

Body Condition Scoring in Beef Cows

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Body condition is a better indicator of nutritional status in beef cows than weight because weight is impacted by fetal growth, placenta, and increased fluids associated with pregnancy. Although body condition is a subjective measure, producers can use a set of guidelines to enhance consistency and accuracy in their evaluation.

Previous research has indicated that cows in moderate body condition (5 on a 1-9 scale) at calving have better quality colostrum and higher subsequent conception rates than thin cows (Odde et al. 1986; Selk et al. 1986). If high quality nutrition is provided to mature cows with a body condition score (BCS) 4 at calving, research would indicate they will have acceptable conception rates. However, producers need to evaluate the cost of providing that high quality feed. Many times green grass is available right before breeding and may be an economical source of protein and energy. If harvested feeds and expensive supplements have to be delivered, then maintaining more condition prior to calving may be more cost effective.

First calf heifers should not be allowed to drop below a BCS 6 prior to calving. These heifers continue to have nutrient requirements for growth. The additional requirements of lactation make providing enough energy for weight gain very difficult which can cause underweight heifers to not conceive the second calf. Losing replacement cows at this point is very costly due to the inputs already spent on developing the heifer.

Monitoring body condition allows producers to develop better supplementation strategies. Using excess fat cover acquired during summer grazing, providing supplemental feed before cows use too many reserves, and only providing as much supplement as needed to gain or maintain desired condition can reduce the amount of money spent on supplementation, maintain desired condition, and improve reproductive results during the subsequent breeding season.

There are at least three key times producers want to do a thorough BCS assessment on their cows to determine if management changes need to be implemented. One to two months before weaning, producers should assess the BCS of the cows. If the group as a whole, is below the desired BCS, particularly if the feed resources after weaning are not sufficient to improve condition, producers may need to wean earlier than planned or change the feed resource available to the cows. Another important time to evaluate BCS for needed management changes is a month before calving. If the group is averaging below the desired body condition, this is an easy time to increase the quality of the feed enough to add some condition on the cows. This is not a good time to use weight gain as an indicator of cow nutritional status. The fetus alone is gaining 1 pound/day at this time. The third time to assess the BCS of the group for management changes is just after calving. Lactation has started and the energy needs of the cow have doubled. Within 83 days, the cow will have to be bred again to stay on a 365 d calving interval. Is she in adequate

condition now and what feed resources will be available to her between now and breeding? The diet that sustains a bred, dry cow is not enough to maintain condition on a cow who now has the nutrient requirements associated with lactation. Some producers who have struggled to maintain enough condition on cows to attain acceptable breeding rates during this time have delayed spring calving to closer to the time green grass is available. Producers may find this to be a desirable option but also need to think through how those decisions impact other facets of the operation such as weaning date, weaning weight, quality of forage during breeding, marketing options, as well as other parameters.

Assessing BCS in time to make changes when necessary is a great management tool. However, producers need to be careful to assess the herd as a whole. Making management decisions for the whole herd based on two or three thin cows can be costly. Decisions should be made on the average of the group, or the thin cows could be managed separately from the remainder of the herd as they may be the very young and oldest cows in the herd.

While the BCS scale is 1-9, producers will likely rarely ever see a cow in a BCS 1 and will hopefully not see a cow in a BCS 2 or 3 very often. The same is true of a cow in a BCS 9. There is typically about 75 pounds of fat cover associated with each BCS and that cover can be used in place of supplement when cows are in a BCS greater than 5. Although many producers like to see cows in a BCS 6, it can be expensive to maintain cows in a BCS 6 if expensive feed resources have to be purchased to do so.

If a producer did not need to supplement cows to maintain or improve their body weight, but chose to supplement anyway, how expensive is it? If the producer had 500 head of gestating, non-lactating cows and fed 1 pound of cattle cubes costing \$400/ton for two months, it would result in spending \$6000 on unnecessary supplement. By the same token, not supplementing enough and having cows lose body condition and have poor subsequent reproductive results is also costly. Therefore, being able to accurately assess BCS is extremely important.

A useful resource when determining BCS is extension circular 281 Body Condition Scoring Beef Cows: A Tool for Managing the Nutrition Program of Beef Herds <http://extensionpublications.unl.edu/assets/pdf/ec281.pdf>. This publication gives objective criteria when making a subjective decision on assigning a BCS. Producers need to evaluate fat cover over the ribs, palpate the transverse spinal processes along the back, and evaluate the amount of cover over the tail head and brisket. Evaluating the barrel of the animal can be deceiving as it does not indicate fat cover but rather represents gut fill. A cow on low quality forage is likely to have a lot of gut fill and an extended rumen which can give the impression the cow is in better condition than she is to the untrained eye.

Assessing BCS can improve supplementation strategies, resource management, and improve the opportunities for reproductive success.

Literature Cited

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Selk, G. E., R. P. Wettemann, K. S. Lusby, and R. J. Rasby. 1986. The importance of body condition at calving on reproduction in beef cows. OSU Agric. Exp. Sta. Publ. 118:3163-3169.