



**SOUTH DAKOTA STATE
UNIVERSITY EXTENSION**

A General Guide to Body Condition Scoring (BCS) Beef Cattle

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Body condition score (BCS) is a practical management tool used to evaluate the **energy reserves of beef cattle**. The 9-point scoring system ranges from **1 (emaciated) to 9 (very obese)**. By evaluating fat cover and muscling at key anatomical locations, producers can use BCS to estimate an animal's energy reserves and relative body fat. Body condition is closely associated with animal performance and is particularly important to reproductive success. Body condition score provides an **estimate of relative body fat reserves**. Based on NRC estimates, empty body fat increases from approximately 4% at BCS 1 to 34% at BCS 9, with each one-unit increase in BCS representing approximately 3.8 percentage units of empty body fat.

Relative Body Fat	
BCS	% Body Fat
1	4%
3	11%
5	19%
7	26%
9	34%

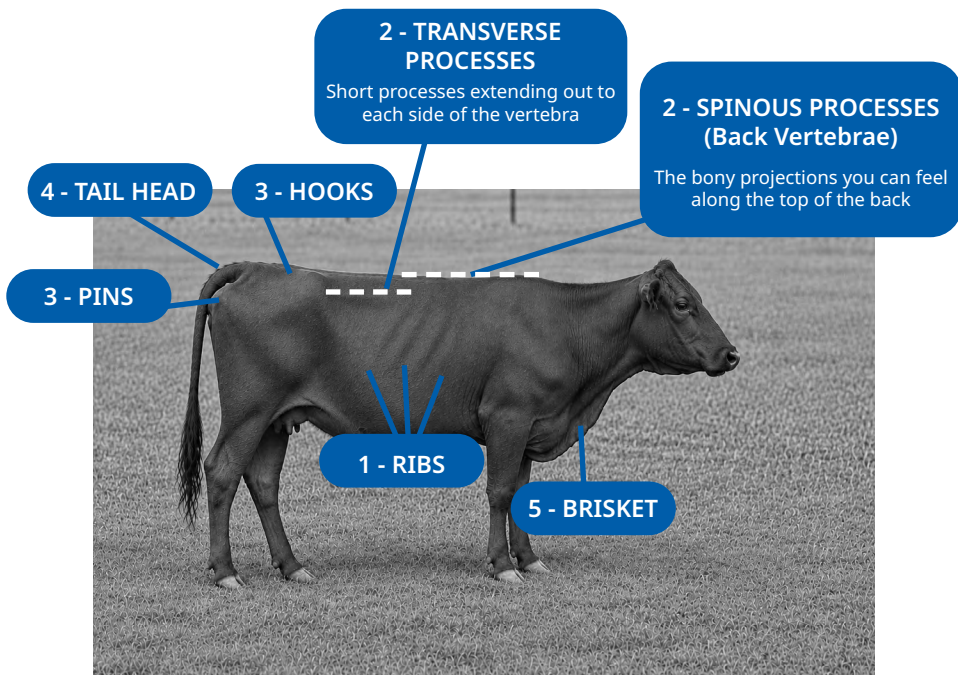
For most mature beef cows, a **BCS of approximately 5 to 6** is desirable, although the optimum varies with stage of production, age, and management goals. When improvement in BCS is needed, allow adequate time to achieve the desired change. A one-unit increase in BCS requires approximately **7% of body weight gain**—about **100 pounds for a 1,400-pound cow**.

For example, if 120 days are available from weaning to calving, a 1,400-pound cow would need to gain approximately **0.8 pound per day** to increase one BCS, **in addition to meeting the nutrient requirements for pregnancy**.

The most economical time to improve body condition in mature cows is generally **after weaning and during mid-gestation**, when nutrient requirements are lowest during the annual production cycle. Evaluating BCS at key management points allows producers to identify cows that are too thin or over-conditioned and make timely nutritional adjustments before reproductive performance is compromised. BCS should be monitored frequently during the winter-feeding period, as losses in body condition can be increasingly difficult and costly to replace as calving approaches and nutrient requirements increase.

Key points for using BCS effectively:

- **Score consistently.** Use the same criteria and, when possible, the same evaluator.
- **Score cattle throughout the production cycle.** Key times include weaning, mid-gestation, before calving, and before breeding.
- **Keep records.** Track BCS over time to identify trends and guide nutritional management.
- **Consider age, frame size, breed type, and hair coat.** These factors can influence a cow's appearance and BCS assessment. Seasonal changes in hair coat, particularly the difference between winter and summer coats, can also affect visual scoring.
- **Observe cattle in a natural setting.** Avoid scoring cattle in a working chute, where restricted viewing and posture can reduce accuracy.



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Key areas to evaluate body condition:

1. Ribs
2. Back including spinous and transverse processes of the vertebra
3. Hook and pins
4. Tail head
5. Brisket



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BCS 1 – Emaciated.

The cow is severely emaciated and may appear physically weak. The shoulder, ribs, backbone, hooks, and pins are sharply defined with no detectable fat and severe muscle atrophy. This condition is rare and often associated with disease, parasitism, and severe nutritional deficiency.



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BCS 2 – Very Thin.

The cow appears emaciated but not weak, with no detectable fat cover and significant muscle atrophy over the shoulder, loin, rump, and hindquarters. The ribs, backbone, hooks, and pins are prominent and easily identified.



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BCS 3 – Thin.

The cow appears thin, with no brisket fat and some muscle atrophy over the shoulder, loin, rump, and hindquarters. Slight fat cover is beginning to develop, but the last three ribs (11th, 12th, and 13th), remain clearly visible, and the backbone, hooks, and pins are prominent.



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BCS 4 – Borderline.

The cow appears thin, with the last two ribs (12th and 13th) visible and slight muscle atrophy still evident over the shoulder, loin, rump, and hindquarters. Shoulder muscles remain prominent, particularly when the animal moves. The back vertebrae are rounded and detectable with slight pressure, while the hooks and pins have minimal fat cover but remain easily identified.



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BCS 5 – Moderate.

The cow has slight brisket fat and normal muscling throughout. The last two ribs (12th and 13th) are generally visible only when gut fill is reduced, and the backbone can be felt with firm pressure. A thin layer of fat covers the shoulder, reducing visible muscles definition during movement. The hooks and pins appear smooth but remain distinguishable, and fat is beginning to fill around the tail head.



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BCS 6 – Good.

The cow has noticeable brisket fat and a smooth appearance with normal muscling. The ribs are well covered and not visible, and the backbone can be felt only with firm pressure. The hooks and pins appear rounded and smooth, with noticeable fat deposition around the tail head.



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BCS 7 – Fleshy.

The cow has a full brisket and smooth appearance, with the ribs completely covered by a uniform layer of fat. Substantial fat cover over the shoulder results in smooth, fluid muscle movement as the animal walks. The topline begins to appear square, and the pins are embedded in fat. Distinct fat deposits, or pones, begin to develop on either side of the tail head.



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BCS 8 – Obese.

The cow has a short, thick-appearing neck and a brisket distended with fat. Bone structure is obscured. A thick layer of fat covers the shoulder, obscuring muscle movement as the animal walks, and the topline appears square and blocky, with heavy, spongy fat cover throughout. Prominent fat pones surround the tail head, fat is evident in the udder, and mobility may be impaired.



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BCS 9 – Very Obese.

Rarely observed, the cow appears extremely square and blocky, with heavy fat cover obscuring all bone structure. The neck appears short and thick, and the brisket is distended with fat. Large fat pones surround the tail head, significant fat is deposited in the udder, and mobility may be seriously impaired.

Key Takeaways:

- **Consistency is more important than perfection.** The exact BCS assigned to an individual cow does not need to be perfect. Consistent scoring over time allows producers to identify changes in body condition and make timely nutritional adjustments.
- **You do not need to score every cow.** A representative sample, such as **25% of the herd every two weeks during winter feeding**, can provide useful information about changes in herd condition.
- **Focus on the group, not individual cows.** A simple tally by BCS is sufficient to evaluate the nutritional status of the herd and identify when management changes may be needed.
- **Keep records simple.** Record the group or herd, number of cows evaluated, date, and the number of cows within each BCS and summarize the results.

Example:

<u>Herd name</u>		<u># in group</u>	<u>Date</u>	
BCS 3	BCS 4	BCS 5	BCS 6	BCS 7
II	III I	III III III II	III IIII	I
2	6	17	9	1
$3 \times 2 = 6$	$4 \times 6 = 24$	$5 \times 17 = 85$	$6 \times 9 = 54$	$1 \times 7 = 7 = 6$
35 total				
$(6 + 24 + 85 + 54 + 7) \div 35 = 5 \text{ BCS}$				

Example Herd Summary:

- Cows evaluated: 35
- Average BCS: 5.0
- % BCS ≤ 4 : $((2+6) \div 35) \times 100 = 23\%$
- % BCS 5-6: $((17+9) \div 35) \times 100 = 74\%$
- % BCS ≥ 7 : $(1 \div 35) \times 100 = 3\%$

In this example, the herd averaged a BCS of 5, yet 23% of the cows scored BCS 4 or less. This illustrates why evaluating the **distribution of BCS within the herd** provides more useful management information than the herd average alone. With nearly one-quarter of the herd at BCS 4 or less, these cows should be identified, sorted from the main herd, and managed separately to effectively improve body condition.

Resources

- "Body Condition Scoring Beef Cows: A Tool for Managing the Nutrition Program for Beef Herds." (PDF) University of Nebraska– Lincoln, 2014. <https://extensionpubs.unl.edu/publication/ec281/2014/pdf/view/ec281-2014.pdf>
- Guide to Body Condition Scoring Beef Cows and Bulls.(PDF) Kansas State University, 2016. https://bookstore.ksre.ksu.edu/pubs/guide-to-body-condition-scoring-beef-cows-and-bulls_MF3274.pdf
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