tennessee; and Ralph E. Bender, Ohio, Chairman.



George Nornes, Climax High School Vocational Agriculture Instructor and F.F.A. Advisor was named King Agassiz III at the 1963 Red River Valley Winter Shows. Mr. Nornes was selected as the agricultural "man of the year" for his leadership and success in the field of agriculture.

# Both Sides of the Issue

## The Community Changed—I Decided to Stay

REED FRANZ, Reynolds Area Joint High School



The challenge of every vocational agriculture program should be to meet the needs of students as they prepare for a career. As the agriculture in the community changes, this challenge becomes more important and the course of study must be revised accordingly. Most of us are aware of the effects research has had on dairy, livestock and poultry production techniques. Larger units, materials handling equipment, increased application of nutrition research, among other things, have made it necessary for the professional worker to continually grow. This type of changing community is understood and for the most part, teachers and teacher educators have met these changes through programs of inservice teacher education.

However, there is an even greater change occurring within many of our school communities. The number of agricultural career opportunities has increased markedly. Urbanization has had a sizeable effect upon rural America in recent years. Mercer County in Western Pennsylvania is one of these areas. Farms are being sub-divided into home sites. Areas that once grew corn, wheat and hay are being acquired for flood control projects, recreation areas and expressways.

### Changing Employment Opportunities for Students

Interstate Highway 80, now under construction, crosses the county in an East-West direction while Interstate Highway 79 has been advertised for bids at this writing and will cross the county in a North-South direction.

These changes have and are decreasing the number of farms and farm operators. Consequently, we have experienced a decline in the number of students who are interested

in farming as a career. For a while this decline went unnoticed. Now, we are at a point where vocational agriculture, as it has been known for so many years, cannot survive if it is to be the only type of training we are to offer.

We find that as our farms have changed to lawns, parks, golf courses and shopping centers, rural youth have become interested in a whole gamut of new careers. The need for landscape planners, grounds keepers, garden center managers and the like is being felt. Urbanization has not erased the need for vocational training in agriculture at Reynolds High School, but it has forced an adjustment in our instructional program.

Reynolds Area Joint High School is one of twelve high schools in Mercer County. Seven of these schools offer courses in vocational Agriculture. Our vo-ag course of study has recently been revised to place additional emphasis upon horticulture, including ornamentals, turf management, and greenhouse management. While we expect many of our students to continue their interest in farming, we have attempted to proportion our instruction to benefit a wider range of student interests and needs.

### A School Greenhouse

All of our students get experience in the department greenhouse. During the fall the greenhouse is used for forage crop demonstrations and other plant experiments. Also, about 45 one year old geranium plants are potted by students to provide cuttings for the production of 500 geranium plants for the Memorial Day trade. The balance of the 17' x 20' greenhouse is used for producing vegetable plants. We feel this selection of greenhouse activities provides each student an opportunity to learn basic agricultural science as he gains experience in growing plants under controlled conditions. No matter what agricultural career a student may eventually choose, he will find this knowledge and experi-

ence useful. Although the greenhouse is primarily for educational purposes, so far we have made it a self-supporting project.

There is another reason why we have an obligation to revise and expand our training program. Unemployment is a problem in our area of the State, as it is in many other areas. Local development and planning organizations are seeking new industries. Many of our leaders are concerned about the future growth of the community. Recently, an organization was formed to develop local tourist attractions. Although educational programs cannot be expected to find immediate answers for unemployment problems, I think we do have a responsibility to workers to become gainfully employed in occupations which contribute to the economic growth of the community. This cannot be done unless each of us responsible for vocational programs makes an accurate and truthful appraisal of employment opportunities.

### Meeting Employment Problems

Some indicators of employment needs and opportunities are available in each township and county. Recent census figures and agricultural statistics are helpful in appraising the situation. Other indications may be found by studying the occupations of high school graduates employed during the past several years. These may show as we found, that some graduates are working in florist shops and ornamental nurseries, constructing and maintaining golf greens, employed as wildlife managers and tree surgery or in similar types of employment. In many cases, it will be found that graduates so employed did not enroll in vocational agriculture because the program was thought to be for those interested in becoming farmers.

The value of greenhouse and nursery products has shown a consistent growth in the past 20 years and now represent 8.4% of farm income in

(continued on page 46)

# The Community Changed—I Decided To Change Jobs

J. P. BRESSLER, Teacher of English, Williamsport Technical Institute  
Williamsport, Pennsylvania



After 20 years of teaching Vocational Agriculture, I have at last signed my last project book, and have turned to another phase of teaching. This in itself is not news, but the conditions and experiences that lie behind this decision may have some value to others who may be faced with a similar choice.

There is no need to rehash the present plight of agriculture; that is too well known to repeat. What is important is that the results of rapid urbanization, the creeping but relentless decimation of the farm labor force through mechanization and otherwise, are at last being seriously felt, especially near urban centers that have hitherto sponsored excellent programs of Vocational Agriculture. When I speak of why I quit teaching agriculture, I hope I am reflecting these changes accurately, and believe that similar conditions can be expected within the program in most areas where the urban influence has overshadowed agricultural growth in its environs.

## These Were the Changes

This story is, by now, a common one. Comparatively stable economic conditions have caused a rapid rise in industrial expansion and in the population that has clustered around the city in an ever-widening suburban periphery. Much of the land on which FFA projects flourished only 15 years ago is now in houses. Even a school farm that we worked only six years ago is now a sprawling housing development. Corn rows that were headed by such signs as DeKalb or Pioneer are now wide avenues and streets bearing such names as Park Avenue or Willow Street.

The former, sharply-drawn lines between city and country are no more, and the shadow of industry extends even farther in its influence.

The high cost of entering into farming has become another factor in the choice that farm boys must make within this influence, while at the same time the lure of greater security in the industrial life of the community offers a more sober answer. Furthermore, farms near the urban centers have assumed a new denominator of value based on the price of building lots so that few could afford to buy really good farm land in such areas if they wanted to. The answer has been a dwindling enrollment in Vocational Agriculture, and when the classes decline in size below economic justification, Vocational Agriculture is in trouble.

## Possible Approaches

We could stop right there, for the answer is as simple as that. There are, however, other factors that need to be aired, for they have a distinct bearing on what we may expect from here on. I would not have changed my teaching field had these conditions offered hopes of being met by a transition from one type of Vo-Ag program to another based more realistically on the changing times. There has been much speculation about the possibility of changing some objectives of Vocational Agriculture for just such situations as ours, to include a poly-purpose program of so-called "Agribusiness," ornamental horticulture, and some service trades in agriculture. The change, if it is ever to come about, is already too late for some of these departments. They have been left to wither on the vine.

Ours is a large vocational school (Williamsport Technical Institute) where farm as well as city boys and girls have a varied choice of vocations. The farm boys now invariably choose the short-range goal of industry, for they can do well at once, without the large investment in agriculture that would be their only hope so long as the agricultural course offers no alternative training. But industry includes many jobs which could come under the agricultural department training, if the offerings were properly diversified. To justify

the cost of specialized instructors and equipment for such fields as ornamental horticulture and agricultural equipment service, students must be drawn from a larger area. Vocational Agriculture in its present form is not set up for that, nor does it appear a promise in the near future unless the area technical school becomes a reality.

Furthermore, the well-established rural vocational agriculture department cannot be expected to have any great interest in the problems of the more urban departments. The impact of change has not yet been felt there so severely. This does, however, cause a split personality within the profession which it can ill afford at this time. With such powerful forces as The Committee for Economic Development, out to do us no good, a united front and a vigorous, well-framed program is essential now.

Add to this the changing political picture of redistricting, and the power of the urban ballot to elect candidates who have an anemic interest in agriculture at best, and you find a diminishing list of friends. It may be merely a question of time until this new balance of power is translated into what they call a more equitable distribution of vocational funds. A recent CBS program, ALL AMERICA WANTS TO KNOW, made a specific point of the fact (as they put it) that one third of the money now spent for vocational education goes for agriculture which has only about six percent of the work force. Regardless of the accuracy of the figures, the point was made, and it was not meant to help the cause of vocational agriculture in my department or yours.

## What Kind of Students?

As a last resort, the tendency among school men has been to pad shrinking enrollments in agricultural departments with problem students who must be put "somewhere" regardless of their suitability. These mentally and often morally bankrupt cases are not suited for training

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# Ohio Seniors Given Work Experience in Farm Related Occupations

REX CUNNINGHAM, Teacher of Vocational Agriculture, Arcadia, Ohio

If you are in a fringe area in relation to the number of farming opportunities I believe you should re-evaluate your program as to utilization of occupations related to agriculture. At Arcadia enrollment had declined to twenty-one students and less than 25 percent of graduates were returning to farming; therefore I decided to try to determine the cause of this attitude toward agriculture in my community.

A comprehensive study of the area indicated that of a ten million dollar school district evaluation, eight million was invested in farming operations and farm related industries. With a high school enrollment of 186 and total school of 750, there appeared to be huge potential for vocational agriculture in the future, although the district lies between two cities of over 20,000 population and is rapidly being urbanized.

This afforded me with rather dicotomous hypothesis of the situation. One being that students with good agriculture backgrounds should be very much in demand and the other was that something in the present curriculum was lacking or these situations could not exist.

Data received from surveying vo-ag graduates from the previous ten years indicated they believed more technical and mathematical areas should be included in our curriculum so students would be better qualified to enter related and unrelated agricultural occupations. Additional surveys of potential students reflected the fact that an education in agriculture was desired although opportunities for farming were limited.

I further personally interviewed managers of fifteen agriculture related industries to acquire their attitudes toward graduates of vocational agriculture. These interviews indicated an agriculture mirror in which was reflected an unlimited number of opportunities and employment possibilities for qualified students.

As a result I instituted a special senior farm shop course with a vo-

ational guidance phase added this past year. Since these changes enrollment has climbed to over forty and several interested students have been placed in various farm related occupations.

This new part of the curriculum was brought about through a special senior farm shop course, which is in addition to the normal four year program because past graduates have expressed the need for themselves to become better qualified in related and nonrelated agricultural occupations upon graduation.

This special course is open only to boys not planning on going to college or returning to the farm, and who possess average or above ability as determined by the vo-ag teacher and guidance counselor. For example a typical student might come from a general farm where the family is financially unable to expand for him to enter the operation or a student who has been on a work experience program and wants to continue in the agriculture field. During his senior year in high school he would follow a curriculum of English, Democracy, Vo-ag IV, and the special senior farm shop course. During this special course he would still maintain his farming program because this course is strictly elective and is not intended to have any particular relationship to the farming program. The content of this special course includes the following areas and related subjects.

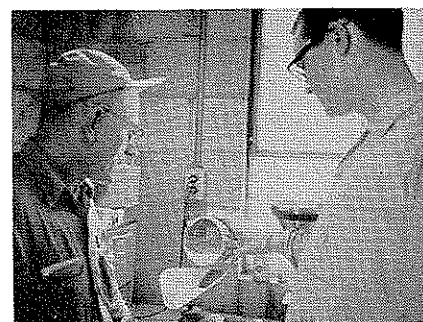
- 15 weeks Agricultural Mathematics (Algebra, Mensuration and Trigonometry)
- 6 weeks Agricultural Blue Print Reading
- 2 weeks Agricultural Advanced Electric and Ox-acetylene Welding
- 2 weeks Advanced Agriculture Electricity
- 10 weeks Agricultural Guidance

The guidance area of the curriculum has just been initiated this past

school year. The objectives of this phase are: (1) Have students gain meaningful experiences in farm related occupations; (2) Help students make social adjustments prior to entering an occupation; (3) Provide students with first hand experiences while being supervised by others.

Students are selected to work with a specific agricultural industry based upon their abilities and interests as concluded by the vo-ag teacher. The duration of this part of the course is ten weeks for four hours per day. The student takes regular high school courses in the morning and is compensated only for transportation and clothing. Within each industry the student is provided with enough time to become acquainted with each phase of the operation whereby he can formulate his own behavior patterns toward such occupations as sales, management, bookkeeping, parts clerks, mechanics, carpentry, and similar positions.

Since initiation of the program, two groups have graduated with a total of eleven boys. Of this group three have returned to farming, four are in farm related occupations. Of these one is a head bookkeeper in an elevator, while the others work in a soybean processing plant and flour mill. Two others are now in the College of Agriculture at Ohio State University and one in the military service. The other boy after becoming interested in mechanics is studying to become



Pictured above is Dick Gassman, who is receiving instructions from Oren Bibler, the mill manager at the Landmark grain terminal who is one of the cooperating agriculture related industries.

an aircraft mechanic in Miami, Florida. One might reasonably question why the change of attitude and vocation. By course study and work experience in an industry a change in occupational selection occurred which is exactly what I had hoped would result from this program.

I believe these agriculture related industries are an untapped resource

which vocational agriculture has only begun to utilize. From my limited experiences I would encourage other teachers to embark upon a program of vocational guidance in agriculture related occupation for their students as a part of their total school day curriculum whether they have a special course for this purpose or not. I further believe that such a program

should only involve students who are academically average or above. Looking toward the future, possibly vocational agriculture will resolve some of its former outmoded standards and require all senior boys to actively engage in some agriculture related industry in addition to or without maintaining a farming program. □



## Providing Supervised Practice— School and Community Should Share

TEXTON R. MILLER, Teacher Education, North Carolina State University,  
Raleigh, North Carolina

We need to take a new look at supervised practice in Vo-Ag for our high school students. Our new concept should more fully recognize (1) the expanded and specialized phases of modern agriculture, (2) the changed environments of Vo-Ag enrollees, and (3) the modern principles of vocational guidance. When this has been done, the term "supervised practice in agriculture" will seem more appropriate than the term "supervised farming program."

### Assumptions:

Let us first consider, however, some basic assumptions about education in agriculture for high school students.

- (1) The primary concern of the high school phase of vocational agriculture is the student—providing him with the greatest opportunities possible for developing his interests, knowledge, understandings, and abilities in the expanding field of agriculture.
- (2) Effective teaching-learning in vocational agriculture is dependent upon the inclusion of appropriate learning experiences in agriculture. Accepted principles of learning support this aim of learning to do and doing to learn. Reinforcement of learning is an essential part of the learning process.
- (3) The primary purpose of the supervised practice program is to broaden the quantity and quality of opportunities for effective learning activities in agriculture. Application and discovery in realistic situations is the function of a supervised practice program.

With these assumptions in mind, let us consider some recent changes in agriculture and education which have implications for our concept of supervised practice in vocational agriculture.

### Modern Agriculture:

Today the term "farming" has come to mean only one phase of agriculture production of farm products. We should recognize two other phases of agriculture: agricultural processing and marketing and agricultural services, including the professions. Many of the activities of these two phases once were performed by the farm operator. Although no longer done on the farm, they provide a large number of occupational opportunities. Without adequate learning experiences in these phases, the agricultural education of high school students is incomplete.

### Changed Home Situations:

Many students who are enrolling in Vo-Ag today do not have adequate home facilities for a broad experience program in farming; least of all, the broad field of agriculture. The new concept of *supervised practice* should include recognition of the responsibility of the school and community to furnish a greater number of supervised practice opportunities for Vo-Ag students.

### Research in Guidance:

Recent studies in the field of counseling and guidance have implications for the concept of supervised practice. First, we now know that youth should not be expected to make more than tentative occupational choices at the ninth and tenth grade levels. Vocational agriculture teachers can no

longer insist (if they ever could) that students declare their intentions for a career in farming or other agriculture as a prerequisite for enrolling in Vo-Ag. It is even less valid to insist that students provide their own supervised practice opportunities as an enrollment qualification. Thus, if adequate supervised practice is provided, the school and community must become involved.

There is another point in vocational guidance that is often overlooked, even by vocational educators. It is that vocational choice itself is a vital part of the vocational educational program. A "vocational" program should provide exploratory experiences as a basis for career selection. Supervised practice in farming alone is not sufficiently broad to provide learning experiences representative of modern agriculture. Supervised practice should include exploratory experiences in nonfarm, agricultural occupations as well as in farming.

At this point, it seems logical to attempt a definition of a modern concept of supervised practice for high school students of vocational agriculture.

### A Definition of Supervised Practice:

*Supervised practice* consists of those learning experiences, related to instruction, which require development beyond the normal school hours and class facilities.

*Supervised practice* utilizes the realistic work opportunities made available at the home, the farm, the school, and community businesses, for developing the desired and needed level of student competency in agriculture.

The term "supervised" refers to the

guidance and counsel provided by the teacher, parents, employers of the students, for the primary purpose of insuring meaningful, effective, on-the-job experiences.

#### *Role of Supervised Farming Programs:*

The fact that we need a broader concept of supervised practice does not imply that supervised "farming" programs will not continue to be a very important aspect of vocational agriculture. For many students the core of supervised practice may well be the supervised *farming program* at home. However, one's concept of supervised should not be limited, either by the term "farming" or by the term "home program."

#### *Role of the School:*

The development of appropriate supervised practice anywhere within the broad field of agriculture should be encouraged. Furthermore, the school and community should assume a larger responsibility in providing supervised practice opportunities.

Only with this expanded concept of supervised practice can we look forward to developing the most desirable, appropriate, effective program of learning experiences in agriculture for all who are enrolling in vocational agriculture. □

### **Basic . . . Aebischer**

(continued from page 34)

fields as feed and fertilizer businesses by merely working in retail establishments.

If thought is given to the amount of influence that employees in these businesses exert on what farmers purchase, the need for a sound understanding of a farmer's needs is obvious. Employers in these and similar businesses tell us that many of the various specific skills in their businesses can be taught and learned quite effectively after employment. An adequate understanding of farming and of farmers, however, cannot be acquired after employment.

For the student who is sincerely interested in either farming or off-farm related occupations, experience programs that provide a maximum of actual farming with emphasis on the type of program which involves management and record analysis will best prepare the individual for the future. Instructors in agriculture need to be realistic in suggesting farming or experience programs in relation to individual capacities and opportunities.

Such comments as the following

are common. "A boy wants to become a veterinarian. Why should he need to have farming experience?" If the boy reaches his goal, there is about a 50% chance that he will engage in a large animal practice. He will need to know how to work with farmers and to understand their problems. The same type of questions asked in relation to a greenhouse objective would need a different answer. An agricultural student could conduct a most satisfactory "farming program" by working with and learning the numerous phases of a greenhouse business.

While work experience in related off-farm agricultural occupations is valuable from an exploratory standpoint, it can supplement but cannot accomplish the same purpose as effectively planned and conducted farming experience. Vocational agriculture has a very serious responsibility in developing the kind of farming programs which give a student an insight to the problems of applying the technical resources available to farming within the general structure of sound farm management. The current trend to bigness in farming in acreage, size of herds, amount and kind of mechanization and indebtedness has frequently not been accompanied by farm management equal to the problems created.

Both farmers and those in occupations directly serving the farmer need a background of experience and education which will enable them to make the technical resources of agriculture an asset in farming rather than economic traps which leave the countryside littered with the wreckage created by inept application. □

### **Changed Jobs . . . Bressler**

(continued from page 43)

for a farm business, and the milieu thus created has not done vocational agriculture any good. When the agricultural department becomes a haven, it loses its true purpose.

Fortunately I know that, as a field, vocational agriculture is in a much more stable position than some of its urban components, and this is in no wise intended to cast gloom over the future of vocational agriculture. We are dealing here with a basic industry and education is an integral part of it. I hope that my decision need not be made by many of my old friends who wear the advisor's jacket. As a person on the outside now, let me give an honest conviction that a clear-cut program must come from

within the profession, and that it must have a new, built-in sales appeal, for you have fewer friends now to help you sell.

#### **New Satisfactions**

I am now teaching Technical Communications to adult technicians in training at the Williamsport Technical Institute. This includes: research techniques, report writing, and oral communications. While this would not be a normal transition for an ag teacher to make, it does give me a unique position to view vocational agriculture in a wider perspective. A recent research study has revealed that in 18 months of teaching this new course, I have taught more former FFA and 4H students than have graduated from our Vo-Ag department in its 18-year history. In another year you can drop 4H from the list and the figures will still be valid. The figures are especially significant because our enrollment comes from many states and largely from rural areas. This must surely hold some significance that bears watching.

While I greatly enjoy the new assignment and will give it the same zeal and enthusiasm that I formerly gave to Vo-Ag, nothing can ever replace that certain indefinable satisfaction that comes from teaching boys for a life on the farm. □

### **Decided to Stay . . . Franz**

(continued from page 42)

Pennsylvania.<sup>1</sup> Over 17 million square feet of space is devoted to the production of flowers in greenhouses located in every county of the State.<sup>2</sup>

I do not favor promoting a false need for conventional vo-ag programs if the number of farms in a school patronage area does not justify it. If an adjustment in the training program can better serve the community the vocational agriculture teacher and all concerned have a moral obligation to bring about such a change. We can no longer afford to follow the trend; we must help determine the trend.

I believe vocational agriculture at Reynolds High School has a definite and an important role to play in the economic and social development of our community. The obstacles we have and will continue to encounter need not jeopardize this development. □

<sup>1</sup>Weekly News Bulletin, Pa. Dept. of Agriculture, Vol. 47, No. 47, Nov. 21, 1962.

<sup>2</sup>Weekly News Bulletin, Pa. Dept. of Agriculture, Vol. 47, No. 27, July 5, 1962.

## Cabinet Aids in Cleaning Chores

NORMAN PAUTZ, Teacher of Vocational Agriculture, Chilton, Wisconsin

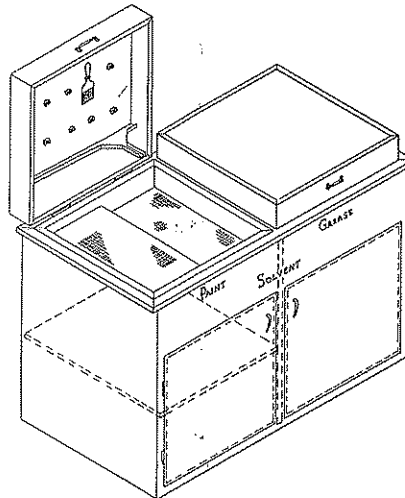


Do you have the problem of washing paint brushes, cans filled with paint laden turpentine, crooked brushes from improper storage, high turpentine cleaning costs? Or perhaps you are troubled with washing greased parts such as bearings and upon finishing this job begin to wonder where you will dump the solvent, or store it until such time when it will be used again? Then this idea might be worth trying.

This is a standard height cabinet made primarily out of three fourths inch plywood. Dimensions are such that maximum utilization can be made out of standard four by eight foot sheets. The cabinet is mounted on casters for ease of movement. The covers exist as split and separate covers over two sinks. The sinks are made of galvanized sheet metal. In the sinks are removable screens with the two halves of the screens at different levels. One half of the screen is below the solvent level while the other half is above to allow for dripping and draining. One of the sinks is used for paint brush cleaning and storing while the other sink is used for washing all greased parts. Paint brushes are stored in the cover which has a galvanized

background and drip for any possible drainage back into the tank. Greased parts can be washed and then allowed to drip when placed on the higher screen elevation.

The solvent used is a product of the Standard Oil Company called Stanisol. It is a very effective and yet inexpensive product the cost being not much more than kerosene. The solvent is allowed to stay in the sinks in most cases for the school year. There will be a build up on the bottom of sludge or dissolved paint. This might be stirred up and the entire content then poured away as it is very inexpensive.



SCALE 3/4" = 1"

The storage below is split—one side shelved for paint and new brush storage. The other side is made purposely for the storage of two five gallon cans of new and unused solvent.

We have found that the cabinets use has helped us greatly here at Chilton in our Vocational Agriculture Shop. Boys now enjoy painting or at least do not hesitate to go ahead knowing that they will have a clean brush to start with and that cleanup will be no problem when finished. □

Education makes people easy to lead, but difficult to drive; easy to govern, but impossible to enslave.

—Lord Broughman



**N.V.A.T.A.**  
**News**

Wenroy Smith  
President, NVATA

### NVATA NEWS

Each day we read and hear about the unemployment problems especially among the high school drop-outs and those who have recently graduated from high school. Various figures are quoted from time to time by writers, educators, legislators and others. Probably no one knows the exact figure but the problem is evidently acute, especially in certain areas of the country.

One educator, considered to be a very reliable individual, has said that—"nationwide almost 30% of the high school drop-outs are unemployed, about 15% of the high school graduates are without work and unemployment of vocational school graduates is about 5%.

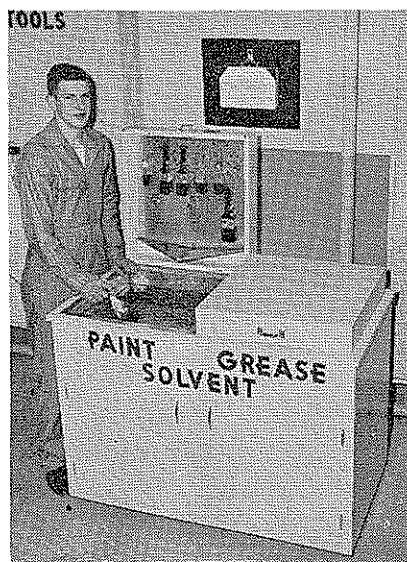
I have been unable to locate any information that shows the rate of unemployment among high school graduates who have completed all of the courses of vocational agriculture offered by their local school. A number of studies are needed in this particular area. If anyone reading this article knows of studies that have revealed such information, the writer would sincerely appreciate having the results.

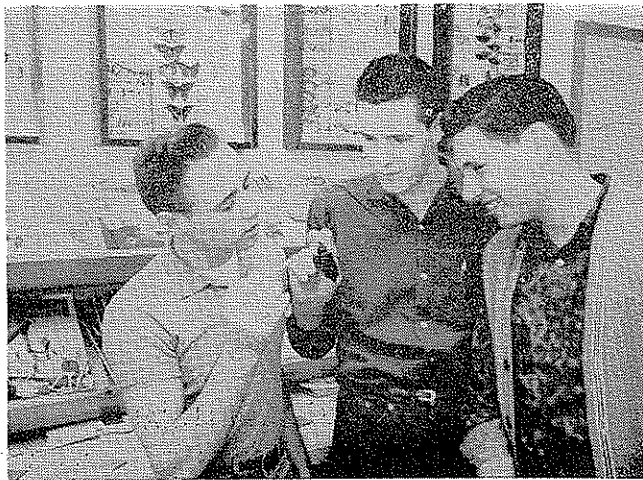
What is the employment situation of vocational agriculture graduates in your community? Take the graduating classes of the last 3 or 4 or 5 years; are 15% unemployed? Are 5% unemployed? Is the figure 1%? You may have something to brag about that is being overlooked.

How many boys majoring in vocational agriculture fail to graduate from high school? Nationally about 30% of all students enrolling in high school fail to graduate. I believe we in vo-ag can beat those figures.

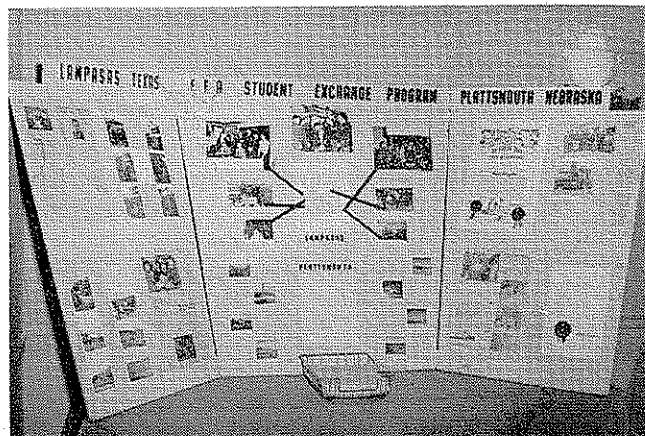
I believe that every teacher of vocational agriculture who has not recently surveyed the employment status of vo-ag majors during the past 3-5 years should do so. Employment information about this group should be relatively easy to secure and the chances are excellent that it will provide you with "facts" that can be put to good use.

Of course, a district or even a statewide study in this particular area would be desirable. Such a study would be an excellent activity for your state association.





Dale Elliott, Neil Westervelt, and Glenn Newman of the Cherokee County Rural High School vocational agriculture department of Columbus, Kansas inspect the characteristics of a large wood borer. The department has organized an extensive collection of insects to aid students in identification.

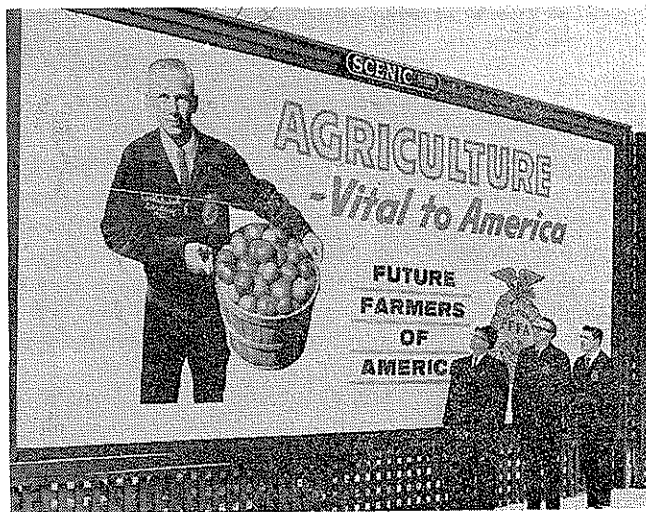


The Lampasas, Texas, FFA Chapter participated in a Student Exchange Program with Plattsmouth, Nebraska, FFA Chapter during the past year and VA Teacher Jack Lacy outlined the procedures in the program with this exhibit at the State Teachers Conference.

# Stories in Pictures



Ronald Lodes of the Lawton, Oklahoma FFA Chapter with his Grand Champion Steer at the Tulsa State Fair. Also pictured are Judge Herman Purdy of Penn State and Glen Bratcher Head of the Animal Husbandry Department at Oklahoma State University who is helping Ronald hold the trophy.



A number of outdoor advertising companies in Minnesota displayed 100 Future Farmer posters during February and March. These signs were made available as a part of the companies' public service advertising.

In the photo, left to right, are: R. R. Galarneault, president of the Minnesota Outdoor Sign Association, St. Cloud; Dale Christianson, state student secretary, of Owatonna and Ron Gernandt, Minnesota FFA president, of Faribault.



**AUTOMATION ON THE FARM**—Don Shuppert, Vocational Agriculture Instructor, Plymouth High School, Plymouth, Indiana, demonstrates a new electric feed grinder and mixer to members of his adult class. An average of 45 members attended the weekly series of meetings which are conducted each year at Plymouth High School. L. to R. Don Shuppert, instructor; Fred Neidlinger; Harold Van Vactor, President; Don Houin, Paul Horn and Elwyn Yockey, Vice resident.