

THE VISITOR

Devoted to the Interest of Agricultural Education in
Minnesota Schools

VOL. IX

February, 1922

No. 6

BULLETIN FILING

MAKE BULLETINS MORE ACCESSIBLE

One of the chief sources of information which should be used by the class in vocational agriculture is the bulletin. This, outside of special articles and addresses, is the principal way in which the latest truths in regard to agriculture are disseminated. Text and reference books are published at wide intervals and it is impossible for them to be up-to-date very long after they leave the press.

The bulletin, whether published by a state experiment station, the United States Department of Agriculture, or a private organization, can and does contain information that is new. If some additional truth is discovered within a month following the publication of "A," another bulletin, "B," can be issued at slight expense.

Recognizing the value of bulletins as we do, it is safe to say that the teacher who does not make use of them is not doing his full duty.

The value of the bulletin library consists in three things: (1) The files should be complete. There should be material on every phase of agriculture. The instructor must be constantly on the alert to obtain copies of new bulletins as they come from the press. His name should be on the mailing lists of every agency that issues printed material relating to agriculture. This means constant watchfulness and often considerable correspondence.

(2) The bulletins must be available for use. They must be readily accessible and usable not only for the instructor but for his students. The completeness of the materials matters not at all if it is difficult or impossible to find the particular thing that is needed. This accessibility is secured only through the installation of a proper filing system. The system used must consider not only ease of finding the desired bulletin, but convenience in replacing it, adding new bulletins, and keeping them in order.

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SELECTION OF EXAMINATION QUESTIONS

It is assumed for the purposes of this discussion that an examination consists of any question or set of questions to be answered by a class in writing. Assuming this definition, we commonly use examinations in two situations. In order to find out whether a class has made sufficient preparation for a lesson and in order to use the certainty of such an examination to stimulate preparation, we may test a class on subject matter which has not yet been discussed in class. In this situation examinations are frequent and consume little time; it is enough to make certain that members of the class have remembered the main points of the advance lesson. There is ordinarily a time limitation, and such examinations are merely tests of ability to memorize.

The second situation is the one we usually think of in connection with examinations. The teacher wishes to ascertain whether the class has mastered important points previously discussed in the class room or laboratory. In this situation, however, memory questions do not wholly serve the purpose. The examination must do more than test the memory of the student.

The examination is not merely a device to be used by the teacher for his sole benefit in order to study the progress of the class; it is also a teaching device. The aims of an examination are two; it should test and it should train. There are at least four ways in which the examination should train students: (1) It should train the student to apply his knowledge. Many memory questions can be so revised that they require a recall of points and in addition an application of these points to a specific situation. (2) It should train the student to organize his knowledge. Students find it easier to answer several questions about parts of a subject than to answer one question which calls for their knowledge of an entire subject. The one large

THE VISITOR

Published monthly by the Division of Agricultural Education, University of Minnesota, University Farm, St. Paul, Minn.

Entered as second class matter at the post-office at St. Paul, Minn., under the act of August 24, 1912.

Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized August 2, 1918.

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question forces them to organize their knowledge of a subject. (3) The examination may train students to compare values, i.e., train them in judgment. If a student possesses a knowledge of materials and methods but is unable to judge which material or method is most appropriate for a given situation, his knowledge is not of any great value to him. (4) An examination may also train his initiative, i.e., a question may be framed in such a way that a satisfactory answer requires him to strike out independently and think for himself. It will be observed that a good examination question has much in common with a good oral question; the difference is that a student has more time to think through an examination question than we commonly give him during a recitation to answer an oral question.

The following examination was recently given to a class in vocational agriculture:

1. Name the parts of a corn kernel and describe the feeding value of each part.
2. What are the characteristics of a good crop rotation?
3. What is the composition of cow manure?
4. What are the types of corn?
5. Describe the rag doll method of testing seed corn.
6. Give the advantages and disadvantages of fall plowing.

The teacher evidently desired to cover the important points discussed and learned during several previous class periods. The questions are mem-

ory questions. The characteristics of good examination questions may be illustrated by revisions of the above questions.

1. Examine ears A and B on the desk. Which would you select if buying corn to feed? Give reasons.
(One of these ears is poorly matured and is starchy with small germs; the other has large plump germs and a large proportion of horny starch. The correct choice of ears and reasons for the choice requires a knowledge of the parts of a corn kernel and of the composition of the different parts applied to a given situation.)
2. Having in mind the characteristics of a good crop rotation, criticize the following five-year rotation.
First year, corn
Second year, corn
Third year, oats
Fourth year, timothy and clover
Fifth year, timothy and clover
How could this rotation be improved?
(Here again the emphasis is on application of knowledge. The improvement phase of the question offers an opportunity for initiative to some students; others will be guided by their knowledge of farm practice.)
3. In order to obtain a suitable fertilizer for corn, what addition should be made to cow manure? Explain. (The question is revised so that application of knowledge is required.)
4. Compare the types of corn in tabular form in respect to kind of starch contained and proportions, if more than one kind, regions where grown, use, size of ear.
Name one variety of each type.
(The student is required to organize his knowledge of the differences between the types.)
5. Considering the natural conditions under which corn germinates in soil, how could you improve the rag doll method so that it would furnish these conditions?
(This question requires an application of the principles of germination, of the knowledge of the rag doll test and also requires initiative on the part of the student to devise improvements on this method.)
6. Under what conditions would you plow for corn in the spring? Under what conditions would you plow in the fall?
(This question requires selection of the right farm operation for given conditions and thus trains the stu-

dent in judgment and yet requires a knowledge of the advantages of fall and spring plowing.)

Teachers of agriculture will find it interesting to study the examinations which they have been giving or are giving to their classes. Each question should meet as many of the following tests as possible:

1. Must the student apply his knowledge?
2. Must the student organize his knowledge?
3. Must the student compare values and alternatives?
4. Must the student use his initiative?

F. W. L.

SOURCES OF ILLUSTRATIVE MATERIAL

It has come to the attention of The Visitor that many men in the field are much in need of illustrative material. It is difficult for the instructor to keep posted on material available. We are therefore giving here a list of charts, samples, and pamphlets that may be obtained free or at a minimum cost.

Spend a few hours in writing for this material. When it arrives, USE IT in vitalizing and improving your teaching.

Farm Mechanics

1. Southern Pine Association, New Orleans, La.
Bulletins:
No. 36 Implement Sheds
No. 48 A Hundred Handy Helps
No. 50 The Home Built Garage
No. 56 Smaller Farm Buildings
No. 59 The Interior of Your Home
No. 60 Farm and Home Mechanics
No. 65 Town and Country Buildings
2. International Harvester Company, Chicago, Ill., "Making Things," Parts I and II, 10 cents a copy.
3. Portland Cement Manufacturers, Philadelphia, Pa., Bulletins and display material.
4. S. C. Johnson & Son, Racine, Wis., Johnson's Wood Dye.
5. Henry Diston & Company, Philadelphia, Pa., Saw and File Chart.
6. J. E. Porter Company, Ottawa, Ill., Book of Modern Barns and Book of Practical Barn Equipment.
7. Armstrong Cork & Insulation Company, Pittsburgh, Pa., Sample of Cork Brick and "Better Stall Floors."
8. Pacific Lumber Company, 311 California Street, San Francisco, Calif., Display Material.
9. Farm Implement News, Masonic Temple, Chicago, Ill., The Tractor Field Book.

10. Buffalo Forge Company, Buffalo, N. Y., Mechanical Technology Catalog No. 205 (Booklet in Forge Exercises).

11. Simonds Mfg. Company, San Francisco, Calif., How to File a Saw.

Animal Husbandry

1. Western Milling Company, Oakland, Calif., Feed Samples.
2. Carnation Stock Farms, Tolt, Wash., Pictorial Pedigree of Carnation King Silvia.
3. International Stock Food Company, Minneapolis, Minn., Horse Disease Chart and Horse Anatomy Chart.
4. Armour & Co., Chicago, Ill., Standard Breeding Chart and Types of Beef Animals.
5. Wm. Cooper & Nephews, 152-154 Huron Street, Chicago, Ill., Chart of 26 Breeds of Sheep.
6. Domestic Science Department, Wilson & Company, Chicago, Ill., Wilson's Meat Charts (Large).
7. Journal of Veterinary Science, Chicago, Ill., Veterinary Charts.
8. Morris & Company, Chicago, Ill., Pictorial History of Steer.
9. United States Department of Agriculture, through your senator, Diseases of the Horse and Diseases of the Cow.

Soils and Fertilizers

1. Virginia-Carolina Chemical Company, Richmond, Va., Fertilizer Exhibit.
2. Swift & Company, Armour & Company, Morris Packing Company, Chicago, Ill., Fertilizer Samples.
3. United States Department of Agriculture, Bureau of Soils, "Important Soils of the United States." Two large boxes filled with vials of soil from all soil districts of the country. Shows surface and subsoil.

S. D.

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(3) The bulletins must be kept in good condition. This again is largely a matter of the method of filing. Many systems now advocated and in use are of such a nature that bulletins are easily torn and otherwise mutilated, become dusty and soiled, and often misplaced and lost.

This article deals largely with a simplified method of filing bulletins adapted to the high school department of vocational agriculture. The writer has tried this method and has found it successful from all standpoints. It has the desirable qualities of convenience, simplicity, cheapness, completeness, good appearance, expansibility, and small space requirement.

For holding the bulletins a box should be constructed 7 by 10 by 16 inches inside measurement. It should be strongly built but made of some light wood such as basswood. A tightly fitting lid should be hinged at one end and fastened by a hook at the other. The front (the end fastened with the hook) should be supplied with a handle for carrying and a name plate for labeling. A box of these dimensions will hold from 150 to 250 bulletins, depending upon their thickness. A longer box would be too heavy to carry from place to place. The bulletins are placed in the file in an upright position so that titles may be easily read. The cases may be placed on shelves along the wall and new ones added as needed. The shelves should be about 3 feet 10 inches from the floor for convenience in reading titles. If it is necessary to place shelves above those for the bulletin boxes they should not be closer than 16 inches because of interfering with the extraction of bulletins.

Another receptacle for bulletins is the standard "cap size" filing cabinet. The files are 15 inches wide, and by use of a partition in the center, provide space for two rows of bulletins in each drawer. This method does not have the "travel" feature of the one mentioned above and is more costly. It does present a better appearance and has several other advantages. By providing a carrying case as described, a set of bulletins may be taken out and easily carried.

The order of placing the bulletins in the files should be the simplest and most logical.* Main and sub-topics should be filed in alphabetical order to facilitate search. Division cards 6 by 9½ inches should be provided in various colors to be used in setting off topics and sub-topics. For further ease in filing and finding bulletins, these cards may be of different cut. For example, blue cards "cut one" may be used for main divisions as Animal Husbandry, Field Crops, Rural Life, and so forth. Salmon colored cards "cut two" may be used for subdivisions, as under Animal Husbandry

*There are two other methods of cataloging the bulletins. One is the extremely simple method that might well be used by a student or his father on the farm. File bulletins under natural headings without using a logical outline, i.e., use only the common terms to designate any division. These headings should be arranged alphabetically as Barley, Corn, Dairy, Hogs, Horses and so on. Another method is the more complicated but very efficient modification of the Dewey decimal system recommended on pages 370-371 of "How to Teach Agriculture" by Storm and Davis.

—Beef Cattle, Horses, Sheep, Swine. Cards of another color "cut three" may be used for further sub-topics. With this system it is possible to expand by merely adding new division cards.

One of the most important features of this system is that it is a simple matter to take care of cross-filing. A good many bulletins are published treating of more than one subject. Rather than placing these in a "general" file they should be placed in the file under one of the headings discussed. Colored cards 6 by 9 inches should then be labeled as the bulletin cover and filed under the headings treated. Each of these "dummy bulletin" cards should have a reference showing where the bulletin is filed.

In order to keep a check on the bulletins, each as received should be given a number (serially) and the number, title, and source listed in a book kept for the purpose. When bulletins are taken from the room by students, they may be required to sign by number and thus enable the instructor to check responsibility for loss.

The writer has tried several other methods of filing bulletins. The use of a card catalog in connection with a filing system is usually too complicated for high school use. Too much time and trouble is required registering and placing new bulletins in the files and in going through the cards before locating a desired bulletin. Boxes and pigeon holes are objectionable because of dust and dirt, bunched condition of bulletins, poor appearance, possibility of damage by mice and insects and the necessity for sorting from ten to fifty bulletins to find the one wanted.

The system advocated in this article has several distinct advantages. For the sake of brevity, these will be enumerated without discussion.

1. Eliminates the card catalog.
2. Files by subject matter—natural and logical way
3. Saves space
4. It is easy to file, find, and return bulletins
5. Keeps bulletins upright—no rolling and no necessity to remove to read bulletins
6. Keeps bulletins clean
7. It is mouse- and fly-proof
8. Costs very little—shop made
9. Files present a neat appearance
10. They may be built up by adding new units as more space is needed
11. It is valuable for students to install at home.

S. D.