

Body Condition Scoring and Judging in Dairy Cattle

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Introduction

Body condition scoring is a measurement of degree of fatness or thinness on the basis of animal health and nutritional state provided to the dairy cattle in the dairy farm.

It (BCS) is a simplest tool to evaluate the condition of dairy cattle, nutrition of herd, milk production and reproductive performance of the cattle. This technique is performed on the basis of scoring with accuracy in several developed as well as developing countries. This is the commonly used technique in which scores are given to respective animal on the basis of its health or body condition. Principle behind this includes visually observation of animal and with or without palpation of transverse process of vertebrae, tail head, pin bone, hook bone, spinous process, space between 12 and 13 rib and sacral crest (seven major skeleton check points) and assigning numeric value (score) to each point based on the fat deposition over these check points then comparison is done using the scale. For large producing farm routine monitoring of body condition plays important role to assess the dairy cattle for better production and it helps to detect the potential health problems occurrence which might reduce the milk production further.

Advantages of Body Condition Scoring

- BCS helps to measure the fat deposition irrespective to the body size of dairy cattle.
- BCS is appropriate measurement of deposited subcutaneous fat indicates the accurate fat cover (evaluate by the variation in fat cover on the given check points of dairy cattle)
- BCS provides the cheapest, easier and quickest method to compare the dairy cattle in a farms (Maintained under variable managemental and environmental condition)

- BCS for single dairy cattle might vary between observer as they have different observation prospective (subjective evaluation); high repeatability and reproducibility can be obtained between observers and worker (Croxtton and Stollard, 1976; Nicholsons and Sayers, 1986).

When to Score?

- Basic thumb rule includes scoring in every 30 days before breeding particularly, 90 days after breeding and 100 days before calving.
- Scoring should be done on the basis of stage of production of the dairy cattle.
- Scoring of calves should be from 6 months of age further perfume periodically for better assessment of their body growth.
- Heifers must be scored thrice before calving.
- In large herds scoring of at least 20 cows at each stage should be done to obtain reasonable estimate of the body condition in the entire herd.

Precautions during Body Condition Scoring

- ✦ Side observation of dairy cattle is considered as good observation for different check points.
- ✦ Stand right behind the animal to begin the scoring.
- ✦ During observation cattle must be in relaxed and do not having kind of stress may lead to inappropriate scoring.
- ✦ As long as the same individual evaluates the herd each time, a realistic estimate of scores will be produced.
- ✦ Scoring must be performed by the skilled person or veterinarian rather than the producer itself leads to biasness.

In our country generally BCS is done on the basis of 5-point scale in dairy cattle.

Score	Evaluation	Description of animal
1.	Very poor	Animal emaciated, deep cavities under tail head, no muscle cover between pelvis and skin all the bones very prominent.
2.	Poor	Animal appears weak, cavity under tail head marked; deep depression is loin area, some muscle mass evident all over the body.
3.	Moderate	Shallow cavity in tail head region seen, slight fatty tissue also evident, Pelvis can be felt easily, depression in loin region still evident. Ends of transverse processes of lumber region can be palpated with some pressure.
4.	Good	Fatty tissue can be felt all over the animal body (chine, loin and rump region). Skin appears smooth but pelvis can be felt. Ends of transverse processes can be felt but thick layer of tissue in the region evident. Only a slight depression evident in loin area.
5.	Fat	Folds of fatty tissue present all over, pelvis felt only with firm pressure. Transverse processes difficult to palpate. No depression in the loin area visible.



Judging Of Dairy Cattle

Introduction

Judging dairy cattle is a comparative evaluation of cattle includes the ranking based on the nearly close ideal dairy confirmation. Desirable dairy confirmation involves the functional traits associated with the higher milk production over a long period of life of productive cycle.

Score Card

The **Purebred Dairy Cattle Association (PDCA)** developed a score card that describes ideal dairy conformation. Five major categories are defined: frame, dairy character, body capacity, feet and legs and udder.

Dairy Cow Unified Score Card

1. Frame- 15%

The skeletal parts of the cow, with the exception of feet and legs, are evaluated.

Rump- long and wide throughout with pin bones slightly lower than hip bones. Thurls need to be wide apart and centrally placed between hip bones and pin bones. The tailhead is set slightly above and neatly between pin bones, and the tail is free from coarseness. The vulva is nearly vertical.

Stature- height, including length in the leg bones. A long bone pattern throughout the body structure is desirable. Height at the withers and hips should be relatively proportionate.

Front End- adequate constitution with front legs straight, wide apart and squarely placed. Shoulder blades and elbows need to be firmly set against the chest wall. The crops should have adequate fullness.

Rump, Stature, and Front End receive primary consideration when evaluating Frame.

2. Dairy Character- 20%

The physical evidence of milking ability is evaluated. Major consideration is given to general openness and angularity while maintaining strength, flatness of bone and freedom from coarseness. Consideration is given to stage of lactation.

Ribs- wide apart. Rib bones are wide, flat, deep, and slanted toward the rear.

Thighs- lean, incurving to flat, and wide apart from the rear.

Withers- Sharp with the chine prominent.

Neck- long, lean, and blending smoothly into shoulders. A clean-cut throat, dewlap, and brisket are desirable.

Skin- thin, loose, and pliable.

3. Body Capacity- 10%

The volumetric measurement of the capacity of the cow is evaluated with age taken into consideration.

Barrel- long, deep, and wide. Depth and spring of rib increase toward the rear with a deep flank.

Chest- deep and wide floor with well-sprung fore ribs blending into the shoulders.

The barrel receives primary consideration when evaluating Body capacity.

4. Feet and Legs-15%

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Feet and rear legs are evaluated. Evidence of mobility is given major consideration.

Feet- steep angle and deep heel with short, well-rounded closed toes.

Rear Legs: Rear View- straight, wide apart with feet squarely placed.

Side View- a moderate set (angle) to the hock.

Hocks- cleanly moulded, free from coarseness and puffiness with adequate flexibility.

Pasterns- short and strong with some flexibility.

5. Udder- 40%

The udder traits are the most heavily weighted. Major consideration is given to the traits that contribute to high milk yield and a long productive life.

Udder Depth- moderate depth relative to the hock with adequate capacity and clearance. Consideration is given to lactation number and age.

Teat Placement- squarely placed under each quarter and properly spaced from side and rear views.

Rear Udder- wide and high, firmly attached with uniform width from top to bottom and slightly rounded to udder floor.

Udder Cleft- evidence of a strong suspensory ligament indicated by adequately defined halving.

Fore Udder- firmly attached with moderate length and ample capacity.

Teats- cylindrical shape and uniform size with medium length and diameter.

Udder Balance and Texture- Quarters should be evenly balanced; soft, pliable and well collapsed after milking.

