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Featuring —

GRADUATE STUDY AND INSERVICE EDUCATION

THE

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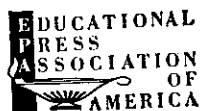


TABLE OF CONTENTS

Editorials
 Inservice Education: Crucial for the Times147
 Graduate Study and Inservice Education147
 Occupational Experience in Agricultural Business
James E. Dougan and John Watkins149
 Instruction for Farm Machinery Occupations
Jay Wood151
 Inservice Education for Leaders of Youth Organizations
George Luster and Harold Binkley152
 Book Reviews153
 And Change We Must
J. C. Atherton154
 Assistantships and Fellowships in Agricultural Education, 1968-69
Harold R. Cushman and Harry E. Peirce156
 Teacher Liability in the Agricultural Mechanics Laboratory
John Hillison158
 Continuing Education for Young Farmers
John H. Rodgers160
 Inservice Education for Teachers
R. M. McGee162
 Difficulty Experienced by Teachers in Conducting Agricultural Mechanics Programs
Earl S. Webb163
 Travel Scholarship Winners165
 Is Your Classroom Showing?
Clayton Riley166
 Stories in Pictures
Gilbert S. Guiler168

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Editorials

From the Editor . . .

Inservice Education: Crucial for the Times



J. Robert Warmbrod

Agricultural educators are experiencing a time when inservice education is the primary means of giving direction both to the nature of change in agricultural education and to the rapidity with which change is made. Viewed from a broader perspective, inservice education for agricultural educators could influence to a great degree the role agricultural education is to play in future programs of vocational education in the public schools.

There are many forces contributing to the imperative-ness of inservice education. Some of these forces are familiar for we have dealt with them effectively in the past. The rapidly changing sciences of agriculture and education continue to necessitate the constant updating of the profession in technical subject matter and the principles and practices of teaching and learning. But there are new and perhaps

unfamiliar forces which accentuate the need for inservice education. Some of these recently appearing forces are within agricultural education, but others encompass the whole of vocational and general education.

The broadening of vocational education in agriculture to include education for all occupations involving knowledge and skill in agriculture has created a need for additional competencies by agricultural educators. One of these new areas of competence has to do with the subject matter or content of instruction. To plan, conduct, and evaluate educational programs relating to agriculturally oriented business and industry, agricultural educators need to be familiar with and have some knowledge of the nonfarm business and industrial complex serving agriculture. Neither the management and operation of agriculturally oriented businesses nor the function of agricultural knowledge and skill in the context of business and industry have generally been a part of the educational or experiential backgrounds of agricultural

(Continued on next page)

Guest Editorial . . .

Graduate Study and Inservice Education



David R. McClay

In vocational and technical education in agriculture, *The Agricultural Education Magazine* serves an important function in providing a communications vehicle through which teachers, administrators, supervisors, and teacher educators are informed of developments and progress being made in this important field of education. Many leaders in this field believe the "Ag. Ed. Magazine" continues to be the most important medium we have for promoting unity

and a sense of belonging among those who work in agricultural education throughout the nation.

This issue of our magazine marks another milestone in its long life—a change in editors. Most of us cannot appreciate the amount of work our editors unselfishly give through the years in order to provide our field with a qual-

Dr. David R. McClay, Head of the Department of Agricultural Education at The Pennsylvania State University, serves as Chairman of the Editing-Managing Board of The Agricultural Education Magazine.

ity professional journal. Dr. Scarborough has done an excellent job during the past three years as editor. Beginning with this issue and continuing for the next three years, Dr. J. Robert Warmbrod, University of Illinois, will edit *The Agricultural Education Magazine*. We must all help Dr. Warmbrod with his new responsibility as editor so that our professional journal continues to improve in quality and usefulness.

I believe the theme "Graduate Study and Inservice Education" is a very appropriate one for our new editor to tackle as his first assignment. It is a theme that should be of interest and concern to every one of this nation's 11,000 teachers, administrators, and teacher educators in vocational-technical education in agriculture.

Most speakers at college and university commencements include in their remarks somewhere that graduation from college should not be the end of formal education for a person. This fact certainly applies to individuals entering the field of education. Graduate study and inservice education provide the educator an opportunity to keep up to date in the technology of his field; to keep abreast of federal, state, and local changes in laws, policies, and procedures; to

(Continued on next page)

From the Editor . . .

educators. An immediate task of the profession, then, is the upgrading of its members in these areas of technical competence.

The broadened purposes of vocational education in agriculture have created also an urgent need for new and different competencies that fall within the domain of professional education. Established programs are being modernized and extended; new programs are being developed. The clientele served by and interested in agricultural education is changing not only in scope but in character and means of involvement. Persons are entering agricultural education who are prepared through education and experience as agriculturists and technical specialists rather than as educators. Such are some of the elements that make imperative inservice education in the specific areas of program development, teaching, and evaluation in agricultural education.

Other issues point up the need of agricultural educators for inservice education which is of a different character. The role, clientele, and content of vocational education are being discussed by educators and laymen. Educational programs involving several vocational areas are being established. Some persons, both within and outside vocational education, are promoting programs of general vocational education that de-emphasize or even eliminate specialized vocational programs at the high school level. Issues such as these illustrate that agricultural educators can no more afford to shun these forces than they can afford to boycott inservice education programs designed for all vocational educators or for educators in other areas of vocational and general education. A prominent part of inservice education in agricultural education must be the development of competencies which continue to place agricultural educators in leadership roles in planning, conducting, administering, and evaluating a total program of vocational education.

The crux of the matter is that inservice education is not a casual or informal affair. Inservice education involves more than attending an annual teachers' conference or the

occasional reading of an article in a professional or research journal. A program of inservice education that is void of formal graduate study, either for a degree or as a nondegree candidate, is inadequate. The attitude of the practitioner—whether teacher, supervisor, or teacher educator—who is "too busy with practice to find time for study" is as indefensible as it is unprofessional. Agricultural education, like any profession that wishes to continue to be dynamic and viable, must place high priority on the continual improvement and updating of the technical and professional competence of its members.—JRW

Guest Editorial . . .

learn better ways of doing his job; and finally, it keeps him informed of events and trends in other educational fields. Graduate study is also a prerequisite for promotion and higher pay for most jobs in education.

Each individual teacher, supervisor, or teacher educator is primarily responsible for his own professional growth and competence; however, providing reasonable opportunity for graduate study in agricultural education for all is a major responsibility of teacher educators. Both resident and continuing education courses in technical agriculture and in agricultural education should be provided as needed in each state. To do this presents many states with problems which appear beyond solution. Shortage of staff, budget, and time are the most frequent problems heard. Many states, however, are providing the resident and continuing education courses and workshops that teachers need. Often programs have been developed with the help of the state's agricultural teacher organization.

Ask yourself, "Do I need to improve my knowledge and competence so that I can better perform my job?" If you feel this need, why not enroll in a suitable graduate course or workshop soon?

Themes for Future Issues

| | |
|----------|--|
| February | TECHNICAL EDUCATION IN AGRICULTURE |
| March | RESEARCH AND DEVELOPMENT |
| April | THE IMAGE OF VOCATIONAL EDUCATION IN AGRICULTURE |
| May | INSTRUCTIONAL MATERIALS |
| June | EVALUATION |
| July | AGRICULTURAL EDUCATION IN PROGRAMS INVOLVING OTHER VOCATIONAL SERVICES |
| August | ADULT EDUCATION |

The Cover Picture

Professor John Mallory, left, State University of New York Agricultural and Technological College at Delhi, New York, explains the use of the oscilloscope in tuning tractor engines to Robert Ossont, Hartley Martin, and Robert Watson during a summer inservice workshop for teachers of agriculture. Photograph supplied by Harold L. Noakes, Chief, Bureau of Agricultural Education, New York State Department of Education.

A New Program of Inservice Education —



John Watkins

OCCUPATIONAL EXPERIENCE IN AGRICULTURAL BUSINESS

JAMES E. DOUGAN and JOHN WATKINS
Supervision, Ohio Department of Education



James E. Dougan

The primary purpose of the agricultural supply and service program in Ohio is to provide classroom instruction and cooperative occupational experience to students to prepare them for gainful employment in occupations related to agriculture. It was determined in the initial state of development of this program that there was a need for all teachers conducting the program to receive some inservice training to prepare them as teacher coordinators. Teachers in schools planning agricultural supply and service programs were requested to enroll in a three-week workshop developed specifically for this purpose. Three such workshops were held prior to the summer of 1967.

Intern Program

An intern program was initiated during the summer of 1967 to provide additional inservice education for teachers conducting agricultural supply and service programs.

The intern training program consists of the placement of teachers for a period of time in an agricultural business. The program was initiated by several forces including the teachers who had conducted the program for at least one year. Teachers, businessmen, and the state staff recognized that there was a need for information regarding the operation of the business, employment patterns in the business, and better understanding of the products and services of the business.

The agricultural businessmen expressed a strong desire to provide training centers for teachers in which they

become actually involved in many of the activities that students experience during on-the-job training as a part of their occupational experience programs. The training stations consisted of five farm machinery dealerships, three feed, seed, and fertilizer dealers, one horticultural garden supply center, and a U. S. wildlife conservation facility.

Getting the Program Started

The program was initiated by the state staff bringing together representatives of agricultural business, vocational agriculture teachers, and others to discuss ways and means of implementing such programs. The following are some of the issues discussed at the preliminary meetings.

Should teachers receive on-the-job training in an agricultural business or establishment in their local community? Generally speaking, the state steering committee recommended that this experience be gained outside the local community but within commuting distance of the teacher's home in order to reduce the teacher's expense while in training.

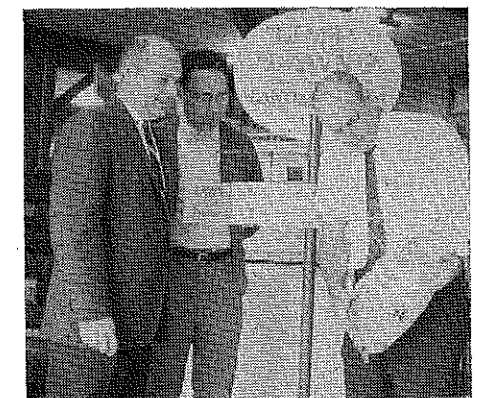
What should the length of intern training program be? The committee decided that the actual on-the-job experience should be at least two weeks in length and that this experience should be preceded by at least two days of orientation and followed by three days of appraisal including the development of definite guidelines for future intern programs.

Should the teachers receive on-the-job training at one place of business?

The committee was divided in their thinking in this matter, therefore, some of the teachers were placed at business establishments for the entire training period and other teachers received their experience in two different training centers.

The state steering committee selected local agricultural businesses throughout the state for training centers. After the teachers and the training stations were selected, a dinner meeting was called which consisted of the local managers of the training centers, the teachers, and the state steering committee for the purpose of developing the on-the-job training program. The Executive Secretary-Treasurer of the Ohio Farm Machinery and Power Equipment Dealers Association, the Executive Secretary-Treasurer of the Feed, Grain, Seed and Supply Dealers Association of Ohio, and the Public Rela-

(Continued on next page)



Odell Miller, teacher coordinator of the agricultural supply and service program at Marysville High School, Ohio, discusses lawn supplies with John Watkins, assistant state supervisor of agricultural education, and John Leeper, manager of a local agricultural supply business.

tions Director of Farm Bureau Landmark of Ohio were selected from the steering committee along with two members of the state staff to provide on-the-job supervision of the program.

The vocational agriculture teachers received no pay while on the job since they were under contract to their schools. Each teacher signed a statement relieving the business firm of any responsibility in case of accident while in training.

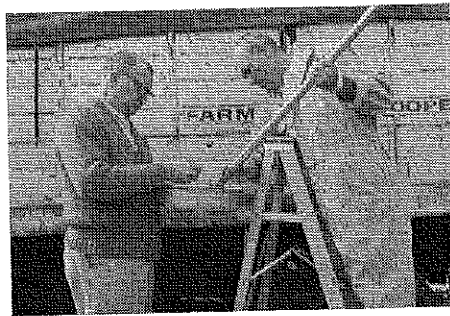
On-the-Job Assignments

Each teacher was asked to complete the following assignments during the intern experience.

- The preparation of a recommended training program for teachers pursuing a similar intern program in the future.
- The development of an on-the-job training program for high school students in a similar situation.
- The planning of a course of study for teaching technical and related instruction in the classroom.
- The collection of appropriate instructional materials.
- The preparation of a list of equipment and facilities essential for a school offering programs of agricultural supply and service.
- The preparation of an evaluation of the intern training experience.

Recommendations for the Future

- Part of the orientation period should be spent at the training station



Teacher-intern, Odell Miller, takes a sample of grain for testing under the supervision of John Harper, Fieldman for the Landmark Company in Marion and Union Counties, Ohio.

so the teacher can get involved in the regular training programs as soon as possible.

- The teacher must be assured of participating in a variety of experiences in the business during the intern period.
- Agricultural business leaders in the state should be involved in the planning of the total intern training program.
- The wise selection of experienced teacher-trainees is important.
- The training stations should be managed by men willing to cooperate with the teacher-interns.
- Full-time work by the teacher-interns is required while in the training program.
- The local school must understand and endorse the program and approve the participation of the teacher.
- Teachers should not receive pay from the business while on the job.

Benefits of the Program

Evaluation by the teacher-interns, agricultural leaders, and the state staff revealed that the program was extremely helpful in promoting the agricultural supply and service program in Ohio. Similar intern programs are planned for the future. Some direct benefits of the program include the following.

- The occupational experience enabled the teacher to relate more fully to the students their cooperative experience program because they participated in the same kind of work as other employees.
- The prestige of the program has improved among businessmen since they know teachers are better prepared to conduct the program.
- The program provided more training opportunities for vocational agriculture students.
- The program aided teachers in developing individual training plans for students.
- On-job experience gave teachers more confidence in teaching the program because they had a better understanding of the operation of the business.
- The occupational experience informed teachers about problems and concerns of agricultural businesses.
- The training program provided opportunities for the agricultural businessmen to become better informed about the total vocational agriculture program.

Instruction for Farm Machinery Occupations

JAY WOOD, Supervision
Washington State University



Jay Wood

What knowledge and skills should be taught high school students who are preparing to enter occupations in farm machinery businesses? A study of fourteen farm machinery firms in Spokane County, Washington provides information helpful in modernizing high school curriculums that are oriented toward employment in the farm machinery industry. The Spokane area typifies the modern concept of agriculture. Large wheat farms in the Palouse area, an abundance of irrigated, diversified farming operations near the famed Washington fruit country, and its proximity to the forest producing areas of Northeastern Washington, Northern Idaho, and Northwestern Montana make Spokane a natural hub for agricultural marketing and manufacturing.

Jobs in Farm Machinery Firms

The major functions of farm machinery businesses are retailing and service. The job titles of workers in the firms are manager, salesman, mechanic, partsman, set-up man, bookkeeper, officer manager, secretary, and purchasing agent. Farm machinery dealers indicate that important activities of employees are meeting people, selling, estimating costs, reading technical reports, service manuals, and parts lists, planning production or service of the firm, keeping records, handling money, promoting the services of the firm, and writing business letters. Dealers emphasize that meeting people is of great importance for all job titles.

Mr. Wood was teacher of agriculture, Medical Lake, Washington, at the time this study was conducted.

Need for Employees

Owner-managers and managers of farm machinery businesses report difficulty in finding qualified employees. The prospective employees must be over 18 years of age. Most employers prefer persons with a farm background who have some work experience prior to employment. All dealers require that new employees have at least a high school education. Post-high school education, including college in some instances, is preferred frequently.

Areas of Instruction

Dealers indicate that employees need knowledge and skill in the areas of production, products, materials, and service pertaining to the farm machinery industry.

In the areas of mechanics and engineering, it is essential that employees have technical instruction in:

- Basic mechanical skills
- Farm machinery
- Internal combustion engines
- Tractors

In agricultural business management, instruction is needed in:

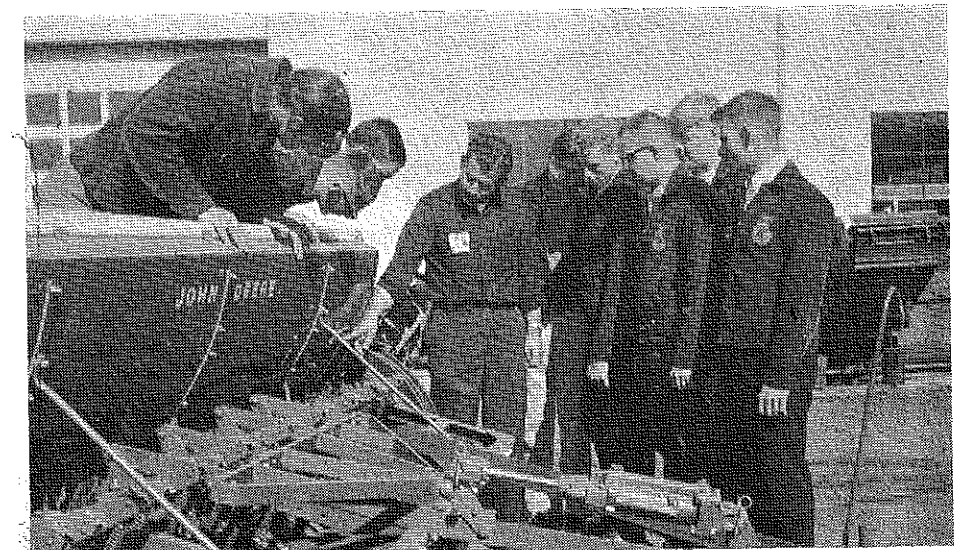
- Agricultural economics
- Agricultural marketing
- Business administration

Plant growth, fertilization, control of insects, diseases, and weeds, plant propagation, soil types, and conservation are appropriate areas of instruction in plant and soil science.

In addition to instruction in agriculture, employers stress that high school courses in typing, bookkeeping, and general mathematics are valuable for prospective employees.

Curriculum Revision

Farm machinery dealers are interested in working with teachers in developing educational programs designed to prepare students for entry into occupations in the farm machinery industry. Employers are willing to permit high school students to visit and observe operations of the firm. Most dealers will provide reasonable employment for students and will release key employees to aid teachers in providing instruction. Managers are aware that problems involving liability insurance, the time involved in training and supervising student-employees, and the attitudes of students will be encountered in developing and conducting a cooperative educational program involving both the school and farm machinery firms.



The sales manager of a farm machinery firm demonstrates the adjustment of a grain drill.

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Inservice Education for Leaders of

YOUTH ORGANIZATIONS

GEORGE LUSTER and HAROLD BINKLEY
Teacher Education
University of Kentucky



This seminar had its beginning in the minds of a few people who felt a keen need for making youth organizations associated with vocational education contribute to the instructional programs. Over the years some youth organizations in individual chapters and clubs have geared the local program of activities to instructional programs. These activities have contributed significantly to effective teaching.

PURPOSE

The primary purpose of the seminar was to upgrade the professional leadership in the use of youth organizations as teaching devices. The Vocational Education Act of 1963 made it possible to broaden vocational education. It recognized the need for youth organizations to develop leadership and citizenship in all service areas of vocational

education. There seemed to be a need for the professional leadership of youth organizations to have a "meeting of minds" in order to present a united and consistent front to schools and the public regarding the place and purpose of the youth organization in vocational education. Representatives from each of the service areas in vocational education shared in developing the specific objectives of the seminar and in planning the seminar program.

OUTCOMES

Selected items from the reports made by representatives of each vocational service on the last day of the seminar follow. These items are based upon reports on the topics "What We Have Learned From Other Vocational Services" and "Where Do We Go From Here?"

A National Seminar for Professional Leaders of Youth Organizations in Vocational Education was held at the FFA Leadership Training Center, Hardinsburg, Kentucky, June 12-16, 1967. The seminar, funded under the provisions of the Vocational Education Act of 1963, was attended by 126 leaders of vocational youth organizations from 46 states. Seminar participants included vocational educators in agricultural education, business and office education, distributive education, home economics education, and industrial education.

★ Youth organizations are an integral part of vocational education.

★ Activities of vocational youth organizations should contribute to the effectiveness of the instructional program. The course of study provides the basis for programs of activities of youth organizations.

★ There is need for separate youth organizations in each vocational service. Each vocational service has needs which are unique to it, and which can be met best by a specific youth organization.

★ There is need for all vocational youth organizations to work together. While the different youth organizations are unique, they also have common problems and concerns. More cooperation is needed on items of common concern at the local, state, and national levels.

★ The role and functions of all youth organizations need to be stated clearly. These should center on the instructional program and the needs of youth.

★ An appropriate and well-developed program of activities is the heart of each vocational youth organization.

★ The adviser is the key person in making any vocational youth organization function properly. Both pre-service and inservice programs in teacher education should devote the time and effort needed to prepare vocational teachers to serve effectively as advisers to youth organizations.

★ Vocational youth organizations can be of real value to students with special needs. This topic needs much additional study.

★ Vocational youth organizations must be recognized as an integral part of the school program. Public information and relations with school administrators, persons in business and industry, and the general public need much improvement.

★ Vocational youth organizations must not be exploited by businesses, industries, or political groups.

★ Evaluation should be an integral feature of all phases of the work of vocational youth organizations. It should be a built-in feature at every stage and at all levels of operation.

EVALUATION

It was the general opinion of the participants that the seminar was a good beginning, but that many of the objectives should be considered in more depth. The participants felt that it was especially beneficial to have professional leaders of youth organizations for all vocational services participate in a meeting of national scope. Many felt that the seminar made significant contributions in helping professional leaders of youth organizations understand and appreciate more fully the programs of youth organizations in other vocational services. In general, the participants felt that this seminar needed to be followed by similar meetings at the state level. They also felt that additional seminars at the national level were needed to consider in depth important aspects of making youth organizations a more effective part of vocational education.

BOOK REVIEWS

RAYMOND CLARK

Michigan State University

Book Review Editor

AGRICULTURAL EDUCATION, by Glenn Z. Stevens. New York: The Center for Applied Research in Education, Inc., 1967. 113 pp. \$3.95.

This is an authentic, descriptive treatise of contemporary vocational and technical education in agriculture. It is neither encyclopedic nor is it a recipe book to tell teachers how to teach or administrators how to administer programs. Quotations from and comments regarding references that go into detail on process and procedure are well chosen. They are presented in such a way as to stimulate the reader to want to look them up. The appended bibliography of these and related references would be helpful to professors and students alike.

This book capitalizes on a number of recent developments such as a taxonomy of occupational titles in agriculture, research relating to occupations in agriculture, and re-structured curricula. It is modern in terminology, philosophy, and principles.

One of the characteristics of the book that makes it interesting reading is the style. Many parts of the book are written as if by an observer of a passing scene, although there is no pretense of its being an historical document. It is not written as if by a disinterested by-stander. On the contrary, the manner is such as to convey the excitement and challenge that these developments presented. As Gordon Swanson has said in the foreword, "the author has that unusual quality of making the simple sound exciting and the complex sound simple". One who has been taught or addressed by Professor Stevens can hear him speaking as he reads.

There has long been a need for a reference that would be just right for school and college administrators, curriculum coordinators, and school coun-

selors. In short, the need has been for a work that is neither promotional nor defensive but forthright in presenting vocational and technical education in agriculture as it is and as it can become. This is such a book. It should be required reading—it can easily be read in one evening—for educators who need to be better informed on this important phase of education. These would include, in addition to those previously mentioned, teachers in all the other vocational fields as well as in agriculture. This reviewer expects that the book may be used by many professors as a text or reference for an introductory course at a university preparing teachers of agriculture. It is recommended to all teachers of agriculture and leaders in the field as a good addition to the professional bookshelf.

Harold M. Byram
Michigan State University

AN INTRODUCTION TO FORESTRY, by L. R. Hilterbrand. Lafayette, Ind.: Balt Publishers, 1967. 235 pp. \$4.00.

Recognizing the need for a more elementary text in forestry, the author has attempted to set forth in this book the latest available information in forestry. This book is limited to a small segment of woodland management. Directed toward the midwest area of the United States, emphasis has been placed upon the steps necessary for a successful forestry practice. Forestry practices such as planting trees, silvicultural practices, and harvesting methods are included. The book is written so the average high school pupil can read and understand what is written.

Guy E. Timmons
Michigan State University

AND CHANGE WE MUST

J. C. ATHERTON

Teacher Education

Louisiana State University



J. C. Atherton

We are bombarded from all sides by the statement that we must modify our program so that it is current and so that it meets the needs of those with whom we work. It appears that acceptance of this need is fairly

universal and that the major difficulty is one of implementation. Here lies the knotty problem.

Forecasters of various types have presented such views as the doubling of the world population within a span of forty years, the chronic shortage of foodstuffs throughout the world, and the need for increased efficiency in farm production and the processing and distribution of agricultural products within the United States. It is a common opinion that the current level of production of food and fiber will not suffice to meet our national needs within the next twenty years.

Another major consideration within this nation is the continuing reduction of the number of farmers and farm laborers. There is a corresponding increase in the size of the labor force engaged in servicing the farmer, processing farm produce, distributing farm products, and selling agricultural goods.

"The question no longer is whether there will be adjustments in the program."

"It is nice to revere the past, but . . ."

A FORMIDABLE TASK

These facts have confronted the educator with a formidable task. A normal reaction to this is one of admitting that the situation exists but to rationalize that there is so much to do now that one does not have time to even think about the future, let alone doing anything about it. Such an attitude, if allowed to hold sway in the thinking of those engaged in agricultural education, can lead only to disaster. This must not be allowed to happen; too much is at stake.

The task facing the profession may seem awesome, but this should just make the challenge stronger and dedication to the task more profound. It boils down to the fact that the difficulties may be taken as an overwhelming flood which will inundate us, or it may be viewed as an increasing opportunity and challenge in which planning, perseverance, and perspiration are needed in large measures for the leading of agricultural education into the fields of continued useful service.

John Stuart Mill commented in the last century that "No great improvements in the lot of mankind are possible until a great change takes place in the fundamental constitution of their modes of thought." This view seems very appropriate for contemporary society. It is nice to revere the past and all of its glory, but reality dictates that we apply modern thinking to the situation which confronts us. Modernization should take place but only where it will be advantageous.

THE NEED IS OBVIOUS

Problems facing agricultural education within a state are many and varied. For several years we were nagged by one concerned with where to begin making change. The need has become obvious but not the road to follow. Pressures from all sides have been exerted to get the program moving although many of these act as opposing forces to other pressures. These have produced a dilemma. One can not afford to remain stationary, but it is impossible to satisfy all of the pressures the undertaking faces.

Possibly, President Coolidge had a good solution when he finally concluded that as Chief Executive he could not please everyone. So, he decided to do what seemed right and then to allow the critics to have their "fun".

Changes have been made in many states and others are being proposed. The subject of a good study might be to determine what portion of it is the result of doing little until the strong pressures have built up and the needs for change are obvious. It is realized that this may be stepping on a few toes but possibly the reaction to that may be stimulating to the profession.

It seems that there must be a coordinated effort of studying, planning, implementing, evaluating and replanning

"The problem is one of determining the modifications needed and putting them into practice."

"The task facing the profession may seem awesome, but this should just make the challenge stronger and the dedication to the task more profound."

in a never-ending cycle if the job before us is to be done effectively. The profession must have the courage to take calculated risks if it is to regain its position of educational leadership. Otherwise, major opportunities may be lost and initiative may pass into the hands of others. Once lost it is difficult to regain the initiative. The obligation of leadership in the field of agricultural education is to see that there is no lack of courage or foresight in the building of educational programs which meet the challenge facing the profession.

There is a need to recognize that man's vision is limited. To begin, he does not have all of the facts and it is not easy to interpret those he has. It is impossible to foresee all of the changes which may occur. So plans at best must be made, partially at least, upon educated guesses. Projections are made upon the basis of past experience and the evidence on hand. Yet, plans must be made and programs initiated on the basis of these goals.

As time progresses actual occurrences will differ to some degree from those which were projected and for which plans had been devised. This may call for a revision or modification of thought and procedures. It seems prudent to make changes when they are needed. The original plans may have been wrong since they are the results of what someone at a specific time thought was the appropriate course of action. Subsequent events may show that this viewpoint was faulty.

BRINGING ABOUT CHANGE

It seems that if the profession is to be instrumental in bringing about the change it desires, it may be well to review briefly the steps involved in bringing this to pass. Although part of this may be "old stuff" to some, there is the necessity for keeping certain principles before us.

Understanding the Need for Change. It is easy to note in history major changes which have occurred and the things which caused them to be made. It is a much more difficult task, however, to comprehend current trends and to deduce from them the direction that agricultural education should pursue. Until one sees the need for changing current procedures, it is extremely difficult to get him to exert much energy and brainpower in such a venture. It seems important also that one recognize that change is an on-going activity and that there must be continuous planning if one is to keep abreast of the current situation. What is vital and far-reaching currently may soon become obsolete unless it is updated periodically.

Ascertaining the Possibilities for Making Changes. The rate of change and the extent of modification permitted will vary among the several states. Willingness by those in the power structure to innovate and to permit others to do so is essential for the bringing about of desirable change. A worker in agricultural education may run into lots of frustration when he goes counter to the wishes of those in a position to "call the shots."

Developing a Suitable Climate. It seems that program change in our field will be the product of leadership and not dictatorship. If this assumption is valid one must be aware that there is a need for enlightening people of the current situation and of the shortcomings of the traditional program. Not much constructive action can be taken when those involved are hostile or indifferent. It is imperative that there is built a spirit of permissiveness as a

"The profession must have the courage to take calculated risks if it is to retain its position of educational leadership."

minimum. An attitude of enthusiasm for program improvement is to be desired.

Working With Others for Change. Change affects and involves numerous persons. To implement innovations successfully requires that there be a smooth working relationship with various groups and individuals. Many of these are outside the profession of agricultural education. For example, it would be foolish to attempt to rearrange class schedules, to attempt to arrange for off-campus work experience programs for students during school hours, or to make similar changes without securing the approval of the high school administrator. Vocational training in agriculture is a cooperative venture. Good working relationships are required if the program is to be run effectively.

Planning. A static position in agricultural education was maintained for a long period of time. Finally, the log jam disintegrated and change was inevitable. The question no longer is whether there will be adjustments in the program. The problem is one of determining the modifications needed and then putting them into practice. Without plans we are operating in the dark. This makes it easy to take the wrong step, and since change will be a continuous process there is need for planning which extends over a long period of time. Planning and replanning should be considered a normal part of the job.

Implementing. The ultimate payoff in any program comes from its being put into effect. Seeing the need for change, getting public approval for change, and planning and working with others are all important parts of bringing about desired change. But these will avail little if implementation or follow-through is neglected. Leadership and informed followership are needed as much in this phase as in any other aspect of program development.

ASSISTANTSHIPS AND FELLOWSHIPS IN AGRICULTURAL EDUCATION, 1968-69

For a number of years the American Association of Teacher Educators in Agriculture has conducted an annual survey of assistantships and fellowships available at institutions offering programs of graduate study in agricultural education in the United States. The primary purpose of this effort has been to provide persons who are interested in pursuing graduate study with an overview of available opportunities.

Apparently more opportunities will be available for the 1968-69 school year than ever before. Listed are 158 assistantships, fellowships, and graduate instructorships reported as being available for the year ahead by 35 institutions. Last year there were 136 opportunities listed by 29 institutions, and 1967-68 was a banner year. Of course, the listing is never complete because not all institutions return information.

It should be pointed out that the survey requested institutions responding to list only aid available to agricultural education graduate students. General aid available to students in several fields is not reported.

Key to List

Data provided are in the following order: Nature of assistantship (number available); number of months available during year; beginning month of employment; amount of work expected; monthly remuneration and other considerations such as remission of fees; whether aid is for master's, advanced graduate program, or doctoral students; source of funds; and the 1968 deadline for application. Slight variations in this pattern are due to the nature of the data provided by reporting institutions.

University of Arizona

Research assistantships (2); 12 mo.; June or September; ½ time; \$250; out of state tuition waived; master's; apply by March 1.

Arkansas State University

Research and laboratory assistantships (3); 9 mo. and summer; June, September, and February; ½ time; \$266-\$400 per month; college funds; apply by January 1 for second semester, May 1 for summer semester, and June 1 for fall semester.

University of Arkansas

Research assistantships (6); 9 or 12 mo.; September; ¼ time; \$125-\$250; tuition remitted; doctoral students; apply by March 1.

Auburn University

Research assistantship (1); teaching assistantship (1); 9 mo. and 3 mo.; open anytime; ¼ time; \$120; master's or doctoral; Auburn U. Dept. Funds; apply anytime.

Research assistantship (2); 12 mo.; open anytime; ¼ time; \$300-\$380; doctoral; Occupational Research Coordinating Unit; apply July 1.

Clemson University

Research assistantships (4); 12 mo.; June or September; ½ time; \$250; reduced tuition; master's students; apply by May 1.

University of Connecticut

Research assistantship (2) in vocational and technical education; September; ½ time; \$283; master's or doctoral; State Department of Education; apply by March 1.

Cornell University

Research assistantships (3); 12 mo.; June and September; ½ time; \$225-\$280; reduced tuition; master's or doctoral; State, Federal (Hatch, USOE); apply by March 15.

Teaching assistantships (3); 12 mo.; June and September; ½ time; \$225-\$250; tuition remitted; master's or doctoral; State and College; apply by March 15.

East State Texas University

Teaching assistantships (2); laboratory assistantships (2); 9 mo. and 12 mo.; September; ¼ time; \$250 teaching, \$175 lab; master's students; apply by May 1.

University of Illinois

Research assistantships (4); 12 mo.; September; ½ time; \$243.50-\$287.50; tuition and fees remitted; doctoral students; apply anytime.

Research assistantship (4); 9 mo.; September; ¼ time; \$133.33-\$158.33; tuition and fees remitted; master's and doctoral; apply anytime.

Research assistantships (3); 9 mo.; September; ½ time; \$266.67-\$316.67; tuition and fees remitted; master's and doctoral; apply anytime.

Iowa State University

Fellowships (6); 9 or 12 mo.; September; \$222 plus extra for dependents; fees remitted; master's students; U. S. Office of Education; apply by March 1.

Research assistantships (2); 9 mo.; September; ½ time; \$277; reduced tuition; master's or doctoral; Experiment Station; apply by March 1.

Educational Research Fellowship (1); 9 or 12 mo.; September; \$277 plus extra for dependents; fees remitted; master's or doctoral; USOE; apply by March 1.

HAROLD R. CUSHMAN and HARRY E. PEIRCE, Cornell University

Kansas State University

Research assistantships (3); 12 mo.; September and February; ½ time; \$225; master's students; no deadline on applications.

University of Kentucky

Research assistantships (4); 12 mo.; June and September; ½ time; \$240-\$350; master's or doctoral; State funds and Federal grant; apply by April 1.

Graduate assistant in agricultural education; 10 mo.; September 20 hours per week—work related to course work and graduate program; \$240; doctoral students; University of Kentucky; apply by May for fall semester and November for spring Semester.

Louisiana State University

Research assistantships (10); 9 mo.; September; 15 hours per week; \$250-\$300; reduced tuition; master's or doctoral; department funds; apply by April 15.

University of Maryland

Instructorship (1); 10 mo.; September; teaching agricultural mechanics in Institute of Applied Agriculture; \$600; fees remitted; doctoral students; April 1.

Fellowship; 12 mo.; September; \$200 plus \$50 per mo. per dependent; doctoral students; Title I, ESEA; April 1.

Research assistantship (3); 12 mo.; September; ½ time; \$270; fees remitted; master's or doctoral; apply by April 1.

Michigan State University

Research assistantships (6); 9 mo. and 12 mo.; September; \$300-\$425; out of state tuition waived; doctoral; University, vocational, and grants; apply before March 1.

New Mexico State University

Teaching assistantship (2); 9 mo.; September; ½ time; \$244; tuition remitted; master's students; apply by March 15.

North Carolina Agricultural and Technical State University

Assistantships; 9 mo.; June and September; ½ time; \$200; master's students; apply 60 days before term of registration.

Ohio State University

Research and teaching assistantships (4 to 6); 12 mo.; June and September and beginning of any quarter; 15 hours per week; \$300; fees waived; master's and doctoral, Ph.D. preferred; apply by February 1.

Oklahoma State University

Teaching assistantship, agricultural education (1); teaching assistantship, agricultural mechanics (1); 9 mo.; September; ½ time; \$275; reduced tuition; out of state fees remitted; master's or doctoral; apply by February 15.

Research Assistantship (1); Research Coordinating Unit; 9 mo.; September; ½ time; \$275; reduced tuition and out of state fees remitted; doctoral students; apply by February 15.

University of Minnesota

Teaching assistantship (2); 12 mo.; June; ½ time; \$300; reduced tuition; master's or doctoral; apply by February 15.

University of Missouri

Research assistantship (1); 12 mo.; June; ½ time or 20 hours per week; \$250; master's and doctoral; State funds; apply by February 15.

Montana State University

Assistantship (1); 9 mo.; September; \$50; reduced tuition; master's students; University; apply by June 1.

University of Nebraska

Research assistantship (2); 12 mo.; July; ½ time; \$275; master's or doctoral; Experiment Station; apply by May 1.

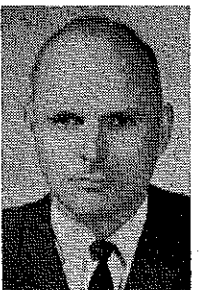
Oregon State University

Assistantship (1); 10 months and summer; \$400 per mo. for 10 months, \$400-\$600 for summer study, \$200 for travel as job requires.

(continued on page 162)



Harold Cushman



Harry Peirce

This article was prepared as a project of the Publication Committee of the American Association of Teacher Education in Agriculture. Dr. Cushman, teacher educator in agricultural education at Cornell University, is chairman of the Publication Committee. Mr. Peirce is a graduate assistant in agricultural education.

Teacher Liability in the Agricultural Mechanics Laboratory

JOHN HILLISON
Agricultural Occupations Instructor
Mt. Carmel, Illinois

Vocational agriculture has become a very complex and complicated field. The agricultural mechanics laboratory with its power equipment is a complex area of vocational agriculture. One very real problem that exists in agricultural mechanics instruction, that does not generally exist in other areas of instruction, is the possibility of student injury. With student injury also comes the problem of potential liability for the teacher.

Liability and Negligence

Liability does not exist for the teacher unless he has been negligent in some way. This aspect of negligence can come about because the teacher is guilty of ineffective supervision, poor instruction, or a lack of foreseeability.

Foreseeability is a term referring to the fact that a teacher or normally prudent person should be aware of and anticipate the consequences of a dangerous situation. The concept of foreseeability is very important as this is the way a jury consisting of laymen will look at a liability suit. These laymen must ask themselves: If I were the teacher would I have known a dangerous situation existed and would I have done something about it?

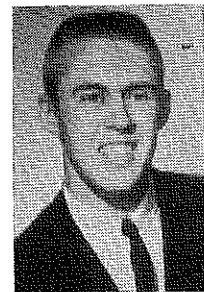
Defenses to Charges of Negligence

If a teacher does become involved in a lawsuit involving student injury, he has several defenses that can be used.

One of these defenses is contributory negligence which says that the student is guilty of causing the accident by his own negligence. A similar defense is that of assumption of risk or that the student assumed the risk which eventually caused his injury when he started the machine or job. It should be pointed out that both contributory negligence and assumption of risk are rather weak defenses to use when the case involves an inexperienced minor.

A third, relatively new, defense is that of comparative negligence. The theory of comparative negligence assumes that neither the teacher nor the student is 100 percent at fault in causing the accident. It assumes that both must be in part at fault. If, for example, a jury finds a student to be 50 percent at fault in causing the accident and the teacher to also be 50 percent at fault then no damages would be awarded to the student. If a teacher is considered to be more than 50 percent at fault for causing a student's accident, then any damages awarded would be based on the proportional difference between the

"The teacher through instruction and example can prevent accident situations."



John Hillison

This article is a summary of a paper on teacher liability prepared by Mr. Hillison in a graduate course in Agricultural Law at the University of Illinois.

teacher's and the student's liability. If, for example, the teacher was found to be 55 percent at fault and the student 45 percent at fault in causing the accident then the jury would force the teacher to pay 10 percent of the damage suit to the student. Former decisions based on the defense of contributory negligence would have awarded 100 percent of the damages to the student or would have awarded no damages at all, depending on whom the jury favored.

Proximate cause of accident is another defense the teacher may use if involved in a lawsuit concerning an accident. The theory behind proximate cause is that there must be a direct chain of causation which created the injurious accident. If another student in the shop was a more direct cause of the accident by turning on an electrical switch when unexpected, by moving a gear when not anticipated, or any other direct involvement that actually caused injury to the student bringing the suit, then that fellow student's action would become the direct or proximate cause of the accident.

"Negligence can come about because of ineffective supervision . . .

poor instruction . . .

lack of foreseeability."

Another possible defense is the concept of "in loco parentis". This concept assumes that the teacher-student relationship is very similar to a parent-child relationship. If a student does something wrong then a teacher is expected to punish and correct the student just as a parent would punish and correct his child. If a student is injured then a teacher is expected to come to his assistance and help him. While "in loco parentis" is a good theory to operate under it is no justification for attempting medical attention and aid for which we as teachers have had no training. However, if a suit is brought against a teacher for injury to a student because of incorrect or faulty medical aid given in an emergency then "in loco parentis" would be the defense that teacher would use. It should also be mentioned that a teacher might be sued on the grounds that he failed to act under "in loco parentis" and give aid to the best of his ability. It is quite essential to remember that "in loco parentis" can both work against and protect the teacher depending upon the circumstances.

Other Forms of Protection to the Teacher

Teachers are protected from liability by factors and agencies other than a good defense at a lawsuit proceeding. One of these protecting agencies is the professional organizations to which teachers belong. The American Vocational Association has a \$25,000 liability insurance policy available to members. Many state educational associations also have liability insurance policies available to members.

A few years ago an article of this nature would have been quite unnecessary as the courts had always ruled that the common law rule of governmental immunity held. This rule was

that governmental agencies, such as schools, could not use tax money to pay for any liability. This philosophy came from the historic English concept that the king or government was infallible. While a majority of states still subscribe to the doctrine of governmental immunity, a number of states have accepted the idea that schools should be held liable for accidents that occur to its students while under the control of the school.

The landmark case overruling the philosophy of governmental immunity was a case decided by the Illinois Supreme Court in 1959. Most states that permit school districts to carry liability insurance have overruled the governmental immunity concept for schools. However, teachers should check to see if the liability protection includes both the teacher and the school district or just the district.

A state's statute of limitations protects a teacher from having to wait an unlimited number of years to see if a suit might be brought against him as a result of student injury. While this limitation varies from state to state, Illinois might be used as an example where a damage suit must be filed within one year of the accident against a school district and within two years of the accident against a teacher.

While it has been pointed out that there are numerous defenses a teacher may take, that there are a large number of factors and agencies that will protect the teacher when he needs help, it still should be emphasized that the best protection is accident prevention. If the teacher through instruction and example can prevent accident situations from occurring then he will never have to worry whether or not his lawyer has chosen the correct defense for him.

DEFENSES

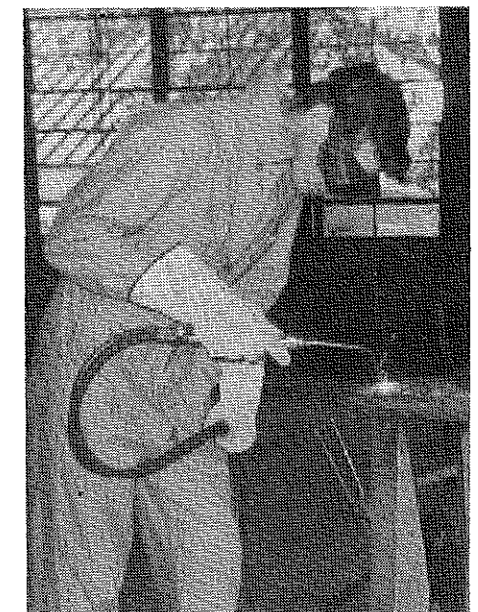
Contributory negligence

Assumption of risk

Comparative negligence

Proximate cause

In loco parentis



Proper dress with appropriate protective devices, as well as proper instruction and supervision, insure safety in the agricultural mechanics laboratory.

Continuing Education for Young Farmers

JOHN H. RODGERS, Teacher Education
Virginia Polytechnic Institute

Economic pressures are causing a decline in the number of farms and an increase in the size of farms. However, those who continue to farm will play an increasingly important role in our society and in the world. To meet this challenge the farmer of the future must be an ambitious, management-minded individual who keeps up with the latest developments in science and technology. He cannot rely upon the education received while in high school and college. It is imperative that educational opportunities be provided to allow this strategic group of citizens to stay up-to-date.

Purpose of Young Farmer Education

The purpose of young farmer education, presented by seminar participants, is to provide organized instruction for those who are no longer enrolled in secondary school and are in the process of becoming established in farming or a closely related occupation. Instruction is considered relevant and of interest to young farmers when it contributes to the attainment of long-range objectives, the solving of immediate problems, and to efficient management in the production of agricultural products.

Young farmer programs are often responsible for civic projects and other community endeavors. However, the greatest benefit to the community is economic. Young farmers introduce new techniques and new crops of high po-

tential. They are responsible for the intensification of agriculture which strengthens the economy and makes the community more desirable.

Preservice Education of Teachers

The instructor holds the key to the development and expansion of effective programs of young farmer education. Some ideas advanced for strengthening preservice education for teaching personnel in young farmer education were the following:

- A philosophy and attitude must be developed with prospective teachers concerning the importance of young farmer education and the need for teachers of young farmers.
- Instruction must be provided in the methodology of teaching young farmers.
- Undergraduate students must have an opportunity to observe successful young farmer programs and successful teachers of young farmers.
- The undergraduate program should provide an opportunity to develop leadership qualities essential to organizing and advising young farmers.

- Prospective instructors need to know administrative policies and procedures and be able to use advisory committees effectively in conducting programs of young farmer education.

- Teacher educators need to analyze preservice programs and modify courses or add new courses to enable students to acquire critical competencies prior to being employed.

Inservice Education of Teachers

Recommended inservice activities in young farmer education included:

- A workshop or seminar for state staff, supervisors and teacher educators, to determine the situation, needs, trends, and status of young farmers and young farmer education.
- Pilot programs in young farmer education.
- A research program in young farmer education.
- Credit courses and noncredit workshops for teachers engaged in young farmer education.
- District meetings of staff and young farmers to identify effective procedures for developing educational programs.
- Well prepared professional and technical instructional materials.

Planning and Evaluating Programs

The point was made forcefully that in planning educational programs for young farmers attention must be given

Report of a National Seminar

to formulating objectives that give proper recognition to the cognitive, psychomotor, and affective domains. These objectives should then serve as a guide in selecting instructors or specialists who will assume responsibility for guiding the learning activities of the young farmers.

Evaluation evoked a great deal of comment. The present scope of evaluation was seen as too limited. It was proposed that more attention be given to accomplishments resulting from young farmer organizations and to personal and group development. Also, attention should be given to program influences which lead to abundant living.

There was a great deal of support for the idea that evaluative efforts as we have known them over the years have not been satisfactory. Criteria have lacked uniformity and have been easily misinterpreted. Also, they have not been measurable. The need for realistic criteria based upon educational outcomes was stressed.

Committee Highlights

Reports from seminar committees contributed many ideas and challenges. A few of the highlights of committee reports follow:

- Instructional aids which should receive attention as a means of making instruction more effective include video tape, closed circuit television, programmed material, computerized instruction, telephone teaching, and simulated experiences.
- Areas of instruction in which materials designed for self instruction might be effective are agricultural mechanics, farm credit, wills and insurance, and some facets of farm management.
- Long range plans should be established in each state for the number



John H. Rodgers

Participants from forty states attended a National Seminar on Young Farmer Education at Virginia Polytechnic Institute on August 7-11, 1967. The seminar included study and discussion relating to program development, organization and administration, preservice and inservice education of teachers, methods of teaching and instructional materials, and evaluation. The seminar was funded under the provisions of the Vocational Education Act of 1963. Dr. John H. Rodgers, Head of Agricultural Education at VPI directed the seminar. A report of the seminar proceedings will be available in the near future.

of young farmer programs needed and for continued and successful recruitment of staff to make such plans possible.

- The role which women instructors may play, particularly in teaching specialty subjects, should be considered.
- All capable graduates of a school or college of agriculture, regardless of major, should be recognized as potential instructors.
- At least one teacher in multiple teacher departments should be employed as a full-time instructor for young farmers. The need for high school teachers to continue to be involved in young farmer education was recognized.
- Staff at state and national levels should be provided with sufficient time to provide leadership for young farmer education.
- In determining the teaching load of a teacher, credit should be given for young farmers enrolled as well as for high school students.

- Young farmer organizations at the local level have improved the effectiveness of the instructional program.

- Generally the feeling is that there is not a need at the present time for a national young farmer organization.

- An organization of young farmers' wives has proven to be beneficial in promoting young farmer education.

- State associations of young farmers are strengthened by members attending state, regional, and national leadership seminars and meetings.

- Specialists from industry, government, and universities should be used as resource persons in program development and expansion.

- The systems approach in education appears to hold promise for the future development of young farmer education. Research and development should be encouraged to develop this system which makes maximum use of available equipment, facilities, and staff to motivate students and properly sequence learning experiences.

- Young farmers, when associated with young farmer organizations, give generously of their time and energy to bring about civic and community developments and improvements.

- On-farm instruction is a vital and necessary part of the total instructional program for young farmers.

- Young farmer development committees have functioned successfully in matching young men who prove to be assets to the community with an economic farming unit. Committees composed of farmers, businessmen, county agents, area redevelopment people, FHA and PCA representatives, bankers, and others advise and encourage individuals during the process of becoming established in farming.

Inservice Education for Teachers

R. M. MCGEE

Vocational Agriculture Teacher
Munford, Alabama

It is recognized that there are rapid changes taking place both in agriculture and business. Educators as well as lay citizens must be aware of these changes and be prepared to adjust educational programs to meet these ever changing needs.

The nature and rate of technological change militate against the concept of terminal education. As technology up-

grades the skill and knowledge requirements of jobs, education can no longer be confined to the traditional twelve, fourteen, or sixteen years of formal schooling. The Department of Labor projects that the average youth of today will probably shift occupations some five times over the approximately forty years he is in the labor market. A life of continuing occupational ad-

justment will mean a life of continuing education to meet changed or additional requirements.

The Up-to-Date Teacher. In October, 1965, issue of *The Agricultural Education Magazine*, the Editor speaks of a 1966 model vocational agriculture

(Continued on page 164)

Assistantships and Fellowships in Agricultural Education, 1968-69 (Continued from page 157)

Pennsylvania State University

Research assistantships (12); 12 mo.; June and September; 1/2 time; \$240 first year, \$260 second year; tuition and fees remitted; master's and doctoral; apply by February 1.

Purdue University

Teaching assistantships (2); 10 mo.; September; 1/2 time; \$280 plus some travel; reduced tuition; master's students; apply by March 1.

Graduate instructorships (2); 12 mo.; June or September; 1/2 time; \$375; reduced tuition plus travel expense; doctoral students; apply by March 1.

Rutgers the State University

Fellowship (2); 10 mo.; September; \$200; tuition and fees remitted; master's and doctoral NDEA; apply by March 15.

Research assistantships (6); 12 mo.; July; 15 hours per week; \$240.58; tuition remitted; master's or doctoral; apply by March 15.

Sam Houston State College

Fellowships (1 to 4); 9 mo.; September; \$288; master's students; apply by April 1.

Laboratory assistantships (1 to 8); 9 mo.; September; 4 to 12 hours per week; \$53 to \$160; master's students; apply by April 1.

Southern Illinois University

Assistantships (2); 12 months; June and September; 1/2 time; \$250 per month; tuition and fees remitted; master's apply March 1.

Internship (Jr. College) assistantship (2); 18 months; Sept., Jan., March, and June; 1/2 time; \$220 per month; tuition and fees remitted; master's; apply anytime.

Texas A and M University

Teaching assistantships (4); 9 mo.; September; 1/2 time; \$300 doctoral; \$250 master's, first year; \$275 master's, second year; apply by April 1.

Tuskegee Institute

Research assistantships (2); fellowships (2); 9 mo., 12 mo.; September; 1/4 time; \$250; master's students; school and outside agencies; apply by May 15.

Utah State University

Teaching assistantship in agricultural mechanics (1); 9 mo.; September; 1/2 time; \$250; master's student; College of Agriculture; no deadline on applications; usually filled by a graduating senior on basis of record and ability.

Washington State University

Fellowships (2); 9 mo.; September; no specified time required; \$300; master's students; State Coordinating Council for Occupational Education; apply by April 15.

Fellowships; summer (6 or 8 weeks); June; no specified time required; \$300; State Coordinating Council for Occupational Education; apply by April 15.

Wisconsin State University, Platteville

Research and teaching assistantships (5); 9 mo.; September; \$225; scholarship available to remit tuition and fees; master's students; graduate school; apply by April 15.

Wisconsin State University River Falls

Teaching and research assistantships (10); 9 mo.; September; 12-15 hours per week; \$223-\$278; out of state tuition waived; master's students; apply by March 1.

University of Wisconsin

Research assistantships (2); 12 mo.; July or September; 20 hours per week; \$262 plus out of state tuition remitted; master's or doctoral; apply by February 15.

Difficulty Experienced by Teachers in Conducting Agricultural Mechanics Programs

EARL S. WEBB

Teacher Education
Texas A&M University

PURPOSE

The purpose of the study was to determine the difficulty encountered by teachers of vocational agriculture in conducting agricultural mechanics programs. A secondary purpose was to determine the relationship between the difficulties encountered and the number of years of teaching experience and the number of graduate hours completed by teachers.

PROCEDURE

Data were from two sources: teachers of vocational agriculture and area supervisors. Information forms sent to teachers requested the number of years in teaching, the number of hours of graduate credit acquired, and an indication of the degree of difficulty encountered in performing specified activities.

Information forms sent to supervisors included many of the same items as the form sent to teachers. Supervisors were requested to estimate the percentage of teachers that, in their opinion, experienced difficulty in conducting agricultural mechanics programs. Level of difficulty for each item was expressed as follows: no difficulty, little difficulty, some difficulty, much difficulty, extreme difficulty.

SUMMARY

Neither years of experience nor graduate hours earned had any influence on the relative degree of difficulty

expressed by respondents. The degree of difficulty expressed by teachers in conducting agricultural mechanics programs tends to parallel the percentage of teachers estimated by supervisors to "need much improvement." Tasks, in general, rated at the highest level of difficulty by teachers were those tasks that supervisors suggested needed much improvement by teachers.

Items ranked in the order of difficulty by teachers are as follows:

- Obtain adequate consumable shop supplies in advance of shop classes.
- Determine the tools and equipment needed to teach tractor and machinery maintenance.
- Obtain adequate funds to operate an effective farm mechanics program.
- Develop a budget for financing the farm mechanics program.
- Keep all students busy during shop periods with worthwhile projects.
- Obtain plans and drawings for suitable student projects.
- Keep hand tools in good condition.
- Maintain good housekeeping standards in the shop.
- Require students to develop drawings and procedures for building shop projects before construction of project is started.
- Service and maintain power equipment.

- Determine the tools and equipment needed for teaching electricity.
- Determine the tools and equipment needed for teaching concrete and masonry work.

Supervisors indicated the following tasks as those needing much improvement by teachers:

- Determining tools and equipment needed to teach tractor and machinery maintenance.
- Obtaining plans and drawings for student projects.
- Obtaining adequate funds to operate an agricultural mechanics program.
- Maintaining good housekeeping standards in the shop.
- Obtaining adequate consumable supplies in advance of shop classes.
- Keeping hand tools in good condition.
- Organizing written courses of study for each class in agricultural mechanics.
- Servicing and maintaining power equipment in the shop.
- Determining the arrangement of power tools for maximum safety and use.
- Determining the tools and equipment needed for teaching concrete and masonry.

RECOMMENDATIONS

Tractor and machinery maintenance seems to be the instructional area that should be given immediate attention. Concentrated efforts should be made by University and State Department staffs to assist teachers through workshops and credit courses to increase competence in teaching tractor and machinery maintenance. Universities and colleges responsible for preparing teachers should develop practical courses in this area to be required in agricultural education curricula. These courses should be accompanied by instructional procedures adaptable to teaching high school students and adults.

Welding is a good example of what can be accomplished through the combined efforts of educators and com-

mercial organizations in promoting a phase of a program. Both teachers and supervisors placed tasks relating to welding at the end of the list of problems encountered in conducting agricultural mechanics programs.

Another problem area is financing the operation of an agricultural mechanics program. Tasks specifically relating to finance were mentioned frequently both by teachers and supervisors as an area where difficulty was experienced. Greater efforts should be made by colleges and universities responsible for preparing teachers to provide instruction in ways and means of financing agricultural mechanics programs. Budgets based on what is to be taught should be an important part of the course of study developed by teachers. Well developed courses of

study indicate supplies and equipment needed and the amount of money required. Otherwise, there appears to be little basis for making financial estimates.

A third area that needs immediate attention is the service and maintenance of hand and power tools. Workshops and credit courses should be developed to enable teachers and prospective teachers to develop the necessary skills and to acquire the knowledge needed to keep equipment and tools in proper working order.

Housekeeping is a major problem. Efforts should be made to assist teachers in keeping shops neat and clean. The development of personal attributes which contribute to orderliness and neatness seems to be the major means of solving this problem.

Inservice Education for Teachers (Continued from page 162)

teacher. Obviously, this definition would describe a teacher who has kept up with the changes. Models for vocational agriculture teachers should change much the same as models for automobiles. That is, each vocational agriculture teacher must change and upgrade himself each year in order to be abreast of the new techniques and technology.

Here, flexibility becomes a factor in the school's response to the world of work. Within higher education, for example, subjects might be taught for one week or ten weeks, one year or three years, day or evening, or in courses not necessarily coinciding with the academic term. Nor is it necessary that courses be taught by a person with three published articles to students working for a degree.

Flexible Inservice Education. Changes must be brought about by use of the many varied methods of inservice education. Without inservice education the recently revised courses of study are of little value to the out-of-date vocational agriculture teacher. The out-of-date teacher must continue with his old course of study until he decides to take advantage of inservice education

provided by the university, his supervisory staff, or even one of his fellow teachers.

For example, many of the courses of study in Alabama have been revised. Production farming constitutes only a fraction of the units of instruction in the new courses of study. New units dealing with Merchandising of Agricultural Products, Farm Laws and Legal Problems, and Organizational Structure of the Farm Business are but a few of the many recently developed areas of instruction. The 1940 graduate cannot adequately teach these topics unless inservice education of some type has kept him abreast of the constant changes.

Inservice education is becoming all important for the vocational teacher today since he is confronted with the matter of specialization. Many vocational agriculture teachers operate a one-man program in this time of technological change. Contrast this with other agricultural agencies and commercial concerns dealing in agricultural services where there are several personnel with one or more persons assigned special areas of responsibility. These specialists are not expected to

deal with all current facets of agriculture and related areas.

Specialized Inservice Education. After talking with many vocational teachers concerning inservice programs and workshops, the suggestion was common that the type of education needed by teachers was specialization. It can be assumed that teachers want information especially applicable to the area in which they teach. That is, a teacher serving in an industrial area would need different areas of specialization than a teacher in a livestock area.

Where can teachers get inservice education? Many agricultural colleges offer regular five-week courses each summer. Some colleges offer three-week courses or special one-week workshops. Also there are workshops taught in the various communities for upgrading teachers. There are evening classes during the regular school year for teachers who are within driving distance of a university campus. Many teachers prefer workshops held during the summer on the university campus, however, workshops taught in communities throughout the state have been favorably received by teachers.

Six outstanding teachers of agriculture have unique opportunities for inservice education during 1968. Each has been named a winner of a 1968 NVATA Travel Scholarship awarded by A. O. Smith Harvestore Products, Incorporated. In addition to receiving an expense paid trip to the 1967 NVATA and AVA conventions in Cleveland, the teachers will make a one-week tour throughout the United States this summer to study new developments and innovations in agricultural technology.



James E. Hamilton

Twenty-two of James E. Hamilton's twenty-five years as a high school teacher of agriculture were at Audubon, Iowa. He is a past-president of the Iowa Vocational Agriculture Teachers Association, the Iowa Vocational Association, and the National Vocational Agricultural Teachers' Association. Mr. Hamilton says that his major accomplishment has been the opportunity to teach 500 high school students, 100 young farmers, and almost 2,100 adult farmers. A recent study revealed that 72 per cent of his former high school students are engaged in an agricultural occupation. Mr. Hamilton holds B.S. and M.S. degrees from Iowa State University. He is currently Adult Director, Iowa Western Community College, Council Bluffs, Iowa.



Clarke B. Wood

Clarke B. Wood has taught agriculture in Connecticut high schools for thirty-one years. Since 1939 he has taught at the Housatonic Valley Regional High School, Falls Village, Connecticut. During this time the department has grown from one to four teachers of agriculture. Mr. Wood is a past-president of the Connecticut Vocational Agriculture Teachers Association. He has taught and supervised an extensive young farmer and adult farmer program since 1941. During the past year, 60 high school students and 230 young and adult farmers were served by the vocational agriculture program in his school. Mr. Wood holds a B.S. degree from the University of Connecticut. He earned the M.S. degree at Cornell University.



Fay A. Thompson

Fay A. Thompson, Powell, Wyoming, has taught vocational agriculture for twenty-seven years. He has taught at Powell High School for the past twenty-three years. Sixty-five of his former students have been awarded the State Farmer degree; nine of his former students are American Farmers. Mr. Thompson's FFA Chapter has won numerous state and national awards. Mr. Thompson received the B.S. Degree from the University of Wyoming and the M.S. in agricultural education from the University of Minnesota.



Floyd A. Blauer

Floyd A. Blauer has taught agriculture in Kansas high schools for thirty-eight years. He is now in his twenty-fourth year at Stockton, Kansas. Mr. Blauer has served on the Board of Directors and is a past-president of the Kansas Vocational Agriculture Teachers Association and the Kansas Vocational Association. Many of his former students have won state and national awards and honors. The program of vocational agriculture conducted by Mr. Blauer emphasizes strong farming programs and an active young farmer program which was begun in the early fifties. Mr. Blauer is a graduate of Kansas State University.



W. O. Barrow

W. O. Barrow, a graduate of the University of Missouri, is currently in his thirty-fifth year as a teacher of agriculture in Missouri. He has taught at Rogersville, Missouri, since 1938. Mr. Barrow is a past-president of the Missouri Vocational Agriculture Teachers Association and in 1959 received the Missouri Distinguished Service Award for outstanding teachers of vocational agriculture. Many of his former students have received state and national awards and honors. Mr. Barrow has taught classes for adult farmers for twenty-eight years. He has served as a supervising teacher in the student teaching program of the University of Missouri.



E. H. Cheek

E. H. Cheek, has been teaching agriculture at Perry, Georgia, since 1955. He has been a teacher of agriculture for thirty-one years. Mr. Cheek has conducted pilot programs in horticulture and off-farm agricultural occupations. A \$30,000 greenhouse for the horticulture program has just been completed at Perry High School. An additional greenhouse is under construction. Facilities of the school for supervised practice also include a 20-acre forestry plot and housing for livestock. Ten of Mr. Cheek's former students have become teachers of agriculture. He is a past president of his state association of vocational agriculture teachers. He holds B.S. and M.S. degrees from the University of Georgia.

TRAVEL SCHOLARSHIP WINNERS

Is Your Classroom Showing?

CLAYTON RILEY

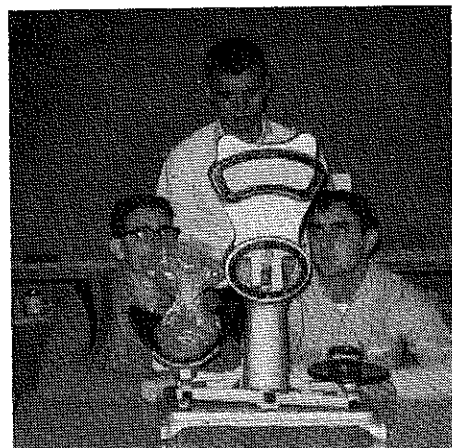
Teacher Education

University of Kentucky

Is your classroom for listening only?

Did you ever go fishing without bait? How about a trip without transportation? Sounds absurd doesn't it. How about these questions — teach welding without welders? Conducting an FFA meeting without members? I know that teachers of vocational agriculture would not attempt any of these examples, but are you guilty of teaching agricultural occupations in a production agriculture classroom?

How many of you teach an agricultural business course without the proper and necessary classroom equipment? John Dewey was purchasing classroom furniture for a school and the salesman, after listening to his needs, said, "I am sorry but we do not have what you want, our equipment is for listening only". Is your classroom for listening only? If we believe in the theory



Students use scales to practice weighing and determining cost.

of "learning to do by doing," there must be changes and modifications in the classroom setting.

Facilities Add Realism

The purpose of an agricultural occupations course is to provide training for job entry and encourage students to explore the world of work. The classroom instruction must be practical and realistic if it is to be of any value to students and employers. The classroom facilities can aid in presenting to the students an atmosphere of realism which enhances the learning process.

Facilities are determined by the course of study.

The facilities in the classroom should be determined by the course of study.

Equipping the classroom for an agricultural business course does not require changing the physical structure but rather adapting present facilities to new needs. In most situations, a little rearranging of furniture will develop an atmosphere to stimulate the activities and environment of a business.

I have visited departments where a section in the back of the room is used for teaching the agricultural business course. The teacher still uses the room for his other classes and simply moves to the rear of the room for his agricultural business course. A section of existing bookshelves can be used and other practical equipment can be constructed in the agricultural mechanics laboratory.



Students explain a display made during class which features household chemicals.

Equipment Needed

The following inexpensive equipment may be considered for the classroom in schools teaching or planning to teach an agricultural business course.

Portable Counter. For use by students to practice selling and checking out customers. This gives the students experience in dealing with customers over the counter. The view from the other side is much different even in the classroom dealing with classmates.

Scales. For use by students to practice weighing merchandise, seed, and other small item purchases and in developing speed and skill. Three types of scales are recommended: a fan type scale with pan, a roller type, and a hanging type with pan.

Cash Register. For use by students to practice making change, in developing speed and skill in handling money, and in making change without errors. Older type cash registers can be purchased at low cost or they can be borrowed or rented from local businessmen.

Are you guilty of teaching agricultural occupations in a production agriculture classroom?

Sales Tickets. For use by students to practice making out orders and charge tickets and in seeing the importance of figuring and writing legibly and correctly. Samples can be obtained from local businessmen.

Merchandise. Samples should be available to familiarize students with products sold in farm service stores and garden centers. The type of store students train in would determine the type of merchandise needed. The products needed most frequently include:

- Spray equipment
- Sprayers
- Dusters
- Feed samples
- Seed samples
- Fertilizer samples
- Chemicals, herbicides, insecticides
- Seed sowers
- Garden and lawn supplies
- Animal health supplies



Student arranges a display of animal health products.

Telephones. Tele-trainers are needed to practice proper use of the telephone, selling on the phone, and taking orders on the phone. Tele-trainer kits can be borrowed from the local telephone company at no charge.

Tape Recorder. For use to record sales demonstrations, role playing, voice development, and greeting customers. The tape recorder serves an important role in evaluating students' performance by playing back and allowing the class and students to evaluate performance.

Display Area. Shelves or a unit built on walls as needed to allow students to practice building displays, stocking shelves, selling material, pricing material, and taking inventory.

Slide Projector. Slides of students can be shown in class to evaluate their skills. Pictures should be taken of procedures used in various businesses in the community for the class to study and evaluate. Slides are helpful for demonstrating ideas to the class without having the actual material on hand.

If we are to train students for job entry in the agricultural business areas, we need to show them not just tell them.



Clayton Riley

Mr. Riley is the former Director of the Demonstration Center in Nonfarm Agricultural Occupations at Reidland High School, Paducah, Kentucky. He is presently a teacher educator in Distributive Education at the University of Kentucky.

Listening or Learning

If you are unable to secure all the items listed, start with the equipment needed first — those items most frequently used in your course of study and needed by the students in their training centers. If we are to train students for job entry in the agricultural business areas, we need to "show them" not just "tell them" about it. Remember "one learns from his own activities."

Is your classroom for listening or for learning? I feel it should be for listening, showing, and doing.

In the past, teachers of vocational agriculture have done well in securing and maintaining a usable classroom. Let's continue to make adjustments in our facilities as our programs grow, expand, and change to meet the needs of the students and community.

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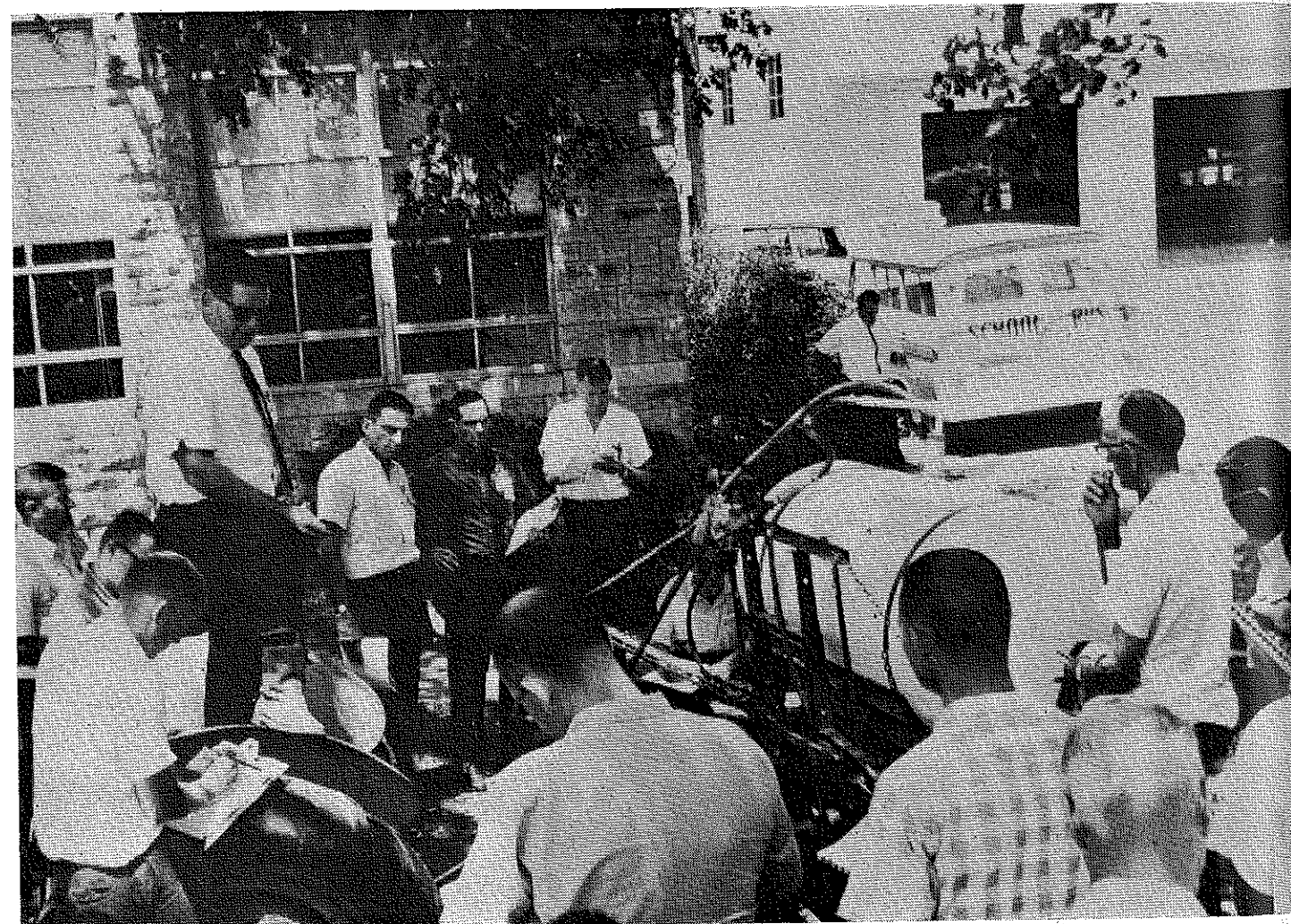
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Stories in Pictures

GILBERT S. GUILER
Ohio State University



A good seedbed is essential for improved sugarcane production in India. Photo—Bristol



Vocational agriculture teachers in Kansas receive in-service training on spraying equipment for weed and insect control during the summer months. Photo—C. C. Eustace

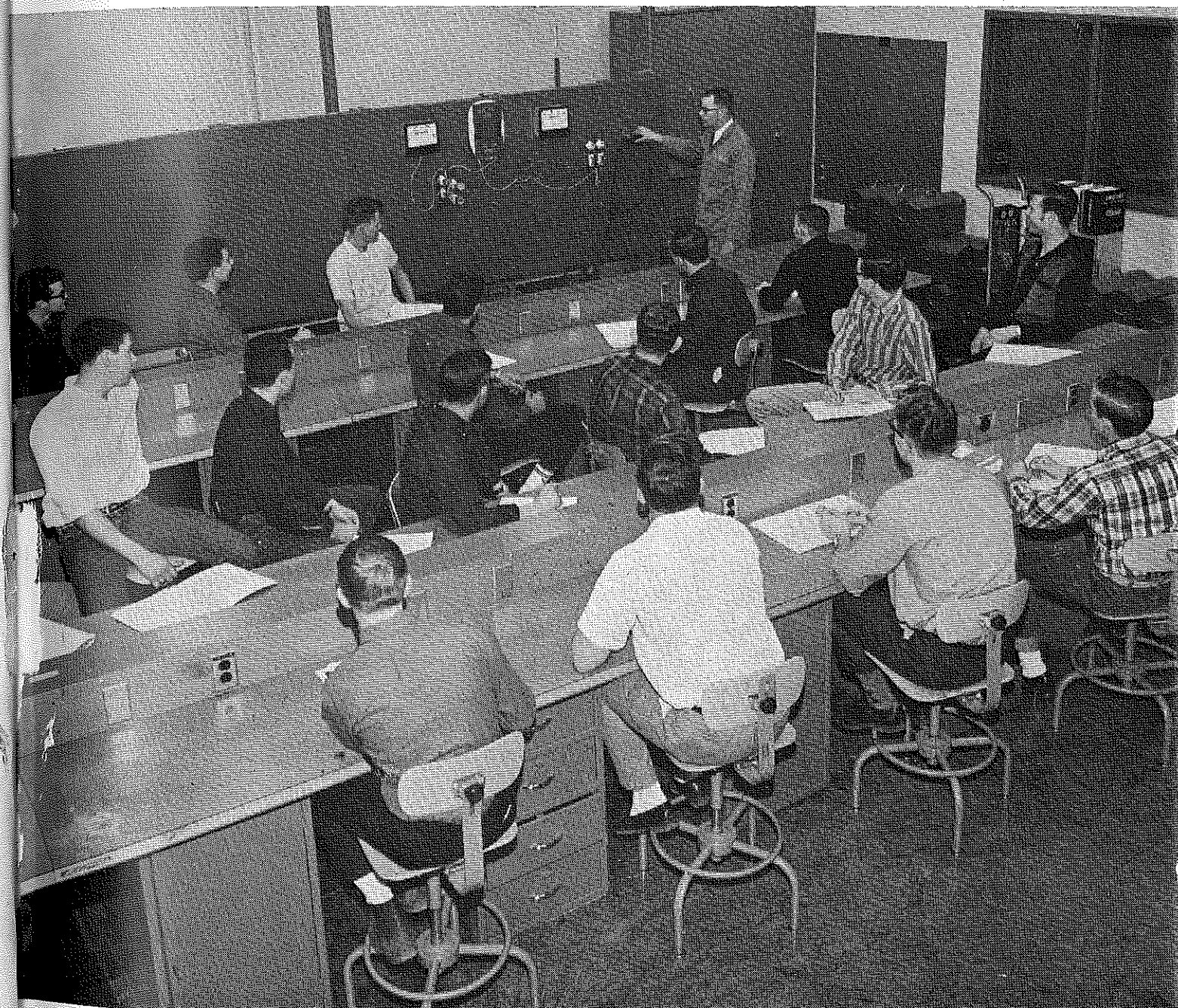


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Featuring—

TECHNICAL EDUCATION IN AGRICULTURE