A key activity is some class time reserved each marking period for student assessment of progress on supervised practice and for making new or additional plans. Actually, one of the very best adult education programs by the Vo. Ag. teacher is that of teaching the new concept of supervised practice to a group of parents of Vo. Ag. students. By explaining the philosophy and concepts behind the program, parents are more likely to understand the need for and be part of this activity. The financial concept of the expected outcomes would be more adequate support for the Vo. Ag. department. But the most important outcome should be that of a more individualized program of constructive building activities for every student in Vo. Ag. $$$

The themes for future issues are:
- March: Looking Ahead in Vocational Agriculture
- April: Production Agriculture — Still in Yeare
- May: Summer Accountability
- June: Administration and Supervision — Local to National

BOOK REVIEW


The Living Oceans describes answers to many mysteries of the sea as at the same time raises many new questions. A detailed discussion of factors such as temperature, depth, and salinity give the reader an understanding of the ocean environment. Various ocean environments and their life-supporting potential are discussed in relative to some of the thousands of species of plants and animals that exist as well as some that have disappeared. Laurie gives the reader a book on the ocean as seen from a scientist's point of view.

Switzerland Course

The ninth international course on Vocational Education and Teaching in Agriculture will be held in Switzerland during August 1974. Those interested in a group activity relating to this international event—group travel, planned group interactions with educators in agriculture from other countries, group discussions from the U.S.A. point of view, group side-trips and study, possible participation of spouses, undergraduate credit for the course—are encouraged to contact Dr. Ray Agan, Professor, Coordinator of Vocational Education, Sam Houston State University, Huntsville, Texas 77340.

Students Request Supervisory Visits

Jewell Money, teacher, Lutesville, Missouri

I have been discussing the importance of the school day visit. It is agreed that some teachers let themselves become too involved in the community and adult work and young farmer meetings that the all-day program is slighted. My own opinion is that this is wrong. If another teacher is needed and the school will respond to the need, then the Agricultural Science Instructor will take second place. This is not to negate out-of-school groups to a position of lower importance because adult education is very important, but a one teacher department can only handle so much work. If we are hired for the program, that is where our responsibilities primarily lie.

We still find administrators reluctant to pay teachers the regular salary for the summer work. The reason is usually that the teacher has not proven that he is on the job during the summer months, if the teacher is not on the job during the summer months, he should not expect to be paid. A summer visitation program has always been stressed at Woolland. A program of activities has been filled with the superintendent and principal each year. However, to emphasize that the agricultural instructor was on the job a program including the names and dates of students involved, dates of other activities including time and dates were given to students and administration.

The schedule of visits for the three summer months has proven very successful. The students and parents were expecting the visit and the administration knew where the instructor could be found if needed during the day. It is a wonderful public relations program between the teacher, administration and parents.

The Agriculture Instructor is, in most cases, the only teacher who is in regular contact with the community. His image affects the feelings of the community toward the school. Administrators are aware of the importance and most administrators will be happy to pay the regular salary during the summer months if they feel their instructor is hard at work.

No one can put a value on the supervisory visit. We do know that many students become more serious when they find an organization and a person to work for. Regular support is a must. — The FFA and the Agriculture Instructor.

Yes, the summer visit and the regular school year visits is important. Try it. You will find parents welcoming you and you will find administration behind you all the way. I know I have had six superintendents and four principals in 19 years, and all have taught our program in Vocational Agriculture. The supervisory visits are the backbone of the Vocational Agriculture Education programs.
Two rural boys found fresh interest in their high school training program at Princeton, Minnesota through their local Vocational Agriculture Department's cooperative job training and placement program.

Ron and Dave participated in a (2) quarter class (18 weeks) involving a survey of agriculture occupations and preparation for on-the-job placement as juniors. Both boys expressed a definite interest in wildlife management and were placed for the remaining (2) quarters of the school year, through the summer months and until the following November. A made-to-order training station was found on the 5,550 acre Sherburn National Wildlife Refuge located seven miles southwest of Princeton.

A work training agreement was signed by the boys, their parents, the instructor and the refuge manager after federal employee job applications were filled out. The following job description indicates the nature of their work:

Position Description—Student Aid Supervisor

Primary Duties—75% of Total
1. Water Gage Readings and Well Water Sampling—Read water gauges at established locations once each week. Take samples of well water at residences and other locations as designated by supervisor. Approximately 30% of duties.
2. Lawn Mowing—Grass cutting and maintenance at contact stations, headquarters and other areas as designated. Approximately 10% of duties.
3. Track Disposal & Area Clean-up—Weekly run to contact stations, nature trail, headquarters, cause access and other locations to empty trash receptacles and general clean-up in parking areas. Approximately 10% of duties.
4. Game-Flock Management—Assist in cleaning, feeding, and collecting of facilities, feeding, wing clipping and other activities as required. Approximately 10% of duties.
5. Maintenance Leaflot Dispensers—Refill leaflot dispensers at headquarters, contact stations, and nature trail. Keep and maintain records and inform supervisor. Approximately 10% of duties.

Other Duties—25% of Total
1. Evaluation of woodstock boxes as to amount of use, number of young produced, repairs needed, etc.
2. Assist with controlled burning and related management practices.
3. Assist with vehicle maintenance and repairs.
4. Perform other refuge duties as designated.

A work schedule training plan was then established by the teacher and the refuge personnel. The required orientation and safety training instruction was given by the refuge personnel and the boys were given a refuge vehicle drivers test involving the use of 4 wheel drive vehicles and snowmobiles. The actual division of duties was as follows:

- Check & Repair Woodstock Boxes: 17.2%
- Pavement Work: 14.5%
- Routine Mowing: 12.5%
- Routine Maintenance: 11.2%
- Forestry Management: 9.5%
- Nature Trail Signs: 9.8%
- Water Samples & Flow Gauges: 6.8%
- Asst. with Vehicle & Fencing: 4.9%
- Asst. with Leaflot: 4.0%
- Trash Disposal: 2.6%
- Refill Leaflot Dispensers: 2.1%
- Safety Meetings: 1.1%
- Controlled Burning: 1.0%

The following special projects were assigned to the students under the guidance of the Student Aid Supervisor in charge of supervising them depending on the nature of seasonal refuge concerns.

Projects for High School Assistants
December through March:
1. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
2. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
3. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
4. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
5. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
6. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
7. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
8. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
9. Project: Wood Duck Nesting Box Maintenance
   - Project no. hrs. req.—40
10. Project: Wood Duck Nesting Box Maintenance
    - Project no. hrs. req.—40

The chapter operates a 100 acre farm on which many of the students keep their show animals. Chapter members have shown approximately 300 animals at local, district, and state livestock shows over the past five years and have successfully exhibited at 38 shows. The State Award for showing the largest number of livestock at the Spring Livestock Show has been continuously won by the chapter. Many state proficiency awards have been won by individual chapter members and judging teams have consistently ranked among the top four winning teams on the state level.

(Concluded on next page)
(Simmons from page 151)

Many students live within the city limits, while their parents or other family members live outside the city where they keep their livestock. Beef animals, swine, and sheep are the most popular types of livestock in the community. Other FFA members keep their animals on the school farm.

While a surprisingly large number of (orator students have full-time farming operations, most graduates are either part-time farmers or they have entered some phase of the large field of agriculture. For example, several FFA members have entered some professional phase of agriculture.

In addition to the school farm, the department also has a farm mechanics shop, a greenhouse, and a food preservation center. Students have the opportunity to be exposed to all phases of the field of agriculture both in the production and the preparation of food.

James Mogen, Sr. and a student examine the trailer owned by the chapter.

Although the department has many outside related activities, instruction in the classroom is neglected. Subject matter relevant to all phases of agriculture is presented to the students.

The close cooperation of parents and school officials has assisted in making teaching agriculture at Stidell High School both successful and pleasant. (Simmons from page 151)

PRACTICAL—Key Word To Supervised Practice

Don Claborn
Instructor of Agriculture
Trenton Junior College, Missouri

Supervised occupational experience is a practical and valuable to the student. Sometimes very uninteresting experiences are taken. If a program includes only looking over the manager's shoulder or following some, then let it call what it is—just plain observation. If we can let the student have supervised occupational experience that starts an individual on a level commensurate with his ability or set a local normal to beginning employees in a business—a true-to-life situation. In this situation we are providing the student with meaningful experience as opposed to looking over man's shoulder whereby the student does not feel the things.

If the working experience is to be valuable, it must be true to test the student's ability—an experience that will give the students an opportunity to prove themselves. Education in the past has had many stumbling block or classroom experiences and many times they have not proven valuable. The student deserves the real thing; getting his or her hands dirty, proving themselves at the bottom of the ladder, is ability. If we are to say we are going to "train them out to the wolves." No, the instructor or coordinator is going to work with the student and the employer to see that the student's experience is valuable.

Why is it important that the job be an actual working experience? In the experience the student has had in working with student placement, employers have been highly interested in a student's success on the job. Student interest has been shown in class grades; however, there has been interest in a student's ability to achieve a job.

This is a trait that is proven on the job; therefore, if we are to give a student an actual working experience, it is going to have to be a real-life experience. If it is to be a real-life experience, questions must be asked in determining the student's ability to achieve a job. (a) Is the time long enough for actual student involvement? (b) Does the student have an interest in the feel of the business or is it strictly an observation? (c) Does the student have the ability to produce and must perform the job? (Simmons from page 151)

The AGRICULTURAL EDUCATION MAGAZINE

BOOK REVIEWS

PROFESSIONAL FLOWER ARRANGING FOR BEGINNERS

Robert L. Gordon, 1972 Vocational Education Productions, California Polytechnic State University, San Luis Obispo, Calif., 102 pp., $1.35 paperback.

The first four chapters present good basic materials on floral, material, equipment, and care of a floral arrangement, and the material is easily read and understood. The book is written in a conversational manner, which the author's own color and design are very effective. Many new flower arrangement books try to do this.

Three types of flower arranging are discussed: the continental, Japanese, and west side. Overall, shapes of arrangements are discussed with excellent illustrations throughout. The author also gives information on designing for competition. This book offers useful, detailed information that the average person can use. The author's background seems to have made him aware of the need for arranging flowers for the sake of it. The beginning is not interested as much in perfection but he is in beauty.


In this book Dr. Draycott animates the findings of numerous investigations and research studies concerning the nutrition requirements of sugar beet. Much of the data is extracted from experiments conducted in Great Britain where sugar beet is grown extensively. Use of the British system to express this data may be somewhat confusing to those not familiar with the system.

Following a general discussion of sugar beet production and fertilization, the author presents a detailed discussion of the various forms of manure and nutrients involved in the nutrition. Chapters devoted to nutrients include: Nitrogen, Phosphorus, Potassium, and Sulphur, Calcium, Magnesium and eight other micro-elements (iron, cobalt, copper, molybdenum, manganese, lead and zinc). Nutrients are discussed in terms of their deficiency symptoms, effect on growth and physiology, and their plant relationships as well as various other subjects.

The remaining chapter deals with weeds and grass weeds, crop rotations, and fertilization methods. Physical conditions of the soil and fertilizers and methods of application, cultural practices, diseases, pests, and plant protection, and seed nutrient requirements.

As head of the Chemistry Section, Broglio's Barn Experimental Station, Suffolk, England, Dr. Draycott has done many years of experience and work for the book. The book is well organized and makes it easy to use as a reference. The data presented is valuable and should be consulted by those interested in sugar beet production.

Stephen S. Miller, Instructor, Vocational Technical Center, Montebello, West Virginia
BELIEFS ABOUT VOCATIONAL AGRICULTURE
BY TEACHERS AND PRINCIPALS

Herbert B. Schumann
Assistant Superintendent
Nashville, Texas

Earl S. Webb
Teacher Education
Texas A&M University

B. What do high school principals expect of teachers of vocational agriculture? What do high school teachers expect of their principals? How do these views differ from the views of teachers about their programs? Are the variables of school size, tenure of teachers and principals, and previous experience of the principal as a teacher of vocational agriculture, and previous experience of the principal as a student of vocational agriculture, significant differences when compared to views held by teachers and principals regarding programs of vocational agriculture? The answer to these questions formed the basis for research conducted by the Department of Agricultural Education at Texas A&M University.

C. Data were obtained by use of an information form sent to 560 randomly selected teachers of vocational agriculture and to 200 randomly selected principals from schools in which programs of vocational agriculture existed. Responses were in terms of levels of agreement to statements about various aspects of the program of vocational agriculture. Significant differences were determined by analysis of variance and set at the 0.05 level of probability.

Findings are reported in three categories according to agreement or disagreement between teachers of vocational agriculture and their school principals. Where significant differences occurred they are reported.

Areas of agreement by both teachers and principals

1. Both teachers and principals agreed that a significant amount of the vocational program in vocational agriculture should be emphasized by giving a greater emphasis on the underlying principles of agriculture rather than training for specific agricultural occupations.

2. Teachers and principals agreed that students should be afforded the opportunity to work in vocational agriculture without regard to their academic background.

3. Both groups agreed that students who plan to obtain voca-

4. Teachers and principals agreed that students should be afforded the opportunity to work in vocational agriculture without regard to their academic background.

5. Both groups agreed that students who plan to obtain voca-

6. Both teachers and principals agreed that a significant amount of the vocational program in vocational agriculture should be emphasized by giving a greater emphasis on the underlying principles of agriculture rather than training for specific agricultural occupations.

7. Both groups agreed that teachers of vocational agriculture should be encouraged to work with students as a group in the community.

8. Both teachers and principals agreed that teachers of voca-

9. Both groups agreed that teachers of vocational agriculture should be given more opportunity to work as a group in the community.

10. Both teachers and principals agreed that a significant amount of the vocational program in vocational agriculture should be emphasized by giving a greater emphasis on the underlying principles of agriculture rather than training for specific agricultural occupations.

11. Both teachers and principals agreed that a significant amount of the vocational program in vocational agriculture should be emphasized by giving a greater emphasis on the underlying principles of agriculture rather than training for specific agricultural occupations.

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20. Both teachers and principals agreed that a significant amount of the vocational program in vocational agriculture should be emphasized by giving a greater emphasis on the underlying principles of agriculture rather than training for specific agricultural occupations.
Why Junior High Programs?

Alois H. Halcomb
Subject Matter Specialist
State Department of Education
Auburn, Alabama

The instructional program is supplemental with field trips, resource people, films, and other activities to make the course more relevant.

Our eighth grade course, CAREER GUIDANCE II, is a continuation of the seventh grade course. Since occupation of all kinds are explored, it is practically impossible to accomplish all this in one year. More emphasis is placed on job characteristics, skill requirements, educational requirements, and job opportunities. As in the seventh grade, simple shop skills are developed through the use of hand and small power tools in the shop.

The concept of career education is continued in grade nine which is entitled CAREER GUIDANCE AND BASIC VOCATIONAL EDUCATION I. Students study the employment opportunities and basic subject matter in sixteen instructional areas or clusters. These areas are: general farming, livestock production, crop production, agricultural supplies, general agricultural mechanics, metalworking, woodworking, machinery, building construction, power mechanics, electricity, agricultural products, ornamental horticulture, natural resources, forestry, and pre-professional agriculture. Since students are expected to choose one of the seventeen occupational objectives for special study during the eleventh and twelfth grades, teachers must do a good job in exposing students to all seven objectives. A thorough study of employment opportunities must be accomplished if the students are to become knowledgeable about jobs in the vast vocational area. The sixteen areas are further explored during the tenth grade, thus preparing the students for special study during their last two years. This specialized study may be provided by the local teacher, in an area vocational center, or by another vocational service.

As might be expected, approximately 80 percent of the instructional time is devoted to shop work. Field trips to resource people, and supervised practice experiences supplement the instructional program. Again, leadership characteristics are developed through PFA activities.

In conclusion, career education is emphasized throughout the agricultural education curriculum in Alabama junior high school programs. Through the gradual process of guidance, instruction, and practice, the student is motivated to make a wise selection of an occupational objective for further study and exploration. Teachers of agricultural education are well qualified to provide this necessary and essential guidance so desperately needed by the younger students. In many cases, the junior high school students take basic skills along with employment opportunities in Career Guidance I and II courses.

Small Animal Laboratory—Business

Small Animal Care is an educational program designed to prepare students for entry-level employment as veterinarians, pet shop salesmen, animal workers, animal groomers, humane society workers, laboratory animal assistants, and riding stable assistants. Traditionally, such training has been done in a local school level as a part of a co-op program such as agriculture. However, with the help of an administration that has a very broad concept of education that allows for specialization, a local industry that claims it needs over fifty qualified employees in animal care each year, and an abundance of facilities and equipment, now an animal care program can be taught in the high school level.

The main emphasis in the program is "education with an element of realism." It is realistic because 1) everything that is taught is based on behavioral objectives which the student will apply when they have school to begin work, 2) the related class, laboratory and work area are set up like a combination veterinary pet shop, grooming salon, and kennel, and 3) live animals are incorporated into the program. Students can earn 100, 25, 15, and 10 credits with animals without the experience of working with them unrealistically. Five dogs, five cats, 100 rats, 25 guinea pigs, and 8 tanks of tropical fish provide the necessary ingredients to make the program work. The program emphasizes the experience opportunity to experience a study "hands on education." Students are motivated to come in on weekends and over the holidays to care for the animals.

The program is offered in two ways. First, it is a natural agricultural subject in the urban area. Young people have always been interested in animals.

(Concluded on page 158)

High School

Mr. Penn, the instructor, demonstrates the proper procedure for administering medication to one of the school's dogs.

Kathie Kearn demonstrates the daily job of cleaning the animal pens and feeding the animals in the work area.

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(Concluded on page 158)
From the Book Review Editor's Desk...  

BOOKS TO BE REVIEWED

COMMERCIAL CATFISH FARMING  
By J. L. Temple  
Interstate Printers & Publishen, Inc. (1973)

GREENHOUSE MANAGEMENT FOR FLOWER AND PLANT PRODUCTION  
By Kenneth S. Nelson  
Interstate Printers & Publishen, Inc. (1973)

THE ADVANCE OF AMERICAN COOPERATIVE ENTERPRISES: 1905-1945  
By Joseph G. Knapp  
Interstate Printers & Publishers, Inc. (1973)

TRACTOR AND SMALL ENGINE MAINTENANCE  
By Arlen D. Brown  
Interstate Printers & Publishers, Inc. (1973)

EDUCATORS GUIDE TO FREE HEALTH, PHYSICAL EDUCATION AND RECREATION MATERIALS  
Edited by Foley A. Markle  
Educators Progress Service, Inc. (1973)

EDUCATORS GUIDE TO FREE GUIDANCE MATERIALS  
Edited by Mary H. Santonja and Joe A. Simpson  
Educators Progress Service, Inc. (1973)

APPROVED PRACTICES IN BEAUTIFYING THE HOME GROUNDS  
By Norman R. Hoover  
Interstate Printers & Publishers, Inc. (1973)

APPROVED PRACTICES IN SHEEP PRODUCTION  
By Elwood M. Sargent  
Interstate Printers & Publishers, Inc. (1973)

MODERN CONCEPTS OF FARM MACHINERY MANAGEMENT  
By W. Kennel  

FARM MANAGEMENT: PRINCIPLES, BUDGETS, PLANS  
By R. B. Harter  

INTRODUCTORY EXPERIMENTAL SOIL SCIENCE  
By R. R. Sabey  
Stipes Publishing Company (1969)

LAW AND COURT DECISIONS ON AGRICULTURE  
By N. P. Krutter and H. W. Hanah  

ENGINEERING APPLICATIONS IN AGRICULTURE  
By Winfield Bowers, Benjamin A. Jones, Jr., and Elwood F. Oliver  
Stipes Publishing Company (1973)

LABORATORY STUDIES IN FIELD CROP SCIENCE  
By W. F. Bear  
Stipes Publishing Company (1987)

If you feel qualified to review one of these books and desire to do so, write the Book Review Editor and he will send the book for review. Once reviewed, the book becomes the property of the reviewer.—James P. Key, Book Review Editor, Agricultural Education Department, Oklahoma State University, Stillwater, Oklahoma 74074

(Halcyon from page 156)

only vocational service providing the basic career information in a local school is the Teacher of Agribusiness Education.

When students complete the Career Guidance I and II courses, and have been exposed to the job opportunities through the study of the ninth grade curriculum, we in Alabama feel that junior high programs are serving their purpose.

THE AGRICULTURAL EDUCATION MAGAZINE

GROUND FAULT CIRCUIT INTERRUPTER INSTRUCTION  

W. F. Bear  
University of Minnesota

What is the latest in the electrical instruction? Shocking as it may be to you, it is the ground fault circuit interrupter (G.F.C.I.). The question has been answered, but is your G.F.C.I. up to date?

W. F. Bear  
University of Minnesota

"Let-go" current for man is considered as no greater than 5 m.A., therefore, Class A G.F.C.I. units are designed to function at this value.

G.F.C.I.-HOW?

If a circuit is operating properly, the "hot" and "neutral" conductors carry the same current. The primary components of the G.F.C.I. are a differential transformer, an amplifier, and a fast-acting circuit breaker. Output voltage necessary to activate (trip) the G.F.C.I. is obtained from the differential transformer whenever current through the ungrounded wire is not equal to the current in the neutral wire (as caused by current flow from the ungrounded wire to ground).

This differential transformer output voltage created by the fault current is amplified and used to actuate the circuit breaker and open the circuit whenever the current exceeds a predetermined level.

G.F.C.I.-WHERE?

G.F.C.I. can be installed in the main conductors of a service entrance to interrupt all power if a fault occurs.

G.F.C.I.-DEMONSTRATION

"What you can't SEE won't hurt you!" is a poor philosophy with electricity. To help you SEE these dangerous
Opportunities in the Turfgrass Industry

W. F. Campbell and G. A. Long
University of Utah

PROFESSIONAL

Individuals in this group may teach, do research or extension work in turfgrass. The professional may do experiments to improve turfgrass quality through breeding, environmental control, and cultural techniques. Other duties may include editing information leaflets, pamphlets, and bulletins on turfgrasses, or making presentations on professional and extension work.

In an industrial company the primary jobs are those of conducting research, demonstrations, and/or sales promotion. Individuals in this group should have completed a Ph.D. degree, which requires about seven years of collegiate study.

MANAGERIAL

A golf course or athletic field superintendent supervises and coordinates the activities of workers on the course or athletic field. He is responsible for improving and maintaining the turf without interrupting play. In addition to supervising the turf, he is responsible for hiring and training employees; keeping employee records; preparing budgets and reports; purchasing materials and equipment; and maintaining equipment. Much work of these individuals is outdoors. During the growing season, he may work 10 to 16 hours a day. A two-year professional school course is highly desirable training for this job. Many men attain supervisory positions in two or three years, and begin supervising and managing golf courses.

With the turf industry growing so rapidly, what types of training are available to acquire proficiency in this field or associated businesses? Who are the special interests, aptitudes, and physical abilities needed for employment in turf occupations? A knowledge of education, training, and experience are needed for entrance and advancement in such occupations.

Landscape CONTRACTOR

The landscape contractor is usually self-employed. He establishes and maintains turf and strawberry on various properties according to the landscape plans. He estimates costs, then bids for the jobs. In his work he supervises and coordinates other clerks, and tries to establish the landscapes around homes and businesses. He may make decisions regarding the establishment of the plants and what cultural practices, such as type of soil, amount and grade of fertilizer, and type of equipment needed to establish the plants. The superintendent is responsible for ensuring the work is done correctly. He must see to it that the equipment is properly maintained and used.

During the winter the landscape contractor sells his services by renewing old contracts and contracting potential customers. He also may contract for snow removal. His success depends upon their initiative, experience, and ability. A two-year course in ornamental horticulture and landscaping provides valuable training for such jobs.

SERVICE WORKER

The service worker prepares the golf course, field or race track for various sporting events. His work is primarily in the maintenance of the golf course or athletic field. He may perform any number of tasks such as 1) mowing the turf with power mowers; 2) operating irrigation equipment; 3) smoothing the area with a power and hand equipment; 4) applying fertilizers and pesticides; 5) operating and maintaining mowing and fielding equipment; and 6) operating snow equipment and maintaining the large areas of open space.

Service workers are needed to maintain turf and strawberry on various properties according to the landscape plans. He estimates costs, then bids for the jobs. In his work he supervises and coordinates other clerks, and tries to establish the landscapes around homes and businesses. He may make decisions regarding the establishment of the plants and what cultural practices, such as type of soil, amount and grade of fertilizer, and type of equipment needed to establish the plants. The superintendent is responsible for ensuring the work is done correctly. He must see to it that the equipment is properly maintained and used.

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Agricultural Education Magazine
OBJECTIVES—A RETURN TO REASON

Richard K. Hill
Vocational-Technical Education Division
Virginia Polytechnic Institute and State University
Blacksburg, Virginia

Behavioral objectives have come under increasing attack lately. In the September, 1971 issue of The Agriculture Education Magazine, Bill Vice, director of the Virginia Vocational-Technical Education Division, presented a list of what he believed were the seven most common behavioral objectives. They were:

1. The student will learn to do something.
2. The student will be able to do.
3. The student will be able to use.
4. The student will be able to identify.
5. The student will be able to analyze.
6. The student will be able to apply.
7. The student will be able to explain.

Vice concluded with the statement, "This is an out-of-school setting. It is not what the student does in school. It is the student's ability to do for himself as an employee of his school system."

This point was well taken, but it is not the entire story. What is needed is an objective that is both specific and measurable. Behavioral objectives are very similar to objectives in other phases of education. They are intended to provide a clear statement of what is expected of the student and how to measure the student's performance. Behavioral objectives are particularly useful in providing a clear focus for curriculum development and in setting clear expectations for student achievement.

A good behavioral objective should:

1. Be specific: It should clearly state what the student is expected to do.
2. Be measurable: It should provide a way to measure the student's performance.
3. Be attainable: It should be realistic and achievable for the student.
4. Be relevant: It should be relevant to the student's needs and interests.
5. Be time-bound: It should specify a time frame for completion.

Behavioral objectives have several advantages over other types of objectives:

1. They are concrete and specific, making it easier to assess student progress.
2. They are easily adapted to different learning environments and settings.
3. They are flexible and can be modified as needed.
4. They are easier to understand and communicate to students.

Behavioral objectives are a valuable tool for setting clear expectations and guiding instruction. They provide a clear focus for curriculum development and help ensure that students are meeting their learning goals. However, it is important to remember that behavioral objectives are just one part of a comprehensive approach to education. They should be used in conjunction with other strategies to provide a well-rounded education for all students.
Become established in the com- munity. The major goal in rural, teaching, and farm-related work is to prepare beginning teachers and most successful experienced teachers agree with this ad- vice. The agriculture teacher should design an agricultural program to serve the educational needs of all students in the community. As he becomes established in the community, he implements the program over a period of years, an activity-oriented program to help each student gain the technical competencies to perform the job while gaining the ability to satisfactorily relate to other people.

WHAT CAN THE TEACHER DO?
As stated, the established agriculture teacher with years of service to the community can account for his success over the years by looking back to students. What can the new teacher do to ensure that his program in development, teaching and other related activities will meet the needs of the community using all the resources, especially human resources. Consider the following "time tested" suggestions which can be implemented provide the structure for a program that will establish and maintain most students procedures used by school admin-istrations, citizens groups, or former students.

- Develop an agriculture education program that will serve the educational needs of all students planning to enter an agricultural occupation.
- Manage the community in planning the instructional program. Use an advisory committee.
- Involves students in course planning.
- Recognize that students "learn by doing." Extend the activity-oriented program beyond the classroom walls to the community.

-Vocational education in agriculture must make a significant contribution in helping each student to choose, prepare for, enter into, and advance in an occupation.

Evaluation is a continuous process that follows immediately the implementation of a plan of instructional activity. Educational activity should be designed to provide students the knowledge for job entry and to help the student develop the personality traits needed to succeed in their role. When this is achieved, a good accounting can be made of the teacher's impact.

(Please note: This is an excerpt from a larger document.)

TROPICAL CROPS MONOCOTYLEDONS 1

The two-volume set is not new, having been originally published in 1968, but it has been reprinted with an introduction and additional material. The first volume covers the monocotyledonous crops grown in the tropical regions of the world, while the second volume covers the dicotyledonous crops. The set is an excellent resource for anyone interested in tropical agriculture, as it provides a comprehensive overview of the crops grown in these regions.

TROPICAL CROPS MONOCOTYLEDONS 2

The second volume of the set is similarly comprehensive, covering a wide range of monocotyledonous crops. It includes detailed information on the cultivation, uses, and economic importance of each crop, as well as information on their cultural requirements and pests. The set is a valuable resource for researchers, educators, and students interested in tropical agriculture.
Stories in Pictures
by Richard Douglass

Two Indiana Vets check signals for the week's work on Monday morning. Mr. Phillip Schmidt of North Posey High School consults with his student apprentices, Harvey Richner. Scenes like this are common in Indiana where 14 ag education upperclassmen have been placed for ten weeks of summer experience in the local ag departments in order to learn about the summer program. Dr. W. H. Hamilton, Purdue University, visits each of these apprentices three times during the ten weeks. (Photo from Bill Hamilton)

A TIP TO MAKE LIFE MORE ENJOYABLE. Several Nebraska instructors have custom-fit their overhead projectors into an audio-visual cart. Credit goes to Ray Becker, Dennis Czech and Wayne Ober, Nebraska Educators. (Photo by Richard Douglass)

INSTRUCTORS ALSO LEARN BY DOING. South Dakota State University staff member, Gary McVey, provides lots of hands-on in-service practice in the Ag Mechanics area. (Photo supplied by Gary McVey)

NON-WARPING WELDING TABLE. This welding table design is being observed in many 4-H shops. It never has to be oiled and it always fits. Minimum surface grinding is necessary to restore the surface. A metal deflector is usually installed under the table to protect the welder's hands and feet. (Photo by Richard Douglass)