



Ruminant Nutrition Notes

**Extension Animal Husbandry
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Body Condition Scoring is Still Your Most Important Management Tool

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There are many management tools you should be using as you make the day to day decisions it takes to make a successful beef enterprise. Many of these tools are very important, but none is more important than body condition scoring.

Body condition scoring is a system of evaluating the amount of fat reserve a cow is carrying. The system is a simple visual assessment of cow fatness, with several areas of the body observed including the brisket, the ribs, the tail head and across the top of the back (Figure 1).

The body condition scoring system used in beef cattle is on a 1 to 9 scale with 1 being extremely thin, and 9 being extremely fat. Other classes of livestock, and other parts of the world use different systems such as a 1 to 5 scale (commonly used in dairy) or a 1 to 10 scale (sometimes used in Europe and uncommonly in the US). When you discuss this topic you need to make sure that everyone involved is using the same 1 to 9 scale. Usually for practical application we use the whole numbers, but in some cases, such as in research, we use the half scores as well.

The scoring is usually done with only visual evaluation and that is one of the nice things about it. Cattle don't need to be gathered or worked through a chute for you to evaluate their body condition. Some factors such as how thick their hair coat is, and how full of feed they are can have an impact on visual scores and that should be considered. For example, if you are highly dependent on ribs in your scoring a thick hair coat might obstruct your view and cause you to score high. This is the big reason for looking at various areas. If you have cows in a chute or want to get fine tuned, or are just learning the system, it is helpful to feel for fat over the ribs, around the backbone, etc.

I like the 1 to 9 scale partly because it is easy to teach to producers. Many producers are unfamiliar with the system, but do observe the condition of their cows. Most all cattle producers have an idea if their cattle are thin, ok, or fat, and that is in essence a three point scale. The 1 to 9 scale is simply 3 divisions on the thin category (1 to 3), 3 divisions on the "ok" category (4 to 6), and 3 divisions on the fat category (7 to 9).

Descriptions of the scores follows:

- BCS 1 – Extremely thin and weak. Severe muscle wasting. Animal is near death.
- BCS 2 – Extremely thin but not weak. Muscle wasting is evident in the hind quarter.
- BCS 3 – Very thin. All ribs and back bone easily visible and no apparent fat deposits anywhere on the body. Individual vertebrae are visible along the back bone. Some muscle wasting is evident in the hind quarter.
- BCS 4 – Thin. Ribs and backbone visible, but individual vertebrae not visible. No muscle wasting. Sunk in appearance around the tail head.
- BCS 5 – Moderate condition. Last two or three ribs usually visible, and little fat is evident in the brisket or around tail head, but area around the tail head is not sunken.
- BCS 6 – Smooth appearance. Ribs not easily visible. A small amount of fat is evident around the tail head and in the brisket.
- BCS 7 – Fleishy appearance. Brisket and tail head have considerable fat deposits, and the back has a flattened appearance.
- BCS 8 – Obese. Neck appears short. Back is flat with dimples at the backbone. A lot of fat is present in the brisket and around the tail head.
- BCS 9 – Extremely obese. Appearance is similar to an 8, but more exaggerated. Brisket is extremely full of fat and large fat deposits are found around the tail head.

How you use the system will vary depending on the size of your operation and the level of management you wish to employ. Every producer should visually assess body condition every time they look at their cows. Once you get familiar with the system, you should be able to just take one look at the herd and come pretty close to the average body condition score. You also should keep in mind the cows that consistently have the lowest scores as they sometimes give you an indication that the condition of the whole herd is slipping.

If you are a larger producer with a higher level of management interest then it is a good idea to keep a record of each cow's body condition score when they go through the chute, and especially at the pre-breeding working, and at pregnancy check time. These body condition scores give you a good indicator of the adequacy of the nutritional program, and will help you in evaluating pregnancy rates.

The reason managing body condition is so important is that it influences general health and reproductive success. If cattle are very thin (BCS 3 and down) they may have a depressed immune system leading to more disease and parasite loads, and they also will have lower quality and quantity of colostrum which will reduce calf health, vigor and survival. Cows in a body condition score of 4 and lower will also have lower reproductive performance. There will always be individual cows that will be exceptions to the rule, but on a herd basis, having average score lower than 5 will mean reduced breeding rates.

There has been a lot of research on critical body condition scores, and all that work points to having cows in a 5 or better score at all times to optimize reproductive rate. In a study

from Texas, 1041 cows were body condition scored at the start of the breeding season. Those cows with a score of 4 had a 58% breeding rate, those with a 5 had an 85% breeding rate, and those with a 6 score had a 95% breeding rate. In a study from Florida at three locations 624 cows were scored at the pregnancy check. Cows with a BCS of 3 had a 43% breeding rate, cows with BCS of 4 had a 66% breeding rate, and cows with a BCS of 5 had a 94% breeding rate. There are many other studies available that agree closely to these results.

I talk to a lot of producers that don't have a controlled breeding season, and often get the statement that "I don't need to worry about body condition and its influence on breeding rate because I leave my bull in all the time. That way none of my cows comes up open." This may be true, but a thin cow in this kind of year-round calving system is more likely to have more than a year interval between calves, which also costs you money. Regardless of your management program, managing to maintain good body condition will pay off.

It is important to discuss ideal body condition scores at different times in the lifecycle. For mature cows you need to shoot for a minimum body condition score of 6 at calving, 5 at the start (and end) of the breeding season, and 4 at weaning. For young cows (first and second calf) you need to target about a half score higher than the mature cows with 6 to 7 at calving, 5 to 6 during the breeding season, and not less than a 5 at weaning. Heifers tend to lose condition faster and are harder to put condition back on after calving than mature cows, so don't let them get thin in the first place.

For most operations the working range in body condition will be BCS 3 to 7. It should be very unusual to have 1s, 2s, 8s or 9s in a good production system. The very low scores are an indicator of malnutrition, parasites, or perhaps very old age. The high scores will normally only be seen in barren cows, or in extreme over feeding.

The good thing about the body condition scoring system is that it is simple, inexpensive, and requires no investment in any equipment. Because of that it is something you can start doing today! I encourage you to walk through your cows and write down some body condition scores. Start by trying to estimate the average for the whole herd, and identify the high scoring and the low scoring cow. If you find the average score is less than a 5, if the minimum score is less than a 4, or if the high score is higher than a 7 then you should take steps to alter your management program to get closer to the target scores.

If you want to study this topic in more detail there are many good resources on the web. Several web publications I would recommend can be found at:

<http://edis.ifas.ufl.edu/AN001>

<http://www.ext.vt.edu/pubs/beef/400-795/400-795.html>

<http://osueextra.okstate.edu/pdfs/F-3283web.pdf>

Figure 1. Areas to evaluate during body condition scoring.

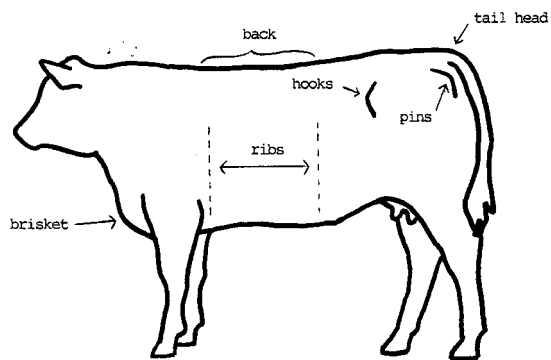


Photo 1. A body condition score 3 cow.



Photo 2. A body condition score 4 cow.



Photo 3. A body condition score 5 cow.



Photo 4. A body condition score 6 cow.



Photo 5. A body condition score 7 cow.

