

# AG NEWS & VIEWS

## LIVESTOCK

# Body Condition Score as a Tool for Cow Herd Management

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**T**echnology has provided agriculture with new, creative and efficient ways to accomplish production goals. However, sometimes traditional tools still provide effective ways to manage the cow herd at different stages of production. One of these traditional tools is

body condition scoring (BCS). Most cattle producers are familiar with BCS and its impacts on fertility. However, how can BCS be used as a tool to prevent negative impacts on fertility?

Body condition score is used to assess the energy status (fat cover) of an animal. This

process is done with visual observation of an animal and applying a value (BCS score) to that animal. The scoring system used is a 1 to 9 point scale with 1 = emaciated (very thin) and 9 = obese (very fat). This scoring system is a subjective measurement, and how one person scores may be different compared to another scorer. It is critical that scoring is done consistently by the same person over time in order to effectively manage your cow herd and feed resources. Producers target their cows to score between a 5 and 6 so a cow has the best opportunity to produce a calf every year. A change in 1 BCS is equivalent to 90 pounds of body weight. It is not recommended to compare BCS across herds that were scored by different people because

not every person evaluates an animal the same or gives the same score.

It is not always feasible to BCS each individual cow within a group and make sorts. In this case, score half of the group to estimate an average score for the whole group. If there are just a few thin cows in the group, determine why they are thin. Is it because of age (young vs. old), lameness or sickness, or is there a parasite problem?

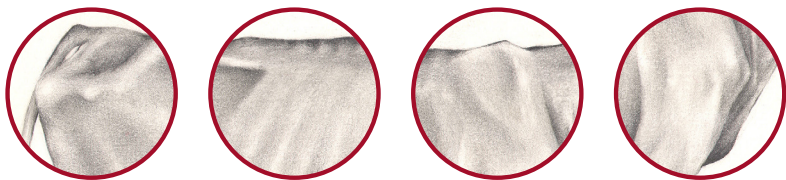
Body condition scoring is a practical tool and an important practice that allows producers to quickly estimate the energy status of cows at that point in time. With this information, decisions can be made to manage an individual or a group of cows separately without having to supplement the whole herd, and ultimately you'll save on feed cost. 🐮

# What is Body Condition Score?

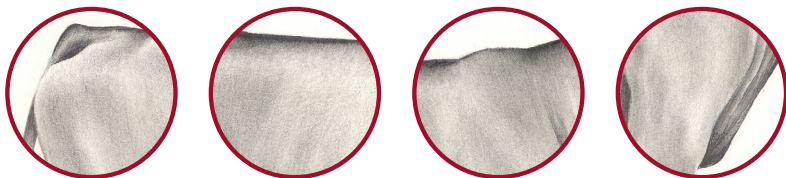
Body condition score gives us a snapshot in time of the animal's energy status. This indicates how well the animal is doing based on production stage and diet. Body condition score should be assessed on cows at different times of the year so that you can make management decisions based on their current condition. The three most critical times of the year are at calving, mid-lactation and mid-late gestation.

## BODY CONDITION SCORE

**1** **Hips:** no palpable fat **Ribs & Spine:** no palpable fat  
**Shoulder:** front of shoulder is slightly pointed  
**Brisket:** no palpable fat



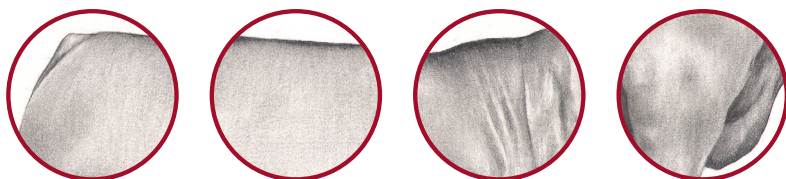
**3** **Hips:** some palpable fat cover **Ribs & Spine:** ribs still individually identifiable but with rounded edges, some palpable fat along spine and over dorsal portion of ribs  
**Shoulder:** front of shoulder is slightly pointed **Brisket:** some palpable fat cover



**56 percent of BCS 3 cows became pregnant after 75-day breeding season.**

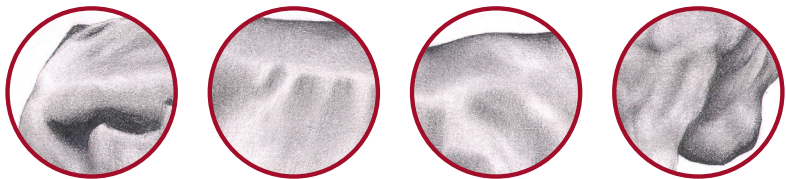
According to a study conducted, in part, by Ryon Walker, Ph.D., at Louisiana State University, the ideal body condition score for breeding cows is 5 or 6. The rate of pregnancy after a 75-day breeding season was 88 percent in cows with a BCS of 5 and 89 percent in cows with a BCS of 6. Rates dropped to 56 percent in cows with a BCS of 3.

**7** **Hips:** very spongy fat cover, developing pones (fat pockets)  
**Ribs & Spine:** ribs and spine not visible, very spongy **Shoulder:** very spongy, hard to distinguish front of shoulder **Brisket:** very spongy



**67 percent of BCS 7 cows became pregnant after a 75-day breeding season.**

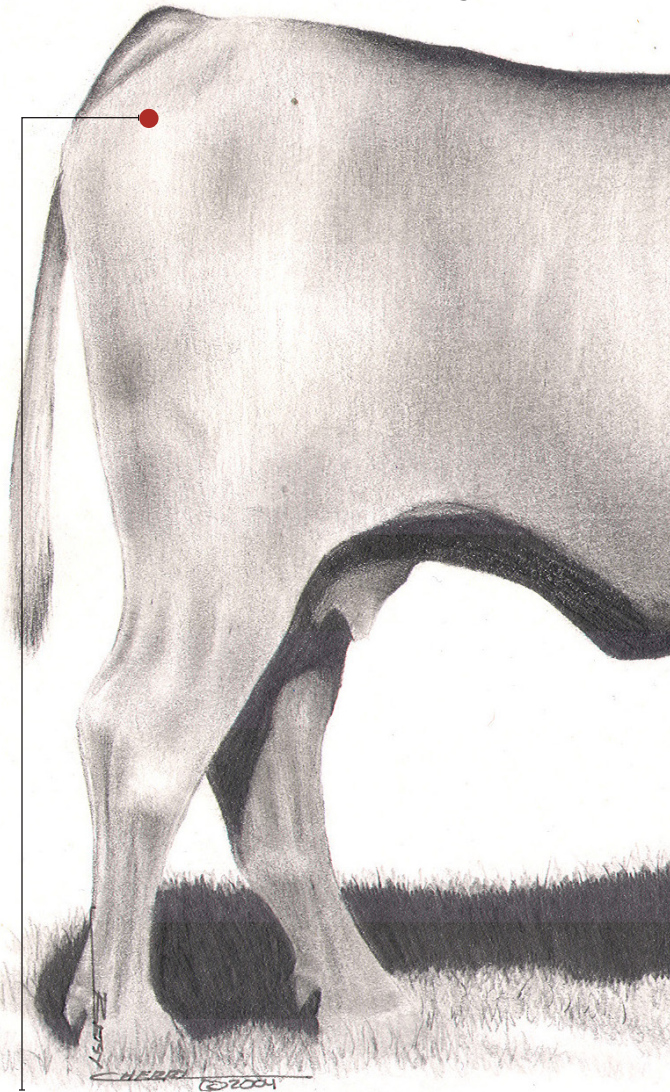
**9** **Hips:** tail head and hips buried in fatty tissue, pones are protruding  
**Ribs & Spine:** excessively spongy along back and over ribs, no bones detectable **Shoulder:** excessively spongy, shoulder looks blocky  
**Brisket:** excessive amount of fat hanging between front legs



**5** A BCS of 5 or 6 is the ideal body condition for breeding and calving. The large cow below shows a BCS of 5.



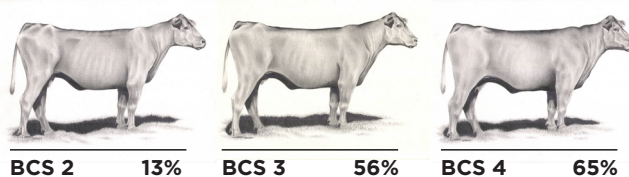
**88 percent of BCS 5 cows became pregnant after a 75-day breeding season.**



### HIPS

Palpable fat cover is detected over hips with some signs of fat pockets developing around the tail head.

### 75-DAY BREEDING SEASON PREGNANCY RATES

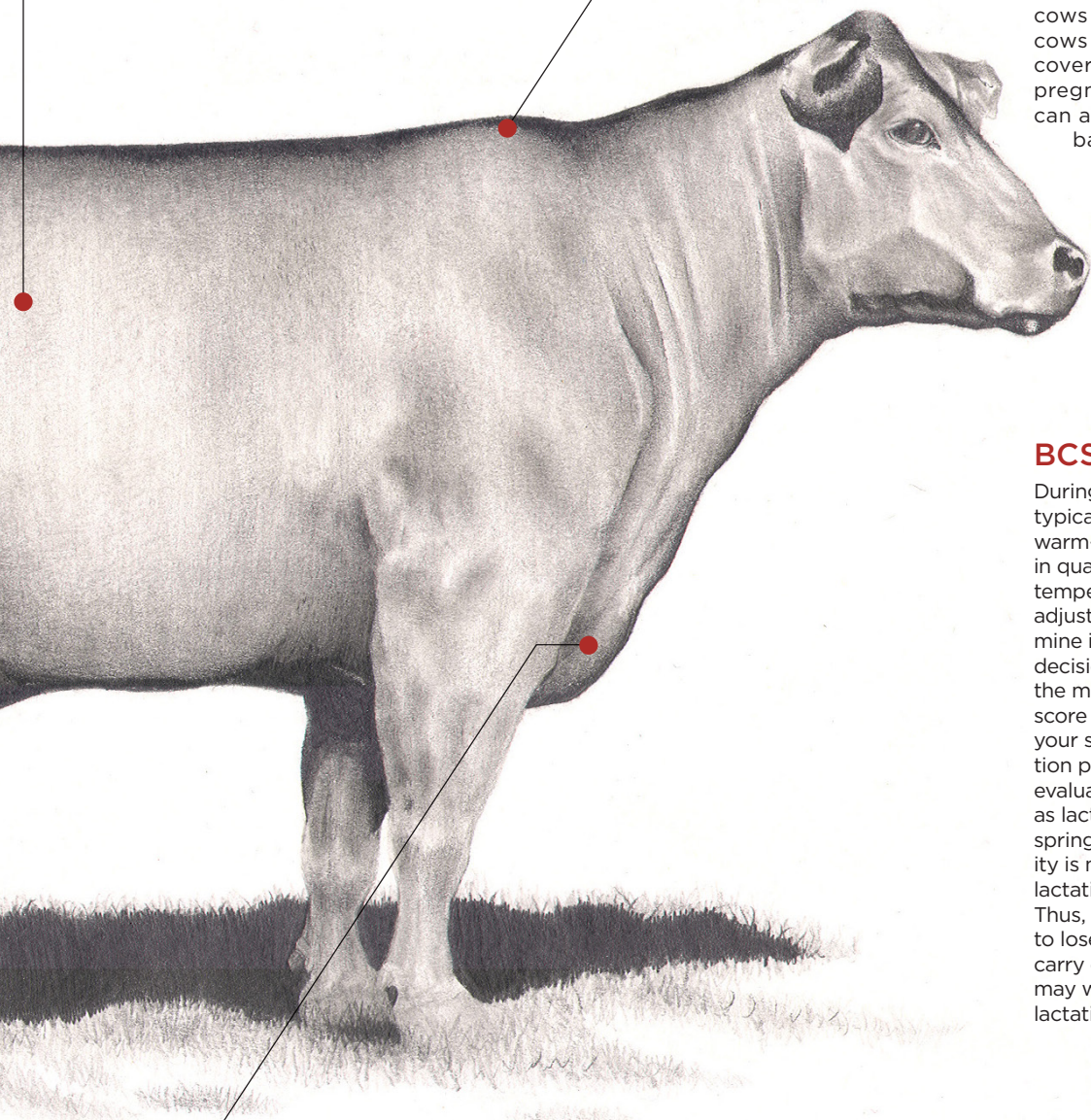


**RIBS & SPINE**

Developing a spongy feel over ribs and spine. Spine is not visible, but the last two ribs are still visible.

**SHOULDER**

Some palpable fat cover is developing. The front of the shoulder is rounded, not pointed.



**BRISKET**

Starting to develop palpable fat cover in the brisket. Fat cover is smooth to the look with no developing fat pockets yet.

**When to Assess**

The three most critical times of the year to assess body condition score are at calving, mid-lactation and mid-late gestation.

**BCS AT CALVING**

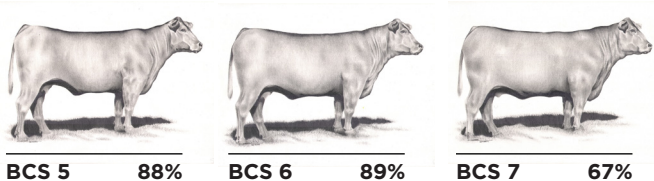
Many studies have correlated cow BCS at calving and the likelihood of getting pregnant during the breeding season. For example, cows in a BCS of 5 or greater have a better chance of getting bred early during the breeding season compared with cows in a BCS of less than 5. In addition, cows that have too much condition or fat cover (BCS greater than 7) can have lower pregnancy rates. This snapshot at calving can allow you to make adjustments in diet based on the time of year and calving season (spring or fall) to improve a cow's plane of nutrition and body condition prior to the breeding season. Young lactating females that are thin at calving will struggle to improve their body condition prior to breeding, unless they are on full feed.

**BCS AT MID-LACTATION**

During mid-lactation, the breeding season is typically wrapping up. For spring-calving cows, warm-season grasses are starting to decrease in quality because of lack of moisture and hot temperatures. This time of year will allow you to adjust your summer grazing strategy and determine if supplementation or other management decisions are needed. For fall-calving cows, it's the middle of winter. Based on the condition score of your cows, you may need to adjust your supplementation program. At this production phase, it is critical that condition scores be evaluated in younger producing females, such as lactating 2- and 3-year-olds. Oftentimes in spring-calving cows, warm-season forage quality is not sufficient to meet the requirements for lactation and growth of a lactating 2-year-old. Thus, most of those younger females will begin to lose body weight and condition, which will carry over into the next calving season. You may want to consider early weaning the young lactating females if this occurs.

**BCS AT MID-LATE GESTATION**

Mid-late gestation is the most critical and most convenient time to body condition score. This is typically done at weaning or a follow-up working after weaning where cows are palpated for pregnancy, dewormed and possibly vaccinated. At this stage, cows are approximately three to four months prior to calving, which allows the opportunity to adjust management so the majority of cows calve in a BCS range of 5 to 6. Cows can then be sorted into a fleshy and thin group using BCS, if pastures and resources allow. This prevents overfeeding or underfeeding certain groups, which ultimately saves money.



Images provided by University of Minnesota Extension Beef Team

Source: Demeterco et al., 2017



**RYON WALKER, PH.D.**

# Meet Our Newest Livestock Consultant

Ryon Walker grew up in central Texas, where he enjoyed hunting, team roping, showing steers and heifers, and FFA. In 1996, he interned for Leachman Cattle Company in Billings, Montana. There, he developed an interest in the cow-calf sector, particularly in the field of reproductive physiology. He also managed Butler and Son Charolais while earning his master's degree. His primary focus is nutrition and reproductive management practices to improve fertility and longevity in the cow herd, as well as identifying traits that assist in selecting replacement females that are more efficient on forages.



**Work History:** Before joining the Noble Research Institute in June 2017, Walker spent six years with the University of Minnesota as a beef extension specialist.

He conducted programs and workshops across the state, and he worked with producers on ways to extend their fall grazing season and evaluate cow size and efficiency within their herds. He also spent nearly seven years with Louisiana State University as an assistant then associate professor conducting research in the areas of cow feed efficiency, alternative feeding strategies during the backgrounding period, and management strategies to improve reproductive efficiency.



## Education

- **Bachelor of Science** in Animal Science, Texas A&M University, 1997

- **Master of Agriculture** in Animal Science, Texas A&M University, 2000
- **Doctor of Philosophy** in Reproductive Physiology, Colorado State University, 2004