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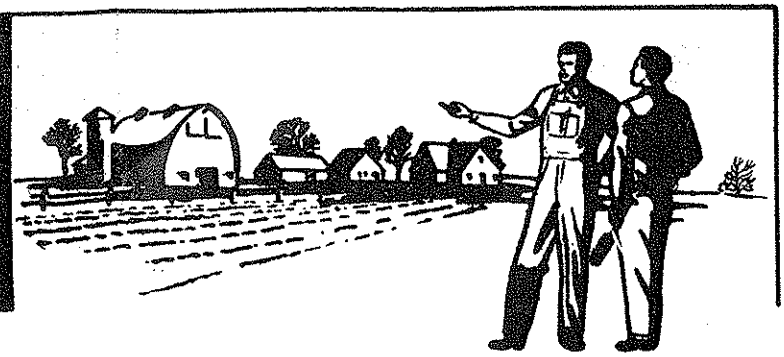
Featuring—Working with Young and Adult Farmers

The Agricultural Education Magazine



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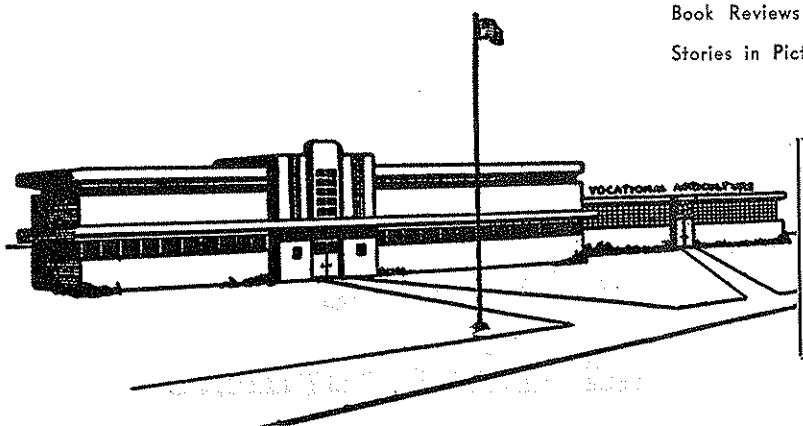

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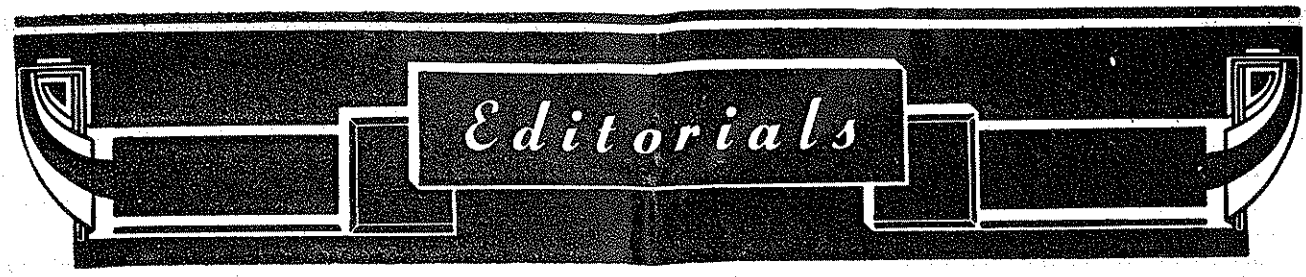

Adult Education for Changing Times

RALPH J. WOODIN, Teacher Education,
Ohio State University

Changing times for farmers make changes in existing adult and young farmer programs imperative if these programs are to be a vital influence in agriculture during the next ten years.

Forecasters by the dozen see farmers operating larger acreages, using more machinery and equipment, increasingly concerned with problems of farm policy, vertical integration and a new technology of agriculture. They envision more of these adults and young farmers having graduated from agricultural colleges and from high school vocational agriculture classes, and living in communities with expanding boundaries which are served by larger high school districts.

Before becoming overawed by these new problems, vocational agriculture teachers might well consider that emergencies and problems have been met in the past and that the experiences of meeting them has generally been beneficial. Changes, even emergencies, in agriculture have been occurring regularly since the first adult farmer class was organized. Teachers conducted adult and young farmer programs during the twenties when farmer cooperatives seemed the panacea for agriculture, during the thirties when three dollar hogs and 50 cent wheat brought about the Agricultural Adjustment Administration, and during the forties when World War II gave farmers the challenge of producing "food to win the war and write the peace."

Certain outcomes have resulted from those programs of adult and young farmer education which have kept pace with changing times. These outcomes will continue to be important to communities, schools and farm people during the sixties. They constitute important goals for post-high school programs in the next decade.

These are some outcomes which have met the tests of time and public approval:

- Improved farming and higher farm incomes have been brought about.
- Entire communities have profited from the emerging leadership in agriculture developed in out-of-school students.
- More high calibre young men have found a place for themselves in farming through the guidance of the young farmer program.
- Public support for local schools and for vocational agriculture has been strengthened.

In securing these, and perhaps new and additional

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From the Editor's Desk . . .

Agricultural History in the Making - - -

Increase in farm size, specialization in farming, the creation of larger school districts, and changes in recreational activities are all having an effect on the nature of the programs of vocational education in agriculture for young and adult farmers. The following adjustments have been made, are being made, or could be made by teachers in their adult and young farmer programs. Some of the so-called "adjustments" are simply good ideas which have been used in some situations for years but which have never been generally adopted.

1. Increasing specialization should create a desire for more intensive instruction in the areas of specialization. This should provide a boost for systematic instruction as opposed to a series of meetings on unrelated topics.
2. The new methods of financing farming should bring the need and demand for courses dealing with the pros and cons of these methods of financing coupled with intensive study of the associated marketing problems. The role of farmer cooperatives in financing and marketing will be restudied.
3. As farmers become more expert in their specialties, interests may shift to farm management courses involving continuing analyses of the entire farm business. Group instruction will deal with problems revealed by these analyses.
4. Teachers of vocational agriculture will make more use of resource persons from all sources and especially of farmers who are first to adopt new practices or procedures.
5. Teaching of adults and young farmers, both in organized classes and on the farm, should become a part of the teacher's contracted responsibility rather than a sideline for extra pay.
6. There will be a changing emphasis in the evaluation of the work of the vocational agriculture teacher; greater importance will be attached to the effectiveness of his work with adults.
7. There will be an increase in programs for young farmers.
8. Adult and young farmer classes will be scheduled more and more on Saturday mornings and in the later afternoons of weekdays.
9. Teachers will begin to serve a larger proportion of the farmers through increased on-farm instruction which will result in greater demand for organized classes. Greater emphasis will be placed on adoption of new practices.
10. Teachers and adults will turn to year-around

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Adult Education - - -

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outcomes during the next ten years, teachers must give attention to new and promising ways and means. The following suggestions to teachers are indicated both by current changes in agriculture and by the outcomes we desire:

- Appraise those changes in the rural community, the farm family, and in farming which affect your community.
- Help advisory committees to study changes and its effect on planning, organizing, conducting and evaluating the program.
- Use modern methods of group instruction, including new tools of communication, as a means of teaching more in less time.
- Utilize teacher resources for specialized instruction both from within the group and within the community.
- Devise more efficient individual on-farm teaching.
- Involve the entire family in farm decision making.
- Build educational programs which extend through the entire year.
- Develop well rounded programs which provide for social and civic development as well as for proficiency in farming.
- Find a closer liaison between adult education in vocational agriculture and other adult education programs within the school and community.
- Extend adult and young farmer programs to those communities not presently served.

For those with the wisdom to select from time proven objectives and the vision and courage to devise new ways of reaching them, changing times in farming offer new and greater opportunities for service. □

Agricultural History - - -

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courses in an effort to time group meetings to the need for considering specific problems.

11. More classes will be organized for absentee landowners.

12. Colleges will try to cope with increasing requests for education and service from an awakened farming public by providing teachers of agriculture with a great variety of specialized teaching aids and sources of information.

13. More adult courses will be provided which deal with the formulation and effects of government farm policies, especially as these policies affect prices.

14. The broad area of money management will be the basis for adult courses with such topics as insurance, retirement and investments being given serious study.

15. Farm mechanics instruction will continue to be important. Stress will be placed on repair, maintenance and adjustment skills and on management aspects of mechanization.

It is always difficult to lead the way into the future. However, our greatest opportunity for service and our greatest satisfactions from our work will come from helping make agricultural history rather than from reading about it. □

The Cover Picture

Young and adult farmer programs can and should serve the entire farm family. This Ohio family appears to be quite happy about their situation—probably because everyone is involved as decisions affecting the young farmer are being discussed. □

A teacher suggests what you can do to - - -

Help Young Farmers Become Established

R. T. REDD, Vocational Agriculture Instructor, Worsham, Virginia

R. T. Redd

Gone are the days when one can say, "I'll try my luck in the city and if I don't have the brains for the job, I'll go back to the farm." Farming has advanced rapidly in recent years to become a competitive specialized business requiring specialized operators. Skilled farmers that are accepting the rapid changes of today's agriculture and making the necessary adjustments are continuing to survive while unskilled farmers who reject the scientific advancements are falling by the wayside.

Farming is a big business. The average amount invested in farming per farm worker is $20,000 to $50,000, or 2 to 4 times the nonfarm industry level.[1] A terrific difference between the farmer and other workers is that the farmer must still finance his own business. Yes, farming is big business, a challenging business, and a satisfying business if we are prepared to meet the mounting demands and decisions required of it.

Our program of vocational education in agriculture is based on the needs and problems of farm people. One of the greatest problems faced by young farmers and many adult farmers is that of becoming established in farming. Since establishment in farming on a satisfactory basis is a primary objective of our young farmer program and a universally difficult problem for young farmers, it is evident that we as vo-ag teachers should give adequate thought and time to this problem.

What then are some of the problems faced by young farmers in becoming established in farming? The three major problems most often listed by young farmers are:

1. Financing the farm business
   a. Procuring initial capital
   b. Obtaining adequate operating finances
2. Labor
   a. Securing adequate labor, trained to do farm work
   b. Retaining labor
3. Land
   a. Procuring land to make initial start
   b. Purchasing land to enlarge the farm business
   c. Getting higher quality land when the young farmer realizes that he has started on land of poor quality which limits his yields or interferes with his efforts to obtain more adequate financing.

Other important problems listed by young farmers include in part:

1. Livestock
   a. Diseases
   b. Low producers
   c. Breeding difficulties
   d. The length of time required to build a herd
2. Crops
   a. Yields
   b. Diseases
3. Machinery
   a. Selecting

[1] DeGraff, Herrell, "Who's The Farm Worker." *County Agent Vo-Ag Teacher*, Vol. 13, No. 9, September, 1957. p. 16.

b. Obtaining adequate financing
4. Marketing
5. Partnership agreement
6. Rental contracts
7. Lack of experience

Before the teacher of agriculture can be of assistance in helping a young farmer to solve his problem, he must first recognize the problem himself and lead the young farmer in recognizing the problem. The advisory council can be of tremendous help in this situation as they can rely on their experience and knowledge of the community to determine the needs and problems.

After the problems or needs have been determined, a definite course of action is decided upon by the young farmer, based on guidance by the vo-ag teacher, the advisory council, and other reliable sources of information.

In order to avoid some major difficulties and help young farmers to intelligently solve their problems, the teacher's contribution should logically start with the all-day program since many young farmers come from this group. The teacher of vocational agriculture should conscientiously use this program to prepare boys for farming and for the rapid changes in our agriculture. In addition to teaching the enterprise jobs, shop skills, and FFA work, areas such as the following could well be included in the high school program:

1. Insist on a well-developed supervised farming program as this program frequently leads to establishment in farming.
2. Teach farm management and help boys with farm management problems and decisions, especially in their senior year.
3. Teach boys where to find and how to evaluate information for their home situation.
4. Teach contracts and agreements.
5. Provide information as to sources of loans, how to apply for loans, and the responsibilities of the borrower.

The vo-ag teacher should provide guidance for in-school and out-of-school groups. Considering the investments and problems in farming today, there is little wonder that prospective young farmers experience a period of indecision. The teacher can help prospective young farmers decide on a vocation by providing detailed information on various vocations. The individual should definitely be discouraged from making hurried decisions.

Some of the contributions the teacher should make to specific problems presented by young farmers involve the use of all the tools available in the local vo-ag department. The teacher can apply these tools to help young farmers solve their problems.

Frequent solutions to the problems of finances are:

1. To obtain a loan from a reputable source. The teacher should acquaint the young farmer with lending agencies, the techniques of making a loan application and the responsibilities of the lender and borrower. The teacher should help the farmer determine the need for the loan and prepare a repayment schedule based on his actual operation.
2. To develop a new enterprise or improve present operations to raise the capital. The teacher should encourage the farmer to investigate factual information concerning new enterprises and determine their place in his farming program. In addition, information may be passed to the young farmer that will increase his management ability, thereby increasing the efficiency of his operation.
3. To reduce financial requirements. Efficiency factors through management can also be applied to reduce financial requirements. The teacher and advisory council can help the young farmer determine weak and strong points in his operation.

Some ways in which a vo-ag teacher can help young farmers with their land problems are:

1. With the help of the advisory council and other local agricultural agencies, the teacher can help young farmers locate an available farm or land with which to enlarge the business.
2. Provide soil survey maps and information to aid the young farmer in intelligently selecting farm land.
3. Help the young farmer with a farm survey to determine its capabilities and limitations by the use of soil tests, expected yields, etc.

The teacher can help young farmers with problems through his organized classes of instruction based on the individual needs of members of the group. Such problems as listed previously should definitely be given consideration as they often appear as major problems of young farmers.

The young farmer should be encouraged to use the facilities of the local school shop and apply the basic farm shop skills developed there to his individual machinery problems.

The teacher of vo-ag can make the facilities of his department known and available to young farmers. The use of the agricultural library, current publications, and other materials will frequently provide the necessary information needed by the young farmer to intelligently solve his problem.

Probably no greater contribution can be made by the teacher than through actual farm visitation where the personal and farm problems can be visualized more accurately. When the problem is recognized, the teacher and young farmer must work hand in hand to secure the needed information to solve it.

Farming is a big business and the Vo-Ag teacher can exert an influence in helping young farmers to become established in farming and in helping those already established to stay in farming and protect their $20,000-$50,000 investment. □

Long-time planning for - - - Adult I, II & III

C. A. ANDERSON, Supervisor, Minnesota

The adult farmer program is becoming more and more important each year. There is no question but what the agriculture instructors are recognizing the increased needs of the farmers of their communities. These adult students have decided on farming as a way of life that is satisfying to them and their families. The instructors must have the confidence of the farmers and be able to motivate them to want to be a part of the adult farm instruction program. We must be able to develop the right attitudes so that the judgments made by the student will be good.

We must have a program that will satisfy the school administrator, the school board and the community. Therefore, we must have a program that these people will not only want but will demand as a part of the total school program.

The solution to the agriculture

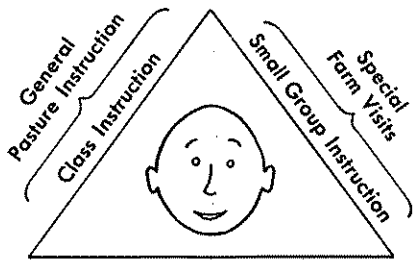
adult program for the farmer and all others concerned is a program that will be at least three years in length. In other words, Adult I, II and III. Under this plan, the entire farm is taken into consideration and the same students will remain more than one year. A core course of at least three years is organized for the over-all community needs and could be the outcome of a good advisory committee. In addition to the core course, an individual course is planned for each student for each year. Such a procedure lends itself to long-time planning and a good farming program.

Adult I core course would start the student on farm records and accounts, with particular emphasis on beginning inventories and the areas of farming in the community such as soil, dairy, crops, marketing, mechanics, government programs, etc. Adult II would be a continuation of the farm records and accounts but, in addition, the analysis of the first year's records and farm practices would be decided upon, such as fertilizers, crops to grow, planning the business, cost of production and getting more involved in the five areas of farm mechanics: (1) farm buildings and conveniences, (2) farm power and machinery, (3) soil and water management, (4) electricity, (5) shop skills. Ag III would be getting into more complicated farming programs, such as types and size of farms, and would be carried on mostly at discussion groups.

The Vo-Ag instructor must try every angle so as to do the job well. A class procedure might be illustrated by a triangle given at right. The student is in the center of the triangle and will receive his information by seeing, hearing and speaking. However, he must be made to feel that the program is for him. You will note on the triangle that class work is on one side of the triangle, group on the other side, but on the base of the triangle is the individual instruction. Let us assume that pasture is to be part of the core course. This problem is discussed in class in a general way after which some of the students will concur they wish to go further. Field trips are then organized to take the small group to see such items as pasture renovation, rotation, fertilization mixtures, etc. The individual being the base of the triangle, instruction then is conducted on his own farm and his pasture needs discussed.

It is suggested that note boxes be used in place of notebooks for taking notes on all items that fit his needs. This is best done on 4" x 6" cards filed in a box with headings applicable to his own farm and kept from year to year. Notes can be brief on ruled side of card and sketches of items for the farm on the unruled side. The note box can be 12" long and 6¾" wide and 4½" deep (outside dimensions) and made from ¼" material such as plywood. The bottom and ends are placed inside of the 12" side, glued and tacked with small brads. The boxes can be stained and numbered with a sticker on each end. Such a box will hold not only cards but bulletins and books being used. This note-taking on his own farm problems is satisfying to the farmer.

The individual course should be so planned that it will show where the farmer is at present, goals established each year, and list the practices necessary to accomplish the goals. This can be best done by having headings of items of present situation, practices to follow and goals for each farm.



The students in Adult I should be made responsible for students who are to be enrolled in Adult I next year and also assist in attendance.

Specialists or farmers with experience can be brought in by the group to speed up the know-how, but in all cases the subject presented should be tasty so that students will want to come back for more.

There should always be a spirit of competition in the classes and it appears that the best way is to have class officers and give some award or publicity to achievements.

Possibly the time will come when we need to think seriously about reducing the amount of time spent on all day classes and give more time to farmers who are actually in the business.

We must always keep in mind that we are also interested in the individual, which might be expressed in the following poem:

In Farmers Training it's up to you
To know the student's best IQ
From where he is to where he goes
Depends on him and what he knows
First of all he must stay *alive*
And as a *useful* man continue to strive
A *healthy* one each day thru
To create a desire to want to do
Happy about life on the whole
As he works toward his family goals
His *moral* standards must be high
For the quality is set in public eye
He cannot neglect good *social* aim
If he is to play and stay in life's *important* game
Balanced must be on *spiritual* side
And on *political* band wagon he must ride
If you can shape the eight above
Your product will be a man to love.
You have the tools at your command
Take to your job as best you can
Select the things student needs to know
In management, livestock or crops to sow
Education always comes by degrees
The end result is bound to please
To shape their lives should be your aim
Your name will be in someone's Hall of Fame. □

The forces behind the program - - -

Factors Associated with Adult Class Development

C. OSCAR LOREEN, Teacher Education and Supervisor,
State College of Washington

Enrollment in adult classes in vocational agriculture differs greatly among the states. Since all of the states operate their programs under the same national vocational education legislation, these questions seem pertinent:

1. Why is there such a wide variation in the growth pattern of adult education in the various states?
2. What are the factors which serve to promote and develop adult education in vocational agriculture?

A recent study[1] was an attempt to find some answers to these questions. This study, although national in scope,

[1]C. Oscar Loreen, "An Examination of Adult Education in Vocational Agriculture in the United States," Dissertation, University of Minnesota, 1958.

dealt primarily with those factors which may normally be expected to be influenced directly by the teacher, school administrator, teacher trainer and state supervisor. The factors may be said to be confined to the teacher's side of the desk.

Procedure

A tentative list of factors which were considered relevant to the development of adult education in vocational agriculture was prepared. On the basis of the judgments expressed by a jury of professionals, a list of factors upon which to base the study was developed.

The study included the ten states with the most extensive programs in adult education and the ten states with the least activity in adult education. The sample upon which to base the study was drawn from listings of schools which offered vocational agriculture programs. The sample consisted of 270 schools, one-half from states of high adult enrollment and one-half from states of low enrollment.

A questionnaire for teachers was developed and sent to each teacher of vocational agriculture in each school included in the sample. Another questionnaire was developed and sent to the school superintendent or principal in each of these schools.

Questionnaires were also developed for securing information from the state supervisors and the teacher trainers in the twenty states included in the study.

Findings

The list of factors which were believed to be related to the development or non-development of adult education in vocational agriculture were ranked by a jury of teacher trainers and state supervisors in the following declining order of importance:

1. Teacher attitude
2. Teaching load
3. Training of the teacher
4. Teacher trainer's attitude
5. The state supervisor's attitude
6. Teacher interest
7. Course content
8. Status of teacher in the community
9. The school administrator's attitude and understanding
10. Teacher ability
11. State reimbursement policy
12. The local advisory council
13. The state plan for vocational education
14. Precedent
15. School facilities

Information was then secured through questionnaires and other means for the purpose of testing the validity of the factors listed above.

Analysis of the information secured from teachers, school administrators, teacher trainers and state supervisors disclosed that the following factors were important in the development of adult classes in agriculture:

1. Teacher attitude
2. Training of the teacher
3. Teacher interest
4. The school administrator's attitude and understanding
5. Teacher trainer's attitude
6. The state supervisor's attitude
7. The local advisory council

It could not be concluded from this study that the following factors are associated with the development or non-development of adult classes in vocational agriculture:

1. Teaching load
2. Teacher ability
3. Status of teacher in the community
4. The state plan for vocational education
5. State reimbursement policy
6. School facilities
7. Course content
8. Precedent

It *cannot* be concluded, on the other hand, that these are *not* important factors.

For example, let us examine the teaching load factor.

In making this study, schools in states having adult programs were referred to as Group I and schools in states with limited adult programs were called Group II. When teaching load was measured by means of the Douglass formula, it was found that the teaching load of teachers in Group I and Group II was the same.

It was quite evident that there was lower vocational agriculture enrollment in schools of Group II (limited adult program). Consequently more teachers in these schools teach classes other than agriculture than was true of teachers in schools of Group I (extensive adult enrollment). In other words, it seemed that teachers generally carried a heavy load but when duties with respect to vocational agriculture became limited, teachers were given non-agricultural teaching responsibilities.

While it could not be concluded from this study that teaching load was a factor in the development of adult classes, it seemed evident that teachers who had the desire to conduct adult classes budgeted their time in such a manner as to make this possible. One might also observe that teaching load could influence a teacher in deciding whether to organize and conduct an adult class.

Factors which Promote or Hinder

School administrators, state supervisors and teacher trainers were asked what they thought was the greatest single factor in promoting adult classes in their respective communities and states.

That the course meets the needs and desires of farmers for information was mentioned most frequently by school administrators as the most important single factor serving to promote adult classes. Next in importance, according to the administrators, were the teacher's enthusiasm, interest, ability, and effectiveness.

As a group, teacher trainers and supervisors mentioned teacher attitudes, training, and ability as important factors. They also feel that their own influence is important in the promotion of adult classes.

In the opinion of the jurors, who were all supervisors and teacher trainers, the single factor which served to promote adult classes most was teacher-centered. The teacher's interest, attitude, ability and desire to serve were important, in the opinion of jurors.

Jurors, teacher trainers, state supervisors, and school administrators, as a group, placed considerable emphasis on the teacher and his attitude, enthusiasm, interest and ability as the factors which served to promote adult classes most.

These people were also asked to identify the factor which was the greatest single obstacle in their states and communities to the development of adult classes.

Collectively, jurors, teacher trainers, state supervisors, and school administrators placed the teacher's time, attitude, ability, and interest as a most important obstacle. They also recognized that the attitude of the school administrator and lack of interest on the part of the community were also important factors. They recognized, too, that urbanization and the competition for the time of the farmers were important obstacles.

Recommendations

Leaders in agricultural education, especially teacher trainers and supervisors, have an important obligation. The pre-service education and train-

ing of the prospective teacher should be of such a nature that the student will embark on his teaching career with interest, enthusiasm, and understanding. He should be made aware of the rewards that come to the teacher through serving well the agricultural education needs not only of the youth, but also the adults of the community.

State supervisors must bring about a clearer understanding on the part of school administrators of the place of adult education in the total program of agricultural education in the community school.

The school administrators, too, have a responsibility to their teachers of vocational agriculture and to their communities. This responsibility is to maintain the kind of school-community climate that will allow a complete program of vocational agriculture to flourish and to serve efficiently the agricultural needs of the community.

A capable, interested, and ambitious teacher, properly trained and encouraged, can help the vocational agriculture program attain the high ideals that were established long ago. This venture of federal, state, and local cooperation in an educational program can be successful to the extent that each person responsible for a segment of it carries on his tasks effectively and efficiently. The teacher trainer, the supervisor, the school administrator, and the teacher can each exert his influence in the fuller development of the vocational agricultural education program. □

A study of - - -

The Need for Young Farmer Education In Louisiana

MORRIS N. ABRAMS, Teacher Education, Louisiana State University

Morris N. Abrams

THERE were 116,240 farm operators in Louisiana in 1954. The educational needs of this group is one of the major objectives of the teachers of vocational agriculture in the public high schools of this state. These needs are met through organized systematic group and individual instruction. Each teacher has the responsibility of determining the problems of the farmers in his school district and then providing instruction to assist in meeting these problems.

The establishment of young farmers in farming is another primary objective of vocational agriculture. As young men complete their training in high school, those who desire to become farmers should be provided with the assistance and guidance necessary for them to achieve this objective. The accomplishment of this objective is not easy because the capital investment for a young farmer to begin in farming on a modest scale is tremendous. In addition, the technical changes in agriculture are continually placing more importance on the value of farmers being well trained in their occupation. The wider use of machinery, fertilizers, insecticides, new types of feeds and other new agricultural practices makes it imperative for a farmer to continually study and understand these activities if he is to be successful. The provision of this type of information and training can be accomplished through systematic instruction by teachers of vocational agriculture.

The question of whether there is a need for additional young farmers trained in vocational agriculture is continually raised by individuals who are interested in providing this type of training. The average age of the Louisiana farm operators in 1954 was 49.1 years. There were 16,601 farmers who were 65 years of age and above. Many of these farmers will retire from farming and the responsibility of providing trained replacements is with the program of vocational agriculture.

To attempt to further ascertain the need for young farmer education, a schedule was prepared and mailed to 160 teachers of vocational agriculture who have been teaching for the past five years in the same school. There were 60 of these teachers who completed and returned these schedules to be included in this study.

The number of years of teaching in the present position by the teachers ranged from 5 to 31, with an average of 13.28. The average enrollment in all-day classes was 46.41, with an average of 7 young farmers and 17.3 adult farmers per teacher enrolled in classes of systematic instruction in agriculture.

Each teacher was requested to list the approximate number of farmers in the school district. There were fifty teachers who replied to this request and the number of farmers in the school districts ranged from 30 to 900. Of the total number of farmers included in the study, the average number for each teacher was 174.

This study represented a five year period in attempting to determine the need for young farmer education. Each teacher presented the number of high school graduates who completed two or more units in vocational agriculture during this period. Table I presents the number of high school graduates who completed two or more units in vocational agriculture at the schools represented in the study.

There were 2,715 students who graduated with two or more units in vocational agriculture from the 60 schools during this five year period. The number for each year ranged from 497 in 1951-52 to 579 in 1954-55. The number graduating from each school during the five year period ranged from 21 to 130 students.

The determination of the number of these students who graduated with two or more units in vocational agriculture and who are presently residing in the school district was made by requesting each teacher to list by years the former students who were in the school district at the present time. Table II presents the number of former students presently residing in the school district.

There were 1,168 of 2,715, or 43 per cent, former students of vocational agriculture who were presently residing in the school districts represented in the study. The number for each department ranged from 0 for one department to 80 for the largest number in one district. All schools represented, except one, had some former vocational agriculture students residing in the district.

The number of former students who were presently residing in the school district and their occupations was requested from each teacher. The data in Chart I present the different occupations represented by the graduates.

Of the 1,168 graduates, there were 667, or 56%, who were engaged in farming or jobs related to agriculture. There were 501, or 44%, of the graduates who were in nonagricultural jobs.

The data from the schedules of the 60 schools represented in this study indicate that 43% of the graduates with two or more years of vocational agriculture are presently residing in the school district. The teachers of vocational agriculture have available in their school districts prospective students who should be included in an organized course of instruction for young men who are interested in farming

Of the graduates residing in the school district, there were 667 young men who were engaged in farming or related occupations. The changes in technical agriculture and the importance of getting established in farming should make it imperative for each teacher to provide training for these people in agriculture.

Each teacher of vocational agriculture should attempt to study the need for this type of training in his school district. If the program of vocational agriculture is to continue to contribute to the advancement of the agricultural industry, technical training for prospective farmers must be provided in all areas of agriculture where vocational agriculture is taught. □

A study of - - -

Needs and Interests of Young Farmers

in the Kuemper, High School Area

JAMES J. STRAUTMAN, Vo-Ag Instructor, Carroll, Iowa

James J. Strautman

ONE purpose of this study was to determine whether there were sufficient numbers of out-of-school boys and young men living on farms in the Kuemper High School area to justify the offering of classes for young farmers. Another aim was to determine the needs and interests of these young farmers in educational, guidance, and social opportunities. An attempt was also made to determine in what subjects, or areas, more training was desired by the young farmers when they were of high school age.

Procedure

A single page questionnaire, designed to be self administered, was developed and used in this study. Names of out-of-school young farmers were obtained from high school vocational agriculture students, adult advisory council members, high school students, extension personnel, and the records of the ten parishes which Kuemper High School serves. A total of 149 names was obtained from all sources. A total of 140 questionnaires was distributed by the high school students, the adult advisory council, and the vocational agriculture instructor. Ninety-eight usable questionnaires were returned. Boys and young men, 14 to 28 years of age, inclusive, who were not attending any public or parochial school classes and who were living on farms in the area were included in this study.

Findings

Interest expressed by young farmers in attending meetings. This study indicated that there are sufficient numbers of out-of-school young farmers in the Kuemper High School area to justify the offering of classes for young farmers. Only 15 of the 98 young farmers surveyed indicated that they had little or no interest in attending such meetings. Of the entire group, 40 expressed either "much" or "very much" interest in attending meetings, and 43 expressed "some" interest.

No significant difference was found in interest in attending meetings between the following groups: married or single young farmers, high or low farming status, veterans and non-veterans, high school graduates and non-graduates, vocational agriculture in high school and no vocational agriculture, veterans training and no veterans training.

Young farmers who were 4-H members were significantly more interested in attending meetings than were young farmers who were not members.

There was a significant difference at the 1 per cent level between adult or young farmer membership and non-membership in their interest in attending meetings. Generally, the more training the young farmers had in agriculture and the better established in farming they were, the more interest they had in attending meetings. Previous membership in an adult evening school class or young farmer class had the greatest effect on the amount of interest expressed in attending meetings.

Interest in subject matter areas. An educational program for young farmers should be governed by the needs and interests of the group. The subject matter areas ranked from highest to lowest by the young farmers were as follows: (1) Shop skills, (2) Livestock feeding, (3) Livestock management, (4) Keeping and using farm records, (5) Crop and soil management, (6) Getting a better start in farming, (7) Getting together with young men their own age to discuss common problems, (8) Rental or partnership agreements, (9) Getting started in occupation related to agriculture, (10) Getting started in some nonagricultural occupation.

There was a significant difference at the 5 per cent level between high school graduates and nongraduates in their interest in getting a better start in farming. Adult or young farmer class members were significantly more interested in getting a better start in farming than were nonmembers. Graduates with no vocational agriculture were significantly more interested in getting started in an occupation related to agriculture.

Single young farmers were significantly more interested in getting started in some nonagricultural occupation than were married young farmers. Interest in rental or partnership agreements was affected significantly at the 1 per cent level by age, with the age group 20-24 having the highest mean score.

Interest in keeping and using records was affected significantly at the 1 per cent level by the following characteristics: marital status, farming status, and age. There was a significant difference at the 5 per cent level between the vocational agriculture graduates and nongraduates in their interest in keeping and using records.

The young farmers with the classification married or high farming status had a significantly greater interest at the 1 per cent level in other management problems than had single

or low farming status groups. Veterans and high school graduates had a significantly higher interest at the 5 per cent level in other management problems than had nonveterans and nongraduates.

High school graduates were significantly more interested at the 1 per cent level in shop skills than were nongraduates. Married young farmers were significantly more interested at the 1 per cent level in livestock feeding than were single young farmers. High school graduates and vocational agriculture graduates were significantly more interested at the 1 per cent level in livestock management than were nongraduates and graduates with no vocational agriculture.

Members of the 4-H clubs expressed a significantly higher interest in livestock management than did nonmembers. High school graduates and adult or young farmer members were significantly more interested at the 1 per cent level in crop and soil management than were nongraduates and nonmembers.

Members of 4-H Clubs and vocational graduates had a significantly higher interest at the 5 per cent level in crop and soil management than had nonmembers and graduates with no vocational agriculture.

Veteran and adult or young farmer class members were significantly more interested in getting together with young men of their own age to discuss common problems than were nonveterans and nonmembers.

Since the interest of the young farmers was high in shop skills or farm mechanics, this area should be given attention in the high school vocational agriculture programs.

Many studies point out that there are more boys who want to farm than there are farms available. The fact that the total number of farms in the state is declining only aggravates the situation. This study points out that the age group 14-20 would benefit most from a guidance program that acquainted them with opportunities in agriculture other than farming or in opportunities outside of agriculture.

Of the 61 responding to the question, "whether or not you attended high school, what subjects or areas do you now wish you would have had more training in when of high school age," some phase of technical agriculture was mentioned 65 times; chemistry, science or mathematics was mentioned 18 times and business and bookkeeping 15 times.

Boys planning to farm and boys with a strong possibility of becoming established in farming should be encouraged to enroll in all of the courses offered in agriculture as well as science and bookkeeping. The study of farm record keeping in the farm management course should, however, provide them with the bookkeeping experience the young farmers expressed a need for.

High school farm boys interested in agriculture should be made aware of the fact that there are more boys who want to become established in farming than there are farms available and that the competition will be keen. Also, they should be made aware that the field of jobs closely related to agriculture is on the increase and that boys with a farm background have a good opportunity in those fields. They should be aware, also, of the opportunities for college-trained people in agriculture. □

More Educational Power from Three-Phase Programs

R. E. MOECKEL, Director of Vocational Education, Olivet, Michigan

R. E. Moeckel

CONTRIBUTING to the prosperity and happiness of rural families through vocational agriculture is an ultimate objective of our efforts. Are you still using the obsolete one-phase or two-phase program? To attain our objectives we need the full power of a three-phase program — adult-farmer, young-farmer, and future-farmer classes.

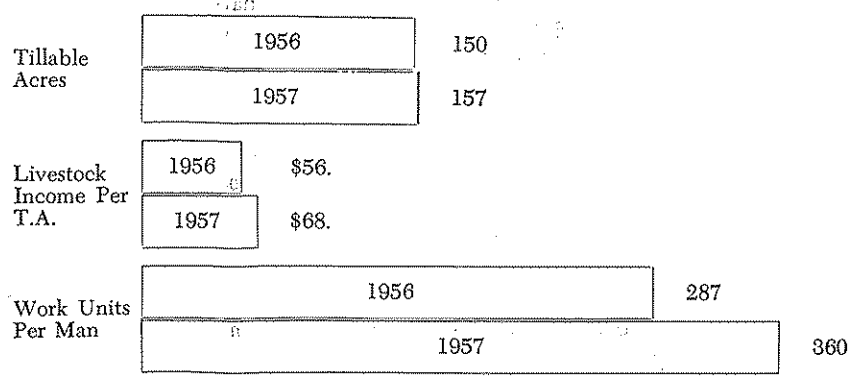
Working with the high school phase only is like pumping up a tire, one pound at a time, while it losses two. We never catch up. The situation is similar with just part of a program for our rural people when we have only one or two phases.

In Olivet, Michigan, farm people have access to a full program, consisting of three adult farmers, one young farmer and three high school classes in vocational agriculture. These classes are conducted by the equivalent of about 1.4 men. One teacher has high school classes and the FFA Chapter, while the other teacher works with adult and young-farmer classes. When responsibilities are divided in this manner, the direct responsibility for each teacher to develop and adapt his part of the program to community needs promotes a more balanced department in all three phases of the program.

How Many Are Enrolled?

"How many students are there in your department?" This is a frequent question and incorrectly answered by many vocational agriculture teachers. At Olivet there are 175 people (high school, young farmer, adult farmer, wives) involved in the classes of the department, from 112 farms. Unless we tell the entire story of our responsibilities, other teachers and the public may be justified in criticizing us for the small number of people with whom we work. Including the adult students in our enrollment is legitimate if we are providing on-farm

Table II — Olivet Farm Business Analysis
Twenty Similar Farms—1956 and 1957



instruction on a year around basis and sponsoring group meetings to meet the farmers' problems during fall, winter, spring, and summer. Table I illustrates how the hours of instruction might be calculated for a three-phase program. This might be compared with a teacher of an academic subject with an average of 30 students per class for 5 periods per day for 160 days or a total of 800 hours of instruction.

TABLE I — Hours of Instruction in a Typical Three-Phase Program

Class	*Enrollment*	*Hours of On-Farm Instruction per Student*	*Hours of Total On-Farm Instruction*		*Hours of Classroom Instruction*
Agriculture I	15	3	45		160
Agriculture II	10	3	30		160
Agriculture III or IV	15	3	45		160
Young Farmers	15	6	90		30
Adult Farmers	30	6	180		20
Total hours of Instruction			390	+	530 = 920

Olivet Adult Program

Recent activities of the Olivet young and adult farmer program are demonstration plots of corn hybrids; fertilizer plots; and weed spraying on oats, alfalfa, corn and soybeans. The farm record analysis project which has been conducted for three years, with and average of 28 farms involved, has formed the basis of systematic instruction (Refer to Table II). Such information as this project provides allows the instructor to develop, with the advice of the adult students and the advisory committee, an instructional program that is based on problems of the farmers instead of on the enterprise basis.

Trends in Adult Farm Education

As agriculture in an area changes, the adult program needs to be adjusted to the changing conditions. The following are some trends and adjustments in the adult farmer program at Olivet which have been made to meet current changes.

Trend	*Adjustment*
1. Need for more managerial ability.	Farm record analysis project and more on-farm instruction.
2. More specialization in farming.	A cross-sectional curriculum based on the problems of a specific group rather than on an enterprise basis.
3. More rapid technological progress.	More resource people, materials, etc., and more on-farm instruction.
4. Complex technological decisions.	Coordination with other agricultural agencies in the district and county.
5. Family solidarity and planning.	Wives attend certain meetings.
6. Part-time farmers too busy for classes.	More on-farm instruction.
7. More products and salesmen creating confusion.	Demonstration-plots and more on-farm instruction.
8. Complexity of rural problems.	A departmental advisory committee.

To keep pace with the rapid technological developments in agriculture we must generate intellectual power at all three levels—high school, young farmer, and adult farmer. □

Introducing New Farming Opportunities

Top problem for agricultural workers

J. ROLAND HAMILTON, Teacher Education, East Texas State College

J. Roland Hamilton

"LAND of Opportunity" is the title given the United States by the rest of the world. There was a time when farming was high on the list of opportunities for a good life in this country. Evidence that this concept is rapidly changing is seen in the following: the exodus of farmers from the farm; rural boys and girls fearful of a future in farming; many businessmen pessimistic over the outlook for agriculture; and even many professional agricultural workers who apparently do not recognize any long-range opportunities in farming for their communities.

Revolutionary changes in agriculture are undoubtedly responsible for this situation—for non-progressive people, at least. There is, indeed, little opportunity for a good life on the farm where outdated farming methods are still being used. For the progressive group, including farmers, businessmen, and professional agricultural workers, the opposite is true. For them, the sweeping changes in agriculture have opened up new opportunities little dreamed of even a quarter of a century ago.

Success Stories

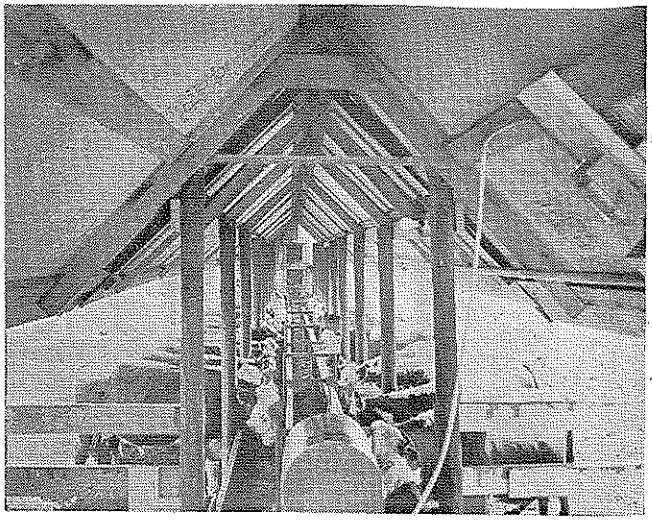
Each time I hear someone discussing the dismal prospects for the future of farming, I am reminded of a number of success stories of rural communities which I have observed in each of four different states—communities that by all reasonable standards have risen far above their neighbors. In each of these cases, farming has been "revolutionized" by the introduction of new opportunities. Some of the outstanding cases include: a change from cotton production to beef calf production, now covering most of four counties in the Brown Loam area of Mississippi; the development of a system of production, storage, and marketing sweet potatoes in the area around Sunset, Louisiana; the development of a $5 million dairy farming industry in Hopkins County, Texas, formerly one of the poorest areas in the state; and numerous other "revolutions."

How does such a movement get started? In searching for the key to some of these success stories, I have checked on the natural resources, geographical location, market outlets, type of population, and other factors that might give these communities a natural advantage over their neighbors. I have found no significant advantages as far as these factors are concerned.

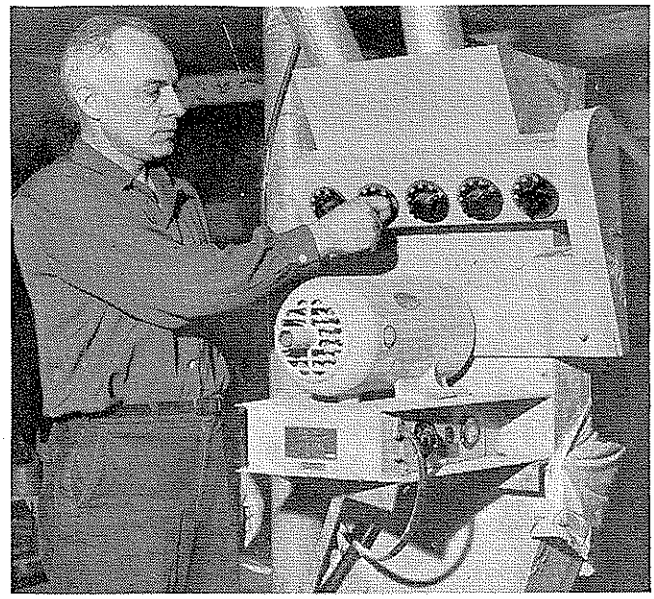
Key Leader(s) Responsible

The starting point in every "farming revolution" I have studied has been traced to an agricultural leader with vision and enthusiasm for a better community. In visualizing a better community, he apparently looked for workable opportunities—opportunities that had potentials for most of the farmers in his service area. And though the identification of a genuine opportunity is only the first step in raising the level of farming and rural life in a community, it appears to be a necessary step.

Without the introduction of new opportunities in a community, farming progress is certain to be slow. Since farmers are conservative, they



The mechanical feeder shown in the photograph represents an opportunity for reducing labor and increasing the size of the farm operation. With such mechanical feeders, equipped with automatic controls, one man can handle 500 to 1,000 head of cattle without outside help. (Courtesy Clay Equipment Company.)



Photograph shows the "heart" of a mechanical, automatic feed handling system. In this Indiana set-up, man labor required in producing 32,000 broilers in one year (four turns) was only 20 seconds per bird. Savings on feed costs the first year amounted to $6,000 above the cost of the equipment. The same type of system can be used in other kinds of livestock production. (Courtesy R. A. Smitherman, Greenfield, Indiana.)

year's annual Young Farmer Conference.

are unlikely to make major changes unless they are led to see genuine opportunity in a new farming program. Therefore, it is the duty and responsibility of the paid agricultural worker(s) who serve the area to be on the lookout for and to introduce all appropriate ideas for the improvement of the community. Farmers generally lack the necessary background of training in research and contact with modern methods to visualize important opportunities in farming and recognize them as such. The ability of an agricultural leader to visualize and identify genuine opportunities and to lead his constituents to do likewise seems to be one of the rarest, though most valuable, human qualities. This ability involves creativeness, an analytical mind, sound, practical judgment, a "knack" for getting along with people, respect and confidence of the people in his service area, plus a willingness to work hard and to persist in the task.

Perhaps this sounds like a pretty "big order," but I am convinced that most of the histories of "revolutionized communities" point to one such man as the person responsible, regardless of the number of people he may have used in getting a new program established.

Methods of Introducing New Opportunities

That the channeling of new opportunities into farm practice is not an easy task is evidenced by the total absence of "farming revolutions" in vast areas of the country where they are needed and should be taking place. Many professional agricultural workers, indeed, refuse to accept this task as their legal and moral responsibility.

Back of any proposal for a new kind of farming program must be a great deal of research—research that provides answers to all important questions relating to the actual workings of a new program. Soil types, climate, market outlets, financing, processing, storing, and such factors must be studied and favorable answers found before an agricultural leader can be on "firm ground" in introducing and promoting a new farming program.

The public must be "sold" on a new opportunity before it can have much chance of success in a given community. Wise agricultural leaders use, in their "selling" job, every means of enlisting the support of the press, radio and TV personnel, civic clubs, key businessmen, outside specialists, and, of course, all farm organizations and key farmers.

The technique most often used in getting farmers and other key people in a community to recognize a farming opportunity is to "show them." Merely stating that a "pig parlor would be profitable for you" generally has little effect in getting pig parlors established in the community.

One Vo-Ag teacher launched an egg production program, built around low-cost semi-caged housing, by taking two bus loads of his farmers and businessmen across one state and into another to study firsthand an established business of this type. His community today might be classified as "revolutionized" as a result of his vision for a better community and his persistence in channeling it into his own service area.

The instructional program which is necessary in implementing a new farming program must be provided, of course. This, however, appears to be a pleasure to those who have been responsible for introducing a movement that holds promise of "revolutionizing a community." An agricultural worker does not have to be a specialist in, say, egg production in order to promote this enterprise. He can obtain the help of specialists in the instructional program and he can learn the business himself, given some time to do so.

What Opportunities Are Available?

It would be an almost impossible task to list all the unused opportunities available to farmers today. Indeed, not all the opportunities in farming have been discovered yet. Among those that are being used to improve farming in progressive communities throughout the country today are the following: making the man hour go farther by the use of more appropriate mechanical power; automatic controls for all types of farm processes which further release the operator for other work; improved methods of harvesting, curing, processing all types of farm products; improving market demands by the production of better

products more attractively packaged; further improvement of livestock by artificial breeding and better feeding programs; cooperative production to develop and maintain satisfactory markets for farm products; irrigation where feasible; better control of insects, pests, and diseases of livestock and crops; better financing of the farm business; better farm management; more adequate farm shops as needed; and the like.

Many, many other opportunities for the farm could be listed, of course.

Conclusion

For my money, give me an agricultural worker who has a moderate background in technical agriculture and related science plus a *lot of ability to recognize genuine farming opportunities and the desire to implement these into the building of a better rural community*—in short, a man with vision and concern for the future welfare of his community and enthusiasm for working at the task.

If we get the feeling that all the opportunities in farming have been exploited, maybe we should do a little traveling, and before long we will come upon a community that has been or is in the process of being "revolutionized." Let us stop here and investigate; talk with the key leader, and we may get some ideas that will work in our own communities. Are we thinking, planning, and operating "big enough"? Or, are we spending most of our time on things that have little effect on the long-range development of farming in our communities? □

Farm Training Program for Emotionally Disturbed and Mentally Retarded Children

A. Z. SOFORENKO, Farm Training Supervisor, Waterford Country School, Quaker Hill, Connecticut

At the Waterford Country School near New London, Connecticut, a supervised farm training program has been introduced for all male students who are physically able to do most farm tasks. Although it is realized that all of the students of the school will never become members of the American farm population, it is felt that the boys are getting a worthwhile experience which will render them more adaptable to whatever their later life holds for them. Very few boys in schools for the emotionally disturbed and mentally retarded actually engage in farm work under the supervision of a technically trained staff as part of a well organized curriculum.

The results have been gratifying. In short periods of time students have become more receptive to further training in this type of program.

At present there are twenty-two students who are engaged in the program. These students vary widely in chronological age (6 to 26), mental age (3 years and up), and Intelligence Quotient (48 to 103). In addition to varying degrees of mental ability, this group includes epileptics, brain damaged children, schizophrenic and emotionally troubled children, and one hydrocephalic child. The program is geared to meet all levels of achievement.

Boys Grouped for Work and Training

Realizing that achievement levels will be different among the boys, carefully planned groups have been formed. This has been done by group conferences between each student's unit leader, resident counselor, and agricultural teacher. The three major factors which are considered in making these groupings are the student's working ability, his readiness to work with others within a group, and his willingness to accept and carry out responsible tasks.

When working at jobs on the farm, the students are carefully placed in work projects that they can achieve. These are "on-the-job" training experiences for them, and as they finish one job level they are placed in another situation either on the same work level or on one slightly higher in difficulty. The boys work alone or together within the groups depending upon the jobs to be done and whether or not they can effectively work with someone else. The latter procedure is valuable in teaching students to strive to be compatible with others so that they may have the opportunity to work with their friends in the group rather than alone.

A sample work training situation at the farm for a group of eight boys has been as follows:

Boy-1—feeding and watering calves
Boy-2—feeding and watering chickens
Boys-3 & 4—sweeping and washing the milking area
Boys-5 & 6—washing milking equipment
Boys-7 & 8—feeding and bedding cows

The boys are spread in the various job areas geographically close enough for proper supervision, but far enough away from each other to feel a sense of "work responsibility." The teacher visits each area and works with the individual boys, with an instructional approach rather than doing the job for them. This affords the student an "on-the-job" training program which has been found a valuable tool for them to use as an aid to help them achieve their own work goals.

A method found useful by the boys in the group farm work is that a brighter boy will work with and help a slower boy. It has been noticed that this type of experience is valuable for boys in the areas of leadership training and of work supervision.

Work and Training Program

Each boy is given a minimum of eight hours per week of supervised farm training. Two hours of this is in actual classroom work, and the remainder in supervised farm work, to apply what has been learned in class. Notebooks are kept by all students and recorded in their own achievement levels. A plan of goals is kept on the class bulletin board so that every boy can watch his growth in the farm training skills. These advancement charts are, of course, on each boy's individual achievement level. On each student's report, achievements (not grades) are recorded.

Included in the training program is a chore training schedule where two boys per week are awakened at 5:30 every morning to assist the farm counselor with the morning chores. All boys go through this part of the program with no exceptions. The results have been very good. The student has an opportunity to put to good use his training of the afternoon sessions, and the counselor has the opportunity to

work more closely with each boy and gradually to help him to help himself.

The advancement chart lists those work experiences which give the boys of all groups goals toward which to work. In part, they are as follows:

1. sweeping a floor
2. washing a floor
3. washing a milk can
4. sterilizing a milk can
5. washing a pastuerizer
6. operating a milking machine
   a. placing the cups
   b. releasing the milk
   c. washing the machine
7. feeding and watering
   a. cows
   b. calves
   c. chickens
   d. pigs
   e. ponies
8. carrying hay
9. raking the barn yard
10. painting
11. greasing equipment
12. cleaning areas
13. recognizing feeds
14. repairing fences
15. farm carpentry
16. candling eggs
17. bedding animals

The list is added to during the seasonal phases of farming: e.g., during the spring–preparing the seedbed, seeding, harrowing, plowing; during the summer and fall–cultivating, harvesting and other seasonal activities such as those a commercial farm would be engaged in during the year.

The items in the advancement chart have not been placed in progression for a definite reason, the reason being that all boys, regardless of group, are expected to achieve all the goals posted, although each boy will work on his own achievement level. For example, in number 13, we would expect a boy of the lowest group (3) to tell the difference between grain and hay, while a boy of the highest group (1) would be expected to recognize the different grains such as rye, wheat, oats, and corn. Each of the above work experiences can be achieved by all the boys in the program. It must be recognized, however, that the achievements will be on different levels. The group 1 boy who can read the scale will feed three pounds of grain to an animal as measured on the scale, while a group 3 boy will feed the grain from a can filled up to a certain white mark. In both cases three pounds are being fed to the animal.

The interest of the students runs high in this program. Without outward complaints, the boys are ready to do THEIR chores at 5:30 each morning. It has been in the author's past experience to know of boys with "normal" abilities who have balked at this requirement.

The milk that the farm group handles is the entire school supply of milk. The boys have a great sense of responsibility for the part that they play in the entire school operation.

Sound teaching principles and well planned visual aids make up the academic portion of the program. Agricultural textbooks are used and various interpretations on the text are made by the teacher-counselor depending on the group in class. Charts and drawings are made by the students and are used as teaching aids in class. Visual aids are used extensively. Such areas as general farm safety, handling and caring for farm animals, and safety with farm animals are stressed. For the brighter group, planned field trips are taken in the general area of the school.

Treat Boys As Normal Human Beings

On *Visitors' Day*, the students take pride in their farm demonstrations and receive encouragement from the adults present. Such public recognition increases the boys' interest in the program.

The basic idea that is followed in this program is to treat these boys as normal boys undergoing normal vocational experiences. With this thought in mind, remarkable progress has been made by the students within the program. In addition, there seems to be some carry-over in general academic attitudes and behavior. The students involved are developing desirable methods of behavior and a definite mastery of vocational agricultural skills, on each boy's own capability level. It is felt that they need a program that will prepare them for adulthood, one which will give them a sense of responsibility toward other living things, a knowledge of doing a worthwhile job, and a feeling of immediate achievement and self-worth. To a satisfying degree, the school feels that the farm training program is accomplishing these goals. □

An experienced teacher discusses the - - -

Problems of Beginning Teachers

RAYMOND C. WALL, Vo-Ag Instructor, River Falls High School, and Supervising Teacher, Wisconsin State College at River Falls

Raymond C. Wall

"I DOUBT that I will ever make a teacher," was the discouraged observation recently made by a student teacher of vocational agriculture to a classmate. In answering the question "Why?" he replied, "I just don't seem to be getting through to them."

What are the problems of beginning teachers? In contacts with student teachers extending over a number of years, it seems to me that the problems which give them most concern as they prepare to teach are: (1) Organization of time and teaching materials, (2) Maintenance of good classroom discipline, and (3) Development of self-confidence.

Why do beginning teachers fear these particular difficulties the most? In the first place, teaching vocational agriculture requires excellent organization of time to allow proper attention to the many details of the work. Equally good organization of teaching materials is necessary to effectively motivate, instruct, and guide the pupils. Secondly, discipline is a word coming back into our vocabularies. School administrators invariably inquire about the ability of a candidate for a teaching position to maintain a good learning situation in the classroom, and, of course, the teacher himself will want to be able to maintain such an atmosphere. In the third place, whether or not the student teacher has believed some of the scare headlines about the "terrible teenagers," he nevertheless tends to discount his own more mature age, training, and experience to the extent that ordinary problems seem to him to be major reverses, and in his discouragement, he begins to doubt not only his ability to teach but the desirability of the profession.

Let us follow a student teacher through some of these experiences. In his "apprenticeship" period of observa-

tion and actual teaching under the guidance of his supervising teacher of vocational agriculture, he has an opportunity to observe the latter teach four classes of high school pupils, conduct young and adult farmer classes which sometimes keep him until well past midnight, supervise and advise the FFA activities, attend numerous meetings, provide on-the-farm instruction, write letters and publicity articles, maintain shop equipment, keep records, make reports, and confer with an endless succession of students and others.

The student teacher finds himself extremely busy just teaching one class, and he wonders if he can organize his time to satisfactorily conduct his own department the following year. During his observation period, he observed no particular discipline problem. His attention may have been called to one or two boys who needed watching, but all seemed reasonably cooperative and interested in learning.

Now that he has been teaching a few days, the boys in his class begin to "try him out." He has learned that problems of this nature are better prevented than controlled, and that it is his responsibility to maintain a cooperative, firm, friendly, and impartial attitude. He may or may not seek the advice of his supervising teacher, but in either event he will want to handle the situation himself. If he weathers this "tryout" period successfully and the class settles down to work under his leadership, he has already improved his self-confidence immeasurably.

But maybe he did not get the cooperation of the class as he wished. Maybe he had difficulty in arousing interest, or even in just getting their attention. Or perhaps he couldn't get "through to them."

What are some possible solutions? Probably these problems cannot be completely solved because we never become perfect teachers; we are always searching for a better way. However, the following seem to offer the most hope to the beginning teacher: (1) His own increasing experience, (2) Supervisory personnel, (3) Teachers in the field, and (4) Research in agricultural education.

It is obvious that the supervising teacher has a great responsibility in encouraging the novice and in guiding him through his first teaching experiences. It is equally obvious that the teacher-training institution should offer him the best possible fund of knowledge and know-how to get him off to a good start.

There is general agreement that his own increasing experience will give the beginning teacher the most help. He becomes progressively adept at budgeting his time and at making his teaching more interesting and effective. As he becomes a more experienced teacher, he finds that discipline is a problem of decreasing importance because he is learning to know and understand his pupils, and he finds he can direct their energies into purposeful activities. He discovers that his self-confidence grows. He learns that it is based on being well prepared, not only from the standpoint of his own basic knowledge and preparation, but in the planning of his daily lessons as well. He learns further that self-confidence grows with enthusiasm, will power, positive thinking, liking people and wanting to work with them, and a sense of accomplishment.

State supervisory personnel are in a good position to help beginning teachers. They are generally former vo-ag teachers themselves and through additional training, experience, and opportunities for observation, are able to note difficulties and offer helpful suggestions. A common problem, however, is that state supervising staffs are frequently so limited in number that the beginning teachers scarcely get acquainted with them to the point that they recognize their visits are to help rather than to "snoopervise."

New teachers can get a great deal of help from teachers in the field. Many are organized into small or county groups and meet regularly to discuss common problems. Such meetings are very worthwhile in helping the teacher with his problems and in enabling him to get a broader picture of the vo-ag program in his area. A teacher can very often pick up ideas by visiting departments of neighboring vo-ag teachers and thus learn how others have handled similar problems.

Finally, considerable help for both beginning and experienced teachers can come through agricultural research, especially of a creative nature. If the premise is accepted that the vo-ag teacher has many duties, and that the dynamic character of agriculture in our time demands more of farmers and consequently of vo-ag teachers, then it follows that studies in effective agricultural education should always be in progress. What is the job of the teacher of vocational agriculture? Are we doing some things in certain ways just because of tradition? What records should be kept? What should we teach?

Vocational agriculture has been a vital force in the development and improvement of agriculture in the past. It can continue to be so in the future as we improve our teachers and our teaching. □

Do you want a year-around adult program?

Evaluation and Planning Discussions May Be Your Answer

DAVID RICE, Professor of Education, Ball State Teachers College

David Rice

WORKERS in vocational education in agriculture have come to realize that perhaps the most effective work we do, vocationally, is the holding of adult and young farmer classes. But do you ever wonder where you can find the time to schedule such classes, or wish for an occasional evening at home with the family during the peak months of activity of the school year? The following suggestions, while they will not provide any more nights in the week, may point the way to breaking some of the bottlenecks in your present schedule.

Traditionally, the teacher who offers both a young farmer and an adult farmer class finds himself with two night class meetings per week during January and February, probably the busiest time of the school year. But there is nothing very sacred about such a tradition. There certainly are other methods of scheduling adult classes.

Remember the discussions which were held at the business session of the threshing ring when the annual ice cream social was held after the

season's threshing was completed? The ring president, or the operator of the threshing machine, led the discussion with a summary of the year's harvest, a few comments about the harvest in preceding years, and a few suggestions for next year's wheat and oats crops. The operator's report included the yields per acre, weight and moisture, straw yield, threshing quantities, rust and smut present in the wheat and oats, and similar factors observed on the farms in the threshing ring which he saw as factors influencing his profit. In the buzz session which followed, farmers discussed which variety had yielded the most, what cultural practices they had followed, and possible improvements to make in the next year's crop. Before the meeting adjourned, the farmers had decided the variety to seed, the seed treatments to use, the most profitable fertilizer rates, and other cultural practices to follow for the next year's crop. Are your adult farmer classes as effective as these threshing ring discussions were?

An examination of the situation might reveal that threshing ring discussions were effective for a number of reasons. First, the discussion was held immediately after the harvest was completed when farmers could easily evaluate their practices for the year and compare their crop results with those of their neighbors! Secondly, the discussion concerned each farmer and his problems, practices, and profits. Another factor contributing to the success of the discussion was that they were held at a time when they could help the farmer make his decisions for the next year. In the present era of combines and mechanized agriculture, it is imperative that our adult farmer classes meet the problems of modern farming. Just as this threshing ring discussion would have failed in January after it was too late to influence decisions about a wheat crop already seeded, adult farmer classes can fail to function as effectively as they might if they do not consider farm problems and farm problem sequence.

Farmers today do not have an opportunity to meet as these farmers did in their threshing ring meetings except by chance meeting at grain elevators, etc., unless an agricultural leader takes the initiative to organize such a program. Why not time your adult farmer classes to coincide with seasonal farm problems which farmers are interested in discussing prior to the time of decision making? Consider the possibilities of a vocational agriculture teacher in a community holding adult farmer classes after the harvest of wheat and oats is completed to discuss the most profitable varieties, fertilizer rates, disease and insect problems, and other cultural practices which were used or were problems during the year. As farmers are enrolled in this course, they could be requested to complete crop data forms similar to the one listed in table 1 before each meeting. A summary of this discussion would logically lead to discussions resulting in effective plans for next year's crops, and might take two or perhaps three evenings to complete. Similar evaluation and planning type meetings could be held after the harvest of corn and soybeans, after farrowing, weaning, and marketing of hogs, or after marketing of other major enterprises in the community was completed. In these meetings, the class members might be influenced to send soil samples to the state soil testing laboratories, and another series of annual meetings could be devoted to interpreting the soil test results and

TABLE 1 — Small Grain Crop Summary

*Please complete this summary at harvest time and return to Vocational Agriculture Teacher**

Soil type in field	
Fertilizer analysis and amount per acre	
Variety grown	
Seeding rate	
Yield per acre	
Test weight per bushel	
Legume stand	
Disease problems	
Weed problems	
Insect problems	
Cost of production per acre	
Returns per acre	
Profit per acre	
Special practices carried out	
Special problems encountered	
Other Comments	

*A pad of report forms should be developed to cover all the types of meetings planned and should be given to each farmer, perhaps in duplicate, as he is enrolled in the course. A post card reminder at harvest time would enhance completed and returned report.

TABLE 2 — Adult Farmer Class Schedule

Season	*Topic for Discussion*
July 29-30	1-2 Meetings on Small Grains (a) Evaluate practices, problems, and results of harvested small grain crop. (b) Make plans for small grain crops for next year.
November 29-30	1-2 Meetings on Corn and Soy Beans (a) Evaluate practices, problems, and results of harvested crops. (b) Make plans for corn and soy bean crop for next year.
Winter	4-6 Meetings—Intensive study of other farm problems which the group wishes to discuss.
February	2-3 Meetings on hog production after farrowing, weaning, and/or marketing hog litters. (a) What were the practices, problems, and results on these litters. (b) Making adjustments and plans for future litters.
March	1-2 Meetings on Fertility Programs (a) Teach how to take samples and complete soil laboratory forms in crop meetings above.* (b) Have soils tested at state soil testing laboratory. (c) Discuss: (1) Soil test laboratory results. (2) Plan fertility program for farms.
Summer	Class tour to observe practices and results on farms.

*Vo-Ag Teacher may want to get an adequate supply of forms and sample boxes, and perhaps assume responsibility of getting samples to the testing laboratory after farmers have taken them, in order to carry out effectively the discussion suggested under point c.

planning the fertility program for the farms of class members. These evaluation and planning meetings based upon annual farm problems and farm production patterns and distributed throughout the year could be supplemented with a short series of classes to study more intensively other farm problems which the group would desire to discuss. A pattern similar to that listed in table 2 might be developed. Each meeting discussion could be summarized in a statement of desirable practices and developed into a check list (see table 3) which could be used to plan effective farm visits to discuss individual farmer plans and problems.

Such an approach to conducting adult farmer classes would tend to meet problems in the sequence in which they exist in modern agriculture and would possibly result in class members who would make increased use of good records, who would be variety conscious, and who would be conscious of production practices which affect returns of the farm annually. An increased interest in the local adult farmer program would possibly evolve and farmers would be able to use the instruction to carry out effectively the appropriate approved practices in proper sequence and combination. The quality of farming programs of class members would thus improve and the teacher would have the satisfaction of knowing that the adult farmer program was a success. This approach would develop a program in which the teacher would be a discussion leader and each farmer would be a resource person to contribute to the discussion.

For a number of years teacher trainers and supervisors have talked about developing a year-round program of adult farmer classes in order to obtain more effective on-the-farm visits and follow-up instruction. The evaluation and planning approach discussed above, supplemented with a short series of meetings to study intensively other farm problems, would make possible an extended program during the year. The work load of the vocational agriculture teacher could be redistributed in line with the principle of work load distribution from farm management with which vocational agriculture teachers are familiar, and in line with the problems of modern farming, and in line with the heavy time load of school activities which evolve during January and February in most high schools today. □

TABLE 3 — Farm Practice Check List[1]

Practice	*Doing This Now*	*Plan to Do This*	*Need More Information*
1. Treat seed wheat			
2. Top-dress wheat nitrogen			
3. Etc.			

[1]See page 39. Biser, L. C., and Murray, R. A., *Successful Young and Adult Farmer Classes*, University of Maryland, Dept. of Agricultural Education, College Park, Maryland, July, 1953, 57 pp.

It Takes People

for developing programs meaningful to all

WARREN G. WEILER, Supervisor, Ohio

Warren G. Weiler

WE can't afford to be self-satisfied with our program, whether it be state or local. Neither can we assume that the state supervisor or the local teacher has the wisdom or the vision to individually chart the course for vocational agriculture or work out the details of operation. It takes the whole team —teachers, local administrators, teacher educators and supervisors as well as advisory committees, to make a program and have it operate effectively.

The idea of more thorough planning received major attention in Ohio during the summer of 1956 when thirty teachers participated in a workshop under the direction of Dr. Webster Tenney and Dr. Ralph Woodin. Emphasis was placed on the development of long-time programs in local chapters. This was followed by a series of district meetings on the same subject, under the leadership of workshop participants and district supervisors.

Ohio's Five-Year Plan for the improvement of vocational agriculture was developed through the combined efforts of staff members and teachers, pooling their ideas for the improvement of the program.

The Ohio staff, early in 1957, decided that our objectives on a state basis could be more clearly identified. We also felt that the ways and means of reaching those objectives might be more definitely determined than we had done in the past. With this in mind, a two-day staff workshop was held in December to develop a five-year plan.

During the staff workshop, the members divided themselves into four committees with the thought of developing a tentative five-year program which would include definite ways and means. This program was to be designed for both staff and teachers. Upon completion, this tentative program, without the goals, was taken to the teachers in district meetings to secure their counsel, additional suggestions and their estimates of goals. It was interesting to find that the teachers frequently set higher goals than the staff members had tentatively selected. As an illustration, in the use of advisory committees, the staff had suggested a goal of "50% of the teachers use over-all advisory committees," whereas the teachers set this goal at 75%. Teachers were also asked for their ideas on how staff members could be of more service

to them.

In developing the plan, the goals and ways and means were grouped into eleven areas. These are as follows:

Relationships with school faculty and administration.
Classroom teaching.
Planning and development of the vocational agriculture program.
Developing farming programs.
Advising the FFA.
Guidance and counseling.
Teaching farm mechanics.
Young and adult farmer programs.
Physical facilities.
Professional improvement.

Following the district meetings, the ideas and goals were assembled by staff committees and the five-year plan was finally accepted by the staff. The members were then divided into five committees to implement the plan. These committees and their responsibilities follow:

Professional—(School relationships, program planning, professional improvement, staff and teacher in-service training, evaluation, travel regulations and staff organization.)

High School—(Classroom and on-farm teaching, guidance and counseling and farming programs, teaching aids, equipment and reference materials.)

Out-of-School—Young and adult farmer and veterans' program.)

Farm Mechanics—(Including physical facilities and equipment.)

FFA and Public Relations—(Including state fair and all judging contests.)

All problems of any consequence are first referred to the proper committees for consideration and a report to the entire staff. The committees meet simultaneously a minimum of six times per year, with extra meetings as the need arises. It is recommended that an individual serve on a particular committee for a maximum of two years.

Several of the committees have teacher advisory committees that meet as the need for additional counsel is apparent. Examples of these are FFA, Teaching Aids, Research, Conservation and Public Relations.

In general, the responsibility of the staff committees during the coming years would seem to be that of:

1. Carrying out the suggested ways and means.
2. Securing the assistance of teachers and others in furthering the activities listed.
3. Effecting further adjustments and refinements of the goals and ways and means.
4. Recommending needed research.
5. Evaluating progress in the various areas of the program.
6. Developing understanding and cooperative action on the part of members of the staff and teachers regarding particular areas of the program.

This method of developing and executing a program takes many people and considerable time, but it is the democratic way of doing it. It might be done more quickly and maybe easier by a small committee. However, we don't feel that a program developed in this manner would mean much to those who did not have a part in making it. We believe that if we have many people involved in making a plan, we will have many people vitally interested in helping to carry it out. This should be a big factor in assuring its effectiveness. □

Another point of view on - - -

Training for Farming and/or Related Occupations

J. C. GREEN, Teacher Education, Stephen F. Austin State College, Texas

J. C. Greene

MANY sincere workers in the field of vocational agricultural education believe that the basic objectives of the Smith - Hughes Act should be modified or restated to meet present day realities. They maintain that the training which, the Act stipulates, is "to meet the needs of persons fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or the farm home," was adequate when the Act was written in 1917 but does not apply to present conditions. These leaders have seen a majority of the former students of vocational agriculture go into occupations related to agriculture rather than into the business of farming. Naturally, they are asking a very logical question, "Why are we not training students of vocational agriculture for the occupations which they are entering, as well as for the business of farming?" This and many other questions are expected from those who are willing to look realistically at the situation. However, there is another group of leaders who are willing to go along with the original purpose of the Act, and believe that necessary adjustments can be made to fulfill present needs. These leaders are just as sincere in their position as those desiring a change. Is it possible that the positions of both groups are justifiable? Perhaps the two groups are not as far apart as they appear to be.

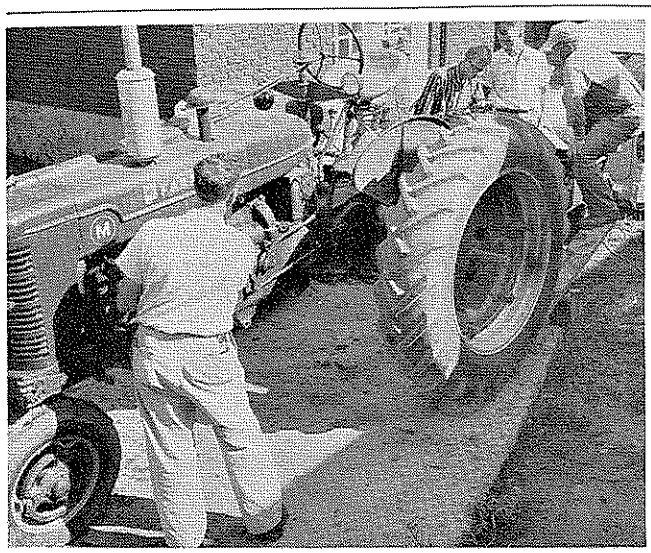
Let us review the events of the past in order to get a much better perspective on the questions concerning the objectives of vocational agriculture. First, a majority of former students of vocational agriculture have been entering occupations related to agriculture. Second, many former students have become successful leaders in related occupations, and secretly the teachers realize that much of the credit rightfully belongs to them. However, teachers realize the futility of publicly presenting such a claim, because their objective was to train students for farming. Let us explore the proposition of how it has been possible for former students of vocational agriculture to reach the pinnacle of success in related occupations. Perhaps the primary reasons are the following: farm boys come to teachers of vocational agriculture with wholesome attitudes toward work and with varying degrees of experiences in accepting responsibility in the performance of certain tasks on the farm; teachers develop in farm boys the quality of self-confidence, add to and improve their farming skills, and develop their students' leadership abilities. The student's supervised farming program has provided the teacher with an opportunity to teach a student the techniques of problem solving, develop judgment and creative abilities, and provide valuable experience

in managing a business. By the time a student leaves high school, he has developed a definite set of moral and social values and has realized he belongs to a social order with positive responsibilities and rewarding privileges. What greater reward could a teacher desire? Do teachers have cause to worry if this transformation took place in a pastoral setting? Should teachers feel cheated if the setting should change, and they must leave it to others to add the finishing touches to masterpieces so carefully initiated?

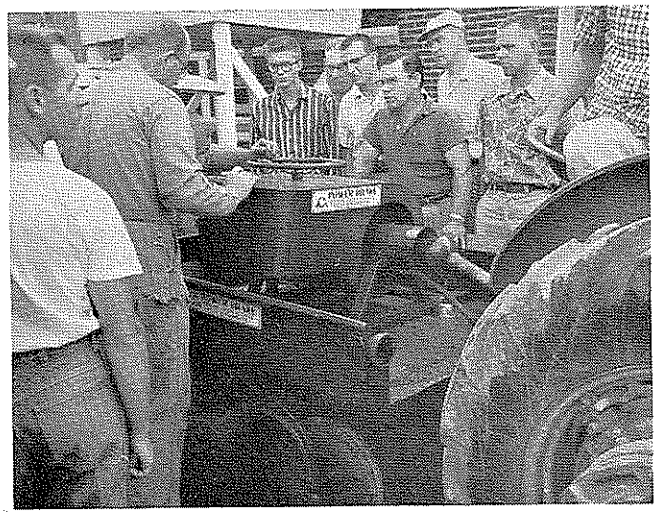
Employers in business and industry have found the products of vocational agriculture classes to have the basic qualities which they so highly desire in employees. Employers are willing to take those students and train them for their organizations (providing the vocational training needed for a particular job). The success of a craftsman's product is measured largely by the consumer's acceptance. Perhaps it would be wise for teachers to concentrate their efforts on maintaining and improving the qualities of the products which consumers desire; not by adding new features, but by diligently striving to improve those qualities which have proven to be basically sound.

Before altering or changing the objectives in vocational agriculture, there are some important questions which should be considered very carefully; i.e., would it be advisable to lay aside a procedure which has been very successful for forty-two years and try an unproven one? How many and in what related occupations would teachers of vocational agriculture be expected to provide functional training? How would teachers know that their students would elect to enter occupations for which they had been trained? If teachers of vocational agriculture attempted to train students in several occupations, would they by necessity neglect some of those basic qualities which have been so highly desired by employers? These and many other questions must be carefully answered before a single objective is altered, or new ones accepted.

Would it be possible for the two groups to reach an understanding on the following principle: "Teachers of vocational agriculture have and will continue to develop within their students a set of basic qualities which are essential to success in farming and related occupations"? Such a principle would be the basis for evaluating the success of the program with high school students. Those who would or must evaluate the success of the high school programs must accept the fact that teachers of vocational agriculture cannot dictate to students in their choices of occupations. If it is necessary to evaluate a teacher's ability to establish persons in the business of farming, then it would be more logical to measure his ability on the percentage of his young farmer classes placed in farming. □



1. Bob Smith checks the carburetor adjustment the boys have made while the boys operate the dynamometer.



2. Ohio agriculture teachers learn to use the dynamometer in a two-day in-service workshop.

An Engineer answers the question - - -

Should Every Vocational Agriculture Department Have a Dynamometer?

CARLTON E. JOHNSON, Agricultural Engineering, Ohio State University

You wouldn't have to have a single farmer complain that his tractor had less power after the tuneup it got in your school shop than before if you used a power take off dynamometer. Nor would you be putting needless parts on the tractor.

Robert Smith and Warren Reed, teachers of vocational agriculture at Payne and Convoy, Paulding County, Ohio, have found their dynamometers essential in their program of teaching tractor maintenance.

Bob puts the farmer's steam cleaned tractor on the dynamometer as soon as it comes into the shop. After warmup, load is applied to the tractor by the p.t.o. brake. A pressure gauge records the force applied, which the students soon learn is a measurement of torque. The p.t.o. speed is recorded for several torque readings and the data placed on the blackboard. Students then calculate horsepower. The horsepower observed is compared to the Nebraska tractor tests to see how the tractor compares with a new one. Both you and Bob, as teachers of vocational agriculture, have a unique opportunity to bring together many

fundamentals of a good scientific education in teaching students how to apply mathematics, physics, chemistry and engineering to agriculture.

Bob's students have used the operator's manuals to develop a check list for adjustments recommended. A team of three boys work on each tractor and record on the check list the jobs done. They thoroughly check the air cleaner including the pre-cleaner and stack and the oil filter. They clean and gap or install new spark plugs. While the spark plugs are out, they check and record compression on each cylinder with the throttle wide open. After squirting some motor oil into each cylinder, the compression is checked again. This test indicates the condition of the valves and rings. They adjust valve clearance and adjust (or replace) the breaker points. They set the ignition timing. They clean and adjust the carburetor and after five class periods are generally ready to retest the tractor on the p.t.o. dynamometer. The valve of each adjustment can easily be shown by a power test after each operation if desired. The boys use the following procedure:

(1) Warm up the tractor to operating temperature.
(2) Check no load p.t.o. speed to see if the governor is adjusted properly.
(3) Load tractor down to rated p.t.o. speed.
(4) Check timing by rotating the distributor a little each way to see changes in speed. Select setting giving highest speed.
(5) Adjust carburetor by closing needle until p.t.o. speed begins to drop. Open until maximum speed is obtained. For best economy, close needle until speed drops about five per cent. During the carburetor setting, the load (torque) remains constant.
(6) Send an extra copy of the shop record home with the tractor, indicating what was done and the power gain.

Warren Reed used his dynamometer on nineteen different tractors owned by members of his adult farmer group this past year. An average of 3.2 horsepower per tractor was found. This gain would mean plowing in one gear higher in the heavy soil of the community. At $70 per horsepower cost of a new tractor, the value of each tractor increased over $200. "I have had many farmers comment favorably about the good performance of their tractors after tuning with the p.t.o. dynamometer. I definitely recommend it as a useful addition to a Vocational Agriculture Farm Shop program," states teacher Reed.

These teachers looked a long time before they found a way they liked to measure tractor power. They didn't want to use the belt dynamometer because of the space required and danger of using it in a school shop. They wanted something that was simple and easy to understand, yet accurate. And, of course, they wanted something they could afford.

The Payne FFA chapter, in cooperation with the school board, bought the power brake which Bob Smith uses. Warren Reed bought the dynamometer he uses in cooperation with a local tractor and implement dealer.

The successes of these teachers in achieving outstanding tractor maintenance programs for high school and adult farmers suggests that every teacher should consider a p.t.o. dynamometer as an important shop tool. It would appear that scientific tractor maintenance is now possible. □

What is the state of the - - -

Professional Training of the Vocational Agriculture Teacher

CLODUS R. SMITH, Teacher Education, University of Maryland

Clodus R. Smith

THE professional training of teachers of vocational agriculture is vital to the success of vocational education in agriculture. Providing adequate professional training for prospective teachers of vocational agriculture is of major concern to state supervisory and teacher training departments.

It is the accepted role of departments of agricultural education to continually produce better trained teachers of vocational agriculture. This is accomplished through continuous examination of the competencies acquired by prospective teachers in training for duties and responsibilities found in the vocational agriculture teacher's job. The educational experiences included in the pre-service professional training of prospective teachers of vocational agriculture should be those which contribute to the development of the knowledge, skills, and attitudes necessary for proficiency in teaching vocational agriculture. To select and provide educational experiences which produce competent teachers of vocational agriculture, teacher trainers need facts and information which will answer the following questions:

1. What educational experiences are needed in the professional preparation of teachers of vocational agriculture?
2. What educational experiences are being provided in the professional training programs for prospective teachers?
3. When are professional experiences in agricultural education provided: in courses before, during, or after the student teaching period; in directed participation; or in combinations?
4. Are the programs of professional preparation consistent in their offerings?

To seek information relative to these questions, a study was conducted to ascertain the professional experiences provided in the agricultural education courses required by the land-grant colleges. The specific purposes were to: (1) ascertain the pre-service professional education experiences provided prospective teachers of vocational agriculture by the agricultural education departments in the land-grant colleges; (2) discover the degree of homogeneity of the professional education experiences provided by the agricultural education departments in the land-grant colleges; and (3) to determine the time when prospective teachers of vocational agriculture were provided professional experiences by the agricultural education departments in the land-grant colleges.

The data were obtained from the 48 land-grant colleges in the continental United States for the 1957-58 school year by the mail survey method. To secure the data, a list of professional experiences in agricultural education deemed essential in

the training of prospective teachers of vocational agriculture was developed from content of agricultural education courses from selected institutions, programs of directed participation, and research studies conducted on related problems. An ad hoc survey instrument was constructed containing 254 professional experiences in agricultural education which were validated by a jury composed of teacher trainers. The instrument was submitted by mail to the head teacher trainer in each of the land-grant colleges.

The findings of the study support the following conclusions:

1. The professional experiences in agricultural education constituted a desirable unit for analyzing the agricultural education courses required for prospective teachers of vocational agriculture.
2. The professional experiences in agricultural education deemed necessary by a jury of teacher trainers, with few exceptions, were included in the training provided by most of the agricultural education departments.
3. The experiences concerned with developing a philosophy, understanding, and appreciation of the vocational agriculture program were provided chiefly in agricultural education courses prior to the student teaching period.
4. The experiences used to develop competency in performing the duties and responsibilities of a teacher of vocational agriculture were provided in directed practice in most institutions.
5. Most of the experiences were provided either in courses prior to the student teaching period or in observation and teaching rather than in courses at the time of or following the student teaching period.
6. The experiences in conducting the young and adult farmer program, conducting placement and follow-up activities, evaluating the vocational agriculture program, and using the advisory council were not provided in as many institutions as were the other experiences in the list.
7. Most of the experiences in the area of developing an understanding of vocational education in agriculture were provided in agricultural education courses prior to the student teaching period.
8. Directed practice provided most of the experiences in developing competency in:
   a. Establishing and maintaining working relationships in the school and community.
   b. Selecting pupils for all-day classes.
   c. Discovering individual and community instructional needs.
   d. Conducting the instructional program.
   e. Keeping records and making reports.
   f. Procuring, organizing, and maintaining facilities.
9. Courses prior to the student teaching period and/or directed practice provided most of the experiences in:
   a. Planning the instructional program.
   b. Advising the FFA chapter.
   c. Developing the farm mechanics phase of the instructional program.
   d. Conducting the young and adult farmer program.
   e. Promoting and publicizing the program.
10. Much of the professional training of prospective teachers of vocational agriculture was provided by the supervising teachers in directed practice.

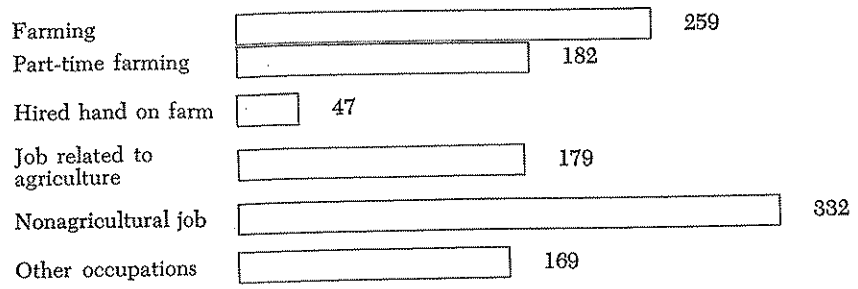
TABLE I — Number of High School Graduates Who Completed Two or More Units in Vocational Agriculture

Year	1951-52	1952-53	1953-54	1954-55	1955-56
Number	497	525	541	579	573
			Total 2,715		

TABLE II — Number of Former Students Presently Residing in School District

Year	1951-52	1952-53	1953-54	1954-55	1955-56
Number	196	219	232	253	260
			Total 1,168		

CHART I



Based on the findings of this study, the following recommendations were made:

1. The professional experiences in agricultural education were confirmed as being essential to the training of prospective teachers of vocational agriculture by a qualified jury of teacher trainers; therefore, all teacher training staffs should consider the possibility of including these experiences in the agricultural education courses required for prospective teachers of vocational agriculture.
2. Professional experiences in agricultural education involving principles and methods used in teaching and conducting programs of vocational agriculture should be included in directed practice as well as in courses provided in the teacher training institution.
3. Teacher trainers should strive to improve the professional training for prospective teachers of vocational agriculture in the following areas: conducting the young and adult farmer program, conducting placement and follow-up activities, evaluating the vocational agriculture program, and using the advisory council.
4. Supervising centers should be selected which have the facilities, instructional materials, and programs for providing the professional experiences in agricultural education in each of the areas of competency to be developed.
5. Frequent evaluation of the professional experiences in agricultural education should be conducted within and among the teacher training institutions.
6. Research should be conducted to determine the educational needs of supervising teachers in preparing them for the duties and responsibilities involved in supervising trainees. □

A young farmer describes the - - -

FFA of Yesterday*

WILLIAM GABLENZ, Little Falls, Minnesota

About a month ago, my wife and I had the pleasure of being invited to the 21st annual banquet of the Little Falls chapter of Future Farmers of America. When I read *21st* on the invitation, it sort of startled me. I remembered attending the very first one when I was a sophomore in high school. I have had the pleasure and opportunity of attending nearly every annual banquet in Little Falls, but for some reason, the time factor didn't catch my thoughts until this year when I read *21st*. Twenty-one seems to be a magic figure for a boy—I know they always look forward to being 21. To me, someone older, 21 also seemed to be a yardstick of time, for I must confess as I sat there that evening my mind kept running back, picking up events and just little things that I had experienced in FFA—the trips to other schools, the trouble another boy and I always had with car sickness, the annual convention in May, how we were always short of money; and that wonderful train trip to Kansas City to the National Convention. Taking a quick glance back, it seems like a very short time—10 or 20 years seems like only weeks or months. As we look way back to what the FFA was and did then, and add each year's advances and achievements, up to the present time; we wonder how it was all done in just 21 years.

At that time the chapters were small and a lot of good sized high schools didn't have an agriculture department. When the teacher organized a chapter, many school officials and other teachers looked at it as a headache, thinking that the time the boys wanted might infringe on other activities in the school. One of the big jobs of the FFA in those days was to sell their program. They had to for its survival. The projects then were small, a few chickens, a garden, an acre of corn, or if you were lucky, a gilt or a calf.

Why was it this way? The main reason was lack of capital to go ahead. The fathers were just starting to breathe again after a very disastrous depression. They had no intention of spending money on some untried new methods. In fact, many fathers tried their best to discourage their boys from farming, knowing there were easier ways to make a living. As I look back on it now, I don't believe the teachers were trying to sell any ideas that were all new and untried. They were only presenting a few small, but necessary, changes at a time. However, because of their age, the boys lacked judgment and went home and told their dads that they were doing things all wrong and they should do it this way. The result, for some, was very discouraging; but those fathers who had enough patience to sit down and talk it over with their sons realized some very sound reasoning was being presented. About that time some bankers and other businessmen with a lot of foresight and a personal desire to give someone help, started helping these boys. Strange as it may seem now, quite often these gentlemen, along with a patient instructor, sat down and brought father and son together on a workable working agreement. Money was loaned, better and larger projects were started and finished with success. True—tough luck sometimes hit, other factors entered—it was not all sunshine; but over all, the "on the farm program of the agriculture and FFA student" was growing.

One thing I remember our agriculture teacher kept emphasizing was to specialize. He would tell us that some day prices would be more or less set, over production would be a big factor and the only way we would realize any margin at all for the products we sold was to specialize in order to cut our fixed costs. He told us by specializing in one thing, it would increase the volume and we would enjoy the advantages of a larger volume in buying and selling. At that time, as well as now, the age old argument was presented—if one thing fails, you would have another to fall back on. Today many are finding that they have another to fall back on, but fixed costs and not enough volume have eaten up all the profits.

When Mr. McIntosh, our instructor, would get us settled down on a project, he would have us write out our long time objective and the things that should be done to obtain that goal. I will never forget the time I wrote out one on dairy. At that time, to obtain a 500# butterfat herd average was about like running a four minute mile. I thought if 500# was good—550# would be better—so with no more reasoning I stated my long time objective: 24 registered Holstein cows with 550# production! At that time 24 cows was considered a large herd. When Mr. McIntosh read this, in spite of his good foresight, he thought it was so far-fetched that he read it to the entire class. I received a great deal of kidding about it. This year I have over 40 registered Holstein cows and I know when the records are completed in January, by our D. H. I. A. supervisor, these cows will produce well over the then unbelievable 550# herd average. This shows how agriculture has advanced these last couple of decades.

It is my personal belief that the FFA has advanced even faster than agriculture itself, for today I know 8th grade boys who are already lining up projects so they will be already to go when they get in high school and FFA.

The FFA, with the well planned and well organized program of work that it has today, is a great incentive for young boys. They know that when they get in FFA, it not only will be educational, but will be a lot of fun. Their parents know it will be clean, constructive guidance and training that will be very useful in adjusting their sons for our complex social life.

It seems as though every year the boys have a little more polish and ability when they conduct their annual banquet. The last few years, several FFA projects have been presented and explained on the program and I marvel at the training these boys get in accurate record keeping. As they go on to become farmers, they will find that accurate records are necessary. They must be studied and analyzed if any progress is to be made.

They will also find when they work with these farm accounts, that today, farming is a business—a very competitive business—and not just "a way of life" as some politicians and dreamers want us to believe.

They will soon be qualified by age to help choose leaders of this country. One of the jobs of the FFA today is to train these boys so they can help make an intelligent choice. So the leaders they choose will be honest, capable men with a sincere desire to

*Talk given at Minnesota FFA Foundation Board meeting, December, 1958.

work for the good of the country, not schemers trying to buy votes with government subsidies.

If farming is going to advance in the future, as it has in the past, farmers with the will to work and the ability to think should not be tied down because they have to carry along the poor and inefficient operator who qualifies for government subsidies because poor management puts him in the low income bracket; or the, so called, laborer who continues to draw unemployment even after he refuses a farm job because he doesn't care for that type of work.

The last couple of years, the FFA has had cow clipping contests out at our farm. This year 40 boys from 10 schools assembled at our farm for a cow judging contest. Many of these boys were left without their instructor as the instructors took other boys to poultry and meat judging contests that were held in Little Falls; not once did one of these boys get out of place or conduct himself other than as a gentleman.

Four years ago last September, Ezra Benson, Sec. of Agriculture, visited our farm. A little advance publicity was let out by the local paper and radio so different groups assembled to see the Secretary. The FFA asked permission to come out, which I was happy to grant as I knew they would be gentlemen regardless of political belief. I wasn't the only one who had that respect for them, for the FFA was the first of the groups that Mr. Benson talked with and he gave them much more time and attention than the group of politicians and political hopefuls that he met.

Perhaps the FFA means more to me than it does to a lot of adult farmers. Probably because I enjoyed it so much and it meant so much to me when I went to school. I found it hard to just leave it, in fact, I still occasionally ask the instructors for advice.

When I went to high school my folks always encouraged me to be a good member. They made many sacrifices that I might take part and attend meetings in the district.

When Phyllis and I were married, she came from a school where they had no Agriculture Department —therefore no FFA. Since then she has gotten acquainted with its program and when our boy was only two years old, she started to express a desire that when he was old enough he would be a member of the Future Farmers of America. But now she has changed—she just takes it for granted that in a few years Gary will be a Future Farmer of America. □

LEADERSHIP TRAINING AND PARLIAMENTARY PROCEDURE FOR F.F.A. by Jarrell D. Gray and J. R. Jackson. Published by Prentice-Hall, Inc., Englewood Cliffs, N. J. 120 pp., 1958. Price $2.25.

This book was written primarily to provide reference material for the leadership training program of the F.F.A. chapter. It is divided into two parts. The first part deals with the organization of the F.F.A. chapter, the duties of the various offices, and the qualifications of members and officers.

The second part presents information on parliamentary procedure. It is simply written and organized for easy understanding. The more common parliamentary practices are illustrated. The book provides for student practice by including parliamentary problems and study questions. It should be a valuable reference to F.F.A. members and advisors.

The authors, Jarrell D. Gray and J. R. Jackson, are staff members of the Department of Vocational Agricultural Education, Agricultural and Mechanical College of Texas.

Rufus W. Beamer
Teacher Trainer
Tennessee

THE STOCKMAN'S HANDBOOK (Second Edition) by M. E. Ensminger. Published by The Interstate Printers and Publishers, Inc., Danville, Illinois, 667 pp., Illustrated. 1959. Price $6.50.

This excellent source book on livestock production and management has been revised after five printings of the first edition which appeared in 1955.

The author has retained the many attractive features of the first edition while making changes to reflect recent scientific and technological advances in livestock production. Numerous and generally appropriate line drawings are included. Extensive use is made of tables to present important basic information. Contextual material seems to cover most of the areas in which a stockman is likely to wish help. In some instances, however, the vocabulary may be too difficult for high school students to read without help. This book should be a highly useful reference for both the teacher and the student when seeking authoritative information on most livestock problems.

Mr. Ensminger is Chairman, Department of Animal Science, State College of Washington.

Raymond Garner
Teacher Trainer
Michigan

FARM TRACTOR MAINTENANCE (Second Edition) by Arlen D. Brown and Ivan Gregg Morrison. Published by Interstate Printers and Publishers, Inc., Danville, Illinois. 215 pp., Illustrated. 1958. Price $3.00.

This new edition of *Farm Tractor Maintenance* maintains the object of the first edition, that of bringing together in one book widely scattered information pertaining to tractor maintenance and care. The contents of the book are divided into 20 chapters. They are: (1) The Meaning of Preventive Maintenance, (2) Modern Farm Tractors, (3) Tractor Fuel, Oils and Greases, (4) General Maintenance, (5) Maintaining the Lubrication System, (6) Maintaining the Air Cleaner and Crankcase Breather, (7) Maintaining the Cooling System, (8) Maintaining the Fuel System, (9) Maintaining the Ignition System, (10) Maintaining the Electrical System, (11) Maintaining the Hydraulic System, (12) Maintaining the Power Transmission System, (13) Maintaining the Chasis, (14) Servicing and Repairing the Engine, (15) General Suggestions for Tractor Operation, (16) Operation in Cold Weather, (17) Safety Precautions, (18) Trouble-Shooting Guide, (19) Storing the Tractor for Long Periods, and (20) Preparing the Tractor for Service after Storage.

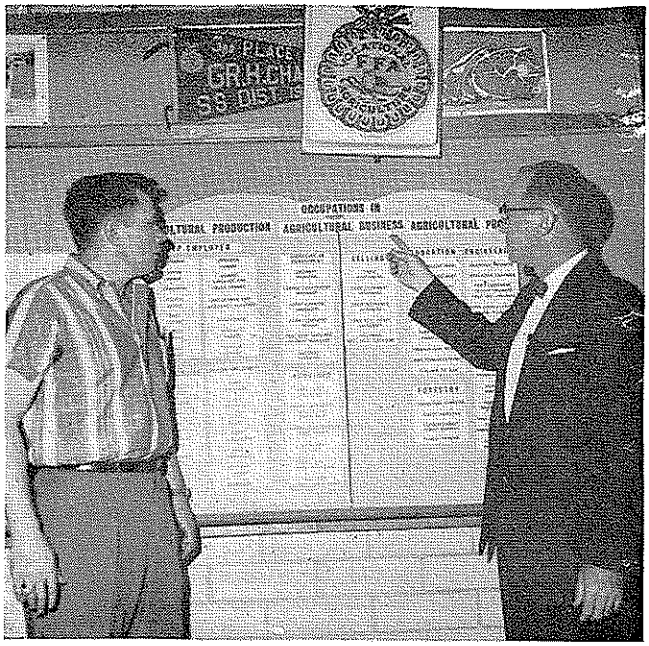
The book is simply written and is accurate in presentation of material. It contains many illustrations and may be easily adapted to classroom or shop use. It includes a minimum of background information.

This book should be a very valuable reference to farmers who operate tractors, to students and teachers in high school and adult classes in vocational agriculture and to others concerned with the operation and maintenance of farm tractors.

The authors are: Arlen D. Brown, Associate Professor of Agricultural Mechanics, Agricultural Engineering Department, Purdue University, and the late Ivan Gregg Morrison, Professor of Agricultural Education, Farm Mechanics Specialist, Purdue University.

Rufus W. Beamer
Teacher Trainer
Tennessee

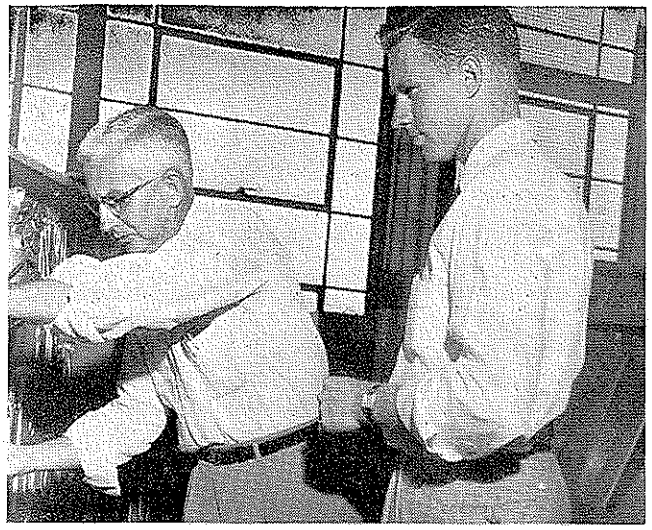
World production of potatoes centers in Europe and the USSR, although this vegetable originated in the Andes, notes a Twentieth Century Fund report.



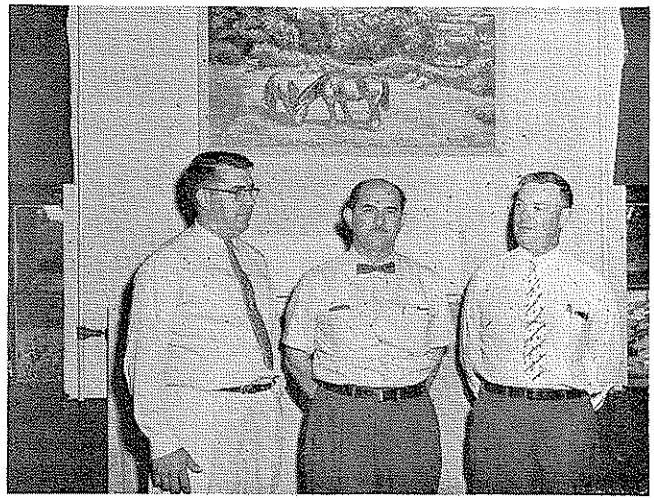
Occupations in agriculture are much more numerous than most people realize. High school career days are a means of acquainting students with opportunities in agriculture. Jack Lacy, vo-ag teacher at Lampasas, Texas, and Dr. Jarrell D. Gray, Department of Agricultural Education at Texas A & M College discuss career opportunities in agriculture at a career day held at Lampasas High School

Passing the gavel—retiring National FFA President H. Downing passes the gavel to the newly elected president, Adin Hester.

State Officers presenting their parents: P. K. Beck, State President and his parents Mr. and Mrs. Arnold Beck; Sam Brewer, 6th Vice President, and his parents Mr. and Mrs. Brewer; Terry McDavid and his parents Mr. and Mrs. McDavid, and Don Clemmons, 3rd Vice President, and his father Mr. Clemmons; after which P. K. presented the mothers with Certificates of Merit, and the fathers with Honorary State Farmer Degrees. (Florida)



Louis Templeton, left, Pinckneyville high school vocational agriculture instructor, advises Southern Illinois University student teacher Harold Bruntjen, Harvel, on tool cabinet maintenance in a vocational agriculture school shop. Templeton is the supervisor for Southern's first two vocational agriculture seniors who are doing student teaching for six weeks at Pinckneyville this term. Pinckneyville's vocational agriculture department is the first to be selected by SIU for this purpose. (S.I.U. Photo)



NOTED EDUCATORS VISITS UNH

The curriculum of the Thompson School is explained by Philip S. Barton (right) Head of the Thompson School here at UNH, to Mr. Lorenzo Garcia (center) Director of Vocational Education in Puerto Rico. Neal D. Andrew, Director of Vocational Agriculture for New Hampshire accompanied the visitor to the campus.

Stories in Pictures

The Annual Luncheon of the Ohio Vocational Agriculture Teachers' Association has been one of the features of this meeting each year. In this picture are shown some of the participants in last year's annual Young Farmer Conference.