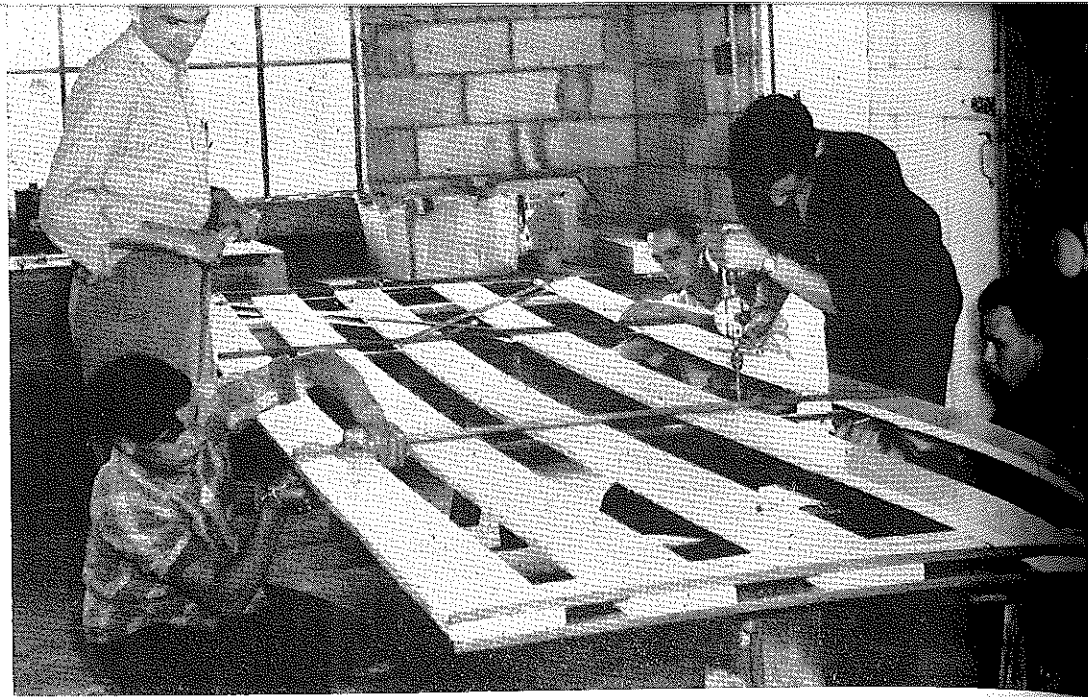


Pictures of the month...

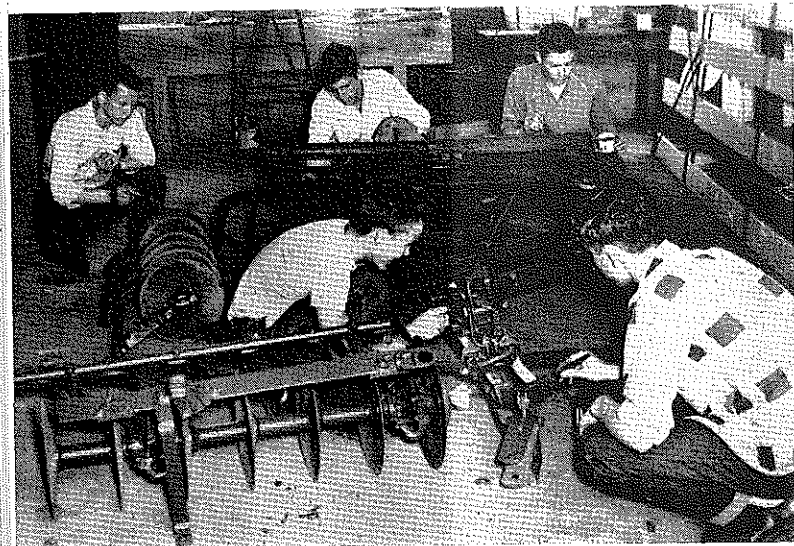
A contest open to all
teachers of Vocational
Agriculture and farm
veterans



"Building Farm Gate in Farm Shop"

Robert D. Walker, Teacher
Thompsonville, Illinois
Camera: Kodak 35, Plus X film, SM flash bulg.

↑
FIRST PLACE



◀ "Repairing Farm Disc"

Robert D. Walker, Teacher
Thompsonville, Illinois

"Two Utah Chapters Broadcasting"

D. M. Clark, Teacher
Montrose, Colorado

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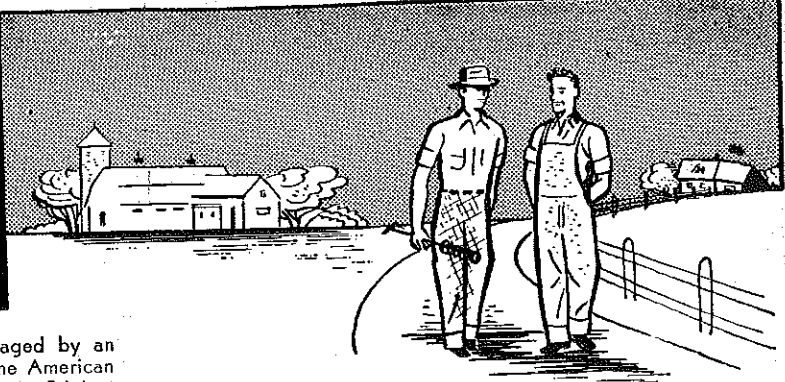
NUMBER 3



North Carolina FFA Camp Pier,
Lake, Elizabethtown, N. C.

Featuring . . .
Starting the New School Year

The Agricultural Education Magazine



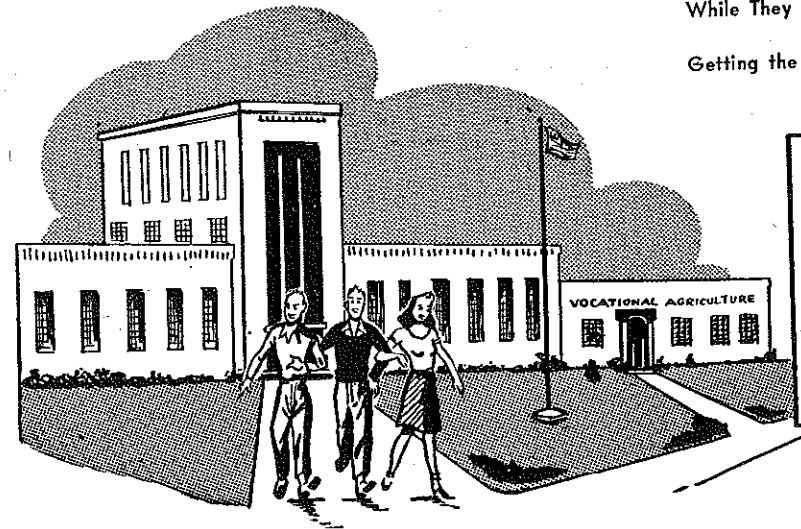
A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Interstate Printers and Publishers, Danville, Illinois.

THE INTERSTATE DANVILLE, ILL.

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Editorials

Guest Editorial . . .

H. S. LITTLEPAGE, Superintendent, Carlinville Community Unit School District, Carlinville, Illinois

SEPTEMBER is, in all probability, the month of greatest opportunity for the teacher of vocational agriculture, as well as for his co-workers in the school. This beginning month of classroom activities and of first active contacts with other staff members and non-ag students is the key period in determining to a large extent the level of success and accomplishment for the school year. Right relations established early with all personnel of the school organization are so important that it would seem profitable to give special thought to the matter at this time.

The teacher of vocational agriculture enjoys certain definite advantages over his co-workers in some other fields—particularly the academic area. Generally, even a new teacher in the Ag position will have been on duty during the summer months. He will have had an opportunity to meet and establish cordial relations with the administrative staff, the boys of his department, many other students and some teachers.

It has been my good fortune during several years of administrative experience to have been associated with several superior teachers of vocational agriculture. In attempting to analyze the factors important in the success of their own departments, and in their contribution toward making a success of the entire school program, it seems to me that it was due in very large measure to the fine relations they were able to establish with the rest of the school family. I believe it is possible to list several factors important in this.

The successful teacher of vocational agriculture will be aware of the advantages which he enjoys, and be grateful for them. In addition to those mentioned, he more often than not enjoys a definite salary advantage over other staff members. This is usually explainable and defensible from a standpoint of the time requirements of the job. However, this and other possible advantages are sometimes "sore spots" in the area of faculty relations.

Being aware of his favorable position, the successful vo-ag teacher will avoid taking advantage of it. He will go out of his way to establish cordial and friendly relations with other staff members. If some show signs of resentment and jealousy, he will try to be kindly understanding of the basis of such feeling, and show interest in helping to secure for his co-workers some of the good things which he enjoys.

Because he is in a somewhat favorable position he will make it obvious that he is willing to do even more than his share of the special jobs about the school. He will find ways for his department to be helpful to other departments. His farm shop, and the shop boys who are handy in making things of value to other departments of the school, can be helpful in establishing friendly relations.

He will be as thoughtful as possible in planning special field trips to avoid inconveniencing other teachers. He will encourage his boys to cover work missed in

(Continued on Page 71)

A Good Start Wins Many a Race

A NEW SCHOOL YEAR! For the teacher in vocational agriculture this may not have the same meaning that it implies for the teacher in the academic subjects who has just taken up residence in the community or who has resumed residence again after being away for the summer. Ordinarily the Vocational Agriculture Instructor has been *on the job* at least since the first of July, if new in the community, and throughout the summer if continuing in the same school.

In contrast to the teacher in other subjects the Vocational Agriculture Instructor has been on the farms and in the homes of his pupils before school starts. He knows in advance of the opening day of school most of the pupils who will make up his vocational classes, their needs and problems in a general way at least, and he has pretty well in mind the facilities with which he will be working.

Even with these advantages in starting off a new school year, the first day and week of school is significant in terms of the accomplishments to be made in the year ahead. Pupils get their first impressions of the program, the teacher and their own opportunities and responsibilities during these first days. A new teacher in a new department can get off to a good start or he can create problems to be overcome later by the manner in which he begins the year. Unless the teacher is prepared to guide his pupils into useful, challenging and important learning activities which move along at a rate that leaves the impression that there is more to be done than time will allow, he can rest assured that the pupils will see to it that something happens, much of which may not be in the best interests of desirable learning or a proper learning environment. Unless the teacher is prepared to keep a few "jumps ahead" of the pupils he faces the prospect of the pupils doing the "jumping" first in directions which lead to confusion and bad habits.

Then there is always the important problem of establishing or re-establishing the most effective relationships with the administration and the other members of the faculty. It does not pay to let these relationships work out their own course as the year progresses. Understandings concerning many aspects of relationship must grow or develop as needs arise it is true, but it is never too soon to get started on becoming aware of the other fellow's job and helping him to understand yours. The teacher in vocational agriculture has an excellent opportunity to initiate proper relationships with other faculty members due to his greater familiarity with the community and its human and natural resources. He can make known to other teachers in many ways the fact that he can and is willing to assist them as they need to increase their understanding either of particular pupils or the resources which the community offers to them. Such initiative on the part of the Vocational Agriculture Instructor is almost certain to pay off when later on he desires some favor or cooperation from others.

Are you getting off to a good start?

Establishing and maintaining satisfactory school relationships

CLARENCE J. HEMMING, Vo-Ag Instructor, Alexandria, Minnesota



C. J. Hemming

ARE the aims and objectives of vocational agriculture consistent with the philosophy of the school? Are they accepted and supported by the administration? How can the school best be informed of the agricultural program? Will the administrator encourage the instructor to engage in the many activities which are essential in a successful vocational program?

These and many other like questions are cause for concern to the instructor entering a school system for the first time and to one in an already established system. Whether the instructor is experienced or a new graduate, the same problem of administrative relationships are his to meet and to attempt to solve.

The Administrator, the School, and Vocational Agriculture

The superintendent in the modern community school is charged with the financial and educational management of the school system. It would be well for each teacher to study the over-all duties and responsibilities of the administration that he might better understand past, present and future administrative policy.

Some of the basic facts which bear directly on the relationships between the agricultural program and the administration are:

1. The superintendent is responsible to the Board of Education for the over-all school program.
2. The curriculum of the school includes all of the experiences which the students participate in to attain the objectives of the school.
3. The teaching staff and the integration of its activities determine to a large degree the success or the failure of the school.
4. The agriculture program is one segment of the school curriculum.
5. The school operates on funds raised through the taxation of property within the school district, and supplemented by state and federal aids.

These statements may seem trite. However, a majority of the difficulties experienced in establishing satisfactory relationships with the administration arise from misunderstandings or the lack of a satisfactory concept by the agricultural instructor or the administrator. There would seem to be small room for disagreement on the above statements.

To understand areas of differences and to provide a sound basis for planning a program for improved relation-

ships, the following assumptions may prove helpful.

1. The Board of Education and its administrative officers do at present or may be led to support the agricultural program.
2. Superintendents generally understand the aims and objectives of vocational agriculture.
3. Superintendents generally are not familiar with the accepted and tested procedures necessary to attain the desired aims and objectives.
4. A lack of information or understandings regarding the activities of the agriculture instructor is more common than is complete understanding.
5. Some pressures will exist from within the school and from without which may tend to hamper or disrupt a complete program of activities in vocational subjects.

From the statements regarding the administration and the assumptions in regard to the agricultural program, the instructor may be able to identify areas wherein an understanding might be achieved.

The problem remains of developing an approach usable in the promotion of complete understandings, and which will serve as a guide for the instructor as he makes requests relative to the program. Two viewpoints which may be used to explain and to justify the program are:

1. The program should be planned and executed with a thorough understanding of the school, the staff, and the community in which the instructor works.
2. The program should be planned and executed with a thorough understanding of the teaching situations and the educational values as they affect the individual students.

Some amplification of these statements may be worthwhile to point out their implications and their potential force.

Need for Understanding of the School, the Staff, and the Community

The good teacher will become thoroughly acquainted with the school, its curriculum, the personnel, the existing facilities, the financial structure, and the school's major problem areas.

The agriculture instructor will, by a complete knowledge of the school curriculum, realize how well his course of study fits into the entire school program. As agriculture instructor, one needs to remind oneself that agriculture is but one segment of the program to provide learning experiences for the high school, out-of-school youth and adult students. This is not to imply that what the instructor is doing is not important but that he should keep his viewpoint broad enough to recognize the entire school program and to adapt his program to it

and to be able to see how the school program can be adapted to fit the vocational program which he is responsible for.

The instructor should become interested in the guidance program, particularly as it affects farm youth. The guidance personnel will welcome the intimate knowledge which a good instructor develops of the individual student, his ethnic and cultural background, and of the home situations in the course of making supervised farming visits.

The personnel of the school deserves serious study and consideration. It must be borne in mind that each instructor is making his or her contribution to directing the learning experiences of the farm youth enrolled in agriculture. Our primary concern is with the total learning experiences which the school is providing to the end that desirable changes in the individual shall result. The school staff is the medium through which the students are guided in these experiences. If we subscribe to the philosophy that we teach the whole individual, we must in all honesty know personally the staff whom the students contact.

Know Other Courses of Study

The instructor should know in a general way the courses of study of the various fields of study. There is nothing incoherent with the concept that the agriculture instructor should be as conversant with the course of study in the social sciences as is the concept that the social science staff should be familiar with the course of study in vocational agriculture and its aims and objectives. If one is not willing to extend his knowledge and understandings to other fields of education in the school system, one has no right to complain if and when the staff members concerned fail to understand the agricultural program.

A method which has the advantage of increasing the agricultural instructor's point of view as well as that of the other instructors is to review the objectives of each of the subject matter fields. It will be surprising to all to find how nearly alike are the objectives of many of the courses.

If one knows the staff members, their methods and their philosophies, one will be better able to guide the student and to counsel with his parents. The instructor will find a means to extend information to the staff about the agricultural program. Consequently there will be fewer misunderstandings and less adverse pressures to cause the instructor and the administrator concern.

Know the Facilities Available

A knowledge of the facilities available at the school is important in promoting good administrative relationships. Knowing the general school space problem, the equipment available, and the responsibilities for such equipment will aid the instructor to view with the proper perspective the requests which he might make. This does not mean that because the mathematics classroom is poorly lighted and poorly ventilated that requests for the improvement of the agricultural rooms should be delayed or neglected. If all the instructors are

familiar with the total school needs their requests can be coordinated more effectively.

Generally the financial aspects of the school are the direct responsibility of the administration. Individual departments within the schools are more and more becoming involved in the formulation of the total school budget. Even where the budget is not known to the staff, the knowledge of the fiscal problems and the tax structure of the community may well improve administrative relationships.

The position of the agriculture instructor is unique in the school in that he, more than anyone on the teaching staff, has the opportunity and the responsibility to know well the community which the school serves. His contacts with the farmers, farm youth, and businessmen while engaging in supervised farming visits and community relations make possible a community awareness. The administrator will find this to be an important source of information useful in the management of the school if the instructor will demonstrate this awareness of the community and its resources.

The instructor who is new to the community will rapidly accumulate this information through community surveys and individual contact. He may well demonstrate his interest in the community by contacting his administrator to secure whatever information the latter may possess regarding the school community. A sound working relationship may well be the outcome.

Understand the Teaching Situations and Their Educational Values.

Vocational agriculture uses a course of study based on the needs, interests and abilities of the individual. If the instructor's proposals for additions and changes, requests for financial support and for the approval of activities are based on realizable educational objectives for the individual students, the overall recommendations will usually be accepted.

A good agricultural instructor regards the program of vocational agriculture as being more important than his personal interests. Too often requests and proposals are submitted for approval in a manner tending to emphasize the instructor's personal desires as their justification. The effective program is based on activities whose aims and objectives are vocational. Recommendations should emphasize the needs and desires of the student, the school and the community and the results which are to be achieved in meeting those needs and desires.

Problem Areas

Adequate Facilities. A vocational agriculture department has a need for relatively large class rooms, a farm shop, and for specialized equipment. Much of this equipment is quite expensive and for most effective use must be provided for the individual student. Some considerations which may aid in proposing the departmental needs include:

1. The administration should be kept informed of the importance of agriculture in the school community. The instructor should provide peri-

odic reports giving in a condensed form the basic organizational information regarding the farming industry in the community. Each department is accumulating survey data of the farms in the area. Summaries of this information should be provided to the administrator.

2. New expenditures should be justified in terms of the aims and objectives of vocational agriculture. The questions to be answered should include: *Will it mean a better trained individual? Will it result in more efficient farming for the community? Will it aid in establishing the farm youth and adults in farming?*

This type of reasoning will be much more effective and meaningful than the all too common "I would like" approach. The instructor is in reality selling a product. He is not selling himself, but the vocational program. The administrator has salesmen at his office everyday. He must exercise discretion in his purchases. If the product is useful (will achieve results) and its cost is not out of proportion with the available finances, its purchase will likely be approved. The instructor must sell the program. There is a product in terms of end results to sell.

3. Expanded facilities like the course of study are justifiable to the extent that they meet the needs and the interests of the students who are to be served. The needs and the interests of the all-day, out of school and adult students are the basis by which the administrator may judge the worthwhileness of the program requests.

The above statements do not mean that until the facilities are overcrowded, or the equipment outmoded and lacking that the proposed additions should not be considered. On the contrary, the needs and the interests can be anticipated and

measured. The effect of the departmental facilities on the instructional programs is the significant factor to consider. Seldom where the need is clear and the results consistent with the educational objectives are proposals for expanded facilities not given serious consideration.

It should be recognized that even though the need is apparent and the results worthwhile, it may be necessary for the school authorities to deny the request. A review of the statements and assumptions given earlier in this article will help the instructor to study and evaluate the local situation. By such study and evaluation he may gain a perspective which clarifies the reason why the request was denied and he can proceed to formulate an approach which will assure consideration and approval at some future date.

Time allotment and teaching load. The effective program in agriculture is contingent upon the individual farming programs out of which is built the course of study. An important activity of the instructor is the supervision of the individual farming programs. This supervision can only be performed on the students' farms. Thus it becomes essential that the scheduled classroom hours shall permit the instructor adequate time for such farm visits.

Recent studies have shown that there is a marked improvement in the total farm programs of the students if they receive frequent visits. The optimum would be considerably more than the three or four visits which are usually given as minimums.

In arranging the programming, if the instructor can demonstrate what the possible results of frequent visits will be, the administration will make every effort to provide a maximum of time for visitation and other community responsibilities.

There will be situations in which a limited staff may make it necessary to
(Continued on Page 60)

Pupils learn to prepare lawn and at the same time promote good relationships with the administration and school. Pittsboro Vo-Ag Dept., North Carolina.
(Photo, courtesy of J. K. Coggin)



Starting a new agricultural department

JAMES WILLIAMS, VO-AG Instructor, Lompoc, California



James Williams

department going. However, there are certain advantages and disadvantages in establishing a new program in the schools.

Advantages and Disadvantages

In starting from scratch there is nothing to live up to and nothing to live down. If a teacher goes into a school where an outstanding program has been in operation, it will probably prove very difficult to "live up to" the things his predecessor has done. However, in starting a new program, a teacher does not have to match the preceding program. The pace can be set by the instructor.

In starting a new department, there is "nothing to live down." All vo-ag programs in all high schools are not successful. The procedures and practices of the former teacher in an established department may have been such as are not conducive to success. Often these are the causes of failures. To step into a school where the program is on the "rocks" would be difficult, but in starting a new department, there is "nothing to live down."

In a beginning program, *every thing you do counts*. If the students win a few ribbons at the County Fair, prune an orchard, paint the football bleachers or plant a co-operative vegetable garden, it will be noticed and appreciated by the people of the community. They would not take it for granted or possibly expect more, as would be the case in a department which had already been established. In a new department, every activity in the program will stand out and can be a credit to the instructor.

Probably the advantages far outweigh the disadvantages in starting a new department; however, there are certain disadvantages to be encountered. Possibly the classroom and other facilities will be poor. One corner of a basement may be the classroom, or one end of the bus garage may be your only facilities. It will take some imagination and initiative to interest the students when they view these surroundings. The prestige of the Ag department is not established because of its beautiful facilities.

In a beginning department there is no teacher to leave behind all the textbooks, bulletins, charts and other instructional material needed. Much time will be necessary in planning and ordering such material and even then, much of the

THERE are no exact tricks or miracles that will work every time when it comes to starting a new department of agriculture in a high school. Many of the basic principles for running a vo-ag program will apply to starting a new department as well as keeping any

material will be lacking that is found in an established department.

In starting a new department, there is the disadvantage of having no instructional material on hand. The classroom and shop facilities may be practically nil or very inadequate.

Sell Your Program

There are three other main disadvantages in starting a new department. They will be classed as disadvantages, by the writer. However, it will be left to the reader to decide as to whether they are really disadvantages. 1. The school board, the administration, the students, and the people of the community must be sold on a vocational agricultural program in their high school. For your consideration, here are some of the steps used in selling the entire program:

The School Administration: When the teacher is interviewed and hired for the job he must sell himself to the administration. Almost immediately the teacher should survey the community and decide on a course of study for at least the first year. The superintendent, principal, and the school board are anxious to know what this new venture will offer in the way of instruction. The alert teacher will have this ready as soon as possible. The survey can be made by obtaining from the County Agricultural Commissioner or Agent a copy of the annual crop report, which will give the acreage, yield, and dollar value of each crop and class of livestock produced. From this information a satisfactory course of study can be outlined for the first year.

In selling the program to the administration it is not a good policy to spend immediately every dollar the superintendent has allowed the department. A bit of thrift will go a long way in selling the administration. Do not sit down and order 20 copies of every book that you think you will ever need. These agricultural texts are expensive—go easy. Be sure the book is needed before you order. This advice applies not only to books but to all instructional material. A large percentage of your classroom instructional material can be obtained free from the state college of agriculture and many other sources. Make use of this material, thereby reducing your instructional costs. Assure the administration that you have a sound course of instruction to offer in their new agriculture course; do some sound and logical planning before spending too much money on instructional material. This is the first step in selling the principal, superintendent, and school board on a department of agriculture in the high school.

Selling the Students: If the new department is housed in the basement, the corner of a classroom, or in the bus garage, it may be difficult for the teacher to generate much enthusiasm; however, enthusiasm must be generated or the new department is doomed. Nothing is so catching as enthusiasm and the burden of creating this atmo-

sphere rests on the shoulders of the teacher. There is much to be enthusiastic about. Starting the Future Farmers of America Chapter will mean the election of officers, leadership training, various contests, fairs, fund raising campaigns, banquets and recreational activities. But first of all, be zealous about selecting projects and getting a home project started; and be zealous about each unit of instruction. The student is the most important part of your public relations. Sell the student on the program and a large share of the salesmanship work is finished. During each day bear this in mind—teach those students as though next year they will be on the school board (possibly they will). The student is not fooled—he must carry something away from your course. He must be able to look back and put his finger on the things he learned in the vocational agriculture class. This does not mean day to day drill in the classroom. The community is your laboratory; make sure you use it. The student will like it and consequently learn more. On many units two days per week can be well spent on field trips. Study the unit in the books and bulletins, and then go out in the field and see how the farmers themselves are doing it. The student must be sold on the program, so it must be interesting. The driest unit in agriculture can be made interesting with a little imagination and initiative.

Future Farmers of America: The F.F.A. program can be the key to a successful vo-ag department. It can be the frosting on the cake of instruction. Get it organized and put dignity into the Future Farmers organization. How can dignity be established? Use some care in selecting the students for agriculture; get some publicity in the papers; get some Future Farmer's names in the paper, thereby letting them get some favorable comments from their friends and parents. Then they will start to work. Get this publicity by doing a few things and doing them well. Prune an orchard, grow a vegetable garden on school property, plant some vacant lots around town, get some fund raising campaigns going. All these things must be done well. Win a contest or two. Do not try to enter all the contests that are available or take on too many other activities. Such a "big fire" can be built that all the teacher's time will be spent in "carrying wood for the fire." Do not let these activities and contests get out of control. After your students leave your class and are on the school board how will they evaluate their instruction in vocational agriculture? They may recall only the activities, contests and fairs.

Remember, a teacher must establish dignity in the department and gain the respect and interest of the student and if this can be accomplished by winning a contest then the time spent in winning this contest cannot be questioned. The student must be sold on vocational agriculture or a new department is doomed to failure. It can be sold by an enthusiastic teacher if he uses all the "tools" available in selling the program.

Selling the People of the Community: For a successful, well-rounded program the community must be sold on a voca-

(Continued on Page 67)

Color conditioning in the farm shop

CLINTON D. ZOLLINGER, Vo-Ag Instructor, Kaysville, Utah

DURING the past two years, I know of no one factor that has increased the efficiency in our agricultural school shop more than that of color conditioning.

The problem of color is very much related to light. For years interior lighting has had to play the role of an inadequate substitute for sunlight and natural light. We are beginning to realize that color has a major role to play with and without artificial lighting. In recent years illumination specialists and educational authorities have been working with light which is in competition with natural light. Proper illumination aided by color conditioning of schools and their individual equipment make school surroundings interesting, tasteful, and in general, improves the morale of school children. Whether we realize the fact or not, color and light affect us during all of our waking hours. We react to color displayed by light every minute of the day.

Most of us are aware that the farmer's bull will react violently to most anything of a red color. Also that for most people a day in the country among the works of nature does more to relax and rest the individual than other forms of relaxation. Doctors frequently prescribe to a nervous patient some such treatment as this: "My advice to you is pack your bag and go to the country or mountains for a week." After a hard, bleak, snow-filled winter, nothing is so inviting or interesting to see as nature's own recovery from the wet, cold snow. Nothing is more pleasant to the eye than the fresh, interesting colors of grass, trees, shrubs, and flowers in the spring.

Experts in color conditioning find that the more "man-made" surroundings can be made to appear like that of nature in its splendor, the more people will accept their recommendations of color conditioning. Have you ever found gaudy colors, glaring surfaces, or drab areas in the works of nature, except where man has made them so? Certainly not.

Color conditioning in a shop may well follow nature's color conditioning with excellent results. Some of the remarkable results that industry has obtained in the use of color dynamics are improved morale, reduced absenteeism, and greater efficiency in production.

Professor J. K. Coggin, Professor of Agr. Education, University of North Carolina is a pioneer in color conditioning of school shops. In June of 1950, shop teachers of the Northern part of Utah were able to have Professor Coggin direct a work shop at Davis High School Farm Mechanics shop. Professor Coggin worked in connection with Pittsburgh Paint Company, one of many paint companies cooperating with industry in the development of color conditioning in industry, to develop a few standards for high school shops. These standards have been tested and are being tested in many parts of the country. These results were ably and successfully accomplished at this conference.

After this work shop conference the

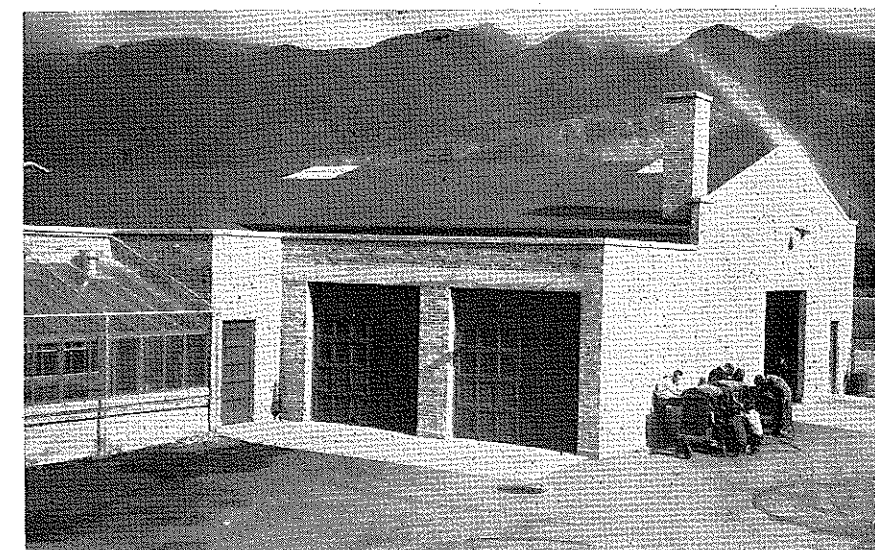
Future Farmers and their instructors at the Davis High School decided to follow the many recommendations given by Professor Coggin and the shop teachers of the Northern Utah schools. As our vo-ag building had only recently been completed, we felt that these changes would certainly improve our new facilities. Machinery was rearranged, ceiling and walls were repainted, and all equipment was painted according to standards set up at that time.

These color standards were as follows:

- I. Shop, machinery color markings
 - A. Buff* (focal) all edges of table tops, ground surfaces of bases, necessary reflective areas to increase light at places of work.
 - B. Yellow* (focal) all adjustable levers, adjustment bars, screws or operating controls.
 - C. Orange* (focal) inside of switch boxes or controls, electrical outlets, and in combination with black for extreme caution, slippery surfaces and moving equipment; also on all guard edges.
 - D. Green* (vista) main body of equipment — All non-operative parts of equipment and machinery.
 - E. Red - Emergency* equipment — red band back of fire extinguishers, first aid cabinet.
- II. Walls and wall fixtures and cabinets, ceiling beams and doors.
 - A. Wall and cabinets sprayed with a light pale green color using a washable paint—semi-gloss finish.
 - B. Ceiling, beams and doors—egg shell white — washable. Two coats used over a primer.
- III. All machinery and equipment have the same new basic green appearance.

*Pittsburgh Paint Co. (Colors are trade names.)

A view of the building occupied by the Davis Vocational Agriculture department, Kaysville, Utah, showing the farm shop portion. The department has grown from one teacher to four and from a program housed beneath the stage in the high school building to the very fine shop space shown here.



ance. Before color conditioning, each machine had its basic color from blue to bright red. We own an old bench saw (Wallace 8-inch) which is 27 years old. After reconditioning, lowering, and repainting, this saw looks like new.

IV. Use of focal yellow and orange adds just enough color to make a shop look interesting, "worked in" and yet tidy and new. Just as in nature, a yellow flower bed bordering on a green lawn sets off the lawn, so does yellow and orange in machine painting. It is interesting to see how much easier it is for adults, young farmers and future farmers to operate machinery when operating levers are set off by a pronounced color such as yellow.

V. Color conditioning aids in longer machinery and tool life and in better house cleaning. Students take more pride in their work, and are more considerate of tools and equipment. House cleaning is much easier. It is easier to keep a painted object clean. Areas where dirt accumulates should be painted a light color. This will aid janitor and students in better cleanliness.

VI. Last, but not least, color conditioning promotes safety in the shop, makes students safety-conscious, and improves the morale. The hardest job I have is to get students to leave the shop, whether they are F.F.A., Young Farmers, or adults. The past two years has brought visitors from Germany, Iran, Egypt, Japan, Canada, Hawaii, the Philippines, and many states of our U. S. A. The universal comment has been their approval of our color dynamics in the shop.

The use of scientifically arranged color schemes has been found to have the effect of reducing glare, making for more pleasant working conditions, paying dividends in better eyesight, and better adjustment of pupils to surroundings. Safety measures are promoted, and house keeping problems are diminished.

Certainly then the efficiency of the agricultural shop has been increased.

It is interesting to note that many of (Continued on Page 70)

Improving student behavior

MARSHALL J. SCOTT, Teacher Education, University of Illinois



M. J. Scott

HOW CAN you make the "little devils" behave? This question or a similar one appears often in the minds of teachers. It is a particularly baffling problem for many beginning teachers. The answer may determine whether a person will remain in teaching or be

successful and happy in his work if he does continue in the teaching profession.

The question is too complex to answer satisfactorily in a brief discussion. There are, however, some basic principles which serve as a guide in answering questions which arise in particular situations. The purpose of this article is to indicate some of the factors in the total environment which affect student behavior patterns and to describe more fully the factors which beginning teachers can sometimes change.

Discipline is a term often used in connection with student behavior. Since the word *discipline* is used indiscriminately and often in the negative sense, it is not used in the title of this discussion. The term *student behavior*, on the other hand, is a broad term which includes student attitudes, values, habits, and actions. Student behavior is a result rather than a cause. For example, student boredom or frustration may develop into disciplinary problems. However, this is only one of many causes of poor student behavior. The total situation or environment affects the present and the future behavior of students.

Some of the factors in the total environment which may affect student behavior are as follows: teaching skill and personality of the teacher, student realization of need for and interest in the topic being discussed, classroom facilities, degree of respect for the teacher and school by parents and adults in the community, individuality of students (intelligence, health, previous training, etc.), leadership within the group, changes in the weather, and approaching events which students consider to be important.

A teacher cannot change all these factors. He can, however, study the total environment which affects student behavior in a particular teaching situation. With this information it will be easier for a teacher to adjust to the every-day problems which confront him. He should attempt to change the factors which can be changed and graciously accept those factors which cannot be changed, in the manner of a true professional.

Among the environmental factors which can often be controlled by the teacher are the method of building interest in study topics, mannerisms of the teacher, and classroom facilities.

Developing Interest

Acute disciplinary problems tend to develop more frequently in groups where interest is low in the work being done. In most cases a student must recognize his relationship to a specific problem before he will exert any effort to work or study on his own power or his own time. Teachers differ greatly in their ability to help students see these relationships. It helps to make use of past experiences of students and to increase participation in worthwhile experiences related to the problem being studied. By so doing, the teacher can sometimes develop more "natural" interest on the part of students. *Natural* interest seems to develop only when students accept specific goals which have been developed in the class as their own personal goals. *Artificial* interest is usually present when students work for extrinsic rewards rather than important goals. When a teacher announces certain objectives and follows with threats if they are not accomplished, students are put under pressure which may or may not develop into *artificial* or *natural* interests.

Students seem to be motivated when they have developed either natural or artificial interest in a topic or assignment. Unfortunately, however, artificial interests have only temporary or spasmodic success in changing the general attitude or behavior of students. Skillful teachers exert pressures which they hope will help students to develop immediate artificial interests and eventually, as students begin to recognize relationships between a lesson and themselves, into natural interests.

Characteristics of the Teacher

Certain characteristics or mannerisms of teachers seem to be associated with attaining improved student behavior in the classrooms. Teachers who are successful in developing desirable student behavior tend to be:

1. Skillful in planning work.
2. Enthusiastic and generally optimistic.
3. Courteous in dealing with students.
4. Tactful when possible.
5. Firm while acting as a leader or teacher.
6. Courageous and confident.
7. Consistent from day to day.
8. Honest and fair.
9. Sincere.
10. Methodical.
11. Interested in students and people in general.
12. Skilled in the art of questioning.
13. Able to ignore insignificant behavior problems.
14. Able to wait for group approval.
15. Able to conduct effective conferences with individuals or small groups.
16. Quick to praise and recognize abilities in others.
17. Capable of working with adults in the community.
18. Strong in maintaining good public relations.

Teachers who have trouble with student behavior appear to have some un-

desirable habits or characteristics. They tend to:

1. Talk too much.
2. Interrupt others who are talking.
3. Permit themselves to become involved in personal arguments before or during class discussions.
4. Act as if they are on the defensive.
5. "Blow their tops" for little reason.
6. Laugh too much or grin more or less constantly.
7. Fail to think ahead of the class.
8. Miss logical steps in group thinking or fail in adjustment to the ability level of specific groups.
9. Emphasize mistakes instead of recognizing improvement.
10. Appear to be lost or not sure where they are going.
11. Lack integrity.
12. Play favorites.
13. Procrastinate.
14. Hold grudges.
15. Have poor general health.
16. Have poor vision or hearing.
17. Have a poorly developed speaking voice.

No teacher has all the good or bad characteristics which have been listed. Practically every teacher has some of both good and bad characteristics or personal behavior habits. The problem seems to be one of degree. Teachers should make a study of their personal characteristics and strengthen their good behavior habits and strive to improve or correct their undesirable traits. Almost every teacher can improve some mannerisms which may result in improved student behavior.

Facilities

When great sums of money are required to improve facilities, teachers may be stymied in their attempt to improve the total environment in the teaching situation. However, some improvements can be made in a classroom which cost little or no money. Long-time plans can be made which require only a moderate cash outlay in any one year.

It is difficult for experienced teachers to successfully improve the behavior of students in rooms that are dingy, drab in color, unclean, or adorned with cracked or broken plaster. Rooms which are equipped with worn, marked, uncomfortable, or squeaky furniture, contribute to disorder. Noisy heating systems, poor acoustics, concrete floors, or other distractions, may also be key factors which contribute to poor student attitudes and general misbehavior.

The following practices will help to improve student behavior:

1. Keep rooms orderly and clean.
2. Provide adequate storage and filing space.
3. Brighten room with cheerful, harmonious colors.
4. Provide squeakless and comfortable chairs and tables which are either new or in a good state of repair.
5. Reduce the number of class interruptions by visitors, phone calls, outside noises, etc.
6. Add floor coverings which reduce noise and add to the beauty of the room. Heavy linoleum or tile of rubber or cork are recommended.
7. Improve acoustics by ceiling treatment, window drapes, curtains, felt banners, pictures, etc.
8. Display appropriate pictures, charts, student art work, etc.
9. Cover lower part of windows, glass door panels, and glass partitions, if they provide views which distract the attention of students.

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Appeal to the sense of sight!

DON E. HADLEY, Vo-Ag Instructor, Ohio City, Ohio

THE individual who understands how learning takes place recognizes the importance of the sense of sight to the learning process. The learning situation which brings into play the greatest number of senses is likely to be the most effective. We tend to learn more through the sense of sight than any of the other senses. Visual aids enable the Vocational Agriculture Instructor to make excellent use of the important sense of sight in many and varying learning situations, in the classroom, in the farm shop, and in the field. The aim here is to present the characteristics and uses of good visual aids.

What Is a Visual Aid?

A visual aid is any especially prepared device designed to facilitate learning through the sense of sight. It is usually of such a nature and size that it can be used in carrying on group instruction, being large enough to be visible to the class. Text materials, reference books, and other printed matter make use of the visual sense, but since these are not considered as being especially prepared devices that can be used before an entire class, they are not considered here.

For What Purpose are Visual Aids Used?

Visual aids usually are not considered as methods or techniques of teaching, but as devices that can be employed effectively while presenting instruction by any of the recognized methods. Among the important uses of visual aids are the following:

(a) They increase the visual experiences of the student. This type of teaching device provides the learner with additional experiences and increases his knowledge of the subject.

(b) They strengthen vital images. Important sensory impressions involved in learning will become stronger.

(c) They give experience not possible in the classroom or farm shop. Through the use of films, models, charts and pictures, the student may acquire information that otherwise would be impossible. Problem situations may often be presented in the classroom through the use of films or models, etc., before the students are actually confronted with them in the field.

(d) They add variety to student activities. The use of visual aids assists the instructor in developing interest and eliminating monotony in the classroom.

(e) They re-enforce learning. Instructional units already taught may be re-enforced through the use of visual aids.

(f) They develop interest in some specific subject or activity. A film, slide, model, or chart may be used to arouse interest in a subject and get the student in a state of readiness to learn.

(g) They develop an understanding of a subject in the shortest possible time. The time necessary for students to learn a subject may be decreased by supple-

menting other methods with effective visual aids.

(h) They assist the slower student in learning. The visual aid can remain before the students or may be referred to until he has mastered the subject. A technical principle that is difficult to understand with only oral instruction may be clarified. (Examples of technical problems are horizontal and vertical hitches on a plow.)

(i) They are aids to other methods of instruction. Visual aids do not usually replace other teaching methods, but should make them more effective. A visual aid should seldom be used as a separate method of instruction.

(j) They show relationship between instructional units, lessons, subjects, and other learning activities. Films and other visual aids may be used to tie lessons or subjects together and give them unity. This assists the student to use past experiences in new situations, which is the essence of learning.

What Are the Characteristics of a Good Visual Aid?

In planning, selecting, or evaluating a visual aid, consideration should be given to the factors that make it valuable as a teaching device. The following are characteristics of a good visual aid:

(a) The aid should be large enough to be seen by all the class. Every student in the room should be able to see all parts of a visual aid from his location.

This visual aid was used with both all-day classes and adult farmer classes in teaching electrical wiring. The Ohio Power Company loaned the material for use. Mr. Hadley is pictured at the left.



An aid is of little value if all the students do not see it.

(b) The important parts stand out. This is often accomplished by using colors and shading.

(c) Only the essentials are included. All unnecessary details are omitted. They are both worthless and confusing.

(d) A visual aid is used for some specific instructional purpose. It should not be used to fill in time or to entertain students.

(e) All lettering and notes must be clear and large enough so that they can be read by everyone in the group.

(f) The vocabulary used in the notes must be within the ability of the student to understand. The things to be taught must not be obscured by words that the average student does not understand.

(g) It should be portable, easily moved out and transported.

(h) It is displayed before the class only when needed. All such devices distract attention if they are shown before there is a need. They should be either covered or removed when not in use.

(i) It is made to scale. Models or other aids not in proportion confuse the learner and give him false impressions of an object.

(j) It is durable and strongly constructed. All aids must be well constructed in order to withstand use in the classroom.

When Should Visual Aids Be Used?

A visual aid should be used only when it will assist the teacher in presenting a lesson. If the aid is displayed before needed the students are likely to concentrate their attention on the chart, model, or diagram rather than upon what

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School relationships

EDGAR W. HAMM, Vo-Ag Instructor, Norfolk, Nebraska

"YOU can't be a howling success by simply howling." How many vocational agricultural instructors find themselves simply howling? "The coach has all my Ag boys. I haven't had a decent class for three weeks because of the track meets, the senior play and the prom! How can I teach anything that way?"

These and many more howls have gone up from vocational agricultural teachers. What is wrong? They have been howling about a lot of things instead of doing something about them. They might ask themselves the question, "How can we better our relationships with the rest of the school?"

Good school relationships exist when all members of the school staff, including teachers, administrators and custodians, are working together to provide the best possible learning situations for the students at all times. How then can the vocational agricultural teacher work toward better relationships with the other teachers and the administration?

You Are A Member of A Team

First, he must realize that he is a member of the teaching staff of a school system. As such he is subject to the rules, regulations and assignments made by the managers of the school system, the principal and the superintendent. Someone has aptly said, "Please give me patience to accept what cannot be changed, courage to change what can be changed, and the wisdom to know the difference." Administrators are human beings and as such have peculiarities and weaknesses. Sometimes a teacher must endure a difficult situation, but he must not condemn his job or his school because he dislikes some member of the school's staff.

It is the duty of the administrative officers to make plans, give directions and offer leadership so that the purposes of the school may be carried out efficiently. Thus, vocational agricultural teachers are subject to the rules and regulations, however burdensome, silly or even stupid they may seem.

Must the vocational agricultural teacher follow regulations which he feels are undesirable in a meek and docile manner? Indeed not! Courage to make changes is a most admirable quality in any man. It is better for him to have his shoulder to the wheel than his back to the wall. If he does not like things as they are, let him develop some sound, logical reasons for a change and, with a spirit of cooperation, call on his superiors and see what can be done about making such a change. Few administrators will refuse to grant a hearing if approached in the proper way. It should be unnecessary to say here that the administrators should be the first to be approached when a teacher has a school problem to discuss. Too many times the boarding house hears about the difficulty first!

The main difference between a wise man and a fool is that a fool's mistakes

never teach him anything. If this is true, teachers should try to learn from their mistakes; if they are to profit from their errors, the mistakes need to be called to their attention. This is the job, albeit unpleasant, of the administrator. Unfortunately, some of the vo-ag teachers do not accept these criticisms graciously. Yes, an unfavorable comment will sometimes hurt, but if it is based on facts, the teacher must learn to accept it and use it to his advantage.

We judge ourselves by what we feel capable of doing, but others judge us by what we have done. When a teacher fails to do a good job of teaching, he begins to fail in his job of building good school relationships. Poor teaching leads to discipline problems, making things uncomfortable for all concerned. Idleness is the devil's workshop. Busy boys in the vocational agricultural shop do not have time to use water guns. Every administrator wants his school to make a good impression on the public. Good learning situations in the vo-ag department enhance the value of the school in the eyes of the community. The fruits of the "ag" instructor's teaching are often more readily seen than are those of a Latin or mathematics instructor.

Each vo-ag teacher is a member of a community and as such he should take an active part in all of its activities—religious, economic, social and political. He should accept civic responsibility. Because of his educational background, he is capable of providing leadership in his community. Only if he knows the people and conditions surrounding him can he do his best job of teaching.

Cooperate With Faculty

The first four points herein have dealt mainly with building good relationships with the school administration, but a teacher does not deal only with the administrators. The vocational agricultural teacher, being a part of an educational system, must be cooperative and helpful to the rest of the faculty. Ag teachers sometimes have a tendency to feel "special" and this can lead to serious misunderstanding on the part of other teachers. One of the things the vo-ag teacher can do for other teachers is to help provide information about a student's home conditions which will in turn help him in understanding and guidance. Understanding one's pupils is certainly important if optimum learning conditions are to be maintained.

The vo-ag teacher must take his turn in sponsorship of classes, the student council and other organizations which help the boys and girls of today to find their places as men and women of tomorrow. He should take a sincere personal interest in other members of the school staff. Nothing makes a man feel better than having another person show an interest in him, his family, his successes and even his failures. He may need sympathy and understanding. A few words of praise can change the entire

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How to launch a new year in vo-ag

ARTHUR H. CUTTER, Vo-Ag Instructor, Rochester, N. H.



Arthur H. Cutter

IN the Spring previous to the beginning of a new school year all of the prospective agriculture students are assembled and the highlights of the program are outlined to them. They are given the opportunity to look over the classroom and shop facilities and encouraged to ask questions. Butterfat and soil-testing demonstrations are put on by the senior boys. Before this preliminary meeting breaks up the local F.F.A. president extends an invitation to attend the next regular chapter meeting. This year the film "THAT INSPIRING TASK" was incorporated into the meeting for the first time in our chapter. It proved to be of such interest that we will use it in the future to aid us in our orientation. The picture shows what a boy of ordinary circumstances can do in developing a sound supervised farming program.

A few days following this meeting a trip is taken to two or three of the outstanding boys' farms. These boys outline their programs, tell of their beginnings, and relate their plans for the future.

By now the eighth graders are pretty well oriented. They are then interviewed individually and arrangements made for an early home visit. At this time parents are interviewed and a tentative supervised farming program is set up by the boy, the parents, and the teacher.

The First Week is Important

If this start is made in the spring and supervisory visits are carried on during the summer months, the boy is generally well established in his farming program when school starts. This is a big asset.

The first few days of school are important ones and may make or break the year both for you and your students. The first two days are devoted to an introduction to vocational agriculture and the enterprises common in the area are discussed. For the next three days each boy draws up his definite supervised farming program based on his preliminary program with any necessary alterations. Also the F.F.A. is fully outlined and all boys are encouraged to join.

To make the boys feel at ease, starting at the first get-together, the students are encouraged to participate in all discussions and to feel free to ask questions at any time.

By the time the second week of school begins the boys should be pretty well on their way to a successful four years in vocational agriculture. □

Method is the arithmetic of success.
—H. W. Shaw

Charts as an aid to improved instruction

JOE P. BAIL, Rural Education Department, West Virginia University



Joe P. Bail

THE use of visual aids is universally recognized as a time-saving and worth-while means of instruction. A type of visual aid which has not received the amount of attention due it is the chart. A chart may be a simple graph plotting the ups and downs of an enterprise or, on the other hand, may show by pictures or unusual color combinations the advantages of using certain practices in preference to others. In fact, they may be as variable as the maker desires them to be.

The old saying that we like to see things in black and white may well be replaced with the saying that we desire to see things in pleasing colors. Why not use green or yellow or some other color that is appealing to the eye and will aid in getting the point across?

The experience of Reno L. Taubert, vocational agriculture teacher at Clay High School, Clay, West Virginia, and Norton E. Plymale, Veterans teacher in Clay County, bear this out. During the past six years, they have made and collected approximately 600 charts, size 28" x 36". Most of these are the result of their own personal effort and include all types, ranging from printed to pictorial material. They have found that the most effective chart is the one that gets and holds the attention of the group and presents the information in a new and striking manner.

Points To Remember

If the charts are made for statistics there is room for the addition of material each year. The charts must be kept up to date or they are no more valuable than any other outmoded material. Similarly, they must be kept clean and not allowed to become tattered and torn with use. If they do become frayed at the edges they should be replaced.

It was also found that the source of the material was of paramount importance. The results of local, county, or state enterprise records were more valuable and meaningful than those from areas more distant. However, outside material, if used wisely, is of great value.

The problem of securing the necessary supplies for making charts of your own is not difficult or expensive. The local newspaper office will have suitable chart paper or heavy wrapping paper and the type of pencils or crayons used will vary with the individual. Use your own ingenuity in making your charts. It should serve your purpose and not try to cover situations in a variety of places.

Another important point is to have the charts filed in such manner that they can be gotten at a moments notice. In

addition, they should be stored in a dry place, free from dust and dirt.

In summarizing, a good chart has the following characteristics:

1. Neat and attractive.
2. Accurate.
3. Brief.
4. Room for expansion.
5. Applicable to the situation.
6. Eye appeal—holds attention.

As defined by Webster, a chart is a guide. As such, it would lead in the proper direction, in short, to chart the right course.

Types of Charts

1. *Personal*—This chart is made by the teacher to bring out more effectively certain points in his teaching for All-Day, Young Farmer, and Adult Farmer Classes. The use of personal records of the members often brings out factors which could not be gotten from books or bulletins. This type of chart should be simple and direct. One of the common criticisms of charts is that they try to tell too much of a story and lose their effectiveness. If you use charts to tell a whole story, use several, don't try to crowd it all on one chart. Any chart that has the personal touch of the teacher is more effective than a stereotyped one.

2. *Government Agencies*. Certain charts put out by the United States Department of Agriculture are very effective teaching devices. Notable among these are some showing the various grades and market classes of livestock, the cuts of pork and beef and government standards in other agricultural products. Pictorial charts by the Soil Conservation Service are also effective. These may be secured by writing to the U.S.D.A., Washington 25, D. C. They will first send you a list from which you may select the charts you desire.

3. *Commercial Companies* — Several

large farm machinery manufacturers make available pictures or charts of their machinery. Many demonstrate some particular job or the correct way of doing an ordinary job to which little attention has been given. Feed concerns and others also depict desirable methods of carrying out specialized jobs.

4. *Professional Chart Makers*—Printing and publishing companies may carry certain standardized charts showing phases of the farming operation. These may be suitable at certain times, but are apt to lose interest if used to any extent. They lack the personal touch of the maker, and are oftentimes not entirely suited to the situation. Since the teacher did not make them, he may not be able to give the full story.

5. *Miscellaneous*—Small charts for individual use may also be satisfactory. Pictures of breeds of livestock and poultry are useful in judging and identification work. Blueprints and drawings of farm shop jobs may also be used with considerable success. Many of these are available from other states and from your own State Division of Vocational Agriculture. □

Improving student behavior

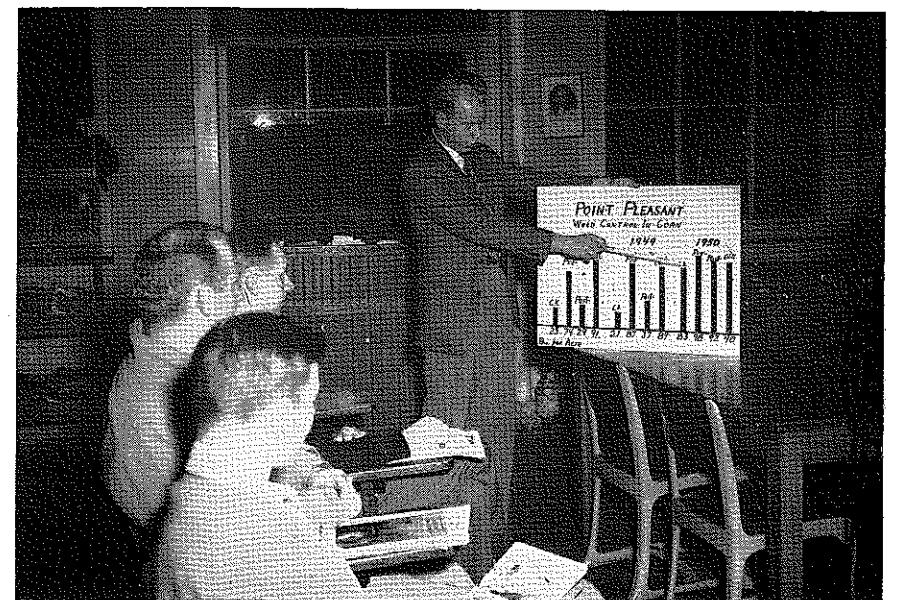
(Continued from Page 56)

10. Improve heating and ventilation. Replace or repair noisy heating equipment.

Cooperation Required

A careful study of the problem, in view of the factors listed, accompanied by appropriate changes will improve student behavior in most situations. Teachers need to work with administrators and other teachers in the school to improve the total environment which affects student behavior. It is not an easy job, but it is a very interesting and challenging one. Personal satisfaction is the reward for all teachers who succeed in improving student behavior. When all the teachers in a school system work together for improvement, benefits accrue to the students, the school, the community, and society as a whole. □

Using a chart to tell a story.



Establishing and maintaining relationships

(Continued from Page 53)

provide a limited time for such responsibilities. Rather than take affront, the solution may be to labor most diligently in what ever time is available to achieve results which might demonstrate clearly that such time will yield results far beyond those achieved otherwise. If the program is presented in such a manner as to clearly demonstrate the responsibilities of the instructor and the results which are attainable for the betterment of the individual student and of agriculture in the community, the problem of obtaining time to adequately do a job will seldom be an issue.

Time for adequate supervision and teaching loads are closely related problems. The instructor who has an excess of fifty students is probably overloaded. To secure the approval for a second instructor is often times difficult. First, the existing program should have achieved results which prove the value of agricultural training as a part of the school curricula. Second, the relationships with the administration should be such that there exists a complete understanding of the activities necessary to conduct a complete and effective vocational agriculture program for the high school, out of school and adult students. Finally, a departmental long time program should have been planned which clearly expresses:

1. The need for added personnel.
2. The operation of the program and the individual responsibilities of the instructors.
3. The expansion of services which will be made possible, and
4. The anticipated results in terms of added students, more effective farming programs, greater farming efficiency, and greater establishment in farming for the students enrolled in the program.

Too often the addition of personnel is delayed until the effectiveness of the program is seriously reduced because of the overload of responsibilities. Such situations may be reduced in number if the instructor will keep the administration fully informed of the activities engaged in and the effect of not being able to perform the needed jobs.

Salaries. The instructor of agriculture devotes his full time during the entire year to achieving a better agriculture by directing the learning experiences of individuals, changing their methods and attitudes, and by improving or increasing their skills. For this the instructor has the right to expect a reimbursement which will offer a comfortable living for self and family, a degree of security, and a chance to maintain his self respect.

The program of instruction should by its results prove to the school and community that the activities of the department are important in meeting the needs and desires of the rural people.

The salaries of full-year employees are prone to be criticized by other staff members of the community and sometimes by the administration. In most cases, such criticism is made felt be-

cause they have been misinformed or are uninformed of the scope of the instructional program. It thus becomes the responsibility of the instructor to keep all segments of the school and community informed of the program. This does not mean "tooting one's horn." The instructor should sell the product. The accomplishments of the individuals working through the program are the products and the best means of informing the public of the program. By deduction, the public will know who is responsible for the direction of the program.

If the summer activities and the compensation for them are subject to question, the instructor might examine his public relations activities to determine if the activities and the accomplishments of the individuals taking part in the course in agriculture are made known to the people in the school and the community.

The old objection to providing salaries equal to or higher than those which the administrative officers receive indicates possible lack of understanding and of long range planning. If a staff member's contribution to the community has a true value, it would seem feasible that the officials concerned can easily justify added compensation for their administrative duties.

The Means to Advance Understanding

To provide information to the administration, the school personnel, and the community by which to create a satisfactory understanding is a major problem in attaining a mature stature for the program of vocational agriculture. It has been pointed out that the problem centers about providing information about the activities and accomplishments of the students and the instructor.

The administrator deserves and wants to be better informed than he is in many instances. He must be able to answer questions about the program clearly, factually, and with conviction. This he will be unable to do unless he has facts upon which to base his reply. It is not inconceivable that the instructor should of his own volition make frequent written reports of his activities and the results obtained. A brief monthly, weekly, or even daily report might do wonders in the promotion of a good understanding of the concept of the program of vocational agriculture. As a minimum an annual report should be supplied to the Board of Education and the superintendent. It should be brief. It should stress the outcomes in terms of the people with whom the instructor works and of their farming programs.

The people of the community, the school staff, the Board of Education, and the supervisory personnel should be drawn into the departmental activities as often as possible. These activities should be those which demonstrate the results which are being achieved. There are many events such as project tours, parents' nights, Father-Son banquets, judging contests, instructors meetings, and state events which are well suited to the purpose. It will be helpful if the administrative staff can find time to be with the instructor on a typical summer day's activities. No agriculture instructor

can fail to find occasion when such public relations activities would not be possible and worthwhile.

Take Part in Organized Groups

There is no better means by which the instructor may provide information than to actively support the local teachers' organization, and to take part in staff projects or studies which aim at a better school or school offerings. The agriculture instructors often have leadership qualities which make them valuable to staff organizations, teacher organizations, and community organizations. He should make the most of these opportunities. He should actively support the state and national educational organizations whose aim it is to further education for American youth. He can not and should not hesitate to associate himself with the cause of educators in general, particularly if he is aware of the value of their support and the contributions he may make to the cause of education. The instructor of agriculture must keep his interests and activities broad even though his teaching duties require a specialized approach to a segment of the community population.

The advisory council has a distinct place in the agricultural program. The thinking instructor will find its usefulness great and he will find it a valuable medium through which to bring information to the community. His reports to the advisory council members should stress the results which the instructional program attains in meeting the needs and desires of rural people as they are brought to light by the workings of the council. The advisory council should have a close relationship with the administration to be most effective. The recommendations and reports of the council to the administration are an effective means of encouraging understanding and an awareness of the outcomes achieved.

In Summary

The support of the school staff, the administration, and the community depend to a large extent on the effectiveness with which information is provided them about the vocational agriculture program.

An acceptable concept by the instructor about the school, its curricula, and its problems is a necessity for establishing satisfactory school relationships.

Wholehearted participation in the total school program of activities affords a useful background for complete understanding and support.

Close examination of the program as operated in the individual school and self evaluation by the instructor may make possible the discovery of strengths and weaknesses. If these are studied objectively, a positive approach for establishing satisfactory relationships may be formulated.

The means proposed for accomplishing the objectives of the vocational agriculture program should be justified in terms of the results to be achieved. □

Satisfaction can mean stagnation.

Making charts for teaching

RALPH J. WOODIN, Teacher Education, Ohio State University

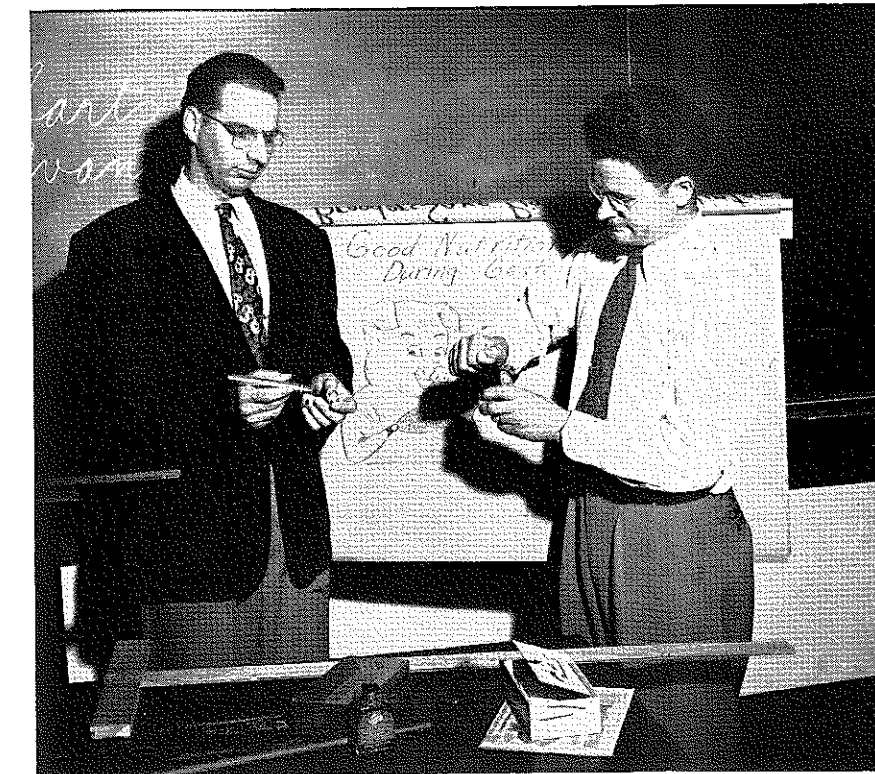


Ralph J. Woodin

the room and the teacher erased the blackboard.

An unusual student reaction to a good job of teaching? Hardly. Good teachers will tell you that they have similar reactions from students after any good job of teaching. The point to the story is that the teacher led the class to identify a common problem in steer feeding from the farming program of a member of the class. After drawing on their own experiences as well as from the facts that could be obtained from the references available, they had a part of the answer. An important part of the answer lay, however, in a conclusive experiment in feeding corn cobs to steers which had been conducted by the Ohio Experiment Station. One copy of the report of this experiment was available. This teacher, anticipating the use of this research data, had placed it on the blackboard before the class came in. When it was needed by the class, a roller blind

H. E. Ridenour, Centerburg, Ohio, and DeReath Palmer, Painesville, Ohio, members of a class in teaching aids for vocational agriculture demonstrate some of the simple equipment needed for making charts.



"BILL, couldn't afford *not* to feed ground corn cobs to his steers according to that table"—and then in the next breath "I'm going to have to have a session with Dad tonight"—so spoke a tow-headed 15-year-old Ohio farm boy. The bell rang. The class filed out of

was raised and there was the basis for an interesting half hour's discussion of how feeding corn cobs might help solve one boy's steer feeding problem.

This Ohio teacher works in a community where steer feeding is an important enterprise. He says that since such data became available three years ago, he has presented them to five different high school classes and to two groups of adult students. He is pleased with the results, too. This new practice has been rapidly accepted in his community, resulting in a sizable saving in feed costs to farmers. Perhaps more important, his students have learned to evaluate data; to appreciate agricultural research; to apply experimental data to their own problems; and to think together toward the solution of common problems.

This particular table contains four columns of data and 22 lines of figures. Twenty minutes would be a conservative estimate of the time to place it on the blackboard. Seven times 20=140 minutes of teacher time spent in copying this table on the blackboard. It will be used for classes in the future, too. Half this amount of time would have been required to make a paper chart which could be used as long as the data remained useful for teaching.

Advantages of Charts

This illustration points out certain advantages to teachers in preparing paper charts, tables and graphs as a means of interpreting current agricul-



H. E. Ridenour, the teacher of vocational agriculture at Centerburg, Ohio, finds this homemade easel a useful help in making his own charts.

tural research. These advantages are as follows:

1. Charts make it possible for the teacher to present up-to-the-minute research data.
2. Charts make it possible to direct the thinking of a group step by step so as to develop understanding and belief in the data presented.
3. Charts save the teacher time in copying data on the blackboard which must be erased after each class period but which are used a number of times.
4. Charts are especially useful in classrooms where blackboard space is limited.
5. As a library of charts is developed, they serve as a ready resource for many teaching situations.

In spite of these important advantages, a minority of teachers make use of them. A variety of reasons are offered by teachers who have yet to make their first chart. Some of them are:

1. Chart-making materials are not available.
2. Chart-making takes too much time.
3. Chart-making requires special abilities.

The answers to these objections are that the materials and equipment for chart-making are low in cost, that chart-making can save the teacher's time, and, finally, that with the equipment now available anyone who can write on the blackboard can make a useful chart.

Chart-Making Is Not Difficult

The following suggestions are offered, not to those teachers who have been making charts for years, but rather to those who have hesitated to make a beginning. If these teachers will follow these brief and simple suggestions, they will be able to reap all of the advantages which have been described above. In addition, they will find that practice makes perfect and that their chart-making techniques will improve as they make more charts.

Securing Equipment. Only three items of equipment are necessary—paper, a large T square, and a felt nib pen.

The paper may be either brown wrapping paper or better still, a heavy white wrapping paper. This paper should be cut to a size which will be suitable to the teacher. The writer prefers sheets of paper which will make 36 by 42 inch charts.

(Continued on Page 71)

Teacher-pupil-parent planning in determining course content

RICHARD JONES, Graduate Assistant, The Penna. State College, State College, Penna.



Richard Jones

VERY LITTLE teaching is remembered unless it is applied, and no teaching will be applied if the boys are not interested in it, or if it does not apply to their own or the local situation. Therefore, the jobs and enterprises in a vocational agriculture course of

study should meet and represent the needs and desires of the students and the community, and should anticipate their future needs by recognizing changes as they occur or are needed. Community needs are usually determined by the new vocational agriculture teacher through the use of surveys, advisory groups, by talking with community leaders, from census figures, and other similar sources. Where many new teachers fail is in observing the necessity of fitting the instruction program to the needs of the individual boys.

The following procedure has proved to be very helpful in meeting the needs of the individual boys in a community where a five year agriculture schedule is in operation. In this situation, the eighth grade is pre-vocational and is followed by the standard four years of vocational agriculture. An orientation unit is placed early in the eighth grade pre-vocational work in which the boys learn the meaning and purposes of vocational agriculture, the F.F.A. and the supervised farming program. Following this, during the remainder of their eighth year and in the summer between their eighth and ninth years, home visits are made with the objective of acquainting the parents with the vocational agriculture program and, if possible, to decide on practical production and improvement projects for the boys.

When the boys return in the ninth year, and each year after that, the year's program is developed. The boys first list their farming programs on the board, add to this their home enterprises and any other subjects in which they are particularly interested, such as new crops or types of livestock and items from farm magazines that have interested them. When this list is completed, the boys are divided into groups and each breaks down the listed enterprises in which they are interested into the jobs or sub-units. In doing this, the boys use books, bulletins, discussions, and other suitable sources and procedures. This seems to awaken their natural curiosity and gives an excellent introduction to the various subjects. These jobs are then placed in the proper sequence based on the seasons in which they are most likely

to occur. Each boy is then encouraged to take the list home for any suggestions from his father. This latter point in particular is one that is too often omitted. Such a policy of bringing the fathers into the planning of the program is one of the best ways to improve public relations in the local community. When the father puts his approval on the program, or sees some of his suggestions added, he usually becomes a very strong advocate of vocational agriculture.

Gaps will probably occur in such a program, but the boys will fill them in later as new things arise, so this is nothing to get alarmed about. The teacher will still have to do a lot of advance planning to be able to guide the boys in setting up such a program. This is where he should have analyzed and used his surveys and other information about the agriculture of the community. No previous planning, or weak previous planning, on the part of the teacher will usually cause chaos when the students try to set up the program and will leave the students with the impression of having accomplished nothing, instead of a feeling of having done something worthwhile and wanting to carry it out to a successful conclusion.

When the year's course is completed, the boys check the Supplementary Farm Practices list in their record books, indicating the things they will learn that year. The next step is for each of the boys to write up the plans for his farming program. During work on these project plans many items in the course of study may be adequately dealt with. The remaining jobs should be introduced in their proper sequence using the situations of specific students. The group will then be trying to solve the boy's problem instead of doing a "dead" problem for the teacher. After the exploration of the boys' knowledge of, and experience with, the subject, during which the instructor watches particularly for special reactors (those with obvious likes, dislikes, or outstanding interests) and gives these reactors a chance to express their feelings, the boys can set up the problems to be studied and the skills to be developed. These should be listed on the board. They will probably be disorganized, so the next step is to have the boys arrange them in a logical sequence. It may be desirable or necessary for the instructor to suggest problems or skills omitted by the students.

The end results of such a procedure as this are: time saved, a more unified and practical program, a feeling on the part of the boys that the program is their program (a new feeling to many of them), a decrease in discipline problems and drop-outs, and an improvement in public relations in the local community through the inclusion of the fathers in the planning of the program. □

Color slides are effective

R. C. WILLIAMS, Vo-Ag Instructor
Dover, Tennessee



R. C. Williams

COLOR slides made in the local community can be one of the most effective forms of visual education. They can serve in many ways to promote the program of vocational agriculture. Slides of local chapter enterprises and activities, as well as farming activities in the community, provide interest which is closely tied up with the fine opportunity for educational values.

The supervised farming programs can be improved and beginners can be motivated to carry out a good program. Boys like to see themselves and their enterprises in color on the screen. They like to have their program make a favorable impression upon classmates, parents and others. This means that they will strive to have the best possible program if they feel it is to be subjected to the critical eye of parent and classmate. Parents of freshmen may be called in early in the year to discuss the program of vocational agriculture. During the discussion several color slides of successful programs may be shown to promote the program with the parents.

Many Possible Subjects

Color slides are very effective in teaching improved practices to both boys and adults of the community. Many fine educational activities may be pictured and brought to the screen before groups of boys and adult farmers.

F.F.A. activities are promoted and improved through color slides. Pictures of such activities as summer camp, forestry camp, State Convention, National Convention, Contests, fairs, exhibits, banquets, parades, parties and others may be taken and shown to students who did not participate. This causes many of them to want to take part in these activities. Parents and school officials can be clearly shown some of the important functions of F.F.A. work.

Preparation Is Not Difficult

The work of making 35 MM color slides is very simple. There is no necessity of knowing a lot about photography in order to do a good job of taking pictures for color slides. A camera with flash attachments that will do a very satisfactory job of taking pictures for color slides can be purchased for a price ranging from \$55 to \$100. Daylight type Kodachrome film should be used. These films are also satisfactory to use with a flash. A blue flash bulb must be used when exposing daylight type film with a flash. A 20 exposure roll of daylight type Kodachrome film will cost about \$3.25. This original cost pays for developing the pictures and making them into individual slides or a regular film (Continued on Page 63)

Ohio teachers organize to provide teaching aids

RAYMON O. DEACON, Vo-Ag Instructor, West Jefferson, Ohio



Raymon O. Deacon

"GOD HELPS Those Who Help Themselves," is more than an idle statement to Ohio teachers of vocational agriculture. They did something when they found that busy schedules did not give them time to prepare as many teaching aids as they believed they

needed. The teachers of vocational agriculture asked for help. To this end the President, C. R. Fralling, of the Ohio Vocational Agricultural Teachers' Association appointed a standing committee of six members to work with members of the Department of Agricultural Education and Supervisory Staff in setting up a teaching aids program. This committee was charged with the responsibility of setting up and putting into effect a five year program designed to expedite the preparation and distribution of teaching aids. Dr. Ralph Woodin, Department of Agricultural Education and D. R. Purkey of the Supervisory Staff were assigned to assist the committee. Members of the committee serve for two years with three members being replaced each year.

Before the teaching aids committee came into existence the Ohio Agricultural Education Service was set up which, in part, provided a working agreement with the University of Illinois in providing film strips as they were available and could be adapted to Ohio conditions. Part of this work then became a function of the teaching aid committee. Early in the work of this committee Mr. H. E. Ridenour, teacher at Centerburg, conducted a study to determine, as nearly as possible, which aids teachers wanted

and could use to the best advantage. As a result of this study, work is being carried on by the committee in improving book and bulletin libraries and adding new film strips and evaluating new motion pictures. From the study, the teaching aids committee hoped to set some direction to its work and to determine jobs that teachers considered most important. With this information available staff members were asked to designate areas in which they preferred to help in the collection of subject matter. These staff members were then asked to contact the subject matter specialists of the College of Agriculture, Ohio State University and the Ohio Agricultural Experiment station in his selected area. An example of the way all groups were used is shown in the work of the committee on the revision of the bulletin lists in which fifty-four vocational agricultural teachers over the state, with special interests in an area, were asked to submit a recommended bulletin list. To this list was added out-of-state bulletins found to be useful. The entire list was then given to the appropriate member of the staff who referred the list to the university subject matter specialist in that area for additions or recommendations. This list was then submitted to the committee for final checking before mimeographing. An attempt was made to keep the list very selective. The recommended book list was revised using much the same procedure. However, in the case of reference books, sample copies are sent to teachers for evaluation before submitting the list to subject matter specialists.

Much of the work of the teaching aids committee has, to this point, been directed at getting a working plan into operation and in trying to get at some of the problems confronting teachers. Much of the responsibility for the actual work goes back to teachers themselves. At

least one district in Ohio has set-up a workshop for the preparation of certain types of visual materials. District chairmen are providing teacher-made materials from their districts for a display at the annual conference. A graduate course is being offered at Ohio State University in the Department of Agricultural Education dealing with the use and preparation of teaching aids. Motion pictures, film strips, charts, resource units and a newsletter to vocational agricultural teachers are all a part of the work moving forward every day as a part of the work of the Teaching Aids program in Ohio.

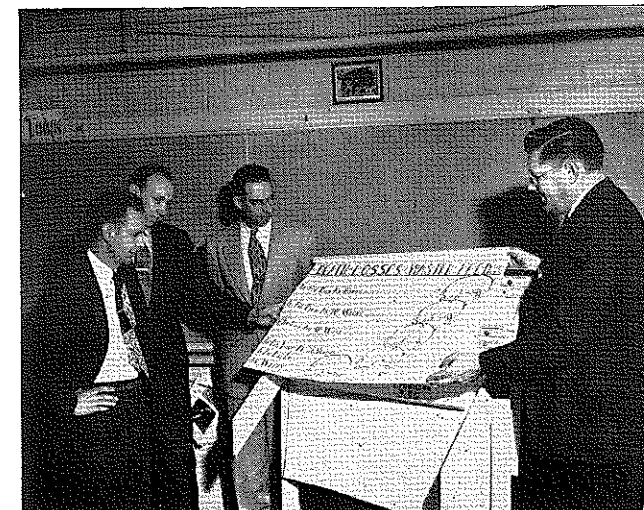
The teaching aids committee elects a chairman and secretary. Minutes of the meetings are sent to all committee members and members of the staff in agricultural education. The fact that all members are constantly kept informed and are working on various phases of the program contributes much to the success of the work being performed. The committee meets three times each year. The three full days spent in committee work does not take into account the extra time the members spent in preparation of work for the committee meeting, or the work of other teachers, staff members and subject matter specialists. Yes, "God Helps Those Who Help Themselves." Teachers in Ohio know the truth of that statement in developing their program for using teaching aids. □

Color slides are effective

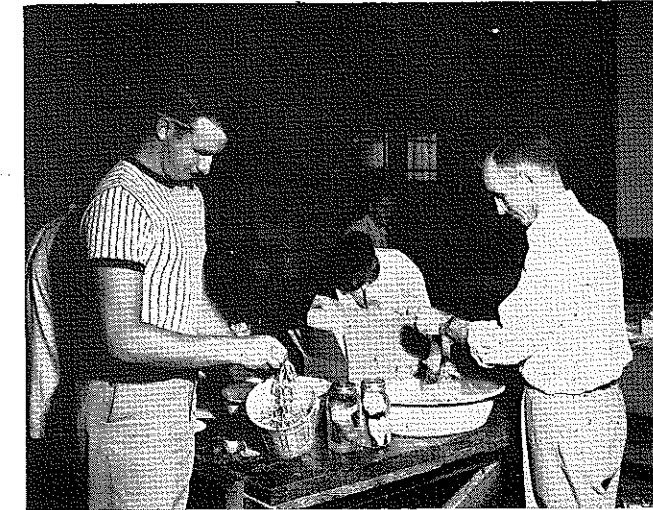
(Continued from Page 62)

strip, whichever is desired. The simple cameras require only three important steps to be learned. These steps are clearly outlined in the instructions which come with the cameras. They are setting the shutter speed, the lens opening and the range. A light meter may be used to help determine shutter speed and lens opening but its use by a beginning amateur is questionable. A simple exposure guide that can be purchased for 25 cents will serve better at that stage. □

The Ohio Teaching Aids Committee viewing some home-made charts and examining the display rack and file for charts used in the West Jefferson, Ohio Vo-Ag Dept.



Two Ohio teachers of vocational agriculture preparing teaching aids for use. This is the type of work that districts are taking up in a cooperative effort to help improve teaching aids.



Special "parent" meetings for every class

ALFRED H. KREBS, Teacher Education, University of Illinois

"FRESHMAN-PARENT" meetings have been of great value in getting freshman classes in vocational agriculture off to a good start—especially in regard to developing broad supervised farming programs. What's wrong with using the same idea with sophomores, juniors, and seniors to keep our programs developing? That's the question one Illinois vocational agriculture teacher raised with regard to his vocational agriculture program. Let's see if we can answer his question by exploring possible items for discussion at such meetings.

Establish Objectives

Before trying to develop agenda for these proposed parent-class meetings, let's try to state briefly what we would hope to accomplish.

The following broad objectives are suggested:

1. To educate parents about our total program for high school boys, young farmers, and adults. The emphasis would depend upon the particular class involved.
2. To develop understanding of the objectives of the vocational agriculture program—and what these objectives imply with regard to the boys' vocational plans.
3. To evaluate the progress of the boys in relation to supervised farming program, the FFA, and contributions to the home and farm.
4. To consider ways in which parents can contribute to the boys' progress.
5. To initiate parental consideration of the ways in which young men become established in farming—and what parents can do to assist in the establishment.
6. To consider problems of parents in cooperating with the vocational agriculture program.
7. To consider special problems faced by the boys as they progress through high school in relation to what parents can do about them.

Planning Programs for Meetings

We are now ready to consider what kinds of programs could be planned for parent meetings for each of the four classes. The programs outlined are suggestive only and should be partially planned around the problems raised by the parents.

Freshman-Parent Meeting:

1. What is a "complete" program of vocational education in agriculture for a community?
2. What are the purposes of vocational agriculture?
3. How do supervised farming programs contribute to these purposes? What is a good farming program?
4. How do classroom instruction, laboratory work, school farm shop,

and the FFA contribute to these purposes?

5. How can pupil, parent, and vocational agriculture teacher work together to accomplish these purposes?
6. What does enrollment in vocational agriculture imply with regard to the vocational plans of the pupils and the responsibilities of the parents in this respect?
7. What should the pupils accomplish the first year?
8. What special problems do parents anticipate in regard to the vocational agriculture program?

Sophomore-Parent Meeting:

1. A brief over-view of the vocational agriculture program and its purposes would be in order.
2. What did we decide that pupils should accomplish the first year?
3. What did the pupils actually accomplish (in relation to supervised farming programs, FFA, contributions to home and farm, progress toward establishment in farming)?
4. What special problems were faced during the year by parents, pupils, and teachers? What can be done about them?
5. What changes have occurred in the pupils' possibilities for becoming established in farming?
6. What should the pupils be expected to accomplish the second year? How can parents, teacher, and pupils cooperate in meeting these objectives?

Junior-Parent Meeting:

1. What new developments are there in the vocational agriculture program?
2. What did we decide the pupils should accomplish the second year?
3. What did the pupils actually accomplish?
4. What special problems were faced during the year by pupils, parents, and teachers? What can be done about them?
5. What changes have occurred in the pupils' responsibilities for becoming established in farming?
6. How do young men actually get established in farming?
7. What should the pupils be expected to accomplish the third year? How can pupils, parents, and teachers cooperate in meeting these objectives?

Senior-Parent Meeting:

1. What did we decide that pupils should accomplish the third year?
2. What was actually accomplished? What progress was made toward establishment in farming?
3. What occupations related to farming may some of the pupils be considering? How does this affect the pupil's vocational agriculture program?
4. What special problems were faced

during the year by pupils, parents, and teachers? What can be done about them?

5. What effect is the military situation going to have on the pupil's vocational agriculture program and his establishment in farming?
6. What special plans should be under consideration with regard to establishment in farming? (Credit, locating a farm, writing agreements, parent-son agreements, parental responsibilities in helping pupil get established, ways of getting established in farming.)
7. How can pupil, parent, and teacher work together to accomplish the goal of establishment in farming—or placement in other positions if that is decided upon?
8. How can the young farmer program contribute to establishment in farming?

Would These Meetings Be Worthwhile?

Would these meetings be worth the effort? Each of us will decide for himself by answering such questions as:

1. Should parents be included in planning their children's educational programs?
2. Do we want parents to know about our program of vocational agriculture and what we are trying to accomplish?
3. Are our vocational agriculture programs as good as we can make them? Would these meetings help us to develop better programs?
4. Do we have time to discuss all of the items suggested with each pupil and his parents individually on the home farm?
5. Are there any benefits derived from group discussion of the items suggested that would not be obtained through discussion with a pupil and his parents individually?
6. Are we doing all we can to help young men get established in farming?
7. Are we aware of the special problems faced by parents—and should we help to solve them?
8. Can more be accomplished by having a separate meeting for each class than by having one general meeting?

The list of questions is, of course, not complete. Each of us can think of many more questions. Our answers will help us decide on the value of parent meetings for each class. What is your decision? □

PICTURES?

Do you want pictures in *Agricultural Education Magazine* to add to the effectiveness of stories and the attractiveness of the *Magazine*? If so, send in pictures—with or without articles—but always with a legend to describe and identify the purpose of the picture.

Clear, glossy prints, of sufficient size to avoid enlarging, reproduce best. Prints will be returned unless submitted for the Picture of the Month Contest. The source of pictures used will be acknowledged except as their source is identified as accompanying an article.

Development of programs that lead to establishment in farming

JIM HAMILTON, Vo-Ag Instructor, Audubon, Iowa



Jim Hamilton

EVEN though it is our objective in vocational agriculture to train present and prospective farmers for proficiency in farming, we know at the outset that it is not always possible to have all boys become established in farming. The Korean War and the drafting of

men for the armed service have made it more difficult to establish a large percentage of the vocational agricultural boys in farming today.

It is not necessary to point out that the high cost of equipment and the finance needed to start farming today makes it more difficult to aid boys in becoming established in farming. Then, too, in our community and state there just are not enough farms so that all boys or established farmers have a farm that they can operate each year.

These obstacles to a start in farming have not changed the procedures necessary or desirable in aiding boys to develop farming programs. Rather they have postponed the final establishment into farming until a later date.

Six Guides

Here are the six steps that have been followed in helping Audubon F.F.A. boys in establishing sound supervised farming programs:

1. Become acquainted with the boy, his parents and the home farm.
2. Interest the boy and his parents in the future of farming for the boy.
3. Work with the boy and his parents in setting up goals for the farming program and for the future establishment in farming of the boy.
4. Help the boy start his complete program by helping directly or indirectly to—
 - a. plan the program
 - b. obtain livestock and/or crops of proper quality and quantity
 - c. obtain finances
 - d. obtain information and develop skills necessary to carry out the program
 - e. market the products
5. Enlarge the project each year and suggest proper changes as needed in the long-time plans.
6. Help to secure the land, partnership agreement or other provisions to farm while the boy is still in school as well as out of school.

It is hoped that these six steps listed will lead into a supervised farming program of the size and quality that will enable the student to become established in farming.

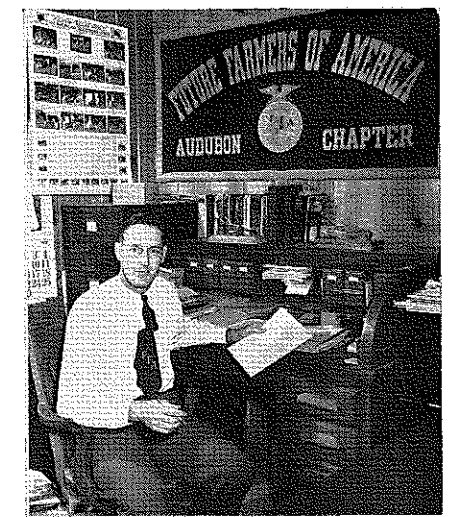
Programs Must Differ

Every boy that enrolls in high school is different from every other boy, as is one farm different from another farm. One must always use step number one, that is, we always have to become acquainted with the boy, his parents and the home farm. Before you can interest a boy in the future of farming you need to know how much or how little he has enjoyed farm life on his home farm. One or more trips to the farm and several visits with the parents are necessary for a knowledge of the farm, the parents, and the boy. You can't become acquainted by listening to the farmer's neighbor alone. Many times, on Audubon County's better farms there is no need for the second step listed as the boys from these farms are already interested in farming. Many times the teacher of vocational agriculture not only has to kindle the fire of interest in the boy but he must also keep the interest going. Many devices may be used to interest a boy and to maintain his interest. The activities of F.F.A., such as project tours, F.F.A. shows, etc. may be used. A strong pride in the farming program is virtually an assurance of success.

Trips to successful farms where former F.F.A. members have become established through farming programs can be of great aid in interesting boys in a well planned farming program.

The setting of goals and long-time planning is easy with the boy that is interested and feels sure of his future farming plans. It is more difficult many times to get the parents to see the value of long-time plans and to let the boy develop by increasing his program each year. The importance of the parents cooperation is second only to the boys interest in farming. The boy and his

Harold Heikens, Audubon F.F.A. member building a terrace. A farm improvement project made possible through obtaining parental cooperation.



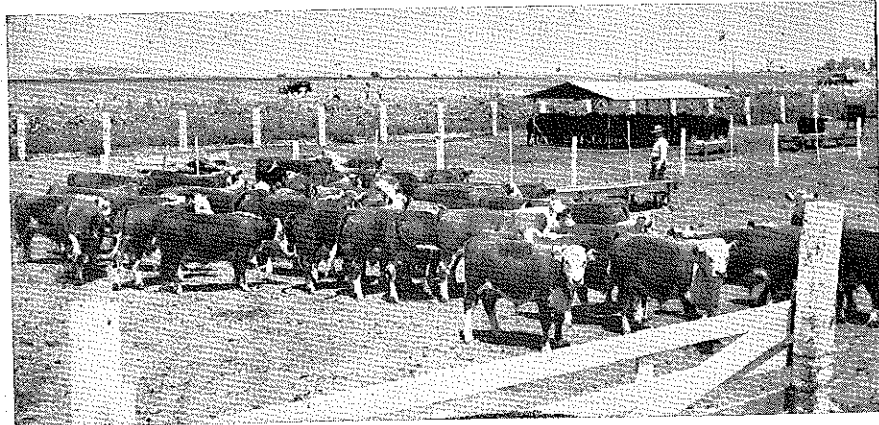
The author in his attractively arranged office space.

parents want to have confidence in the agricultural teacher before too many agreements are made and signed. Without the cooperation of the parents it is very difficult to accomplish much in a farming program.

The farming program goals that are adopted should be suited to the interest and capabilities of the student as well as suited to the home farm situation. To get the farming program under way, plans will have to be completed, agreements must be drawn up, and it is often necessary for the teacher to aid the boy in purchasing and selecting the animal or in renting ground. After the first year many boys have farming programs in operation and little revision is necessary to help the boy toward his established goal. Sometimes boys enroll in vocational agriculture with a definite purpose of learning how to do improvement or supplementary practices. Thus, there is no 1-2-3 order of listing the jobs for the vocational agricultural teacher for every boy in developing the desired supervised farming program.

Some of the jobs that a teacher will be helping many students accomplish are financing the project, selecting livestock

(Continued on Page 71)



A portion of the feed yard at the Wasco Union high school farm laboratory. In the background can be seen a crew of workers harvesting the 311 sack per acre crop of red potatoes.

A school farm laboratory supplements class room teaching

P. D. Spilsbury, Vo-Ag Instructor, Wasco, California

THE average high school has a chemistry and physics laboratory for the teaching of these important sciences by experimentation. How can a farm be used in the same manner as a laboratory to teach farm students skills needed in the increasingly complex business of farming? Here is how this is done at Wasco, California.

The Wasco Union High School farm laboratory consists of 95 acres of improved land, watered by a 350 foot well with a 50 horse-power electric pump which feeds water through a reservoir covering approximately one acre. This reservoir permits night pumping with irrigating done by day. Crops grown on the farm include alfalfa, permanent pasture, milo, cotton, sudan grass, potatoes, and truck gardens. In addition 20 acres of land have been purchased by the Wasco Chapter, Future Farmers of America, for the purpose of the sun-drying of cull potatoes for stock feed.

Pupils Get Real Farm Experience

The farm is the property of the high school district and the income derived goes into the district funds. The policies, plans and rotations are developed by the department head and are submitted to the governing board of trustees for approval. The farm is operated as practically as possible, not as a show place or experimental farm but as a farm laboratory for the purpose of instructing high school students, who plan to make agriculture their way of life, the farm skills necessary to operate a farm in this vicinity successfully. Farm mechanics skills are taught in two small shops located on the farm. Several of the buildings used as farm shops, feed storage, poultry houses, swine farrowing units, sheds for beef cattle and many smaller projects have been built by the boys studying farm mechanics as a part of their training in vocational agriculture. In addition to these projects built on the farm, boys are permitted

and encouraged to make feeders, managers, brooders, feed troughs, gates, trailers and many other pieces of equipment needed in their home projects.

Truck gardening is taught by having all freshman and sophomore students prepare the seed bed, plant, and cultivate a general family-size garden plot. Seed, tools and irrigation water are furnished without cost and the student is permitted to take home whatever produce he produces for family use. The carry-over from this policy is sometimes seen in the fine gardens grown by boys interested in agriculture who live in town and lack facilities for livestock and more extensive crop enterprises.

The value of the school farm labora-

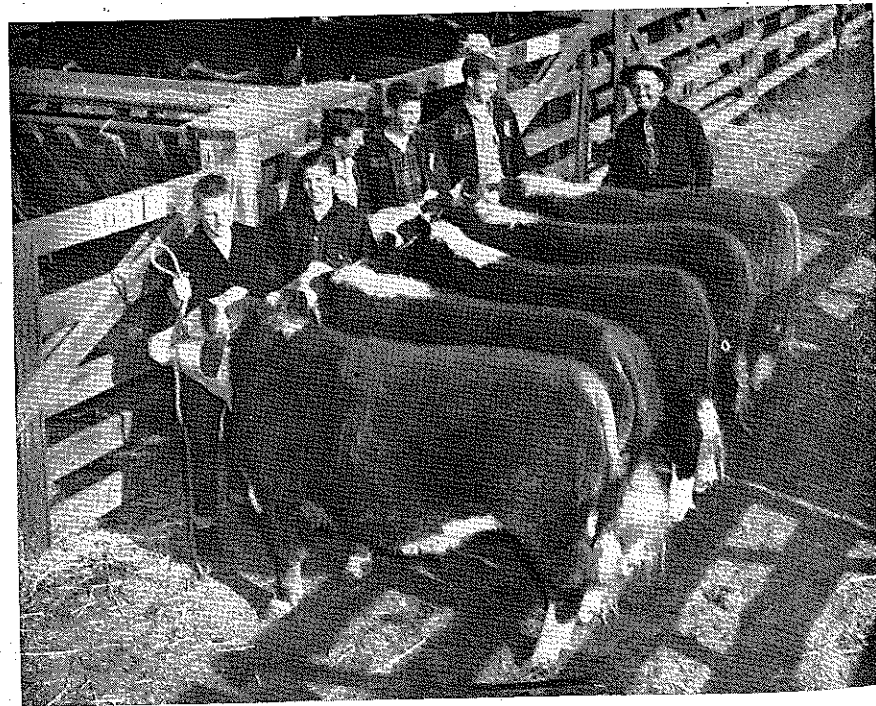
tory is readily understood when the crops standard to the community are studied by classes as they develop. Culture, fertilizing, weed control, irrigation, pest control, harvesting, marketing, and other practices are learned and retained much better when these can be seen by the students and in many cases done by them in actual practice.

F.F.A. Members Purchase Animals

Perhaps one of the most useful functions of the school farm is a place for holding feeder animals, breeding stock and feed supplies for sale to Future Farmer members. Feeder calves, pigs, and lambs are sold to individual boys and the local branch of the Bank of America has made loans to finance the carrying out of these projects. Over a period of 14 years just under one hundred thousand dollars have been borrowed from the bank without a single loan being defaulted or loss occurring to the bank. This process furnishes an excellent opportunity for the Future Farmer to become acquainted with the banker and other finance organizations and to learn the value of establishing good credit and responsibility.

As all animals kept on the Wasco High School Farm are property of the FFA Chapter, those left, after the boys have selected the feeders which they wish to purchase and take to their own farms, are fed out on the school farm. This permits the establishment of a mutual insurance setup in which a boy pays an additional 10 per cent of the purchase price of an animal, and for this premium the chapter guarantees to replace any steer which dies with one of equal weight and from the group of animals from which the lost animal was originally selected. Over a period of years this insurance plan has about broken even financially, but has prevented financial disaster to many chapter members. Every parent, without exception, has ad-

Champion pen of 5 steers owned and exhibited by a Wasco Future Farmer. Great Western Livestock Show, Los Angeles, Calif., 1951. Steers were purchased as feeder calves from the Wasco F.F.A. Chapter and were fed on the boy's home farm.



vised his FFA son to take the gamble out of feeding animals by acquiring this insurance.

Feeding out the surplus beef, hogs, and lambs on the school farm has permitted the boys who feed at their homes to have a gauge or barometer of how their own animals compare with those being fed on the farm. The beef animals kept on the farm are all halter broken by the Ag. classes and this permits many boys to have their only contact with livestock as many of the farms in this community have no animals or livestock grown on them.

Farm Products Rank High

The farm work is done by two full-time men with the salary paid to the man feeding the livestock shared equally by the Future Farmer Chapter and the High School District. One of the men is a graduate of the agricultural department and achieved the degree of State Farmer while in high school. He fits and shows the carloads of cattle fed on the school farm. Proof of the feeding skill carried on at the high school farm is the fact that in the last six years at the Great Western Livestock Show, Wasco Future Farmer Chapter carloads, exhibited in the open division against colleges, high schools and professional feeders, have won three grand championships, and two reserve grand championships. In 1951, chapter carloads were excelled only by Karl Hoffmann, famous cattle feeder from Iowa. The Wasco FFA Chapter exhibited the reserve grand

champion carload. This carload dressed within one-half of one per cent of the Iowa load after the long trip from Iowa.

One of the outstanding accomplishments at the Wasco Union high school farm has been the development of the use of dried cull potatoes as an excellent livestock feed. Formerly thousands of tons of these cull potatoes were hauled out on the desert to rot. Now that their value as feed has been demonstrated the competition for purchasing them has increased to the extent that their price has approached that of barley.

All feed grown on the school farm is purchased by the FFA Chapter from the high school board at market prices. In addition, hundreds of tons of local feeds have been purchased at harvest time and stored at the farm for sale at slightly above cost to the Future Farmers for their livestock projects.

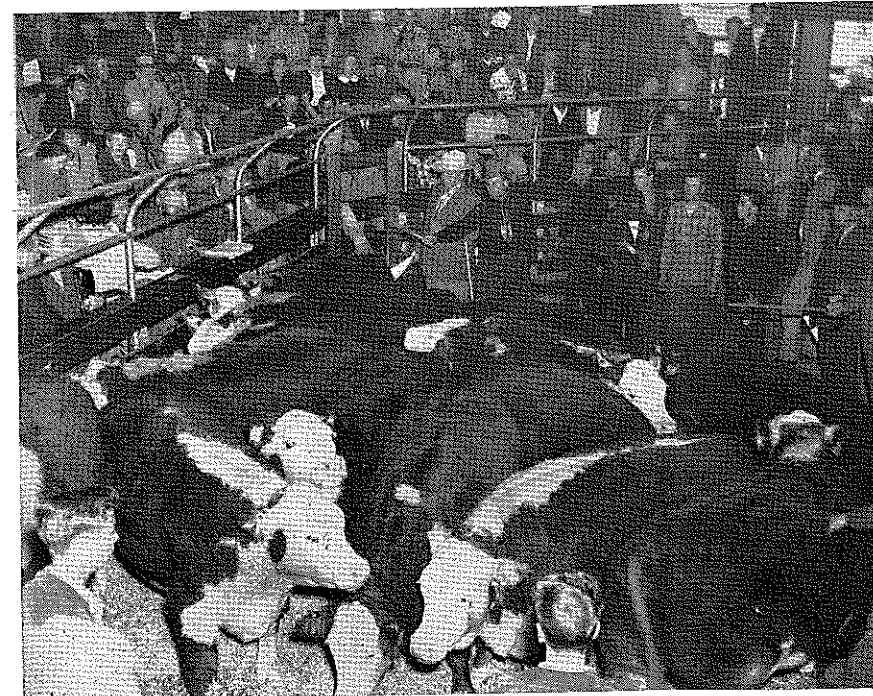
Farm Mechanics Included

Much oil field scrap in the form of discarded pipe has been welded in the farm shop classes into frames for shades for cattle, portable grain bunks, hay mangers, and water troughs. Evidence of this good shop experience has been the fact that Wasco FFA exhibitors for the last four consecutive years have won the first prize sweepstakes ribbon at the California State Fair for Farm Mechanics Projects.

All boys in agricultural classes have the opportunity to learn the operation and care of farm machinery by driving tractors and equipment used in the pro-

duction of crops grown on the high school farm laboratory.

Proof of the feeding practices used on the Wasco Union High School farm laboratory is this highly finished carload of Herefords judged as reserve grand champion load at the 1951 Great Western Livestock Show held in Los Angeles. The load placed next to that of Karl Hoffmann's grand champion carload of Herefords, dressed out less than 1/2 of 1 per cent less than the load finished by this famous Iowa feeder. The dressing percentage was 67 per cent. Men in the ring left to right, Mike Gallagher, commission man; P. D. Spilsbury, head of the Wasco agriculture department; Harry Nelson, Kenneth Duncan and Elmer Brooks, F.F.A. boys; Skip Streiff (checked shirt) who fed and exhibited the carload along with four others owned by the Wasco F.F.A. chapter. Wasco F.F.A. exhibitors received \$63,000.00 from sale of livestock owned by members and the chapter, and prize money won at the 1951 Great Western.



Values Summarized

The values of the school farm as a supplement for classroom teaching of agriculture can be summarized as follows:

1. Permits boys to study first hand the standard crops and crop practices of the community.
2. Practical and interesting way to teach the growing of a family garden.
3. Furnishes a place to store the products of the Future Farmer chapter feed cooperative, the most important basis for a successful livestock program.
4. Permits the establishment of a mutual group insurance setup with 100 per cent protection for the boy.
5. Supplies a place for studying the use of cull feeds which would otherwise be wasted.
6. Place for boys to learn farm mechanic skills in building the equipment necessary to carry on livestock projects.
7. Permits all of the boys in the vocational classes to learn to handle and love livestock, the basis of diversification of crops.
8. Permits boys to learn to operate and care for farm machinery and thus become successful farm laborers, foremen and operators of farms.

Starting a new agriculture department

(Continued from Page 54)

tional agricultural program in the high school. Through the process of selling the school administration and the students a large portion of the people of the community will be sold. However, there are other necessary steps in selling these people. First of all, get out and meet the people. If the teacher is zealous about the program he will have something to talk about and the people will listen. Take advantage of every opportunity to speak before the farm organizations, service clubs, fraternal groups, and the Parent Teachers Association. Make early contacts with key farmers and business men.

In the process of initiating the department in the school there may have been articles in the local papers about starting a vocational agriculture class in the high school. People will be eager to meet the new instructor and they will be interested in what he has to say for his program. Be prepared to take advantage of these opportunities to sell the program. Get the people of the community behind you, for as Lincoln said, "Public sentiment is everything; with public sentiment nothing can fail; without it nothing can succeed. Consequently he who molds public sentiment goes deeper than he who enacts statutes." □

Development and application of farm mechanics skills and judgments*

CARL F. ALBRECHT, Agricultural Engineering Dept., Michigan State College



Carl F. Albrecht

VOCATIONAL education in agriculture promotes growth in the direction of establishment and increased proficiency in farming. It has been frequently said that about eighty-five per cent of the activities in farming involve engineering. If this high figure is even remotely accurate, it serves to emphasize the need for a better program of development and application of fundamental farm mechanics skills and judgments. Certainly there are numerous indications that we have neglected somehow to provide for real, lasting student growth in the farm mechanics field comparable to the progress our students have made in other areas of vocational agricultural education. One way in which the proper development and especially the application of farm mechanics skills and judgments might be measured in a community is by the number of good home farm shops that can be found therein. We need only to look around us on the farms in our various states to observe the lack of adequate home farm shop facilities on the majority of farms. After over thirty years of talking about home farm shops we still have very few that can be considered adequate, and most of these have been developed in the last few years. Where have we failed and what can we do about it?

In his excellent article, "The Fundamentals of Educational Method," in the June, 1951, issue of *Agricultural Education Magazine*, Dr. J. A. Starrak points out that the basic problems in education are two, namely: (1) what should we teach, and (2) how should we teach it. Surely all of us agree that in farm mechanics we must teach in such a way that we will help the student to develop fundamental skills and judgments. But we cannot stop here. We cannot teach skill for skill's sake in any vocational course. We must also help the student to learn how to apply those skills and judgments. Thus, it is reasonable to expect that a training program in the area of farm mechanics should be an integral part of the student's supervised farming program and be closely related to the needs of the farm on which he lives. There will be items of equipment connected with the student's farming program or his farm which he will need to construct to carry out a satisfactory productive farming program. One might consider the building and repairing of these items as service work. Admitted,

*Speech given at the North Central Conference held at Chicago, March, 1952.

it is possible to over-do this building of projects to meet supervised farming needs at the expense of other fundamental farm mechanics skills which the student should also develop. Our problem then is, "How can we teach what we should teach in this area of vocational agriculture?" It is doubtful that anyone has the complete answer to this question, but there are some steps that the teacher of vocational agriculture must take if he wishes to be fairly sure that his students are being adequately prepared in the field of farm mechanics for proficiency in farming. Here are a few suggested channels of thought and action which might lead to a partial solution of some of our problems.

Planning the Program

One of the most important steps to help us to insure relatively complete coverage in the farm mechanics training program is that of continuous planning. Some of this planning will be done by the teacher himself and will be based, among other things, on facilities available, community needs, and the instructor's ability. But the most important phase of planning will involve the students and their parents and will be based on the students' individual need, particularly as it applies to their farming programs and their home farm situations. This latter phase of planning should, of course, be continuous but much of it might be concentrated in the summer months. Some teachers prefer to devote one of the home farm visits almost entirely to farm mechanics planning, while others may make it a regular part of each visit. During these visits, the student, with the help of his teacher, begins a list of all of the different jobs and projects in the farm mechanics area that need doing on that farm and also to work out a preliminary priority order of these items.

In assigning priorities to the various items, the consideration of whether or not the student is ready to handle the job is very important if we expect success. The plan should cover a period of several years, perhaps four. Thus the eleventh year student would have plans for farm mechanics work for two years beyond high school graduation. Additions to the list and revisions of it should be made as time goes on.

After such a list has been established with each boy, it will be necessary for the teacher to coordinate the plans of all of his students so that he will not overcrowd his shop space at one time and find himself with a bare shop a few weeks later. In a program of this kind there are bound to be projects in which there will be considerable repetition of fundamental skills and it will be up to the teacher to determine how much of

that repetition can or should take place in the school farm shop. Consequently the teacher must also make arbitrary decisions as to which of the selected jobs or projects should be done in the school shop and which of them should be done on the home farm. The on-the-farm follow-up deserves our most careful consideration. It is the key to real vocational training in the mechanical phases of farming.

Skill Analyses of Shop Projects

One method that the teacher can use to prevent excessive repetition of fundamental tool processes is to make a rather complete analysis of the various projects that students will build and the repair jobs which they will do. Such a breakdown could be made in great detail, but it is doubtful that any teacher would have the time to analyze extensively each project which the students in his class would undertake. Nor is it suggested that such a complete analysis is necessary or advisable. We must realize, however, that there are many fundamental manipulative skills involved in such an apparently simple project as a nail box, and that there is considerable repetition of these skills as long as we remain in the area of farm carpentry. While some additional skills will have been added, a number of the skills needed to build a self-feeder or a portable hog house are not different from those required to make the nail box. This might be an indication that one of these two larger items had better be built on the home farm rather than to be built in the school farm shop and then moved to the farm. It is conceivable, therefore, that even in the earliest stages of planning, some phases of the farm mechanics training program can and should be earmarked to be done right on the home farm. Thus, the vital follow-up phase of vocational training can begin almost simultaneously with the school shop and classroom training. This is a part of *teaching the boy to farm the way a farmer farms*.

Skills analysis of projects suggests one addition to Dr. Starrak's fundamentals of educational methods, viz. *WHEN TO TEACH IT*. And this, of course, is another important part of planning. In Michigan, general shop is prerequisite to instruction in farm mechanics. It is usually offered in the 9th grade. This general shop instruction can be of great value if that part of the work is properly organized to develop some fundamental shop skills that the student can use in farm mechanics. He can learn to swing a hammer correctly, handle a saw, use a wrench, sharpen a chisel or a plane blade, draw a file, tin a soldering copper, and to develop many other fundamental skills which he is physically and mentally ready to acquire. As teachers, we must not overlook the fact that it is one of our prime responsibilities to see that each of our students does develop sound, fundamental manipulative skills.

Above all, let us not assume that all of the farm mechanics skills can be developed in a year or two. It takes more time than that. We have all probably heard of *reading readiness*—the point at which the student is able to assimilate and understand what he is able to read.

How about *manipulative skills readiness*—the point at which the student is able to understand what he should do and is physically able to do what he understands should be done. What use is there in trying to help a boy to develop skill in forge work, for instance, when he is physically incapable of swinging the heavy hammer with one hand while holding the tongs with the other? And yet, in so many farm mechanics courses outlines, forge work is scheduled in the 9th grade. Anytime later would be better for most boys. The same thing applies to sharpening a twist drill, welding, and many other manipulative skills. It would seem obvious, therefore, that we must plan to provide opportunities for the student to acquire new skills as he becomes ready, physically and mentally, to do so.

Growth in Judgment

The student's growth in judgment is more difficult to measure than his development of manipulative skills and also more difficult to achieve both for the student and the teacher.

Recently, a student teacher was observed working with his class on the job of converting a horse drawn manure spreader to one to be operated from a tractor. The immediate problem was to hoist the front end of the spreader to allow the removal of the front wheels. The boys prepared a single chain sling around the fore part of the spreader and began to hoist it. The top of the box began to give way because of the greater stability of the bed. Here was the teacher's opportunity to help to develop judgment—but he missed it. He didn't say, "why is the top caving in?"—he said, "put a two by four up there or the box will break." Not entirely negative, but also not much left for the students to think about. Let us not only emphasize the *what*, but also the *why*, and let us give the student a chance to at least try to figure out the *what* and the *why* if we desire to develop judgment on his part. Another example of judgment in farm mechanics which we must help the student to develop is that of involving decisions of whether to hire certain kinds of farm mechanics work done or to buy the equipment needed and acquire the skills necessary to do them himself. In this case he should also be able to evaluate the work and the finished product even though he may not have the skill to do the job himself. There are hundreds of opportunities for us to help our students develop judgment. We should look for them because judgment is perhaps even more important than are the skills.

Records Needed to Measure Growth

Most of us will agree that some kinds of records are necessary if we desire to measure progress. What we need is a method of keeping a record of the fundamental farm mechanics skills our students are developing. A record of what things the boy has made or repaired is useful, from the farm mechanics standpoint, only insofar as it contributes to the skills record. Our records should indicate the variety of skills achieved as well as how much practice the student has had. Also, we should

certainly give the student credit for the mechanical skills he develops on the farm. In some areas of farm mechanics, such as soil and water development, the home farm is a far better place for him to develop manipulative skills than in the artificial situation we would have to employ in the school shop.

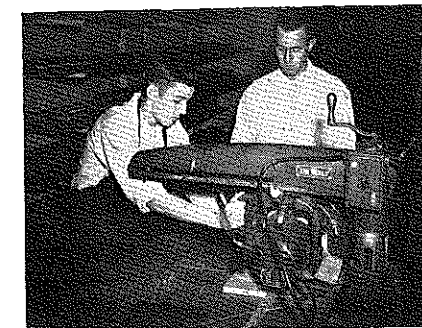
Conclusions

We need to make a conscious effort in the development and application of farm mechanics manipulative skills and judgments in order that progress in this area in the future might be comparable to that made in other areas in vocational agricultural education. We must base our teaching in farm mechanics on the student's farming program needs and the needs of the home farm, but we must not overlook our responsibility to help him to develop as many fundamental skills as possible. This means avoiding excessive repetition of skills in the school farm shop and, most important of all, a good follow-up program on the home farm.

Arranging a small shop

PAUL DIXON, Voc. Agr. Instructor, Waverly, Ohio

WHAT a mixup—a small shop and a large class. When we started the year we had a shop full of boys and equipment and no place for projects. By the time the first six weeks had rolled around, we were working on some wheat drills together with farm shop projects. I came to the conclusion that something had to be done. The shop was a crowded mess and was likely to get much worse as time went on. Some planning was necessary. This was accomplished with the help of Gordon Ryder, teacher at Washington Court House, Ohio. The first job was to get more room in the center of the shop for machinery, for the engineering class and for large farm shop projects such as gates, feeders, and hog houses. This was done by moving work benches to the walls. We placed them along one wall and one-half of the opposite wall. The welder was placed in the corner and metal working benches with heavy vises and grinders were placed on each side of the welder, thus taking up the remaining one-half of a wall and one-half of the third wall. This left us one-half of our third wall vacant which we used for tools. The shop being rather dark, we painted it white to



Space for the table saw must allow for length of boards to be sawed. A problem in a small shop.

In order to accomplish this it will be necessary for teachers to do more planning on a long time basis. It will also mean that teachers will need to be more aware of the manipulative skills involved in each project their students make so that they can properly guide them through a program of farm mechanics that is well rounded and complete. We must keep in mind that a program of farm mechanics is not complete unless the student has also learned to form sound judgments and to evaluate farm mechanics work. Finally, records must be complete enough to measure growth and simple enough not to be burdensome.

These things which we need to do point up a need for teachers to develop new methods of incorporating farm mechanics planning more thoroughly in the supervised farming program plans and also to devise new ways of recognizing the opportunities for the student to develop his skills at the same time that he builds things which he can use on the home farm. □

brighten and lighter that portion of the shop. A very shallow cabinet was built to conserve as much floor space as possible.

By the rearranging alone, we were able to get rid of two benches and one of the metal working tables and yet have sufficient bench space. This opened up the center of the shop to a great extent, but we still had a forge which occupied a large corner of the shop. By removing this, ample room was permitted for two boys to work. The forge was replaced with an oxy-acetylene torch. The only other power tools we have with the exception of the welder and grinders is a 12-inch table saw. This was placed about three feet from our fourth wall near the center so that we have just room enough to rip twelve foot gate lumber on it. The fourth wall has a place for lumber with just enough space to walk between it and the saw.

This all makes a rather efficient shop layout with little or no waste space and gives us plenty of room for larger pieces of machinery.

Our larger jobs in shop have been put off until the weather was nice enough outside. We have completed a rather sizeable list of projects both large and small. Those recently completed in the shop are, two hog feeders, rebuilding a farm wagon, welding a milk cart and mounting two horse drawn corn planters on Ford tractors, together with some small articles. Those outside the shop include building two wagon beds and a calf shelter on skids.

The engineering class has worked on several pieces of equipment such as two grain drills, one disk, one plow, two corn planters plus the larger equipment which we were able to use through visits to a dealer at his place of business.

As our school year came to a close, I felt that we had had a fairly successful shop program for the boys although we have had a limited amount of space in which to work. I have several changes already in mind for next year which will give us a more efficient shop. □

Color conditioning

(Continued from Page 55)

these colors are used by national highway safety codes:

- Buff color—shows the way and reflects light
- Yellow—denotes adjustment of travel, denotes warning
- Orange—Caution
- Black and Orange—denotes extreme caution
- Green—go ahead
- Red—danger

Loud colors should be used sparingly and especially not in line with working areas. This distracts your attention from the job you are doing.

One factor we must keep in mind in using color is to keep brightness difference as low as possible. Another factor is to eliminate glaring surfaces.

All oil and grease must be removed before attempting to paint equipment, and be sure non-gloss metal paints are used.

In painting the rooms, the wall opposite the light inlets or windows must be painted dark. The walls with the windows in, should be painted light for balance.

Chief functions of color conditioning are:

1. Relieves our tension
2. Relieves fatigue
3. Increases efficiency
4. Simplifies our work
5. Improves morale

Make a practice of touching up at least twice a year after the color scheme is in effect.

Proper color conditioning of our school farm shop has resulted in increased efficiency:

1. Light values have doubled. Before we painted our agricultural shop, it was necessary to use overhead lights in cloudy or stormy weather. Now the lights are rarely, if ever, used during such weather because this type of color conditioning reflects light. It does not absorb light where light is needed.

2. The shop building has a pleasant, restful atmosphere as a result of color conditioning. Adjoining the agricultural shop is the automotive shop which was painted dark red in most areas with the wooden ceiling stained brown. This was very depressing. The two instructors have used overhead lighting during all periods of the day unless there was direct sunshine outside, and they have found this to be ineffective. Several times these instructors and others have commented on the marked change in the two buildings. Just two weeks ago these instructors finally gave up and are at present busily repainting their shop to conform to the standards we have used. At present, part of the building is finished. The contrast is so great that even the students are making this a topic of discussion at home.

If you have not tried color dynamics in your shop, give it a try. I'm sure you will be amazed, as we were, at the increased efficiency that color can give to you and your students in your high school shops. □

Appeal to the sense of sight

(Continued from Page 57)

the teacher is saying or doing. The aid should remain covered or out of view of the class until the stage is reached in the lesson where it will clarify certain points being taught by the teacher.

What Types of Visual Aids Are Available?

Blackboard Illustration: The blackboard is used daily by the resourceful and skilled teacher. Examples of items that may be placed on the board are developmental topics or questions, sketches, charts and diagrams.

Models: A model is a replica of some object. It may be in miniature; it may be in exact size; or it may be enlarged. Most of the numerous types of models can be classified under the following general headings: actual size models, smaller scale models, large scale models, transparent models, working models cutaway or section models.

Excellent cutaway and section models can be used in the farm shop or classroom to show the function of some part that is otherwise obscured. The use of such devices permits the teaching of functions and principles in the shortest possible time.

Enlarged models are often made of some working part to explain complex mechanisms that may be difficult to understand. An example of such would be the hydraulic system of a tractor. Small scale models are used to illustrate the working principles or characteristics of large objects. Both enlarged and small scale models have more instructional value when constructed so that the parts actually work.

Charts: Charts are used to draw the attention of the class to important facts or ideas. Excellent charts can be made showing such things as functions of equipment, to present important facts, etc. Arrange the charts in such a manner that they may be displayed when needed, and then removed without distracting attention. It is advisable to mount them on rollers or slides. When not in use, cover them if they are left in front of the class.

Exhibits: Exhibits of models, samples of work, and damaged parts of equipment make strong impressions upon the individual. The student will retain, for a long time, an image of a damaged tool that has been abused by improper use and carelessness. Such displays are effective teaching aids.

Film Strips: A film strip is a length of standard motion picture film containing still pictures or instructions on some subject. It is shown on the screen as a still picture. Each strip generally deals with a particular subject or learning unit. The steps of performing some operation are often shown. Each step is arranged in the proper sequence and can be shown on the screen as long as necessary.

In using film strips the instructor should become thoroughly familiar with the material so that he may give the necessary explanations as they are shown to the class.

Sound Film: Sound film utilizes two of the important senses in learning. □

School relationships

(Continued from Page 58)

course of a teacher's life. There are many chances to be of help to other teachers.

In summary, these are the five points the vo-ag teacher should remember in establishing good school relationships; make adjustment to school regulations; accept criticism gracefully; do a good job of teaching; be active in community affairs; work cooperatively with other teachers. Perfection may not exist in school relationships, but doing these things will help each vocational agricultural teacher be a booster for his own school and administration and can lead him to a more satisfying and a happier teaching career. □

"It should be regarded as an obsolete practice to teach today with a single textbook," says the 1951 Yearbook of the Association for Supervision and Curriculum Development, a department of the National Education Association.

"An education program should be determined by the needs of the children and youth of the local community. It should be planned by individuals who will be affected by the results. This means the parents, children, and other citizens of the community, as well as the teachers, the principals, supervisors, and the superintendent should have a part in planning the school program."

Films intensify interest and call attention to important things to be learned. The student should be informed on what to look for before viewing the film. A list of questions may be used to guide them in their observation. They should be tested or a discussion may be held on what they have learned from the picture.

Motion pictures should be used only where they will prove to be an effective aid to learning and where they will assist the student in grasping the subject matter being taught at that time.

Where Are Visual Aids Secured?

Many of the best visual aids used in the classroom are made by the teacher or under his direction. There are several advantages in making them. The teacher may prepare just that which he wishes to show and omit all unimportant and undesirable features. They can be made to the size needed for classroom use. Visual aids can be secured from a great many sources. The increased emphasis upon the need and values of such aids in learning has greatly enlarged the available supply. Some of these sources are given below. Most of these aids are in the form of films, slides, strip films, charts, and printed matter:

- a. Industrial firms
- b. Local businesses and dealers
- c. Educational institutions
- d. Department of the Interior
- e. Department of Agriculture
- f. Department of Commerce
- g. Organizations in a specialized field. □

Making charts

(Continued from Page 61)

In order to secure straight lines of letters a long T-square should be employed for lining the paper previous to lettering. Such a T-square may be purchased or may be easily built in the farm shop.

The last piece of equipment that you will need is a free-flowing fountain pen which uses felt nibs and a quick drying ink. Such a pen offers many advantages over the use of ball-point pens with India ink.

Planning the Layout. Before you start on your chart it's a good idea to sketch your ideas on a piece of 8½ x 11 paper. Begin with the title. The title should, first of all, tell the reader what the rest of the chart is about. In addition, it should stimulate the reader's curiosity and interest him in the material which follows.

Let's start with a simple title such as "Feeding Tankage to Pigs on Pasture." Here are some variations:

1. Through asking a question—Should Tankage be Fed to Pigs on Pasture?
2. Through putting the reader into the situation—Will It Pay You to Feed Tankage to Pigs on Pasture?
3. Through word play—Pigs Make Hogs of Themselves Faster with Tankage and Good Pasture.

The beginner will do well to start with simple tables of data which may be copied directly from the bulletin or other source of information. It's a good idea to include such information as will help the reader to understand how, when, and where the research was conducted. It's a good idea, too, to simplify large complex tables of data.

A good addition to many tables is a short pithy statement which sums up the content of the chart. This *stinger* usually follows the table at the bottom of the chart. Examples might include "Spittlebug Can be Controlled" or "A Pound of Tankage Saved a Half-Bushel of Corn."

Still another good addition to a chart is a simple drawing, cartoon, or diagram. While these are not an essential part of every chart, they often help in securing interest and in making an important point.

Making the Chart. Having assembled the necessary equipment and made a sketch of the chart, it's a simple matter to complete the chart. Most of us can do better work seated at a table although you may prefer to work on a drawing table in a standing position. Here's one final precaution—Don't try to make each letter and figure perfect. If you do a reasonably good job of writing at the blackboard, a similar quality of work is satisfactory for chart-making.

Try It Out

From now on you are on your own. You will find that, like riding a bicycle or using a band saw, practice develops additional skill. You will find, too, that you have discovered another teaching tool which will make your work more effective and enjoyable as well as save your time. □

"While they live"

L. E. CROSS, Exec. Sec. N.V.A.T.A.



L. E. Cross

association done to honor them "while they live"?

Apparently the people in Minnesota who are engaged in Agricultural Education think it is desirable to let them know "while they live." Their belief was substantiated through the presentation of Honorary A.V.A. Life Memberships at the last annual AVA convention.

Should other states wait for the convention to be held in that state before their vocational educators are similarly honored? With forty-eight states as a potential it just might be forty-eight years between such occasions. Some states might find it difficult, if not impossible, to ever hold an AVA convention at any time.

Minnesota presented awards to supervisors, teacher-trainers and to quite a number of outstanding vocational agriculture teachers. It may be that a vo-ag teacher has received such an honor before (I would guess maybe not), but certainly never have so many vo-ag men been so highly honored. The pattern has been cut, what will the follow-up be?

More state associations of vo-ag teachers should be giving serious consideration to the selection of outstanding men within each state who might be worthy of receiving an honorary A.V.A. life membership.

It seems to us that the time to honor people is "While they live." □

Guest Editorial

(Continued from Editorial Page)

other classes with a minimum of trouble to these teachers. He will do everything possible to "sell" the other departments of the school rather than to sympathize unnecessarily with boys who cannot see the value of these subjects to future farmers.

He will understand that the ability to work harmoniously with others is the biggest single factor in success, and that the prestige which he enjoys with his own boys will depend to a larger degree than he may realize on how his co-workers on the faculty feel toward him.

Let us hope that prospective teachers assigned to training stations this year may be fortunate enough to work under supervising teachers who have a keen appreciation of this important aspect of their jobs. □

Development of programs

(Continued from Page 65)

or crops, planning terms of agreements, estimating costs, approved practices to maximize gains or yields and developing skills needed to carry on the farming program.

Programs Affect Courses

The course material for the vocational agricultural instructor should be based upon the needs of the student in developing his farming program. The objective of the vocational agricultural course should be to enable the student to: (1) choose the crops and livestock which fit the home farm situation; (2) make the most efficient livestock gains and most profitable crop yields; (3) maintain the farm buildings and farm machinery; (4) market his products to the greatest advantage and to purchase his supplies wisely; (5) develop the ideal of being thrifty; (6) develop the ideal of being a worthy citizen in community affairs, and; (7) analyze his own problems. Many times the agricultural teacher can help the boy locate land to farm and encourage him in the final step of renting land that constitutes a big step toward establishment in farming.

Of all the jobs needed in getting a boy established in farming, the most important is interest. If the boy has interest he will look for and find the information needed to successfully carry on his program. For example, I would like to cite my first agricultural class in Audubon. Of this class, three are established in farming, five are in service but were working toward establishment in farming until they were called to service. Two have completed service; of these two, one is working for a construction company and the other recently purchased a share in a service station. The three that are established in farming had the greatest interest in being farmers in high school. They differed widely in their progressive growth of farming program. The boy with the least interest and the poorest supervised farming program probably has the best program now. This is a direct result of parental help after the boy's marriage. This however, has not been true in later classes as the boys with the better farming programs have been the first to become firmly established.

Some boys may choose a life partner (wife) that does not like the farm. In such cases no amount of planning will lead to establishment in farming. This is a problem that an agricultural teacher may help the boy to understand.

In summary I believe that, as vocational agricultural instructors, we can best aid a farm boy in developing a farming program that will lead to establishment in farming by: (1) interesting the boy in life of farming, (2) getting the cooperation of the boy's parents in helping the boy reach his goals, (3) giving the boy confidence that he can farm by giving him good practical instruction on the farm that helps his farming program, and (4) helping him gain experience in renting and managing a farm. □

Getting the most from D.H.I.A. Records

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ALMOST every vocational agricultural department in Wisconsin has a herd testing program and uses the records to teach better methods of dairying. Because of the great need for better dairy management in the Kiel vocational agricultural department, the boys enrolled in vocational agriculture computed the records of the 68 herds on test for 1950-1951.

These 68 herds were divided into four groups: excellent, good, fair, and poor, according to average butterfat production per herd. We found that the average for the excellent group was 21.8 cows per herd and 10,047.74 pounds of milk with an average test of 3.64. The butterfat average was 366.25 pounds. The good group average was 17.4 cows per herd, 8,023.76 pounds of milk, 3.65 test and 303.45 pounds of butterfat. Group 3 (or the fair group) had 19.3 cows per herd, 6,968.52 pounds of milk, 3.68 test, 256.88 pounds of butterfat. Group 4 had 13.4 cows per herd, 5,218.82 pounds of milk, 3.77 test, 196.23 pounds of butterfat. The average for all herds on test was 7,365.66 pounds of milk, 273.72 pounds of butterfat with an average test of 3.71.

Using this information as a basis for study, we pondered on the one big question: Why should one herd of 22.4 cows have an average butterfat record of 147.44 pounds and another herd of 22.3 cows have a production of 382.62 pounds of butterfat?

To answer this, we jotted down questions that, if answered by each student, would give data concerning the dairy practices followed on the individual farms. These are a few of the 103 questions asked in the questionnaire filled out by each student: *Do you feed grass silage? Do you mix your concen-*

trates? Do you clip your cows? Do you have a purebred herd? What kind of bedding do you use? How long do you leave your cows stand dry? Do you pasture young stock in the woods? Do you keep breeding records? All questions could be answered briefly.

These questionnaires were then sorted into the same groups used in classifying the herds according to their butterfat production. With the tabulation of all the results, we had a complete analysis which looked like this:

Group	Average weight	Purebred
1	1275 lbs.	58.8%
2	1200 lbs.	47.1%
3	1075 lbs.	11.7%
4	1000 lbs.	5.8%

The analysis is 15 pages long and we had it mimeographed for use as a text for the all-day students, young farmer group, and also the adult farmer class. By going over each question and discussing it we found that little things might mean the difference between success and failure.

In my teaching experience this has been one of the finest tools of teaching I have ever used for the simple reason that it is information gathered from our own community. This dairy herd analysis was confidential because all the herd records used were numbered and the numbers were known only by the herd owner and myself. Each boy knew where his herd ranked and interest was certainly stimulated. The complete study for the all-day students was six weeks in length where every phase of this analysis was discussed. The time spent on this study in the young and adult farmer classes amounts to about 10 hours of classroom discussion.

Some of the most outstanding factors affecting butterfat production in the Kiel area were size and age of the cow, use of a good bull and artificial breeding, the average age at which the heifers were bred, and the time the cows freshened. (The herds that freshened in the fall had an increase of as much as 200 lbs. of butterfat over those that freshened in the spring.) The farmers that fed alfalfa hay had a great deal more success with their herds than did some of the others who fed mixed hays. The herds that were fed concentrates according to production did much better than the others. We also found that the high producing herds had a protein supplement equal to 1/10 of their ration or more. Good pasture was a very decisive factor affecting butterfat production. The farmers practicing sanitation had a higher production. The feed cost per 100 lbs. of milk was \$2.48 for group 1, while for group 4 it was \$4.93. The labor income per cow for group 1 was \$187.42 and for group 4 a loss of \$48.52 per cow. Milk testing and



Preparing test samples at Kiel vocational agricultural department.

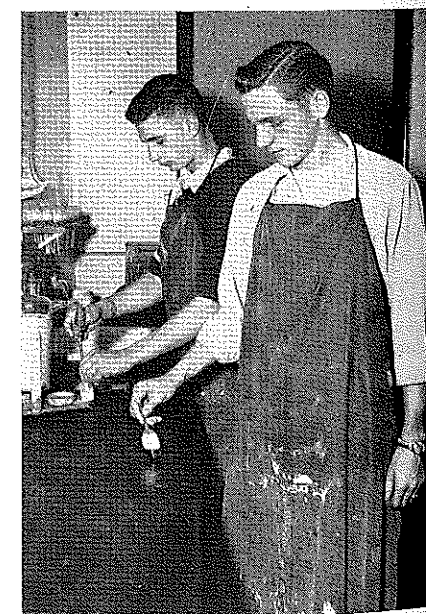
use of records was another big factor in butterfat production of these herds.

Because this analysis was a survey of the Kiel rural area, made possible by the farm students and farm owners, it meant a great deal more to the individuals personally than if the same information were taken from a bulletin or textbook. Many hours of supervised study on the farm enterprises were taken up with the individual on the dairy herd analysis in respect to his own herd and the practices used on it.

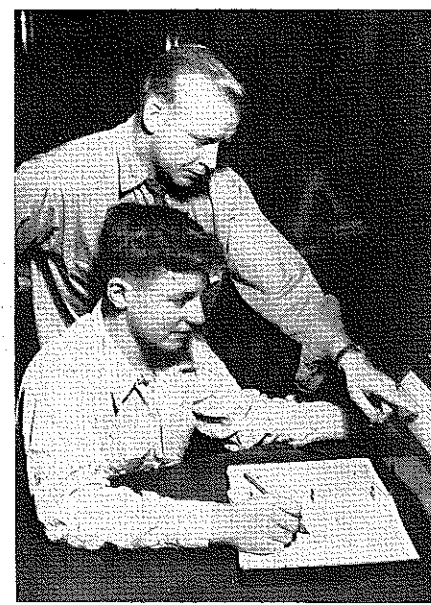
Also, where I had been having a hard time making a personal contact in respect to the supervised farming program, I have found that this analysis is a very good incentive to have the boy do a better job of improving agriculture on his own farm. Without question it is one of the outstanding teaching aids in our vocational agricultural department and the main reason is that this study was made possible through the cooperation of the father, son and the vocational agricultural instructor. All three were working together to improve the farm business on the individual farm and every farm in our community.

There is a great deal of hard work on the part of an instructor connected with such analysis but the amount of satisfaction and the relationship one has with the farm families rewards him tenfold.

Members of Kiel vocational agricultural department making butterfat test.



Computing dairy production records—Kiel vocational agricultural department.



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