Cattle Body Condition Scoring (BCS)

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Body Condition Scoring

- What is it?
- Why is it important?
- How is it done?
- Practice.

What is Body Condition Scoring?

- Body Condition scoring (BCS) is a process to identify and describe the relative amount of fat cover on cattle.
- The amount of fat cover in cattle indicates the relative amount of energy stores available.
- The most common system used is the one to nine condition scoring system. A condition score 1 cow is very thin and emaciated. A condition score 9 cow is very fat and obese.

Why is there Cattle Condition Scoring?

- The amount of fat cover in cattle indicates the relative amount of energy stores available.
- In production, under stress, or situations of low dietary input cattle utilize fat stores first to maintain. Once fat stores are depleted, muscle tissue is sacrificed.
- The ability to easily identify the body condition of cattle is critical in assessing in their nutrition/dietary intake.
- By having an accurate measure of cow's body condition, you'll have a good indicator of how to manage their nutrition to maximize their productivity, especially reproduction.

Why is there Cattle Condition Scoring?

- Reproductive Performance
- Health and performance of offspring
- Production Performance
- Full expression of stock's genotypic potential.
- Health and well-being of animal

Reproductive Performance

- For a cow to maintain a 365-day calving interval, she must rebreed by 82 days after calving (283-day gestation + 82-day postpartum interval = 365 days). On average, cows that calve in a *BCS 3 or 4* have difficulty exhibiting their first heat by 80 days after calving.
- Cows that calve in *BCS 5 or 6* tend to exhibit heat by 55 days after calving and; therefore, have a better opportunity to maintain a 365 day calving interval.

Health and Performance of Offspring

Thin cows of BCS 4 or less:

- Produce less colostrum
- Give birth to less vigorous calves that are slower to stand
- Calves have lower immunoglobulin levels (anti-bodies) impairing their ability to overcome early calf-hood disease challenges.
- Decreased lactation performance and therefore calf nutrition resulting in decreased weaning weights and muscle development

Full Expression of Stock Genetic Potential

- The phenotypic expression of animal's full genetic value is masked and stunted

- "The purebred seedstock producer is in business of producing genetics that look and perform at highest level." C. Hinman 1953

Health and well-being of animal

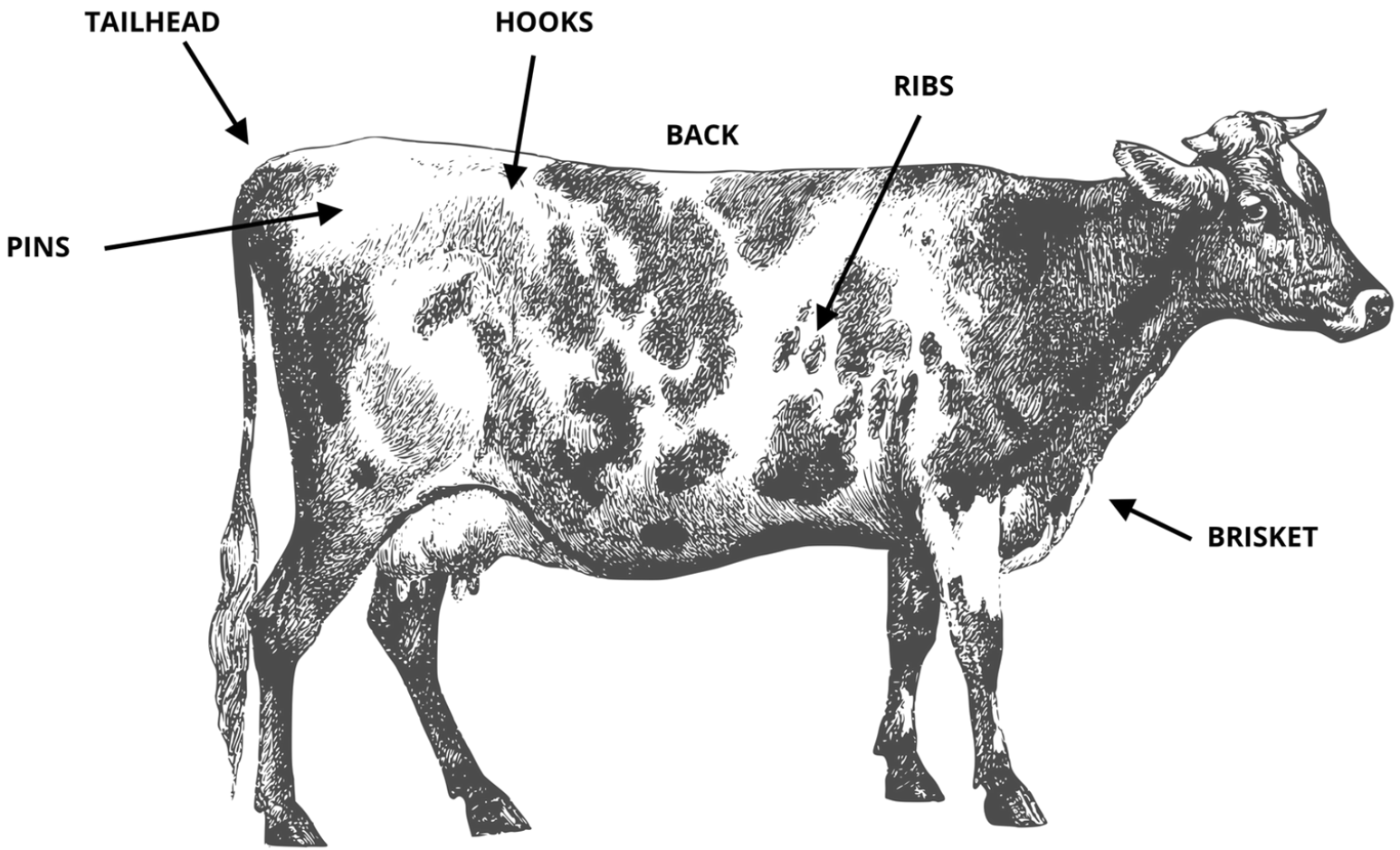
- Thin cows are not healthy and have compromised immune systems.
- Thin, undernourished, and emaciated cattle suffer.
- As stewards of the breed it is our duty to ensure that no animals in our breed unduly suffer through our neglect, ignorance, or misguided frugality.

How it is Done….
Body Condition Scoring

How it is done.

- Body condition scoring can be done using visual indicators or a combination of visual and palpation of key bone structures for amounts of fat
- Key areas for evaluation are the backbone, ribs, hips, pin bones, tailhead, and brisket (next slide).
- Palpating cows for fatness along the backbone, ribs, and tailhead will help refine skills to visually score body condition.
- If body condition scoring is new to you, focus on separating cows into thin, moderate, and fat groups without worrying about the numerical score. With experience, you will connect the “look and feel” of your cows to a body condition score.
- Hair can affect visual assessment.

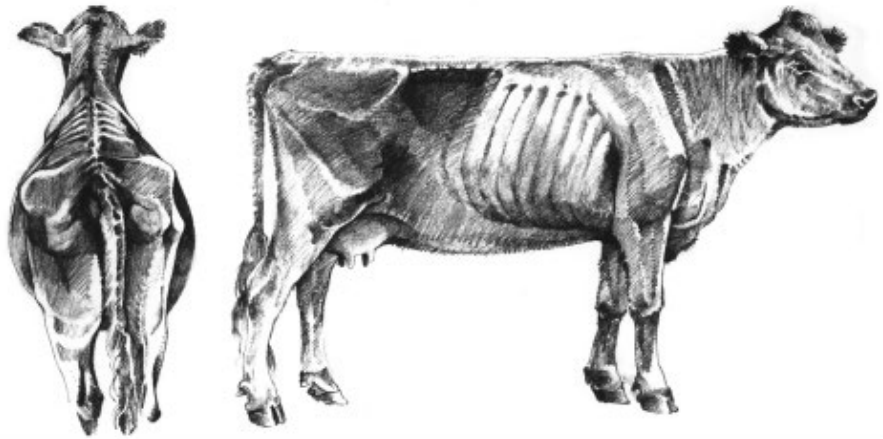
- There are 6 areas on the animal that we visually assess the amount of condition (fat):
  - the brisket
  - ribs
  - back
  - hooks
  - pins
  - tailhead



BCS	Description
1 Emaciated	No palpable fat over spinous processes, transverse processes, hip bones, or ribs. Tail head and ribs project quite prominently.
2 Poor	Tail head and ribs are less prominent. Individual spinous processes are still sharp to the touch, but some tissue cover on dorsal portion of ribs.
3 Thin	Ribs are individually identifiable but not as sharp to the touch. Obvious palpable fat along spine and over tail head with some tissue cover on dorsal portion of the ribs.
4 Borderline	Individual ribs are no longer visually obvious. The spinous processes can be identified individually on palpation but feel rounded rather than sharp. Some fat cover over ribs, transverse processes, and hip bones.
5 Moderate	Cow has generally good overall appearance. On palpation, fat cover over ribs feels spongy and areas on either side of tail head have palpable fat cover.
6 High Moderate	Firm pressure required to feel spinous processes. A high degree of fat is palpable over ribs and around tail head.
7 Good	Very spongy fat cover over ribs and around tail head. "Pones" beginning to be obvious. Some fat around the vulva and in crotch.
8 Fat	Cow very fleshy and over-conditioned. Spinous processes almost impossible to palpate. Cow has large fat deposits over ribs and around tail head, and below vulva. "Pones" are obvious.
9 Extremely Fat	Cow looks patchy and blocky. Tail head and hips buried in fatty tissue and "pones" of fat are protruding. Bone structure no longer visible and barely palpable. Animal's mobility might even be impaired by large fatty deposits.

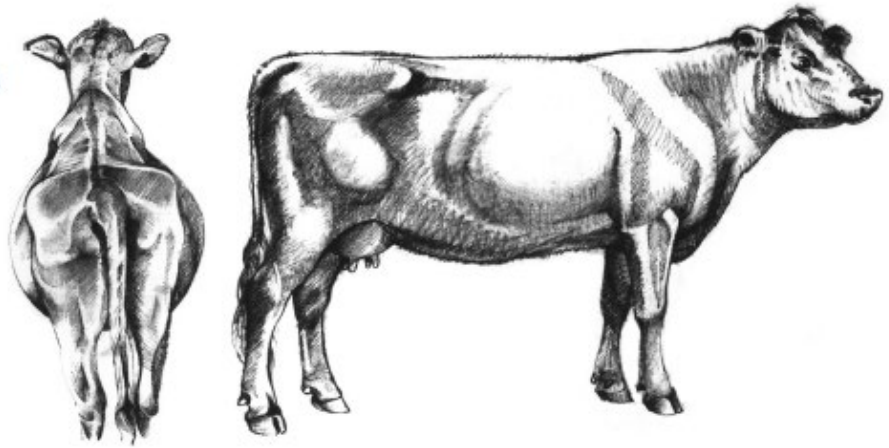
BCS = 3

Liveweight: 980 lbs
11% Body Fat



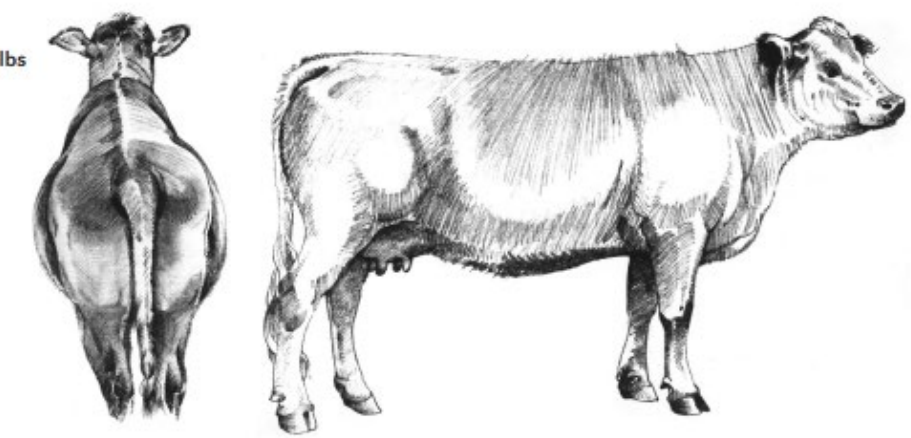
BCS = 5

Liveweight: 1,130 lbs
19% Body Fat

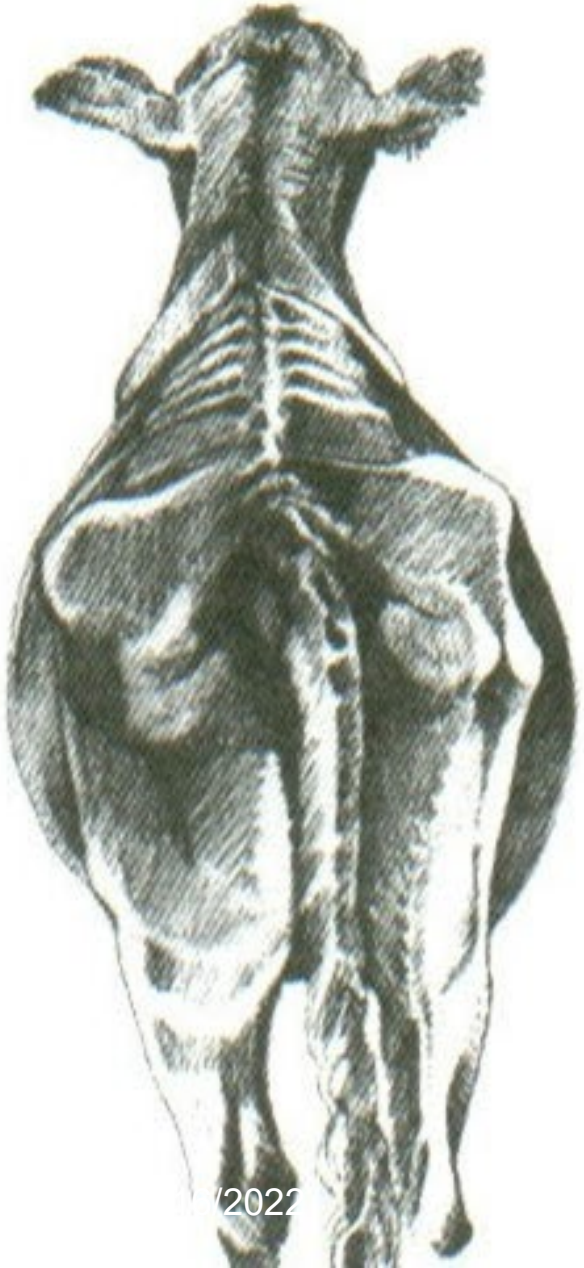


BCS = 7

Liveweight: 1,280 lbs
26% Body Fat



BCS = 3



BCS = 5

BCS = 7

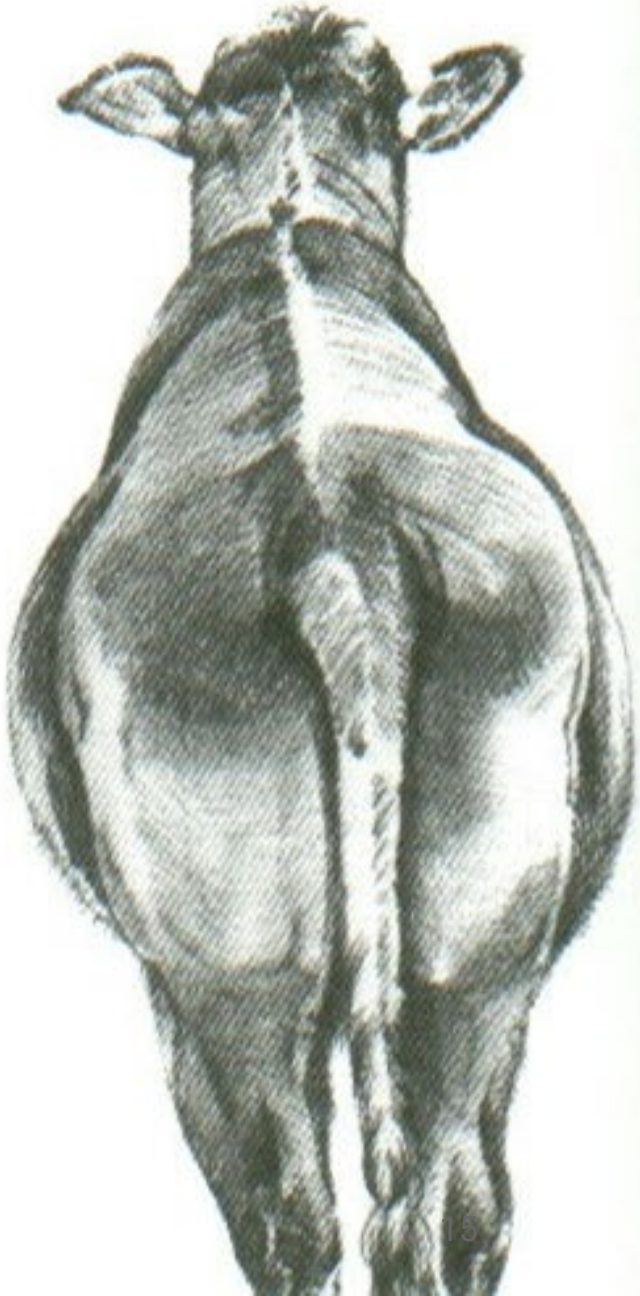


Table 2. Visual Description of Key Body Locations Associated With Each Condition Score

Reference Point	Body Condition Score								
	1	2	3	4	5	6	7	8	9
Physical weak	yes	no	no	no	no	no	no	no	no
Muscle atrophy[a]	yes	yes	yes	slight	no	no	no	no	no
Outline of spine visible	yes	yes	yes	slight	no	no	no	no	no
Outline of ribs visible	all	all	all	3-5	1-2	0	0	0	0
Fat in brisket and flanks	no	no	no	no	no	some	full	full	extreme
Outline of hip and bones visible	yes	yes	yes	yes	slight	no	no	no	no
Patchy fat around tailhead	no	no	no	no	no	slight	yes	yes	yes

[a]Muscles of loin, rump, and hindquarter are concave, indicating loss of muscle tissue.
Adapted from Pruit and Momont, South Dakota State University, 1988.

When to Body Condition Score the Cow Herd

Although evaluation of body condition can be looked at as an ongoing process, there are key times when body condition scoring should be considered:

Time	Reason
Late Summer	Condition scoring the cow herd at this time may be used in planning management strategies such as early weaning or supplementation programs for cows grazing warm-season pastures or range that are decreasing in quality. Scoring cows at this time is probably more important in range areas as compared to areas that would have both cool- and warm-season pastures and crop residues. Young cows need to be examined closely, as they are likely to be the females that are losing condition, and early weaning this group may be the management option. Also, if pasture quality and quantity is decreasing at a rapid rate due to environmental conditions, weaning the whole calf crop may be necessary.
Fall	Condition scoring cows in the range area in the fall is critical. Because of feed resources, it is more difficult to get condition back on cows prior to calving in the range area where the feed resources are primarily warm-season grasses. Condition scoring cows at this time will help in planning an economical winter supplementation program to get females back to the target BCS. If young females are thin, consider early weaning their calves to allow them to regain condition.
Weaning Time	Pay particular attention to young cows weaning their first calves, as they are most likely to be thin at this time. In areas where crop residues are part of the feed resource, thin cows will typically regain condition.
45 Days After Weaning	Gives a good idea how fast cows are "bouncing back" after weaning. Thin cows should be gaining back condition if cow type is matched with the feed resources. This is especially true if cows have both warm- and cool-season pastures or crop residues to graze. It will take longer for cows grazing dry native range to gain back body condition.
90 Days Before Calving	Last opportunity to get condition back on cows economically. This would be the time to separate thin cows from cows in good condition and feed them separately. Pay attention to young cows.
Calving	If cows are thin, you may want to change the pre-calving feeding program or weaning date. Thin mature cows at calving may indicated a mismatch between genetics and feed resources, especially if cows received adequate diets and they are thin. It also may mean that calving and/or weaning are not matched with the resources or genetics. It is difficult to economically get condition on cows after calving. It takes large amounts of high quality feed.
Breeding	Thin cows at this time may indicate a poor match of calving season to feed resources. Maybe calving occurs too early in the spring.

BCS 3

BCS 6

BCS 5

BCS 4

Body Condition Scoring Resources

ADCA Body Condition Scoring: https://dextercattle.org/wp-content/uploads/2020/02/bcs-scoring-1.pdf

University of Nebraska - Lincoln https://extensionpublications.unl.edu/assets/pdf/ec281.pdf

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DISCUSSION
QUESTIONS