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The Cover
A most important job in the heart of the corn belt is evaluating or calibrating the corn planter. Here Avery Gray, Vo-Ag teacher near Lafayette, Indiana teaches this basic skill to his high school students. Meantime the community, and the school evaluate Avery's work and his program. This kind of evaluation is a concern of everyone in Agricultural Education. It can be a potent means of improving programs at local, state and national levels.
Guest Editorial

Human Betterment—Best Basis For Evaluation

G. R. COCHRAN, State Supervisor, St. Paul, Minn.

"Dad, our new agriculture teacher really is interested in what I am doing. He is coming out next week to go over some of my plans with you and me." Without realizing it this boy was making an evaluation of his teacher, his objectives and his program. The teacher's interest in the student as an individual, in his situation, and his aspirations are fundamental to all good agricultural teaching. Might not the comment of this boy serve as a starting point for the consideration of evaluation of local programs of agricultural education?

What do we want to accomplish? What are our objectives? Before a program, or an individual's activities, can be realistically and fairly evaluated, purposes, goals or objectives must be determined. These should be clearly understood and clearly stated. Generally speaking in evaluating programs, if we have one, or a few very specific goals or objectives we are more likely to be realistic in the judgments to be made.

The starting point of evaluation of a program of agricultural education must be the student and his attitude, whether he be high school or adult farmer. How can he be motivated, what changes occur as a result of instruction?

When we have the opportunity to talk to the school principal, the superintendent or others do we mainly speak of the shop projects completed, the winning of the trophy at the State FFA Judging Contest, or the number enrolled in our adult farmer classes? At the end of the school year when we take time to review the past year's work do we think mainly of the projects, winnings and publicity, the numbers in class? Or is our real accomplishment in the horizons we have helped broaden, the encouragement given to the boy who might have dropped out of school but for us? Is it in the closer relationship between the FFA boys in our chapter and their parents, out of which grew a working relationship, or the farm family who has a better living as a result of being in our adult class? Are these not valid criteria by which our accomplishments may be measured?

Can an evaluation be made on the subjective basis outlined above? While some, no doubt, may disagree experience would indicate that such an evaluation can be made. The student respect for the teacher, a businesslike attitude in class, pride in accomplishment, the ability of students to work together, consideration

From the Editor's Desk

A New Thrust for Evaluation

Next to the weather, evaluation has been the most talked about subject in Agricultural Education for the past 30 years—and also like the weather something we have done the least about. There are signs that there will be more action if not less talk in this area in the next few years.

The first indication of progress comes from reports of state supervisors who in several states have honest to goodness working plans in operation for assisting their teachers in evaluating local programs. The best of these evaluative procedures, now in use, include the definition of objectives, development of criteria, involvement of school and community representatives and finally the preparation of concise findings which serve as a guide to further program development and refinement.

A second indicator of a new interest in evaluation is written into the National Vocational Education Act of 1963. The first paragraph of the Act provides a basis for evaluation when it states . . . "So that persons of all ages in all communities . . . will have ready access to vocational training which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests and ability to benefit from such training."

Other sections of the Act state that federal funds may be used by the states . . . "including periodic evaluation of state and local vocational education programs. . . ." State plans must provide for periodic evaluations and advisory committees are to be used in developing and evaluating new programs at both state and local levels. The Act also establishes a national advisory committee on vocational education and provides for a first review of vocational education programs by January 1, 1968.

We hope that the evaluation which is encouraged by this act will have as its major objective the stimulation of local programs through self-examination and study. If this purpose is to be accomplished state staffs and teachers must assume certain responsibilities. State staffs need to develop workable plans and procedures for conducting local evaluations. Concise and penetrating instruments must be devised which will provide measures of both quantity and quality. Communication with school administrators and community leaders regarding proposed evaluations must be developed and maintained.

The teacher's responsibility for evaluation becomes one of directing school and community leaders in a thorough self-study of their programs, with the aim of making desirable changes and adjustments.
Human Betterment . . .

for the opinions of others and enthusiasm are a few subjective measures or evaluation that must be considered in any evaluation of an agricultural program.

Who evaluates our programs? All those we work with. Necessari-ly school administrators, principals, boards of education, supervisors and others must on occasion evaluate our program. Sometimes the evaluation may be thorough, sometimes, unfortunately, on a superficial basis. However, the basis for real effective evaluation starts with the question “How am I doing?” This summer spend some time in asking, and frankly answering, the question “What am I really doing for my students?” Your honest answer to this question will be the best possible evaluation that can be made of our local programs of agricultural education.

LETTERS

Sir:

Richard L. Sparrow, Teacher of Vocational Agriculture, Manchester High School, North Manchester, Indiana, has done a pioneer piece of work in teaching about farm related occupations as reported in the article, “Exploring Farm Related Occupations.”

The portion of the article describing “A Three-Phase Program” is quite clear and concise and could well serve as a pattern for other teachers of vocational agriculture in the development of instruction for the purpose of exploring farm related occupations. It is obvious that many of the details in the development and the administration of such a program have not been described, however, this is understandable since maga-zine space would not permit such details. At the same time, it also is understandable that local conditions would require adaptations in many of these details and could be handled in a manner as determined by the local teacher of vocational agriculture.

Mr. Sparrow also points out the need for an expanded program of studies to accommodate the needs as determined, as well as the possibility of incorporating the observational program in the junior year in high school which has the potential of being even more effective, since it would permit an accommodating course of study during the senior year.

Sincerely,

WENRO SMITH
Saltsburg, N. Y.

Sir:

We should all be appreciative of Professor Thompson’s article entitled “Personal Values of Vocational Agriculture

A New Thrust . . .

If within the next five years a thorough going evaluation were made of every local program of vocational agriculture we could, not only identify progress made through the National Vocational Education Act of 1963, but more importantly, we could expect to strengthen and improve the program of every department of vocational agriculture in the nation.

Ralph J. Woodin

Students and Their Teachers,” because it has re-emphasized the responsibility that persons in our culture are changing from traditional to emergent type values. Would another generation in the past, if tested similarly, show the same type of change? It may be that the factor which actually is in effect is the usual adolescent psychological phenomenon wherein the “new generation tends to look at the “old” generation as “old fogies”—until later when they become the “old” generation. If this is the factor concerned, the data which show differences between the traditional values of the teachers and the emergent values of the students and between the freshmen and the seniors might merely be associated with growth through added experience, and adjustment to the changes in our culture.

At any rate, the article has “highlighted” our responsibility concerning our students’ values and we should renew our personal dedication to serve our students through example and precept.

Sincerely yours,

E. E. CLARIN
Lafayette, Indiana

Nelson Named Washington’s Teacher of the Year

Arthur Nelson, vocational agriculture instructor at Castle Rock High School, has been selected as Washington’s Teacher of the Year for 1964 and will be a candidate for the honor of national teacher of the year award. Nelson has taught vocational agriculture at Castle Rock continuously since 1946. Herbert Hansen, Superintendent of Schools at Castle Rock, says of him: “Nelson has a superior ability to impart knowledge. He nourishes every vestige of learning ability and this interest continues after the student leaves school. Graduates of all his classes for many years

Arthur Nelson, Washington’s Teacher of the Year.

back return for his advice and counsel.”

He was the 1962-63 President of the Washington Vocational Agriculture Teachers Association and currently is President of the Washington Vocational Association.

After receiving his degree in agriculture from Washington State University, he served as a commissioned officer in the U. S. Army during World War II. He has been teaching vocational agriculture at Castle Rock for the past 18 years. Twenty-two boys have won the State Farmer Degree, one the American Farmer Degree, one was named Star State Farmer, one was awarded Star Dairy Farmer. Chapter honors include national superior awards from 1955 through 1963 and a gold award in farm safety each year from 1958 through 1963, and the Governor’s Award in 1963.

Bert Brown, Director of Agricultural Education, describes Nelson as a master teacher with an outstanding ability to create in his students a desire to excel in both curricular and leadership activities.

When You Move . . .

To avoid missing issues of The Agricultural Education Magazine be sure to notify the magazine of any change in address. Send a card to The Agricultural Education Magazine, Interstate Printing and Publishing Company, Danville, Illinois, giving your new mailing address.
Don’t Wait too Long Before Evaluating

HAROLD SHOAF, Supervisor, State Division of Agricultural Education, Topeka, Kansas

“...We are considering closing our vocational agriculture department...” These welcome words can chill the blood of most district supervisors. Why are there only 15 boys enrolled in vocational agriculture in this high school of 60 farm boys? The climax comes when the administrator states, “Unless there is an improvement in our vocational agriculture department, we anticipate its closing.” In cases of this kind, the evaluation has already been made by the local administrator and the majority of the board.

After the supervisor has recovered from the initial shock, discussion of the facts concerning the vocational agriculture department are obtained with opinions on how to solve the problem. At this date, it is too late for a teacher to evaluate himself or his problems. He needs help, and he needs it immediately. Before this critical stage is reached, a teacher-administrator-supervisor conference can possibly solve some of the problems by joint meeting. When a department has reached this crucial stage, the last hope of recovery rests with an evaluation team composed of a teacher trainer, state supervisor, and the district supervisor. If the administrator feels that the evaluation can be of assistance to this school, a date is set with the agreement of both the administrator and teacher.

Use of the Evaluation Team

On the day of the evaluation, the evaluation team starts with a conference with the school administrator. School and district characteristics are discussed to find out the size of enrollment, size of farms, and general information concerning the district. The evaluators spend the day at the school analyzing classroom teaching, farm mechanics, FFA, farming programs, enrollment, time schedules, courses of study, out-of-school programs, records and reports, organization and administration, farm supervision, and physical facilities. The team likewise spends time with the vocational agriculture teacher obtaining his views as to the solution of the problems of the department. After collecting the information, the evaluation team spends one hour writing up their notes to present to the administrators, vocational agriculture teacher, and members of the school board. The teacher, administrators, board members, and evaluation team meet to hear the recommendations made by the evaluating team. Opportunity is given for the teacher, administrators, and board members to express their views concerning the points in the evaluation. Recommendations are made clear by the evaluation team. At a later date, the evaluation is sent in writing to the administrators and the vocational agriculture teacher.

20 Evaluations Since 1959

Twenty departments have been evaluated in Kansas from 1959-1963. Six departments were evaluated for student teaching centers. Fourteen departments were evaluated at the request of local communities which felt the department was not operating properly. Seven of the departments requesting an evaluation were considered definitely improved. It was questionable whether four of the departments which requested evaluations improved to any degree. Three of the fourteen departments evaluated closed. It is not known the correlation between the evaluation and the vocational agriculture department’s closing.

Of the eleven schools requesting evaluations which continued to serve students interested in agriculture there was an increase in enrollment of 10.6%. One of the merits of the evaluation was a better understanding by the administrators and the vocational agriculture instructor concerning the operation of a successful vocational agriculture department. After evaluations, a definite improvement was noticed by supervisors in preparation, motivation, and classroom teaching. Better housekeeping was noticed in preparation for the

(Continued on page 275)
Use Local People to Review Local Programs

R. J. DENNY and J. R. CLARY, Supervision, North Carolina

The principle objective in review and evaluation of local programs of agricultural education should be to stimulate local interest, initiative, and responsibilities for program improvement. More specifically, the objective is to determine if the program of agricultural education is designed to fit the community and the needs of the people whom it is to serve. To accomplish this objective requires the participation of local professional leaders in education and agriculture, lay people who are concerned with the program, and consultants provided by the state staff of supervisors. This group, working within the framework of Federal and State policies, share in designing programs to fit the communities in which local programs function and the educational needs of the people concerned.

Program reviews may be considered the second step in program planning or replanning. Once a program is established in a community, a review of the program is one way of calling the attention of local people to adjustments to be made if the community is to receive the greatest benefit from an agricultural education program. Here the matter of program review becomes complex in that it becomes necessary to acquaint teachers, administrators, boards of education, lay citizens and others with policies, objectives, and standards when it is likely that there is little incentive on the part of local people to evaluate a program. In many instances they know only one school and have no standards by which to appraise their own school.

One reason that more progress has not been made in program reviews is that of finding sufficient time to do the job. An adequate job of evaluation requires time to develop procedures, arrange for conferences which involve busy people, and introduce new practices. Another reason that more progress has not been made is that a great amount of time is required to determine the real outcomes. Instead of conducting program reviews for the purpose of improving programs we have used tests, rating scales, project earnings, and the number of students entering farming as a vocation to determine department ratings. None of these is very significant in determining how well an agricultural education program is tailored to fit a particular community, nor does it involve people rather than the teacher and students.

Steps in Conducting a Program Review

A procedure for reviewing programs which involves as many local people as possible seems to be more readily acceptable by both the review committee and those who are concerned with the program at the local level. This procedure gives local people an opportunity to describe the existing program in terms of: local policy, program planning, teaching, department management, professional improvement, research and development, public information, administration and supervision, and program evaluation.

The study reports for all the schools in an administrative unit are submitted to the superintendent’s office where statements of policy and a description of how policies are made is attached. This information is forwarded to the state supervisor of vocational agriculture who in turn
selects a review committee. The first job of this committee is to review the study reports for each of the schools and decide what additional information is needed, the items needing clarification, and specific responsibilities of the review committee when visiting the administrative unit.

Arrangements are made with the superintendent for a visit by the review committee for observation of the teaching-learning setting and any necessary clarification of the study report.

After the visit, the review committee again meets to draw up specific recommendations for improving programs of agricultural education in the administrative unit. Recommendations for each school should be made in separate sections of the review committee's report. These are to be sent to the superintendent with a copy to the district supervisor. This makes it possible for the district supervisor to assist the superintendent in following the committee's recommendations.

One advantage of following such a plan of program review is that local communities in which programs of agricultural education function have a greater share in designing and evaluating programs. This is likely to give greater assurance of efficiency in operation. Subsequent program reviews will then become less tedious.

This procedure is to be preferred over an evaluation which is designed to follow a check list or rating which may place a stigma upon a program which may have a lasting effect. Such a rating would determine if minimum standards for reimbursing programs under the Vocational Education Acts are being met, but would not determine what should be done to improve in areas of weakness.

Periodic reviews of agricultural education programs should be conducted if programs are to keep abreast of the changes in the school community.

A Guide for Self-Study

Information gathered in the self-study on the following areas is compiled and one copy forwarded to the State Supervisor of Vocational Agriculture. Item I should be compiled at the administrative unit level. Items II through X should be compiled for each school by its study committee. The report from each school plus the unit-wide report on Item I constitutes the administrative unit report.

I. Policy and Policy Making

A. Include a summary of all policies developed at the administrative unit level which affect programs of agricultural education in some special way.

B. Present a typical example of how a policy for agricultural education is developed.

C. Describe plans for evaluating existing policy.

II. Planning Programs of Agricultural Education

A. List the major objectives of the over-all program of agricultural education.

B. Describe procedures used for determining who should participate in the program, what should be taught, and how the teaching should be done.

C. Describe the general situation in the school community. Attention should be given to communities, organizations, description of the population, and major trends occurring in the area.

D. Describe the agricultural situation in the school area. Agricultural occupational tenure, and enterprise patterns should be noted.

E. Describe the educational situation in the community in terms of status of education and educational attitudes of people. Include charts and outlines showing the present high school and adult agricultural education programs. Courses and course outlines should be included.

F. Describe any projected programs and plans for program improvement.

III. Teaching

A. List objectives of the instructional program for high school students.

B. Describe the instructional program for high school and adults.

C. Describe planning and scheduling procedures by the staff which provide for learning experiences for adults and high school students.

D. Describe the relationship between instruction and educational needs and interests of students.

E. Describe how audio-visual aids, field trips, demonstrations, and other instructional aids are used in providing learning experiences.

F. Describe how the teacher is following up instruction in the field and the amount of time provided for this. Describe supervised practice programs of students and adults.

IV. Department Management

A. 1. Describe the instructional facilities including size of classroom, size of agricultural mechanics shop, amount and quality of classroom equipment, amount and quality of agricultural mechanics equipment and tools, land laboratories, and other teaching—learning facilities.

2. Describe housekeeping practices in the classroom and laboratory facilities.

B. Describe the quality and amount of instructional materials and equipment.

C. Explain the local plan for replacing materials, tools, and equipment used for instructional purposes. Include amount of funds budgeted yearly for instructional purposes.

V. Professional Improvement

A. Describe activities of the teacher of agriculture in professional advancement, including participation in educational organizations.

B. Describe activities of the teacher of agriculture in inservice education through formal study and other professional activity.

VI. Research and Development

A. Describe research activities conducted which were designed to determine problem areas affecting vocational agriculture.

VII. Public Information

(Continued on page 273)
Evaluating Instructional Programs

PAUL E. HEMP, Teacher Education, University of Illinois

Evaluation of instructional programs like death and taxes is inevitable. Each year departments of vocational agriculture are closed and each year other departments are maintained or expanded. The public evaluates vocational agriculture by supporting or not supporting local programs. Parents evaluate local programs by advising their sons to enroll or not to enroll in vocational agriculture.

Unfortunately, many persons have not evaluated instructional programs in terms of acceptable educational objectives. Others have considered the objectives too narrow or inappropriate for the times. But much of the blame for criticism of programs of vocational agriculture must be borne by the professionals working in the field of agricultural education. We have failed to do a sound job of evaluating instructional programs. In some cases we have evaluated those results which are clearly visible and ignored important educational outcomes which are difficult to see and measure. We have not clearly identified our educational objectives and made those objectives known to the general public. We have failed to publicize adequately the results of evaluation. Many of our evaluative efforts have not been scientific, systematic, and continuous. Often we do not have the necessary data on our students to evaluate their progress in vocational agriculture. Progressive farmers often have more data on their livestock than we have on our students. Finally, the evaluative process has not made its greatest contribution because we have failed to involve lay citizens effectively in the systematic, scientific evaluation of our programs.

Kinds of Data Needed

We need a complete beginning inventory on each student who is entering our educational programs or classes. This inventory should include a profile of agricultural experiences indicating the student's level of achievement in agricultural skills and knowledges. We need to know where each student is with respect to choosing an occupation. We need to know his background and experiences in the field of leadership. We need to know the social and economic forces which are acting on him at home or in other situations. We must know the aptitudes and interests of students in various fields. In short, the student data required for an effective evaluation of our teaching efforts must be as complete and comprehensive as the data a progressive farmer would keep on his livestock or crop enterprises. Before we are able to secure student data of certain types, accurate measuring instruments will have to be developed.

Timing is Important

It has been said many times that evaluation is a continuous process. This statement should not encourage us to rely entirely on a cursory, haphazard type of observation. Sound evaluation must be done consciously and deliberately using all the empirical evidence that can be collected. Data must be collected at regular intervals, and day-to-day observations must be recorded to supplement the information obtained during specific evaluation periods. Certainly, any minimal program of evaluation must include "readings" of those factors being evaluated at the beginning of the school year, at the close of the school year and at regular intervals in between. The question of when to evaluate our teaching efforts depends partly on what we are evaluating. We should expect immediate progress from students learning facts or simple mental skills but only long-term results may be expected from our efforts to change attitudes and levels of aspiration.

Psychological Barriers

One prevalent idea that has held evaluation back is the notion that evaluation is something you do to students. We shouldn't be surprised to learn that students and parents consider evaluation the prerogative of
the teacher rather than a joint effort involving teacher, student, and parents. One way we can counteract this barrier is to involve students in the evaluation process and make parents aware of how students are evaluated and what the results really mean. An equally important reason for involving students in evaluation is that we need to teach self-evaluation. The process of establishing objectives, planning ways and means of reaching these objectives, and ultimately evaluating progress is a basic procedure which is applicable to almost any type of human endeavor.

Another barrier to improved evaluation of instruction is our inability to identify important educational objectives and to state them in simple, operational terms. Some people judge an adult class a huge success if 100 people turn out for a meeting. An FFA activity is judged successful because it promotes good public relations. A learning activity is scheduled because students enjoy doing it. A department is singled out for special mention because 80% of its graduates have gone into farming. There is nothing wrong with using these criteria to evaluate instruction so long as we recognize they do not relate directly to important educational objectives. The evaluation of animals at a fair should not serve as an substitute for the evaluation of boys. The real danger in paying attention to farming programs, FFA activities, and promotional activities is that we are likely to ignore the important changes in human behavior. In order to pass judgment on learning outcomes we must examine the objectives originally established.

A third barrier to sound evaluation of instructional program is the traditional report card and the antiquated grading system which is used to arrive at numerical or letter grades for a course. Evaluation should go beyond the mere assignment of grades. We should report to our students and their parents the progress made by individuals in accomplishing the educational objectives and goals. In such a progress report broad, general educational objectives might be broken down into specific, action-type objectives and evidence presented showing how far a student has progressed along a line identified as an educational objective or goal. Such a report could indicate not only how far a student had come since the first day of enrollment but also where he presently stood with respect to his peers or other norm groups.

The Professional’s Role

We have kept the evaluative process and the real results of evaluation hidden well enough so that the general public has evaluated programs on their own, using their own crude procedures, and assuming their own objectives. Professionals have a right and a responsibility to work with lay groups in identifying appropriate objectives and providing sound ways and means for evaluating progress towards these objectives. Teachers who have done a good job have no cause to fear legitimate evaluation. Throughout the nation vocational agriculture teaching has been excellent enough to serve as examples for teachers in other areas to follow. If we subject our efforts to a more thorough, complete evaluation the results will show up better and be visible to a larger portion of the general public.

Use Local People
(Continued from page 271)

A. Describe how the public is being kept informed as to the work and major achievements of the vocational agriculture departments.

B. Describe the methods used in keeping the local school administrator informed of the progress and problems in the local program of vocational agriculture.

VIII. Administration and Supervision

A. Describe the role of the local school administrator in planning and evaluating programs of vocational agriculture.

B. What portion of the school day is set aside for supervision and working with organized adult groups? How is this time being used?

C. Describe how lay citizens are being used in planning and evaluating programs of vocational agriculture.

IX. Program Evaluation

A. Describe the plans and procedures that have been followed in periodic program evaluation involving local administrators, advisory committees, and others concerned with the program.

X. Consultant Services

A. Describe how consultant services have been utilized in planning and implementing agricultural education programs.

An Example of a Local Report

An Example of a Section of a Self-Study Report Is Given Below.

II. C. We have six distinct communities in our school community. Buckhorn was a feeder school until 1963. Bullocks School, Sims School, Lamms School, and Roney Williamson's Cross Road and Rock Ridge. Rock Ridge is the center of the wheel. The population is about 98% rural. We have one village in the District: Sims, with a population of 207; Old Field Township, with a population of 1,117; Springhill Township, with a population of 2,866; and Taylors Township, with a population of 1,993. The Rock Ridge Community comprises all of Old Field's Township, half of Springhill Township, and about one-fifth of Taylor's Township. The major trends in the area taking place are as follows:

1. The farms are becoming less in number but larger
2. People are buying other farms and combining to make it more profitable to operate with the modern farm machinery

Teachers Objectives for Adult Farmers Classes

1. Help change or improve certain farm abilities in the community.
2. Make new friendships and thus increase the enrollment in the all-day department.
3. Lower the per capita cost for the agriculture instruction.
4. Help create and maintain desirable attitudes between the farmers and the Public School.
5. Afford an opportunity for the teacher of Vocational Agriculture to render educational services in his community.
Since the beginning of vocational education in agriculture, approximately 400 studies have been made for the purpose of developing criteria and appraising programs of vocational agriculture. A great deal of attention has been given to the development of criteria for, and to the appraisal of, programs by teachers, supervisors, and students. The involvement of high-school principals in the development of criteria and in the appraisal of programs has in most cases been ignored.

A study completed recently by the writer gave high-school principals in Tennessee an opportunity to develop criteria for appraisal and to appraise their local programs of vocational agriculture. The study also determined the importance high school principals in Tennessee attached to the major areas of a total program of vocational agriculture.

Developing Criteria

The criteria were developed in cooperation with a jury of 69 educators in Tennessee. The jury was composed of 30 teachers of agriculture, 29 principals of schools with departments of vocational agriculture, 6 supervisors of agricultural education, and four teacher trainers. Members of the jury were asked to judge each criterion, in a list of proposed criteria, by answering the following questions: (1) Is the meaning of the criterion clear? (2) Is the criterion sound? (3) Will principals be able to evaluate the phase of the program indicated by the criterion?

When 20 per cent or more of the jury members answered one or more of the three questions on a criterion “no,” the criterion was changed or deleted. The revised set of criteria became the evaluative instrument used in making the appraisal.

Appraising Programs

The evaluative instrument was mailed to all 289 high-school principals in Tennessee who administrated departments of vocational agriculture in their schools. One hundred and eighty-seven principals, or 64.7 per cent, returned usable instruments. The principals were asked to rate 123 phases of their programs, listed under ten major areas of a total program of vocational agriculture, as superior, good, average, fair, or poor. For tabulating, the ratings were converted to numerical scores (5 for superior, 4 for good, 3 for average, 2 for fair, and 1 for poor), and the mean rating for each phase and each area was calculated.

Table 1 shows the principals’ appraisals of the ten major areas of their programs of vocational agriculture. The principals felt that the strongest areas of their programs were the relation of the teacher of vocational agriculture to the total school program, the organization and planning of the program of vocational agriculture, and the Future Farmers of America organization. They indicated that the weakest area was the adult-farmer program, followed close-
ly by the young-farmer program.

Further appraisal of the programs by this group of 187 principals shows that, 41 per cent of the teachers taught other high-school subjects in addition to vocational agriculture, 87 per cent of the departments did not conduct a young-farmer program, and 36 per cent of the departments did not conduct an adult-farmer program.

When the principals' ratings were studied in the light of certain selected factors, it was found that the ratings were higher for the departments in which: (1) instruction was provided for young and adult farmers, (2) teachers devoted full time to teaching vocational agriculture, (3) vocational agriculture was an elective high-school subject, (4) less than 20 per cent of the students lived on farms of 30 acres or less, and (5) more than 79 per cent of the students completed supervised farming programs. These judgments seem to indicate areas of the program nearest ready for improvement.

### Importance of a Total Program

Table 2 shows the degree of importance that the principals attached to each of the ten major areas of a total program of vocational agriculture. The principals felt that all ten areas were important. They regarded the relation of teacher of agriculture to the total school program as the most important area, and the young-farmer program they rated as the least important.

<table>
<thead>
<tr>
<th>Areas of Program</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relation of the teacher of agriculture to the total school program</td>
<td>4.33</td>
</tr>
<tr>
<td>Organization and planning of the program of vocational agriculture</td>
<td>4.31</td>
</tr>
<tr>
<td>Providing the instruction</td>
<td>4.32</td>
</tr>
<tr>
<td>Farming programs of high-school students</td>
<td>4.03</td>
</tr>
<tr>
<td>Future Farmers of America</td>
<td>4.13</td>
</tr>
<tr>
<td>Young-farmer program</td>
<td>3.44</td>
</tr>
<tr>
<td>Adult-farmer program</td>
<td>3.49</td>
</tr>
<tr>
<td>Farm mechanics program</td>
<td>3.99</td>
</tr>
<tr>
<td>Physical facilities for vocational agriculture</td>
<td>4.24</td>
</tr>
<tr>
<td>Public relations program</td>
<td>4.22</td>
</tr>
</tbody>
</table>

**Implications and Applications**

The judgments of the 187 principals point some directions well worth special consideration for improving an on-going program in vocational agriculture. Here are a few of the more significant implications and applications:

1. Each principal and teacher, with the help of the supervisor, should study the amount of time required to provide an effective program of vocational agriculture not only for those enrolled in the high school, but for others who seek such instruction.

2. Teachers should acquaint the principals with the possibilities in young- and adult-farmer programs.

3. Teachers and students should use evaluation more extensively. Evaluation should be used in formulating teaching and learning objectives, planning instructional activities, and selecting instructional materials.

4. Teachers and principals, should study the farming and other agricultural opportunities. Local programs of vocational agriculture should then be developed that will prepare young men for the farm and nonfarm agricultural occupations in that or some other community.

5. Teachers and principals can and should emphasize enrolling boys who live on farms large enough to develop satisfactory farming programs or who can be placed for satisfactory farm and other agriculture experience.

6. Physical facilities needed for vocational agriculture should be provided. Only with good physical facilities can the teacher of agriculture achieve maximum results.

7. A public relations program which establishes confidence can be effective in obtaining community support for vocational agriculture.

8. In-service activities for teachers should be implemented by the State Division of Vocational Education, in cooperation with local boards of education. In-service programs are especially needed in young- and adult-farmer education, farm mechanics, and public relations.

9. The fact that a number of principals indicated they were not in a position to appraise some of the areas and phases of their programs of vocational agriculture points to a need and possibly a readiness for in-service training for high-school principals.

10. Principals should insist on the use of an evaluative instrument each school year to appraise their local programs. They could then use the results to guide the understanding and implementation of a successful program of vocational agriculture.

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**Don't Wait Too Long**

(Continued from page 209)

evaluation team. None of the fourteen schools requesting evaluations had Young Farmer classes. Four of the fourteen schools carried Adult classes. Of the three schools which closed, one had an Adult class, but none had Young Farmer classes. Six of the eleven schools which requested an evaluation, that stayed open, now carry Adult classes. Two of the eleven schools carry Young Farmer and...
The Public Supports Vocational Agriculture
Here Are the Facts!

GILBERT S. GUILER, Teacher Education, The Ohio State University

Some people outside of the profession, and some within, would lead us to believe that vocational agriculture is on its way out. One school administrator recently remarked that vocational agriculture enrollment across the nation is diminishing and that fewer boys will be interested in the program each year. Is this true? What facts do we have in order to properly inform the public?

Many important facts concerning vocational education including vocational agriculture are found in the Digest of Annual Reports of State Boards for Vocational Education, 1962.

According to the Digest, enrollments in all federally reimbursed programs in vocational education have increased from 2.2 million in 1946 to over 4 million in 1962 or an increase of 83 percent. This total enrollment includes both high school and out-of-school programs.

Vocational Agriculture Enrollment

The enrollment in vocational agriculture has increased from 510 thousand in 1946 to nearly 900 thousand or an increase of 76 percent in 1962.

Figure 1 shows that a gradual increase in total enrollment in vocational agriculture has occurred every year since World War II.

The enrollment figures above certainly indicate an increased interest rather than a decreased interest in vocational agriculture on the part of our clientele. These are facts that we in the profession should be using to inform the public of the true stature of Vo-Ag today.

During the past few years we have read many statements which tend to play down the need for and importance of vocational agriculture. Statistics reveal that farm population is declining and it is obvious many farm boys will not stay on the farm. However, millions of people employed in off-farm agricultural occupations, furnish supplies and services to the farmer. Millions of others transport, process, market, and sell agricultural products. All of these employment opportunities require agriculturally trained people. It is apparent that an increase in vocational agriculture enrollment should be expected in the years ahead.

High School Enrollment Leads

The Digest further reveals that the total vocational agriculture high school enrollment exceeds the combined total of both young farmers and adults. The percentage relationship of these three groups may be seen in Figure 2.

It appears that additional emphasis should be given to the young farmer program throughout the states and territories if we are to continue instruction where the need is greatest.

The ten leading states in total enrollment have nearly one-half million students. One-fourth of this enrollment is found in the high school. Considerable differences are noted in the out-of-school enrollment in these leading states. The young farmer enrollment is only 28 percent of the adult farmer figure and 24 percent of the high school enrollment as shown in Table 1.

The out-of-school enrollment exceeds the all day enrollment in Mississippi, South Carolina and Texas. This is also true in Iowa, Minnesota.

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and New Jersey according to the report. However, in contrast, nineteen states and two territories have reported their evening class enrollment to be less than 25 percent of their total enrollment in the high school classes, while five states—Alaska, Hawaii, New Mexico, New York and Rhode Island—listed no enrollment in the adult farmer classes in this report. At the same time, 369 schools in these five states offered vocational agriculture to the high school students.

The small percentage of young farmers enrolled in vocational agriculture as compared with either the adult or high school enrollment, may be accounted for by the fact that fourteen states and two territories did not report any part-time or young farmer enrollment. The total high school enrollment in these states, as reported, amounted to 36,178. This lack of part-time students indicates that for many, vocational agriculture is terminal at the high school level.

Greater Financial Effort Shown by Local and State Governments

During the past eight years the total amount of money invested in vocational agriculture has increased 37 percent, as shown in Table 2. It is interesting to note that the Federal government’s expenditure has increased only 18 percent during this period, while the state’s share has increased 55 percent and the local government has contributed an additional 34 percent. Is this not an indication that the people being served by vocational agriculture are willing to support its purposes?

Nearby, 10,000 high schools in the United States offer instruction in vocational agriculture, proof that the public needs and wants vocational agriculture. Many school administrators have favored consolidated schools in order to offer vocational agriculture in the curriculum. This support of vocational agriculture is evident by the fact that over 80 percent of the total money comes from the state and local governments as shown in Figure 3.

Additional information which can be used to support the vocational agriculture program can be seen in Figure 3. The state and local government funds are supporting vocational agriculture over four times as much as the funds from the Federal government.

In light of the information from the

TABLE 2
Increase in Expenditures for Vocational Agriculture By Source of Funds During Past Eight Years

<table>
<thead>
<tr>
<th>Financial Support by</th>
<th>1955</th>
<th>1962</th>
<th>Percent Increase Past Eight Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Government</td>
<td>$23,408,562.29</td>
<td>$31,057,246.40</td>
<td>32.6%</td>
</tr>
<tr>
<td>State Government</td>
<td>18,472,981.92</td>
<td>28,580,744.47</td>
<td>54.7%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>11,825,580.68</td>
<td>18,644,907.25</td>
<td>51.3%</td>
</tr>
<tr>
<td>Total</td>
<td>53,707,124.89</td>
<td>73,281,082.12</td>
<td>37.0%</td>
</tr>
</tbody>
</table>
demonstration tractor the dynamometer is used again to show the effect on horsepower and fuel efficiency. The areas which most commonly affect fuel consumption and power are the governor and throttle linkage, manifolds and air cleaners, ignition and electrical system, ignition timing, and carburetor adjustment.

The laboratory part of this unit is taught by having two students on one tractor. A total of 24 hours is spent in completing the procedures by the students on these tractors. This laboratory unit is blocked out so that there are 12 two hour periods on this job.

The Young Farmer classes have followed the same laboratory procedures as the day school classes. The work on the tractors has been done during Christmas vacation and the Farm Mechanics Shop was made fully available to them. The time spent with this group varied from two to three full day periods.

The dynamometer is available to the Adult class. They have used it to test tractors, but as yet a full laboratory unit has not been covered by this group.

Another use of the dynamometer has been a cooperative effort with the 4-H clubs from the countries in the area. At the request of the 4-H club agent or leader the dynamometer has been used in connection with their tractor maintenance program. In this case the Vocational Agriculture Instructor goes with the dynamometer to put on these schools.

![Image](image-url)

Vo Ag Teachers and community representatives meet at A. & T. College at Greensboro, N.C. The above group took part in the large planning activity. C. E. Dean and A. P. Ball at A & T College served as Consultants in the planning meeting.

Planning for the Next Five Years

C. E. DEAN, Teacher Education, The Agricultural and Technical College of North Carolina

The Better Farm and Home Improvement Association, an organization of non-white families and the teachers of vocational agriculture, agreed to try out a new procedure this fall. It was this—instead of each teacher and a representative group of adults coming together to plan the annual and long-time programs, the families who are members of the B. F. H. I. A., and their teachers agreed to try out a joint meeting.

On the night of the meeting some forty adults and their teachers assembled at the College which is located near the center of four counties in the Piedmont Section of North Carolina. After talking things over the families and teachers were divided into several groups to work on the following committee assignments: Program of Work, Time and Place for the Annual Meetings, Budget and Finance, Criteria to Consider in Selecting Officers, and Flower Exhibition. Each group had a set of guide lines to somewhat govern each Committee's work.

At 9:30 P.M., the Committee work ended and the entire group reassembled to listen to the reports which were most inspiring and thought provoking.

Some of the advantages of the plan were as follows:

1. Several families had an opportunity to get acquainted and to talk about their local organization's program.
2. Many experiences could be blended into useful ideas and practices for the future.
3. Several teachers were able to assist in the planning during the same meeting.
4. Some resource persons from the College could assist in plans, and
5. The group enjoyed a brief fellowship period after the final reports were made.

One family (man and wife) stated that they enjoyed the work in their local organization. They also related that one head of a family was taken ill just about tobacco marketing time and the members of the local chapter went over and graded and tied up a barn of tobacco in one evening. There were 32 persons who took part in this activity.

Finally, to point out one significant phase of the planning, the members have their meeting place schedule set up from 1964 to 1972.

Whatever the mind can conceive and believe, the mind can achieve.

—Napoleon Hill
Evaluating Farm Mechanics

MARVIN R. MONSON, Teacher of Vocational Agriculture,
Newman Grove, Nebr.

Evaluation is closely associated with the planning and carrying out of the vo-ag program. Good periodical evaluation will help to determine the weaknesses and strengths of any program and provide means for improving it. Although the total program needs to be constantly evaluated, the Newman Grove High School is presently evaluating the farm mechanics program.

Occupations of Graduates

There undoubtedly is more than one way to evaluate any program or part of the program. The evaluation of the program has been changed by first determining what the graduates of the past ten years are now doing. This was accomplished through contact with the individuals and/or their families. It was found the 95 graduates of the Newman Grove High School who had completed the vo-ag program are working in the following occupations at the present time:

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No. of Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farming</td>
<td>31</td>
</tr>
<tr>
<td>Service</td>
<td>19</td>
</tr>
<tr>
<td>College</td>
<td>14</td>
</tr>
<tr>
<td>Trade School</td>
<td>2</td>
</tr>
<tr>
<td>Bookkeeper</td>
<td>2</td>
</tr>
<tr>
<td>Construction</td>
<td>2</td>
</tr>
<tr>
<td>Mechanic</td>
<td>2</td>
</tr>
<tr>
<td>Jet pilot</td>
<td>2</td>
</tr>
<tr>
<td>Grocery store employee</td>
<td>2</td>
</tr>
<tr>
<td>Teaching</td>
<td>1</td>
</tr>
<tr>
<td>Truck driver</td>
<td>1</td>
</tr>
<tr>
<td>Banking</td>
<td>1</td>
</tr>
<tr>
<td>Minister</td>
<td>1</td>
</tr>
<tr>
<td>Soil Conservation Service</td>
<td>1</td>
</tr>
<tr>
<td>Newspaper reporter</td>
<td>1</td>
</tr>
<tr>
<td>Gas company employee</td>
<td>1</td>
</tr>
<tr>
<td>Insurance salesman</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturing company</td>
<td>1</td>
</tr>
<tr>
<td>Feed company</td>
<td>1</td>
</tr>
<tr>
<td>Dairy employee</td>
<td>1</td>
</tr>
<tr>
<td>Barber</td>
<td>1</td>
</tr>
<tr>
<td>Agr. research (Ph.D.)</td>
<td>1</td>
</tr>
<tr>
<td>County Agent</td>
<td>1</td>
</tr>
<tr>
<td>Carpenter</td>
<td>1</td>
</tr>
<tr>
<td>Firestone store manager</td>
<td>1</td>
</tr>
<tr>
<td>Telephone company employee</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>95</strong></td>
</tr>
</tbody>
</table>

Farm Mechanics Areas Needed

Since a larger percentage of the vo-ag graduates were engaged in the area of farming than in any other area it was decided to attempt to determine what should be taught in the vocational agriculture farm mechanics program that would be the most helpful to those individuals going into farming. This was done by using a checklist of skills in a number of areas that were or might be included in the farm mechanics program. The areas included in the checklist were: tool sharpening, carpentry and woodworking, rope work, forging, painting and finishing, drawing and sketching, cold metal work, soldering, oxyacetylene welding, arc welding, electricity, farm machinery, concrete and masonry, plumbing, fencing, farm buildings, tractor maintenance, irrigation and drainage, soil and water conservation, transmission of power, and materials handling. Skills listed in each area of the checklist included those that had been taught, and those that might be taught. Space was provided so that additional skills might be added by each individual using the checklist. An example area from the checklist is shown below.

<table>
<thead>
<tr>
<th>Area 9: Oxyacetylene welding</th>
<th>Should be taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set up welding equipment</td>
<td></td>
</tr>
<tr>
<td>Adjust flame to oxidizing</td>
<td></td>
</tr>
<tr>
<td>Carburizing and neutral</td>
<td></td>
</tr>
<tr>
<td>Establish surface</td>
<td></td>
</tr>
<tr>
<td>Cut a piece of steel</td>
<td></td>
</tr>
<tr>
<td>Cut cast iron with cutting</td>
<td></td>
</tr>
<tr>
<td>Weld cast iron with bronze</td>
<td></td>
</tr>
<tr>
<td>Hard surface a plow share</td>
<td></td>
</tr>
<tr>
<td>Make a butt weld with steel</td>
<td></td>
</tr>
<tr>
<td>Make a butt weld with bronze</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>

Reactions of Farmers

The checklist was given to a number of farmers in the community to be checked and returned to the vo-ag department. No attempt will be made to give the results of the checklist here as to the number and kinds of skills checked by farmers as being essential to their occupation. There was, however, no skill in the list that was not checked at least once. There was no skill in the list that was
checked by everyone receiving the checklist. The Newman Grove Farm Mechanics program will not be changed drastically from the results of this study but it is felt that it will be strengthened by the deletion of some skills and the adding of other skills on the basis of the returns from the checklist. An evaluation of this kind keeps the department in close touch with the people who expect to use the skills.

Additional surveys are being planned in other occupational areas as grouped from the study of the occupations of vo-ag graduates. Each of these will serve as a guide to improve the instruction in farm mechanics as it relates to the occupations of the Newman Grove High School graduates.

The one specific phase of high school vocational agriculture that few have questioned as far as its value for college work is the farm mechanics program. Due to a particular interest the author completed a study entitled "Relation of High School Vocational Agriculture to Achievement in Agricultural Engineering Courses at the Iowa State University." An attempt was made in this study to determine the relationship between semesters of high school vocational agriculture and achievement in four selected agricultural engineering courses.

The Findings

On the basis of the findings of this study, no significant relationship existed between semesters of vocational agriculture and semesters of mathematics and chemistry completed in high school, rank in high school graduating class or college mathematics placement test scores. A highly significant negative relationship, however, was found to exist between semesters of vocational agriculture and semesters of high school physics which indicated that vocational agriculture was being substituted for physics in the high school curriculum.

Vo-Ag Students Achievement

Positive correlations significant at the five per cent level existed between high school vocational agriculture and high school quality point average, final college quality point average, third-quarter college quality point average and grade in Agricultural Engineering 254. It appeared from these relationships that those students who took vocational agriculture in high school tended to achieve at a higher level in high school and in college as reflected by their quality point averages.

The students who had completed high school vocational agriculture tended to achieve at a higher level in Agricultural Engineering 254 than did the nonvocational group which indicated that the area of metal work and welding was being covered fairly well in most high school vocational agriculture programs. Further, the facilities for welding and metal work in most vocational agriculture shops were superior to other areas of farm mechanics.

The nonvocational group had more high school mathematics and physics, whereas many of the vocational agriculture group had substituted vocational agriculture for these courses in their high school programs. This may have placed the vocational agriculture group at a disadvantage in the more technical agricultural engineering courses requiring a mathematics and physics background.

When the groups were analyzed according to the semesters of high school vocational agriculture, it was found that the group that had completed three or four semesters tended to achieve equal to or higher than the groups with seven or eight semesters or no high school vocational agriculture. This may indicate the students who took only three or four semesters substituted college preparatory courses for vocational agriculture which gave them backgrounds for higher achievement in college. This provided them with both an agricultural and technical background which may explain the higher degree of achievement than that obtained by either of the other two groups.

Farm Mechanics for College Preparation

Hindrance or Benefit?

THOMAS A. HOERNER, Department of Agricultural Engineering, Iowa State University

Cutting with the oxy-acetylene torch is one of the skills taught to students from the College of Agriculture. Here two students are closely supervised by an instructor in Agricultural Engineering 254.

High School Farm Mechanics Needs Improvement

There was no evidence in this study to indicate that those students who
had selected vocational agriculture in high school rather than other courses were in any way handicapped in agricultural engineering courses at the Iowa State University. If the students who had completed high school vocational agriculture were not better prepared for the agricultural engineering courses than the nonvocational agricultural students as a result of the farm mechanics program, and if those who had not attended college were not properly prepared for the understanding of principles and adequately trained in manual skills for farm mechanics in farming, it would indicate that the farm mechanics program in vocational agriculture should be improved. These are words for thought. The preparation appears to be adequate in metals and welding but definitely lacking in the areas of carpentry, soil and water, and farm power and machinery as based upon the findings of this study.

A good self-study and reevaluation of the farm mechanics phase of vocational agriculture programs would be very beneficial, particularly in the areas of curriculum planning, quality instruction, and making better use of existing facilities.

What Do We Really Know About Our Program?

CURTIS R. WESTON, Teacher Education
University of Missouri

If and when we stop to take time to really look at and evaluate our program in vocational agriculture, what do we really know and what can we prove about our program? This applies at all levels, at the high school level, at the state office level, and at the teacher training level. We have built a philosophy on many assumptions which are difficult to justify when viewed or appraised by someone not closely associated with agricultural education.

Let me be the first to heap praise upon everyone working in agricultural education at all levels of endeavor, but as I have indicated, what do we really know about the outcomes or end results of our work.

I'm sure each of us have many questions, for which we would like better answers than we have available at the present time.

Various attempts have been made at evaluating some phases of our program, still we have so many things for which we cannot supply figures and statistics to justify many of our activities.

First, what is agriculture? Where does it start and end? Who should be enrolled in our program? What kind of training should each student receive? These are questions with which we struggle daily, and each must arrive at the answer to his own satisfaction.

All hear many claims, pro and con, regarding our program that we cannot prove or disprove. Some of these claims come home to haunt us as we move about in our circle of work.

Some of these claims or assumptions could be:

1. That farm mechanics instruction should be an integral part of the instruction in vocational agriculture.
2. That vocational agriculture is of more value to a student than some other course in high school.
3. That in three or four years of high school, we have vocationally prepared a student for farming.
4. That teachers of vocational agriculture spend their time on work experience visits with the students who need the most help.
5. That summer employment of teachers has been of significant value.
6. That the time spent in FFA activities could be spent more profitably in other activities.
7. That vocational agriculture is truly more vocational than many other courses in high school.
8. That the problem method of teaching is the best approach to learning.
9. That college students, preparing to be teachers, spend too much time on methodology and not enough on subject matter.
10. That supervisory visits from the state office have really improved the instruction on the local level.
11. That teacher-training institutions have been in a position of leadership or trying to catch up with latest practices.
12. That the FFA has made a significant contribution to leadership in vocational education.
13. That contests stress the important phases of agriculture.
14. That large classes are essential to a successful program.
15. That six weeks of student teaching is of less value than a semester.
16. That supervised farming or work experience is necessary for entrance into our program.
17. That a supervised farming program might be a liability, rather than an asset to learning.
18. That vocational agriculture reaches only about one-half of the rural population.
19. That state office staffs have really put emphasis upon the more important agricultural aspects of the program.

These listings could go on and on, but I believe they will point out what I mean by “What Do We Really Know About Our Program?” Each statement could be rephrased to take the pro or con issue, but the answer, in most cases, would be built on assumptions rather than sound evidence for evaluating the program of vocational education in agriculture.

National Seminar to Discuss Improving Ag Tech Programs

ROBERT E. TAYLOR, Director, National Center for Advanced Study and Research in Agricultural Education

One of the significant trends in the structure of our nation’s work force is the rapid development of occupations which are between the skilled worker and the professional. The agricultural industry is no exception. Commonly labeled technicians, these individuals must exercise mental (cognitive) skills primarily but also must be able to perform the manipulative skills needed in the job. As Halterman points out in his California study, the ag technician must acquire the skill and ability to make practical applications of theoretical knowledge in performing specific tasks in the production of goods and services in agriculture.

Need for Technician Training

The technological explosion in agriculture and the rapid expansion of the off-farm phase of the agricultural industry have brought about an increasing need for these semi-professional workers.

One of the major responsibilities facing state staff members in agricultural education in the months and years ahead is providing leadership for the development and expansion of this vital phase of agricultural education. Factors contributing to the urgency of this task are:

1. One of the key features of the new vocational education act is its emphasis on serving all age groups. We are challenged to serve the “no man’s land” between high school and the baccalaureate degree.
2. Agricultural occupation studies being conducted in the various states are revealing an increasing need for agricultural technician training programs.
3. Many states are developing the needed educational organizational structure for providing agricultural technician training programs, such as area vocational schools, technical institutes, and community colleges.
4. The current needs for the labor market demands quality vocational education. Agricultural technician programs provide the means for adequately developing needed depth of know-why and know-how.

Since funds will be available under the new act for agricultural technician programs, it would appear that staff members, both supervisors and teacher educators, will have definite responsibilities and opportunities for leadership in this area, irrespective of which institutions offer the programs.

National Seminar on Ag Tech Training

Recognizing the need for expanding and improving our efforts in agricultural technician training, the National Center Advisory Committee recommended that a national seminar on agricultural technician training be conducted at the National Center this summer. This seminar will be conducted July 20-24 on The Ohio State University campus in Columbus. A grant has been provided by the Sears-Roebuck Foundation to underwrite the cost of this seminar.

Seminar Purposes

The primary purpose of the seminar is to assist state staff members in agricultural education in identifying and clarifying their leadership role in the initiation, conduct, and evaluation of agricultural technician programs in their respective states. In addition to this global purpose, a number of specific areas have been identified for seminar discussion. Some of these topics are:

1. Need for agricultural technician training programs
2. Objectives for such training programs: curricular content determination, student services—selection, counseling, placement, follow-up
3. Staffing:
4. Plant facilities and equipment
5. Finishing:
6. Relationships of such programs to other agencies and groups

National Consulting Staff

A consulting staff of nationally recognized leaders will discuss these topics and be available to assist state staff members in “thinking through” some of the challenges and problems involved in improving this phase of our program.

Some of the members of the consulting staff will be:

- Merrit B. Hill, President, J. I. Case and the National Farm Equipment Institute
- Wesley P. Smith, State Director of Vocational Education, California
- A. W. Tenner, Director, Agricultural Education Branch, Office of Education
- Robert Knoebel, Acting Director, Technical Education Branch, Office of Education
- Byrl R. Shoemaker, State Director of Vocational Education, Ohio, and President, American Vocational Association
- Lloyd Phripps, Chairman, Department of Agricultural Education, University of Illinois
- Jerry J. Halterman, Instructor, Modesto Junior College, California
- C. A. Sherman, Dean of Agriculture, Mt. San Antonio College, California
- Joe Clary, Assistant State Supervisor of Agricultural Education, North Carolina
- Neal Arnold, State Supervisor of Agricultural Education, New Hampshire

All States Urged to Participate

This seminar is being conducted primarily for state staff members in agricultural education and individuals working directly in agricultural technician programs. Here is an opportunity to secure some specialized assistance and work with your coworkers from throughout the nation in focusing on a vital problem affecting us all. The Center can provide a nationally recognized consulting staff, other resources, and the climate essential for considering the crucial issues associated with improving and expanding agricultural technician programs; however, the seminar will be successful only to the degree that it involves key representatives from each of the states. We invite you to participate, contribute suggestions, and raise questions.
What Agriculture Should Be Taught the First Two Years

L. A. BLACKBOURN, Teacher of Vocational Agriculture, Berlin, Wisconsin

The type of Vocational Agricultural program that we offer during the first two years can have an important bearing on the success of the entire program. There may have been a time when general objectives could cover the entire Vocational Agricultural program. This, however, is not true today. The very rapid and drastic changes in the field of agriculture have created a need for some changes in our training program. This discussion will be confined to the Freshman and Sophomore years.

Needed Changes

Those of us who have been teaching Vocational Agriculture in recent years have encountered enough problems to convince us that a number of things come under the must category. For example:

1. We must have a program that will be attractive to students of all scholastic abilities. Too many young men of ability have been channeled out of agriculture or have decided that they had better opportunities in other fields.
2. We must recognize that more students who are interested in agriculture will be continuing their education beyond high school.
3. We must have a program that is really accepted by the high school administrators.
4. We must recognize that farming today requires a thorough knowledge of the basic underlying principles of science.
5. We must appreciate the fact that freshmen and sophomore students in high school are developing interests and forming opinions that will influence their career selections.

If we accept the idea that we must have a program that solves these problems, then it follows that we should have some very definite objectives to guide our course during these early years in the students’ educational program. Let’s make these changes before the proverbial “horse has been stolen from the unlocked barn door.”

“New Era” Objectives

A recent study by representatives of every group in Wisconsin that has an interest in agricultural education, has confirmed the need for a reorganization of the objectives for each segment of the program. This study, known as the “New Era Evaluation Program for Vocational Agriculture in Wisconsin,” lists the following specific objectives for the first two years of study in vocational agriculture:

1. To develop an understanding of the science of soils, plant life, and animal life as it relates to agriculture.
2. To provide students an opportunity to develop an interest in agriculture and rural living.
3. To provide students with available information relative to the character of, the opportunities in, and the qualifications necessary for occupations in the field of agriculture.

The specific objectives for the third and fourth year are:

1. To provide adequate education in production of food and fiber.
2. To develop an understanding of processing, transportation, marketing and organizing marketing and purchasing agencies for food and fiber.
3. To provide instruction in selection, operation, maintenance and repair of farming and processing equipment used on their own farms.

Curricular Changes

Does this mean that agriculture would evolve into General Science and Biology courses during the first two years? Certainly not!

The recent shift from emphasis on operative skills to management skills suggests that all students who are interested in agricultural occupations have essentially the same basic needs. The teaching of agricultural science to students who can associate the subject matter with their everyday ex-

Farm Mechanics: A Berlin Future Farmer, using a model he has constructed, explains to the rest of his class how he has solved the problem of roof support in a pole barn planned for the home farm.

Learning about the law of supply and demand in Junior and Senior Farm Management units will form a solid basis for many farm problem decisions later on in life.
Experiences on the farm represent the very best condition for learning. Future management decisions, based on this learning, will make for more successful farming operations.

Guidance and counseling would assume a major role in this program. Students would have a chance to determine their own qualifications for success in a large number of agricultural occupations.

Farming programs and agricultural learning experiences would be emphasized as a vital part of the students' program. Those who found no interest in this part of the program would shift to some other area of interest by the end of the Sophomore year. This would be no calamity. His decision will be based on fact, not on ignorance, since he has had an opportunity to discover his own potential as well as that of the field of agriculture.

However, I believe that a larger number, than has been the case in the past, will want to continue in the program. For them, we have provided a foundation that will make for success as they continue training for their chosen vocation.

A curriculum designed to solve the problems mentioned earlier will meet the objectives listed or if reversed, a plan to meet the objectives will solve the problems. We all recognize the changes that are taking place in the society in which we live. Our program is not isolated from others. To enjoy the success that it has in the past, some changes will need to be made if we are to keep pace with the times.

Collecting the Evidence

In order to accomplish these objectives, the instructor should utilize the methods most effective for him in collecting evidences of accomplishments. In order to make a proper evaluation these methods could include: 1) analyzing the nature of the farming program from such standpoint as growth, breadth, continuity and suitability; 2) analyzing records of results in farming activities, such as levels of efficiency, profits or losses, and accumulation of assets; 3) surveying approved practices and skills used in developing farming programs; 4) observing activities and situations on farms which reveal carry-over of instruction that was given to farming activities; 5) conferring with students to discuss their accomplishments and their understandings of how and why certain methods and practices were used; 6) examining business agreements, plans and other written materials involving farming programs; 7) accumulating materials which reveal insight into the learner's thought process and motives; and 8) analyzing progress in becoming established in farming.

In summary, evaluating your farm programs will develop comprehensive plans leading to the accomplishment of definite objectives. Remember, no matter how good anything is, it can always be better. Keep one thing in mind: you are to constantly improve the status of agriculture in our communities.

Opportunities do not come to those who wait; they are captured by those who attack.

—William H. Danforth, I Dare You
A New Department and a New Vista at N.M.S.U.

PHILIP J. LEYENDECKER, Dean & Director, College of Agriculture & Home Economics, New Mexico State University
J. D. McCOMAS, Head, Department of Agricultural & Extension Education, New Mexico State University

A study by the College of Teacher Education and the College of Agriculture at New Mexico State University has resulted in the formation of a new department within the College of Agriculture at NMSU. This new Department of Agricultural & Extension Education is designed to provide better service to the university and those associated with agricultural and extension education in New Mexico.

Study Findings:

The study was initiated with the expressed purpose of developing a more effective educational program for high school teachers of agriculture and cooperative extension service personnel.

The study revealed that the College of Agriculture was graduating majors in agricultural education from a department which did not exist within its college.

It was also found that no undergraduate program in agricultural extension education was offered, yet a master's degree program was in effect. A graduate degree program without a corresponding undergraduate program appeared to be academically unsound. Also undergraduate requirements for agricultural education and extension education students was found to be concomitant.

The consolidation of undergraduate programs in agricultural education and extension education seemed to entail few changes and promise a more efficient use of university resources. Further, it was demonstrated that the costly on-the-job training of new cooperative extension service personnel could be eliminated.

Changes Anticipated:

Initially, the changes in the undergraduate program covering both agricultural and extension education will be modest. Immediate realignments will include the following:

1. The introductory course in agricultural education will be extended from two to three semester hours and will include equal emphasis upon agricultural and extension education.

2. A new three-hour course will be added at the sophomore or junior level with equal emphasis on 4-H and FFA programs.

3. The “methods block” of eight weeks and eight credit hours will be reduced to six credit hours and a six-week methods period. The new “method block” will include teaching in vocational agriculture and in extension.

4. The eight-week period of directed teaching will be reduced to six, to conform with all other student teaching programs at NMSU. A new four-week, four-credit-hour course will be added in directed field experience in cooperative extension education with emphasis on 4-H youth programs. Wherever possible and feasible, extension field experience will be in the same county following the directed teaching experience. All undergraduates will have a double major in agricultural and extension education with experience in high school and extension teaching.

5. A team-teaching approach will be utilized with a part-time instructional staff supplied by the Cooperative Extension Service of the New Mexico State University.

6. Graduate programs for high school teachers of agriculture and extension service personnel will take advantage of common graduate courses designed to meet mutual requirements. These courses will be further strengthened with specialized graduate courses in their respective fields of interest.

In conclusion, we feel that this new department offers a new vista to meet more adequately the prevailing and changing needs which must be satisfied to strengthen both the agricultural education-teaching profession.

Farm Mechanics Instruction for Oklahoma Teachers

DALE A. COTTON, Executive Secretary, Oklahoma FFA Association

One of the areas in which most vocational agriculture instructors feel a need for more knowledge is in the agricultural mechanics field, so two schools have been set up to teach more in this area.

Nineteen teachers are working for credit at Weatherford, and 20 are attending at Holdenville. They can obtain two hours of college credit in Agricultural Engineering 410.

George Cook, Assistant Professor in Agriculture Engineering at Oklahoma State University, who has charge of the course, calls it a refresher course, and instruction is given in up-to-date agriculture mechanics. He has used many resource people in presenting the class material.

The teachers attend 16 meetings of four hours duration, using both evenings and Saturdays to get in the necessary class time.

Included in the subject matter being offered is oxy-acetylene welding, advanced concrete work, use of the framing square, rafter cutting, and plywood usage, electricity, plumbing, and

INTENTLY TRYING his head at welding aluminum, an Oklahoma teacher works under the close scrutiny of the welding instructor and his classmates.
tractor maintenance and repair, small gasoline engine repair, and inert gas welding.

These are not theory courses, but, if at all possible, such teacher actually tries his hand at each of the skills taught. Each of them worked on a tractor and on a small gasoline motor; each tried his hand at cutting rafters and figuring with the square, and each practiced with the oxy-acetylene and inert gas welders.

Science degree from Virginia Polytechnic Institute and a Master's degree from Michigan State University. For the past 16 years he has taught vocational agriculture at Heathsville and Northumberland High Schools.

Animated 35mm Slides

A significant breakthrough in the techniques of visual communications for teaching and training purposes was revealed at the American Society of Training Directors convention in the Sherman House, Chicago, (March 20-24) with the first large scale showing of animated 35mm color slides utilizing the patented “Technamation” process.

The slides can be projected through any standard slide projector, without modification of the equipment. The only requirement is the addition of a small, polarized spinner that is placed in front of the projector lens.

From Farmer Issues

Writing in the December 1938 issue F. E. Heald, Massachusetts, said, “Teachers and extension-service men in agriculture sometimes attempt to avoid duplication of service to such an extent that some much-needed service falls between two units. Some individual badly in need of assistance does not get it, usually because both groups are aware of other men who have disagreed as to jurisdiction and have duplicated efforts to serve the same people.

“Not all overlapping is to be criticized, especially when the two agencies have a plan for co-operation. It is seldom harmful compared with the overlooking of service which is seriously needed. Without a co-operative plan, both the overlapping and the overlapping occur to the discredit of all parties.

“Perhaps the greatest temptation comes from a desire to get credit for the success in the area. Equally, one is tempted to avoid the situation where the promise of success is very poor. The boy who has good home opportunities, who succeeds well as a 4-H club boy before he is 14 years old, who does excellent work in the high school, and who will move along towards success anyway is a tempting bit of publicity; and therefore he often gets too much supervision by persons who wish the credit.”

The publishers state, "This revised comprehensive farm management manual is important for farm owners and farmers who want to make their own facilities more efficient." I heartily agree with this comment.

I found this book easy to read, interesting in approach with over 200 excellent visual charts, tables and pictures. The book is especially fitted for use in teaching vocational agriculture.

Four sections are included, Planning a Start in Farming, Planning the Farm Business, Improving the Home Farm and Living in Today's World. Part I is especially useful for first year vocational agriculture students in making plans to start a farming program. Parts II to IV should prove worthwhile for vocational agriculture upper classmen and out-of-school young farmer groups. I recommend this farm management book for vocational agriculture and young farmer classes.

Mr. Hamilton and Mr. Bryant, the two authors of this farm management book, are both active teachers of vocational agriculture in their respective states.

Howard R. Bradley Teacher Educator Kansas State University


This is an up-to-date comprehensive book concerning all aspects of producing milk. "The approach is via a statement of principle followed by an application of subject matter." Specific chapters deal with dairy animal physiology, nutrition, health, sanitation, reproduction, lactation, and facilities. A rather complete coverage is also presented of the usual feeds and feeding for dairy cattle. A special section, "A Ready Reference Hand-

BOOK REVIEWS

N.V.A.T.A. News

Plans for the 1964 convention, to be held in Minneapolis, December 5-10, are beginning to take shape. Allis-Chalmers, A. O. Smith Harvestore and Swift and Company have already confirmed sponsorship of meal functions for NVATA. The Minnesota association is going "all-out" to make the '64 convention the best ever. Mike Cullen of Willmar, alternate NVATA vice-president for Region III, is chairman of a committee to plan special activities for the ladies. Several interesting events have already been scheduled. Plan to attend the convention and bring the Mrs. along.

The NVATA Executive Committee will meet in Washington, D. C., June 29-July 2. Any NVATA members that has suggestions for the betterment of the organization or problems that he believes should be considered can present them at his state association meeting. If his suggestions or problems are favorably acted upon by the state association they can then be referred to the NVATA vice-president for the Region who will request consideration by the NVATA Executive Committee.

The following associations had 100% membership in NVATA as of April 15, 1964: Idaho, Nevada, Oregon, Utah, Washington, Wyoming, Arkansas (C), Kansas, Minnesota, Nebraska, North Dakota, South Dakota, Kentucky, Missouri, Ohio, Alabama, Alabama (C), Florida, Florida (C), Georgia, Georgia (C), Mississippi, North Carolina, North Carolina (C), South Carolina, South Carolina (C), Delaware, Rhode Island, Virginia, Alaska, Virginia (C), & Virgin Islands. Will your association be 100% by the end of the June 30 fiscal year?

The executive secretary was privileged to attend the recent national convention of The Farmers Union which was held in St. Paul, Minnesota. It was indeed a pleasing experience to meet many old friends of NVATA and to make new ones for the organization. The secretary was honored to visit with Orville Freeman, Secretary of Agriculture and Averell Harriman, Under Secretary of State for Foreign Affairs.

ADDRESS CRASSES, GRAINS AND CANES, Uhl, Melvin John, 47 pages, net price to schools $1.88, 1964.

The book describes a few of the true grasses and shows how they can be distinguished from other plants. It is nicely illustrated with drawings. The text is written for elementary children in approximately fifth grade.

A good teacher is so rare the rumor of him spreads like a scandal.

—John Erskine
Stories in Pictures

Introducing a new course outline in cooperation to instructors in agriculture at one of a series of ten district conferences held annually in Wisconsin for instructors in agriculture, homemakers, and school administrators. From left to right: Instructors Raymond Miller, Bloomer; Archie Abbott, Menomonie; Eugene King, Cadott; Walter Hansen, Spring Valley; Supervisor, M. W. Cooper.

Photo by Joe Clifford, Midland Coop.

Sophomores boys at Frankfort, Ohio installed a safety flag and new triangular "slow moving vehicle" sign on a tractor owned by the FFA and operated on the school farm. Since this farm is 8 miles from school, the tractor must be operated on the highway between the school and the farm, making highway safety especially important. Left to right are Steve Wright, Dave Posey, Gary Long.

[Photo by Bruce Stricklin]

A comparison of agriculture in the United States and Russia was featured in the winning booth at the Washington Junior Dairy Show at Puyallup, Washington. This exhibit was made by the Olympia Washington Chapter where Robert Boyden is Advisor.