Stories in Pictures

GILBERT QUILER
Ohio State University

Concentration and care with proper tools which will result in a level and square building as dressed in Minnesota Agricultural Mechanics shops.

Photo by F. Barb

Reinforcement of early farm days when farm-drawn wagons pulled materials or produced on the farm is this view of an old wagon wheel sitting in the sun. Woods growing up around it attest to its retirement from active duty.

Bureau of Reclamation photo by Neil Burke.

Agricultural Education

Volume 39
April, 1967
Number 10

St. A. A. Seelinger, head of Department of Agronomy, New Mexico State University, discussing soils research with Vocational Agriculture Teachers.

1897-1967. 50th ANNIVERSARY. 1st National Vocational Education Act

Featuring—RESEARCH

1917............50th ANNIVERSARY............1967
Editors

Asking the Right Questions

The point has been made previously in these columns that we should not expect magical prepackaged programs to solve all of our problems. There seems to be a general agreement with this view, although some feel that certain research should be able to contribute to problem solving. Let's explore what this may mean, then ask some other pertinent questions. Do we know how to ask the right questions? Apparently some people whose opinions we respect have been quoted as having some question about that phrase. Note the following:

Your group is not basically a research-oriented group. It has been a closely-knit, tradition-bound group, in which almost all of our programs have been non-research oriented. Can you ask the right questions? (Lester Klagsbrun, Director of the Cooperative Extension Service, Indiana University, April, 1963.)

If we are not asking the right--maybe we should say the most important--questions, then our research, however sophisticated, could add relatively little. These are many factors to consider in arriving at priorities for questions to ask for research help towards.

In the question raised of major importance to a better educational program? Even "purer" research, in contrast to "applied," must be expected to have some reference to the importance of which it would not be done. Certainly educational research should have some clearly defined implications for better educational programs. Since we cannot do everything, there must always be some hierarchy of values operating to determine how much time we can devote to research, just as we cannot assign everything to the service and in particular, in research. A quick, brutal test is to assume that the results of the proposed research are in, and ask you "so what?" A recent review of a sizable research project, carefully conducted, done, and written up, raised this very question in my mind. In this case the satisfactory answer could be found. I am not suggesting that every research project should be immediately put to use in an in-service situation. Rather that educational research should seek to help in answering some important educational questions.

Where do we find such terribly important questions? I suggest that some of these are so close to us that we have been overlooking them for years. For example, how many students were enrolled in high school classes of vocational agriculture has been under much discussion for many years. I have no new answer to know this question any better now than we did 20 years ago? I suggest that we "answer" it as well as we could then. How about the length of the class period? for these classes? Some supervisors have suggested that the principal shift his whole schedule around so that the teacher of vocational agriculture could have this period. How about the number of sections that someone has to take? That the class must have. Yet, we have little valid evidence that we know the optimum enrollment and length of time for the most effective classroom in vocational agriculture. So, I think that a major source of questions for research might be in the area of direction-finding for needed changes for our on-going programs.

Finally, I would suggest that we try to listen to questions that other people would like to ask about agricultural education. Certainly, we must ask the social scientists, psychologists, economists and philosophers to raise questions that they see. This will come naturally, if we listen, as we move more and more into research, for the simple reason that most of our researchers will be from those areas. In our group seem to have fear of any "outside." One such person when asked why "I can't tell them where their research will come out." That's enough good reasons if you have already decided that no change is needed in the current program. If this is the case with most of us in agricultural education, it will likely mean that we will never be asking the right questions.

Cayce Scarborough

While preparing copy for this month's feature, Research, I was reminded of a statement made by Deed Rupar Fair, University of Illinois, while discussing some of the reasons that people in vocational education did not do more and better research. He said that we were more nearly missionaries than researchers, implying that we had more practice telling our story than in research. The quotation in the editorial at the left holds a similar implication. May be that some of us are not much research-oriented.

What does a teacher expect of a supervisor? Probably values a great deal. But if expectations vary too much, how can a supervisor be effective? A $1 bill will be sent to the two teachers named in the best letter on "What I Expect From My Supervisor." (I realize that you teachers don't need the $1 but I need your letters for the June theme on Supervision. But, as they say on TV, you can't have it all.)

I closed. In this column in January I stated that a state supervisor's office was to do in a month and that 21 of these items were PEA activities. I had my figure right but the time wrong. The supervisor sent me straight and gave me permission to use his letter. See Letter in the Editor. Any reactions to the questions?

For some readers I also enclosd the light touch in January, as Willis Lunsford very nicely told me in his Letter to the Editor. Although it would not be possible to please everybody, letters from class teachers help greatly in editing the magazine. THANKS!

Still another reaction can appear in the Letter to the Editor from Alton sofa. As indicated earlier in this column, Alton sofa has indicated his desire to further clarify the AV Journal policy on publishing articles. What is your new reaction to this reaction?

Cayce Scarborough
Dear Cayre:

In the November, 1969 issue of the AGRICULTURAL EDUCATION MAGAZINE, you wrote, "Who? Us?" was most provocative and no doubt disturbed our established routine. We need this kind of thinking.

In the editorial, you made reference to an AVA policy that prohibits the A V JOURNAL, carrying an article on new programs in vocational agriculture involving sales and services, without prior approval by someone from vocational education.

There is no procedure in the AVA policies for the JOURNAL Editorial Board to resolve controversies between two or more divisional editors. If a controversy is not resolved by the Editorial Board, the final decision must rest with the AVA Board of Directors. The article to which you apparently refer in your editorial was considered by members of the JOURNAL Editorial Board and an acceptable solution was not reached, so the matter was referred to the AVA Board of Directors.

The policies and actions of the AVA Board of Directors is not to thrust change and programs in vocational education, but to make every effort to bring these about in an atmosphere of understanding. Perhaps the widespread discussion and the guidelines will contribute to the atmosphere of understanding and enthusiasm for quality vocational education for all citizens.

Sincerely,

Alton D. Ice, Director
Professional Services
American Vocational Association

Dear Mr. Scanborough:

I was very happy to receive your January 1970 letter to the American Vocational magazine. While I think that the guidelines are an excellent way to go, I do think that the list of 25 items should be expanded to include some of the more practical aspects of vocational education in addition to the more theoretical ones. I think that a magazine like this should be a guide for all educators and that it should be used by all educators to help them improve their teaching methods.

Sincerely,

Phyllis L. Edgcomb
Teacher Education
University of Massachusetts

Theory & Practice

It might be possible that researchers in vocational education are overlooking certain factors and making incorrect assumptions about the role of vocational education in the economy. Since our society is becoming more complex, it is important that we continue to study the role of vocational education in our economy.

Speaking of research, did you see the recent report of the economists who analyzed the educational expenditures of various states? They found that vocational education is the most cost-effective and has the greatest payoff for society. This suggests that we need to continue to study the role of vocational education in our economy.

Thanks again for your comments.

Cayre Scanborough

During their July, 1969 meeting their action was to not publish the article "Who? Us?" in the American Vocational Education magazine because both the committee and the AVA Board of Directors agreed that the guidelines would be misleading. The committee met during September, 1969, and the guidelines were approved by both divisions and the AVA Board of Directors during the meetings in December, 1969.

We are still reading many of the articles that were published but we cannot see the separation of a part of a whole that is integral.

Sincerely,

Philip L. Edgcomb
Teacher Education
University of Massachusetts

Guest Editorial

Improving Education With Action Research

Thanks Ralph, sorry that I got the time period wrong. However, I did evaluate the 25 and 42. I thought that the listing of recommended activities was interesting enough to give broader coverage than your state newsletter might have. I have no basis for knowing what is "hot" or "bad" for programs in Illinois, that's why I didn't identify the state. Your letter clarified several matters. THANKS—CES

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Teacher Education
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In Illinois, the agricultural industry is already challenging vocational education concerning their ability to serve the needs of the local agri-business industry. The challenge has increased the need for a systems approach to education. Other challenges are arising from all around: the need for more education to meet the needs of the future by utilizing research in educational decision making. The data storm of the 1960's prompted the formation of the Soil Conservation Service and research directed toward the conservation of our natural resources. The understanding of the 1960's is focusing attention to educational research directed toward more realistic and efficient educational practices.


The purpose of this book is to give the reader an opportunity to examine himself as a leader in the field of management in the behavior of other professionals and to determine whether he himself is guilty of the same type of unsound behavior. The behavior is described as one in which the identification of the wrong way of doing things, and thus it examines the self-inflicted wounds. Following the identification of wrong ways of doing things, the author attempts to indicate the right things to do. Seventy-six self-inflicted wounds are examined in the text and prescriptions for aid in healing each of the wounds are provided.

The book should be read by all vocational educators who are in addition to supervisory roles and it should also be studied by students in the upper grades of the high school, in vocational technical post-high school programs, as well as in university-level agricultural education training. Readers at all levels should find many thoughtful-provoking suggestions in this book.

Raymond J. Clark
Michigan State University

In the January, 1957 issue of the American Vocational Education magazine was located on page 102 in the January issue. It is a great help to keep the magazine that this magazine has held for you. I personally feel that a picture in an advertisement of this type has no place in our own professional magazine.

I would like to compliment you for the fine editorials that you have written over the past year.

Sincerely,

Do you think that the guidelines should be expanded to include some of the more practical aspects of vocational education? It is important that we continue to study the role of vocational education in our economy.

The Modern public school system needs continuing research in each school. Research must be extended beyond the colleges and universities to the place of practical application as we have done in technical agriculture. More research needs to be initiated at the local level with the help of research coordinators in the school districts. Industry is already challenging vocational education concerning their ability to meet the needs of the future by utilizing research in educational decision making. The data storm of the 1960's prompted the formation of the Soil Conservation Service and research directed toward the conservation of our natural resources. The understanding of the 1960's is focusing attention to educational research directed toward more realistic and efficient educational practices.


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Raymond J. Clark
Michigan State University
Priorities in Research

ROBERT E. TAYLOR, Director, Center for Leadership Development in Vocational and Technical Education, Ohio State University *

Robert E. Taylor

Perhaps the most fruitful areas for research might be some of our own unau-
nalyzed assumptions, the historical accu-
menet what we heard or what we have successfully experienced. How many of our
problems resulted from experiments of our predecessors or what we have learned from our own mistakes?

1. What is the most advantageous means of exploiting the applications of new developments in media and education technology? What instruction and program efficiencies may or may not be obtained through these applications? What new instructional methods or modes of pro-

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Research: What Is It?

There are three kinds of problems in the social sciences, he says: theoretical, methodological, and policy. The theoretical problems are by no means of that type. An overwhelming majority read newspapers and magazines, and even when they are informed about social and political questions nationally and locally, they would not consider, under research bias, problems of several types of all which rest on the work of scientifically trained social scientists and researchers.

The first is a belief that the publication of research findings which the researcher knows to be spurious, conclusion which he knows or suspects to be invalid, or which he has been induced to accept by limitations of his findings, and other unethical acts. Everyone professes his faith in scholarship, and research is no exception. However, it is probably rare to assume that very few of those who became researchers in the past were guilty of conscious distortion in their research.

Another at least recent for the social sciences--fountain of funds for research has brought rushing to education.

Farmsmore concludes that the social sciences have a great advantage and also a disadvantage. The social sciences, and particularly the behavioral sciences, have a long way to go in achieving adequate measurement and quantification of data.

Analytical Bias and Statistics

The last clue that I want to leave is that the group, in the privacy, ... the temptation only to confirm or confirm the hypothesis that we started with.

Related to this problem is the broader question: Can the social sciences be valid? A. Furness concludes that it will be difficult, if not impossible, to do so. He acknowledges that social scientists all have biases and we all have questions in our research. This was what led to the social sciences initially, the point is not the key to distinguish between those questions which research can solve and those which research cannot solve.

The technical questions can be solved by research; the decision to use them must be based on value judgments.

"Teachers, supervisors, and teacher educators have important roles to play in research."

"Many researchers in AgEd in the future will have had no experience as classroom teachers."
Research: What Is It?

Most agricultural educators are practitioners, but research is increasingly becoming a part of our role. Due to the increase of available funds, many of us can now conduct some real research if we wish and are competent to do so. Hopefully, many of us will and will do so if we use to make progress, research will have to be a part of the plan. I trembled today in the value of research, in spite of its apparent inefficiencies.

Some authors of the observer mark tell us that one criterion of future success of a company and the value of its stock is the investment it makes in research. The higher the ratio of investment in research, the more likely it is to succeed. Success tomorrow will be based on what is not known today. I would wager that this might well apply to educational agriculture. For many years we conducted a program that was tied to the Smith-Hughes Act and several other absolutes...truths that were not to be questioned, much less researched. We got into serious trouble. We have been pulled out, temporarily, by the Vocational Education Act. It is true that Act simply becomes the basis for new dogmas, and we do not seek new answers to the future, we will in a few years be in the same kind of trouble again.

Policy Important

Part of the question lies with policy and State directors of vocational education probably more than any other group will determine what happens in educational agriculture research in the future. Tho back to research as an opportunity and encourage research to generate and test new ideas will continually lend their states toward better programs and hope and optimism among all. But those state directors who are more concerned with having to the line, with warning more about the details of the 1983 Act than the needs of young people and adults who are fearful of the untried and unknown, will gradually lead their states into a static situation in which despair is the norm among its teachers, supervisors, researchers, and teacher educators.

Policy makers can set the stage for research, they can provide funds and encourage innovation and change; they can establish research staffs in state departments of education and the universities, but what happens after that depends upon the rest of us. We must not forget that there can be just as much intrusiveness among teachers, supervisors, and teacher educators as among state directors.

Teachers, supervisors and teacher educators have important roles to play in research. These roles differ from that of the research specialist, although the roles are not mutually exclusive. One of the real needs is to define clearly the research role of the practitioners in agricultural education. What is his relationship to the researcher? To do what extent should he perform research himself? How do the roles of all fit together to blend into an organized effort toward continued improvement?

Teacher Role in Research

Employment Opportunities and Competencies Needed in Farm Occupations

JAMES T. WEST, Teacher of Agriculture, Dixon, Kentucky

Agricultural Education is in the process of upgrading and modernizing its programs. Much of this progress has been brought about by the passage of the 1962 Vocational Education Act. A large part of the funds from this act has been channeled into research.

It is assumed that, as many teachers of agriculture, have been rather skeptical of some of the research projects. I felt this might be true. During the several years I have been teaching agriculture, there have been many individuals venturing in to writing or reporting that, and I had not allocated sufficient time to thoroughly investigate the data.

In November 1960, I received a letter from Mr. C. O. Noel, Vocational Agriculture Supervisor, Kentucky Department of Education and, later, a supervisory visit from Mr. Charles Wade, Area Vocational Agriculture Supervisor. They requested that I attend a meeting with one teacher from each county in the district to discuss an on-farm research study in the West Kentucky district. Frankly, I was not overly concerned at the prospect of working on a new project. However, I went to the meeting expecting to cooperate to the best of my ability.

The Proposal

After hearing the details, I developed more respect for the proposal. The research would be concerned with farmers and their opinions. I was to interview 10 percent of the farm operators in my county. The farmers were to be randomly sampled from farms that were above average acreage in my county. I was to interview the farm operators to determine how many people were engaged on each farm, what specifically they did, how much they expected to grow, how many other activities, and skills, and tools that each employed person should possess. Moreover, I was to find out from the farm manager what he thought the farm worker should know and be able to do, how much formal education he thought they should have, and the injury each employee would receive in 1976. Finally, I was to find out when each person was supposed to retire or leave farming so that plans could be made to replace them with well-prepared individuals.

I left the meeting feeling much better than when I arrived. This project seemed feasible and would provide information that is worth while for revising the vocational agriculture program.

The records showed the average size farm in my county is to be 183 acres. The farms in the other 12 counties are larger than this. There are 291 farms in the county with above average acreage. This meant I was to interview 29 farm operators and report on the farms that they manage.

Research Helped Me

After my first two interviews, it became obvious that I would benefit from this survey. From a 10 percent random sample, I got a reasonable good picture of the farms and farm operators in my county. It was surprising to me that I knew about farmers in Webster County.

After seven years in a county, things tend to become routine and somewhat in a rut. The majority of the farm operators confronted was farmers of present or former students of vocational agriculture.

I am confident that they will become more proficient teachers as a result of this experience.

This activity provided me an opportunity to meet many fine farmers whom I had not had an opportunity to know. I learned that it is possible for them to do a good job farming without help from me or any other professional people who work with farmers. A conclusion is that we need to broaden and enrich our programs in vocational agriculture to involve more farmers.

Outlook

When the survey is compiled, a complete picture of the type and size of farm in this area of the State will be available. It should show how many men are actually farming, when they will need replacing, and what, in their farmers' opinion, the replacements should know in order to do a better job of farming.

I feel the survey has been a success and have met many new farmers who are eager to cooperate in a study of this type. Many things were discovered in the course of the study and now know. The image I now have of farming in my county has been updated. I feel I can do a better job of teaching vocational agriculture because I have a up-to-date concept of the problems in the business of farming. I know I can do a better job planning and carrying out a research project.

When the opportunity presents itself for teachers of agriculture to become involved in such research projects, I recommend that they cooperate to the best of their ability. I will learn of the problems and immediate needs of the community. I am confident they will become more proficient teachers of agriculture as a result of this experience.

To be a member of a research project in a field of this nature is an upgrading and satisfying experience for teachers.

"This is not to be done for a weekend, I’ve found a friend here!"
Studies in Progress—1966-1967

GENE M. LOVE, Tenochial Education, Pennsylvania State University, and Chairman, Ag Division, AYA Research Committee

The following lists of studies in progress in agricultural education in the United States have been compiled by members of the Research Committee, Agricultural Education Division, American Vocational Association. The lists are compiled annually by the committee for supervisors, teacher educators, and teachers interested in the current efforts of fellow researchers.

Additional copies of regional lists may be obtained by writing to your regional representative as indicated below. Information about individual studies may be secured by writing for the investigation report. Copies of regional publications of Studies Completed in Agricultural Education may also be obtained from your regional representative to the Research Committee.

CENTRAL REGION

(Coordinated and edited by J. Robert Warren, University of Illinois)


RABER, WILLIAM E. The Self-Administered Education (SAFE) Program at Iowa State University. Iowa State University, Ames.

LAVIN, RALPH R. A Review of the State of the Art of Vocational Agriculture Education. University of Wisconsin, Madison.

KATZ, WALTER, A Study of Personal and Social Problems of Vocational Agricultural Education. University of Idaho, Moscow.


BOAS, GEORGE W. The Development of Vocational Agricultural Education in Kentucky. University of Kentucky, Lexington.

MAURER, LEON A. The Development of Vocational Agricultural Education in Indiana. Indiana University, Bloomington.


WELSH, W. C. A Study of the Impact of Vocational Agricultural Education in Georgia. University of Georgia, Athens.

ZIELINSKI, MARCEL. A Study of the Impact of Vocational Agricultural Education in South Carolina. University of South Carolina, Columbia.


RICHARDS, R. A. A Study of the Impact of Vocational Agricultural Education in Texas. Texas A&M University, College Station.

BROWN, J. A. A Study of the Impact of Vocational Agricultural Education in Louisiana. Louisiana State University, Baton Rouge.

BROWN, J. A. A Study of the Impact of Vocational Agricultural Education in Mississippi. Mississippi State University, Starkville.

WILLIS, J. E. A Study of the Impact of Vocational Agricultural Education in Oklahoma. Oklahoma State University, Stillwater.


WASSERMAN, R. A. A Study of the Impact of Vocational Agricultural Education in New Mexico. University of New Mexico, Albuquerque.

BAGGE, B. A. A Study of the Impact of Vocational Agricultural Education in Utah. Utah State University, Logan.

WASSERMAN, R. A. A Study of the Impact of Vocational Agricultural Education in Arizona. Arizona State University, Phoenix.


RINEHART, R. A. A Study of the Impact of Vocational Agricultural Education in Oregon. Oregon State University, Corvallis.


ALLISON, RALPH E. A Study of the Impact of Vocational Agricultural Education in Montana. Montana State University, Bozeman.


BROWN, J. A. A Study of the Impact of Vocational Agricultural Education in South Dakota. South Dakota State University, Brookings.


BROWN, J. A. A Study of the Impact of Vocational Agricultural Education in Nebraska. University of Nebraska, Lincoln.

BROWN, J. A. A Study of the Impact of Vocational Agricultural Education in Kansas. Kansas State University, Manhattan.

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Vo Ag Valuable to Disadvantaged

MARTIN B. McMILLION
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The number of NVATA members on the Editing-Managing Board of the Ag Ed Magazine were increased to four by unanimous vote of the Board at the meeting in Denver in December. Three members are Gerald Page, Nixa, Missouri; Robert Howey, Sycamore, Illinois; Elwin Walker, Noonan, Park, Georgia; and James Wall, Lincoln, Nebraska.

David B. McClay, Pennsylvania State University, was named chairman, succeeding Orrville Thompson, University of California, Davis, who continues as a member of the Board.

George Hurt, Texas State Supervisor, was elected vice-chairman.

Other members of the Board are Ray Aguila, Kansas State University, Neville Huntziker, U.S. Office of Education; R. W. Montgomery, Ahsna University; Ralph Woolf, Ohio State University; Thurston Faulkner, State Supervisor, Alabama; and Cayce Scarborough, N.C. State University.

NEW EDITING-MANAGING BOARD

More Teachers

The primary objective of the study was to study individuals rather than to study words. A list of words and phrases were necessary and these words and phrases were selected from those which are important aspects of the vocational agriculture program. The words and phrases used in the study were the following: 1. learning by doing. 2. leadership. 3. cooperation. 4. Future Farmers of America, 5. farming, 6. vocational agriculture, 7. agricultural mechanics instruction, 8. supervised farming program, 9. non-farm agricultural occupations, 10. on-farm instruction, and 11. teacher of agriculture.

In the study, the highest of the three socio-economic groups placed the lowest value on all eleven of the words or phrases used in the study. The middle socio-economic group placed the next lowest value on all the words except "non-farm agricultural occupation" and "cooperation." As the socio-economic level of the pupils increased, the value placed on the words and phrases decreased for nearly all the words used in the study.

(Continued, page 237)
Flexible Scheduling

WRIGHT NOEL, Ya Ag Teacher, Beav, Oregon

Two and one half years ago, Beav High School joined five other schools in Oregon and approximately 500 schools in the nation in adopting a scheduling program that many predict will become the standard method of scheduling for all high schools. Commonly called flexible scheduling, this process allows for varying lengths of class time, more flexibility of students' use of time, more individual instruction, and more efficient use of facilities. As with all new programs, this one brought with it certain problems and conflicts. However, our school seems to have solved or to have found the means for solving most of the problems.

Fitting Time to Course

Under the flexible scheduling program, each teacher decides on the course time structure that he feels best fits his course. As can be seen from Figure 1, our agricultural department has decided upon different time allotments and sequences for each of the offerings. This allows students and students to break away from the old-fashioned one hour per day per course that has hindered our educational system for so many years.

After the teachers' time allotments are submitted, the information is fed into IBM computers to be analyzed and evaluated for all of the courses to be modeled together. As can be imagined, this makes a school-wide master schedule that looks somewhat like a patchwork quilt. It is interesting to note that the scheduling under this system in our 1,000-student high school requires more of the capacity of the Stanford IBM machine than does the entire coordination of the Strategic Air Command. As can be noted in Figure 1 again, we have broken our day into 2, 18 minute periods. Many classes now use a large group-small group type of instruction whereby the students are gathered together in groups of 100 to 250 for a large group lecture which usually lasts for two modules, or 36 minutes. After the lecture, they meet in groups of 10-15 at various times throughout the week to discuss the material presented in the lecture.

Student Schedules

The student schedules are scheduled for approximately four hours in each class per week for formal instruction, plus one hour of directed study. During the directed study time, the students report to a classroom and are under the supervision of the instructor for that course. In this directed study time, they do not receive formal instruction but have an opportunity to do class assignments, projects, or other work under the direction of the instructor. After a student has demonstrated his ability to direct himself and to use his time efficiently, he may be released from attending the directed study period, to repeat only as he feels that he needs help from that instructor. He may now use this time to do his research or study in the Library, various resource centers, or to lounge in the cafeteria, which is minimally supervised.

Due to the fact that the Junior High School is not yet on flexible scheduling and that the ninth graders are transported to the high school for their extracurricular classes, Agriculture I students meet under the traditional system.

The extreme in flexible scheduling may be noted with the Agriculture IV class. To allow for a large block of time, field trips and of socio-economic extended activities, these students meet for one hour on Monday and Tuesday and no periods on Thursday. Plus one hour per student in directed study. This six period schedule has provided for them to placed in the economy without necessitating absences from other classes or hurried trips.

Student Responsibility

We are finding that by placing the responsibility of the use of their time upon the students, that they are capable of making their own time better and are often motivated to delve in depth into areas of special interest. Our agriculture mechanics facilities are one of the primary areas where this can be noticed. They are being used by students who are often scheduled in for that time but want to construct a project or perfect a special skill.

Our problems have been primarily learning to adapt to a new system. Parents, we have had to get along with less time for formal control of our students. Parents have had to teach them to take more initiative and not depend upon the instructors for step by step direction. Students have had some trouble in learning to discipline themselves to study rather than socialize in the cafeteria.

While it has worked very well for the exceptional student, the average and low student have demonstrated a lack of self-discipline and initiative to use the independent study time properly. Students are now being taught to direct their studies slowly toward independence.

The uncharted time in Figure 1 is used for individual study and preparation of teacher preparation. However, teacher preparation seems to suffer since students seem to be in the office continuously. In summary, it could be stated that flexible scheduling in our school this far has helped the good student and the good teacher to become better. For capable individuals are experiencing difficulties.

While some problems have been found with flexible scheduling, the pace of study and students are pleased with the results. We are convinced that the majority of the students can be benefited through this program.

Vo Ag Valuable to Disadvantaged

(Continued from page 234)

The comparative meaning of study of the twelve values showed a significant difference among the socio-economic groups of pupils. The words "leadership" and "cooperation" had a statistically significant difference in meaning to pupils in different socio-economic groups. Two out of three socio-economic groups of pupils differed significantly (0.10 level of significance) from each other concerning the meaning they placed upon the word "leadership." These two groups were the highest and lowest socio-economic groups of pupils. The highest socio-economic group of pupils placed the highest value upon the word "leadership" and the highest socio-economic group of pupils placed the lowest value upon the word "leadership." The middle socio-economic group of pupils valued "leadership" significantly higher than did the highest socio-economic group of pupils.

A comparison of the connotative meaning for the words between teachers and pupils did not reveal a significant difference in the frequency with which the three socio-economic groups of pupils agreed with the teacher group concerning the connotative meaning of the word "leadership." A striking contrast, however, existed in the frequency with which high school pupils by grades agreed with the teacher group concerning the connotative meaning of the word "leadership." Nearly half of the freshmen and sophomore pupils differed from the teacher group than the junior and senior pupils.

Teachers attempted to predict the comparative meaning of their pupils placed on the words used in the study. Predictions made for pupils in the high socio-economic status and in the higher socio-economic levels were more accurate than predictions for pupils at the lower socio-economic level. The difference in accuracy of prediction among the middle socio-economic levels was not statistically significant. The teachers underestimated the considerable extent of the values which all groups of pupils placed on the words used in the study.

Conclusion

The findings indicate that the socio-economic disadvantaged pupils studied tended to value vocational education in agriculture more highly than the pupils who were not socio-economic disadvantaged. This finding seems to indicate that special programs for the socio-economic disadvantaged may not be as difficult as one would expect, in fact, they may be easier to implement in agriculture. This study indicates that teachers of agriculture should not underestimate the value of socio-economic disadvantaged pupils for vocational education. Although they should, therefore, consider carefully the offering of special programs in agriculture for the socio-economic disadvantaged pupils in their school.

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The Editor
Training Needs

for the Greenhouse Grower

by

HAROLD BRYAN1, RICHARD LINDSTROM2, and WARREN PARSONS3

Many teachers of vocational agriculture have or will be broadening their curricula to include ornamental horticulture and floriculture. They are adding greenhouses and other growing facilities. Many have begun to consider the question of what competencies the greenhouse grower should possess and what they should teach, as well as what plants should be grown by trainees to gain needed competence. The study was designed to answer some of these questions.

During the last ten years significant changes have occurred in agriculture. One of the major changes has been the increasing number of persons employed in off-farm agricultural occupations. Some of the reasons for this trend include: (1) technological developments in the processing and distributing of agricultural products, and urbanization which demand for agricultural goods and services.

One group of off-farm agricultural occupations which will need increasing numbers of agriculturally trained employees is that of ornamental horticulturists. Judges estimated that in 1970 there were 4,000 full-time and 3,400 part-time ornamental horticulturists employed in Massachusetts. This represented about 20 percent of the total number of off-farm agricultural employees in the largest occupational group of the study.4

Oriental horticulture is increasing in importance because more plants are being grown in and outdoors of homes around public and private buildings, along city streets and highways, in parks, and in ornamental areas.

President Johnson’s National Beautification Program has created a demand for plants, plant materials and trained personnel for ornamental horticulture. Most of the recent off-farm agricultural occupational studies including the ornamental horticulture occupational family have inquired into the general areas of competencies such as agriculture, business, and mechanics for the various job titles.

The purpose of this study was to determine the nature of the training desired for the ornamental greenhouse grower, in terms of the relative importance of the species of ornamental flowering plants produced and of the degree of attainment of competencies needed. Knowledge of such competencies would also secure employment information relating to greenhouse workers that could be of value in guidance and training such workers.

What Previous Studies Have Shown

A review of studies of off-farm agricultural occupations revealed that ornamental horticulture offered opportunities for employment by the many businesses and employees found in this industry. Many of the studies were preliminary in scope: employment information and competencies were specific occupations, and were limited to certain areas within a state. Investigators pointed out occupational opportunities and at levels of employment, requiring the largest number of workers in a state. Much of the information was obtained in order by skill, management, supervisory, technical, and other employees. Other employment information specifically for ornamental horticulture included: (1) minimum and maximum age of entry for all levels of employment, job training was 35 and 60 respectively; (2) the median monthly salary: by level of employment, as at 1967; (3) a recent (1967) report in a major city indicated a 35 percent of all workers who are desirous of attending at least a high school education for entry jobs, while 40 percent of the students were in the fifth or sixth years of college; and (4) and that 33 percent of the managers preferred a farm background for employees but with 75 percent who had no preference as to residence or background.

Very little employment information, such as the kind sought in the present study, was discovered through studies of the floriculture industry. There was a total of 529 full-time and 564 part-time employees in the studies reviewed. Employers expected to hire 134 full-time and 549 part-time employees in the next five years. The total number of employees for floriculture could not be estimated because they were hired under other horticultural job titles. These were on specific kinds of employment information for floriculture, such as minimum age of entry, salary, and union requirements. There were only two general areas of training for floriculture employees found in the review of literature: plant science and agricultural competencies. The total number of employees expected in 1969 was 335 full-time and 242 part-time. No occupational studies of the greenhouse industry as such were found in the literature. The only information found was provided as a small part of larger studies of use or more occupational families.

Method Used to Secure Data

A personal interview was conducted with each of the managers of 25 greenhouses, as well as the manager of the Greenhouse in our University (Dane, Illinois: the Interview, 1964).


Planted material is sometimes referred to as 'seedling' plant material, and the plants as 'seedling' plants. In this study, the term 'seedling' has been used as a general term to refer to the plant material.

1. Directed, of course, to the local and regional market, since the production and distribution of these plants is essentially the same as the production and distribution of the plants grown in the greenhouse.

2. The term 'seedling' has been used as a general term to refer to the plant material.

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The third category of training considered was various aspects of plant physiology or what might be simply called crop understanding. The percentage of managers who indicated that the training of crop understanding was essential, useful, or unnecessary is recorded in Table IV. At least three-fourths of the greenhouse managers reported that the following areas of training under crop understanding were essential in order of importance: (1) temperature, (2) water requirements, (3) pruning, (4) disbudding, (5) cutting, (6) special cultural practices, (7) humidity, (8) issue of plant, (9) grading and packaging, and (10) light effects.
Stories in Pictures

Gilbert S. Guiter
Ohio State University

NYATA President Jim Durkee pass the gavel to newly elected President - Dean Walker at Norman Park, Gainesville.

Dear President of NYATA - With Social of Basile, Kansas, give the officer installation ceremony to newly elected NYATA President - Dean Walker and President Jim Durkee at Lemonia, Wyoming took place.

L. H. Newcomb, President, Virginia Association FFA, discusses the early history of the FFA Organization with Dr. Walter S. Newman, President Emeritus, V.P., and Henry W. Sanders, Professor Emeritus, Vocational Education, V.E.P. During a conference in September 1935, Doctor Newman, then State Supervisor of Agricultural Education in Virginia, proposed to the teaching staff at V.E.P. that boys studying vocational agriculture should form their own organization — now the FFA. Present at the conference were Walter S. Newman, H. W. Sanders, Edward C. Mogill, and Henry C. Gruenloh. Mr. Mogill and Mr. Gruenloh are deceased.

Featuring FFA — For 1928 or 1968?

1917 .................. 50th ANNIVERSARY .................. 1967
1st National Vocational Education Act