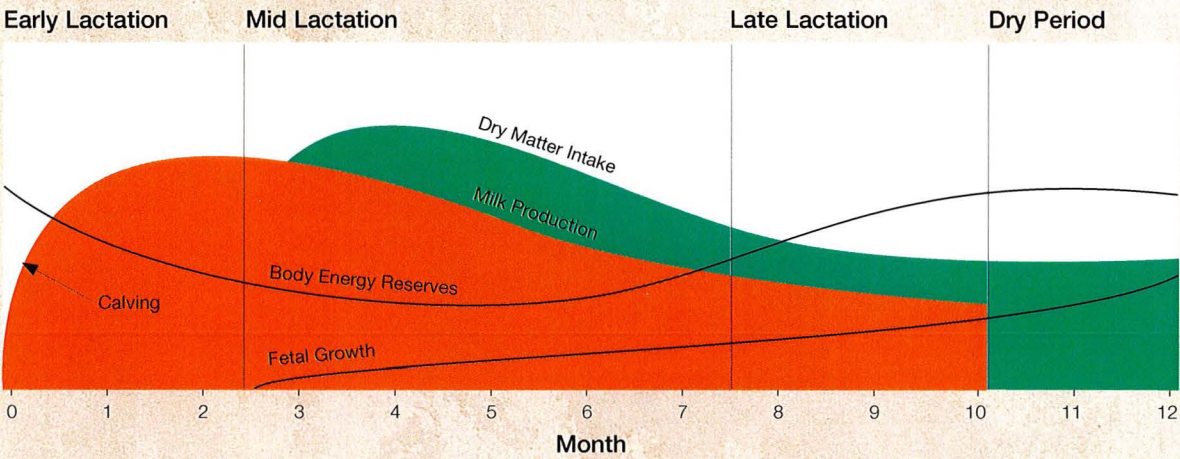
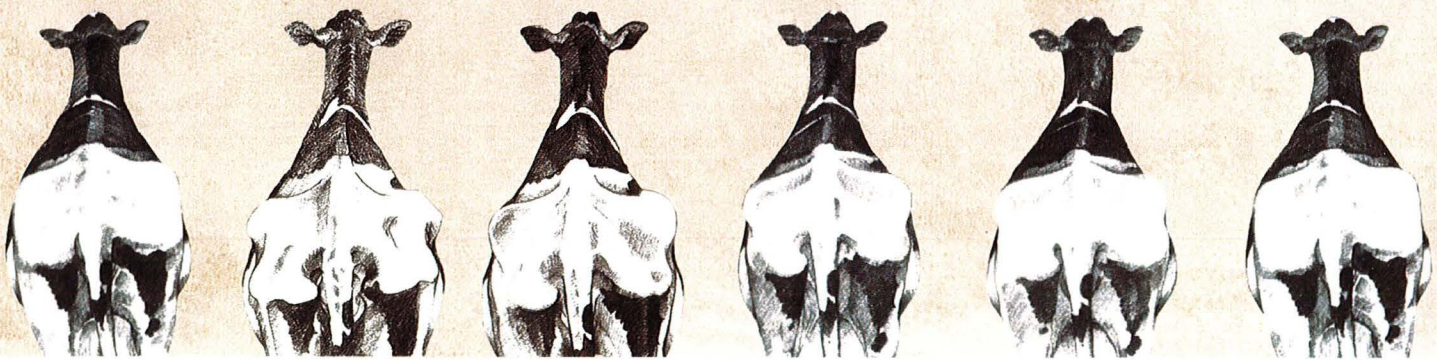


# Body Condition Scoring In Dairy Cattle

## Lactation Cycle



## Desired Body Condition Score

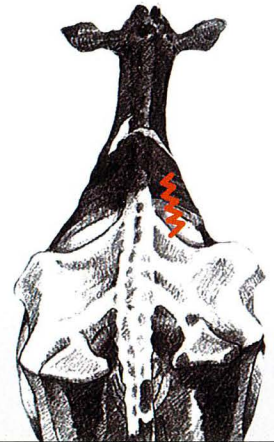
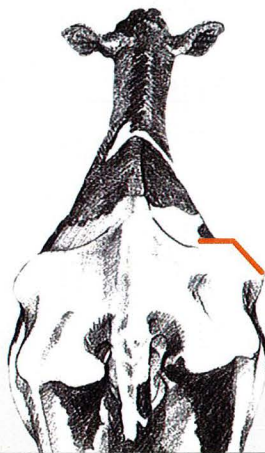
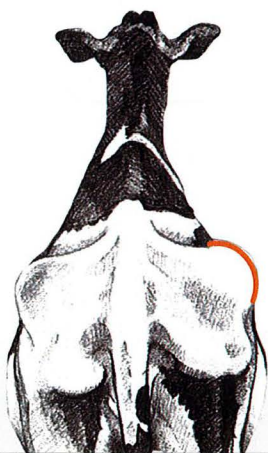


# Dairy Body Condition Score (BCS) Flow Chart

First look at the pelvic area from the side. Check line from hooks, to the thurl, to the pins.



**[V]** If the line forms a flattened V then BCS  $\leq 3.0$ .



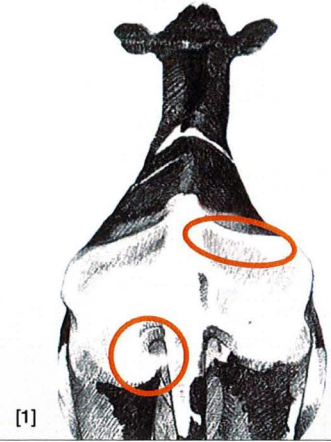
**[1]** If hooks rounded BCS = 3.0.

**[2]** If hooks angular BCS  $\leq 2.75$ . Check pins. If pins padded BCS = 2.75.

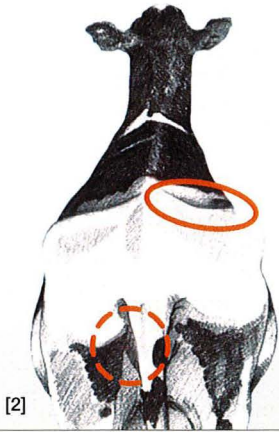
**[3]** If pins angular BCS  $< 2.75$ . If palpable fat pad on point of pins BCS = 2.50.

**[4]** If no fat pad on pins BCS  $< 2.50$ . Examine the short ribs. Look for corrugations along the top of short ribs as fat covering disappears. If corrugations visible halfway between tip and spine of short ribs BCS = 2.25. If corrugations visible three-quarters of the way from the tip to the spine BCS = 2.0. If thurl prominent and spine saw-toothed BCS  $< 2.0$ .

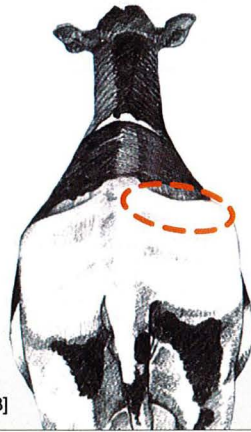
**[U]** If the line forms a crescent or flattened U, consider BCS  $\geq 3.25$ .



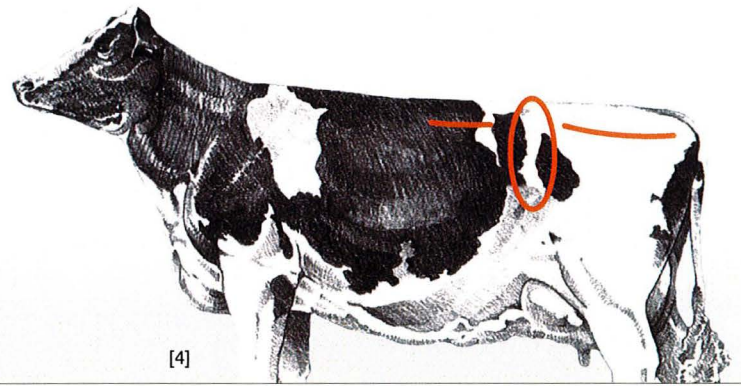
[1]



[2]



[3]



[4]

- [1] If sacral and tailhead ligaments visible BCS = 3.25.
- [2] If sacral ligament visible and tailhead ligament barely visible BCS = 3.50.
- [3] If sacral ligament barely visible and tailhead ligament not visible BCS = 3.75.  
If sacral and tailhead ligaments not visible BCS  $\geq 4.0$ .
- [4] If thurl flat BCS  $> 4.0$ . If tip of short ribs barely visible BCS = 4.25.  
If thurl flat and pins buried BCS = 4.5. If hooks barely visible BCS = 4.75.  
If all bony prominences well-rounded BCS = 5.0.

Elanco

**Rumensin**®

Elanco

**Rumensin CRC**™

# Body Condition Scoring In Dairy Cattle

Body condition refers to the relative amount of subcutaneous body fat or energy reserve in the cow. Wildman et al.<sup>1</sup> developed a five-point (1 to 5) scoring system to measure the relative amount of this subcutaneous body fat. Most body condition scoring (BCS) systems in dairy cattle use the five-point scoring system with quarter-point increments. Body condition scoring of dairy cattle is an important management tool for maximizing milk production and reproductive efficiency while reducing the incidence of metabolic and other peripartum diseases.

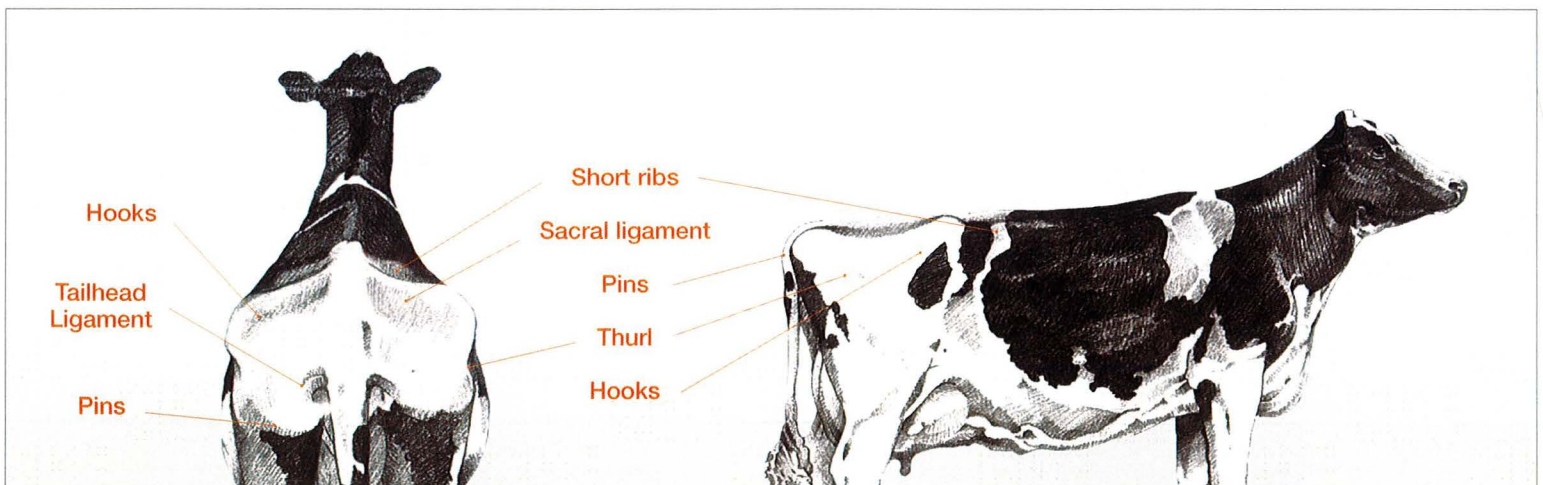
Over-conditioning at the time of calving (BCS > 4.0) often results in reduced feed intake and increased incidence of peripartum problems. Under-conditioning at calving (BCS < 3.0) often results in lower peak milk yield and less milk for the entire lactation. Also, cows should not lose more than 1.0 body score during early lactation. Excessive loss of body condition in early lactation has been shown to reduce reproductive efficiency.

Dr. James Ferguson and coworkers<sup>2</sup> at the University of Pennsylvania have developed an organized process for BCS dairy cows. This system utilizes a flow chart which directs the scorer to view certain anatomical sites of the pelvic and loin area. Use of the flow chart helps develop consistency and repeatability in BCS. This system concentrates its accuracy toward the mid-range scores (2.5 to 4.0), which include most cows. The mid-range BCS are also the most critical for making management decisions. Scores above or below this range indicate significant problems. Exact scoring of extremes in BCS is less critical.<sup>3,4</sup>

While the majority of cows conform to the described criteria, a few cows may not fit exactly. The final BCS may need to be adjusted based upon consideration of observations from all designated areas. Also realize that using the quarter-point system, many cows will fall between two scores (i.e., 2.75 and 3.0). Under those circumstances the scorer will need to make a judgment as to the closest score. Quarter-point differences in scores are not significant under most circumstances.

The first described step in the flow chart is to determine if the line from the hook bone to the thurl to the pin bone is angular (V) or crescent (U). This step is often the most difficult of the scoring process, especially if the cow is near the 3.0 or 3.25 score. If uncertain of a V or U, proceed to the next step. View the cow from the rear. Observe the amount of padding over the hook and pin bones and the prominence of the tailhead and sacral ligaments. From this point, the scorer can usually determine the appropriate score. When a BCS has been determined, the scorer should continue the evaluation process at least an additional step to confirm the final score.

Anatomical areas used in the flow chart are identified below.



1. Wildman EE, Jones GM, Wagner PE, Boman RL, Trout HF, Lesch TN. A dairy cow body condition scoring system and its relationship to selected production variables in high producing Holstein dairy cattle. *J Dairy Sci.* 1982 65:495.

2. Ferguson JD, Galligan DT, Thomsen N. Principal descriptors of body condition score in Holstein cows. *J Dairy Sci.* 1994 77:2695-2703.

3. Roche J.R., Friggens N.C., Kay J.K. et al. Invited review: Body condition score and its association with dairy cow productivity, health, and welfare. *Journal of Dairy Science* 2009; 92: 5769-5801.

4. López-Gatius et al. Effects of body condition score and score change on the reproductive performance of dairy cows: a meta-analysis. *Theriology* 59:3; 2003:801.

Elanco would like to acknowledge David McClary, DVM and John Kube for assistance on this project.

Illustrations by Barb Spike.

Elanco, Rumensin and Rumensin CRC and the diagonal bar are trademarks owned by or licensed to Eli Lilly and Company, its affiliates or subsidiaries.

© 2015 Eli Lilly and Company, or its affiliates.

CADRYRAC00022

10-16-2015