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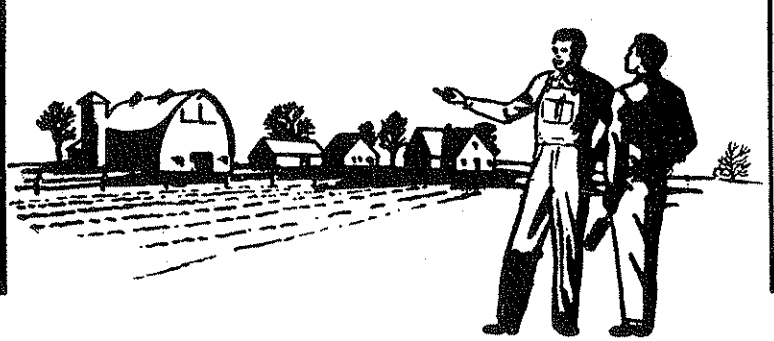
NUMBER 2

Theme— **Preparation For Citizenship Through Vocational Agriculture**

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The Agricultural Education Magazine



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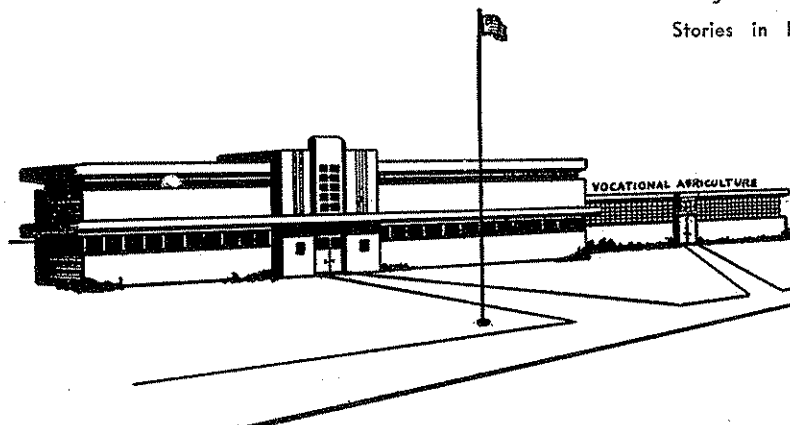
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Editorials

Guest Editorial

MARY M. CONDON, State Superintendent of Public Instruction, Montana

There is something that has been bothering me for a long time—as a public official, a member of the state land board, and educator. It is indicated in the following data—

Year		Total Number	Production value
1930	Farm Units in Montana	47,495	\$ 95,945,000
1940	Farm Units in Montana	41,823	111,043,000
1950	Farm Units in Montana	35,085	4,359,934,000

Where are all of our young future farmers going to find a spot of their own? As one leading citizen said the other day, "About the only way you can get a ranch now is to inherit one, or marry a girl who will inherit one." Not a very practical plan in most instances—but unfortunately too true. In a survey carried out recently in one school community, only 10% of those who took Vo-Ag were still in farming. This, of course, may not be typical—but assuming that 50% stay on the farm—what about those who don't? Was Vo-Ag wasted? Should the students have taken some other subject instead? I say no. Many of them are in business in farming communities where the things they learned in Vo-Ag are essential to understanding their customers' problems and needs. Others have migrated to larger urban areas, and taken with them the understanding of our country's economic basis in agriculture—an idea not generally accepted "on the sidewalks of New York." These economic missionaries are essential to continued understanding and support for farm programs, R.E.A., parity, conservation, and all the things we rural folks take for granted—until we nearly lose them because of lack of understanding by the rank and file of the people.

If it is valid to give agricultural education to farm boys, many of whom we *know* won't stay on the farm, is it not as valid to provide the same educational experiences to town boys who may want to take Vo-Ag? But these are prohibited by regulations which require the Vo-Ag student to have a farm project, usually exemplified by the production of cattle, sheep, hogs, or by 40 acres of crop.

Could not our agricultural education program be designed for all those who possibly are going into farm-related industry? Could not our Vo-Ag teachers, if it is impossible to combine non-farm boys with farm boys (which I doubt), conduct additional classes in agriculture open to all students? Are the schools justified in employing a Vo-Ag teacher to teach 15 or 20 farm boys at the same, or higher, salary than the English teacher who must deal with possibly 120 different students every day? Some administrators are wondering how they can justify this special investment in a few students, who, because of economic circumstances beyond their control, are favored. Does the answer lie in better utilization of agriculture teachers for all the students, at least in our rural high schools?

The Opportunity Is Ours

DR. A. K. GETMAN, Consultant in Moral and Spiritual Values Education, N. Y. State Education Department, Albany, N. Y.

Moral integrity and spiritual ideals have had a profound influence on the lives and culture of the American people. Our forebears struggled to create a way of life that could truly be called God-given. Their words and their ideals in our great documents came alive; they believed in the supreme and inherent worth of each personality whose freedom was more precious than his security. They put their reliance upon Almighty God and spiritual strength became their greatest asset. Today, President Eisenhower, in his dynamic addresses to the American people, urges us to strengthen our citizenship by renewing our faith in the values of the Founding Fathers.

Our world is a battlefield of conflicting ideas and faiths. Indeed free people now face a menace like that of ancient Sodom. Our faith in the freedom of the human mind and spirit is deeply rooted in a spiritual heritage centering in the brotherhood of man and the Fatherhood of God. To accept the blessings of our American rights of "life, liberty and the pursuit of happiness" requires an equal acceptance of the moral duties and values on which they rest. Such citizenship values as courage, a sense of decency, fair play, tolerance, good will and loyalty are not separate traits to be taught as isolated items; rather they are part of a traditional and cultural American heritage deeply rooted in the diverse faiths of our people. The crux of the matter is this; loyalty to good purposes is common enough, but loyalty to moral and spiritual values which undergird true citizenship, must center in loyalty to God.

Each person has a value-pattern which guides and regulates his life. When acting, he decides reflectively or unconsciously whether or not his behavior will help or retard the realization of these values. Total values give a profile of one's character and dependable character is the most reliable promise of worthy future conduct. For many years teachers of agriculture throughout America, have had a vital influence in helping pupils choose and live by creative values of citizenship. The Future Farmer Chapters at all levels, provide unprecedented opportunities for this unique service to a large segment of American youth. Values are learned through life experiences and teachers of agriculture are very close to the lives of their pupils and to the interests and needs of their communities. There is a nation-wide movement to teach moral and spiritual values to all pupils under the best traditions of both education and religion. These values are too basic to the needs of free people, too vital to American life, and too dependent upon our common religious faith, to be promoted by anything but a united professional effort guided and supported by our citizens.

Editor's note—See page 32 for statement of policy of the Magazine regarding Guest Editorials.

Preparing for citizenship

Through Cooperative Activities

RAYMOND J. AGAN, Graduate Assistant, University of Missouri



Raymond J. Agan

ONE of the primary purposes for sponsoring cooperative activities in departments of vocational agriculture is to learn to conduct business in a cooperative and democratic manner—a truly desirable trait of good citizenship. At present there are more than 10,000 farmer owned cooperatives in our country. It is evident that the cooperatives have had wide-spread acceptance by the rural American public. Some of the boys enrolled in classes in vocational agriculture today will be directors and members of cooperatives of their generation and will have the responsibility of making the businesses succeed. Will the training they receive in vocational agriculture give them the knowledge of the principles and practices of cooperation and the proper attitude toward democratic participation which they will need to be good citizens in cooperative enterprises?

Practices Vary

There is a great deal of variation in departments of vocational agriculture over the nation in respect to the use of cooperative activities as a teaching technique. One of my duties this year as a graduate assistant at the University of Missouri has been to develop a resource unit for teaching cooperative activities. It is an interesting but evasive subject. What is the best way to give students of vocational agriculture an attitude of cooperation and a knowledge of cooperative principles and practices? First of all, it must be a "learning by doing" teaching situation. It should also aid in the improvement of the individual farming programs of the members. Furthermore, the future farmer Chapter is very vitally concerned with such activities. Therefore, my first step in introducing this area to students of vocational agriculture is a problem based upon the types of cooperative activities the local

FFA Chapter would be justified in undertaking. With some thought and study under direction of the instructor, the Chapter members might decide to classify the types of cooperative activities they could conduct into such categories as:

1. Purchasing activities which would benefit the individual farming programs of the members.
2. Selling activities which would benefit the individual farming programs of the members.
3. Chapter livestock and crop producing activities within the Chapter.
4. Other activities within the Chapter including community service, and public relations.
5. Activities with neighboring Chapters.
6. Activities with other school organizations.
7. Activities with out-of-school organizations.

Under each type of activity specific projects the Chapter desires to undertake should be listed. An effort should be made to balance the cooperative activities by having each type of activity represented in the Chapter program of work.

Problems to Be Considered

Chapter livestock and crop producing activities within the Chapter are likely the most effective for the teaching of democratic participation and the principles and practices of cooperation. A Chapter deciding to conduct such activities within the organization should consider such problems as:

1. What livestock cooperative activities would be worthwhile for our Chapter to undertake?
2. What cooperative activities with crops would be worthwhile for our Chapter to undertake?
3. What cooperative activities with machinery and equipment would be worthwhile for our Chapter to undertake?
4. What cooperative activities involving credit and insurance would be worthwhile for our Chapter to undertake?

After planning the cooperative activities from which the Chapter would benefit, the members should consider the question, "Would it be advisable for us to band together in a true cooperative?" In order to answer this problem properly the members will need to know the characteristics of a true cooperative and the advantages of organizing a Chapter cooperative to themselves, the Chapter and the community. If their answer is, "Yes, we need to band together in a Chapter cooperative," then they will need to study the requirements and carefully make plans for organizing a successful Chapter cooperative. They will need to consider such problems as:

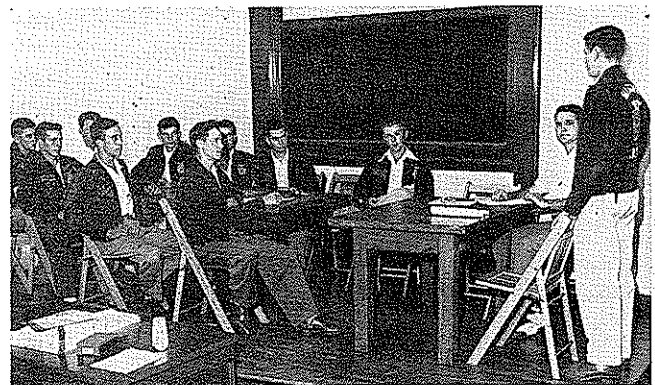
1. Why do some cooperatives succeed and some fail?
2. What is the background and history of cooperatives such as ours?
3. What would be the yearly budget requirements for our Chapter cooperative?
4. What legal instruments would be necessary for our Chapter cooperative?
5. What national, state, community, and school laws would affect our activities in a Chapter cooperative?
6. What methods shall we use in conducting the business of our Chapter cooperative?
7. Should our Chapter cooperative affiliate with other cooperative associations?
8. What taxes will our Chapter cooperative need to pay?
9. What records will our Chapter cooperative need to keep?
10. What steps should we take in organizing our Chapter cooperative?

Any boy who receives four years of training in a department of vocational agriculture which develops and conducts many worthwhile cooperative activities within the framework of an organized Chapter cooperative will, without doubt:

1. Be a better citizen with a favorable attitude toward democratic participation.
2. Be better informed about the principles and practices of cooperation and better able to take his place in a society which approves of cooperative businesses.
3. Be better established in farming as a result of a superior program in supervised farming. □



Future farmer boys use their cooperative tractor to lay out terraces—an activity giving good citizenship training for working in groups.



Future farmer members conduct a junior CCA board meeting—an activity providing opportunity for the development of citizenship.

Effective Vocational preparation also results in developing—

Character standards in training for citizenship

G. F. EKSTROM, Teacher Education, University of Missouri



G. F. Ekstrom

IN working with students of vocational agriculture there is danger that we become so absorbed in pursuing vocational objectives that we overlook accompanying aims in education. Also, sometimes we fail to recognize that we are training individuals who

must work and live with other individuals and with groups in a complicated society.

There are many aspects to the training of students in vocational agriculture for citizenship responsibilities. One of the aspects relates to character standards, to which references are made herewith.

Sharing Responsibilities

Many opportunities are presented to students in vocational agriculture for sharing responsibilities. The teaching laboratory in itself represents a small society where members share materials and opinions. Each individual has the right to be heard, and his points of view demand respect.

Activities in the school shop require a great deal of cooperation. Work areas are related, groups work together on major projects, certain tools and major pieces of equipment are used alternately, and supplies are maintained for the convenience of the entire body.

The FFA is a voluntary organization in which the members work together and share responsibilities. The organization is concerned with the development of leadership and the sponsoring of service undertakings.

The effectiveness of on-farm instruction is dependent on cooperation de-

veloped among the teacher, parents, and student. Undertakings regarding project plans are essential and parent-son partnerships may be advisable as programs are developed.

Honesty and Integrity

The student of vocational agriculture has considerable responsibility, much of which can be related to developing standards of honesty and integrity. The application of instruction is largely individualized and the student must solve his own problems, both in school and at home. He keeps records of receipts and disbursements just as Washington did "carefully and accurately." He sets up standards of production for his projects and subsequently checks on the degree to which the standards are met.

As an FFA member the accuracy of his accounts are taken into consideration for degree advancement. In the school shop the student is charged with the care of equipment and accountable for breakage due to negligence. In contests he must do his own work and succeed in the degree to which he develops judgment abilities.

Personal Satisfaction

The development of personal satisfactions contributes to character achievement. There are disciplines involved in acquiring farm skills, in solving managerial problems, in making a satisfactory weld, and in performing quality workmanship on a shop project.

The development of satisfactory farming programs involving production and improvement projects is the result of thorough planning and careful management. Proud indeed is the boy who produces a ton litter, one-hundred bushels of corn or two bales of cotton per acre. Nor does progress stop here for the candidate who aspires to a higher degree in his organization, or the student

who is about to advance another step on the agricultural ladder. Along with such progress there are possibilities for an appreciation of thrift which ordinarily are not forthcoming with the boy "not on his own."

Likewise there is satisfaction derived from abilities acquired to assume some measure of leadership responsibility, be it in the conduct of a meeting, the supervision of undertakings for younger students or some community service. Progress in social competence too, makes the boy more at ease in his relationship with other students, including the opposite sex, and with adults.

All boys covet good health and a strong physique. Those who learn to take proper care of themselves achieve a character hurdle which often goes by default.

Appreciation of Privileges

An appreciation of personal privileges is among the many additional attributes that might be cited which are indicative of character in students of vocational agriculture. One must believe not only in himself but be enthused about his environment if he is to become a happy and a useful citizen.

The successful student of vocational agriculture has a love of nature and the opportunity to work with plants and animals. He has some understanding as to the basic science of agriculture and is aware of problems related to hazards with which the farmer is confronted. He glories in his handiwork and is challenged by conservation problems.

Finally the student who is making progress toward useful citizenship has an awareness of what others are doing for him. He appreciates his school and his teacher of vocational agriculture. He respects his parents, and is aware of the influence exerted by his church. □

Theme for September

Improving the Teaching-Learning Process



The student who develops a sound farming program gains much personal satisfaction for himself which can affect future living. Young dairy herd owned by student at Aurora, Missouri.



Quality of shop projects reflects training of students. Standards of workmanship are learned for use in life situations. Exhibit at Springfield, Mo. (Photos by Joe Duck.)

Teaching, for any purpose, calls for understanding of—

The place of learning in relation to life

PAUL M. HODGSON, Teacher Education, University of Delaware

EDUCATORS today believe that the degree of learning which takes place on the part of an individual depends to a large extent upon the interest, enthusiasm, and industry or effort of that individual. Many writers have expressed this thought and have carried on studies at least part of which have either directly or indirectly made a contribution to this belief. Most studies have considered the topic from the point of view of the psychology of learning, but in more recent years consideration has been given to not only the psychological but the physiological relationship of the individual to the learning situation. This is emphasized by writers who point out that learning is based upon the complete individual—the skeletal frame, a nervous system, a system of muscles, a circulatory system, and a glandular system—and that the learner is active because of something within. They point out that an understanding of the entire structure of the individual is necessary for one who is trying to influence the educative process of people.

Leading educators generally agree that it is necessary to have an increasing inter-relationship and understanding of all fields of study as they relate to the individual and society as a whole if the greatest benefits are to be derived from our school instructional program. On the basis of this thinking and my study of learning, I have developed a new word for my own use—"Besppe (Bes-pe)"—which I define as the science of living in all its phases with emphasis on dependence and inter-relationships of major fields of study. The basis for all learning implies an understanding, broad interpretation, and integration of fields of Biology, Economics, Sociology, Psychology, Philosophy, with special emphasis on Education as a means of guiding the forces toward successful living of individuals. This may be diagrammed as follows: No longer do we interpret the success of education in terms of stores of factual knowledge but in terms of the development of personality and character of the individual and his satisfactory adjustment (through self-direction) to the society in which he lives. This calls for flexibility and cooperativeness of effort of all people in order that an integrated program be developed to meet individual needs. It calls for a complete understanding of "the place of learning in relation to life."

What Is Learning?

"Live and Learn" is a casual expression which we have all heard and I am sure have used at times in expressing our reactions to the activities of individuals. Mostly, I expect, this expression has been our reaction to an apparent "Trial and Error" experience, especially when failure is the result. It is a way of saying, without considering

the real import behind it, that all our living is a learning process. Looking at the expression in this simple way, we could say that it is almost axiomatic that all people accept the theory that we learn by living—that a person learns as long as he lives and that learning stops only when life has ceased. (To complete the "Live and Learn" expression one often hears "Die and Forget It All.") This means that we are giving a broad interpretation to the meaning of the word "learning"—from the simple realization that the alarm clock is ringing; today is Saturday; it is 6:00 o'clock; it is dark at this time of morning; the razor blade is dull; there is no fruit juice in the refrigerator; the automobile has a flat tire; I must walk to the station; there is not enough time to make the train; a friend picks me up; I am surprised that he is out so early; I find out where he is going and his plans for the day; I arrive late at the station and learn that the train has gone; I phone the bus terminal and find that the next bus leaves in 5 minutes and that I can make connections in Wilmington; I travel a new route; and so it goes. I meet people on the train; I read the morning paper; I finally arrive at the classroom; I learn from students before class about their experiences in getting to class—that fog is had in some areas, parking is difficult, etc.; then class begins and we learn about learning. When did learning start? Some might say that learning could not take place until the organized class officially opened; and if they were speaking of formal learning only, we would agree, but obviously informal learning had been taking place as stated from the moment of the ringing of the alarm clock and many adjustments had been made according to needs and interests.

This simple illustration may cause us to ask the following questions: What is learning? When does it start? How does it take place? When does it end? We as educators (used in the proper connotation of humility and helpfulness but with a positive approach) are concerned with these questions and we must be actively interested in finding the best answers to them so that they may be used effectively in order to facilitate the learning process for boys and girls, men and women in our classes, our schools, and in our communities as we come in contact with them whether through a formalized teaching situation or through the informal contacts of our daily lives.

As we look at learning in terms of the psychologists' definitions and all the descriptive and experimental material involved, we get a picture that really opens a wide area of diversified thinking and we conclude that if we are going to make use of these theories of learning, we must formulate our own definition which we can clearly under-

stand, which we believe in, and which we can and will put into use in our own field of teaching.

Authoritarian Views

A review of some of the material serves to illustrate the kinds of information available and some of the individuals who had made real contributions in the field of learning.

Ebbinghaus (1) who is credited by many with starting the systematic experimental studies of human learning developed the concept that learning lies at the heart of psychology. That learning begins at birth or before and continues until the disintegration of the organism and is a major developmental dimension of the mind. He indicates that modes of perceiving are functions of past experiences or are products of learning. The individual's sets, interests, attitudes, wants are products of his personal history and in turn are determiners of his present and future behavior—our ability to recognize now familiar objects, to perceive the external world, to read, to converse, to think of the things that one now thinks about, to be moved to action toward and by the things which now move one, to respond in now accustomed ways to other people—nearly everything which makes man the complex psychological organism that he is.

McGeoch (2) defines learning as we measure it as a change in performance, as a function of practice. He states that the inherited structure of the organism is a basic condition of all learning—it sets the bounds and framework within which practice has its influence . . . Heredity contributes the receptors through which behavior is initiated, the nervous system, muscles, and glands by which it exists and within this native framework of structure and events learning occurs.

Bills (3) defines learning as the most fundamental psychological phenomenon for which it is the basis of the entire structure of complex mental behavior (the modification of behavior and the previous interaction with environment).

Hilgard (4) defines learning as the process by which its activity originates or is changed through training procedures (whether in the laboratory or in the natural environment) as distinguished from changes by factors not attributable to training. He further states that growth is learning's chief competitor as a modifier of behavior and distinguishes between them by considering whether practice is needed for development. This he illustrates by the flying of birds or the swimming of tadpoles when they have arrived at the proper stage of maturity.

Shaffer (5) states that most physiological conditions are chiefly modifications of the nervous system that occur when learning takes place.

Tilton (6) emphasizes the point in his statement of learning that the definitions vary widely and depend largely upon the theorist (usually psychologist) for their purpose or design. He states that learning is variously described as synonymous with growth or maturation; as a matter of reinforcing or rewarding of responses; as a result of chance success, or as an insightful process. Learning is

broadly illustrated as a process of abstraction, adjustment, analysis, assimilation, association, conditioning, configuration, connection forming, cue reduction, generalization, habit formation, integration, the organization of experience, the reorganization of experience, or of problem solving.

He points out that wide reading reveals a great diversity of definitions of the learning process. From his study he finds that some of the factors which are thought to play an important part in determining the efficiency of the learning process are variously listed as annoyance, aspiration, availability of response, barriers, belongingness, contiguity, emphasis, exercise, felt needs, field properties, figure, frequency, goal reduction, identifiability of stimulus, intensity, interest, motivation, pain, pleasure, practice, punishment, purpose, readiness, recency, reward, satisfaction, set, similarity, valences, and vectors.

According to his analysis, learning can be classified into many categories according to the outcome desired and the difficulties involved. We need to learn to solve problems. We need to memorize and to acquire skills; to learn how to do, to make certain responses more consistently or less often. We need to make some responses more automatically or promptly, more efficiently or gracefully. We need to learn to want or not to want things; to learn to feel or not to feel in a certain way about people or things or situations; to learn to enjoy or to appreciate. The direction of education is very difficult because these needs appear in all sorts of combinations.

An overall review (7) of learning and its many relationships to our consideration of "learning and life" makes a contribution to our background of understanding, and I include parts for that purpose. Learning is obviously basic to the educative process, and it must also be considered as a fundamental process or characteristic of mind. The scope of its influence on experience and behavior is approximated only by the process of maturation, and learning and maturation may with justification be considered the two major developmental dimensions of mind. Learning is even more essential to the definition of mental process than maturation, in view of its necessary involvement in the development of symbolic function and of purposeful behavior other than that directed by the most primitive of physiological drives. If the learning process is roughly defined as the sequence of events or conditions which results in the acquisition of logical activities, the product of learning is the new relationship or changed relationship which has been established through learning. All students have been forced to conceptualize the product of learning in some way, the way selected usually reflecting a systematic bias in favor of association theory (association, bond, connection, $S^H R$, conditioned response) or field theory (insight, organization, trace organization) or a compromise between association and field theory (sign-gestalt, reintegration). Psychologists have not to date agreed upon a definition of learning, although there has been con-

siderable discussion of the problem. The major problem of definition is to distinguish between learning and maturation on the one hand, and between learning and fatigue or work decrement on the other. The source of the difficulty in making the distinction between maturation, learning, and fatigue is that all three are inferences from performance changes, and the performance may reflect the operation of one or all three in combination. Learning is the process of adjustment of the organism to a situation in which the obstacles to the satisfaction of the motivating condition cannot be overcome by the direct utilization of innate or previously acquired modes of behavior or experience and is revealed when the organism's adjustment to the same or similar situations on succeeding occasions shows an increased directness or effectiveness or economy of effort and time in the satisfaction of a motivating condition. The notion of the *problem situation* is fundamental to this conception of adaptive behavior. A problem situation occurs whenever there is "a lack of adjustment between the organism's motivating needs, its immediate environment, and its reactive equipment." There is no problem situation if there is no unrequited need or if the present need can be readily satisfied through the medium of innate or previously acquired behavior, even though the environmental conditions may appear to present an obstacle.

To summarize we may say that Psychologists define learning in various ways; learning is the structure upon which all behavior is erected; learning is centered deeply in the Biological being; learning process is a change in performance or a function of practice; learning is the modification of behavior and interaction with environment; learning is the process by which the individual actively originates or is changed through training procedures as distinguished from changes by factors not attributed to training; etc.

From these studies, one sees the relationship contrast of the scientist and the educator in their thinking and their objectives and concludes that an explanation is not good in and of itself, but that it is good for a purpose, that the working psychology of learning is of central importance to the worker in the field of education, whether he is supervisor, teacher, or guide; his psychology of learning must bear upon every educational problem, upon every phase of his work . . . ; the working hypothesis of the educator must be all embracing from the start but the real test of *educational usefulness* must be applied.

The Teacher's Responsibility

It is from this background of theory and with the objective of educational usefulness that I state my own definition of learning and its application to my field of work in teacher education and supervision:

Learning is conscious living and the ability of the individual to adjust himself to problems of life.

All learning is based on inter-relationship—past experiences, present situ-

ations and problems, and the anticipation of future needs and experiences.

Since all learning is based on relationship of past experience, present situations and problems and the anticipation of future needs and experiences, it becomes the teachers' responsibility to understand the individual in light of all three and be able to draw upon the past experiences in helping students set up the situation not only in terms of vital problems to be solved at present but also those things which will help them set goals towards which they may strive. This means that the teacher is obligated to learn as much as possible about the individual and his entire background of development, and of adjustments he has been making to his problems of living. A teacher needs to know the result of studies that have been made on how individuals learn in order to make the proper interpretation of the past experiences in relationship to the present situation which is provided to stimulate future learning. This information should include the areas of sensitivity, motility, motivation, and integration, all of which are necessary if learning is to take place. The absence of any one would eliminate the possibility of the teacher to capitalize on each to the fullest extent in order that the individual as a whole may reach his maximum capacity for learning and development.

The teacher should see in the individual differences in a class a stimulating challenge to help each develop to his maximum ability in terms of personality, character, and adjustment to life. This, of course, assumes the use of individualization of instruction, pupil-teacher planning, integration of activities for pupil development within the school and community, cooperation with parents, and all of the best learning situations. Tilton (6) gives an excellent coverage of the topic and I include parts of his summary: "Much more than is commonly realized the development of character, personality, and ability traits is controllable . . . beware of the rationalization of educational irresponsibility . . . If the teachers are to know their pupils as they need to know them, they must develop the habits and skill involved in objective observation, sampling, and interpretation . . . the most important thing for a teacher to get from psychology is an understanding of, and control over the learning process . . . More teachers in preparation should specialize in an understanding of the learning process. It is from those who bring this interest and understanding to the work of the school that leadership is to be expected in the greater individualization of education. Learning may be thought of as the profit which accrues from an experience. In other words, learning is being able after the experience to do approximately the same thing with less help. After learning experience, cues alone, without the other supporting helps, are adequate. It is the novelty of experience which provides for learning, not repetition . . . Learning is not in its essential nature a slow and difficult process . . . An understanding of the relation of attention to learning is also an understanding of the

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Vo-Ag provides experience in citizenship

"What you are speaks so loud that I cannot hear what you say."—Emerson.

IRVING E. BACH, Vo-Ag Instructor, Vineland, N. J.

CITIZENSHIP means more than "the state of being vested with the rights and privileges of a citizen" which the dictionary offers as a definition. It denotes active participation in a democratic society. Being a citizen implies that the individual has a voice in his civic affairs. He cannot be complacent with inactivity. He cannot take his "rights" for granted.

The unwritten goal of every agriculture teacher should be to counteract such complacency lest it lead to stagnation of our democratic way of life. You can't go forward by standing still.

In those countries where the inhabitants are "subjects" of the state, there are no citizens, nor can there be any citizenship.

The vocational agriculture department, by law, is an integral part of the local school system because agricultural education is a branch of education not of agriculture. In accordance with that feeling, it is my adopted philosophy, shared by fellow faculty members, that education—all education—should provide the laboratory of thought and experiences so necessary to the growth and development of youth's self-discipline, self-realization, and self-expression in their roles as actively participating citizens in the communities in which they find themselves. The laboratory of "life experiences" should enable each youth to become a mature person—morally, mentally, emotionally, physically, socially, and occupationally.

Vocational agriculture, of course, must be more than a process of absorbing and storing facts and figures. It must be the development of specific knowledges and skills necessary for successful participation in an agricultural occupation AND the development of understandings, attitudes, and ideals necessary for successful participation in rural life.

The agriculture teacher's effectiveness is measured by the relative success which a student has had in reaching the educational objectives as suggested by the United States Office of Education, Vocational Division Monograph #21.

1. To make a beginning and advance in farming.
2. To produce farm commodities efficiently.
3. To market farm products advantageously.
4. To conserve soil and other natural resources.
5. To manage a farm business.
6. To maintain a favorable environment.

It is the sixth objective that we are concerned with in the teaching of citizenship. Those agriculture departments which have been in existence for many years can point out their teaching effectiveness by the number of vocational

agriculture alumni who are respected citizens in their communities. The Future Farmers of yesterday become the leading farmers of today, and the agriculture teachers can be proud of the part they have played in that transformation.

Teachers Set Examples

It has also been my philosophy that the agriculture teacher should, and he actually does to a great extent, practice what he teaches, particularly when it concerns citizenship. The vocational agriculture program is most successful in teaching citizenship when the teacher's qualifications consist of real and personal experiences in the service of his community.

The community activities which the agriculture teacher can take part in, those connected with agriculture as well as those not connected with agriculture, are voluminous. My own activities can serve to illustrate only a sample of the activities in which many of the agriculture teachers participate.

I've been a member of a Borough Council, a Board of Health, a Board of Education, a Shade Tree Commission, a Civil Defense Council, a local agricultural fair committee, a church, a fraternal society, a professional association, a commander of a war veterans' post, and a member of two farmers' co-operatives—since I, as some agriculture teachers do, owned and operated a farm while teaching.

Mr. E. C. Stillwell, vocational agriculture teacher at Freehold, New Jersey, who has taught there for 40 years, and with whom I had the pleasure of working for five years, has a list of activities that dwarfs mine by comparison.

And it would be amiss if I were to omit the help that a wife gives through her civic associations—the P.T.A., Red Cross, Girl Scouts, League of Women Voters, and various other women's groups.

Citizenship must not only be taught, it must be lived. □

The Place of—

(Continued from page 31)

key concepts of "meaning," "problem solving," "the creative act," "insight," and "Intelligence." Many interests mean such activity, more novelty of experience and hence more learning."

Teachers must understand that the primary aim of education is to develop people who will continue to learn after schooling is over for there is little hope that man will know enough to live intelligently in the complex world created by the dramatic increase in knowledge, and little chance that man will use to

best advantage the knowledge available to him. The same writer indicated that learning to make adaptations, to seek to find better adjustments to existing situations, to discover better solutions to problems is what is meant by *learning to learn*. Similar illustrations of the interest of current educational writers in the field of school administration (9, 10) in the process of learning suggests to us that teachers may find in studies and current educational material much support and encouragement for their use in their work of adapting and improving the instructional program within their respective classrooms, schools, and communities.

Relation to Supervision

In helping to develop teachers and to improve the learning situation for children through supervision of teachers in service, one can relate this background knowledge to his experiences with teachers and help them to grow as the supervisor grows in gaining a fuller understanding of "learning" and how it takes place. They can then together evaluate their teaching activities in terms of the specific objectives or goals they have developed, make the necessary adjustments in terms of their findings, and thus continue to improve the learning situation for the persons with whom they are working. It becomes the supervisor's responsibility to provide the kind of democratic leadership that will stimulate teachers to want to improve their teaching, and to see opportunities for self-improvement through the use of all sources of help including the supervision.

Bibliography

1. Ebbinghaus, (1885) Interpretation taken from McGeoch, John A., *The Psychology of Human Learning*, New York: Longmans, Green & Co., 1942. pp. 633.
2. McGeoch, John A., *The Psychology of Human Learning*, New York: Longmans, Green and Co., 1942. pp. 633.
3. Bills, Arthur Gilbert, *General Experimental Psychology*, New York: Longmans, Green and Co., 1935. pp. 620.
4. Hilgard, Ernest R., *Theories of Learning*, New York: Appleton-Century-Crofts, Inc., 1948. pp. 409.
5. Shaffer, Laurance Frederic, *The Psychology of Adjustment*, Boston: Houghton Mifflin Company, 1936. pp. 600.
6. Tilton, J. W., *An Educational Psychology of Learning*, New York: The Macmillan Company, 1951. pp. 248.
7. Melton, Arthur W., *Encyclopedia of Educational Research*, Revised Edition, New York: The Macmillan Co., pp. 668-671.
8. Van Miller & Spalding, Willard B., *The Public Administration of American Schools*, New York: The World Book Company, 1952. pp. 578.
9. McNeerney, Chester T., *Educational Supervision*, New York: McGraw-Hill Book Company, Inc., 1951. pp. 317.
10. Alexander, Wm. M. and Saylor, J. Galen, *Secondary Education*, New York: Rinehart and Company, Inc., 1950. pp. 522. □

Editorial Policy

The Guest Editorial which appears in the Magazine each month is solicited from a person who has an interest in vocational education in agriculture but who is not directly identified with the program. These persons are asked to respond with their own points of view. Magazine policy in this matter assumes that such expression of views has mutual benefits regardless of the possibility of controversy over the issue discussed.

FFA challenges the adviser

To develop those qualities desired in a future citizen

HERBERT SHIPMAN, Vo-Ag Instructor, Jeffersonville, Vt.

ARE we giving Vo-Ag students all that they should be getting from FFA?

The primary aim of the Future Farmers of America is the development of agricultural leadership, cooperation, and citizenship. The purpose of our Vo-Ag classes is to help establish them in farming. If we could mold every boy enrolled in vocational agriculture into a well established farmer who is a leader in his field and community, cooperative with his fellow men, and loyal to his country, it would be something only a little short of a miracle. However, I feel that the FFA, with all its activities, ceremonies, and purposes will go a long way toward that goal.

If the Chapter program of work sets up a responsibility for each member, he will learn cooperation. Whether it is a program to earn money for the Chapter or to render services to the community, they will learn to work together for the good of all. Parliamentary procedure, colorful ceremonies, and degree work are very effective devices for teaching loyalty, respect for authority, and self government. Being a member of such an organization gives the boy something to be proud of and he has a fraternal feeling toward all other FFA members wherever he may be.

All this is well and good, but one other part of the primary aim should be considered: "To develop agricultural leadership." Who are your FFA officers? Are they the boys you could call "natural" leaders? It isn't always true, but I often feel that the boys with personalities that reflect ambition, enthusiasm, and self confidence are the ones who get to be officers. Not that it is wrong that they should be officers. But isn't it better for the bashful boy who lacks self confidence to try and overcome his difficulty and get to be a Chapter officer? He will put himself on the road to a happier and more fruitful life. The "natural" leaders usually grow and are active in other organizations so that they may become leaders in their field without special help from FFA. There are so many more of these boys who are competent workmen and great thinkers, but who lack self confidence, whom I feel are the ones we should give the most consideration.

To discover just what is holding the boy back is a great task, and in this job I envy the teacher who has had years of experience. However, there is this fact to keep in mind. Every person has the ability to do something and if it is developed he may be able to do that one thing better than anyone else.

With this thought guiding us, we can do much for a boy's self confidence.

Every freshman should be made familiar with all the FFA contests before he finishes planning his long-time supervised farming program. This will inspire some to want better programs. Others will not be affected by the challenge and they can be heard to say, "I can't do this" or "Oh, I never could do that."

Having the advantage of being a Vo-Ag teacher, it is possible to make home visits and know the boy's parents, his home farm, and be better able to understand and know the boy. With patience and perseverance we can discover his interests and abilities.

A little praise now and then, for something he has done well, is good. Too much praise could give the boy a one-track mind so that the only thing he cares to do is the job for which he receives praise.

The parents of the boy should be considered when he is planning his supervised farming program in order that his program can enrich the home farm. Good ideas for supplementary practices and improvement projects will be given by the parents to round out the boy's overall program. With everything in mind; the home farm situation, the parents, the boy's interests and abilities, and FFA contests, the boy can be led into planning a well-rounded supervised farming program.

If the boy likes to collect odd stones, that interest can be turned to soil types and soil and water management. If he likes animals, he can enjoy a livestock

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...A horseshoe nail

ARTHUR FLOYD, Teacher Education, Tuskegee Institute

MOST school people now living no doubt will remember how, as pupils, we used to make the rafters ring with the little ditty:

"For want of a nail, the shoe was lost
For want of a shoe, the horse was lost
For want of a horse, the rider was lost
For want of a rider, the battle was lost
For want of a battle, the kingdom was lost
And all for the want of a horse shoe nail."



Arthur Floyd

We knew little about the profound meaning and cared less about the great lesson the poet was endeavoring to teach in these rich, ringing words of rhyme and rhythm.

It is very probable that some educational nails are missing and hence have not been used by many of us as we attempt to lay the foundation, frame

the building, and complete the finishing work of our educational temple, this temple being the discovering, guiding and processing of pupils in vocational agriculture in becoming progressively established in farming or in related vocational endeavors. What, therefore, are some of the nails that should go into the construction of the Vocational Temple? The following are suggested: (a) guidance; (b) farm reared; (c) facilities; (d) ability—physical and otherwise; (e) technical know-how; (f) experience and practice; (g) record keeping; (h) evaluation.

The Need for Guidance

The nail of *guidance* is not simply telling the pupil that he should prepare to enter upon the calling of farming because he is farm reared and his parents are farmers. As important as this condition may be, pupils should have the assistance of their instructor, the principal, and others who may be or may become interested in his welfare to assist him in comparing his opportunities in farming with other reachable vocational endeavors for which he has the ability, desire, and means of preparing himself. He should know the requirements, responsibility, and obligations that other vocations may seem to offer

in which he may have a partial interest and can carry, as well as their advantages and opportunities.

Farm Background

He certainly should be *farm reared*, or have the equivalent in experience, and rural and farm contact. There are many known, but untaught farm experiences that are part and parcel of farm reared folk that have a tendency to steer their thinking along certain directions and govern their behavior. There are, no doubt, many examples to be found which would indicate that city reared people do quite well as rural dwellers and farmers. In this regard, it can only be said that these are rare examples and do not follow the general pattern. Farm reared people have the advantage of working together as a unit toward a common goal. They recognize the principle of the division of labor in carrying out the various aspects of the farming program. A boy with such background realizes the necessity and importance of working together, living together, and the sharing of many experiences together.

Farming Facilities Are Needed

There must be *farming facilities* available without which there would be no opportunity to make a desirable living in farming. There must be such physical facilities as land, machinery, and some capital which would at least serve as a toe-hold for the beginning

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A new slant to the FFA motto . . .

Learning to do by playing

WILLIAM RUDDIMAN, Student Teacher,
California State Polytechnic College



William Ruddiman

Perry Hill, Sutter (Calif.) vo-ag instructor, does it.

Mr. Hill's methods work. His teams in the California State-wide FFA Agronomy Contests held annually on the campus of the California State Polytechnic College in San Luis Obispo, Calif., have consistently placed in the top brackets. Their success is due largely to the ingenious methods originated and adapted by their coach for their training.

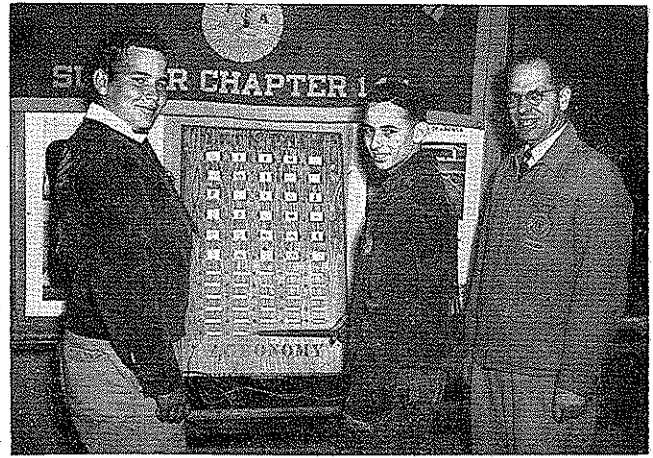
Mr. Hill's students enjoy their training because their instructor has devised interesting and entertaining ways to prepare them for the contest. So much so, in fact, that visitors to the school have found them using these devices during their noon hours. In his version of the old game in which a flashlight bulb lights up when the contestant gets the right connections with one *prod* touching an electrical contact beside a question and the other *prod* touching a contact beside the correct answer to the question, Mr. Hill uses small cards with seed samples used in the agronomy contests cellophane-taped to them, which

ARE you looking for a new way to interest your boys in entering competition in regional, and state-wide FFA contests, and at the same time lessen the work you have to do in training the contestants? Then you should take a look at the way

his students must match with the correct name of the seeds. To prevent students from becoming accustomed to one arrangement on the electric identifier, this instructor has made provision for changing the location of the seed samples and names quickly, and also for replacing them with new and different samples. There are so many samples and names to connect that it takes quite a while for the sharper students to memorize the linked connections.

The materials required in the construction of the electric identifier won't cost more than five dollars, and will cost less if scrap materials are utilized. The body of the identifier is a piece of plywood about 20 inches by 30 inches. Name plates, card holders, bolts and nuts, light, socket, wire, prods, and batteries will be needed to complete the project.

Another device employed by Mr. Hill to train his contest teams is the window wheel (see illustration) which consists of two large circular wooden discs and a cardboard disc, each about fifteen inches in diameter. The top wooden disc is spaced about one quarter of an inch from the cardboard disc and lower wooden disc on a common axle. The top disc has three one and one half inch holes spaced out from the center. Seed samples in cellophane envelopes are



Benny La Montagne, left, and Terry La Maida, center, top boys on Sutter Union High School's 1954 Agronomy Team, use the electric identifier to practice for the California State-wide Agronomy Contest, while Perry Hill, right, their Vo-Ag instructor, looks on.

The window wheel with five cardboard discs would cost about \$1.50.

California Ag. teachers attending the annual CATA convention in 1953 tried their skill on Mr. Hill's "games," which were on display there, and carried home the ideas embodied in them to use both in teaching classes and training contest teams. They agreed that the basic ideas would find wide diversity of application and that their students, like Mr. Hill's, would enjoy "playing the game" to learn. □

A Horseshoe Nail

(Continued from page 33)

farmer. These facilities would most likely grow and expand as he gains experience and becomes more financially secure.

Specific Abilities Required

Ability from the standpoint of physical fitness should certainly be a consideration for those planning for the vocation of farming. Although farming is becoming more mechanized and will perhaps become more so as the years go by and hence will not require the brawn it once did, it still remains a vigorous activity requiring many skills and much stamina. In addition to early and late hours, there are such activities and skills as hauling, loading, unloading, castration, butchering, milking, and the like, that require maximum physical ability.

Need for Accurate Knowledge

In attempting to get his pupils on the doing level or acquiring the *technical know-how* many of us as teachers of vocational agriculture fall down on the job, or either bend the educational nail when it is only one-half in the timber or, worse than that, leave it out altogether. It is often true that some of our pupils' supervised farming programs do not lend themselves as teaching laboratories to giving as rich and as wide home and farm experiences as we would like. But are we doing the best we can with what we have? Are we living up to the maximum of our resources in providing experiences where our pupils may, under our direction and



Benny and Terry use window wheels to improve their skill in seed identification.

spaced on the cardboard discs so that they line up with holes on the top disc on each setting. A handle on the top disc facilitates shifting the top disc speedily to change settings. Students use this device to learn to identify seeds rapidly. At first they are allowed more time to view the samples and write the seed names, but as they become more adept, the time allowed to identify samples is cut down. The instructor has a number of different cardboard discs which he used in his tester to vary the seed samples.

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►Morale building through livestock shows

A "guaranteed price" plan for entries increases the chance of positive value of the livestock show

EDWIN EARL LOCK, Vo-Ag Instructor, Latexo, Texas, and
J. C. ETHERIDGE, Vo-Ag Instructor, Lovelady, Texas

AS teachers of Vocational Agriculture in our public high schools we have found that showing of animals by students has proven to be a morale builder for the people in our communities. It gives the people of the community enthusiasm that has been rooted in individuals since the beginning of livestock shows.

A well-organized program will provide adequate time for other activities. The showing of animals may be considered as such an activity. It is a known fact that boys with show animals will require individual training.

Much controversy has arisen over the program of showing animals with guaranteed prices for vocational agriculture students. It is with much conviction that this article is written.

One of the primary purposes of vocational agriculture in the high school is to give the students practical experience in their farm projects and to practice economy. The question may now arise "are guaranteed prices providing experience?" Proceeding in the affirmative, the program being discussed very ably supplies practical experience.

The Guaranteed Price Plan

How is the program conducted? Most schedules of guaranteed prices for beef for students of vocational agriculture are generously provided for by prosperous businessmen and farmers of the community or county. This procedure is found at county fairs or local festivals. An agricultural committee of the county then decides on a price to be guaranteed. Local businessmen and farmers are contacted and each takes a boy and sponsors this student. Monthly reports are made to the sponsor and his instructor, giving the boy experience in record keeping. The student also has the opportunity to work toward the goal of Grand Champion or Reserve Champion as a show is held to climax the program. These titles bring nice premiums along with usually better than the guaranteed or regular prices. The procedure may vary with locality, and is in line with this area.

Some of the Values

There are many gains to be made from the program other than financially. Listed and discussed, they are as follows:

A. *Experience in Selecting, Fitting, and Showing.* Invaluable experience is gained through selecting calves for show and beef gains with assistance from the Vocational Agriculture instructor. The boy will most certainly be more interested in learning to select better animals later on. Fitting is a process carefully conducted from beginning to end. Students may stand by and watch the process being undertaken by others and

learn the fundamental procedures, but it would never afford experiences such as he can gain from fitting a calf of his own. Knowledge of showing his calf and training it may be the determining factor in whether he wins or loses in a contest. No one is prouder or happier than the boy who shows a calf that he has worked, coaxed, and played with to make it a finished product.

B. *Experience in Feeding Program.* A balanced ration according to the development of the calf must be maintained at all times. The students gain experience in the mixing of feeds, and the proper proportions.

C. *Experience gained from Legal Aspect.* Many boys do not have financial resources to begin this venture alone. Money may be borrowed from the local bank and affords experience in this respect. An understanding of the terms of a loan is developed. Some students borrow money from their parents, and are indeed lucky boys when their parents hold them to regular loan terms with interest rates. A credit rating may be established with the local feed dealer.

D. *Experience in Keeping Complete Records.* While agriculture students have their standard project record books, it is worthwhile that extensive records are kept of the animal. As mentioned before, usually a monthly report is sent to the sponsor and the vocational agriculture instructor keeps a copy of each. Included in these reports are expenses for the month, such as feed, hay, salt, new halter, etc., and gains in weight of the calf. Remarks concerning the calf in any way may be added also.

E. *Developing Cooperation Among Parents, Sisters, Brothers and Friends.* The interest in the project is not always confined to the agriculture student. A former student had such a project and his small sister spent much time administering loving care to her brother's calf. When the instructor visited the boy the entire family accompanied us to the barn and swelled with pride as the progress made was approved. Even though the idea of more money often is involved, it certainly helps to develop lasting cooperation within a family, and understanding between the agriculture teacher and the family which will extend beyond the one calf. This may serve as the pathway to really becoming acquainted with the boy and his family.

F. *Marketing the Animal.* Important also is the experience gained in marketing the animal. The student may previously have had projects which were marketed in a different manner or were consumed at home. Of course, in the method of guaranteed prices, the sponsor will always buy the calf unless someone else wants it. This will help to raise the bidding and often raise it above the

guaranteed price. Sometimes a large packing plant will take the animals at the guaranteed price as a gesture toward the boys.

Difference of Opinion

Many people will still wonder and doubt the importance of such a program. Many of these boys would never have an opportunity to have a project like this if such a program were not available. Loans from the bank may not be obtained without the guarantee to back it up. It is also a chance for them to expand in the future. A boy may eventually build a herd from this one venture. A prosperous showman once said, "I never made money showing cattle, but I never made money until I did show cattle."

We are not recommending that a boy take a project with guaranteed prices only. Rarely do we experience this in daily farming methods. He definitely should try and understand both routes. Showing cattle undoubtedly will bring higher financial returns, even though the cost will be more.

It takes a well-rounded program in vocational agriculture and constant pointers on showing to encourage the student. Anyone with a passable pasture can graze cattle for market, but it takes an interested, energetic person to develop purebred cattle. It has been realized that more judging is done in the farm lot than in the show ring.

It is up to us as vocational agriculture teachers to be sure that these facts are understood by the student and his parents as well. □

A Horseshoe Nail

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assistance, plan and carry out the practices the home farm affords? Do we see to it that our pupils get to do the vital jobs that have usually been reserved for Dad or the older son? What about the planning of the farm program; the buying of seed and fertilizer; the contact with landlords, bankers, and merchants? What about the records and the accounting? What about the purchase and sale of livestock, feed, and the purchase of farm machinery and household goods? What about other experiences such as the FFA affords?

Evaluation Is Necessary

The ability of a farm boy to stand at a distance and look back at his performances and interpret them in the light of the objectives he set for himself is a kind of training that should never be ignored in the teacher's objectives. Regardless of whether we label it as such, it is, it would seem, the most valuable kind of self-evaluation. When the agricultural teacher succeeds in this endeavor, he can really and truly take credit for bringing his pupils into vocational agricultural maturity.

Therefore, as is true in song and story that a kingdom was lost for the lack of a horse shoe nail, so also by the lack of such educational nails as mentioned above or the bending of any one of them which prevents it from becoming firmly set and fixed to aid in holding the structure together and in place, the educational temple will totter and tumble. □

The Young Farmer Program Aids in Developing the well-rounded citizen

Teaching young farmers

—A responsibility requiring our best efforts

T. J. HORNE, Teacher Education, Virginia Polytechnic Institute



T. J. Horne

AS teachers we are charged with the responsibility of training Young Farmers for proficiency in farming so they may become established in a farming operation that will enable them to earn a living for themselves and their families. Also, through individual development, we must prepare them to take their places as desirable members of society in the communities in which they live. Such a concept of Young Farmer education combines two of the basic philosophies of education. The first is that education is an instrument of social development with the final objective of producing individuals who are effective participants in the societies in which they live. The second is that education should develop every person with the final objective of producing appreciations, character, mentality and general well being of the individual to the highest possible degree. Either alone falls short of the ultimate goal for the two must work in harmony in actual life to develop good individuals in a good society.

In terms of this philosophy we continuously strive to achieve these objectives through the science and art of teaching. Yes, the science because of the store of knowledge that technical research and experience have developed and the art because the teacher must create with the students whom he teaches the situations in which learning takes place. The science of teaching combined with the artistry of the profession applied to specific situations in a learning atmosphere distinguishes the master from the ordinary teacher. This combination produces creative teaching.

The times in which we live, industrial achievement, the challenges we face, the National threat to our program have all combined to create excitement, even adventure in education. So much so, that history may well record the next decade as our era of creative development in out-of-school educational programs.

Learning

In teaching we must constantly remind ourselves that we are using the art and science of teaching to bring about learning, a process within an individual that will make some skill or idea his own because he had a need that it filled. Learning then is part of the individual and takes place within his personal development. It is most effectively produced

when an individual has been developed to the point that he feels a need, expands his energy to meet the need, and senses satisfaction from the results of his own efforts. Through this process of learning the experience or thing learned then becomes a part of him.

Learning is a great deal more than acquiring knowledge. According to the late Prof. E. C. Magill it is concerned with producing changes in human behavior. These changes he expressed in terms of things understood, valued, felt, done or known. Those who knew him well recall the emphasis he placed upon teachers striving to achieve changes in individuals through the development of desirable attitudes, appreciations, abilities, knowledge, and understanding. By constantly striving for changes in these things he was emphasizing the development of persons, not on covering an assigned amount of subject matter, as the learning process.

Creative Teaching

Upon this concept of learning teaching becomes a shared process of guided actions and reactions between the student, teacher, and the subject matter or materials of instruction. In such a process the teacher must understand the student and the materials, if he is to create learning experiences that are valuable to the student. This implies that teaching starts with the level of the student and continues to develop him. It means that subject matter makes a contribution but is not the end result. The teacher's function is to direct and assist the student into those experiences that will enable him to develop his natural abilities. According to the teacher's understanding of the students whom he has in class and the materials he uses in teaching will he be able to create experiences that are meaningful at the time that the need exists.

Principles of Teaching Young Farmers¹

1. The students should share in developing objectives for the course.

If students are to feel that the course is theirs they must have a part in selecting the goals. Participation enables them to see the course as a whole and gain a clear sense of direction from the very beginning. Insight into the course gained in this manner enables each individual to assure himself that the instruction will be pointed toward the solution of his problems. By using the students in setting goals for the course some responsibility for their successful accomplishment will be shifted to them.

¹ Adaptations of Principles of Teaching given a graduate class at Pennsylvania State University by Frank A. Butler to experiences in Young Farmer Education Work.

The teacher could well afford to lead an informal discussion of problems at the first meeting to help make the objectives meaningful for the students. List the objectives, discuss each one and make interpretations at the first meeting or better yet develop them with the entire group participating. Until the objective is understood in terms of the student's problem it has little or no meaning for him. It is so obvious that a Young Farmer learns only what he is interested in learning and that all too often the teacher forgets this characteristic in planning his course.

2. Students learn through doing things that interest them according to an effective practice.

Knowledge can be secured through physical, mental or emotional activity. It is not inherited and it can not be bought. A person participating, learns more and feels a greater responsibility to the teacher and the class. As you do something or say something in your own way it is more likely to become a part of you than if you watch someone else. Members of a group that is largely self managed feel a greater personal responsibility, and will usually result in better learning experiences with a greater amount of student enjoyment than a group that is teacher dominated. The use of an effective or approved practice assists in developing efficiency and understanding which in turn enables the student to apply the process to the solution of other problems. A Young Farmer learns best when he has his own personal, social or farming problems to guide and motivate him in recognizing the value and applying the materials to the accomplishment of his goals.

3. Self-activity should use the types of learning and student experiences needed to attain the objective.

Research has given us evidence that learning occurs through the use of our senses, memory, motor skills, problem solving and emotional system. Each of you could identify a pear by its size, color, shape; recall facts and figures from memory; write and work with your hands; find cause, relationships and results of things or events and develop ideals and appreciations that give you pleasure. All of these are ways in which you have used the types of learning. Carefully planned and organized, the various types of learning can be used in many combinations to direct student activities along the most direct path toward the accomplishment of the desired objective. In working with Young Farmers it is important that the illustrations, ideas, and knowledge be adapted to their level of experience. Young Farmers tend to learn by associating a new experience to some past experience. In this manner they relate the unknown to the known. The illustrations and experiences used for a Young Farmer class would be more advanced than the ones used for a Freshman Class of Vocational Agriculture. The experiences of the group serve as a rich source of knowledge and should be brought out through discussion for the benefit of the entire class.

4. Learning should be in terms of the total unit.

An isolated bit of knowledge that an individual has acquired but does not associate with any working relationship has no function except as an isolated item. In farming operations the problems of production of crops and livestock are most effectively taught in relationship to the total management program. If taught as an isolated item a farmer could expand his corn acreage, yet there is little value derived from teaching the expansion of corn acreage if that expansion disrupts the wheat and forage production, thereby, disrupting the feed balance for the livestock program which in turn created an expense far greater than returns from the corn crop.

5. Energies of Young Farmers should be released so they will want to learn.

Every Young Farmer wants to learn. They are particularly interested in personal and social relations and problems of farming. These young men come to class voluntarily, therefore, the desire to learn is present. This desire is normally based upon the Young Farmer not knowing the answer to one or more of his recognized problems. The teacher then has the opportunity to direct the emotional experiences of the class group so that each individual by developing new experiences can shorten the gap from where he is now to where he would like to be. A good teacher never lets this gap become so great that the student's case seems hopeless. The better teachers analyze the student's situations and abilities so carefully that each one is stimulated to want to achieve what he can.

For a moment imagine yourself a Young Farmer in a class in which the teacher had prepared, in his estimation, a very good lesson. He taught the lesson because he thought you needed it. After it was over you weren't aware of the problems, weren't able to discuss what interested you, and weren't interested in what he talked about. Would you be enthusiastic to return to the next class session?

6. Individuals are different and each one learns best when he is free to create his own responses in the learning experiences.

Most Young Farmer groups have a wide range of interests, experiences, farming situations, abilities, interests, attitudes and education. Unless mutual respect is developed for both student and teacher their relationships will be so controlled that the Young Farmers fail to respond creatively when expressing themselves. His fears of not being accepted, showing confusion, not incurring the teachers favor, and being criticized prevent him from expressing himself. The individual class member must be free to respond in his own way for he reacts only to those experiences which he can associate with his situation or needs. Each one must be taken along at his level of progress. This necessitates on-farm instruction. Development of advanced experiences with the more advanced students and

further instruction with the problem for the slower students tends to produce an understanding of their problems and gives assurance that each one is competing only with himself. Every Young Farmers class should be developed around the felt needs and purposes of the pupils in such a way that each one can participate according to his own ability and interests in an atmosphere of mutual respect. Every teacher should remember that students learn in their own way—not in the way the teacher wants them to learn.

7. Changes are brought about through diagnostic and remedial teaching.

Asking the boy who is running the farm why he dropped out of school in the eighth grade will seldom give you an answer that portrays the complete story. The reasons he gives will be simple statements that fail to picture for you the confusion, hopelessness, aloneness which he felt nor the utter failure of the school or teachers to help him solve his problems or meet his needs. This same boy is now eligible for your Young Farmer class. To help him you must find out about these problems and provide during your instructional program the things that the school failed to provide except your remedy must be effective enough to break down the prejudices previously formed. Unless the instruction is beamed towards his needs, whatever they are, he will not become a member of your class, or if he comes to see for himself he will not remain.

An effective part of your teaching will be with him alone during on farm visitation in diagnosing his personal, social, and farming needs, and demonstrating to him the remedies that can be used. As these things are brought about through understanding and sympathetic guidance changes occur that tend to lift the student, to give him a sense of security or comfort, and finally culminate in a challenge to him. When the teacher gets them to the place that they put into use the things they learn then he is a teacher because his students have learned.

Lets look at the farm. Some things are not going well. You as a teacher go out to the farm, discuss the problems with the Young Farmer and lead him to an awareness of their effects upon his program. If through your work with him you lead him to a realization that these problems are being solved by the Young Farmer group, you have taught because he has changed. Furthermore he will ask to become a member of the group so that he too can receive the benefits of a more rapid tempo of learning that will enable him to make further changes that he needs to make in his farming operation. You have used diagnostic and remedial teaching; the Young Farmer has learned and put what he has learned to use. Unless what he learned is put to use the teacher has failed.

The good teacher provides demonstrations, programs, exhibits, tours, reports,

presentations to make each student aware of his progress and to give him a sense of accomplishment. Psychology has stressed the principle that rewards are more conducive to learning than punishment.

The instructional program must be carefully developed to provide the teaching materials needed to lead from the known to the unknown with each lesson making a contribution to the objectives of the course.

8. Young Farmers learn most readily in a favorable social and physical climate.

Young Farmers attend classes voluntarily because they have become aware of needs or problems that are keeping them from reaching goals which they had hoped to achieve. Frequently the teacher is the source of the stimulus that makes students want to achieve more. Once the desire to learn has been stimulated to the place that the student comes to class, then the teacher is responsible for providing an atmosphere of mutual respect between teacher and student that will allow them to meet in friendly informal environments during the learning situation. The teacher and student must accept the personality of each other in developing desirable interactions that will facilitate group discussion.

At the first meeting each one should become acquainted with the others and should learn something about each others' experiences and interests. The teacher becomes the leader of the group. In this role he should see that physical arrangements are made for the type of teaching—learning situation that is best suited to the particular lesson. Teaching should be conducted at the place and under the conditions best suited to the problem. It need not be confined to a classroom.

A group with similar experiences, interests and age levels is more conducive to student participation than groups with great differences in these areas. It is a well known psychological principle that a person likes to be with his own age, interest, and experience group.

If we are to build strong Young Farmer classes our teachers should become strong believers in Young Farmer education. Administrators should provide them with the environment and facilities for conducting the program. Then the teachers must take the Young Farmers where they find them and through understanding assist, guide, lead, correct and evaluate them by individuals and groups until each as an individual is challenged to close the gap from where he is to where he wants to be. □

Phil Alampi, farm and garden director for Radio Station WABC, New York, won FFA's American Farmer degree in 1929 and later taught vocational agriculture in New Jersey.

Promotion on flannel

CARL G. HOWARD, Teacher Education,
New Mexico A. and M. College



Carl G. Howard

EVERY spring graduating high school seniors appear on college campuses in droves. This has brought about a regular "high school day" where students are grouped and conducted to places where the various departments of instruction have prepared exhibits and propaganda for attempting to sell their wares to the prospective students.

Since teaching is hard to visualize for high school seniors, advanced students in agricultural education at New Mexico A & M prepared a script and figures to accompany it on a flannel board for use at High School day this spring. On that day rotating pairs of students in agricultural education committed the script to memory and one put out the "patter" while the other placed the figures on the flannel board. This seemed such good promotion to them that they were willing to pass on their material to others who might like to try something of a similar nature. The instruction, script, and pictures of the figures in the order of their presentation appear below:

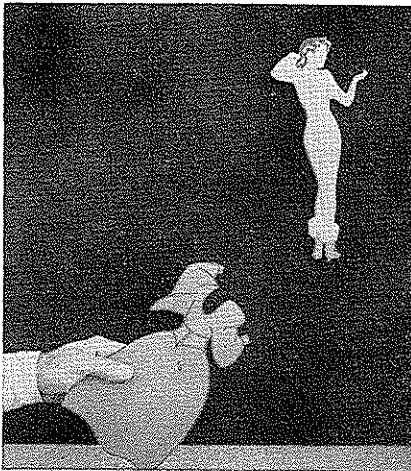
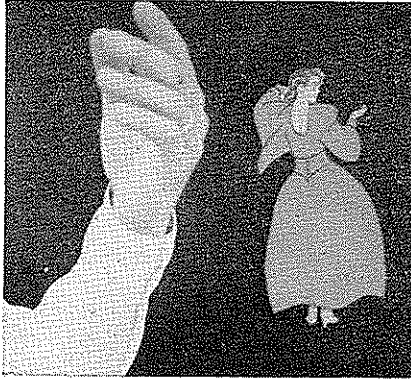
Script for High School Day
Directions:
Put the girl up first as directed by the script. Take the girl down before putting anymore illustrations up. Put the illustrations up as directed by the script. Leave them up and point to each illustration as it is covered in the summary. Take all illustrations off the board and make ready for use again.

Script

"Hey Fellows! Look at our magic board. See, you can put the figures on; (put dressed girl on board) and you can take them off. (take off dress leaving the girl) Oh, pardon me! That was an accident, and all my mistake. Now to keep you from making a mistake we would like to tell and show you why we have chosen the teaching of Vocational Agriculture as our lifetime profession. The mistake that many make is missing out on the abundance of job opportunity which Agricultural Education offers you. Agricultural Education is a course which is about the same as the regular General Agriculture course offered here at New Mexico A. & M., the significant differences being more Education courses in Agricultural Education, plus the abundant job opportunity." (remove the girl completely)

"Now watch and see what other facts, fun, and magic will appear on our board. You must have heard by now that there is a great shortage of qualified teachers of Vocational Agriculture. In fact, they

MOTIVATION USED IN AGRICULTURAL EDUCATION

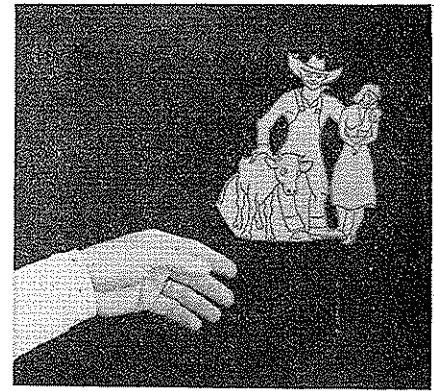


are as scarce as hens' teeth." (illustrate hen with one tooth) "It is estimated that three to four thousand additional Vocational Agriculture instructors will be needed annually for the next ten years."

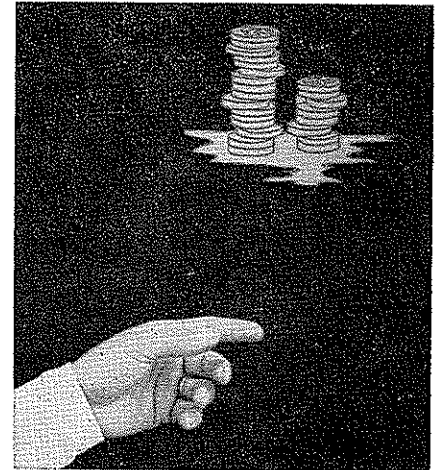


"If you like farming and farm people" (illustrate drawing of man, girl, and cow) "this is an excellent field for you to consider. You will be helping farm people, and improving the farming conditions in your community."

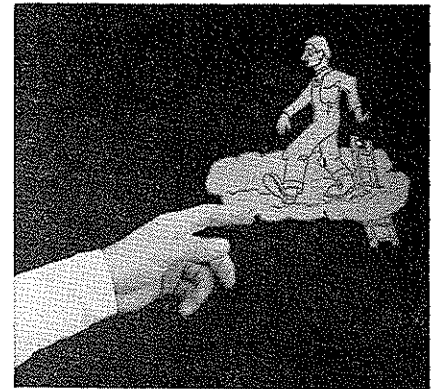
"You may say—'There are plenty of jobs available now, but what about later?' We know there will always be a demand for qualified teachers to teach them. As for farming and the necessity for people to learn to farm, we can see the great importance of that, too."



"We all want money for our work. Well, the Agriculture teachers receive higher yearly salaries than most teachers in our school systems." (illustration of stacks of money)



"Money is fine, but it isn't everything. We all want to climb through the cloud of success and be respected by everyone in our community." (picture of cloud)



"The Vocational Agriculture instructor's knowledge of rural conditions and farm people, along with his dealings with the townspeople and students, makes him a well known and respected citizen of the community."

"Teaching Vocational Agriculture is a real man's job." (illustration of strong man) "It is a challenging opportunity to encourage adult farmers as well as farm boys to better farm living and thus a better rural America. Much of the time spent in teaching Vocational Agriculture is outside of the classroom, such as field trips, judging trips, and trips to each boy's farming program. This is the end of our tale."

(Continued on page 39)

Partners in citizenship training

Preparation for Good Citizenship Can Result Through Vocational Agriculture

L. J. HOWELL, Vo-Ag Instructor, Reform, Alabama¹



L. J. HOWELL

WHAT is a citizen? According to Webster a citizen is a person who is a member of a nation or state, as opposed to an alien; one who resides in a city or town; a townsman; a civilian; a free man.

This includes every one except aliens. It includes many who are not always law abiding people. Penal institutions are at times crowded with poor citizens. These people failed to receive and respond to good training. Such people must be cared for by the municipalities, county, state, or nation.

"An ounce of prevention is worth a pound of cure." Proper home and school training is good prevention for delinquency and poor citizenship. We in vocational agriculture are interested in developing good citizenship in America. Just as materials used in building a house determine its quality, likewise, characteristics developed by a growing person determine citizenship qualities. Thoughts determine actions; actions reveal thoughts; repeated actions become habits and habits determine character.

Every good American citizen desires to see youth grow to be good citizens. To teach boys how to make a living without teaching them to live and get along with their neighbors is not enough. Boys in vocational agriculture should be taught to be good American citizens. The following characteristics properly developed, will help a boy become a good citizen:

1. The art of getting along with others is begun in the home. To be a good citizen, one respects the rights of other members of the family. A good citizen is honest and plays the game of life fairly. Vocational agriculture, properly taught, impresses upon boys the importance of conserving and improving the productivity of the soil. This will insure future generations of good land.

2. A good citizen believes in freedom of religion, peaceful assembly, freedom of speech, press, and radio. FFA members practice all of these in their meetings. They write articles for the newspapers, they make speeches and present programs on radio. The boys are taught to search for all the facts, analyze them, present both sides in every problem, then make an unbiased decision. Decisions made in this manner are usually sound and acceptable.

3. The freedom of franchise is taught and practiced by FFA members when

they elect their officers and transact business matters in regular Chapter meetings. They practice majority rule which is in accordance with our American form of government. This is good citizenship in action. They are taught to choose leaders who are dependable and have high standards of good citizenship in the school and community.

4. FFA members are taught that, if they wish to be good leaders, they must be morally straight and physically fit. Morality, honesty, and integrity are taught through vocational agriculture in keeping records of labor, expenditures, and receipts accurately.

5. Boys are taught in FFA to practice thrift; to desire and seek present and future financial security. They are taught to cooperate with farm groups in problems common to all; because cooperation is the key to success.

6. Students of vocational agriculture are taught to believe in, and to practice free enterprise. They practice free enterprise when they own all, or a part of their projects. This makes them better citizens.

7. To be physically strong, an FFA member must follow rules of good health and proper exercise from a very early age. Likewise, to develop into leadership, he must learn to exercise responsibility first in his home, then in his school activities. Doing chores about the home, helping to plan and carry to completion productive and improvement projects and supplementary farm practices, are responsibilities necessary to develop a member in making decisions for himself. These are good traits in development of a good citizen. Our leaders must bear many great responsibilities. Responsibilities when well carried out, develop our abilities—so we become better and more useful citizens.

9. Students of vocational agriculture must grow into a knowledge that they are a part of the government as is every other American citizen; that our government is a great democracy, a republic, a government of the people, by the people, and for the people; and to be a good American citizen carries with it the guarantee of protection and all of the rights possible for a free man. □

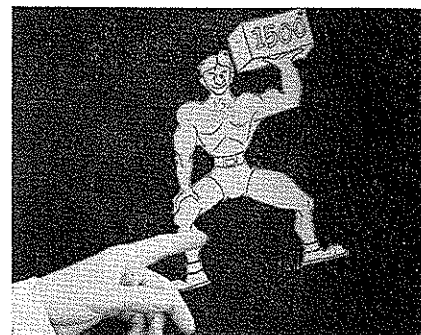
Do you have a story to tell in pictures? A single, clear, well-selected picture plus a concise explanatory legend can accomplish the purpose. The Magazine wants such pictures.



L. J. Howell, Vocational Agriculture teacher; W. C. Bonner, a former student of Howell's, now a successful farmer who was an active FFA member, Chapter Officer and State Farmer, and his son Cecil, who is now President of the Reform FFA Chapter.

Promotion on Flannel

(Continued from page 38)



Summary

"You see before you some drawings. They represent why teaching Vocational Agriculture should be considered carefully by all of you who feel interested in this field. Teachers are scarce, and it would be a pleasure to work with farm



people and farming. A long lasting job that pays well is almost more than we can ask. Plus all of the other advantages, you are one of the most respected men of the community and anyone will agree that this is a job for a real man." □

The recent addition of over five million dollars to the federal appropriations in support of vocational education presents a very real challenge to every person engaged in vocational agriculture. This aid is for the further development of vocational education. What evidence will we have when this money is spent that progress has been made in new directions or in improving our services in existing directions?

¹ Mr. Howell holds the distinction of being the oldest teacher in length of service in Alabama. He started teaching in 1918 in Reform, Ala., where he has remained since.

Contributions of a curriculum to the needs of youth

ANDREW P. TORRENCE, Department of Agricultural Education, Tuskegee Institute¹



Andrew P. Torrence

THIS is a period of much curriculum examination and evaluation. It is a period in which the objectives of secondary schools are being critically appraised. The kind of educational objectives or the kind of educational needs are not agreed upon by all

people that would be affected by them. But through continued discussion and study, it is hoped that each educational unit will arrive at broad objectives in terms of the school, and narrow objectives in terms of the particular department that will yield the most good to the individual and to society as a whole.

It is the writer's belief that the "Ten Imperative Needs of Youth," as stated by the Educational Policies Commission, is a clearly definitive statement of school objectives. These objectives are based upon sound, but often unrecognized, facts that there is a need for planning for the welfare of youth, that there is a duty we owe to youth in the provision of their needs in common, and that it is the job of the school to meet the common and the specific individual needs of youth. The Ten Imperative Needs of Youth are about as inclusive, definite, and yet flexible as any set of objectives that can be found. They give logical organization in curriculum planning, and they are functional and realistic in application.

¹Andrew P. Torrence recently completed requirements for the Ph.D. degree at the University of Wisconsin and is now employed in the Agricultural Education Department of Tuskegee Institute.

Ten Imperative Needs of Youth*

1. All youth need to develop salable skills and those understandings and attitudes that make the worker an intelligent and productive participant in economic life. To this end, most youth need supervised work experience as well as education in the skills and knowledge of their occupations.
2. All youth need to develop and maintain good health and physical fitness.
3. All youth need to understand the rights and duties of the citizen of a democratic society, and to be diligent and competent in the performance of their obligations as members of the community and citizens of the state and nation.
4. All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life.
5. All youth need to know how to purchase and use goods and services intelligently, understanding both the values received by the consumer and the economic consequences of their acts.
6. All youth need to understand the methods of science, the influence of science on human life, and the main scientific facts concerning the nature of the world and of man.
7. All youth need opportunities to develop their capacities to appreciate beauty in literature, art, music, and nature.
8. All youth need to be able to use their leisure time well and to budget it wisely, balancing activities that yield satisfactions to the individual with those that are socially useful.
9. All youth need to develop respect for other persons, to grow in their insight into ethical values and principles, and to be able to live and work co-operatively with others.

* National Education Association, *Planning for American Youth*, National Association of Secondary School Principals.

10. All youth need to grow in their ability to think rationally, to express their thoughts clearly, and to read and listen with understanding.

The vocational agriculture curriculum for Wisconsin has frequently been evaluated and revised by the supervisory and teacher training staffs working in close harmony with representatives of the Wisconsin vocational agriculture teacher organization. The curriculum has undergone several changes in attempts to keep it current with changing philosophies of vocational education in agriculture and to keep it in harmony with the major agricultural enterprises and approved practices of the state. The most recent revision of the curriculum was made in 1952. The major units of this curriculum appear in Table I.

Teachers are advised to follow this curriculum with necessary adjustments to meet community needs. It is suggested that the teacher may adjust each unit to his community 25 per cent either way from the suggested time allocated. Under each unit is listed a very helpful outline. The distribution of a teacher's time within the unit outline is left up to the discretion of the teacher.

It is apparent from observing Table II that the vocational agriculture curriculum of Wisconsin makes a very appreciable contribution to the Ten Imperative Needs of Youth as listed by the Educational Policies Commission. Probably no two people would agree entirely on the degree of the contribution that these vocational agriculture subjects make to the needs of youth. Those appearing in the table are merely the writer's opinion. However, it would be difficult to conceive of a person being totally oblivious to the value of the vocational agriculture curriculum in meeting the imperative needs of youth.

Table II indicates the contributions that the vocational agriculture curriculum of Wisconsin makes to the Ten Imperative Needs of Youth, as listed by the Educational Policies Commission. To get a complete appreciation of the contributions of the Wisconsin vocational agriculture curriculum to these needs, (Continued on Page 42)

Table I

Unit Headings for the Vocational Agricultural Curriculum of Wisconsin with Suggested Time Allotments for Teaching Each Unit

Freshman Year	Weeks	Sophomore Year	Weeks	Junior Year	Weeks	Senior Year	Weeks
Dairy Herd Testing		Livestock Judging.....	4	*Farming Program.....	1	Shall I be a Farmer?.....	1
Thumb rules for feeding.....	3	Farm Mechanics.....	8	Farm Safety and Welding....	3	Successful Farmers.....	1
Poultry Culling.....	1	Analysis of D.H.I.A.		Advanced Soils, Fertilizers		Getting established in	
Weeds and soil sampling.....	2	Farming Program records.....	2	and Conservation.....	4	Farming	5
The Farming Program		*F.F.A. and Farming		Advanced Dairy Cattle		*Farming Program	
and records.....	2	Program Plans.....	3	Management	6	Analysis	1
F.F.A.	2	Feeds and Feeding based on		Farm Accounts, Records		Organizing and Planning a	
Poultry Housing and		Dairy Cattle Feeding.....	8	and Income Tax.....	3	Farm Business.....	4
winter care.....	2	Landscaping the Farm.....	1	Farm Machinery.....	4	Operating a Farm	
Farm Shop Tool Instruction		Orchards and Small Fruits... 2		*Farming Programs.....	1	Business	5
and Safety.....	4	Swine Management.....	3	Marketing and		Farm Law.....	3
*Farming Programs,		Sheep Management.....	2	Cooperatives	7	*Farming Program.....	1
F.F.A. and D.H.I.A.....	2	Beef Management.....	1	Farm Structures.....	7	Electricity, Farm Power	
Corn culture, plant growth		Pastures and non-legume				and Home Shop.....	8
and basic soil study.....	9	hay	2			Conservation and	
Baby Chick Brooding and						Agriculture	2
feeding	2					Rural Living and Farm	
Grains and plant diseases.....	3					Organizations	3
Legumes and Cash crops.....	4					Government Programs	
						and Aids.....	2
	36		36		36		36

* To be distributed

Table II
Imperative Needs of Youth That Various Units in the Vocational Agricultural Curriculum of Wisconsin Contribute to by School Years

Needs of Youth	Freshman Year	Sophomore Year	Junior Year	Senior Year
1. All youth need to develop salable skills	<i>* Dairy Herd Testing and Thumb Rules for Feeding Poultry Culling, Weeds and Soil Sampling; The Farming Program and Record; # The Future Farmers of America; Poultry Housing and Winter Care and Feeding; Farm Shop Tool Instruction and Safety; Farming Programs F.F.A. or D.H.I.A.; Corn Culture, Plant Growth and Basic Soil Study; Baby Chick Brooding and Feeding; Grains and Plant Diseases; Legumes and Cash Crops</i>	<i>Livestock Judging; Farm Mechanics; D.H.I.A. Records, Analysis, and New Plans; F.F.A. and Farming Program Plans; Feeds and Feeding; Landscaping the home farm; ** Orchards and Small Fruits; Swine Management; Sheep Management; Beef Management; Pastures, Non-Legume Hays, and Emergency Hay Crops</i>	<i>Farming Program; Farm Safety and Welding; Advanced Soils, Fertilizers, and Conservation; Farming Program Plans; Feeds and Feeding; Farm Accounts, Records and Income Tax; Farm Machinery, Marketing and Cooperatives; Farm Structures</i>	<i>Getting Established in Farming; Farm Programs; Organizing and Planning a Farm Business; Electricity, Farm Power, and Home Farm Shop; Conservation and Agriculture.</i>
2. All youth need to develop and maintain good health and physical fitness	<i>Farm Shop Tool Instruction and Safety</i>	<i>Farm Mechanics</i>	<i>Farm Safety and Welding; Advanced Dairy Cattle Machinery; Farm Structures</i>	<i>Operating a farm business; Electricity, farm power and home farm shop; Conservation and Agriculture; Rural Living and Farm Organizations</i>
3. All youth need to understand the rights and duties of the citizens of a democratic society	<i>The Future Farmers of America; Farming Program and records</i>		<i>Farming programs; Advanced Soils, Fertilizers, and Conservation; advanced dairy cattle management; Farm Accounts, Records and Income Tax; marketing and cooperatives; farm structures</i>	<i>Farm Law; electrification, farm power, and home farm shop; Conservation and Agriculture; Rural Living and Farm Organizations</i>
4. All youth need to understand the significance of the family for the individual and society	<i>Dairy herd testing and Thumb Rules for feeding; The Farming Program and Records; The Future Farmers of America; Farming Programs, F.F.A. or D.H.I.A.</i>	<i>F.F.A. and farming program plans</i>	<i>Farming Program; Farm Accounts, records and income tax</i>	<i>Farm Programs; Rural Living and Farm Organizations</i>
5. All youth need to know how to purchase and use goods and services intelligently	<i>Dairy herd testing and Thumb rule for feeding; The Farming Program and Records; Poultry Housing and Winter Care and Feeding; Farm Shop Tool Instruction and Safety; Farming Program, F.F.A. or D.H.I.A.; Corn Culture, Plant Growth and Basic Soil Study; Baby Chick Brooding and Feeding; Grains and Plant Diseases; Legumes and Cash crops</i>	<i>Livestock Judging; Farm Mechanics; F.F.A. and Farming Program Plans; Feeds and feeding; orchards and small fruits; Swine Management; Sheep Management; Beef Management; Pastures, Non-Legume Hays, and Emergency Hay Crops</i>	<i>Farming Program; Farm Safety and Welding; advanced soils, fertilizers, and conservation; Advanced Dairy Cattle Management; Farm Machinery, marketing and cooperatives; Farm Structures</i>	<i>Why are some farmers more successful than others? Getting Established in Farming; Farm Programs; Organizing and Planning a Farm Business; Operating a Farm Business; farm law; Electricity, Farm Power and Home Farm Shop; Conservation and Agriculture; Rural Living and Farm Organizations; Government Programs and Agricultural Aids</i>
6. All youth need to understand the influence of science on human life	<i>Dairy herd testing and thumb rules for feeding; weeds and soil sampling; poultry housing and winter care and feeding; farming program, F.F.A. or D.H.I.A.; corn culture, plant growth and basic soil study; baby chick brooding and feeding; grains and crop diseases; legumes and cash crops</i>	<i>Feeds and feeding; orchards and small fruits; swine management; sheep management; beef management</i>	<i>Advanced Soils, Fertilizers, and Conservation; Advanced Dairy Cattle Management</i>	<i>Organizing and planning a farm business; electricity, farm power and home farm shop; Conservation and Agriculture; rural living and farm organizations</i>
7. All youth need an application of literature, art, music and nature	<i>Dairy herd testing; poultry culling; weeds and soil sampling; The Future Farmers of America; poultry housing and winter care and feeding; corn culture, plant growth and basic soil study; baby chick brooding and feeding; grains and plant diseases; legumes and cash crops</i>	<i>Livestock judging; D.H.I.A. Records, Analysis, and new plans; Landscaping and farmstead; orchards and small fruits; swine management; sheep management; beef management; pastures, non-legume hays, and emergency hay crops</i>	<i>Advanced Soils, Fertilizers, and Conservation; advanced dairy cattle management</i>	<i>Conservation and Agriculture</i>
8. All youth need to be able to use their leisure time well and to budget it wisely	<i>The Future Farmers of America; the farming program and records; farming program, F.F.A. and D.H.I.A.</i>	<i>F.F.A.</i>	<i>Farming Program</i>	<i>Farm program; Conservation and agriculture; rural living and farm organization</i>
9. All youth need to develop respect for other persons	<i>The Farming Program and Records; The Future Farmers of America; Farm Shop Tool Instruction and Safety; Farming Program, F.F.A. or D.H.I.A.</i>	<i>Farm mechanics</i>	<i>Farming Program; farm safety and welding; farm machinery marketing and cooperatives; farm structures</i>	<i>Farm Programs; Farm Law; conservation and agriculture; Rural Living and Farm Organizations; Government programs and agricultural aids</i>
10. All youth need to grow in their ability to think rationally	<i>The Farming Program and Records; The Future Farmers of America; Poultry Housing and Winter Care and Feeding; Farming Program, F.F.A. or D.H.I.A.; Corn culture, plant growth and basic soil study; Baby chick brooding and feeding</i>	<i>Livestock judging; D.H.I.A. Records, analysis, and new plans; F.F.A. and Farming Program Plans; Feeds and feeding; orchards and small fruits; swine management; sheep management; beef management; pastures, non-legume hays, and emergency hay crops</i>	<i>Farming Program; advanced soils, fertilizers and conservation; advanced dairy cattle management; farm accounts, records and income tax; farm machinery; Marketing and Cooperatives; Farm Structures</i>	<i>Shall I be a Farmer?; Why are Some Farmers More Successful Than Others?; Getting Established in Farming; Farm Programs; Organizing and Planning a Farm Business; Operating a Farm Business; Farm Law; Electricity, Farm Power, and Home Farm Shop; Conservation and Agriculture; Rural Living and Farm Organizations</i>

* Enterprises typed in italic letters are highly contributory to the Needs of Youth. # Enterprises typed in bold letters are moderately contributory to the Needs of Youth. ** Enterprises typed in light letters are slightly contributory to the Needs of Youth.

Contributions of - -

(Continued from Page 40)

the complete curriculum outline should be read since the unit headings do not in all cases fully point out the learning experiences provided by the curriculum.

Indications concerning the contributions that the vocational agriculture curriculum of Wisconsin make to the Ten Imperative Needs of Youth may be summarized as follows:

1. All except five of the units taught in the whole curriculum contribute to the imperative needs that all youth have to develop salable skills. Of these units contributing to this need of youth, all except three are highly contributory. Two of these three are moderately contributory, leaving only one slightly contributory.
2. One unit in each the freshman and sophomore years contributes highly to the imperative need for all youth to develop and maintain good health and physical fitness. Also, four units in the junior year are highly contributory to this need. The curriculum for the senior year lists one unit that is slightly contributory to this need, one that is moderately contributory to it, and two that are highly contributory to it.
3. One unit in the freshman year slightly contributes to the need for all youth to understand the rights and duties of the citizens of a democratic society. Also, one unit in the freshman year moderately contributes to this need, while another unit highly contributes to it. The curriculum for the sophomore year contains no contributory units to this need. The junior year curriculum contains two slightly contributory units, two moderately contributory units, and two highly contributory units to this need. The curriculum for the senior year contains one slightly contributory unit and three units that are highly contributory to this need.
4. The curriculum for the freshman year contributes more units to the need that all youth understand the significance of the family for the individual and society than does the curriculum for any other single school year. One of the freshman year units contributes moderately while three of them contribute highly to this need. One unit in the sophomore year contributes slightly to this need. One unit in the junior year contributes moderately to it and one contributes highly, while two units in the senior year contribute highly to this need.
5. There are numerous units in the curriculum that contribute to the need that all youth know how to purchase and use goods and services intelligently. Also, a predominance of highly contributory units is found in each school year. The curriculum for the freshman and senior years appears to have the greatest number of contributory units while the junior year curriculum offers the least number of contributory units to this need of youth.
6. The need of all youth to understand the influence of science on human life receives a contribution from the curriculum in each of the high school years. No unit in the freshman year is highly contributory to this need, but many units in this

year are slightly contributory to it. The curriculum for the sophomore year contains one unit that is slightly contributory and four that are moderately contributory to this need. The curriculum for the junior year has two highly contributory units, while the senior year curriculum contains one highly contributory unit and three moderately contributory units to this need.

7. Units in the curriculum contributing to the need for an appreciation of literature, art, music, and nature varies from eight in the freshman and sophomore years to one in the senior year. Most of the curriculum contributions in this area are to the appreciation of nature. However, others might enhance youth's appreciation of literature, art, and music.
8. The vocational agriculture curriculum of Wisconsin possibly contributes less to youths' need to be able to use their leisure time well and to budget it wisely than it does to any other need of youth. All units that contribute to this need do so only moderately except one which contributes slightly.
9. The need that all youth have to develop respect for other persons is contributed to by a number of units. Only one unit in the sophomore year contributes to this need while four units in the freshman year and five units in the junior and senior years contribute to this need.
10. Units contributing to the need for all youth to grow in their ability to think rationally are numerous. Many of the units that are not listed in Table II as being contributory to this need might, in fact, contribute much to it.

All of the imperative needs of youth receive some contribution from the vocational agriculture subjects varying from a very little to considerable. Some of the needs would appear, from a cursory observation of the curriculum, to be only slightly met. However, the curriculum will prove quite contributory to most of the needs if the enterprises are well taught. For example, some safety methods should be learned from the study of certain livestock, from electrification, and from the study of farm machinery which should insure better health. Actual farm work experience is provided for in the farming program and this should lead to better physical fitness. In practically every agricultural enterprise one should learn to better appreciate nature. Also, the student's ability to think rationally should be enhanced to some extent in practically every agricultural enterprise in the curriculum. The methodology of teaching and the teacher himself are major factors in getting this and other needs of youth cared for. The agricultural curriculum of Wisconsin offers some courses, such as farm shop and conservation, that are later developed by some into hobbies. This of course is a desirable end which might lead to better use of leisure time. So, much of the satisfaction of these needs of youth depends upon the interest, efficiency, and ability of the agriculture teacher.

Finally, the vocational agricultural curriculum of Wisconsin seems well planned and organized. The curriculum

FFA Challenges

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project. If he can draw, he could do a fine job on building plans. If he is good at mathematics, he should be able to keep very good production records. There are any number of interests and abilities that can be adapted to a better supervised farming program. Somewhere along the line part of the project should be aimed at winning an FFA contest.

Winning an FFA contest can be like starting a new life for a boy. If he has never had the incentive to get ahead by holding an office or taking the responsibility of a committee chairman, he, undoubtedly, lacks self confidence. He may have felt good when the Ag teacher told him what a good job he did in the shop or with his calf but that doesn't carry much weight when he talks to the other boys about it. After he wins a contest, even on the Chapter level, it is something wonderful for the boy. He has an award to show for it—perhaps a foundation award medal. He has done something better than anyone else in the class and has something to prove it. The other boys in his age group and gang have to look up to him with honor. He has had a taste of glory. Glory is like a habit-forming drug—once a person gets a taste of it he wants more.

This boy who was bashful and lacked self confidence will be more confident in himself and his work. He will probably want to enter district, state, and higher contests. Having received some honorable recognition, the other boys will look up to him, have more confidence in his work and expect more from him. When he is asked a question by anyone he will want to know the answer and soon his interests will broaden to other fields.

As the boy grows, so does his program, and he becomes better established in farming. He soon gets to be an FFA officer and receives the leadership training which he so direly needed. From his position in FFA work he learns citizenship. He will learn co-operation by working with others to promote the FFA. Being so keenly interested in the work, he will probably make a more enthusiastic and competent officer than one who came by the position "naturally."

If I can help do this for one boy every year, I think it will stand solid for my part in that inspiring task. □

is planned for gradual and increasing difficulty from the freshman to the senior year. Most of the technical agriculture is given in the first three years of high school and the last year is mostly devoted to the economic phases of agriculture, which make it more abstract and more difficult to learn and to teach. The last year gives the student training in planning, financing, and managing a farming business with a view toward establishment in farming. This broad training provided for by the Wisconsin vocational agricultural curriculum contributes much to the Imperative Needs of Youth. □

Proper administration of a program of vocational agriculture requires - -

A frame of reference in farm mechanics

GEORGE W. WIEGERS, JR., Teacher Education, University of Tennessee



George W. Wieggers

ONE'S philosophy of agricultural education embodies a set of values which gives direction to what one does. Agricultural educators in a democratic society can and do have different sets of values, hence different philosophies. This situation in America

has been healthy for the most part, because it causes many individuals to reinterpret the values they hold.

A teacher of vocational agriculture develops his philosophy of vocational education in agriculture from many sources. Some values in his philosophy are handed down and accepted and some evolve from his own experiences. Unfortunately, some have formulated a philosophy to justify their actions.

Much of the content of the Smith-Hughes Act reflects values held by leaders of vocational education and of legislators prior to its passage. These values were translated into action when the various states contracted to cooperate with the federal government to use federal grants in the promotion of vocational education. The major provisions that have served as guideposts are that the state must formulate a plan for agricultural education, and that plan must provide: that such education shall be to fit for useful employment; that such education shall be of less than college grade; that such education must be designed to meet the needs of persons over fourteen years of age who have entered, or who are preparing to enter upon the work of the farm or of the farm home; that the State or local community, or both, shall provide the necessary plant and equipment; that each school shall provide for directed or supervised practice in agriculture for at least six months of a year; and that teachers, supervisors, or directors meet minimum qualifications set up by the State Board.

Sound Philosophy Needed

Our present farm mechanics concepts and ideas are not accidental, but were evolved through trial, error and success. Many ideas that failed when tested in practice have been discarded; other ideas have been introduced, modified or changed to produce better results. Those ideas that produced desirable results in practice have been preserved and should be passed on to new and inexperienced teachers of vocational agriculture.

Some teachers seem to believe that because an activity is widely practiced it can be considered good. This may or may not be true. What is good is not necessarily dependent upon the vogue, or even the times. There is no particular virtue in doing things the way they have been done in the past. The goodness of a practice in farm mechanics is usually determined by results produced. The results, both good and undesirable, are not always readily apparent.

Every teacher of vocational agriculture should develop a sound workable philosophy of education. He should develop a frame of reference that will enable him to discriminate between good and bad educational practice if he desires to be worthy of being called a competent teacher of vocational agriculture. He should be aware that his philosophy is revealed by his expressions of thought and feeling and by what he does. A teacher of vocational agriculture subscribes to ideas, principles, theories, concepts and doctrines; he expresses his ideas and points of view, all of which reveal his philosophy. He cannot operate in a vacuum or occupy the position of status quo.

A suggested frame of reference in accordance with which farm mechanics situations, facts and policies may be interpreted, evaluated and acted upon follows:

1. *Vocational agriculture is a part of the whole program of public education.*

Individuals live and work in our democratic society; education should help them to make the needed adjustments.

The whole school program is much larger than any of its parts, but there can be no whole without the parts. Vocational agriculture is a part of the whole. It is a type of education which is designed to train present and prospective farmers for proficiency in farming. One responsibility of the teacher of vocational agriculture is to see that this type of education continues to be a part of the whole program of public education. Only under such conditions can vocational agriculture be justified in our public schools.

2. *Farm Mechanics is an essential part of the total program of vocational agriculture.*

A vocational agriculture program is made up of parts and farm mechanics is one of them. Effective instruction in farm mechanics results in high quality work, effective use of effort, products turned out within reasonable time and economical use of materials by individuals being taught. Competent teachers of vocational agriculture direct learning

activities in such a way that farm mechanics content is related to other vocational agriculture content. Farm mechanics enters into all common types of farming. Instruction should contribute to proficiency in the types of farming selected by the learners. Therefore, instruction in farm mechanics should be treated as an essential part of the whole program.

3. *Instruction in farm mechanics is provided for individuals who want, need, and can profit from instruction that is directed toward proficiency in the types of farming selected by the learners.*

Vocational agriculture is designed for present and prospective farmers. Public funds for such education cannot be justified for individuals not planning to enter farming or who are not already farming. If teachers of vocational agriculture meet their responsibilities toward present and prospective farmers they probably will not have time left to work with individuals who will not or do not plan to use the instruction. Such individuals should be provided other vocational instruction designed to meet their needs.

4. *It is not the function of the vocational agriculture teacher to train craftsmen in the farm mechanics program.*

Success in the various types of farming requires individuals to be able to use knowledge and skills in several areas of instruction in farm mechanics. The individual learner in vocational agriculture does not have the need nor the time to become a highly skilled mechanic. Major construction and repair work arising on farms should usually be performed by skilled craftsmen.

The farm mechanics program should be sufficiently broad to provide the individual with experiences that will enable him to learn what he needs to learn to become a proficient farmer. He should gain experiences in each area of work in proportion to his need. No one area of work should be promoted at the expense of other areas of equal or greater importance to the individual.

5. *Instruction is based on the learner's needs of a mechanical nature.*

Farm mechanics needs grow out of the interaction of the individual with his environment. It is therefore the business of the teacher of vocational agriculture to understand each individual and to know his environment first hand in order to help him recognize his needs.

An individual is confronted by problems in getting from where he is now to where he wants to go. He has had experiences in farm mechanics on the home farm which should be supplemented by experiences provided through organized instruction and supervised practice. He is now living in an environment with various mechanical devices which should be understood and used. Types of farming must be studied to determine the mechanical abilities needed for success. Both the individual and his present and probable future environment change continuously, therefore determin-

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ing needs as a basis for functional instruction is a continuous process.

6. *Instruction is carried to the level whereby individuals not only learn the how and why of approved methods, but do what needs to be done in the types of farming selected.*

The best way for a teacher of vocational agriculture to help an individual to become successful, for example in poultry production, is: have him actually manage and care for a flock, provide experiences which will cause him to learn the how and why of approved methods of management and care, and assist him in solving problems which arise in the management and care of his flock. In many situations a brooder house will be needed. In building a brooder house the individual should be taught to make or read plans, lay out materials, cut and assemble. He should also be taught the characteristics which cause the brooder house to be satisfactory in use. If theory cannot function in practice it cannot be taken too seriously for practical guidance. Theory and practice must be kept together if they are to be used together. Teachers of vocational agriculture have the responsibility of keeping theory and practice together.

As implied above, an individual must practice what he is to learn. Teachers can cause individuals to learn only what they can succeed in getting them to do. Without self-activity there is no learning. Doing in itself may not assure learning, but there can be no learning without doing.

7. *Instruction must meet functional requirements.*

Instruction must be useful to the individual in his chosen vocation in order to be vocational. Both abilities to be developed and/or products produced should serve useful purposes. Functional requirements are necessary for operational conditions on farms. If one gains experiences in electric wiring, it should be those experiences that contribute to actual wiring needs on farms. If one makes a hog watering trough it should hold water. Activities which are unprofitable or have little educational value should not ordinarily be carried out in the farm mechanics program. Most individuals want to go beyond the functional requirement. They like to take pride in turning out work that looks good. It is, however, more important that a watering trough hold water than that it appear pleasing to the eye. Both can be achieved with practice.

8. *The environment in which individuals gain experiences in farm mechanics includes actual farm environments and environments which approximate desirable working environments on farms.*

In order to give training to an individual who needs to develop proficiency in a selected type of farming, real farm jobs and projects should be used to develop abilities in so far as possible and practical. Many of these activities can be carried out satisfactorily in the farm mechanics shop with equipment that farmers use. Some of the activities

will, however, need to be carried out in their natural setting. For example, buildings must be built where they are to stand, concrete floors laid where they are to be used and permanent fences must be built where they will stay.

A desirable working environment in farm mechanics requires the learners to dress for full participation. Individuals usually restrict their natural behavior if they wear regular school clothes while doing farm mechanics work. It is very difficult to keep from getting dirty while working on tractors and farm machinery. Each individual should be able to work without being concerned about getting his clothing soiled.

9. *The farm mechanics shop is designed, equipped and organized to provide opportunities for developing abilities in many areas of mechanical work.*

The farm mechanics shop is a place for individuals to develop many different mechanical abilities. It is not a wood-working shop, or welding shop or any other kind of specialized shop. The shop is designed, equipped and organized to handle work in many areas such as woodworking, welding, farm machinery, tool fitting and others. The quantity of equipment that is provided can be justified in terms of needs, cost, space, durability, distributed use and other factors. It is unnecessary and uneconomical to provide enough equipment for all individuals in a class to work on the same thing simultaneously in one area. The quantity of equipment is provided in each area for only a small number of individuals to work at one time in that area. A large number of individuals in the shop will have to distribute themselves throughout the shop for efficient learning under such conditions.¹

10. *Instruction is distributed throughout the four years of high school work and opportunities for instruction are available for young and adult farmers.*

An individual identifies problems of a mechanical nature each year as he makes a beginning and advances in farming. Problems do not arise in only one year of high school work. Learning activities need to be adapted to the individual's maturation and experimental level. Some activities, for example, are better suited to fourth year students than first year students. Normally the instruction should progress from the less difficult manipulative activities and managerial decisions to the more difficult. In brief, problems arise in situations from time to time throughout the four years of high school work; some activities are more difficult than others; the student can profit more from some experiences at a given time than at another.

Individuals must be provided with favorable class schedules for effective farm mechanics work throughout the four years. Little value can be gained from scheduled instruction each year if the total amount of time allotted to farm mechanics is divided into too many separate class periods.

Time does not permit the individual to learn all he needs to learn in farm mechanics during his high school train-

ing. The high school student is at best a part-time farmer during his high school training. Other problems will become more important to him after he finishes high school and becomes a full-time farmer. It is a function of the vocational agriculture teacher to provide instruction in farm mechanics for individuals beyond high school age.

11. *Recipients of instruction share in developing the program.*

The teacher alone cannot fathom the needs, interests and wants of individuals without their help and cooperation. Each individual learner should work with the teacher to the extent he is able to do so in shaping the program of which he is a part. Every student with the assistance of the instructor should develop his own farm mechanics calendar of activities which may include both individual and group work. A program developed cooperatively by students and instructor should be much better than either could develop separately. This type of experience gives the individual training in cooperative planning. He should be more interested in carrying out a program which he has had a part in developing.

12. *Conditions are favorable for participants to share in evaluation.*

If one is to make continuous growth in farm mechanics he must develop the ability to choose among values or to place values upon processes and products. The learner first of all needs to learn in a general way what is to be accomplished. As he works toward the selected outcome he must know wherein he is deficient and next what to do to improve.

The learner will need direction from someone in order to make intelligent choices and comparisons, but he should accept as much responsibility for self-evaluation as he can. In order for him to learn to evaluate intelligently he must practice evaluating just the same as learning to run a bead in welding. A teacher who does not provide favorable conditions for the learner to share in evaluation that makes a difference lacks at least that much in being an excellent teacher. It is not implied that students will not evaluate even though the teacher elects himself to do the job. Evaluation on the part of the student should be shared and directed and not incidental.

13. *The farm mechanics shop building and equipment financed through public funds are used for educational purposes.*

The farm mechanics building and equipment are provided to give individuals opportunities to learn what mechanics they need to learn to become proficient farmers. Public funds appropriated for constructing and equipping a farm mechanics shop can be justified to the extent that directed learning takes place in and through it. The farm mechanics shop is not just a place to work, not a place to get free work done, not a place for farmers to do work that can be done just as well at home, not a place to store such items as school buses and furniture, not a service center and not a place to do

Teaching agriculture at a British University

PROFESSOR H. G. SANDERS, Professor of Agriculture, Reading University, England

EVERY year thousands of young men and women enter the agricultural colleges of the United Kingdom. They leave at the end of a three-year course with a training which ensures good all-around knowledge of practical farming plus a sound scientific grounding that is of value if they want to specialize at a later stage. Reading University, in the English county of Berkshire, 36 miles west of London, has an important Faculty of Agriculture.

In the teaching of agriculture Reading University has always held a high place since its charter was granted in 1926. With three farms covering about 700 acres it can show a fairly wide range of farming activities, and today about a third of all the students at this University are in the Faculty of Agriculture. About half of these take agriculture as a course, and the other half follow separate courses in horticulture or dairying.

Students are required to do one full year's practical work on a good farm before their entry to the course. During their time at the University they do no actual farm work, being occupied with lectures and laboratory work. The farms are run commercially, but their main purpose is to illustrate the principles of agriculture and to show how the scientific knowledge which is taught can be applied in practice. At weekly farm classes students are shown the various operations in their due seasons and have every opportunity of discussing methods and reasons with the lecturers who conduct the classes.

A further important function of the farms is to provide means for field experiments which are carried out by members of the teaching staff and by advanced students.

Students from Overseas

Most of the students come from homes in Britain but a small proportion are from overseas—India, most parts of Africa, Cyprus and the West Indies have all been represented in recent years. These are particularly welcome because they give much to the student body. A very valuable part of a university education is what the students learn from each other—hence variety in background is very desirable.

For the general degree in agriculture the course is three years. The first is spent in gaining a knowledge of the sciences—chemistry, physics, botany, zoology and geology. This forms the basis for the agricultural sciences which are taken with economics and agriculture itself in the last two years. Farm mechanization is an important subject in the course and, though no attempt is made to produce trained engineers, students have to master the principles of machine construction and use; special emphasis is placed on the considerations which should guide a farmer in deciding what to invest in mechanical equipment.

Very Varied Posts Taken

The aim is to turn out graduates with a good all-around knowledge of farming, with sufficient scientific training to enable them later to specialize on more theoretical lines and yet with the practical sense to make them good farmers. This seems to be achieved because graduates go to very varied posts. Very roughly, one quarter of them farm (either run farms of their own or manage farms for others), one quarter enter administration or advisory services in Britain or other parts of the Commonwealth, one quarter take technical appointments in commercial firms dealing with farmers, and the final quarter go to more academic work, teaching or research.

All these men and women are doing very useful work in their different spheres but it might be argued that it is those who farm who are the most valuable products of the University. Science is rapidly giving us more control of nature and in Britain there is a large and effective advisory service to interpret new discoveries to farmers; but the really important people are those farmers with an understanding of science who will adopt new ideas and show their fellow farmers how new discoveries can be applied profitably in practical farming.

A few students, having taken their degrees in general agriculture at the end of three years, stay for one additional year and take a postgraduate diploma. For this they specialize in either animal, crop or poultry husbandry, doing a small amount of experimental work and spending much time in studying the scientific journals. Instruction in that year is more by the seminar method (i.e. discussion with small groups) than by formal lectures.

It is quite common for students to change from one university to another at this stage of their careers and in the postgraduate group at Reading there are normally men who have graduated at one of four or five other British universities as well as at an odd one or two from overseas.

Courses for Research Posts

Many students enter the Faculty of Agriculture in the hope that they will eventually become research workers. They have the mistaken idea that agricultural research is exciting or even thrilling whereas, of course, it is usually a hard discipline with endless detail. There are a few posts for husbandry experiments for which a degree and postgraduate diploma give sufficient qualification, but for most research appointments an honors degree is essential.

At Reading there are four-year courses leading to honors degrees in agriculture, agricultural botany, agricultural chemistry and agricultural eco-

A frame of reference

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commercial work. The farm mechanics shop is a part of the total school plant just the same as the vocational agriculture class room, the typing room and any other unit in the school.

Opportunities to use the shop and equipment are frequently extended to those who have received instruction or already possess the knowledge and skill necessary to use the equipment correctly and safely to do work for which they do not have facilities at home. Policies need to be developed to prevent abuse of these extended opportunities. Work carried out under such conditions should not interfere with organized class work, nor should the school be expected to furnish supplies nor be expected to bear cost of breakage and unusual wear or depreciation. As the individual develops his own farm mechanics shop he should have less need for using the school's facilities.

14. *Sufficient public funds are made available to carry out a good program in farm mechanics.*

In order to have an effective farm mechanics program for present and prospective farmers the shop must be adequate in terms of location, design, space, heat, lights, doorways and arrangements. Adequate teaching materials, equipment and supplies must also be available for instructional purposes. All of the physical items mentioned cost money. It is the responsibility of the state or local community to provide the necessary plant and equipment. It is not a function of the teacher to raise funds to erect and equip a farm mechanics shop. An adequate budget needs to be set up to take care of replacements, maintenance and new purchases of items after the original capital outlay. It is questionable whether vocational agriculture should be offered in communities financially able to finance a good program, but unwilling to do so.

15. *The competent teacher of vocational agriculture is qualified by training and experience to direct learning activities in farm mechanics and to administer the whole program.*

A teacher cannot effectively direct learning activities in farm mechanics if he has not had sufficient training and experience to meet the demands of types of farming present in the local community. It takes years of training and experience to develop the necessary teaching and mechanical abilities which are possessed by competent teachers. Competency can be achieved by most teachers if they really want to achieve this goal. Excuses and bluffing are not a part of a competent teacher's makeup.

Teachers of vocational agriculture not only have the responsibility for directing learning activities, but have the responsibility

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nomics. For the last three of these, students take the "pure" subject up to the level of a general honors degree, specializing in the agricultural application during their final year. □

Let's examine FFA contests

Values are varied when they are properly selected, planned and conducted

GUY E. TIMMONS, Teacher Education, Michigan State College



Guy E. Timmons

"If you boys don't win first place in this contest, we are not going to enter any more contests." This was a declaration made by a teacher of vocational agriculture to his boys as they waited to enter a state level Future Farmer contest. "Contests are way out of hand." "How can we compete against the Podunk Chapter? That's all they do—prepare for the 'parli-pro' contest which they win year after year." Comments such as these are current and heard by all of us. Such statements, and others aimed at condemning what should be worthwhile ventures in education need to be weighed and analyzed rather carefully. Are there basic wrongs in FFA contests? Is undue emphasis being placed on such contests? Are the contests, as such, being misused to the detriment of the participant and the profession? Satisfactory answers to these and many other questions pertaining to Future Farmer contests must be arrived at for our own satisfaction and for improved public relations.

Contest Objectives

Future Farmer contests of all levels are designed specifically to be educational experiences over and above those educational experiences which can be afforded in the classroom, on the farm, or other locale. They are designed primarily to train and improve participants in general, and secondly, to train participants specifically along agricultural lines. Contests are a teaching technique or aid that can be used effectively for developing student motivation, lending variety to a teaching program, furthering interest in vocational agriculture and like benefits.

Selecting Contests

Teachers and students should carefully evaluate the benefits from all contests and enter those which will contribute most to the growth and development of the individual. Some so-called contests are mere guessing matches involving little by way of background requirements or preparation. The other and more beneficial, the truly educational contests, require extensive preparation but pay far greater dividends to participants. The teacher should emphasize and help guide his pupils toward the latter type. The farm mechanics contest is a good example of this type of contest. In order for the student to compete in tractor trouble shooting or some other phase of the farm mechanics contest he must have studied basic fundamentals and be able to apply them. He cannot guess and run the chance of winning—

he must know something about the job. Winning performance demands, and is the result of, good daily study and performance both in the school situation and on the farm. Winning cannot be the result of a good guess as to which jar contained the most beans. Could the type of contest a particular teacher might encourage his students to participate in have a direct relationship upon the program being operated by that teacher; the effectiveness of that specific program; the resultant product the teacher is turning out; or the student himself? Perhaps we should ask ourselves such questions by way of evaluating our programs. Here again we should go back to our basic contest objective—is it to "win" in a guessing contest, or is it to train boys?

Preparation for Contests

Participation in any contest should be the result of, and reward for, good daily performance in both the formal and informal learning situation. It is unsound to let the objective become the contest and then build the course of instruction around such a false objective. A more sound objective should be good daily performance in any and all phases of the work in vocational agriculture. Let's examine a specific contest and see how preparation for that contest might be handled. Many teachers of vocational agriculture have their boys give oral magazine reports periodically on some special interest area pertaining to or related to the boy's supervised farming program. Such an activity affords the individual a chance to acquire some experience in oral self-expression or public speaking. The boys in any given group might then be able intelligently to select several boys to represent their group, such selection being based on the performance of the individual boy. Those boy-selected individuals could then be given opportunity for additional preparation for inter-group competition. Such competition might be held before a total school assembly or the like and, through the process of elimination, the winning boy and an alternate might be selected to represent his Chapter in higher echelon contests. The same technique could be employed in farm mechanics, farm management, and other contests.

Contest Benefits

1. Contests properly used serve as motivation devices for students. They serve to encourage the boy to do work daily so as to better his future and also his chances of being a contest team member selected by his teacher and fellow students to represent his Chapter and school.
2. Contests properly used furnish the media for a participant to further his education over and above that which can possibly be offered in a given school or class situation.

3. Contests properly used have the possibility of glamorizing an otherwise drab or colorless subject area. Care must be exercised, however, that undue glamour is not placed upon such a needed subject area at the expense of detracting completely from the beneficial.

4. Contests provide an opportunity to meet other people in a competitive, life-like situation. Such association need not be limited to boys but to adults and professional leaders as well.

5. Contest preparation, if it is to be effective, demands departure from the traditional. Such departure calls for varied teaching technique, adding color and life to the teaching situation which, in turn, builds and maintains interest of all class members.

Contest Improvement Suggestions

1. Perhaps more emphasis should be placed on contests in which the greatest opportunity for learning is offered with less emphasis on those contests where the amount and kinds of learning are limited. It is not implied that the contest of limited scope be abolished. Some are perhaps needed for program variety and perhaps to fit less gifted individuals in the program or for other various reasons.

2. Work with teachers and prospective teachers in developing concepts as to the benefits that might be obtained from effectively using contests and as to how they might utilize contests in their teaching programs.

3. Develop the spirit that everyone in a given contest wins in terms of increased learnings. Enter contests to learn, assuming that increased learning will develop a winning pattern.

4. Carefully evaluate existing contests and carefully study new or proposed contests to determine their educational implications. If they have shortcomings, seek ways to improve them.

5. Strive to improve the daily program in vocational agriculture and let such effective teaching better prepare all boys as possible competitors in the game of life.

Contests are basically sound. The human element involved uses or abuses such an effective teaching aid or device according to their own professional or personal stature. Contests can sell a teacher either up or down the river. Which way are YOU traveling? □

A frame of reference

(Continued from page 45)

bility for administering the program in the vocational agriculture department. Such administration requires the teacher to possess such traits as initiative, good judgment, being able to get along with people, being able to develop plans for a long period of time and others. Most teachers can develop the necessary abilities to administer the program within the framework of the overall school policies if they have a strong enough desire to do so. □



DEVELOPING FARM WOODLANDS by J. F. Preston, 1st edition, pp. 386, illustrated, published by McGraw-Hill Book Company, New York. Price, \$4.50.

This addition to the McGraw-Hill "Rural Activities Series" contains the following chapters: Growing Wood as a Farm Crop, Starting a Farm Forest, Weeding and Releasing Young Trees, Thinning Tree Crops, Pruning Tree Crops, Cutting the Wood Crop, Marketing Wood Products, Managing the Farm Woods for Maple Sap, Managing Farm Woods for Christmas Trees, and Managing Farm Woods for Naval Stores. The appendix contains a list of related readings for each chapter, a glossary, volume tables, log rules, modified acreage grid, a sample timber sale contract, a summary of forest taxation laws by states, and a correlated list of visual aids.

This book should serve as a fine reference book for study about the place of forestry in the farm business. The book is well written and well organized. The introduction provides some interesting data on the dollar income the farmer could expect from his wood lot. The discussion is primarily from an operations point of view—describing how to perform the various operations. It should be very helpful to farmers and students by providing some clear and fairly complete instructions on farm woods operations. The illustrations are very clear and well chosen.

The author was formerly Forest Inspector, U. S. Forest Service and Chief, Forestry Division, U. S. Soil Conservation Service. He is also the author of *Farm Wood Crops*.—A.H.K.

METHODS AND MATERIALS FOR TEACHING VOCATIONAL AGRICULTURE TO HIGH-SCHOOL STUDENTS by G. P. Deyoe, pp. 80, illustrated, published by the Office of Field Services, College of Education, University of Illinois, Urbana, Illinois. Price, \$1.00.

There is no subject of conversation closer to the heart of teachers than the improvement of teaching. This publication provides an excellent discussion of planning for teaching, teaching procedures, and the use of teaching aids by one of the best known authors in the field of Agricultural Education. He starts with planning from the standpoint of community needs and building courses of study (with examples and illustrations), and carries it through to the doing level in the classroom.

The publication is an attractive paper bound edition with a multitude of photographs illustrating the various points the author wished to emphasize.

A quotation from the Foreword written by H. M. Hamlin seems to summarize what the author has done. "Teaching is, of course, the most important thing that teachers do; everything else they do is intended to facilitate teaching. Perhaps no human enterprise pays greater dividends than good teaching. Dr. Deyoe has offered many suggestions for making more productive the time that is spent teaching."

Dr. G. P. Deyoe has been a member of the Agricultural Education staff of the University of Illinois for several years. He is the author and co-author of several books used extensively by teachers of vocational agriculture.

—A.H.K.

PROCEEDINGS OF THE FOURTH AMERICAN FOREST CONGRESS, pp. 372 published by the American Forestry Congress, 919 Seventeenth Street, Northwest, Washington 6, D. C. Price, \$3.00.

Proceedings of the Fourth American Forest Congress is a "blow by blow" account of the entire meeting, including the question and answer sessions which followed the main speakers. It was particularly interesting to read first, the main speeches; second, the points of view expressed by panel members on the same topic; and third, the rather warm discussions which followed when the meeting was opened to the audience. The subjects discussed included forest management, multiple use of forest lands, forestry research and education, and forest land-ownership.

Points of view were presented by representatives of the federal and state governments, labor, industry, and the professional forester. Reading this report will help to bring about an understanding of one of the major problems of our time—that of the wise use of our forest resources. Problems discussed touched forest use as it affects every citizen of our country, since they dealt not only with a continuing supply of timber, but also with the use of forest areas for grazing, mining, water and soil conservation, wildlife conservation, and recreation.

Copies are available from The American Forestry Association at the above address.—A.H.K.

INTRODUCTORY ANIMAL SCIENCE. Revised by W. P. Garrigus, pp. 503, illustrated, published by J. B. Lippincott Company, Chicago-Philadelphia-New York. Price

Introductory Animal Science is intended primarily as a college text for the basic course in Animal Husbandry. The organization of the chapters follows a definite pattern. The first three chapters deal with the history and importance of the livestock industry, the evaluation of livestock, and marketing livestock and livestock products. The remaining chapters are devoted to a discussion of beef cattle, sheep, swine, horses and mules, and dairy and dual purpose cattle. For each kind of livestock, a chapter was devoted to each of the following: a de-

Our Cover Picture

Governor proclaims Future Farmers Week. Governor Alfred E. Driscoll is shown as he signs official proclamation designating the week of Feb. 17 as New Jersey Future Farmers Week. Watching the official enactment of the proclamation are: seated at left, Charles Crane of Belvidere; standing left to right, Charles Hoffman of Belvidere, Alvin Kuske of Millville, William Chafey of Mt. Holly, George Aaronson of Bordentown, Karl Reinhardt of Pennington, State FFA secretary; seated at right, Joseph Blakeslee of Newton.

It is not difficult to imagine the citizenship training values growing out of this experience—first, for the young men pictured, second, for the members of the Chapters which they represent and third, for all Future Farmers in New Jersey who participated in the activities of the week set aside by such official proclamation. Photo furnished by Owen E. Kiser, New Jersey State Supervisor.

Wiegiers on Special Assignment



Geo. W. Wiegiers

DR. George W. Wiegiers, Jr., Associate Professor of Agricultural Education at the University of Tennessee, has been selected by the Government of Belgium to do special educational work in the Belgian Congo. He left June 15 to

carry out the three and one-half months' assignment. His appointment was made under the program of the Foreign Operations Administration.

Specifically, Dr. Wiegiers will study the educational needs of the natives in a few selected representative regions of the Congo and recommend a system of practical educational training to meet those needs. He will suggest methods of putting the recommendations into effect, including the establishment of special training schools for teachers, and the most practical and elementary form of training to start the natives on an educational program that will raise the general level of education and improve the native system of agriculture. □

scription of the industry, type and selection, market classes and grades, products and by-products, breeds and production problems. The most useful chapters appear to be those on market classes and grades and livestock judging.

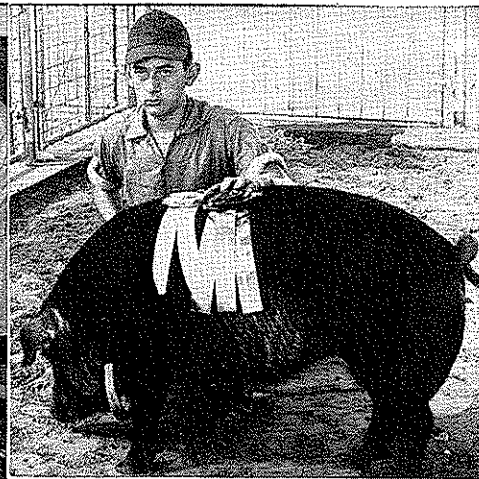
The book is well written, easy to read, and replete with photographs and illustrations. It is, however, quite definitely an orientation type of book—not a production problem book.

The author, Wesley P. Garrigus, is Professor of Animal Husbandry and Chairman, Animal Industry Group, University of Kentucky.

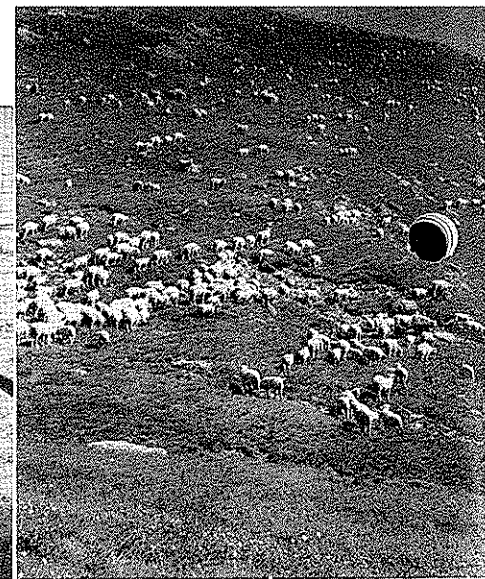
STORIES IN PICTURES



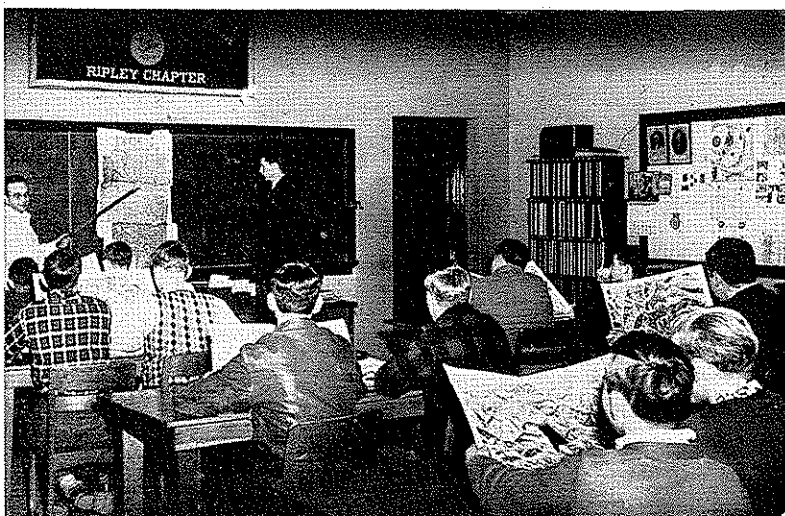
Ray L. Hahn and Mrs. Hahn were honored during the 1954 North Atlantic Regional Conference. Ray retired recently as State Supervisor of Vo-Ag in Connecticut. He is shown receiving a certificate of service from H. N. Hansucker, Program Specialist for the North Atlantic Region, U. S. Office of Education. (Photo by H. L. Noakes.)



A prize winner—Edwin Dale Callender of the Loyd Star, Mississippi, FFA Chapter is justly proud of his Poland China gilt. "Smooth Lady Astor" (the gilt) was Reserve Grand Champion at the Mississippi State Fair in 1953.



Alpine sheep on pasture in the high country of Colorado. This view was seen by members of the Montrose, Colo., FFA Chapter during a pack-trip taken as a summer recreation activity. (Photo by D. M. Clark, Montrose, Colo.)



Cooperation with other agricultural agencies is essential in developing an agricultural program for the community. Above is a soil technician of State Soil Conservation Service discussing conservation problems with a class in vocational agriculture.



Mississippi teachers often go to other states for professional improvement. Here we see a group of Mississippi Vo-Ag teachers studying forestry and forest products at Crossett, Arkansas.

Members of Vo-Ag classes from schools in Winnebago County, Illinois, participated in the Soil Judging Contest as a part of the Conservation Field Day sponsored jointly by the Soil Conservation Service, the County Farm Bureau and the Vo-Ag Departments. (Photo by I. M. Huggins, Vo-Ag Instructor, Rockton, Ill.)

