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JUDGING DAIRY CATTLE

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CONTENTS

INTRODUCTION

Every successful dairyman knows that one of the chief factors influencing the cost of production is the yield obtained from each cow in his herd. Records kept on a large number of cows show in general that the highest average incomes over cost of feed have been obtained from herds composed of the highest-producing cows.

DAIRY-HERD IMPROVEMENT

A herd of dairy cows may be improved by displacing the low producers with high producers. In culling his herd, the dairyman should consider the health of the cows, their production and feed records, their pedigrees, and their physical dairy characteristics. After a careful consideration of these factors the dairyman should dispose of cows which do not give promise of satisfactory returns. In selecting cows for his herd, he should base his choices upon the same factors as in culling his herd.

AIM IN STUDYING DAIRY-CATTLE JUDGING

The purpose of this circular is to guide dairymen, prospective dairymen, and persons preparing to enter a dairy-cattle judging contest, in determining the relative producing ability of dairy ani-

1

mals by their appearance. The method presented is the one which good dairymen and judges commonly use in judging animals either for herd additions or for show-ring awards. It is based on the supposition that a correlation exists between producing ability and body conformation.

This method has its limitations, to be sure. High-producing ability and a good dairy conformation do not always appear in the same animal. Many cows well developed and approaching the ideal in dairy conformation are low producers. On the other hand, many cows poorly developed not only in one but in many points of conformation have high production records. The best argument in favor of the method, however, is the fact that a comparison of a large number of cows, all with high records of production, shows them to be very similar in conformation, and a comparison of a large
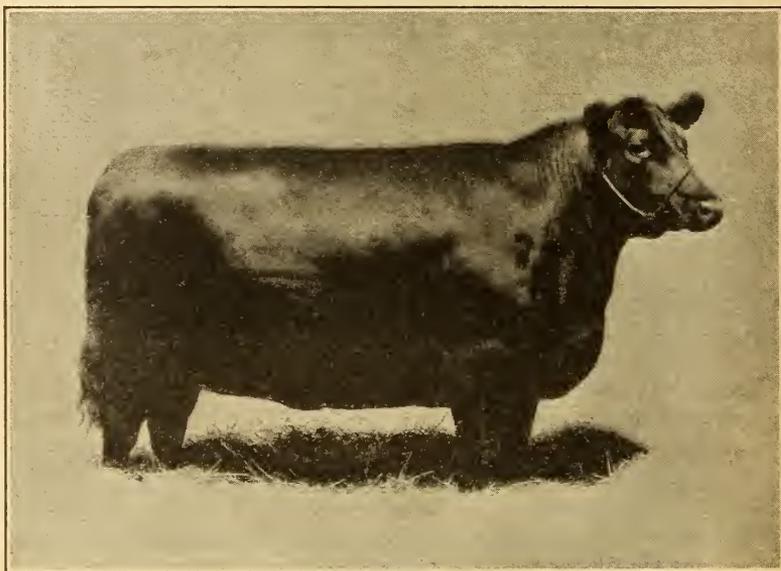
Fig. 1.—Beef-type cow

number of cows having what is considered good conformation shows them, on the whole, to be good producers.

Since the correlation is not perfect, it is evident that greater emphasis should be given to production than to conformation. However, good appearance in dairy cattle is a desirable quality. Greater satisfaction comes from the possession of a herd of good appearance than from one of poor appearance.

When the difference in production of two cows is slight, it is usually not easy and may be impossible to note this difference by the conformation; but when the difference in production is great, that is, when one is a very low producer and the other a very high producer, with a knowledge of the principles of judging it is easy to determine by conformation alone which is the low and which is the high producer. By referring to Figures 1 and 2 this point is brought out

clearly. So far as milk production is concerned, it is not difficult to determine which of these two cows is the better.

Judging is brought into practical use every time a cow is bought for dairy purposes. No matter whether or not the animal has a record of production, few dairymen would buy without an inspection. Careful buyers have so trained their powers of observation as to be able to tell fairly accurately by personal inspection alone whether or not a cow will be a good producer if given proper care and feed.

REFERENCE BOOKS AND BULLETINS

A number of books treat of the subject of judging dairy cattle. Many of these are suitable for use as references by students in secondary schools or beginners in judging. Bulletins relating to the breeds of dairy cattle issued by the United States Department of

FIG. 2.—Dairy-type cow

Agriculture and the State colleges of agriculture and those relating to the judging of dairy cattle should be collected and made readily accessible.

PICTURES

Pictures of the prize winners and of types of breeds should be collected for study. Information relative to the source of such pictures may be had by request from the Division of Agricultural Instruction, Extension Service, United States Department of Agriculture, Washington, D. C.

MAJOR POINTS IN JUDGING

The ultimate objective in dairy-cattle judging is to enable one to select more efficiently cows that will be economical producers of milk.

Therefore, the points that must be fixed clearly in mind are those that are thought to be most closely associated with milk production. From our present knowledge of the relation of function to form, these major points are: (1) Mammary system, (2) dairy temperament, (3) body capacity and size, and (4) health, constitution, and fertility. In addition, there are what may be called the fancy points,
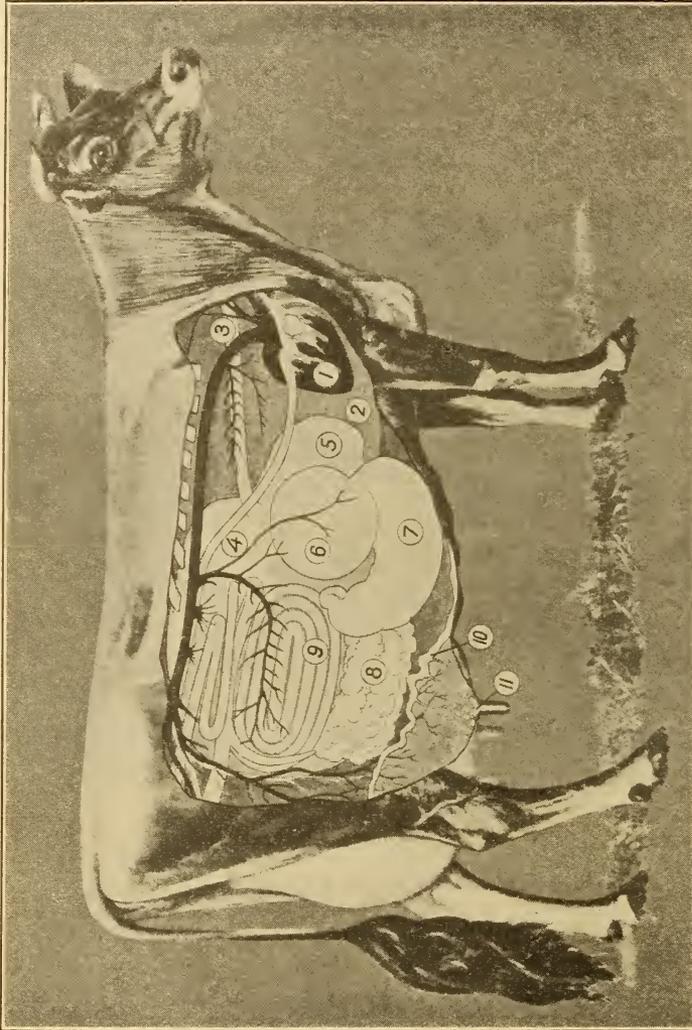
FIG. 3.—Diagram of cow, showing organs. 1, Heart; 2 lungs; 3, gullet; 4, paunch (rumen, or first stomach); 5, reticulum (second stomach); 6, omasum (third stomach); 7, abomasum (fourth stomach); 8, small intestines; 9, large intestines; 10, milk veins; 11, milk cistern

such as pretty head, level rump, small horns, straight back, and wide muzzle. These fancy points are considered more or less carefully in present-day show-ring judging; but they are probably only slightly, if at all, correlated with producing ability. They do, however, add somewhat to the popular conception of beauty of the animal and thus may enhance its selling value.

MAMMARY SYSTEM

Included in the mammary system are the udder, the milk veins, and the milk wells. The importance of the mammary system may be judged from the number of points allowed for it on the score card.

FIG. 4.—A, Shallow-bodied and, B, deep-bodied Holstein cows

A good cow must have a well-developed udder, or she will not be classed as a dairy cow. A cow with good health, constitution, and fertility, a true dairy conformation, ideal dairy temperament, and a body of proper size and capacity—in short, one having all the other
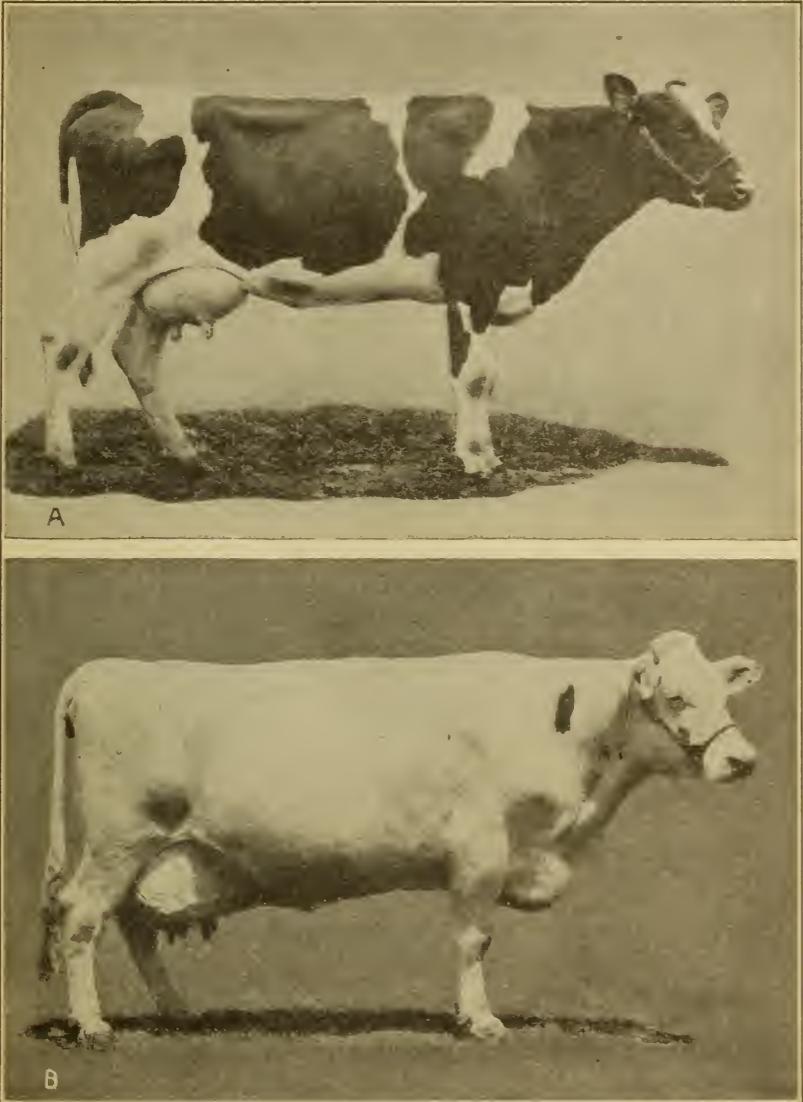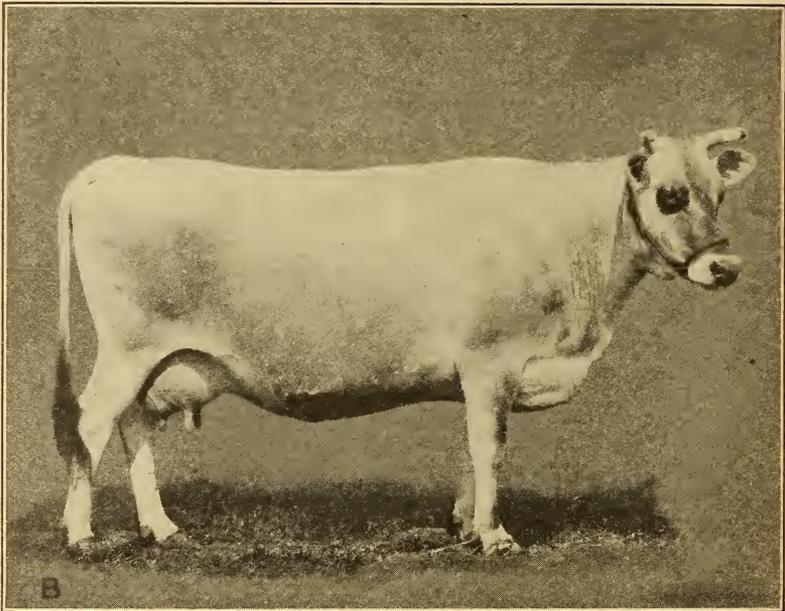
FIG. 5.—A, Shallow-bodied, and B, deep-bodied Jersey cows

important dairy qualities—but poor in udder development, should never win in a show ring.

But what constitutes a good udder? When in full flow of milk a good udder is large, extends well forward and far up behind, and is firmly attached to the body. The bottom is nearly level, and all the quarters are even in size with very little, if any, separation between them. The texture of a good udder is pliable and free from lumps. A hard, meaty udder is not desirable. When milked out, a good udder reduces materially in size and hangs in more or less distinct folds. This is true also in the case of dry cows except those nearing the time of calving. The skin of a good udder is thin, and the hair fine and soft. Views of different types of udders are shown in Figures 6 to 9, inclusive.

Teats should be evenly placed, of moderate size, and easy to milk. Judges sometimes compare the milking qualities of udders by drawing a little milk from each quarter. In the larger cattle shows judges many times require the cows to be milked dry in the show ring. Defects in the udder and obstructions in the teat can thus often be detected.

The size and shape of the teats and the shape of the udder, while not indicative of the producing capacity, are nevertheless important points to consider from the standpoint of disease, injury, and convenience in milking. A pendulous udder is more susceptible to injury than one closely attached to the body.

The large blood vessels usually visible on the under side of the abdomen are called milk veins. They carry a part of the venous blood from the udder back to the heart. There are at least three of these veins, two of which are invisible. They may vary in size; and since the blood does not all return to the heart through the veins, commonly called mammary veins, which are visible on the under side of the body in front of the udder, too much emphasis should not be given to them in judging.

The milk wells are the holes in the body wall through which the visible mammary veins pass to return to the heart. The milk wells vary in size and number; and for the same reason as that given for the milk veins, too much emphasis should not be given to their size and number.

DAIRY TEMPERAMENT

Dairy temperament is a term denoting the tendency of a cow to convert feed into milk rather than into body fat and flesh. The lack of the blocky, beefy appearance, as shown by angularity, the body not heavily covered with flesh, and the bones fairly prominent, are the main indications of dairy temperament. In a mature cow the size of the udder is also taken into account.

A nervous temperament is not to be confused with dairy temperament. The former refers to the tendency to be easily excited. A beef cow may be nervous but show a decided lack of what is called dairy temperament. It is true that good dairy cows have a highly developed nervous system, owing to the fact that the nerves control the many functions of the organs of the body, but this does not necessarily show itself in a nervous disposition. The tendency to become easily excited is not a desirable quality in dairy cows.

In judging dairy temperament due allowance must be made for stages of lactation and pregnancy. Both cows and heifers heavy with calf, especially the latter, will take on flesh to the point where normal angularity may be obscured. Such animals ordinarily lose sufficient flesh and fat during two or three months of heavy milking to permit the observance of their actual dairy temperament. Extreme thinness resulting from insufficient feed should not be confused with indications of dairy temperament.
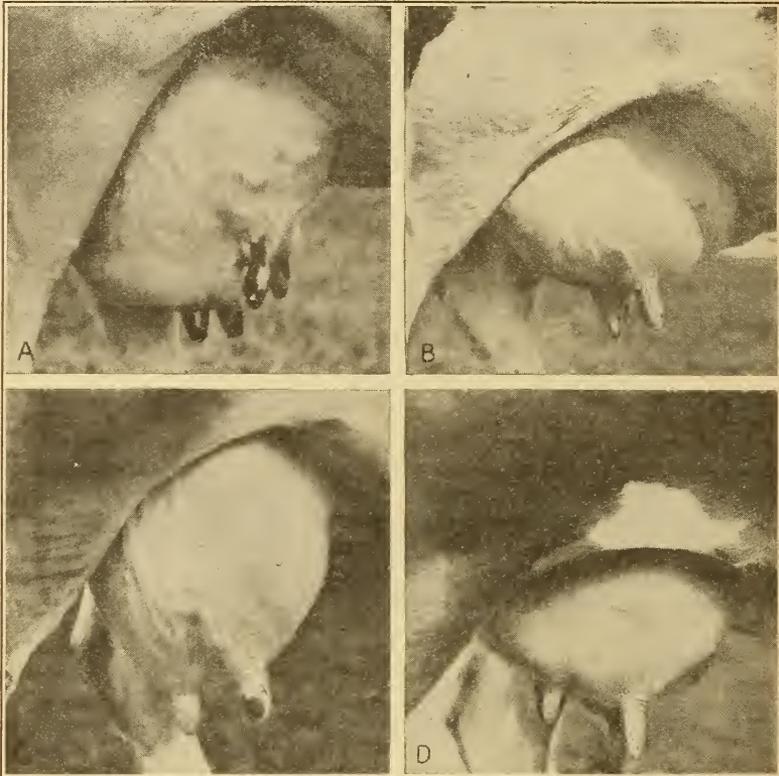
FIG. 6.—Side views of poor udders. A, Deficient fore quarters; B, teats too close together; C, a pendulous udder; D, poorly developed rear udder and teats of uneven size

Ability to draw reasonably accurate conclusions with respect to dairy temperament requires long experience with cattle and numerous observations and comparisons of individuals differing in type.

BODY CAPACITY AND SIZE

Size is an important factor in the dairy cow. Dairy temperament and mammary development being equal, the larger the cow within the breed the better. One should not overlook the fact, however, that large cows may lack the qualities denoting dairy temperament that are demanded in the dairy type. Large cows may be coarse-boned

and not well proportioned. These points must be carefully observed when comparing small cows with those that are larger than the normal cow of the same breed.

There is also a danger of the other extreme. Cows much smaller than the average size for that breed may be too highly defined. Their milk production may be low, not only because of lack of capacity to consume feed but also because of the disadvantages which small cows have when in a herd of larger cows.

The various breed associations have established standards of weight for their respective breeds. These are given on the score cards. One should familiarize himself with these standards and learn to recognize the appearance of an animal that is about the standard size for the breed.

Figure 3 shows the relative positions of some of the organs of a cow. The nature of the feed which is taken into her body requires a large storage capacity, and it is the dairy cow with the good feed capacity that produces large quantities of milk. The four stomachs of a cow and her intestines must not only be large, but the space which they occupy must be roomy. This necessitates well-sprung rear ribs and a long, wide, and deep body.

High milk production requires a plentiful blood supply not only for the udder but for all the processes of digestion and assimilation as well as for the nervous system, and all this blood must be purified by the lungs. This emphasizes the importance of an ample heart and lung capacity, which in turn necessitates well-sprung fore ribs and a good breadth and depth of chest, where these vital organs are situated. Figures 4 and 5 illustrate differences in body capacity.

HEALTH, CONSTITUTION, AND FERTILITY

Health, constitution, and fertility are factors which must be considered in judging any class of breeding animals.

Deficiencies in health and constitution are determined neither by the dimensions of the body nor by the size of the nostrils but by the apparent frailty and delicacy of the animal and the evidence of lack of vigor. Constitution refers to the ability of the animal to withstand the strain of heavy milk production. The alertness of the animal also indicates to some extent its condition of health. Deviations from normal conformation and condition, such as blindness, lameness, knocked-down hips, and defects in the udder, are referred to as unsoundness.

Lack of fertility may sometimes be determined by a laxness of the muscles around the tail head, producing a depression. Such indications, however, are not infallible.

Concerning the importance of the major points, then, it may be said that so far as producing ability is concerned, without regard to minor points, that cow is very likely to be the best which is most nearly perfect in health, constitution, and fertility; surpasses in dairy temperament; has the largest capacity for consuming feed, as shown by the length, depth, and breadth of the body where the organs of digestion are located; the greatest lung, heart, and circulatory system, as shown by the development of the corresponding part of the body; and the greatest development of the mammary system.

GENERAL APPEARANCE AND TYPE

General appearance, while not listed as a separate point on the general score card, is nevertheless taken into account when all of the major points are under observation. In considering general appearance it is best to view the animal from a distance. This makes it possible to disregard, more or less, the individual parts of the body
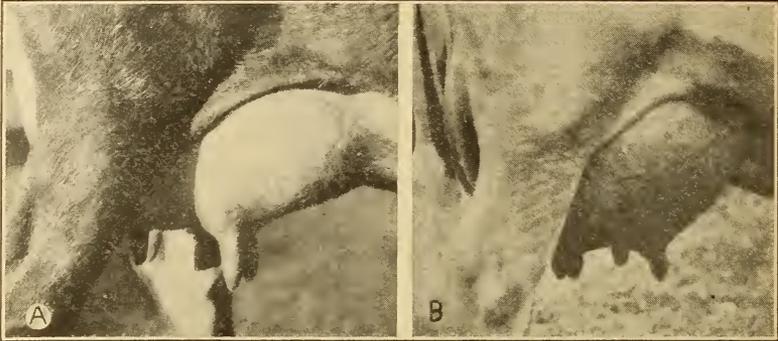
FIG. 7.—A and B, Side views of good udders. Note the perfect balance of udders with well-placed teats of good size

and to see the animal as a whole. Such points as the relation of the size and development of one part of the body to that of another, the general carriage and symmetry of form, the blending of body lines, and the conformity of the animal to a definite type, are considered under general appearance.

Type refers to the standard of conformation established by the breed associations. This standard is usually followed by show-ring judges as indicating the ideal toward which to work. It attempts to
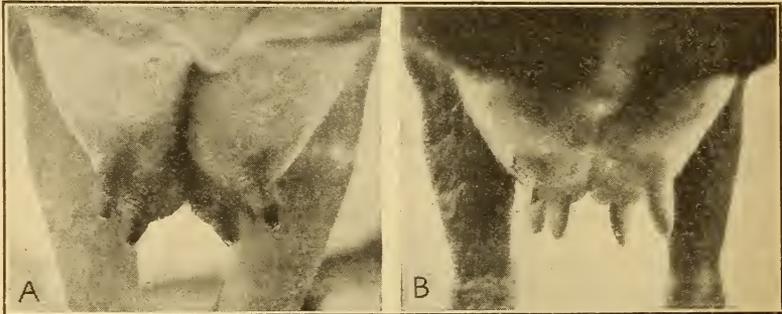
FIG. 8.—Front views of poor and good udders. A, This udder is cut up too much between halves and quarters; B, udder more evenly quartered

combine beauty of form, which is fixed more or less arbitrarily by breed associations, and producing ability.

Ideal types of dairy animals as illustrated on pages 14 to 19 have been fixed by the respective breed associations for the Ayrshire, Guernsey, Holstein, and Jersey breeds. Although no ideal has been agreed upon for the Brown Swiss, the illustrations given have been

submitted by that association as representing animals typical of the breed. Such standards as these are helpful in fixing in one's mind the ideal form toward which the breed associations are working.

Dairy form may be distinguished from beef form by referring to Figures 1 and 2. When the difference is as great as this, it is readily
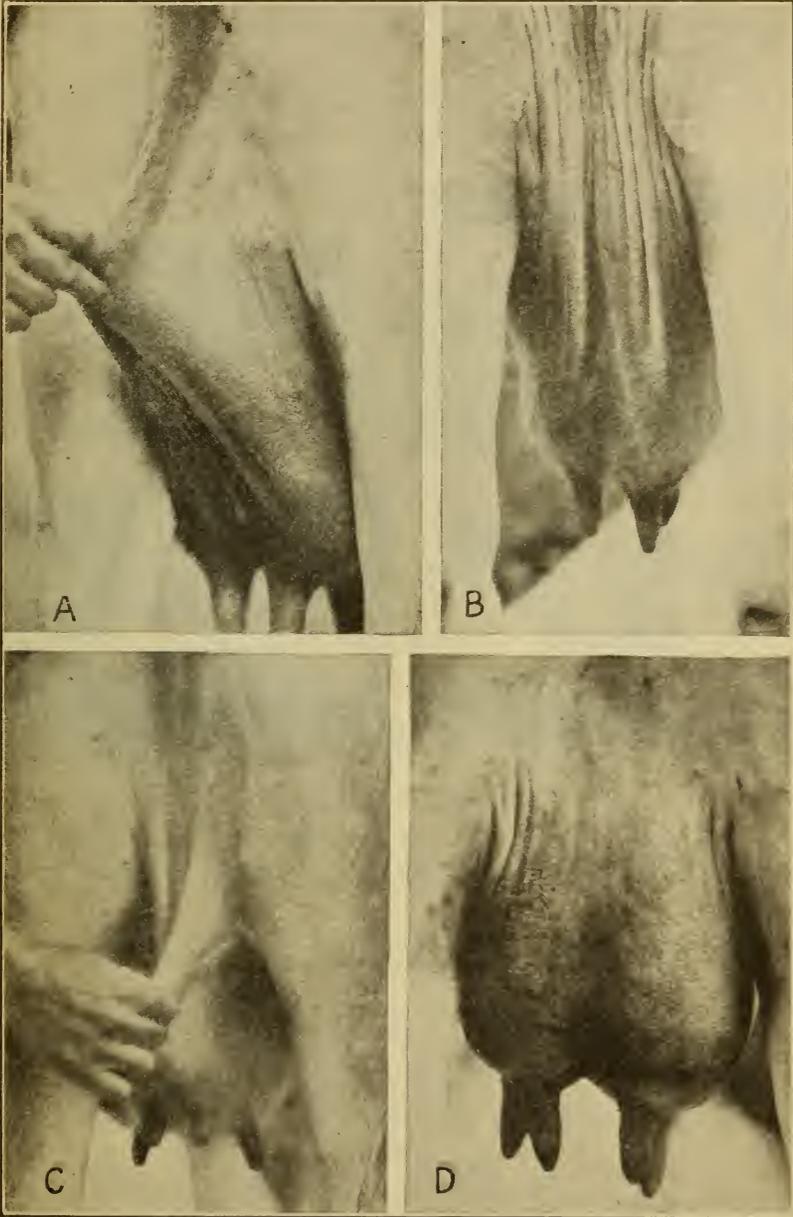
Fig. 9.—Udder attachments. A good udder when milked out dry should hang in loose folds and show high attachment in rear. A and B, Good udders; C and D, poor udders

seen. However, one cow may be of only slightly less dairy confor-
mation than another. In such a case the various points must be
balanced one against the other, and the exactness of such balancing
is what determines whether or not a person can judge accurately.

Dairy cows of good conformation are illustrated in Figures 2 and
10. These are good producers, and they also compare fairly well
with the type fixed as the standard by the breed associations, shown
on pages 14 to 19.

Not all high producers have the pleasing conformation possessed
by these animals, nor are all animals of this conformation high pro-
ducers; but the outstanding points of conformation are in the main
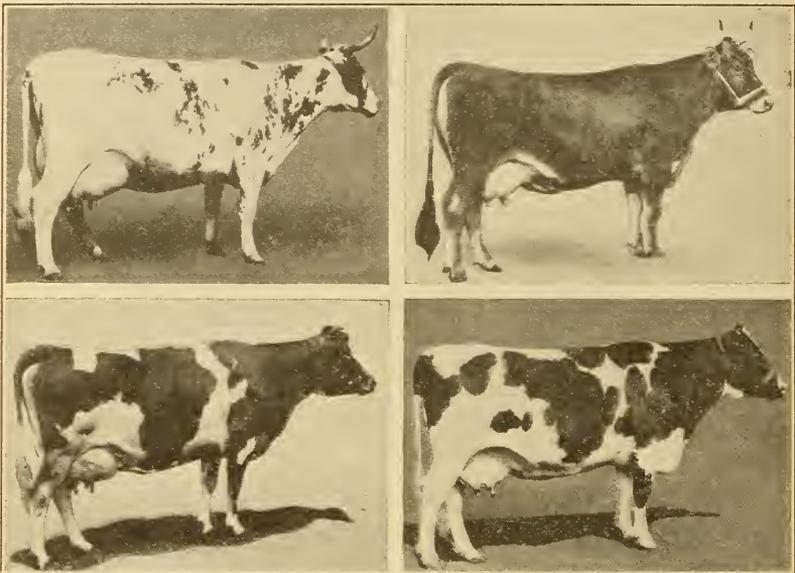
FIG. 10.—Cows with good dairy conformation and high production records. (Ayr-
shire, Brown Swiss, Guernsey, and Holstein)

to be found on most cows of high-producing ability. On the other
hand, most of the cows approaching this ideal type are good
producers.

OTHER DESIRABLE POINTS IN CONFORMATION

The aim of breeders of dairy cattle has always been to combine
beauty and high production. The standard of beauty has been
fixed arbitrarily by the breeders, but at the same time ability to
produce has been foremost in their minds. A large, well-shaped
udder is a valuable point on any dairy cow; but it is more valuable
when it appears on one that is straight in the back, wide between
the two hip bones, and wide also between the hip bones and the
pin bones, because such points add to the beauty of the animal and
enhance its selling value. These points of conformation, although
they may not be correlated with production, should nevertheless
be kept constantly in mind while judging. A **U** neck or a narrow

forehead and muzzle may be found on a high-producing cow, but the standard of breed type requires that the neck be straight or gently curved and that the forehead and muzzle be broad; therefore, consideration should be given to such points, and deductions must be made for defects.

THE SCORE CARD

The dairy-cow score cards shown on pages 26 to 30 give the relative importance of the various points to be considered in judging. It is to be noted that when the single items are considered the greatest weights are given to mammary system dairy temperament, body capacity and size. This fact should always be kept in mind. The minor points should not be disregarded, but they need to be considered carefully only when the animals being compared are practi-
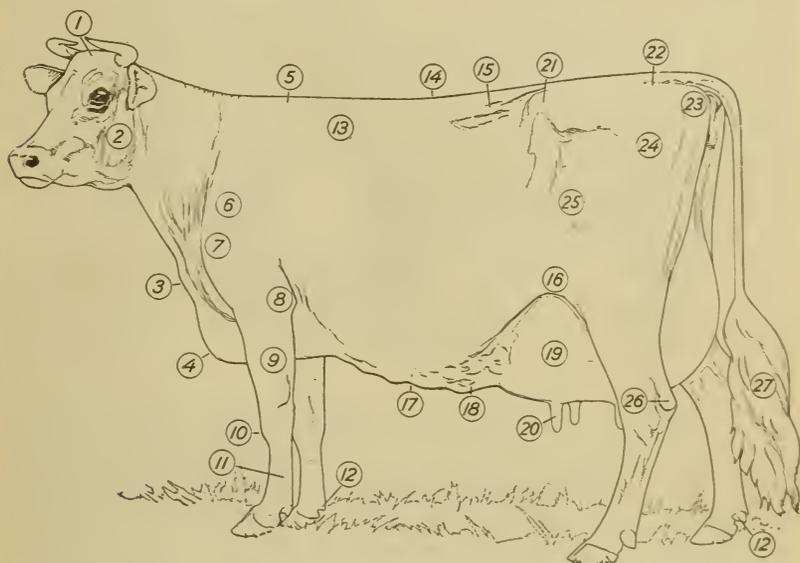
Fig. 11.—Diagram of cow, showing names and location of parts: 1, Poll; 2, jaw; 3, dewlap; 4, brisket; 5, withers; 6, shoulder; 7, point of shoulder; 8, point of elbow; 9, forearm; 10, knee; 11, shank; 12, dewclaw; 13, crop; 14, chine; 15, loin; 16, flank; 17, milk well; 18, milk vein; 19, udder; 20, teat; 21, hip point; 22, rump; 23, pin bone; 24, thurl; 25, stifle; 26, hock; 27, switch

cally alike in the major points. In order to make the score cards more useful, a diagram is given in Figure 11, which names and locates the various parts referred to on the score cards.

As facts accumulate from research and experimental work, additional points of conformation that are correlated with producing ability may become apparent. Although it is difficult to give a correct value as to the relative importance of the various characters that are listed, it is thought that most of the points shown on the general score card have some relation to production.

An accurate score on any animal can not be made until a clear picture of the ideal or perfect animal has been fixed in mind. Work with the score card will help to create this mental picture, especially if the beginner can work with animals that are nearly perfect or approach the ideal type. Where such animals are not available for

study, photographs of the winners at some of the larger cattle shows may be used to fix the ideal type in mind.

Most of the breed associations are developing ideal types of their cattle as objectives toward which to breed. The accompanying illustrations show some of the ideal types of breeds that have already been adopted. Others show types of animals as selected by the breed organizations concerned. (Figs. 12 to 21.)

Score cards for the different breeds of dairy cattle have been published by the various associations. The purpose of these cards is to encourage the development of what is considered by the breeders, through their associations, as the ideal type. Although the score cards for the different breeds are very similar, especially for the more important points, they differ in some of the lesser details. To become
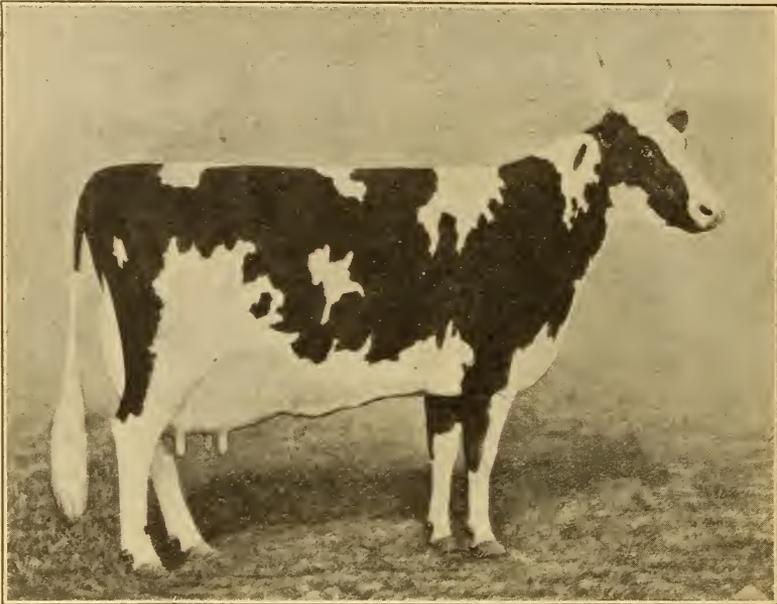
FIG. 12.—Ideal type Ayrshire cow

proficient in judging any one breed, therefore, careful study should be given to the score card for that breed.

Copies of the score cards of the various breeds are found on pages 26 to 30. A general score card based on the indication of capacity for production is shown on page 30. This may be used for any breed. It will be noted that many of the minor points found on the breed score cards have been omitted from this general card. When the general score card is used, adjustments must be made for certain breed characteristics, such as size and color.

HOW TO USE THE SCORE CARD

The beginner should first become familiar with the location and name of each point or part of the animal. The animal to be scored is led past the scorer at a distance of 20 to 30 feet. This permits a good
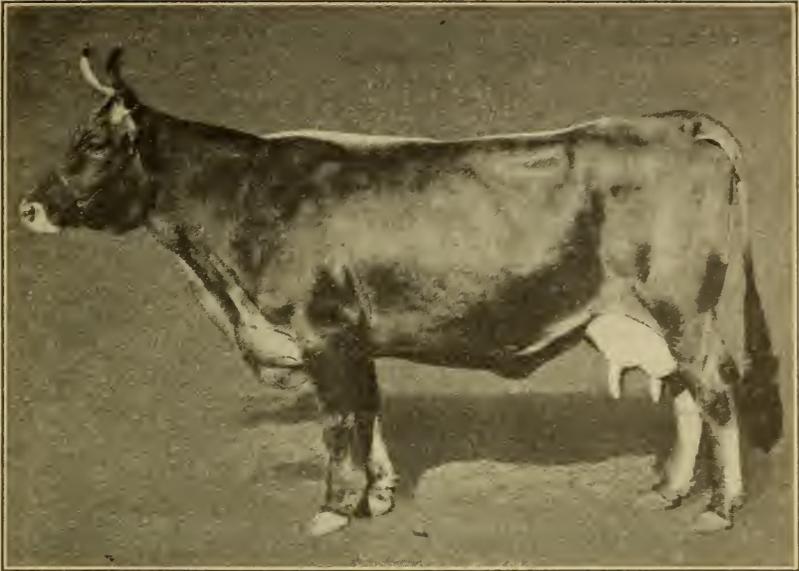
FIG. 13.—Typical Brown Swiss cow

general view; furthermore, the movement of the animal will indicate its alertness. At this time the points to be noted are the general appearance as to type, the relative size of the head, neck, and body. Are they properly proportioned? Are they well joined together? A careful observation should also be made of the straightness of back,

FIG. 14.—Ideal type Guernsey cow
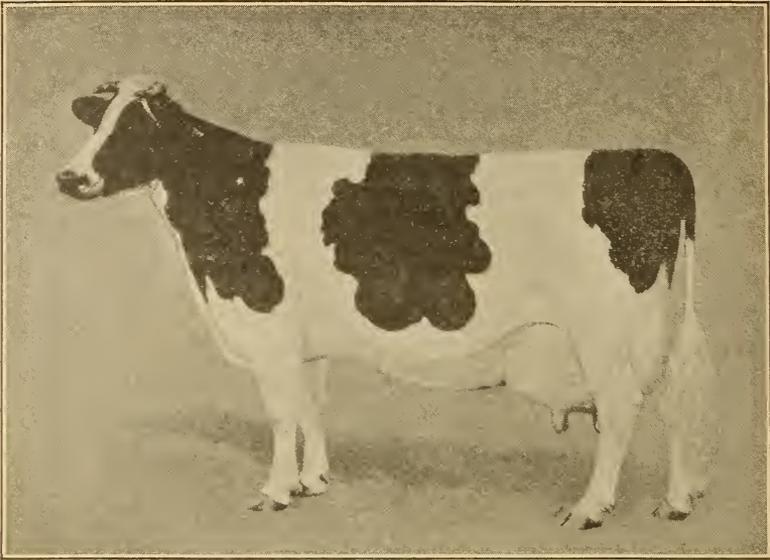
Fig. 15.—Ideal type Holstein-Friesian cow

slope of rump, and length of legs.   How do these compare with the ideal which the judge must always have in mind?   The view from the rear and the front should likewise be made while the animal is moving and the width of body and chest and the general carriage noted.   All these points should also be viewed from a distance while the animal is standing.
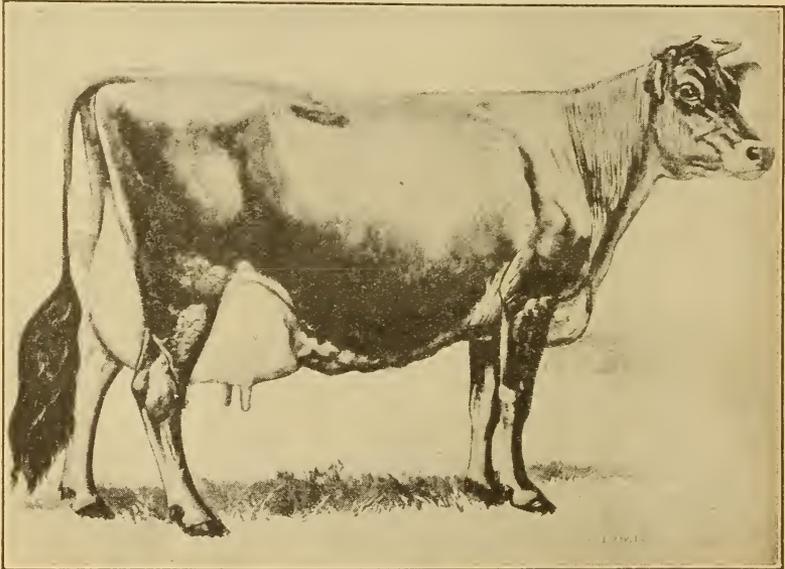
Fig. 16.—Ideal type Jersey cow
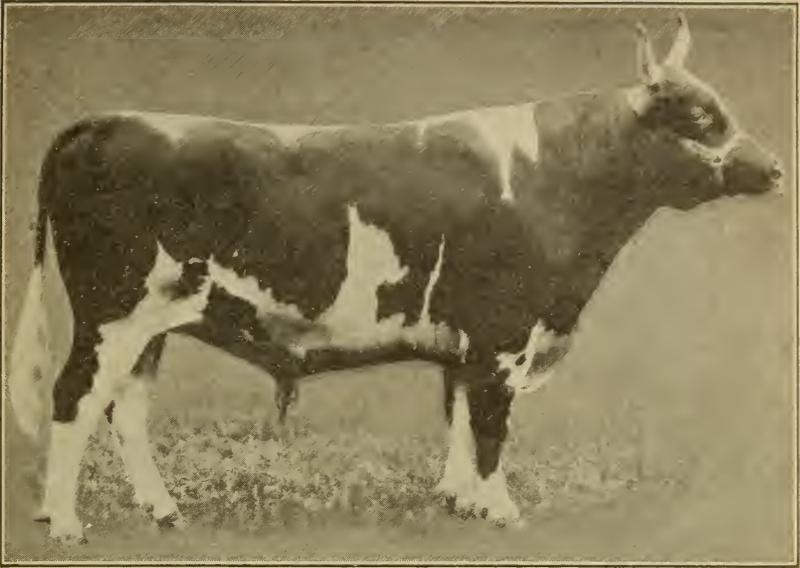
FIG. 17.—Typical Ayrshire bull

SCORING

There are various ways of grading or scoring an animal. Some prefer to make small deductions from the perfect score of each point; for example, if the perfect score of the udder is 20 the animal scored might be cut 1 or 1½ points, making the actual score 19 or 18½. Perhaps a better way is to consider separately each point for which

FIG. 18.—Typical Brown Swiss bull
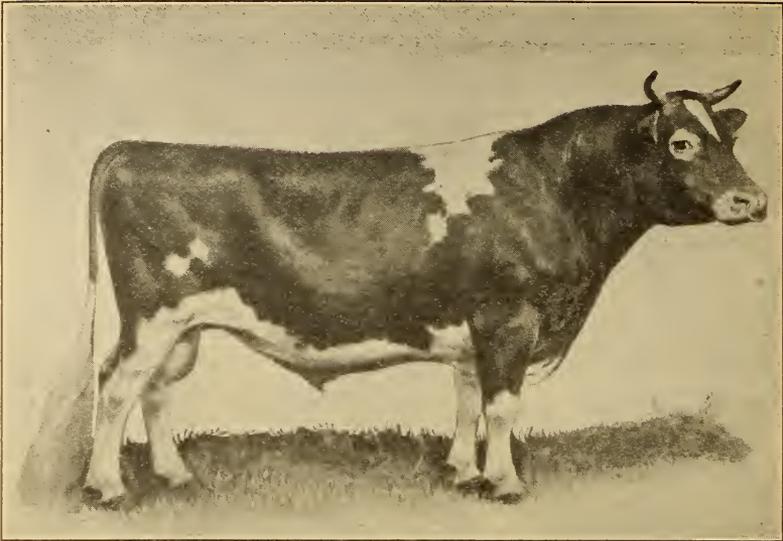
Fig. 19.—Ideal type Guernsey bull

there is a numerical value on the score card and decide whether this point is perfect (1), very slightly defective (0.9), slightly defective (0.8), defective (0.7), markedly defective (0.6), or poor (0.5). Then by multiplying the perfect score for each point by the value given to it, the final score is obtained. The sum of the scores for the various points gives the total score of the animal. An example of the way
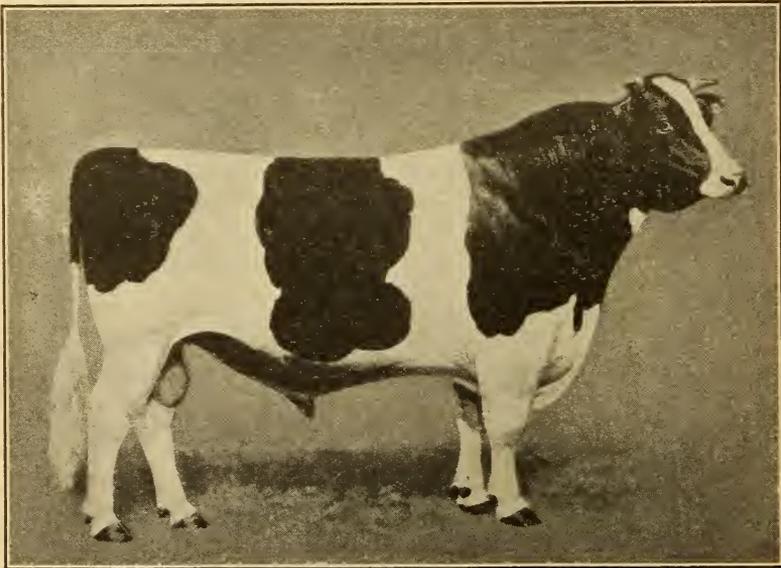
Fig. 20.—-Ideal type Holstein-Friesian bull

in which this is done is found in the general dairy-cow score card on page 30.

COMPARATIVE JUDGING

Practice in comparative judging should be given. By comparing one animal with another, one develops his powers of observation and learns more quickly what are the most important considerations in judging.

CHOOSING A CLASS OF ANIMALS TO BE JUDGED

A group of animals to be judged is called a class or a ring, which may consist of two or more animals. For practice judging and for contest work four is the best number. The animals in a class should be of the same sex and of nearly the same age. They should be selected with the aim of getting animals fairly uniform in conforma-
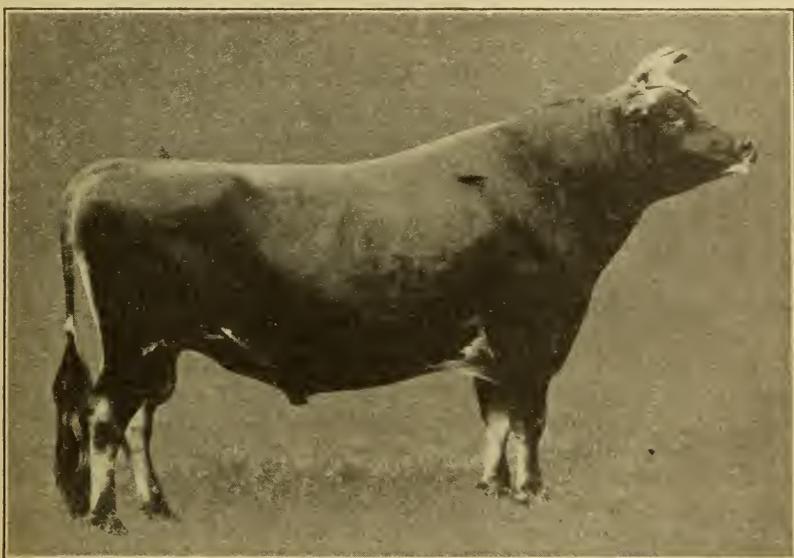
FIG. 21.—Typical Jersey bull

tion but with enough differences so there will be little possibility of different placing by two competent judges. In other words, when a person is learning to use his judgment concerning the importance of the various points of conformation, he should work on classes of animals that have fairly distinct correct placings.

METHODS OF OBSERVATION

The animals should first be lettered at random, A, B, C, D, etc. This may be done by marking the letters on cardboard to hang on the animals or on the attendants. It is best to lead the animals in alphabetical order before the judges and to keep them in that order throughout the observation.

The whole class of animals is led past the judges at a distance of about 30 feet. If facilities permit, the class should be led in a circle

whose radius is about 30 feet, with the judges in the center.   This should take about three minutes.   The animals are led in one direction for half the time and in the opposite direction for the other half. This will expose both sides to the view of the judges.   During this time, as in the scoring by use of the score card, a careful observation is made of the general appearance and carriage.   In doing this observations are made of individual points, such as size, the length and the depth of the body, the straightness of the back and the rump, the fullness of the chest and the barrel, the attachment of the udder, and the shape of the head; but these must be viewed from the standpoint of the whole animal rather than from the individual parts.

The animals are then lined up side by side a few feet apart to give the judge the front and rear views from a distance and close-up views as well.   This should occupy about three minutes.   At this time comparisons are made of such points as the head, the width of the chest and the barrel, the width of the rear udder, and the width of the pelvic bones.

The animals are again lined up in single file to give the judge a side view at a distance of 20 to 30 feet.   This will allow a further comparison of the points observed while the animals were in motion and should take about three minutes.   While the animals are standing in this position the final close inspection is made, which should take about six minutes.   At this time such points as the quality of the hair and the hide, the texture of the udder, and the smoothness of the covering are considered.   This close inspection is made mainly to confirm the decisions that have already been reached and to take what notes are needed for giving reasons for the placings.

HANDLING THE ANIMAL

It is well to approach the animal with care.   Rough handling may annoy it and make observation difficult, if not impossible.   Movements of persons while judging should be slow and noiseless.   Not more than five or six persons should be allowed to handle an animal at one time, and even fewer than these would make observation easier for the judge and cause less annoyance to the animal.

PLACING AND REASONS

After closely inspecting the animal, the judge marks his placings on a card and hands it to the instructor.   Giving reasons for the placings is a good practice that should be required for every class. The reasons show where the observations have been incorrect.   If written reasons are required it is customary to allow 10 to 20 minutes for writing these.   This should be done without looking at the animals.   The points of each animal should be fixed so clearly in mind that reasons can be given from memory.   If reasons are given orally, two to three minutes are usually allowed in each class or ring judged.

A convenient form of card to use is shown herewith.   This should be printed on fairly heavy paper that does not require a stiff back when used in the ring.   A card 5 by 8 inches is a convenient size.

Student's name or number_____

Class_____

Placings: 1st_____, 2d_____, 3d_____, 4th_____

Reasons for placing: _____

_____

_____

_____

_____

HOW TO GIVE REASONS

The reasons for placing must be short and concise. Oral reasons should be given slowly without hesitation. Comparisons should be specific rather than general. It is not desirable to say that one udder is better than another, but rather that it is larger or less meaty, or to give other specific reasons. The points should be compared in the order of importance. For example, if A distinctly excels B in both length and depth of body, and also in the conformation of the head and straightness of back, it is well to mention the body capacity first. Similarly, the udder comparison should be made first if the differences are outstanding. The following, though somewhat brief, is suggested as a desirable form of reasons:

I place this class of (name of class) B, D, C, A. I place B over D because she has a larger barrel, being longer and deeper in the body with a wider spring of rib. Her udder is larger and more evenly quartered, with teats more evenly placed.

I place D over C because she is fuller in the chest and has a straighter back that carries out more nearly level at the rump. Her udder is somewhat larger than that of C.

I place C over A because A has less of the dairy temperament, being inclined to beefiness. A is heavier over the shoulder than C, and her udder is also more meaty than that of C.

SPECIAL PLACING CARDS

Persons who have not had an opportunity to learn how to give reasons often take part in judging contests at fairs and cattle shows and are graded on their ability to judge. For such persons a special placing card is desirable. A card similar to the one which has been used in the farmer's contest at various fairs is shown herewith. A similar card used in the vocational students' contest at the National Dairy Exposition is also given. This card is filled out to illustrate how it is used.

VOCATIONAL-STUDENT'S CONTEST CARD NATIONAL DAIRY EXPOSITION

JUDGE'S SCORE CARD

Placing of points	Class				
	First	Second	Third	Fourth	Grade
Body capacity and size_____	D	A	C	B	100
Dairy temperament_____	A	D	C	B	100
Mammary system_____	D	A	B	C	100
Health, constitution, and fertility_____	D	A	B	C	100
Total_____					400
Grade on basis of comparative points (400÷4)_____					100

	First	Second	Third	Fourth	Grade
Placing of cows_____	D	A	C	B	100
Combined grades (100+100)_____					200
Final grade (200÷2)_____					100

DAIRY-CATTLE PLACING CARD

FARMER'S JUDGING CONTEST

Contestant's name or number_____

Class_____   Date_____

Instructions: 1. Place the animals under "detail comparisons" as outlined below.
2. Give the class a "final placing."
Each of these two placings count as half of your final score.

Detail comparisons emphasizing the more important evidence of	Placing by contestant				Contestant's score by clerk
	First	Second	Third	Fourth	
1. Body capacity and size: Body of such proportions in depth, width, and length as to permit sufficient scale, volume, and full weight for the breed represented_____					
2. Dairy temperament: Showing a tendency to convert feed into milk instead of into body fat and flesh, as indicated by leanness, angularity, and an absence of excess fat, especially over the withers and back, through the thighs, brisket, and neck_____					
3. Mammary system: Udder large and capacious, well attached to the body, extending well up behind and far forward, not pendulous, sound, and with uniform size, and of convenient size for milking_____					
4. Health and constitution: Indicated by alertness, brightness of eye, condition of coat, absence of frailty, vigorous_____					
Sum of score on details:					
Clerk will divide sum by 4_____					
Average on details_____					
Final placing: Consider animals as a whole, give due regard to relative merits, defects and soundness____					
Sum of average on details and final placings:					
Clerk will divide sum by 2_____					
Contestant's final score_____					

DAIRY-CATTLE PLACING CARD—continued

CONTESTANT'S SCORE CARD

Contestant's No. _____

Placing of points	Class				
	First	Second	Third	Fourth	Grade
Body capacity and size_____	A	D	B	C	70
Dairy temperament_____	C	A	D	B	70
Mammary system_____	D	A	B	C	100
Health, constitution, and fertility_____	B	A	C	D	40
Total_____					280
Grade on basis of comparative points (280÷4)_____					70

	First	Second	Third	Fourth	Grade
Placing of cows_____	A	D	C	B	85
Combined grades (70+85)_____					155
Final grade (155÷2)_____					78

The essential feature of these cards is that they provide for a grouping of points so the animals may be placed according to their rank in each of the groups. The contestant is subsequently graded on the placing for each group of points as well as on the placing for the class of animals as a whole.

GRADING

When a contest is held or when a grade is necessary for instructional purposes, grading on both placings and reasons requires a comparison of the contestant's placings and reasons with those of the official judge or instructor.

The placings are usually graded by the use of an arbitrary numerical standard, deductions being made according to the extent that the animals are placed out of the correct order. For example, if the official judge or instructor placed a class ABCD, such placing would be rated 100, and if the student or contestant reversed any two adjacent animals such as BACD, ACBD, or ABDC, his grade would be 85. The possible combinations of placings with their respective scores are shown in the following table:

STANDARD FOR GRADING PLACINGS

ABCD	100	ABDC	100	ADBC	100	ADCB	100	ACBD	100	ACDB	100
ABDC	85	ABCD	85	ABCD	70	ABCD	55	ACDB	85	ACBD	85
ADBC	70	ADBC	85	ABDC	85	ABDC	70	ABCD	85	ADCB	85
ADCB	55	ADCB	70	ADCB	85	ADBC	85	ABDC	70	ADBC	70
ACBD	85	ACBD	70	ACBD	70	ACBD	70	ADBC	55	ABCD	55
ACDB	70	ACDB	55	ACDB	70	ACDB	85	ADCB	70	ABDC	70
BACD	85	BACD	70	BACD	55	BACD	40	BACD	70	BACD	55
BADC	70	BADC	85	BADC	70	BADC	55	BADC	55	BADC	40
BCAD	70	BCAD	55	BCAD	40	BCAD	25	BCAD	55	BCAD	40
BCDA	55	BCDA	40	BCDA	25	BCDA	10	BCDA	40	BCDA	25
BDAC	55	BDAC	70	BDAC	55	BDAC	40	BDAC	40	BDAC	25
BDCA	40	BDCA	55	BDCA	40	BDCA	25	BDCA	25	BDCA	10
CABD	70	CABD	55	CABD	40	CABD	55	CABD	85	CABD	70
CADB	55	CADB	40	CADB	55	CADB	70	CADB	70	CADB	85
CBAD	55	CBAD	40	CBAD	25	CBAD	40	CBAD	70	CBAD	55
CBDA	25	CBDA	25	CBDA	10	CBDA	25	CBDA	55	CBDA	40
CDAB	40	CDAB	25	CDAB	40	CDAB	55	CDAB	55	CDAB	70
CDBA	25	CDBA	10	CDBA	25	CDBA	40	CDBA	40	CDBA	55
DABC	55	DABC	70	DABC	85	DABC	70	DABC	40	DABC	55
DACB	40	DACB	55	DACB	70	DACB	85	DACB	55	DACB	70
DBAC	40	DBAC	55	DBAC	70	DBAC	55	DBAC	25	DBAC	40
DBCA	25	DBCA	40	DBCA	55	DBCA	40	DBCA	10	DBCA	25
DCAB	25	DCAB	40	DCAB	55	DCAB	70	DCAB	40	DCAB	55
DCBA	10	DCBA	25	DCBA	40	DCBA	55	DCBA	25	DCBA	40

STANDARD FOR GRADING PLACINGS—continued

BACD___ 100	BADC___ 100	BCAD___ 100	BCDA___ 100	BDAC___ 100	BDCA___ 100
BADC___ 85	BACD___ 85	BCDA___ 85	BCAD___ 85	BDCA___ 85	BDAC___ 85
BCAD___ 85	BCAD___ 70	BDAC___ 55	BDAC___ 70	BACD___ 70	BCDA___ 85
BCDA___ 70	BCDA___ 55	BDCA___ 70	BDCA___ 85	BADC___ 85	BCAD___ 70
BDAC___ 70	BDAC___ 85	BACD___ 85	BACD___ 70	BCAD___ 55	BACD___ 70
BDCA___ 55	BDCA___ 70	BADC___ 70	BADC___ 55	BCDA___ 70	BADC___ 55
CABD___ 55	CABD___ 40	CABD___ 70	CABD___ 55	CABD___ 25	CABD___ 40
CADB___ 40	CADB___ 25	CADB___ 55	CADB___ 40	CADB___ 10	CADB___ 25
CBAD___ 70	CBAD___ 55	CBAD___ 85	CBAD___ 70	CBAD___ 40	CBAD___ 55
CBDA___ 55	CBDA___ 40	CBDA___ 70	CBDA___ 85	CBDA___ 55	CBDA___ 70
CDAB___ 25	CDAB___ 10	CDAB___ 40	CDAB___ 55	CDAB___ 25	CDAB___ 40
CDBA___ 40	CDBA___ 25	CDBA___ 55	CDBA___ 70	CDBA___ 40	CDBA___ 55
DABC___ 40	DABC___ 55	DABC___ 25	DABC___ 40	DABC___ 70	DABC___ 55
DACB___ 25	DACB___ 40	DACB___ 10	DACB___ 25	DACB___ 55	DACB___ 40
DBAC___ 55	DBAC___ 70	DBAC___ 40	DBAC___ 55	DBAC___ 85	DBAC___ 70
DBCA___ 40	DBCA___ 55	DBCA___ 55	DBCA___ 70	DBCA___ 70	DBCA___ 85
DCAB___ 10	DCAB___ 25	DCAB___ 25	DCAB___ 40	DCAB___ 40	DCAB___ 55
DCBA___ 25	DCBA___ 40	DCBA___ 40	DCBA___ 55	DCBA___ 55	DCBA___ 70
ABCD___ 85	ABCD___ 70	ABCD___ 70	ABCD___ 55	ABCD___ 55	ABCD___ 40
ABDC___ 70	ABDC___ 85	ABDC___ 55	ABDC___ 40	ABDC___ 70	ABDC___ 55
ADBC___ 55	ADBC___ 70	ADBC___ 40	ADBC___ 25	ADBC___ 40	ADBC___ 40
ADCB___ 40	ADCB___ 55	ADCB___ 25	ADCB___ 10	ADCB___ 40	ADCB___ 25
ACBD___ 70	ACBD___ 55	ACBD___ 55	ACBD___ 40	ACBD___ 40	ACBD___ 25
ACDB___ 55	ACDB___ 40	ACDB___ 40	ACDB___ 25	ACDB___ 25	ACDB___ 10

CABD___ 100	CADB___ 100	CBAD___ 100	CBDA___ 100	CDAB___ 100	CDBA___ 100
CADB___ 85	CABD___ 85	CBDA___ 85	CBAD___ 85	CDBA___ 85	CDAB___ 85
CBAD___ 85	CBAD___ 70	CDAB___ 55	CDAB___ 70	CBAD___ 70	CBDA___ 85
CBDA___ 70	CBDA___ 55	CDBA___ 70	CDBA___ 85	CBDA___ 85	CBAD___ 70
CDAB___ 70	CDAB___ 85	CABD___ 85	CABD___ 70	CABD___ 85	CABD___ 55
CDBA___ 55	CDBA___ 70	CADB___ 70	CADB___ 55	CADB___ 70	CADB___ 40
DABC___ 25	DABC___ 40	DABC___ 10	DABC___ 25	DABC___ 55	DABC___ 40
DACB___ 40	DACB___ 55	DACB___ 25	DACB___ 40	DACB___ 70	DACB___ 55
DBAC___ 10	DBAC___ 25	DBAC___ 25	DBAC___ 40	DBAC___ 40	DBAC___ 55
DBCA___ 25	DBCA___ 40	DBCA___ 40	DBCA___ 55	DBCA___ 55	DBCA___ 70
DCAB___ 55	DCAB___ 70	DCAB___ 40	DCAB___ 55	DCAB___ 55	DCAB___ 70
DCBA___ 40	DCBA___ 55	DCBA___ 55	DCBA___ 70	DCBA___ 70	DCBA___ 85
ABCD___ 70	ABCD___ 55	ABCD___ 55	ABCD___ 40	ABCD___ 40	ABCD___ 25
ABDC___ 55	ABDC___ 40	ABDC___ 40	ABDC___ 25	ABDC___ 25	ABDC___ 10
ADBC___ 40	ADBC___ 55	ADBC___ 25	ADBC___ 10	ADBC___ 40	ADBC___ 25
ADCB___ 55	ADCB___ 70	ADCB___ 40	ADCB___ 25	ADCB___ 55	ADCB___ 40
ACBD___ 85	ACBD___ 70	ACBD___ 70	ACBD___ 55	ACBD___ 55	ACBD___ 40
ACDB___ 70	ACDB___ 85	ACDB___ 55	ACDB___ 40	ACDB___ 70	ACDB___ 55
BACD___ 55	BACD___ 40	BACD___ 70	BACD___ 55	BACD___ 55	BACD___ 40
BADC___ 40	BADC___ 25	BADC___ 55	BADC___ 40	BADC___ 40	BADC___ 25
BCAD___ 70	BCAD___ 55	BCAD___ 55	BCAD___ 40	BCAD___ 40	BCAD___ 40
BCDA___ 55	BCDA___ 40	BCDA___ 70	BCDA___ 85	BCDA___ 55	BCDA___ 70
BDAC___ 25	BDAC___ 10	BDAC___ 40	BDAC___ 55	BDAC___ 25	BDAC___ 40
BDCA___ 40	BDCA___ 25	BDCA___ 55	BDCA___ 70	BDCA___ 40	BDCA___ 55

DABC___ 100	DACB___ 100	DBAC___ 100	DBCA___ 100	DCAB___ 100	DCBA___ 100
DACB___ 85	DABC___ 85	DBCA___ 85	DBAC___ 85	DCBA___ 85	DCAB___ 85
DBAC___ 85	DBAC___ 70	DCAB___ 55	DCAB___ 70	DBCA___ 70	DBCA___ 85
DBCA___ 70	DBCA___ 55	DCBA___ 70	DCBA___ 85	DBAC___ 55	DBAC___ 70
DCAB___ 70	DCAB___ 85	DABC___ 70	DABC___ 70	DABC___ 70	DABC___ 55
DCBA___ 55	DCBA___ 70	DACB___ 70	DACB___ 55	DACB___ 85	DACB___ 70
ABCD___ 55	ABCD___ 40	ABCD___ 40	ABCD___ 40	ABCD___ 25	ABCD___ 10
ABDC___ 70	ABDC___ 55	ABDC___ 55	ABDC___ 40	ABDC___ 40	ABDC___ 25
ADBC___ 85	ADBC___ 70	ADBC___ 70	ADBC___ 55	ADBC___ 55	ADBC___ 40
ADCB___ 70	ADCB___ 85	ADCB___ 55	ADCB___ 40	ADCB___ 40	ADCB___ 55
ACBD___ 40	ACBD___ 55	ACBD___ 25	ACBD___ 10	ACBD___ 40	ACBD___ 25
ACDB___ 55	ACDB___ 70	ACDB___ 40	ACDB___ 25	ACDB___ 25	ACDB___ 40
BACD___ 40	BACD___ 25	BACD___ 70	BACD___ 40	BACD___ 10	BACD___ 25
BADC___ 55	BADC___ 40	BADC___ 55	BADC___ 55	BADC___ 25	BADC___ 40
BCAD___ 25	BCAD___ 10	BCAD___ 40	BCAD___ 55	BCAD___ 25	BCAD___ 40
BCDA___ 40	BCDA___ 25	BCDA___ 55	BCDA___ 70	BCDA___ 40	BCDA___ 55
BDAC___ 70	BDAC___ 55	BDAC___ 85	BDAC___ 70	BDAC___ 40	BDAC___ 55
BDCA___ 55	BDCA___ 40	BDCA___ 70	BDCA___ 70	BDCA___ 55	BDCA___ 70
CABD___ 25	CABD___ 40	CABD___ 10	CABD___ 25	CABD___ 25	CABD___ 40
CADB___ 40	CADB___ 55	CADB___ 25	CADB___ 40	CADB___ 70	CADB___ 55
CBAD___ 10	CBAD___ 25	CBAD___ 25	CBAD___ 40	CBAD___ 40	CBAD___ 55
CBDA___ 25	CBDA___ 40	CBDA___ 40	CBDA___ 55	CBDA___ 55	CBDA___ 70
CDAB___ 55	CDAB___ 70	CDAB___ 40	CDAB___ 55	CDAB___ 85	CDAB___ 70
CDBA___ 40	CDBA___ 55	CDBA___ 55	CDBA___ 70	CDBA___ 70	CDBA___ 85

GIVING REASONS BEST METHOD

If a contestant is to be graded accurately on his ability to judge a class of animals, it is necessary for the official judge to know whether

or not the contestant observed all the points wherein the animals differed. The giving of reasons for the placings is by far the best way to get this information. These may be either written or oral. The use of the special placing cards such as those shown on pages 22 and 23 is perhaps the next best; and merely giving one placing on the whole class is the least accurate method.

JUDGING HEIFERS

In judging dairy heifers one must have in mind what the possible development of the animals will be and what they will produce when mature. Good appearance in a heifer counts for much, but it is the heifer that it is thought will develop into the best cow that should be placed first. Animals change, more or less, in many points of conformation from calfhood to maturity. This makes the judging of heifers more difficult than that of cows.

The outstanding points to be considered in judging heifers are length and depth of body, fullness of barrel and chest, and dairy temperament. The development of the udder should be noted, especially the placement of the teats; but since heifers differ a great deal as to the age at which the udder makes the greatest development, this point should not receive so much consideration as with cows in milk. Nor is dairy temperament so pronounced in heifers as in cows. Especially is this true of those that are in calf. These are likely to be heavy in the shoulder and to appear somewhat fatter than the condition that is usually associated with the best dairy temperament. Heifers should be large for their age and should show vigor and a thrifty, growing condition. This is indicated by a sleek coat with a soft, pliable skin.

JUDGING BULLS

From the standpoint of economical dairy production the best bull is the one whose daughters will develop into the best cows. It is obvious that this fact can not be determined in the judging ring. Furthermore, a bull of good conformation and from a high-producing dam may not transmit these characters to his daughters. Therefore, the best way to select a bull is by the performance of his daughters. If a large number of the daughters are of good type and are high producers, it is reasonably certain that the sire will transmit these characteristics to his later daughters regardless of what his own conformation or the record of his dam may be.

When the production records of the daughters of a bull are not available, the records of his dam and her conformation and also the records of his sisters should be used as a guide, as well as the general appearance of the bull himself.

Good size for his age and a long and deep body with full chest are considered desirable points in a bull. He should also be in a thrifty condition, as indicated by a loose, pliable skin, and should show masculinity and vigor. The neck should be medium in length with a prominent crest. Such points as straightness of back, thin hind quarters, level rump, broad head, clean-cut face, and medium-sized ear add to the beauty of the animal and are usually considered in the show ring; but as with cows, there is no evidence that these factors are associated with the ability to transmit production.

SCALE OF POINTS FOR VARIOUS BREEDS

SCALE OF POINTS FOR AYRSHIRE COW

		Points
Head_____		10
Forehead, broad and clearly defined_____	1	
Horns, wide set on and inclining upward_____	1	
Face, of medium length, slightly dished ; clean cut, showing veins__	2	
Muzzle, broad and strong without coarseness, nostrils large_____	1	
Jaws, wide at the base and strong_____	1	
Eyes, full and bright with placid expression_____	3	
Ears, of medium size and fine, carried alert_____	1	

Neck, fine throughout, throat clean, neatly joined to head and shoulders, of good length, moderately thin, nearly free from loose skin, elegant in bearing_____ **3**

Fore quarters_____ **10**

Shoulders, light, good distance through from point to point but sharp at withers, smoothly blending into body_____ 2

Chest, low, deep, and full between back and forelegs_____ 6

Brisket, light _____ 1

Legs and feet, legs straight and short, well apart, shanks fine and smooth, joints firm, feet of medium size, round, solid, and deep__ 1

Body_____ **13**

Back, short and straight, chine lean, sharp, and open jointed_____ 4

Loin, broad, strong, and level_____ 2

Ribs, long, broad, wide apart, and well sprung_____ 3

Abdomen, capacious, deep, firmly held up with strong muscular development _____ 3

Flank, thin and arching_____ 1

Hind quarters _____ **11**

Rump, wide, level, long from hooks to pin bones, a reasonable pelvic arch allowed_____ 3

Hooks, wide apart and not projecting above back nor unduly overlaid with fat_____ 2

Pin bones, high, wide apart_____ 1

Thighs, thin, long, and wide apart_____ 2

Tail, fine, long, and set on level with back_____ 1

Legs and feet, legs strong, short, straight, when viewed from behind and set well apart ; shanks fine and smooth, joints firm, feet medium size, round, solid, and deep_____ 2

Udder, long, wide, deep but not pendulous nor fleshy ; firmly attached to the body, extending well up behind and far forward ; quarters even ; sole nearly level and not indented between teats, udder veins well developed and plainly visible_____ **22**

Teats, evenly placed, distance apart from side to side equal to half the breadth of udder, from back to front equal to one-third the length ; length 2½ to 3½ inches, thickness in keeping with length, hanging perpendicularly and not tapering_____ **8**

Mammary veins, large, long, tortuous, branching, and entering large orifices_____ **5**

Escutcheon, distinctly defined, spreading over thighs, and extending well upward _____ **2**

Color, red of any shade, brown, or these with white ; mahogany and white, or white, each color distinctly defined. (Brindle markings allowed but not desired)_____ **2**

Covering_____ **6**

Skin, medium thickness, mellow, and elastic_____ 3

Hair, soft and fine_____ 2

Secretions, oily, of rich brown or yellow color_____ 1

Style, active, vigorous, showing strong character, temperament inclined to nervousness but still docile_____ **4**

Weight, at maturity not less than 1,000 pounds _____ **4**

Total_____ **100**

SCALE OF POINTS FOR BROWN SWISS COW OR HEIFER

Points

1. Head, medium size and rather long_____ 2
2. Face, dished, narrow between horns and wide between eyes_____ 2
3. Ears, large, fringed inside with light-colored hair, skin inside of ear a
    deep orange color_____ 2
4. Nose, black, large, and square, with mouth surrounded by mealy colored
    band, tongue black_____ 2
5. Eyes, moderately large, full, and bright_____ 2
6. Horns, short, regularly set with black tips_____ 2
7. Neck, straight, throat clean, neatly joined to head, shoulders of good
    length, moderately thin at the withers_____ 4
8. Chest, low, deep, and full between and back of forelegs_____ 6
9. Back, level to setting of tail and broad across the loin_____ 6
10. Ribs, long and broad, wide apart and well sprung, with thin, arching
    flanks_____ 3
11. Abdomen, large and deep_____ 5
12. Hips wide apart, rump long and broad_____ 4
13. Thighs, wide, quarters not thin_____ 4
14. Legs, short and straight, with good hoofs_____ 2
15. Tail, slender, well set on, with good switch_____ 2
16. Hide of medium thickness, mellow and elastic_____ 3
17. Color—shades from dark to light brown, at some seasons of the year
    gray; white splashes near udder not objectionable, light stripe along
    back. White splashes on body or sides objectionable. Hair between
    horns usually lighter shade than body_____ 4
18. Fore udder, wide, deep, well rounded but not pendulous nor fleshy,
    extending far forward on the abdomen_____ 12
19. Rear udder, wide, deep, but not pendulous nor fleshy, extending well up
    behind _____ 12
20. Teats, rather large, set well apart and hanging straight_____ 8
21. Milk veins large, long, tortuous, elastic, and entering good wells_____ 6
22. Disposition, quiet_____ 2
23. Size, evidence of constitution, and stamina_____ 5

    Total_____ 100

SCALE OF POINTS FOR DUTCH BELTED COW

Points

1. Body color, black, with a clearly defined continuous white belt. The
    belt to be of medium width, beginning behind the shoulder and extend-
    ing nearly to the hips_____ 8
2. Head, comparatively long and somewhat dishing; broad between the
    eyes. Poll, prominent; muzzle, fine; dark tongue_____ 6
3. Eyes, black, full and mild. Horns long compared with their diameter__ 4
4. Neck, fine and moderately thin and should harmonize in symmetry with
    the head and shoulders_____ 6
5. Shoulders fine at the top, becoming deep and broad as they extend back-
    ward and downward, with a low chest_____ 4
6. Barrel large and deep with well-developed abdomen; ribs well rounded
    and free from fat_____ 10
7. Hips broad, and chine level, with full loin_____ 10
8. Rump high, long, and broad_____ 6
9. Hind quarters long and deep, rear line incurving; tail long, slim, taper-
    ing to a full switch_____ 8
10. Legs short, clean, standing well apart_____ 3
11. Udder large, well-developed front and rear; teats of convenient size and
    apart; mammary veins large, long, and crooked, entering large
    orifices _____ 20
12. Escutcheon_____ 2
13. Hair fine and soft; skin of moderate thickness of a rich, dark, or yellow
    color_____ 3
14. Quiet disposition and free from excessive fat_____ 4
15. General condition and apparent constitution_____ 6

    Perfection _____ 100

Points

Style and symmetry, attractive individuality revealing vigor, femininity and breed character; a harmonious blending and correlation of parts; an active well-balanced walk_____ 5

Head, moderately long, clean-cut, showing femininity and breed character; a lean face; wide mouth and broad muzzle with open nostrils; strong jaws; full bright eyes with gentle expression; forehead broad between the eyes and moderately dishing; bridge of nose straight_____ 5

Horns, yellow, small at base; of medium length; inclining forward; not too spreading_ _____ 1

Neck, long and thin; clean throat, smoothly blending into shoulders_____ 2

Withers, chine rising above shoulder blades, with open vertebrae_____ 2

Shoulders, shoulder blades set smoothly against chine and chest wall, forming neat junction with the body_____ 2

Chest, wide, and deep at heart with least possible depression back of the shoulders _____ 4

Back, appearing straight from withers to hips_____ 5

Loin, strong, broad, and nearly level laterally; width carried forward to junction with the ribs_____ 3

Hips, wide apart approximately level with the back; free from excess tissue_ 2

Rump, long, continuing with level of the back; approximately level between hip bone and pin bones. Pin bones well apart_____ 4

Thurls, wide apart and high_____ 2

Barrel; deep and long with well-sprung ribs. Individual ribs: Long, flat, wide apart, and free from excess tissue_____ 10

Thighs, incurving when viewed from side, thin and wide apart when viewed from rear; well cut up between the thighs_____. 2

Legs, flat flinty bone, tendons clearly defined; front legs straight, hind legs nearly upright from hock to pastern, set wide apart and nearly straight when viewed from behind. Pastern, strong and springy_____ 2

Hide, loose and pliable, and not thick, with oily feeling; hair, fine and silky_ 3

Tail, long, tapering with neat, strong, level attachment, neatly set between pin bones; fine bone and hair; nicely balanced switch_____ 2

Udder, uniformly fine in texture; free from meatiness; covered with pliable velvety skin_____ 3
    Veins prominent_____ 1
    Attachment to body, strong, long, and wide_____ 4
    Extending well forward; extending well up behind_____ 4
    Sole, level between teats_____ 2
    Teats, of even convenient size; cylindrical in shape; well apart and squarely placed, plumb_____ 3

Mammary veins, long, tortuous, prominent and branching with large numerous wells _____ 3

Secretions indicating color of product, indicated by the pigment secretion of skin which should be a deep yellow inclining toward orange in color; especially discernible in the ear, at the end of bone of tail, around the eyes and nose, on the udder and teats, and at the base of horns; hoofs and horns amber colored_____ 20

Color markings, a shade of fawn with white markings_____ 2

Size, mature cows, about 1,100 pounds in milking condition_____ 2

    Total_____ 100

Points

Forehead, broad between the eyes; dishing_____ 2

Face, of medium length; clean cut; feminine; the bridge of the nose straight _____ 1

Muzzle, broad, with strong lips; nostrils, large and open; jaws strong_____ 3

Ears, of medium size; of fine texture; well carried_____ 1

Eyes, large; full; mild; bright_____ 2

Horns, small; tapering finely toward the tips; set moderately narrow at base; inclining forward; well curved inward_____ 1

Neck, long; fine and clean at junction with the head; evenly and smoothly joined to shoulder_____ 3

Shoulders, slightly lower than the hips; smooth and rounding over tops; moderately broad and full at sides_____ 3

Points

Crops, full; level with the shoulders_____ 5
Chine, straight; strong; broadly developed, with open vetebræ_____ 4
Loin and hips, broad; level or nearly level between the hip bones; level and
   strong laterally; spreading from chine broadly and nearly level; hip bones
   fairly prominent_____ 6
Rump, long; broad with roomy pelvis; nearly level laterally; full above the
   thurls; carried out straight to tail head_____ 6
Pin bones, wide between; nearly level with hips_____ 2
Thurls, high; broad through_____ 2
Tail head and tail, strong at base without coarseness; the setting well back;
   tail long, tapering finely to a full switch_____ 2
Chest, deep; wide; well filled and smooth in the brisket; broad between the
   forearms; full in the foreflanks_____ 6
Barrel, long; deep; well rounded; strongly and trimly held up_____ 9
Flanks, deep; full_____ 2
Thighs, wide; deep; straight behind; wide and moderately full at the out-
   sides; twist well cut out and filled with development of udder; escutcheon
   well defined_____ 2
Mammary veins, large, tortuous, entering large orifices or double extension;
   with additional developments, such as branches and connections entering
   numerous orifices_____ 8
Udder, capacious; flexible; quarters even and of uniform texture, filling the
   space in the rear below the twist, extending well forward; broad and well
   attached_____ 14
Teats, well formed; plumb; of convenient size; properly placed_____ 4
Legs, medium length; clean; nearly straight; wide apart; firmly and
   squarely set under the body; arms wide, strong, and tapering_____ 4
Hair and hide, hair healthy in appearance; fine and soft; hide of medium
   thickness; mellow and loose_____ 8

    Total_____ 100

SCALE OF POINTS FOR JERSEY COW

DAIRY TEMPERAMENT AND CONSTITUTION

Head, 7:   Points
   A. Medium size, lean; face dished; broad between eyes; horns medium
      size, incurving_____ 3
   B. Eyes full and placid; ears medium size, fine, carried alert; muzzle
      broad, with wide-open nostrils and muscular lips; jaws strong___ 4
Neck, 4:
   Thin, rather long, with clean throat, neatly joined to head and
      shoulders_____ 4
Body, 37:
   A. Shoulders light, good distance through from point to point, but thin
      at withers; chest deep and full between and just back of forelegs_ 5
   B. Ribs amply sprung and wide apart, giving wedge shape, with deep,
      large abdomen, firmly held up, with strong, muscular develop-
      ment_____ 10
   C. Back straight and strong, with prominent spinal processes; loins
      broad and strong_____ 5
   D. Rump long to tail setting, and level from hip bones to rump bones__ 6
   E. Hip bones high and wide apart_____ 3
   F. Thighs flat and wide apart, giving ample room for udder_____ 3
   G. Legs proportionate to size and of fine quality, well apart, with good
      feet, and not to weave or cross in walking_____ 2
   H. Hide loose and mellow_____ 2
   I. Tail thin, long, with good switch, not coarse at setting on_____ 1

Udder, 26:   MAMMARY DEVELOPMENT
   A. Large size, flexible, and not fleshy_____ 6
   B. Broad, level or spherical, not deeply cut between teats_____ 4
   C. Fore udder full and well rounded, running well forward of front
      teats_____ 10
   D. Rear udder well rounded, and well out and up behind_____ 6
Teats, 8:
   Of good and uniform length and size, regularly and squarely placed____ 8

Milk veins, 4:   Points
    Large, long, tortuous and elastic, entering large and numerous orifices_   4
Size, 4:
    Mature cows, 800 to 1,000 pounds_____   4
General appearance, 10:
    A symmetrical balancing of all the parts, and a proportion of parts to
    one another, depending on size of animal, with the general appearance
    of a high-class animal, with capacity for feed and productiveness at
    pail _____   10

    Total score_____   100

GENERAL SCORE CARD FOR DAIRY COWS

(Based on indications of capacity for production) [1]

	Perfect score	Student's score	Instructor's score
ALLOWANCES			
Body capacity and size: [2]			
Body of such proportions in depth, width, and length as to permit sufficient scale, volume, and full weight for the breed represented___	*Per cent* 30	*Per cent* _____	*Per cent* _____
Dairy temperament:			
Showing a tendency to convert feed into milk instead of into body fat and flesh, as indicated by leanness, angularity, and an absence of excess fat, especially over the withers and back, through the thighs, brisket, and neck_____	30	_____	_____
Mammary system:			
Udder large and capacious, well attached to the body, extending well up behind and far forward, not pendulous, sound, and with uniform quarters, teats of such size and so placed as to be convenient for milking_____	40	_____	_____
Total score_____	100	_____	_____
DEDUCTIONS			
Health, constitution, and fertility:			
The above score is allowed regardless of the condition of health, constitution, and fertility of the animal. If defects in these points are apparent, deductions must be made to the extent that the defects warrant_____	0	_____	_____
Final score_____	100	_____	_____

[1] If scoring is to be made on basis of breed type, the score cards published by the breed associations should be used.

[2] Average weight as given by the respective breed associations as indicative of size for Ayrshire, 1,100 pounds; Brown Swiss, 1,250 pounds; Dutch Belted, 1,200 pounds; Guernsey, 1,100 pounds; Holstein-Friesian, 1,250 pounds; Jersey, 900 pounds.