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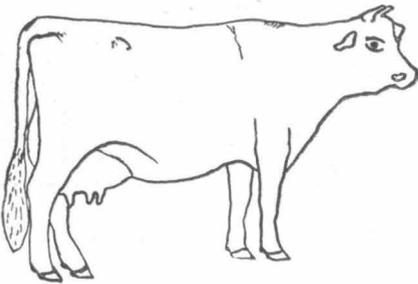
October, 1924

No. 2

A METHOD OF TEACHING DAIRY CATTLE JUDGING

The time available for judging dairy cattle is usually limited. In order to cover the work as thoroly and economically as possible, the following method has been found effective.

The majority of the boys in the average high school class in animal husbandry are already familiar with most of the individual parts of the cow. As a means of review, a portion of a study period is devoted to the study of the parts. The mimeographed outline of the dairy cow is used for drill in locating and labeling the individual parts. The class will have studied in their texts a diagram of a cow with the parts labelled. During the class period, have the students write the names of parts on the mimeographed outline of the dairy cow is point to avoid having the class merely copy the parts from a photograph found in the texts or labelled diagrams found in much of the breed literature. If the work is carried on as a study of the location of the parts, and the labelled diagrams in textbooks used as a means of correcting the students' labeling, much better results follow. The mimeographed outline of the cow is found below.



The second step is the study of the importance of the points used in comparing the dairy animals. A textbook assignment is the basis of this step. In order that the student may be saved from confusion, only the most

important points are studied at this time. Both the labeling of parts and this second step are finished during the first period.

The points used for study are as follows:*

1. Characteristics indicating constitution, vigor, and condition.
2. Characteristics indicating ability to consume and digest feeds.
3. Characteristics indicating dairy form.
4. Dairy conformation.

The work on mammary development is taken up separately at a later time because it is essential that correct concepts be formed at the beginning in order to prevent the student from becoming confused as to the relative importance of the various parts as well as to emphasize the importance of this part in judging.

Before the close of the period a summary of the points is made by the students and the teacher, and worked out to form a basis for a comparison of the cattle to be studied the following day. The form developed is given as No. 1, Comparison of Dairy Cattle.

Note: Only the parts of the animals are compared, and not the animals themselves.

The following day it is necessary that two reasonably good cows be used for further study and comparison of parts. The study is limited to two cows because it would be impossible to study thoroly a larger number.

As a means of very quickly drilling the students on the location of the several parts of the dairy animal, a flash card drill proves very effective.

The class is divided into two groups which compete against each other. As a card is presented the leader of the one side is expected to locate definitely on the animal the part called for by the card. If the pupil misses, one

* The forms used in this work were adapted from "Score Card for Dairy Cattle" devised by the committee of the Dairy Science Association.

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point is counted against his side, and the opportunity for locating goes to the pupil in turn on the opposite side.

FORM 1
COMPARISON SHEET FOR JUDGING DAIRY CATTLE

	Placing	Reasons
1. Constitution		
a. Chest—broad, deep, well-sprung ribs . . .		
b. Nostrils—large, open		
c. Condition—thrifty, vigorous, in good flesh		
2. Abdominal Capacity		
a. Barrel—long, deep, wide, well supported; ribs far apart..		
b. Skin — m e l l o w, loose, of medium thickness; hair soft		
c. Muzzle — l a r g e; mouth, broad		
3. Dairy Form		
a. Back—s t r a i g h t, strong; hips—wide, level		
b. Rump—long, wide, level; thurls wide apart, level tail setting		
c. Legs—straight		
4. Dairy Conformation		
a. Shoulders—wITHERS, vertebrae, hips, and pin bones prominent		
b. Loin—w i d e; ribs long and wide apart		

This procedure lends keenness of competition to the exercise, and still provides for the closest of attention to an otherwise monotonous round of routine questions. The cards may be used several times in the exercise until

all the pupils are thoroly familiar with the parts. The whole exercise should not take longer than ten to twenty minutes.

The cards used are found listed below. The size of the cards is 5x14 inches and they are made by using 2-inch letters of an ordinary stamp printing outfit, or better, by a coarse spoon-bill pen in letters about two inches in size.

- | | | |
|-------------------|-----------------|------------------|
| 1. muzzle | 11. swi'ch | 22. nostril |
| 2. knees | 12. forehead | 23. hckks |
| 3. pin bones | 13. rump | 24. shank |
| 4. dew claws | 14. escu'cheon | 25. rear quarter |
| 5. c'hine | 15. dewlap | 26. throat |
| 6. stifle | 16. heart girth | 27. belly |
| 7. gaskin | 17. cheeks | 28. flanks |
| 8. hooks | 18. loins | 29. elbow |
| 9. floor of chest | 19. barrel | 30. tail head |
| 10. withers | 20. ear | 31. fore rib |
| | 21. brisket | 32. thurl |

Following the drill on the parts of the animal the comparison of the two animals is made. **No attempt is made to p'ace the animals themselves**, but merely to make a study of parts of the two animals. The animals are carefully compared after the pupils have gone over them in order to correct any untrue comparisons. The papers are collected for correction to make sure that all the pupils are using terms that truly describe the animal, and to detect any tendency toward the use of ambiguous and loosely constructed sentences.

The second day of work on the animals is used in actual placing of the animals in all respects except as to mammary development.

Notice that a similar comparison is used as before but that only the bare skeleton of the outline is used and the pupils must rely on their knowledge to make the comparisons. The form follows as Form 2.

FORM 2
COMPARISON OF DAIRY CATTLE

	Placing	Reasons
1. Constitution		
a.		
b.		
c.		
2. Abdominal Capacity		
a.		
b.		
c.		
3. Dairy Form		
a.		
b.		
c.		
4. Dairy Conformation		
a.		
b.		

Conclusion

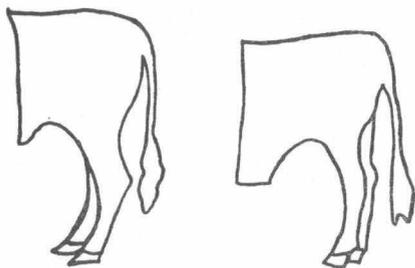
Final Placing

From the study so far the pupils begin to see relationships in the judging work, and to use the important points as the basis for drawing conclusions as to the relative merits of the several animals.

In order that correct concepts may be formed from the very beginning of the work on mammary development, a detailed study of the parts is made similar to the work on the body parts. The summary again results in making a comparison for detailed study of the animal. The form used follows as Form 3:

STUDY CARD OF MAMMARY DEVELOPMENT OF DAIRY CATTLE

1. Capacity	Large in size	large medium small	Number number of cow
2. Quality	Texture—of greatest importance. Soft, mellow, pliable and free from lumps. Hair—soft, fine. Veins prominent.		
3. Shape	Quarters	even full pendulous	
	Long	Length from hooks to pins is associated with length. Udder carried well forward.	
	Wide	Associated with width of the hooks.	
	Deep	Associated with length from pins to hooks.	
Milk Veins	Large, long, crooked, branching. Milk veins on udder crooked, numerous, large.		
Milk Wells	Large, small, medium.		
Teats	Convenient in size, uniform and well placed.		



The greatest difficulty is encountered in giving the class proper concepts as to what constitutes good mammary development. One reason for this is that so many changes are going on with the mammary development during the year that it is almost impossible to get cows that are comparable at any time.

The comparison card for mammary development was designed as an attempt to meet this condition. The first trip in the fall will probably find the cows dry or nearly so. The owner of the cows will very likely know which cows have the best udder development during lactation, so it will be necessary at times to get his aid in selection of cows for study.

The study is made of the individual parts and instead of one card being used for several animals each card represents the record of a single animal. The diagrams are put on the cards in order that the pupil may sketch in the udder of the cow as it looks on the day the study is made. Later, when the study is made of the same cow after lactation has been well started, the pupil has something objective to recall to his mind the condition of the udder of the cow at the previous visit. Similarly, the descriptive terms are put in to guide the pupil to get accurate reports of the animals studied.

In the writer's experience the best results come when four cows are studied. To describe parts, we wish four which are easily comparable, but all representative of a type of udder. Some years not only the second visit is made to report the changes in the udder development of the cows, but a third and fourth have proven profitable.

Later in the school year final work on the placing of dairy cattle is carried on when all the factors may be considered, and when some definite ideals have been set up as to quality, texture, capacity, and probable mammary development from the condition in which they are found at the time of judging. At this time the classes may be increased in number and the placings be made increasingly difficult.

To summarize briefly, the steps in this method of teaching dairy judging are as follows:

First day. Step 1. Have class review parts of a cow in text, place names of parts on a mimeographed outline, and then correct the labeling.

First day. Step 2. A textbook assignment on most important parts of a cow in respect to abdominal capacity, dairy form, and dairy conformation. A comparison sheet is worked out as a basis of comparison of cattle to be studied the following day.

Second day. Step 3. Flash card drill on parts, using animals and dividing class into two competitive groups.

Second day. Step 4. A study of the parts of two animals, according to comparison sheet worked out in Step 2.

Third day. Step 5. Placing animals, using skeleton form of comparison sheet as a basis.

Fourth day. Step 6. Mammary development studied according to study card.

Following days. Step 7. Classes of dairy cows judged and placed.

—V.E.N.

THE AGRICULTURE SECTION OF THE M. E. A.

A strong program for the meeting of the agriculture section of the M. E. A. was prepared by Prof. A. M. Field, president of the section, and Paul Calrow, state supervisor.

In the absence of Prof. Field, Dr. A. V. Storm was called upon to preside during the forenoon meeting, the program of which was as follows:

1. John J. Skinner, superintendent of schools, Owatonna, Minn. "The Values and Objectives of Agricultural Education in Minnesota High Schools."
2. C. R. Wiseman, professor of agricultural education, Brookings, S. D. "The Farm Home and Social Background of Our Students in Vocational Agriculture."
3. F. J. Kelly, dean of administration, University of Minnesota. "Aims and Methods of College Teaching."

At the noon luncheon, Hotel St. Francis, A. F. Dahlberg, agriculture teacher of Redwood Falls, presided. Nearly thirty teachers attended the luncheon and all enjoyed the following program:

1. W. C. Coffey, dean and director of Department of Agriculture, University of Minnesota. "Change in Emphasis on Pertinent Questions Relating to Agriculture."
2. C. R. Wiseman. "How Shall We Measure the Effectiveness of Our Vocational Agricultural Instruction?"

After short remarks by Dr. Storm the nominating committee appointed at the forenoon session reported the following officers for 1924-25: President, F. W. Lathrop, University Farm; vice-president, V. E. Nylin, Hopkins; secretary, L. H. Thurwachter, Albert Lea.

BOOKS FOR TEACHERS OF AGRICULTURE

New Methods in Teaching Vocational Agriculture, by G. A. Schmidt. The Century Company. A readable book. Especial emphasis on job analysis. Good bibliography at end of each chapter.

Farm Economics, by Frank App. The J. B. Lippincott Company. A combination of farm management and agricultural economics.

Productive Swine Husbandry, by George E. Day. The J. B. Lippincott Company. This book has been thoroly revised and made more teachable.

Farm Management, by Andrew Boss. Lyons and Carnahan. A revision of a standard text in its field. The chapter on land tenure has been omitted and chapters on marketing, farming as a vocation, and basic data for farm management problems have been added.

Animal Husbandry for Schools, by M. W. Harper. The Macmillan Company. Another revision. Several valuable chapters have been added on factors influencing milk production, beef production, sheep production, and egg production. Also suggestions on projects.

Production of Field Crops, by Hutcheson and Wolfe. McGraw-Hill Book Company. Intended as a college text but contains reference materials suitable for high school use. Is organized under both crop operations and crops.