Weaning Time: The Importance of Collecting Mature Weight and BCS

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With the busy Fall season quickly approaching, many producers are making their game plans on how to attack this hectic season. For most, the efficient opportunity to "kill two birds with one stone" is rarely overlooked. However, a few producers have been missing this opportunity. One chance spring calving producers have to capture efficiency is by recording mature weights and body condition scores (BCS) on their cowherd when weaning and vaccinating the calf crop, since both cows and calves will be gathered during this process. This is also the most meaningful time to collect both mature weights and body condition scores of your cowherd; because this is the time when they are most nutritionally stressed. Not only will the completion of this data collection chore provide better management of the cowherd, but it will also provide critical information used to calculate Maintenance Energy (ME) EPDs when this data is submitted to the RAAA.

The RAAA's introduction of the ME EPD, the first EPD to measure nutritional efficiency, is just one more example of the cutting edge technology Red Angus breeders have access to through this progressive breed association. The RAAA has the most complete and accurate description of cattle in the industry, and the ME EPD is another tool for producers to use in selecting herd sires and dams.

The ME EPD predicts differences in energy requirements of mature daughters of an individual, and is expressed in Mega-calories per month. Differences in maintenance energy requirements can translate into differences in the amount of feed required to maintain body weight. The collection of both body condition scores and cow weight at weaning add to the volume, accuracy and integrity of data available to you and ultimately, the commercial cattle industry.

The ME EPD is calculated using both BCS and cow weight at weaning, along with the maternal contribution to weaning weight (Milk EPD). **Weights without body condition scores are not used to calculate ME EPDs.** Please note: both measures must be included in order for either to be useful in the Red Angus National Cattle Evaluation.

A group of cows that produce the same pounds of calf with less feed resources will really have an impact on the profitability of any cowherd. Because feed costs account for the single largest expense in any cattle operation, cattle producers can increase profits by lowering the costs of production. Using ME EPDs as a part of your selection criteria can make a positive change in profit by developing a more uniform cowherd with fewer differences in body condition from cow to cow due to maintenance energy.

The Beef Improvement Federation guidelines state mature cows should ideally calve in a BCS of 5 for optimal post partum reproduction as well as optimal milk production. Research shows it takes about 70-100 pounds to change a cow one body condition score. Table 1 illustrates what a producer should look for when assigning BCS to cows. Although there may be differences among producers in assigning BCS, the differences are accounted for as long as one person is responsible for assigning scores for all of the cattle in a group.

ME Requirement Comparison

Cow X and Cow Z are in the same pasture, treated the same throughout the year and, based on their milk EPDs, produce the same amount of milk. Both weigh 1250

pounds, but Cow X is a BCS 3 and Cow Z is a BCS 5. Which cow is more efficient in her use of energy?

Cow Z has a lower maintenance requirement EPD and is better able to utilize the nutrients available. This is calculated by using BCS and weight to determine the nutrient use gap between these two cows. By adjusting for BCS, Cow X will actually have her weight adjusted up to a BCS 5 equivalent (she gets an observation that makes her heavier than her actual weight of 1250 pounds). Cow Z would have her weight adjusted down if her body condition was more than BCS 5 making her lighter than her 1250 pound actual weight, but since she is a BCS 5 she has no adjustment. Remember, the ME EPD is not an efficiency ratio. It represents the actual feed a cow needs to consume to maintain herself.

Thin cows are more likely to work themselves out of the breeding season due to poor reproduction. This is closely correlated to her nutritional state during peak lactation and prior to rebreeding. Research has shown that cows that are less than BCS 5 going in to the breeding season have a longer post partum interval (calving to first estrus or heat) as well as having dramatically lower conception rates when they finally cycle.

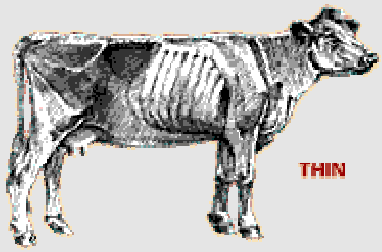
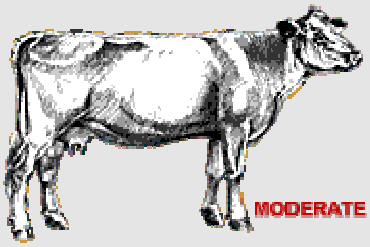
More inputs, both time and money, are required to improve body condition. Research shows mature dry cows convert supplement at a rate of 6:1 or even greater, depending on the quality of the supplement. If a producer decides to feed Cow X supplemental hay to raise her BCS to 5 prior to calving, she would have to eat an additional 1200 pounds of hay to gain body two body condition scores in addition to meeting her normal maintenance requirements. Assuming hay costs $80 per ton or $0.04 per pound, Cow X will cost $48 more to feed. Cattle like Cow Z will wean the same amount of calf without losing as much condition. Production costs are decreased by using the ME EPD in herd genetic selection to determine cows that utilize available resources more efficiently.

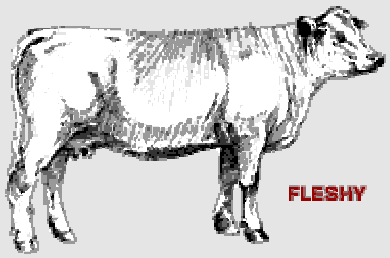
By collecting body condition scores, you increase your profit through monitoring the cowherd more closely. You can use this to adjust and optimize production while minimizing costs. The reporting of these data adds to the Red Angus database for calculating Maintenance Energy EPDs. Collecting and reporting both Body Condition Scores and cow weights along with calf weaning information when returning data to the Association increases the precision of the most accurately described breed of cattle available, RED ANGUS.

Table 1

SYSTEM OF BODY CONDITION SCORING (BCS) FOR BEEF CATTLE

Condition	BCS	Description
Thin	**1**	Emaciated – Cow is extremely emaciated

		with no palpable fat detectable over spinous processes, transverse processes, hipbones, or ribs. Tail-head and ribs project quite prominently
	2	Poor – Cow still appears somewhat emaciated by tail-head and ribs are less prominent. Individual spinous processes are still rather sharp to the touch, but some tissue cover over dorsal portion of ribs
	**3**	Thin – Ribs are still individually identifiable but not quite as sharp to the touch. There is obvious palpable fat along spine and over tail-head with some tissue cover over dorsal portion of ribs.
Borderline	**4**	Borderline – Individual ribs are no longer visually obvious. The spinous processes can be identified individually on palpation but feel rounded rather than sharp. Some fat cover over ribs, transverse processes, and hipbones
Optimum/ Moderate 	**5**	Moderate – Cow has generally good overall appearance. On palpation, fat cover over ribs feels spongy and areas on either side of tail-head now have palpable fat cover
	6	High Moderate – Firm pressure now needs to be applied to feel spinous processes. A high

		degree of fat is palpable over ribs and around tail-head.
Fat	**7**	Good – Cow appears fleshy and obviously carries considerable fat. Very spongy fat cover over ribs and around tail-head. In fact, “rounds” or “pones” beginning to be obvious. Some fat around vulva and in crotch.
	**8**	Fat – Cow very fleshy and over-conditioned. Spinous processes almost impossible to palpate. Cow has large fat deposits over ribs and around tail-head and below vulva. “Rounds” or “pones” are obvious.
	9	Extremely fat – Cow obviously extremely wasty and patchy and looks blocky. Tail-head and hips buried in fatty tissue and “rounds” or “pones” of fat are protruding. Bone structure no longer visible and barely palpable. Large fatty deposits might even impair animal’s mobility.