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THE SUPERINTENDENT AND THE AGRICULTURE DEPARTMENT

The superintendent of schools is an important factor in the development of a strong agriculture department in the high school. Much depends upon his understanding of the aims and methods of teaching vocational agriculture and his willingness to support, encourage, and counsel the teacher of agriculture. Naturally the question arises as to what are the indications of a strong agriculture department. The purpose of the present article is to suggest and discuss from the viewpoint of the superintendent five of the major factors in the success of an agriculture department. The superintendent has an important relation to all five.

The first factor is the selection of proper groups for instruction. What sort of a boy do we want in our agriculture department? The following questions should be answered affirmatively in regard to him.

- a. Does he plan to follow a farming occupation?
- b. Is he genuinely interested in farming?
- c. Does he have a preparation which will enable him to successfully pursue the curriculum?
- d. Does he have a farm background?
- e. If not farm reared, is he willing to secure the necessary farm experience?
- f. Will his parents co-operate in preparing him to follow a farming occupation?

No suggestion is made that the most intelligent and able boys be enrolled in the agriculture department. Neither is it desirable to place a boy in the agriculture class because he has failed to make satisfactory grades in other courses. The possession of a certain minimum of preparation and intelligence is necessary if he is to profit from any sort of high school instruction. Beyond this minimum the selection should be based upon his plans, interests, experience, and parental willingness to co-operate.

It may appear that we discriminate against the boy who is not farm reared. We must remember that the non-farm boy vocationally is at a disadvantage as compared with the farm boy, first, because his decision to enter farming is not based on a real knowledge of farm life, second, because he lacks farm experience, and third, because his prospects of farm ownership are less. Moreover, if he lacks a real interest and a farm background, he will be a liability from the viewpoint of the other members of the class. There are studies which show that non-farm boys who take vocational agriculture in high school very rarely enter farming occupations. However, if such boys are sincere in their desire to enroll in agriculture and attest their sincerity by taking steps to obtain farm experience, they deserve not only permission to enroll but any assistance possible.

On the other hand it should not be assumed that because a boy is farm reared he should be enrolled in the agriculture department. Some careful guidance is needed by boys who are considering enrollment in the agriculture department. Not all persons who may be in touch with them at this time are qualified to advise them wisely. The superintendent through his personal attention or through provision for wise guidance by other persons can do more than anyone else to select proper groups for instruction.

Contact with the vocation is an essential part of any vocational training. This is the underlying thought of farmers who scoff at "book agriculture." It is just as impossible to give adequate training for agriculture in the classroom as in salesmanship, medicine, or engineering. The Federal Vocational Education Act recognizes this truth in providing for six months of supervised farm practice for every boy enrolled. The second factor in the success of a department is the adequate provision for this contact with the vocation.

Our programs for supervised farm practice have consisted quite largely of home projects. A home project consists in the conduct of an enterprise by the boy under as normal farm conditions as is possible. Its planning and conduct are the outgrowth of classroom instruction. The tendency at present is to extend our program beyond the limited number of home projects which the boy may conduct

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during his agriculture course. The aim is to give him a more varied experience than formerly by giving him contact with jobs and skills in many enterprises.

The superintendent may well ask "Are the boys who are enrolled in vocational agriculture under the supervision of the teacher conducting and participating in such farming activities as will afford them a wide variety of experience which is typical of the vocation?" His observation of the activities of these boys will have two desirable results. First, his interest and encouragement will mean much to the boys and the teacher. Second, he will learn that the teacher of agriculture does a very important part of his teaching on the farms of the community. Consequently, the teacher may be far from the school room and yet performing an important part of his work.

The third factor is adequate teaching equipment. The common conception of equipment for an agriculture department is that material used for teaching in classroom, laboratory, and shop. However, a part of the equipment of an agriculture department consists of the farms of the community with their crops, livestock, buildings, and machinery. The equipment should include also the local creamery, elevator, hardware store, and other facilities closely related to the farming of the community. Such equipment enables the teaching of many lessons in a vocational setting. The teacher of agriculture who does not use or is not able to use this important part of his equipment is so much less efficient in his teaching.

The relation of the superintendent to the equipment of the classroom, laboratory, and shop is obvious. His relation is the same as it is to all the other departments in the school. But the problem of utilizing the outside equipment is different. Sometimes an elasticity of organization is necessary. Here an understanding of the problem by the superintendent may result in the adaptation of the school organization to the needs of teaching away from the school.

The fourth factor is a body of functioning subject matter. In respect to this factor the agriculture department has a problem somewhat different from that of other departments. This problem arises from the general acceptance of the principle that the instruction in agriculture should deal with the kind of farming found in the community.

The subject matter of vocational agriculture is therefore found only in part in books and bulletins. A part, a rather large part, is found in the practices and unrecorded experience of the farmers in the community. The teacher of agriculture cannot limit his study of books and bulletins; he becomes perforce a student of the farming in the region about the school.

Not only does the teacher of agriculture need to study the farming of his community, but he needs to keep in touch with a large amount of new subject matter which is constantly appearing in the many phases of agriculture. Therefore the teacher of agriculture must spend more time and effort than most other teachers in finding his subject matter and keeping abreast of recent subject matter.

The fifth and most important factor in the success of an agriculture department is the teacher of agriculture. The saying, "As the teacher is, so is the school," applies to the agriculture department. Obviously the selection of the teacher of agriculture is the most important function of the superintendent in relation to the agriculture department.

While the writer will not presume to inform superintendents on the problem of selecting a teacher of agriculture, one suggestion may be appropriate. A well qualified teacher of agriculture must have a more varied training than many other teachers in the school system. He must have first, a practical knowledge of farming; second, a technical knowledge of agriculture; and third, a professional training in education. Only the teacher who has all three of these kinds of training is well qualified to teach agriculture. Moreover, there is available to superintendents detailed knowledge of the training and experience of candidates for the position of teacher of agriculture. It is possible to find out from the supervisory authorities of the state in which a teacher has taught and from the school authorities of the schools where he has taught, the facts as to his teaching record. From the teacher training institution where he received training, it is possible to get the facts as to his training. The superintendent cannot be too careful in this respect.

To conclude, five major factors in the success of an agriculture department are:

1. Well selected groups for instruction.
2. A supervised practice program which gives adequate contact with the vocation.
3. Adequate teaching equipment and its effective utilization.
4. A body of functioning subject matter.
5. A well trained teacher of agriculture.

The relation of the superintendent to all these factors has been indicated. Perhaps we are justified in repeating the statement made in the first paragraph. The superintendent is an important factor in the development of a strong agriculture department. We may designate him as a sixth major factor. It is of vital importance that he shall understand and co-operate.

F. W. L.

SIX PRINCIPLES FOR THE ORGANIZATION OF SUBJECT MATTER FOR VOCATIONAL AGRICULTURE

A lesson well organized is half taught. The effect of skillful presentation is not to be minimized, but without good organization much power is wasted. It is like raking leaves against the wind.

Many of the principles which ought to govern the organization of subject matter are not new to Visitor readers. The writer's reason for presenting them again is that their appearance in one unit may be of value.

The Unit of Subject Matter

How does the farmer consciously or unconsciously organize the subject matter of agriculture? We include under the term subject matter, knowledge, skills, attitudes. We know that he naturally organizes his subject matter into farm jobs. The publications of the Federal Board for Vocational Education define a farm job as follows: "A farm job is a natural unit of work distinct from other units of farm work with respect to purpose, character and requirements of the situation such as the actual setting and the equipment and supplies used, if any." Examples of farm jobs are buying a cow, selecting a variety of wheat, preparing land for potatoes. On the other hand, the composition of plants, soil moisture, the parts of a cow are not farm jobs.

In addition to organizing subject matter as it is used in the vocation, the farm job as a unit of subject matter has other advantages. Since the organization for teaching and the organization in the vocation have the same unit, i.e., the farm job, it becomes possible to maintain easily a close connection between classroom instruction and the supervised practical work. For example, if the rates of planting for crops were presented as a unit of subject matter, it would be impossible to connect instruction and supervised practical work effectively because farmers are not concerned with all the rates of planting at the same time. On the other hand, the farm job, planting corn as a subject matter unit, allows a close connection between instruction and practice because we can teach the job in the classroom when it is being done on the farm.

If the farm job is the unit it becomes a selective agency. Subject matter which does not make a contribution of some value to a farm job unit is eliminated. If we cannot see that a description of pod corn contributes to the farm job "Selecting a Variety of Corn," it is eliminated. Conversely, if the principle of capillary action is needed to explain certain potato cultivation practices, it is included as part of the farm job unit "Cultivating Potatoes." The first principle of organizing subject matter is that the farm job should be the unit of organization.

Type Situations

If every job were taught as a complete and independent unit, some repetition would occur since many jobs have common elements. This last statement applies particularly to crop production jobs. For example, the jobs cultivating corn and cultivating potatoes have many elements in common. These common elements need to be taught thoroughly when first met; the next time we shall not teach them in the same way. We shall recall the first teaching and place it in a new setting. We shall see these elements from a new angle, and therefore, the second presentation is a form of review.

Either when the farm job or any other unit is used, subject matter should be organized so that elements common to more than one unit are taught thoroughly at first and later only reviewed. We may call this second principle the principle of type situations. Many of the principles of plant and animal husbandry are common to more than one unit. Some jobs are so similar to other jobs that we teach thoroughly only one of the jobs in the group and call this a type job, for example, drilling oats.

Specific Facts, Principles and General Information

The third principle of organization is concerned with the arrangement of subject matter within the farm job unit. Subject matter can be divided into three classes. One class consists of specific facts. Such facts deal directly with the farm job. For example, a common rate for sowing oats is three bushels to the acre. The second class consists of generalizations or principles. For example, when milk is rotated, the lighter constituent, cream, moves to the outer part of the circle. The third class consists of general information. For example, South American natives have apparently cultivated the potato many hundreds of years. The principle is that the order of presentation of subject matter should be specific facts, principles, general information. This principle finds its support in the fact that boys are most likely to know the facts of farming, and procedure from the known to the unknown becomes more probable. Also the effectiveness of inductive teaching is taken advantage of. Contrary to the order followed in many texts, general information is placed last. Its over-emphasis is thereby avoided and whatever general information is presented is more easily retained because a foundation for it has been constructed.

Teaching of Principles

The third principle is important because many most used texts violate it and the teacher needs to be constantly on his guard against following the order of the text. The fourth principle is also often violated in texts. The writer has at hand two texts. A heading in one of them reads "How Plants Grow"; in the other there is a heading "The Principles of Breeding." Both these chapters are followed by detailed discussions of plant and animal enterprises. The assumption is that the student should first master principles and then apply them to situations. This assumption is unsound first, because a principle is not easily learned apart from a situation in which it is needed and second, the fact that situations occur where they may be applied does not insure their application. The material in the chapters referred to in so far as it contributes to farm jobs should be included in the texts at the points where there is a need for them. The principle here involved is "Teach the principle when the need for it arises." Do not segregate principles but teach them in the units where they find application.

Psychological Organization

The fifth principle is that the organization of subject matter should be psychological rather than logical. The essence of psychological organization is that the approach is from the viewpoint of the learner. A logical organization of the lesson "Part of a flower" is to begin with the names, description and functions of the parts of the flower; the psychological organization is to begin with the flower itself. A logical organization of the lesson "Soil forming rocks" might start with a classification of rocks. The psychological organization would begin with a study of some familiar rocks. The psychological organization begins with the thing, the familiar fact. Also the whole of the job or problem is shown to the student at the outset so that he knows where he is going and why.

Seasonal Sequence

The sixth and last principle is that the units of subject matter shall be arranged in seasonal sequence as far as possible. The difficulties of a seasonal sequence organization are (1) that perfect seasonal sequence is impossible owing to the fact that classroom instruction does not extend through the year, (2) it is difficult to teach seasonally an enterprise to which a small number of periods is allotted, (3) the organization of subject matter tends to be somewhat fragmentary, and (4) the organization of many texts conflicts with seasonal presentation. The advantages are that (1) it is possible to correlate classroom instruction with supervised farm practice, (2) boys are interested in jobs that are in season, (3) it is possible to make use of the teaching facilities of the community and to obtain desirable teaching materials. If the organization is not seasonal, the teaching cannot be really vocational.

To summarize, there are six principles which should govern the organization of subject matter of vocational agriculture.

First, the farm job should be adopted as the unit of subject matter.

Second, similarity of subject matter in different jobs should be provided for by selected type situations.

Third, the order of presentation within a farm job should be, first, specific facts, second, principles, third, general information.

Fourth, principles should be taught when the need for them arises.

Fifth, the organization of subject matter should be psychological rather than logical.

Sixth, farm jobs should be arranged in seasonal sequence.

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