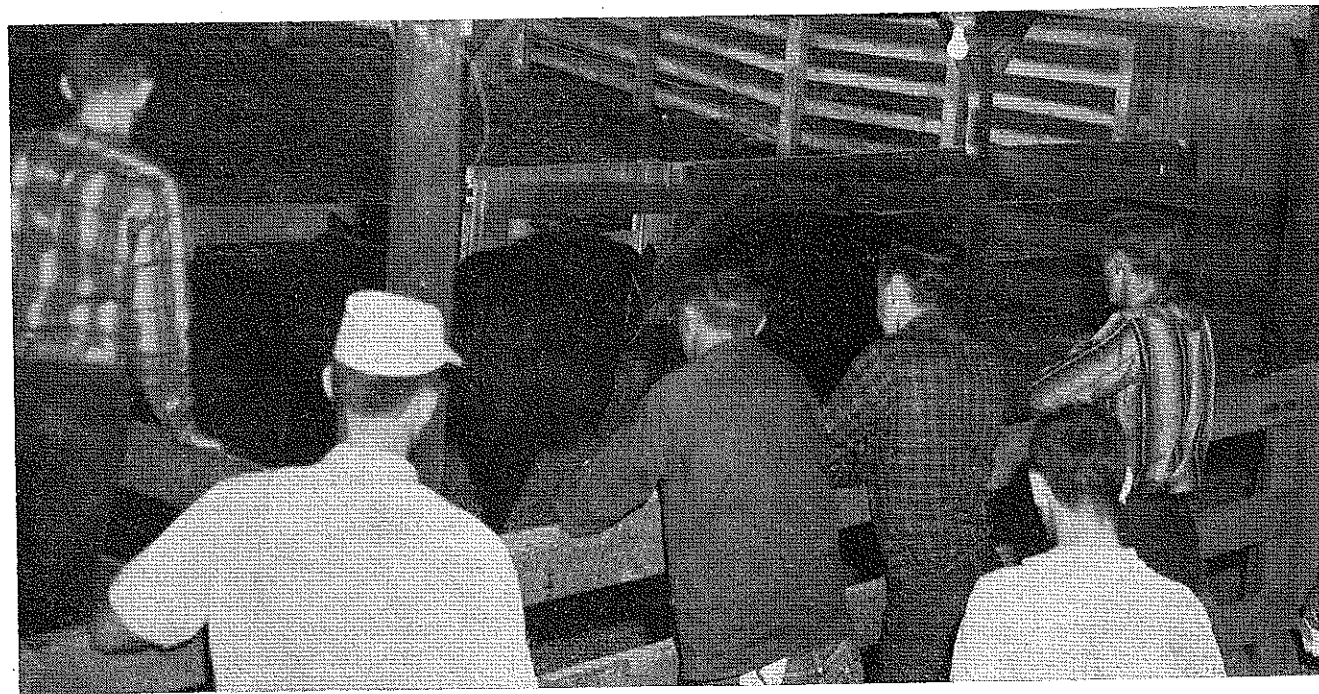


Ohio Young Farmer Wives show baking awards at Young Farmer and Wives Camp.

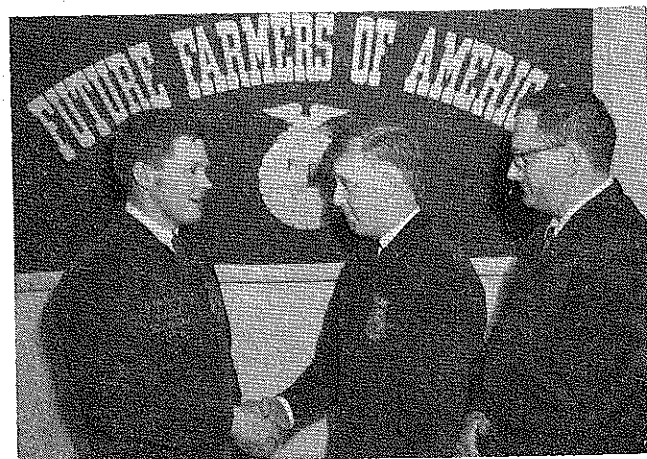
### Stories in Pictures



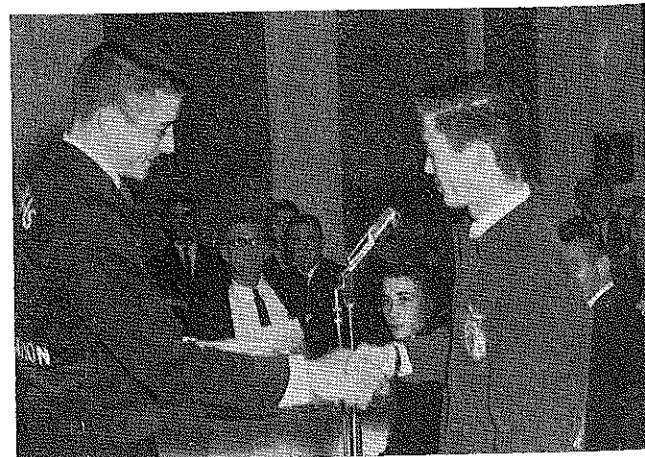
Pictures are needed for "Stories in Pictures" (this page). Dr. Gilbert S. Guller, photo editor, requests pictures from readers of this magazine. Please send your pictures to him at 2120 Fyffe Road, The Ohio State University, Columbus, Ohio.



A group of high school vo-ag students study herd sire selection at the Beef Farm, University of Arkansas, Main Experiment Station.



David Mosher, Greenwich (Center) receives certificate and checks for \$200 and \$100 from Joseph Perrigo, Weare, New Hampshire, National FFA Vice President, for being named State FFA Star Farmer of 1965. Bruce Emanuel (at right) Greenwich, teacher of agriculture and FFA adviser to Mosher looks on during ceremony at 40th Annual FFA Convention at Walton, New York. PHOTO BY Charles Anna, Alexander



Awards for outstanding achievement are presented at the annual Arkansas Association FFA Awards dinner.

Photo — R. C. Haynie

# Agricultural Education

Volume 38

DECEMBER, 1965

Number 6



Four Michigan Teachers of Vocational Agriculture preparing a unit of instruction on small gas engines.

## Featuring Planning Local Programs

The professional journal of Agricultural Education. A monthly publication managed by an Editorial Board and published at cost by Interstate Printers and Publishers, Danville, Illinois.

# The Agricultural Education Magazine

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## Editorials

### What is a Local Program?

The "local program" has been the center of attention in vocational agriculture through the years. Apparently everyone who has given thought to the matter will agree that the emphasis on the local program has been a strong point, perhaps a key point in the development of vocational agriculture programs throughout the country. This emphasis upon the local situation, while using the problem-solving approach (as Ray Cardozier discusses in his Guest Editorial) may account for the many effective programs in vocational agriculture.

The emphasis upon fitting the program in vocational agriculture to the local community can be supported from a number of viewpoints. The sociologist, the psychologist, even the philosopher would find the local view comfortable and fitting for developing educational programs for and with the people concerned. Certainly, basic democratic principles are involved in working with local people in developing local educational programs.

We seem to be on the side of the angels in giving emphasis to local programs. So, what's the problem? Well, there have been a number of problems all along and apparently they are increasing. One of the major questions around for some time, but only recently examined closely by leaders in vocational agriculture, is this: *Are the educational needs in different local communities as different as we have thought?* This question can be examined and answered from a number of different viewpoints. These vary from the view that each individual has his own special needs to that of seeing that everyone everywhere has the same basic needs. Apparently, we have decided, until recently, that all programs in vocational agriculture should operate in the same framework but that programs within this framework should be tailored to fit the needs of the local community. For example, through the years, a "complete" program in vocational agriculture included boys, young farmers, and adult farmers—regardless of the local situation. Traditionally, one teacher did all of these things, including developing the curriculum and teaching materials for all of these groups as well as recruiting and holding members. Some studies have indicated that this is a rather large order, and frequently a very frustrating situation for the conscientious teacher of vocational agriculture.

Changes in school systems through consolidation and otherwise, as well as rapid changes in agriculture, have caused us to re-examine this emphasis upon local programs tailored for a particular community. Some are developing and using statewide courses of study. Within these courses are specified units to be taught at certain grade levels without regard to the local situations. Again, the Guest Editorial raises some questions about this approach, and points to some of the implications for ineffective teaching.

The position taken here is that the question needs full discussion from all those concerned, including teachers of vocational agriculture. Other leaders are reminded that there are different levels of "seeing" this problem. For all educational programs there are the national, state, and local levels. In vocational agriculture, there is still another level between the local and the state, represented by the district supervisor. Leaders at these levels need to raise the same basic question. Just how different are the problems in my district from others in the state? How different are the problems at the state level than in other states?

It would appear that the "answer" (?) lies in the direction of *identifying high priority educational needs of local people*. This can be done only through careful study of economics, education, population, and other existing conditions *within the school community*. In most cases this information is not available. Use of census figures, except as background material, may even be misleading. Then, use of curriculum materials prepared elsewhere may be used in developing effective educational programs with the local people. Further guidelines are needed for the participation of leaders above the local level.

— Cayce Scarborough



Cayce Scarborough

### Theory and Practice

More on definitions. Maybe we mean concepts, as suggested in an earlier editorial. At any rate, many are concerned about the terms we are using. Rightly so. It is difficult enough to communicate when we are using the same term in the same way. Some have suggested that Dr. H. M. Hamlin's definition of Occupational Education is "too broad." (See this column, August issue.) It appears to me that this is a case of using a term in different ways. Hamlin's definition would seem to be in terms of *results*. That is, if education contributes to occupational choice, competency, or advancement, then it is occupational education. However, if you are trying to identify Occupational Education *in advance*, then it would seem that some limitation would need to be put on the term. Would the following be specific enough for identification, yet not be too narrow?

*Occupational Education*: education that is **designed** to contribute to occupational choice, competence, or advancement.

No takers on the offer of space in these columns to explain the development and use of the term *modules*.

Gil Guiler says that he is getting lots of pictures but not enough *good uns!* Does this challenge anyone?

Graduate assistantships are increasing in many colleges and universities, both at the master's and doctoral levels. Further information on availability will be in next month's magazine. I would urge teachers and others to give consideration to full-time graduate study. Problems, of course, but rewarding to any professional educator. Why don't you try it?

(Continued on next page)

## Theory and Practice

(Continued from page 123)

An item in The Farm Index, August, 1965, explaining the reasons for the big jump in educational level of farmers, should have implications for adult farmer programs. It was as follows:

The most striking change in educational level between 1940 and 1960 occurred in the case of farmers and farm managers, where the proportion of high school graduates increased from 19 per cent in 1940 to 59 per cent in 1960. Three major developments are behind this change: (1) Declining numbers of farms and farmers—small, marginal farms, especially tenant farms, are being steadily abandoned. (2) Increasing mechanization and capitalization of agriculture—young men entering the field must have a high degree of technical and administrative skill. (3) Increasing accessibility of schools to rural youth—school busses and paved roads have eliminated one drawback of farm living.

Cayce Scarborough

## News and Views of the Profession

"The Executive Committee of the Agricultural Education Division of the AVA has named a special committee on Professional Personnel Recruitment which is to report at the Miami Convention. Vice President Floyd Johnson says that most states have experienced difficulty in attracting and retaining well-qualified teachers in all areas of agriculture and particularly in Agricultural Education. Johnson says that the NVATA and the Land Grant College Association can cooperate in meeting the problem. Members of the Committee are—Walter Bomeli, Michigan; Wenroy Smith, Pennsylvania; M. M. Botto, Kentucky; C. C. Eustace, Kansas; Lowery H. Davis, South Carolina; and Ralph J. Woodin, Ohio, Chairman.

Professor Allen LeBlanc, University of Southwestern Louisiana, died suddenly of a heart attack on August 7. He was a graduate of LSU (B.S. 1932, M.S. 1945) and had been in teacher education at U.S.L. since 1946. He had been head of the

## Guest Editorial

## Is Problem Solving Passé?

V. R. CARDOZIER, Teacher Education, University of Maryland

Where is the *vocational* in vocational agriculture?

This is a query about the direction of teaching in vocational agriculture. For years—since the beginning of federally aided vocational agriculture—much of the teaching, probably most, was problem centered. It was centered about solving real life problems. Teachers taught pruning fruit trees, slaughtering hogs, laying out terraces—all aimed at developing the knowledge, skills, understandings and abilities required to accomplish these functions.

Now we see curriculum changes with units like horticultural science, dairy science, agricultural chemicals. Shades of 1901! Are we deceived or do we see on the horizon a return to mastery of subject matter as the objective in vocational agriculture?

Recent discussions of curriculum content in vocational agriculture appear to be surely oriented toward the subject matter, with little *direct* vocational or job orientation. We hear talk about clusters, about preparing for wide ranges of jobs. No doubt this is possible. But does it require that we abandon that highest of motivation for learning in vocational agriculture, i.e., learning how to do something and understanding it? The virtue of the problem solving approach is that it shows the learner that what he learns is *useful*, that it *leads directly toward the ability to solve his problem* or do something in which he is interested. Some curriculum plans remind us of Dr. Carsie Hammonds' story of the teacher who announced that "Today boys, our problem is oats." Oats is not the problem. For some boys, how to get a good stand of oats is a problem.

The main objection to teaching directly for job competence is the tendency to orient on skills only, while ignoring the knowledge and understandings necessary for intelligent decision making. Yet good teachers of agriculture throughout the country have long used the problem-solving approach to interest boys in those learnings which involved all of the subject matter that would be included in a strictly subject oriented unit. Thus, good teaching with the problem solving approach used a unit on "pruning fruit trees" to teach a great deal of subject matter which related not only to pruning fruit trees but to fruit production, arboriculture, and other questions related to plant life. Those who criticize the problem solving approach (i.e., in the true context of problem solving, not simply asking questions in an academic unit) as superficial and skills oriented, simply reveal their lack of understanding of the true value and use of the method.

No doubt problem solving has been abused, but on the other hand, no one has discovered a better way to interest boys and girls in what they are studying than to relate that study directly to life, and best of all, to relate the study directly to real life problems that these boys and girls face and recognize.

Subject matter training, preparation for clusters of occupations with no training oriented toward specific occupations, and hence having little or no problem reality for boys, may fall far short of the goal. The fear may be unwarranted but it suggests that over the horizon there are curricula and programs in vocational agriculture that will be loaded with subject matter but thoroughly dull for the learners. Will we walk into vocational agriculture classrooms that used to hum with activity and interest in learning to find dull, uninteresting lectures on subjects, although agricultural in content, that have little or no meaning to the pupils?

What is the answer? It is not clear, and this article does not propose to offer a solution at this time. Instead, the intent is to call the attention of everyone concerned with curricular changes in vocational agriculture to this threat with the hope that the needed curriculum changes can be made without resulting in vapid instruction.

Dr. M. D. Mobley, noted vocational educator, will retire at the end of this month following 15 years as executive secretary of the American Vocational Association.

Instrumental in promoting and strengthening vocational education and securing favorable legislation for all fields, Dr. Mobley was successful in protecting the interests of vocational agriculture in many instances. He was concerned constantly with the relation of agriculture to the nation's well-being.

During hearings prior to passage of the Vocational Education Act of 1963, Dr. Mobley appeared before both House and Senate committees dealing with the proposed legislation. His testimony included:

*"The vocational agricultural teachers of this nation have made one of the greatest contributions in the world . . . by making our present farmers so efficient that we do not need so many of them on the farm."*

*"The point I am coming to is this: We all admit that we don't need as many farmers in the future as we did in the past, but the ones we do have, if they are to make a decent living for themselves and their families, . . . must be better trained than farmers of the past, because farming is more complicated today than ever before in the history of the world."*

*"One other point I would like to make. A great deal of effort is being made and has been made over a period of 10 years, in light of this exodus . . . from farms to the cities, in the selection of people who go into training for the occupation of farming."*

*"In other words, we are not trying to enroll all the farm boys. We know that a lot of them will leave the farm, but the great majority of those who are enrolled in vocational agriculture are the ones who will most likely remain on the farm. They must be well trained. . . ."*

*"The point I am trying to make is, that though we have many leaving the farms, those who are receiving vocational agriculture, in the great majority of cases, are the ones who are likely to be managing our farms in the years ahead and we cannot stop training them."*

Dr. Mobley's agriculture background makes him conversant with the problems and needs of the farmer and the vocational agriculture educator.

V. R. Cardozier

(Continued from page 124)

It has become obvious that curriculums in vocational agriculture must change. Farm production oriented instruction, *alone*, will no longer suffice. Training in the wide spectrum must be offered to those pupils who want it. The question is: Can we make these changes without completely sacrificing the teaching practices which many agricultural educators and educational psychologists consider the real key to success in vocational agriculture?



Dr. Mobley receives a pen from President Johnson at the signing of the Vocational Education Act of 1963.

A native of Paulding County, Georgia, he was born and raised on a farm and graduated from the Dallas (Georgia) High School in 1919. He served as principal of a two-teacher country school in his home county and later earned his B.S.A. degree from the University of Georgia in 1923. For the following two years, he taught vocational agriculture in the public schools of his state.

During 1928-29, Dr. Mobley organized the Future Farmers of America in Georgia and was made state advisor for the group at the initial state convention. He held that post until July 1, 1950, when he was selected honorary state advisor. Georgia's FFA camp on Jackson Lake was developed during this

time. In 1940, he was chosen "Georgia's Man of the Year in Agriculture" by the Progressive Farmer.

When Dr. Mobley left his post as Georgia's State Director of Vocational Education in 1951 to assume the duties of AVA's executive secretary, an editorial in the *Atlanta Journal* stated:

*"One of Dr. Mobley's most fruitful fields of service in Georgia has been the Association of Future Farmers of America, which he organized in this state. He has had the vision to recognize that young people remaining on the farm must be well-schooled if they are to improve their economic status; and, further, he sees clearly that those leaving the farm need industrial training as they invade the urban labor market."*

Prior to being named state director, he served his state as teacher, teacher trainer, state supervisor of vocational agriculture and assistant state director. He holds a M.S. degree from Cornell University and LL.D. from Piedmont College.

Best wishes from all in Agricultural Education go with Dr. Mobley as he retires.

— Floyd Johnson  
AVA Vice Pres. for Agriculture

## Planning Local Programs to Meet Interest and Needs

HAROLD L. NOAKES, Associate, Bureau of Agricultural Education, State Education Department, Albany, New York

Since the beginning of vocational agriculture near the turn of the century, there have been dramatic changes in the nature of agriculture. Farming has become more highly mechanized and scientific. More and more of the work of the farm is being provided by agricultural services and agencies off the farm. In addition, there has been a rapid increase in the services dealing with the processing, packaging, distribution and marketing of the food and fiber produced on the farm.

The local or area agricultural program should reflect these changes. The selection of courses to be offered is influenced by the occupational opportunities in the area and by the needs and interests of students to be enrolled.

Many statewide studies have been completed which provide an excellent picture of the employment opportunities and training needs in agricultural occupations in these states. *In addition to statewide occupational information, it is helpful in program planning to have data available for employment opportunities available each year in the field of agriculture as well as employment trends in the school area.*

A study<sup>1</sup> of off-farm agricultural occupations in New York State reveals that high school programs in agriculture must be expanded to meet the demand for agriculturally trained persons.

A question is frequently raised by a school administrator relative to the interest of students in agricultural occupations. Generally this is because he considers agriculture and farming to be synonymous.

A number of studies have been made in New York during the past year to determine the interest of students in grades 8-10 in five agricultural occupation groups. The table gives the results of three of these studies involving over 6,700 stu-

dents and 22 schools cutting across rural, suburban and urban areas of the state. It is recognized that all students indicating an interest in agriculture will not actually enroll, however, experience has proven that a significant number will enroll when a variety of courses are available.

Among the first choices of occupational groups, boys consistently placed Conservation, first; Agricultural Mechanization, second; Farm Operation and Management, third; Ornamental Horticulture, fourth; and Agricultural Business, fifth.

A new pattern for agricultural education has emerged in New York which is particularly well adapted to meet the program needs of area schools and multiple teacher departments. The instruction in this emerging pattern falls into four general categories including (a) Agriculture in grades 7 and 8, (b) Agriculture in grades 9 and 10, (c) Agriculture in grades 11 and 12 and (d) post high school education in agriculture.

### Agriculture in Grades 7 and 8

Agriculture at this level is one of the exploratory courses in practical arts. It aids in the development of appreciations of agricultural processes and provides opportunities for students to make a start in developing mechanical and scientific skills in agriculture. Students should be provided opportunities to explore the broad field of agriculture and to gain an understanding of the role of agriculture in our modern society.

It is not anticipated that students will arrive at a decision relative to the selection of a vocation during or at the completion of agricultural courses on the 7th and 8th grade level. However, it is recognized that the knowledge and experiences

gained in such courses can be of real value to students in aiding them in arriving at a decision relative to continuing an agriculture course in high school.

### Agriculture in Grades 9 and 10

During the first two years of high school, agriculture students will gain an understanding of the economic importance of agriculture and an appreciation of the occupational opportunities in the various fields of agriculture. They will be given opportunities in the classroom, laboratory, shop and field to gain appreciations and understandings in the science of crop production, livestock production, soil management and mechanics as applied to the various fields of agriculture. They also develop skills in these areas and learn to apply these skills to obtain vocational competencies. They will also be prepared for specialized agricultural courses in the 11th and 12th grades.

Students who do not continue agriculture after grade 10 will receive credit for the courses completed and will have received valuable instruction and preparation for life as a voter, taxpayer and consumer of agricultural commodities. They will have learned a store of agricultural knowledge and have an understanding and appreciation of the role of agriculture in our modern lives and the application of economic and scientific principles to the production, processing, distributing and marketing of food and fiber. Experiences will have been gained and skills developed in growing crops and livestock, agricultural mechanics, conservation of natural resources and accepting a leadership role in society. This instruction will be directly useful to those who go

(Continued on page 140)

Summary of Student Interest in One or More Agricultural Occupation Groups — Three Areas of New York State — 1965

Students Surveyed	Students Indicating 1st Choice in Agriculture			%
	Boys	Girls	Total	
3611	887	508	1396	38.7
2265	573	269	842	37.2
830	198	86	284	34.3
			2521	37.6

12 Oneida-Madison County Schools  
7 Jefferson County Schools  
2 Columbia County Schools

<sup>1</sup>Harold R. Cushman, Virgil E. Christensen and Garry R. Bice. *A Study of*

## The Need For Evaluating State-Level Influence in Local Program Planning



H. G. Beard

H. G. BEARD, Associate Professor, Education-Rural Sociology, N. C. State University; formerly, Administrator, Agricultural Education, and Acting State Director, Vocational Education, North Carolina

This article is on the seeming paradox of *vigorous state-level* efforts to promote *local program planning* in vocational education. First, an attempt will be made to show the heavier state-level hand in local program planning affairs. Secondly, a report will be given of a most preliminary effort to evaluate these increased state-level activities.

### A Principle

In dealing with program planning problems related to the changing *occupational mix*, wherein traditional vocational education services are experiencing overlapping and gaps in efforts, the September, 1965, issue of *Agricultural Education Magazine* offered editorially the following principle:

**Try to ascertain the vocational education needs of the people in the local school district, adults as well as those in school. Then, develop the program of vocational education which will come nearest meeting these needs.**

### A Problem

The present writer has observed that state-level leaders in vocational education (directors, supervisors, teacher educators and state board members) have engaged in a recent flurry of activity to actively and directly assist in local program planning. Indeed, there have been widespread state-level efforts to encourage true local program planning according to the principle just quoted. There are several reasons for this increased activity.

Generally, there is renewed interest in and emphasis upon vocational education. Also, there are expediences. The state-level leadership is committed to maintain, extend, improve and redirect local programs of vocational education by policy statements contained in new State Plans for Vocational Education. These plans were written in the spirit of providing voca-

tional Education "so that persons of all ages in all communities of the State . . . will have ready access to vocational education which is realistic in the light of the actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."<sup>1</sup>

As a federal policy, the state-level leadership is required to file annual projections of local programs including, among other kinds of information, analysis of groups of persons to be served, analysis of job opportunities and manpower needs, geographical variations in job opportunities and groups to be served, comparative data on vocational education programs to be offered, and expenditures by purposes. Two other circumstances related to increased state-level activity in local program planning are the mandated 1968 federal evaluation and the emergence of non-public school agencies in the vocational education field.

With this increased activity at the state-level for local program improvement, with all its potential blessings, one big problem is: How can a heavier state-level hand secure greater local initiative and responsibility which constitute the *sine qua non* of local program planning?

Since the students, the teachers, the administrators and the teaching-learning situations are necessarily and heavily involved in state-level proposals, it seems judicious to secure local evaluations for at least two reasons. First, such evaluations should improve the proposals, especially relating to local adaptations. Secondly, local evaluations seem necessary to develop the requirements for cooperative efforts in pro-

gram improvement between local, state, and federal levels.

### An Evaluation Study

In January, 1964, the North Carolina State Board of Education adopted the following policy on local program planning:

In adherence to the principle of local initiative and responsibility in the improvement of educational opportunity and performance among situational variables in the several administrative units in the state, a plan for vocational education should be developed by and for each administrative unit.<sup>2</sup>

This idea of a local plan along with guidelines for developing a local plan were sent to local administrative units. In addition, several more specific program planning concepts were proposed under the general heading of *A Suggested Pattern For Vocational Education*.

A study<sup>3</sup> was made to secure local evaluations of the local plan concept and two representative program planning concepts from the "suggested pattern for vocational education", namely, introduction to vocations (a new course in occupational guidance) and revised vocational agriculture curriculum (a new organization of instructional content in vocational agriculture). The approach of the study was to measure the meaning assigned to the new concepts by local school personnel. Differences in meaning were determined between the new concepts and comparable traditional concepts, individually and by

(Continued on next page)

<sup>2</sup>"Reorganization of Relationships Between the Division of Vocational Education and Secondary School Administrative Units," Minutes of the North Carolina State Board of Education, Raleigh, January, 1964.

<sup>3</sup>H. G. Beard, *A Study of the Meaning of Selected Program Planning Concepts In Vocational Education*, Unpublished Doctor's Thesis, Cornell University, Ithaca, New York, 1965.

<sup>1</sup>Public Law 88-210, 88th Congress, Approved December, 1963, Section I.

H. G. Beard

(Continued from page 127)

cluster, and between the new concepts and concepts on experimentation and inservice education which were proposed as having a requisite relationship to the new concepts (requisite to the implementation of the new concepts).

#### Method

A *semantic differential* was constructed and administered to a 20 per cent random sample of teachers of vocational agriculture in North Carolina to elicit judgments on the meaning of the program planning concepts under study. Judgments were elicited for the factors of meaning of *evaluation, potency and oriented activity*. The *semantic differential* was administered to subjects in group interviews. Comparisons by individual concepts for each factor of meaning employed the *t* test. The Wald-Wolfowitz two-sample runs test was used to make comparisons by cluster of concepts.

#### Findings

On the basis of the meaning of individual concepts, it was found that: (1) there were no differences in the meaning assigned to the new concept *a local plan for vocational education* and the traditional concept *a local plan for vocational agriculture*, indicating that unified local planning in all occupational fields and for all vocational education services, and local planning on the traditional basis of vocational agriculture are equally good, strong and dynamic; (2) there were differences in the meaning assigned to the new concept *introduction to vocations* and the traditional concept *introduction to agricultural occupations*, indicating that unified efforts in instructional vocational guidance and counseling through a course called introduction to vocations are poorer, weaker, and less dynamic than the traditional approach to guidance and counseling in vocational agriculture; and (3) there were differences in meaning assigned to the new concept *revised vocational agriculture curriculum* and the traditional concept *vocational agriculture I, II, III and IV* indicating that reorganization of instructional content in vocational agriculture beginning with a basic agriculture course followed by occupational specialty courses is better, stronger

## We Can't Neglect Our Young Farmers

WILLIAM R. BINGHAM, Teacher Education, University of Kentucky, Lexington



William R. Bingham

Recently we have heard much about the development of new programs in agricultural education particularly in the area of off-farm agricultural occupations. Undoubtedly, this is proper and most of us have jumped on the bandwagon even though belatedly in many instances. In our enthusiasm to develop something new we should be careful to not abandon important segments of our work such as the young farmer program.

Young men entering farming make up a vital group. True, they are small in number but they will have a tremendous impact on the future of agriculture and of our entire economy.

Perhaps it is no more difficult to become established today. Granted, it takes a lot more to farm but there are a lot more resources for young men to draw from today than in former years. We should help them draw on those resources and chart a proper course.

On the meaning of concepts by cluster, it was found that: (1) there were no differences in the meaning assigned to the cluster of new concepts and the cluster of traditional concepts, and (2) there were no differences in the meaning assigned to the cluster of new concepts and the cluster of requisite concepts. These findings by cluster of concepts, each cluster taken as a whole, indicate a lack of differentiation in meaning between the cluster of new concepts and the cluster of traditional concepts, and a general compatibility in meaning of the cluster of new concepts and the cluster of requisite concepts. Actually, it was found that a closer semantic relationship existed between the new and traditional concepts and between the new and requisite concepts than existed among the new concepts.

#### Conclusion

Additional study of the new concepts and their implementation is needed. However, these preliminary findings suggest that more intensive local evaluations were needed in the developmental stages. Likely, such local evaluations would have improved the proposals individually and as an innovative program.

Probably the first challenge to consider is that of *establishment in farming*. Getting started in farming nowadays is usually considered to be more difficult than in former years. Old timers say that all they needed to farm was a team of mules, a grubbing hoe, a sack of seed corn, a few tools, and a willingness to work. This may have been true but even then it was usually a long and difficult road to really become established with a good home and farmstead.

Perhaps it is no more difficult to become established today. Granted, it takes a lot more to farm but there are a lot more resources for young men to draw from today than in former years. We should help them draw on those resources and chart a proper course.

#### Securing a Base of Operations

Two key things in establishment are a *base of operations* and *capital*. A base of operations causes us to think immediately of land. Land is an important item but is relatively less important than formerly. The young man must make land serve him rather than him serving it. Some land is not worth owning. I once heard a farmer refer to a field as a "strong piece of ground." A neighbor replied that it would have to be to hold up all the rock in it.

A young farmer's time is valuable. He must produce a lot of bushels for each day's work. He is in competition with people who do. Therefore he must spend his time on high capacity land. He would be better renting and getting one-half from 150-bushel corn land than getting all from 50-bushel land.

During the past three years it has been my privilege to serve as a judge in helping select the outstanding young farmer in our state. A devel-

(Continued on page 137)

## Some Suggestions For Planning Local Programs

ANTHONY MUMPHREY, Dean, Louisiana State University at Eunice



Anthony Mumphy

Has the basic philosophy of vocational agriculture changed? Does training present and prospective farmers still continue to command a respectable position as an aim of vocational agriculture programs? Are we expanding our aims to include new training programs resulting in more profitable employment of youths as well as adults? What objectives are serving as guideposts for today's vocational agriculture? Who should participate in local program planning? These are the basic questions being asked by some educators (vocational as well as academic) who are directly concerned with the occupational guidance of youth. Any of these inquiries can be adequately answered by a thoroughly planned program of instructional activities in vocational agriculture.

#### Who is Responsible?

Planning the local program, although being the primary responsibility of the teacher of vocational agriculture, should involve the guidance counselor, principal, key farmers and local successful business/ or industrial leaders. Such a group could serve as an invaluable, effective advisory council in program planning. These individuals are important not only because their training and experience are worthy contributions to the analysis of the occupational needs of youth but because some actually share in the "utilization and evaluation of the final product." Education has long been criticized for not having had the dialogue essential for the proper coordination of education with business, industry, and others concerned with the employment of youth. Basically, these individuals contend that, seemingly secondary school students in all curriculums are being prepared only to enter higher education; limited attention appears to be given to the kind of preparation which will be of immediate use to

those who will enter into the "world of work." Much of this misunderstanding and lack of articulation could be averted if the proper liaison is effected with regard to the initial planning of programs in vocational agriculture.

#### Need for Basic Knowledge and Work Experiences

Recent studies in vocational agriculture conducted throughout the United States, reveal the need for a basic knowledge of agriculture for all individuals planning job entry into businesses and industries allied to agriculture as well as those entering professional agriculture. Leaders in agricultural businesses have repeatedly indicated that in many instances, they have not been selective in employing the agriculturally trained individual. More obvious has been the fact that the non-agriculturally trained are competing favorably with the agriculturally trained for jobs in agricultural business and industry. Is there a difference in the employment characteristics of these individuals? This situation should be a matter of great concern to those who plan programs of vocational agriculture.

Equally important in program planning are the correlative work experiences to be provided for those who will enter farming, as well as those looking to business or industry for employment in the broad, agricultural complex. These work experiences, coupled with a sound basic instructional program and wholesome leadership activities through the Future Farmers of America, could make the difference as far as those individuals who plan to be employable when they complete secondary school.

#### Implementation Necessary

Some leaders in education are of the opinion that more research should be conducted before program changes are effected in our

public school system. The opinion of this writer is that leaders in vocational agriculture should implement more of the research they have on hand, as well as continuing needed studies. Teachers of vocational agriculture cannot wait to locate all the facts before initiating some planned changes in their programs. Many vocational educators are already of the opinion that current programs are too far behind research findings. Most educators, however, will agree that research is vital and should maintain a safe, relative lead in vocational agriculture program development.

#### Evaluation and Follow-Up Essential

Evaluation is essential to maintain an effective program. It should be welcomed and initiated by the local teacher and should involve all individuals who participated in the actual planning of the local program as well as others who have an active interest. The criterion "Is the program meeting the occupational needs of youths as well as adults?" should be examined and evaluated systematically. Redirections of the program necessarily follow a good evaluation.

The final proof of the effectiveness of the program is the answer to the question, "What are the graduates in vocational agriculture doing?" What their employers think of their initial occupational performance is of no less significance than the proper placement of the individual.

Educators would do well to follow the progress of their constituents in their initial employment, with the idea of evaluating suggestions from employers for further improving the effectiveness of vocational agriculture programs.

This kind of action will not only insure a more effective program but will justify the expenditure of additional funds for the purpose of training individuals for more useful employment.

## A Community Surveys Its Agricultural Future

What are the opportunities for entry into farming?

This was the problem that was studied in Dolores, Colorado, in an effort to determine just what farm and ranch entry possibilities there would be from 1962 to 1965 for the 28 vocational agriculture graduates of Dolores High School entering the world of work during that time. Entry possibilities were determined at the different levels of status on the agricultural ladder, what the different possibilities were and how many of these actually existed.

The survey included 46 farms and ranches that were believed to be economic units. An economic unit was determined as one which would provide sufficient economic return to support the operation and provide for reasonable further establishment. The farming area in which these units were located included dry-land farms, diversified operations, irrigated units, livestock operations, specialized crop producing units and orchards.

### Rainfall 15 Inches

The success or failure of farming in this Southwestern part of the state depends on water, particularly rainfall. Because of the nature of the terrain a large portion of the tillable land cannot be irrigated. Respondents interviewed indicated a range of crop success from one out of seven to three out of five years on dry-land units, and only a slightly better average on the irrigated units.

With these conditions prevailing it can readily be determined what the attitude toward ranching and farming might be. Yet, sons of these farmers and ranchers, and other boys, had enrolled in vocational agriculture when it was started in the Dolores school system in 1958. Since that time there had been a steady increase in the enrollment. At the time the first students to complete the full four years of vocational agriculture were graduating, vocational agriculture itself was facing a real crisis. Some careful, but prompt action was needed to re-

### Survey Planned to Study the Need

It was decided that in order to deal with the problem in a realistic manner a carefully planned survey was necessary. To get the study under way a list of respondents was made. This was accomplished by using the telephone directory, previous personal visits and by employing the knowledge and services of the students enrolled in vo-ag classes. The original list included all of the possible farms and ranches that would most nearly fit the desired pattern of the study. The decision as to whether the unit was an economic one was left to the respondent. As soon as it was determined if the farm or ranch was an economic unit of production it was added to the final list.

Contact was made prior to the actual visit in an effort to assure that it was agreeable to make the interview and not infringe upon the operators' time.

Of the final 46 respondents it was discovered that 34 were owners, four were in farm managerial positions, three were partners, three were sharecroppers, one was a cash tenant and one was a crop-share tenant. The farms were categorized according to size to compare the distribution of the different status levels of the operators interviewed and the numbers in each size category.

Good farm management practices were not in evidence on many farms. Labor-economy relationships were believed to be the underlying factor affecting the size of the farm owned. Most owners were found on farms that could be operated with family labor.

The fact remains, however, that some of the farms included in the study were producing at top level. This was specifically noted when it was discovered that 67 per cent of the partnerships were on farms that were less than 640 acres in size.

The average size of the farms

ARLYNN D. ANDERSON, Research Assistant,  
Michigan State University



Arlynn D. Anderson

plans for increasing the size of their farms and 24.5 per cent stated plans for increasing livestock numbers. The main crops grown on irrigated farms were cereal grains, alfalfa or mixed hay and some corn. It was discovered that orchards of less than 40 acres were not believed to be economic units. Most of the smaller farms in the study were orchards.

A few acres of cash crops were noted on irrigated units, but in no case, with the exception of the orchards, were they emphasized to the point of being a main source of farm income. The crops grown on these units were grown to feed the livestock.

Small flocks of sheep were mainly on farms that were smaller than the average while cattle, both breeding and fattening, were found on farms that were larger than the average. Only two swine herds were found.

Principal dry-land crops grown were discovered to be wheat and Pinto beans. Livestock numbers on dry-land operations varied, but the majority of the livestock noted were stocker cattle and these were usually found in low numbers. The livestock on either the irrigated or the dry-land units studied, with the exception of the larger commercial beef operations, were not consistently a part of the annual or long time plan.

### Opportunities Discovered

By summarizing the information at this point of the study it was concluded that there were opportunities for improving farming conditions, but these opportunities did not necessarily exist on farms or ranches where students of vocational agriculture lived or had associations.

Full-time and part-time opportunities for entering farming or ranching were determined and grouped according to the period during which they occurred. These opportunities and their number are listed in Table I.

TABLE I. Opportunities for entering farming and ranching at different status levels on the agricultural ladder.

Operator Status	1962	1963	1964	Total
	and 1963	and 1964	and 1965	
Owner	2	5	7	14
Laborer	4	2	3	9
Partner	5	0	3	8
Cash Tenant	0	1	2	3
Sharecropper	0	1	1	2
Manager	1	0	0	1
Operator	0	1	0	1

## Making Vocational Agriculture a Truly Community Program\*

SELZ C. MAYO, Head, Sociology and Rural Sociology,  
North Carolina State University

A teacher of Vocational Agriculture has in my opinion, three tools available with which to make his program a truly community program. The first of these tools is the training, experience and mature judgment of the teacher himself. In this discussion this tool shall be taken for granted as it runs as a thread through this entire discussion. There is ample evidence that many and perhaps most Vo-Ag teachers have exercised these elements in such a way that rural communities have been enriched almost everywhere — communities in your state and in mine.

### Research is a Basic Tool

The first basic tool available to the teacher of vocational agriculture with which to make his program a truly community program is *research*. As blunt as it may sound at first, a Vo-Ag teacher cannot teach or conduct his program effectively without a deliberately planned program of research within his own community. His research has to be more than casual or highly selected observations about his community. What I visualize is a well developed and systematic program of research.

I suspect that what many of you are saying or thinking at this moment goes something like this — "But, if I carry on a research program, when will I have time to do my job of teaching?" But, this is my point, you cannot do an effective job of teaching and changing the community environment without the research. So, in reality, community research is as much a part of your total job as is the actual conducting of your classes.

The research envisioned here is of two major types. The first type might be called *research for community understanding*. Here the teacher endeavors to gain an understanding of the community as a basis of policy formation within the framework of the educational system of which he is a part. The second type of research viewed here as

\*A talk made to state meeting of Vo Ag

necessary to making his program a truly community program might be labeled tentatively as *situational research*. These are specific situations which will enable the professional person to implement the general policies with specific recommendations. You will, of course, recognize that one significant part of the latter is the well developed problem-solving through research approach in teaching.

Let's now turn our attention to an analysis of, or at least a pointing up of, some of the basic elements involved in both types of research.

A. *Research for community understanding* (adopted from Sanders, Irwin T., *Making Good Communities Better*, Lexington: University of Kentucky Press, 1953. Pp. 8-26)

Since there are so many aspects of or elements in the understanding of the community, it is necessary to be selective. For the purpose of this discussion, five basic areas may be stressed.

1. Leadership structure of the community.
  - a. All communities have a leadership structure.
  - b. No one is a born leader — it is a learned process.
  - c. Certain leadership traits do not hold good for all communities.
  - d. We must learn the types of leaders confided in by communities.
  - e. This structure is in a process of constant change.
2. Kinds of social organization in the community.
  - a. All people have a system for getting things done. We must learn this and use it in so far as possible in order to achieve the best results.
  - b. There are all sorts of formal organizations in our communities. We must learn who makes up the membership and what functions are being performed.
  - c. We must understand the leadership structure of each.
  - d. In addition to these formal

munity and each organization in fact has an informal organizational system — informal groups run the average community. We must learn it; we must understand it; we must work with it.

3. Social ranking structure of the community.

- a. Every person and family fits into a ranking system or hierarchical structure in the community.
- b. This system is expressed in many ways and by various names — for example, town people, no-goods, solid citizen, landowner, tenant, mill people, etc.
- c. In some communities "who you are" is more important than what you are.
- d. These rankings are determined by a host of factors — age, sex, color, occupation, income, length of residence, family background, religion, etc.
- e. The Vo-Ag teacher must learn and understand these rankings and the basis of the rankings if he wants to work with all these groups. He must understand the relation of each to the other.
- f. This, too, is a dynamic structure and undergoes change.

4. The social pressure system in the community.

- a. Every community and organization has a system for pressuring individuals to conform to accepted standards of behavior and also of punishing for nonconformity.
- b. In some areas praise goes a long way, while in others it is confused with flattery and received suspiciously. Putting one person in the limelight may make others envious and less cooperative; while in others people are pleased when one member receives a great deal of recognition.
- c. If the Vo-Ag teacher is seen too often in the presence of certain people, he is automatically rejected by others in the community. Social pressure may be quite great in a community.

5. Systems of social values in the community.

## Organizing for Research and Development

LLOYD J. PHIPPS, Teacher Education, University of Illinois

If we are to meet the research and development needs discussed in the November issue of the "Agricultural Education Magazine" in the article, "Research and Development Needed in Agricultural Education," we must get better organized for research and development. All or some of the following activities should be undertaken. (Some states have already utilized many of the suggestions I am about to mention.)

1. Research and development committees should be established at all Universities preparing vocational teachers. These committees should have representatives from all content areas in vocational education plus access to consultants from subject matter fields. Teacher educators in agriculture can profit from participation on such committees. Such participation will broaden our educational horizons and keep us from being too provincial.
2. "Earmarked" time should be devoted in agricultural education staff meetings at Universities to the planning and analysis of research and development projects. "Earmarked" time should also be devoted at supervisors' staff meetings to the planning and analysis of research and development projects.
3. Joint meetings of teacher educators and supervisors, with teacher representatives, should be regularly scheduled for the exclusive consideration of research and development.
4. Vocational agriculture teacher associations at both the state and national levels should be encouraged to establish research and development committees and to devote adequate time at association meetings to research and development.
5. The joint state staff of teacher educators and supervisors should establish special ad hoc research and development committees as needed. These special committees should report to the joint staff.
6. Supervisors should encourage the establishment of a research and development committee with membership from all vocational education content areas. Agriculture education supervisors should be represented on this committee for the same reason given for the representation of teacher educators in agriculture on University vocational education research and development committees.
7. The supervisory staff in agricul-

mittees to advise regarding research and development programs needed. Mr. Guthrie, Chief of Agricultural Education in Illinois, has utilized the services of industry committees in (1) ornamental horticulture, (2) agricultural machinery and equipment, and (3) agricultural supply. Their use has been very worthwhile.

8. Teacher educators and supervisors should encourage action research among teachers. We have often educated and supervised teachers of agriculture with such a "tight rein" that we have virtually eliminated all their initiative and imagination. We are too prone to tell teachers what will not work instead of listening to their plans, and providing supporting encouragement to conduct action research. We have played "God" and have used the vocational education acts and the state plans for vocational education as clubs to stifle action research and to maintain the status quo. We have often "worshipped at the feet of tradition". The result has often been the loss of departments of vocational agriculture in many areas where agricultural education is of vital and growing importance — notably the urban areas. For example, in Illinois the Woodrow Wilson Branch of the Chicago Junior College established for 1965-66 a vocational agriculture program in the ornamental horticulture field at the 13th and 14th grade levels. This development is launched after many schools surrounding Chicago dropped their vocational agriculture programs because their service area had become almost completely urban. Encouragement of action research and a more extensive research and development program, which is now possible because of the Vocational Education Act of 1963, may have saved some of these departments of vocational agriculture, and their teachers could now be making their contributions in eliminating the unemployment problem of this urban area.
9. Agricultural educators should develop policies that will promote the freedom of researchers. The best way to stifle effective and productive research is to interfere with the freedom of researchers. Good research workers do not work effectively and frequently refuse to operate in an administrative "straight jacket". Some may abuse their freedom, but their number will be few. It is a small price to pay for the increased

10. Agricultural educators should encourage research by individuals. Individuals are, after all, the only ones that can do research. We should not insist that all or even most research fit into a state "mold" for research. Remember that good researchers are difficult to "harness" into a national, regional or state program of research.

11. Delegate responsibility for a research project to a definite person. I am completely disenchanted with group research projects, cooperative research projects, regional and national research projects. They lead to compromise in design and to mediocrity. We can have effective research cooperation, however, as Duane Nielsen and other promoted such cooperation in the thirty-nine states that conducted the studies of nonfarm agricultural job opportunities. There was a common objective, but each researcher was free to design his study as he wished.
12. Encourage and support both project research and program and development research. Project research is an essential ingredient of any total research and development program. Excessive reliance on project research and development, however, often stifles initiative and innovation among research workers. Program research provides a leavening ingredient for a total program of research and development. It assists in the prevention of the excessive bureaucracy and regimentation that may accompany project research and development. It provides "hard" money in contrast to the "soft" money for project research and development. "Hard" money is needed to establish and maintain an adequate staff of research and development workers.

Who initiates action? Everyone must accept responsibility. It is too important to be neglected. The first step in initiating action is the development or revision of administrative machinery, perhaps along the lines just mentioned. Do not worry about the funding of research and development projects. If you get your administrative machinery for promoting and developing research projects developed properly, and if you obtain well designed research proposals, funds to support your proposed research will be available and more funds are on the way. Our main task is to get "geared up" for good research and development. The needs and opportunities are available. The only limitations are our enthusiasm, imagination and ability as research workers and ad-

## Building a Dynamic Vo-Ag Program

J. C. ATHERTON, Teacher Education, Louisiana State University

Our program is what we will it to be. Success or the lack of it depends upon our attitude, interest, desires, efforts, and plans. Failure to use these means that we have automatically willed that the program be sterile and we have doomed it to mediocrity.

Evolving concepts of agricultural education and the extensiveness of the task require usage of the best brains and efforts of the community. Habit and complacency make it difficult to release outmoded practices and philosophies and to venture into needed new and unexplored areas.

Although there are no assurances that success will be automatic, there are certain practices which will enhance the likelihood of satisfactory attainment. As the program of education in vocational agriculture is devised to meet current needs, it seems that the following procedures have merit and should be considered:

1. Survey needs of the community. An analysis of current operations in the light of community needs is a step toward advancement. One of the problems frequently facing a group of evaluators is that of locating the source of weakness in the program. Is it the result of a poor plan, or has the implementation been mediocre? There is a possibility also that it may be the result of a combination of these.

Vitality of the program needs to be renewed. The so-called "cutting edge" of vocational agriculture requires sharpening. Often evaluations are made piecemeal or fragmentary upon the bases of physical facilities present and the personality of the teaching staff. Admittedly, these are important, but they are of a secondary nature. The prime factor is the quality of educational services rendered and the extent of these services.

Questions which need answering include:

a. What does the community need in the way of agricultural education?

b. To what extent is the current program meeting educational

c. Is there sufficient community involvement in the program?

d. Is the local program flexible? Is it reaching all it should serve?

e. Is the program comprehensive?

f. How does the quality of instruction rate?

Answers to these and similar questions are needed so that emphasis may be focused upon vital or critical points. This survey may indicate that there are many problems to solve, however, it is likely that the greatest one will be inertia.

2. Determine objectives and set goals. The program of education in vocational agriculture embraces many things. Some elements should be given higher priority than others. Through this process emphasis may be assigned to the more important activities.

Consideration, planning, and implementation are required for successful operations. These have the potential for improving every phase of the educational program. New approaches may have to be utilized in order to make provisions for large segments of the community. With the broadening vision of agricultural education evolving, it is difficult to fathom the extensiveness of a comprehensive, dynamic program.

Goals must be clear and definite. Techniques for achievement should be included. All activities planned should be educationally centered. As a general rule we do only those things we plan to do except that occasionally outside pressures may force us to engage in a few additional activities. Since this is the situation, it behooves the teacher to outline a long range comprehensive program which centers attention upon the direction that seems desirable.

Education and leadership are fundamental ingredients of the task of the teacher of vocational agriculture. An effective program will include a balance between the two; neither aspect should be neglected. The plan should be "tailored" for the individual community as each has a degree of uniqueness which should be recognized. This becomes quite



J. C. Atherton

obvious when one visits several school communities.

3. Schedule the essential activities throughout the year. For best results the work should be coordinated into the overall calendar of the community school. Maximum results require that there be an appropriate allotment of time, facilities, energy and finances.

Reaching the people of the school community will involve a variety of activities, techniques and of timing. Formal classes during regular school hours will enroll only a portion of the prospective clientele. The timing must fit the local community.

The extensiveness of the task to be done is appalling, but when properly planned and scheduled it does not appear insurmountable. Scheduling of activities permits the instructor to plan more wisely and to use time effectively. It is possible that at times one has neglected certain essentials because some other aspect was more appealing. Excessive time spent on one enterprise, farm mechanics, contests or shows are examples of this. Certain areas may be less glamorous, but this does not diminish their value nor the need for instruction in them.

4. Involve the public in the program. Improved living is the foremost goal to attain through the instruction in agricultural education. To bring about changed lives, the people of the area must be involved. Through this involvement plans devised may be translated into action. Citizens of the community should be active in all phases of the program . . . planning, execution, evaluation, and replanning.

Each community should decide upon the approach to make in program development. It seems that best results are attained when there is a planned program which includes a variety of educational and community leadership activities. The people should be involved in the fulfillment of these responsibilities.

A. D. Anderson

(Continued from page 130)

No attempt was made to analyze the reasons for the trends that might be indicated, such as the evidence supporting increasing numbers of opportunities for owners.

The part-time opportunities discovered by years indicated a great demand for agricultural laborers; an average of 179 per year. It was noted however that work for part-time laborers was only seasonal and that periods of actual employment were usually no longer than two to three weeks in seasonal crop work such as hoeing and shocking beans, haying or picking and sorting apples. Most of the apple work is done by women.

The one important finding relating to part-time opportunities was that there were entry possibilities for six part-time sharecroppers, five crop-share tenants and one part-time manager. These levels of entry were recommended by many of the respondents as being a way to become established in farming or ranching ideally and economically. The fact that there were many smaller tracts of land discovered that were not considered to be economic units, supported the belief that a young man wishing to become established could take advantage of any of the part-time opportunities discovered and lease some additional land to supplement his farming program.

Recommendations

There are a number of other factors that would help ascertain if a young man could become established in farming, but it was determined that opportunities were available for the vocational agriculture graduates.

It was discovered that expanded and more intensive instruction and practical experience in developing soil plans, crop rotations, crop-livestock balances, capital investment calendars, equipment utilization, labor needs, annual and long-time plans and farm home relations, for high school and post-high school groups alike, was needed in order to take advantage of the opportunities discovered. Some of the graduates were taking advantage of the opportunities. Two had entered partnerships on a full-time basis during the course of the study. Others were enrolled in college, preparing to re-

A Study of . . .

Teaching Loads and Teacher Duty Assignments

. . . In Multiple-Teacher Departments

B. C. BASS, Teacher Education, Virginia Polytechnic Institute

Two of the problems with which supervisors and teachers of vocational agriculture have been concerned for many years are teacher loads and teacher duty assignments in multiple-teacher departments.

In an effort to collect information to be used in dealing with these problems, a study was made of the 1964-1965 teaching loads of teachers in multiple-teacher departments of vocational agriculture in Virginia and of the extent to which the duty assignments in these departments had been satisfactory.

Data for this study were gathered by means of a questionnaire. The teachers in 55 (77 per cent) of the 71 multiple-teacher departments of vocational agriculture in Virginia supplied information for the study during March, 1965. There were 123 teachers employed in these 55 departments.

Findings

Two of the teachers worked full time with young adult farmers and the other 121 teachers taught a total of 6,797 high school students during 1964-1965. This was an average of 56.17 high school students per teacher. Six of the teachers taught an academic class and one was responsible for a study hall.

Relative to the length of teaching periods, 45-minute periods were used in only one (2 per cent) of the departments included in this study. Fifty-minute periods were used in 13 (24 per cent), and 55- or 60-minute periods were used in 40 (74 per cent) of the departments.

The teaching loads of the 121 teachers in terms of high school class periods taught each school day during 1964-1965 were (not including out-of-school groups):

- 1 teacher taught 2 periods per school day
- 7 teachers taught 3 periods per school day
- 70 teachers taught 4 periods per school day
- 35 teachers taught 5 periods per school day
- 8 teachers taught 6 periods per school day

121

(Two other teachers worked full time with out-of-school groups).

The 123 teachers were scheduled to supervise students projects and do planning each school day as follows:

- 8 teachers had no periods scheduled for supervising and planning
- 36 teachers had one period scheduled for supervising and planning
- 70 teachers had two periods scheduled for supervising and planning
- 6 teachers had three periods scheduled for supervising and planning
- 1 teacher had four periods scheduled for supervising and planning
- 2 teachers worked full time with out-of-school groups

123

An average of 1.73 school periods per teacher were scheduled for supervising students' projects and planning.

The data in Table 1 reveals the proportion of the reporting multiple-teacher departments in which responsibility for each of certain duties was assigned to one teacher or shared by all teachers and the proportion reporting the used arrangement "highly satisfactory," "fairly satisfactory" or "unsatisfactory."

It may be seen that the number of departments reporting on the duties varied from 18 reporting on presenting TV programs, to 55 reporting on such duties as teaching high school classes and supervising the projects of students. It should be noted that some of the duties listed were not performed in some departments. For example, some departments did not op-

Letters to the Editor

Dear Cayce,

I shall be pleased if you can find some of the poems good enough to have a place in the *Agricultural Education Magazine*. We might even try for a special number when that need arises.

Retirement is just what we arised thought all along. Plenty to do and a lot more we want to do or wish to do or wish we had done. One soon forgets the check and learns to operate on a new level.

Best wishes on your job as editor of the *AgEd Magazine*.

Sincerely yours,  
A. J. Paulus,  
Professor Emeritus  
University of Tennessee

Get started on that "special", Doc, and thanks for letting us use some of those already published. CCS.

Dear Cayce,

Congratulations for accepting the new responsibility of Editor of the magazine. It certainly must be a privilege and an honor to have your name added to the list of editors of the *AgEd Magazine* along with the other outstanding leaders who have been editors. I know that you can meet the challenge.

I have another new Vo Ag department, my third since coming here 28 years ago. The department doesn't wear as well as the teacher, does it?

Best wishes,  
Daryl Sharp,  
Vo Ag Teacher  
Minster, Ohio

Editor's Note: One of the rewards for being editor is to hear from old friends. Yes, I do feel honored. Minster has been fortunate to have your long tenure there as teacher.

Dear Cayce,

I am not sure which month this article fits best, if at all. Probably one of your tough jobs as editor is telling friends that their articles are unacceptable, either because of composition or topic, or at least telling them that the article needs re-writing. Please don't be reluctant to tell me what I should do.

Best wishes,  
V. R. Cardozier  
University of Maryland

Editor's Note: Right, Ray. However, a bigger problem is getting the articles in the first place! Yours was so good until it has the Guest Editorial spot this month. THANKS.

Dear Cayce:

Enclosed is an article, prepared by one of my graduate students and myself, which may be of value in one of the future issues of the *Agricultural Education Magazine*.

Let me commend you on the excellent copy which has been included in the magazine. I feel that you are doing a good job of selection and management. I hope to get some more contributions for our area very soon.

Sincerely yours,  
R. J. Agan  
Kansas State University

Thanks Ray, your cooperation is very helpful - CCS

TABLE 1. Proportion of multiple-teacher departments of vocational agriculture in Virginia in which responsibility for each of certain duties was assigned to one or shared by all teachers and the extent the arrangement had been satisfactory.

(Note: Not all 55 departments reported on each duty)

Duties (Note: The number in parenthesis at the end of each item is the number of departments reporting.)	Reporting departments in which responsibility was:		Reporting departments in which the arrangement had been:		
	Assigned to one teacher	Shared by all teachers	Highly satisfactory	Fairly satisfactory	Unsatisfactory
1. Teach high school vocational agriculture classes (55).....	—	100%*	85%	15%	—
2. Visit farm and work projects of high school voc. agr. students (55).....	—	100%*	71%	25%	4%
3. Prepare students for and help conduct FFA contests (55).....	5%	95%	74%	26%	—
4. Conduct livestock improvement project (Ex.: Sears bull project) (41)....	24%	75%	68%	32%	—
5. Serve as advisor to the local FFA chapter (53).....	57%	43%	75%	23%	2%
6. Teach farm mechanics to high school voc. agr. students (55).....	9%	91%	83%	15%	2%
7. Teach general mechanics to students not enrolled in voc. agriculture (40)....	50%	50%	85%	15%	—
8. Organize and conduct classes (includes visiting farms of members & preparing class reports) for: (a) Adult farmers (45).....	36%	64%	53%	45%	2%
(b) Young farmers (51).....	39%	61%	54%	44%	2%
9. Teach farm machinery maintenance and repair classes (50).....	22%	78%	70%	26%	4%
10. Counsel students (includes recruiting students) (54).....	2%	98%	63%	35%	2%
11. Secure, organize & file subject matter (teaching materials) (53).....	15%	85%	48%	48%	4%
12. Departmental correspondence (54).....	28%	72%	56%	40%	4%
13. Organize and use an advisory council (42).....	7%	93%	44%	54%	2%
14. Conduct classes in food production and conservation (27).....	33%	67%	56%	44%	—
15. Supervise the operation of the school community cannery (30).....	47%	53%	64%	36%	—
16. Evaluate the local program of vocational agriculture (53).....	—	100%	64%	34%	2%
17. Publicity					
a. Write news articles (50).....	30%	70%	54%	42%	4%
b. Present radio programs (40).....	15%	85%	65%	30%	5%
c. Present TV programs (18).....	33%	67%	61%	33%	6%
d. Present school assembly programs (39)....	21%	79%	69%	28%	3%
e. Prepare FFA float for a parade (30)....	17%	83%	71%	29%	—
f. Prepare FFA or departmental exhibits (50)	22%	78%	66%	34%	—
g. Conduct a county or community fair (29)	7%	93%	58%	42%	—
18. Prepare reports					
a. Inventory of equipment, books, and teaching aids (54).....	22%	78%	71%	27%	2%
b. Requisition for reimbursement for cannery (29).....	62%	38%	84%	16%	—
c. Annual program of work for the voc. agr. department (55).....	20%	80%	71%	27%	2%
d. Statistical report—schedule of classes (55).....	22%	78%	84%	16%	—
e. Quarterly activities report (55).....	11%	89%	80%	20%	—
f. FFA dues, order for record books, pins, etc. (55).....	45%	55%	83%	17%	—
g. FFA chapter program of work (55).....	44%	56%	73%	25%	2%
h. Teaching Calendar (55).....	7%	93%	77%	23%	—
i. Preliminary report, high school students (55).....	25%	75%	81%	17%	2%
j. Follow-up records of former students (55)	35%	65%	74%	24%	2%
k. Final report, high school students (55)....	27%	73%	77%	21%	2%
l. FFA state farmer degree applications (51)	69%	31%	73%	27%	—
m. American farmer degree applications (29)	59%	41%	69%	31%	—
n. Final FFA chapter report (54).....	46%	54%	77%	23%	—
o. Applications for FFA Foundation & other awards (51).....	43%	57%	63%	37%	—
p. FFA camp reservation requests (50)....	40%	60%	74%	26%	—
q. Forestry Camp scholarship applications (48).....	29%	71%	74%	26%	—
r. Summary of the Year's Work (55).....	25%	75%	71%	27%	2%
s. Prepare and Submit FFA Contests Entry Forms (54).....	28%	72%	79%	21%	—

\*One teacher in each of two departments worked full time with out-of-school groups. All other teachers in the 55 reporting departments taught high school vocational agriculture classes and visited farm and work projects of high school vocational agriculture students.

The arrangement used for accomplishing each of the 43 kinds of duties was "unsatisfactory" in only a few cases (not over 6 per cent) in connection with 22 of the 43 duties on which information was gathered. It is noteworthy that a large majority of the duties were shared by all teachers in the respective multiple-teacher departments and that the teachers considered this teamwork to be "highly satisfactory."





## Suggestion for—

## Choosing and Using Consultants

### —in Program Planning

HAROLD M. BYRAM, Teacher Education, Michigan State University

Many of the recent studies that have been conducted to determine the needs for area vocational education programs have made use of consultant services. Previous to those it has been a less common practice to call in consultants in connection with local program revisions. Planning procedures have been changing, as teachers of agriculture and their administrators increasingly express a desire for expert or specialized help in local program planning. This call for help can be explained in part by the seemingly drastic changes in objectives and curriculum that have recently been under consideration.

Some may want a candid reaction from a "disinterested" person to the program of vocational agriculture as it has been. Others are probably searching for ideas to consider in an effort to adapt the program in their school to new needs. More research on agricultural occupations has been conducted in the past five years than probably had been done in the preceding twenty years. As the findings of these studies are analyzed one may wish that help were available to interpret them in terms of the program for a given community.

#### Selecting A Consultant

A consultant may be defined as a person from outside the school staff and its clientele that might be affected directly by decisions; who has had experiences and/or education that qualify him to give advice, information, interpretations and/or suggestions regarding alternative courses of action or procedures; and/or who has skill in helping professional people to identify and work through their problems to a satisfactory solution. Some persons qualify as consultants who are in or near the community, or are in the regional offices of state agencies or organizations. Others may be found in state offices of agencies, of state-wide organizations or in state insti-

The regional offices of state and Federal agencies have staff members with an understanding of labor market trends, of unemployment information, and of some training programs. The field service staffs of the Cooperative Extension Service and U.S.D.A. Soil Conservation Service have had special experiences in agriculture that help to qualify them as consultants. There are many business, industrial, and agricultural associations that have management and/or supervisory personnel, some of whom would be in a position to have access to, and should be able to supply pertinent information.

Members of the vocational education staffs of state departments of public instruction and of teacher education institutions are being called on increasingly to provide consultant service in program planning. Sometimes a person may be needed who has a general background, or at least knowledge in several vocational education fields. In other instances it may be appropriate to utilize the services of a subject matter or occupational specialist who is not a professional educator.

Some questions that would be well to consider when choosing a consultant are: Does the person possess knowledge that we need? Does this person have a set of values that we ought to consider? Has this individual had some experience that we would like him to share? Does this person have expertise in some line of work? Can this consultant help us to identify our problem? Can he help us to choose among several alternative courses of action? Is the person disassociated from approval responsibilities or sanctions that might hamper him in fulfilling his true role as consultant?

Specific activities of consultants might include:

—Meeting with a staff committee to help identify problems to be studied



Harold M. Byram

supplying information to help in their solution.

- Assisting in the development, use and/or interpretation of a data gathering instrument to be used in getting ready for program revision, and in adapting an instrument to data processing equipment.
- Assisting in determining how to analyze, summarize, and interpret data.
- Meeting with an advisory committee in evaluating the current program.
- Providing sources of curricular and other materials that may be needed.
- Reporting changes and developments in other local programs observed.

#### Preparing to Utilize Consultant Service

The value of a consultant in program planning will be determined in no small degree by his understanding of what is to be expected of him and the local preparation that precedes his visit. This writer can recall too many instances in his own experiences as a consultant, and of those reported to him, where neither of these conditions was satisfactorily met. In these instances the effectiveness of the consultation provided could have been at least doubled had there been an adequate understanding by the consultant of what was wanted of him.

The consultant should be advised in advance of the problems being dealt with, and those with which he is expected to help. If the specific problem is not readily identifiable, and help in identification of the problems is desired, then adequate background information should be supplied in advance. It would be quite helpful, in any case, for the local teacher or administrator to indicate the specific kind of advice, information, or other assistance that is expected. If, for example, reaction to considerable local data on agricultural occupations is desired these should be supplied him in advance, so that he may study them.

#### Local Administrator

Throughout this discussion reference has repeatedly been made to

#### H. M. Byram

(Continued from page 138)

the local administrator. This is for a purpose. The problems to be dealt with should be an official concern of the school administrative authority. Unless this authority is committed to sanction of action that may be expected, or to administrative recognition of the results of program planning deliberations the services of a consultant might be wasted, or at best could turn out to be largely academic in character. As Goodlad has so aptly put it: "It is a cruel waste when officials permit or even encourage efforts to change, knowing full well in advance that they are committed to a certain policy of procedure regardless of the change ultimately to be recommended."<sup>1</sup> The administrator probably should be the person who makes the official requests for the consultant's service, and should be prepared to work with him and the teacher, as well as with a committee or staff from the local situation.

#### Use Consultant Early

As previously indicated, a consultant may be desired who would work with a staff committee, or citizens' committee or other group. In such instances it would be well to invite the consultant to early meetings of such groups. Experience has shown that initial identification of a consultant with a group is very helpful for early definition of and exploration of a problem. Rapport and confidence in the consultant needs to be developed from the start. If the consultant is the right kind of person for the assignment he would be very helpful in guiding the dynamics of the group as it works.

The consultant should be briefed on the "climate" or local setting of the planning endeavor. For instance, if there are controversial issues these should be made known to him so that he could decide whether (a) to avoid them, (b) to supply information to aid in settling them, or (c) to take a position with regard to them. Or, perhaps the local administrator may ask him to take one of these courses of action, and should so inform him.

It is important that local person-

<sup>1</sup>John I. Goodlad, "The Consultant and In-Service Teacher Education." Chapter VIII, *Inservice Education*, Fifty-sixth Yearbook, Part I, National Society for the Study of Education, Chicago, Illinois, 1957.

nel make a schedule and plan their own activities so as to be free from regular duties or activities at the time agreed upon for consultant work. This is not always easy, and usually will require provision for released time in the daily schedule. Program planning is too important an activity to relegate it to the category of an "after school" or evening time assignment. Most consultants would prefer not to work evenings. At any rate, arrangements should be made for unhurried consultation, free from distraction.

Finally, the teacher, or someone on the school staff should keep a record of matters that have been discussed. These ordinarily would include recommendations by the consultant, and/or tentative decisions made as a result of consultations regarding next step to be taken in program evaluation, planning, or development.

#### Evaluation of Consultant Service

It is taken for granted that an evaluation of consultant service should be made by those using it. Most consultants would be interested in an expression from teacher and administrator regarding their work, if it might lead to improvement of their effectiveness. An evaluation may also help those who use consultants to prepare for better utilization of consultants in the future.

An evaluation should be followed by an appraisal of *the extent to which these purposes were achieved*. Informal discussion by

#### B. C. Bass

(Continued from page 135)

The degree of satisfaction reported with the teacher assignments for accomplishing each of the 43 kinds of duties was summarized separately for departments where the duty was assigned to one teacher and compared with the degree of satisfaction reported in those departments where the duty was shared by all teachers. No significant difference existed in the degree of satisfaction reported.

#### Summary

In a majority of the multiple-teacher departments of vocational agriculture in Virginia most of the 43 kinds of duties investigated were shared by all of the teachers and the teachers considered this arrangement for most of the kinds of duties to be "highly satisfactory." However, in some departments the arrangements for accomplishing some of the kinds of duties were reported to be only "fairly satisfactory" (see Table 1) and in a few cases were "unsatisfactory." This indicates that while the supervisors and teachers have worked out satisfactory teacher assignments for accomplishing most of the duties in their respective departments, much work still needs to be done in some departments to improve the degree of satisfaction with which the assignments of some of the duties are accepted by the teachers.

those involved locally could be directed toward such an appraisal, and then be written up for interested persons.

#### S. C. Mayo

(Continued from page 131)

- a. Social values are the key to understanding a community. If we know what the people in a certain area consider the most important things in life, we know their social values.
- b. People are going to evaluate our program in keeping with their scale of values. If our program has little connection with what *they* think important, we are in for a difficult time.
- c. We must learn and understand these systems of social values. If our program is to be accepted we must interpret it and explain it in terms of values of the community.

(To be concluded next month)

#### W. R. Bingham

(Continued from page 137)

We as workers in agricultural education should encourage them in developing their home and family life. Emphasis should be given to setting family goals, both for the near future and on a long-time basis. Our encouragement should help them develop moral and spiritual values of life.

Young farmers need our continued help in meeting them. If we do our part, I believe they will do theirs and live up to the fine record of outstanding farmers that have preceded them.

H. L. Noakes

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into farming or related occupations upon completing school.

#### Agriculture in Grades 11 and 12

Prior to the end of the second year of agriculture, each student will be aided in the selection of a program in agriculture to be completed during the 11th and 12th year in preparation for the vocation of the student's choice. The variety of courses available will depend on the interests and needs of students, size of school or area served, facilities available and number of teachers employed.

A comprehensive program in agriculture in the 11th and 12th grades will include at least five areas of agriculture. These will include the traditional course centered around training for farming and in addition courses to train for entering positions in agricultural business, agricultural machinery repair and service, ornamental horticulture and conservation.

#### Post High School Opportunities in Agriculture

For many students, agricultural education in high school is not their terminal education. A wide spectrum of opportunities lies before students completing specialized instruction in agriculture on the 11th and 12th grade levels. A follow-up study of the June 1964 graduates completing major sequences in agriculture revealed that one-fourth of these graduates went on to full-time study in institutions of higher education.

Students with agricultural training, plus the necessary courses required for college entrance, will find opportunities unlimited in agriculture after completing the requirements of a professional or technical degree.

A continuing program of instruction will be provided out of school youth and adults engaged in or preparing for farming and off-farm agricultural occupations. Such instruction will enable students to continue their education and thereby advance in their chosen fields.

This program in agricultural education geared to the needs and interests of both boys and girls, extending from grade seven through post high school programs should do much to increase the holding power

#### Preparing—

## Low Cost Overhead Transparencies

—In Color, Too

A. K. JENSEN, Teacher Education, Clemson University,  
Clemson, South Carolina



A. K. Jensen

The value of the overhead projector as a teaching aid is one of the most highly appraised tools of our day. The availability and production of transparencies is sometimes another question.

Commercial transparencies are limited, and they are costly. Even many of the commercial materials that the teachers can use to prepare their own transparencies are expensive and some are time consuming.

The cost factor does not have to be an important factor any longer. Time of production of teacher made transparencies is still a factor. Many transparencies can be produced as easily as any simple chart or diagram produced on paper or on the chalkboard. It involves a small materials investment and a bit of initiative.

#### Here is the Process

First, decide on materials. Select one or two types of plastic, a good drawing pen, India ink, a clipboard, a small Tee square, one or two small triangles, and some china marking pencils. There are a number of sources of plastic. Evaluate them in terms of their usage to you.

Reprocessed X-Ray film can be used with china marking pencils, India ink, or the rubber cement lift process that will be discussed in the article. It can be purchased in quantities of 100 10" x 12" sheets for \$4.00 or 1000 10" x 12" sheets for \$25.00 plus postage or shipping charge. It is available from the Johnson Process Company, 80-88 Front Street, Elizabeth 1, New Jersey.

Another plastic which has proven extremely useful is Trycite. Two thickness are desirable, .003 gauge and .005 gauge. Both thicknesses can be used with India ink and china marking pencils. The .003 gauge can also be used with a "Thermofax Secretary" copying machine. The .005 gauge is usable in the rubber cement lift process. The .003 can be used in the rubber cement lift process but only with extreme care. The .005 gauge is too heavy for the "Thermofax" process. It can be purchased in minimum quantities of 555 sheets of .003 gauge Trycite precut to 8 1/2 x 11 inches for \$10.06 plus postage from Plastic Suppliers, P. O. Box 85, Blackwood, New Jersey or 104 Cole Street, Dallas, Texas.

China marking pencils can be used to develop transparencies in advance or as you teach. They take the place of chalk and a chalkboard. They project as black on white. They do not store too well and fine detail is difficult to obtain.

A variety of felt tip pens are also available and are quick and easy to use. Some are permanent while others can be removed.

India ink will produce excellent transparencies. A good drawing pen such as a KOH-I-NOOR Rapidograph with a 2 1/2 or 3 point is excellent when using India ink. It can be purchased as a fountain pen and it is always ready to use. Ordinary steel point drawing pens are also acceptable. Plastic inks of various colors are also available for these pens from most drawing supply stores.

In using India ink or plastic inks, obtain a 15" clipboard and square off the end. Then using a small plastic Tee square and triangles, most any type of drawings, graphs or charts can be drawn directly on the plastic. The triangles can be raised off the plastic to prevent ink blots by gluing small strips of cardboard on the underside.

The use of simple guides under your plastic also assists production. An ordinary sheet of lined paper assists one in obtaining uniform spacing, lettering and straight lines. Graph paper assists in making graphs and charts. Several such simple guides are available in most any office and certainly help to speed and improve production.

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In producing this or any type of transparency, keep the lettering neat, as simple as possible and at least 1/4 inch high. This can be read in any size classroom by every student. Type size lettering is frequently too small for many classroom applications.

In using ink it is important to keep your plastic perfectly clean. The faintest amount of perspiration on the plastic acts as a coating of oil and the ink will not adhere to the plastic. To avoid this, start at the top, and with a sheet of ordinary paper between your hand and the plastic sheet, move down. This process soon becomes very simple to manipulate.

#### "Thermofax Process"

The "Thermofax Secretary," found in many school offices, produces a very quick transparency. Using Thermofax transparency plastic, most black and white originals in pencil, typewriting, or printing can be reproduced in a matter of seconds. Black inks containing graphite, such as India ink, also reproduce well. A process to reproduce from color originals is also available with special papers and equipment. The Thermofax process is fast and produces a high quality, though somewhat expensive, teaching transparency.

We have used the .003 gauge Trycite to advantage with the "Thermofax Secretary" providing the original from which one reproduces the transparency is in India ink or printed. Trycite does not reproduce well from pencil originals. The cost of the Trycite is approximately 1/3 that of the commercial Thermofax plastic. It is not equal in quality to the commercial Thermofax plastic, but where costs are important, a very satisfactory reproduction can be obtained. We have used many such transparencies on the state-wide basis with good results. The secret is to prepare or select a good original.

If one is selecting a printed original, avoid excessively fine lines and small print. Bold lines and large bold print reproduce well. If you are making the original, use India ink or the special Thermofax ink. Again use 1/4 inch letters.

The plastic is laid on top of the original and fed into the "Thermofax Secretary" in the same manner as with the commercial product. Always use the "laminating film card" as backing as a precaution against etching of the belt. In a second or two, you have the transparency. With this process, multiple copies can be produced from a single original.

You may have to experiment with the best heat on your individual "Thermofax Secretary." We find that a setting for Trycite is usually more toward the "darker" setting than it is for the regular material. Some machines have to be warmed up a bit, and at times when you are producing a number of copies at one time, you may have to change the setting toward the "lighter" mark.

This process is limited to the "Thermofax Secretary" only. It does not apply to other Thermofax copy machines such as the "Dry Photo-Copier."

#### Color Lift Process

There are many times when one would like to be able to project a particularly good colored picture from a magazine or some similar publication. There are several commercial processes which can be used. These usually involve rather costly tools and materials.

It is possible to make transparencies from such pictures with rather limited materials. The process will take some practice. The original copy will have to be sacrificed, but if the transparency is made with care, it will be permanent.

The process involves the use of rubber cement and color pictures printed on a clay base paper. This is the glossy paper one finds in many of our magazines and other printed publications. Since the ink is printed on this clay base, this procedure removes only the ink from the picture. Newspaper pictures are not printed on clay base and thus will not work in this process. One can determine if a picture is printed on clay base by moistening a finger and rubbing over the margin area of the picture. If a white film is left on the finger, you can assume the picture is on clay base.

The materials needed for this process are plastic sheets, rubber cement, a large flat pan or cookie sheet, and a thinner for the rubber cement.

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of schools and to improve the economic situation of the areas served by such programs.

#### Specialized Courses Described

*Agricultural business* will provide the agricultural training required for entrance into agricultural sales and service positions. The primary areas of instruction will include agricultural business, finance, insurance, law, selling, record keeping, business management and other areas appropriate to the field.

*Agricultural mechanization* will provide training in agricultural machinery maintenance and repair for entrance positions with various equipment agencies. Instruction will include the operation, adjustment, maintenance and repair of power units such as tractors, tillage and harvesting equipment and lawn and garden equipment.

*Farm production and management* will continue to train students for farm employment, operation, management and ownership. Areas of instruction will include farm management, farm production of animals and crops, soil and water management and farm mechanics.

*Ornamental horticulture* will train for entry positions in floriculture, landscaping, nursery work and park and grounds maintenance. Principal areas of instruction include greenhouse operation, nursery plant production, flower arrangement, landscaping, equipment repair and maintenance and business practices.

Conservation will provide training for entry positions in the broad field of conservation. The primary areas of instruction will include forestry, wildlife management, water management, development of resources for outdoor recreation and mechanics related to the field of conservation.

Appropriate *agricultural experience programs* will be required of all students enrolled in these courses. This experience may be gained with an agricultural business farm, greenhouse, forest or other which is appropriate to the student's training program. Some of the experience may be gained under controlled conditions on a school farm, land laboratory or forest, and in the shop, laboratory or greenhouse.

# Young Farmer Committee Advises on Purchase of Farms

JOHN F. JUNSCHKA, Vo Ag Instructor, Winona, Minnesota

What are the opportunities for young men who have a sincere desire to become established in farming in your area? Boys in high school and recent graduates face a major

decision whether to become established in farming or a related occupation.

Prospective young farmers need to know the number of farms that

A. K. Jensen

(Continued from page 141)

For plastic, the reproduced X-Ray film is most acceptable, though the .005 Trycrite will work if you are cautious. The rubber cement thinner used may have to vary should you use other plastics.

Use ordinary rubber cement. Buying it in at least quart size containers seems to be the most practical.

With both the Trycrite and the reprocessed X-ray film plastic, we have found that the best thinner is IN Hexane. *This is a very combustible material.* It must be handled with care. Store it in a cool dark place, and make sure that you keep it away from any source of flame. Hexane can be obtained from most chemical supply houses if it is not available from your local chemistry classroom.

When using this process, be prepared to make a number of transparencies at a time. The process involves the following steps:

1. Thin one part of fresh rubber cement with two parts of Hexane. This should result in a water thin cement. Anything thicker will result in the formation of bubbles. Keep this cement in a tightly capped container between use. If the cement is old, you may have to use more Hexane in order to reduce it to a water thin consistency. It must drip off the plastic without forming ripples or bubbles.
2. Pour the cement into a low, flat pan or cookie sheet. Then quickly take your sheets of plastic and draw them down onto and through the cement so that one side of the sheet is thoroughly covered with cement. Let the excess drip off. Hang each up to dry. A spring clip clothes pin works well as a device for hanging these sheets up from a line. Do as many sheets as you can use at one time.
3. Take each picture to be lifted, and in the same manner, apply the cement to the ink side of the picture. Let it drip off, and hang it up to dry. Both your picture and the plastic should be covered with a very thin uniform coat of cement. Any ripples or bubbles at this point will remain in the final transparency.
4. When the cement on the plastic and the picture has thoroughly dried, place the two cemented surfaces together. This is a critical point in the procedure. Once the two come in contact with each other you cannot separate them. Thus, you must place them together properly on the first attempt. Start by applying one edge of each together. Then with a rubber roller, roll the picture down on the plastic, being careful to avoid wrinkles and air bubbles. Wrinkles and air bubbles are difficult, if not impossible, to remove and will show up on the completed transparency.
5. Place the plastic with the picture cemented to it in a pan of cool water for ten to fifteen minutes. Then carefully peel off the paper backing on the picture. Be sure you do not scratch the cement coating in this process. You will notice a coating of white clay remaining on the ink side of the transparency. Carefully wash this off with cold water and a light rubbing motion of the hand. Hang your transparency up to dry.
6. When the transparency has thoroughly dried, spray it with a light coat of transparent acrylic spray. This can be purchased in a pressurized can from most paint stores. This brings out the color and apparently increases the translucency of the transparency. When spraying is complete, clean the nozzle of the spray can by inverting the can and spray for two or three seconds in this position or until only propellant passes through the nozzle. It is important that you use caution during this step. If too much spray is applied, dull spots can appear on the transparency. If you are using Trycrite, too much spray will actually dissolve and distort the plastic. Reprocessed X-Ray film is not affected by the spray and is thus the most satisfactory plastic for this process. Allow your transparency to dry.
7. The transparency is ready for use. If you desire, you can frame it or mask out unsightly edges due to the overcoating of rubber cement. Placing another



John F. Junschka

will be available. These individuals also need guidance, reassurance, and advice from reliable sources to help them obtain a suitable start. Help is also needed to secure credit to finance an economically sound farm.

Minnesota has taken the initiative in starting an organized program to help these young men to start farming. A pilot program involving six communities in northwestern Minnesota in 1961 got the project started.

Winona's Agriculture Advisory council decided to learn more about the project and invited a rural area development specialist, who works as part-time state coordinator for the program, to speak to our group.

The Winona Agriculture Advisory council decided that they would take the responsibility of getting the program started and would act as the local Winona Young Farmer Committee. This committee consists of five farmers, five businessmen, the county agent, Vocational School director, along with the area vo-ag coordinator and the two local vo-ag instructors.

The local committee decided to survey the local farming area to determine the availability of farms and also needs and opportunities for young men to become established in farming. A list of all the farms was obtained from the county A.S.C. office.

The following is a summary of the results from the farm survey:

1. The average farm size of the Winona School area is 253 acres with 114 tillable acres.
2. The average age of the Winona farmer is 52.7 years.
3. Seventy-nine percent of the farm operators own their farms. Thirteen percent farm in partnership with eight percent operating as renters.
4. Twenty-eight percent of the farm operators plan to retire

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in 0-5 years and sixty-one percent after 10 years.

5. Seventy percent of the operators who had an opinion stated that they would be willing to sell their farm on a contract for deed. Twenty-eight percent would sell for cash and another two percent would sell on deed with first mortgage.

This study showed a definite need for young men to enter the farming occupation in the Winona school area. The total number of farm operators in the Winona school area is approximately 800 farmers. Considering the probability that 25% of these farm operators are on units not sufficient in size and quality to produce an adequate income for a full-time farmer would reduce the number of farms to 600. The increase in the farm size and decrease in the number of farms would give us a very conservative figure of 500 farms in the Winona school area.

The study shows that 40% of the farm operators plan to retire within the next ten years. At this rate, we would need twenty farm replacements per year in the Winona school area. Some figure the average farm operator farms for forty years. Using the forty-year basis, the Winona school area still needs 12.5 new farm replacements each year.

### How Plan Operates

A good strong Young Farmer Committee could help locate farms and help young men to become established on some of these economically sound farms. The State Young Farmer Committee could serve as a source of information and advice for prospective Young Farmer Committees in each local community. Young men who have a sincere desire to farm can contact their local Young Farmer Committee for information concerning available farms. The local Young Farmer Committee in turn can secure a list of available farms for sale or for rent in their area. The local committee can help these young men find a source of credit to finance their farming operations. Advice and a little supervision by interested committee members can be very valuable for a young man starting to farm. A complete set of farm records and record analysis at the end

young farmers. This is the best tool that the farmer has in evaluating his results and progress on the farm and upon which he can base his future decisions.

A good example of the operation of the Winona Young Farmer Committee was illustrated in the spring of 1964. A local young farmer was renting a farm and looking for another farm to purchase. The Winona Young Farmer Committee advised against the purchase of one farm due to the need for a completely different set of buildings to facilitate his dairy operation. The Committee advised the purchase of a 160 acre farm with 120 tillable acres. The local bank agreed to finance the young man for a down payment on the farm in addition to his personal property loan as a result of the recommendation of the local Young Farmer Committee.

Another big factor which convinced the banker to furnish the credit was the complete set of farm records with analysis which the young farmer had for the year of 1963. This young farmer had joined the local farm management class in 1962, which is a part of the adult farmer education program of the Winona agriculture department. He attended classes in 1963 and analyzed his farm records at the close of 1963. These farm records and analysis were very valuable in estimating possible returns and success on the new farm.

The Winona Young Farmer Committee has looked at seven available farms. The committee has helped two young farmers purchase farms and worked with another who couldn't come up with the needed down payment.

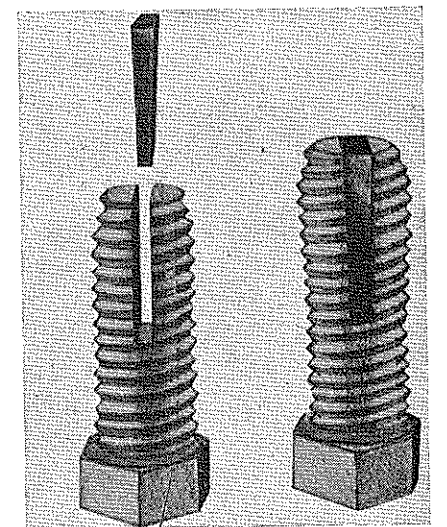
Local credit personnel are very happy to see a young man show them his actual farm production costs and returns. Farmers who keep accurate records and analyze their farm records don't have to use average figures to try and determine their return above feed costs, crop yields, machinery and power costs, and labor returns. These farmers have their own actual production figures which tell the story of the farming operation on their home farm.

This country must have good farmers in the field of agriculture today. The efficient farmer is the one who will survive. A good farmer must keep an accurate set of farm

records and analyze these records to evaluate his progress.

Banks, Production Credit Associations, and Farmers Home Administration are backing the Young Farmer Program and farm management instruction.

An active Young Farmer Committee can provide the guiding hand for young men interested in farming. These young men with the aid of records, farm management instruction and record analysis can assure a community of the continuance of the family type farm.



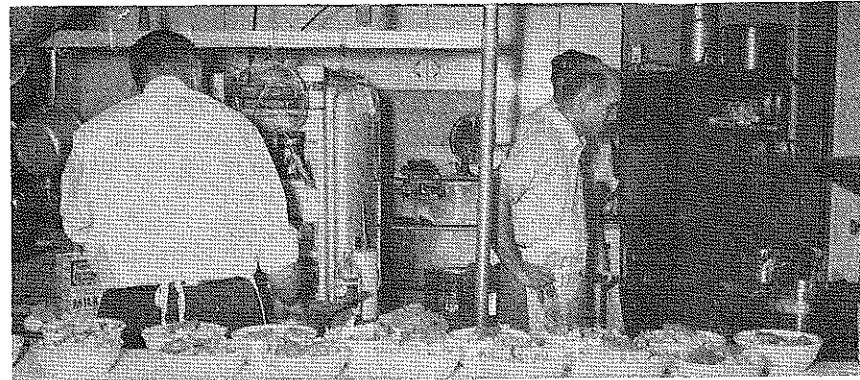
This new expanding, self-locking bolt takes a nylon (polypropylene) wedge in its slotted shank. The first few threads of the bolt are tapered to allow the nut to be started easily, but after the first few turns the bolt meets the resistance supplied by the wedge. The result is a tightly locked bolt resistant to loosening by vibration. Contact Harold V. Jones, Halco Instrument Company, 115 North Market Street, Champaign, Illinois for more information.

A. D. Anderson

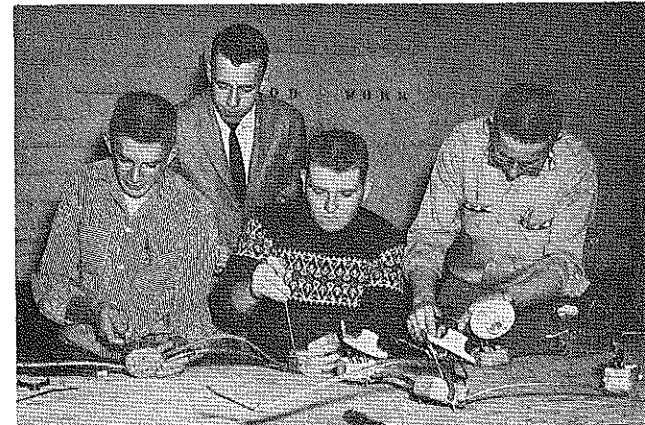
(Continued from page 134)

It was recommended that vocational agriculture become more inclusive, not only in regard to subject matter, but in regard to whom it is made available as well. Many of the part-time positions discovered, especially in the orchards, were filled by women. All part-time labor needed employment during the rest of the year.

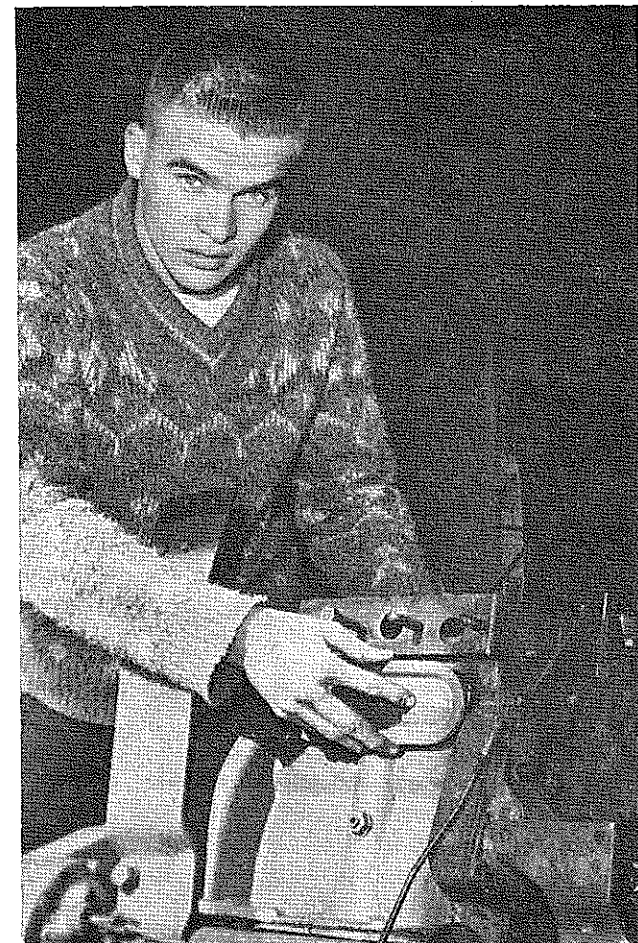
The needs discovered not only supported continuation of vocational agriculture education, but that there was still a need to train farmers and ranchers too. However, in view of the fact that women perform many specialized jobs there should be instruction offered to more adequately train them, and other agricultural workers, for the specialized work that they perform.



Haxtun, Colorado school superintendent, Buford Plemmons assists in frying "Rocky Mountain Oysters," for a Vo-Ag Dad's night hosted by the local Board of Education (Photo by Irving Cross)



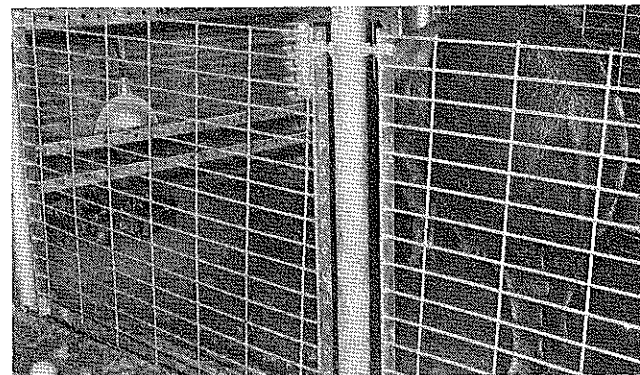
Skills in electrical wiring are taught in the agriculture shop under the supervision of the teacher. (Photo by Paul Hemp)



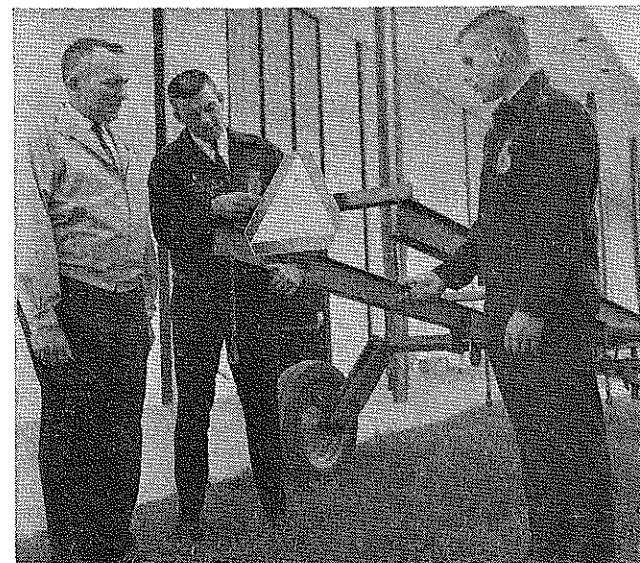
Joel Kritzman demonstrating skills and abilities acquired in the vocational agricultural mechanics shop in Iowa. (Photo by Manson)

## Stories in Pictures

Gilbert S. Guiler  
Ohio State University



The best of living conditions are provided for sow and litters by vocational agricultural students in Missouri. Hot water, heated concrete floor, infra red lamp and guard rails provide protection to newborn pigs.



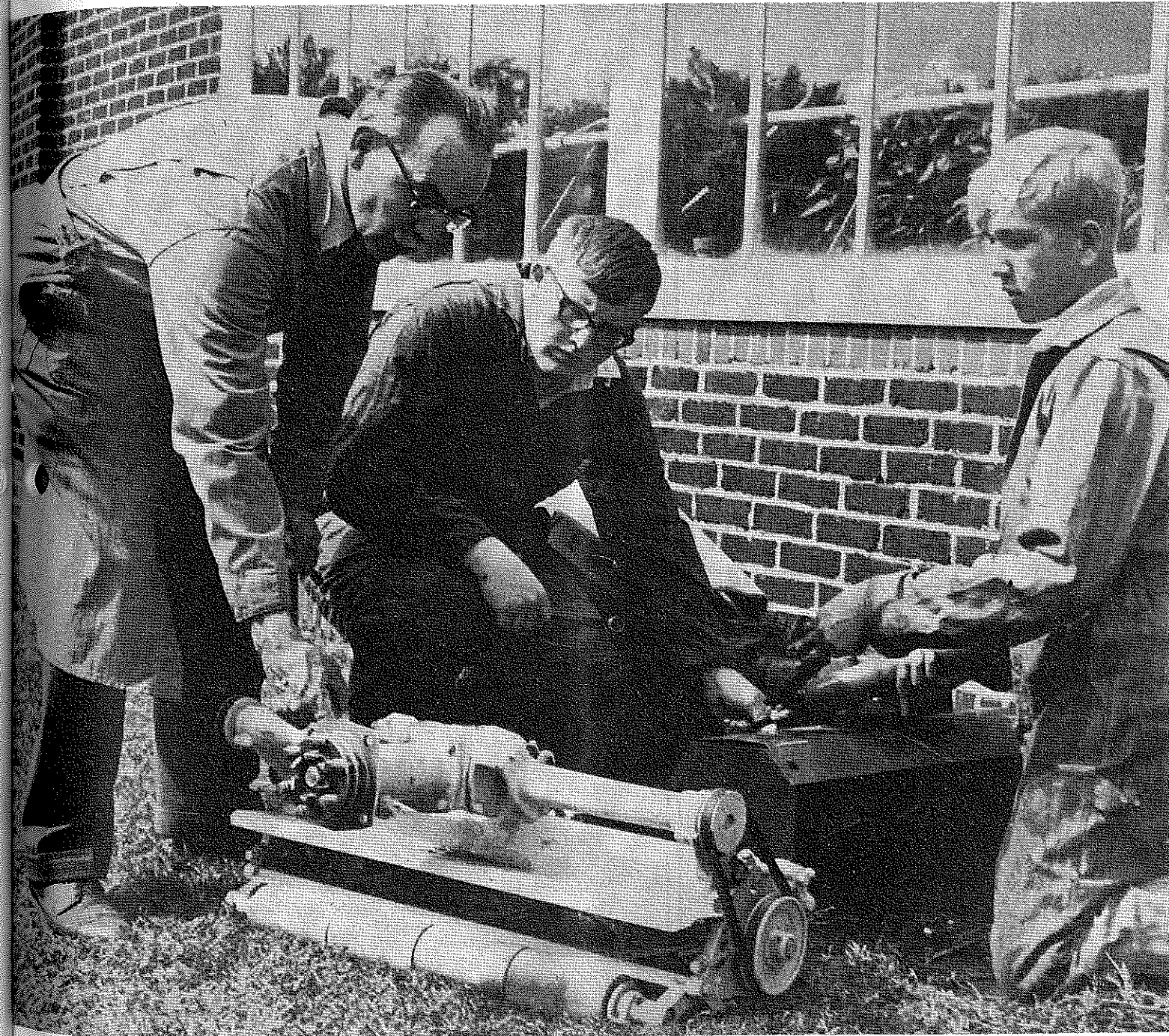
Guy Green, Route 1, Marysville, is pictured with his rotary hoe transporter that he made in Vocational Agriculture Mechanics. Shown on the rear of the vehicle is the "Safety Reflector Emblem" required on all farm equipment when being transported on Ohio highways at night.

# AGRICULTURAL Education

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Robert Peterson and Bruce Frederickson, seniors at Minneapolis Roosevelt High School, receiving instructions in use of landscape equipment, recently purchased for use in the horticulture work experience program initiated by the Minneapolis schools this year. In the background is a part of the greenhouse that serves as a laboratory facility for instruction in the horticulture program conducted by Mr. Luke.

Featuring  
Work Experience Programs