

## **“Time to Judge the Book by its Cover” or Time to Body Condition Score Your Cows**

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Many times we suggest that you look past the surface of many factors affecting beef production, but one example of when you need to study the surface is the condition score of your cows. Cow body condition score (BCS) serves as an important barometer of success or failure as you evaluate the success of your forage and nutrition programs. Research has also highlighted the predictive value of condition scores as it impacts a cow's post-partum return to estrus. Cow BCS at calving is one of the tools that has been shown to be a better measurement of cow condition and reproductive performance than weight. Cows and heifers in thin body condition at calving time are slower to rebreed, produce less colostrum, may not have sufficient nutrient reserves for maximum milk production. Tables 1-3 contain the results of three research trials from Kansas, Missouri and Oklahoma which illustrate the importance of calving cows at a condition score of 5 to insure a high percentage cycling at the initiation of breeding. This quick return to estrus is even more important in programs using synchronization and AI.

Table 1. Effect of Body Condition at Calving on Postpartum Interval and Conception Rate

<u>Body Condition Score*</u>	<u>Postpartum Interval (days)</u>	<u>Conception Rate (%)</u>
3.5-4.0	88.5	70
4.5	69.7	80
5.0	59.4	94
5.5-6.0	51.7	100
6.5	30.6	100

\* Condition scores converted to 1-9 system. Houghton,P.L. et.al. 1990

Table 2. Effect of body condition score on number of cows in heat at beginning of breeding season

<u>BCS at Calving</u>	<u>Days after Calving</u>	
	60	90
	<u>Cows in Heat (%)</u>	
Thin (3-4)	46	66
Optimum (5-6)	61	92

Table adapted from Whittier and Stevens, 1993. Missouri Cooperative Extension Service G2230

Table 3. Effect of Body Condition on Return to Estrus\*

<u>Cow group</u>	<u>Body Condition Score</u>		
	<u>&lt; 4</u>	<u>5</u>	<u>&gt; 6</u>
Hereford X Angus	10.1 %	61.3 %	77.0%
Simmental Cross	36.4%	65.1%	82.8%

\* Percent of cows with luteal activity 85 d postpartum Tinker, E.D., 1989

At a time of year when fall calving herds are finishing up and spring calving cows are in mid-gestation, it is an excellent time to condition score cows. Fall calving cows should be at a BCS of 5 or better. Cows with a condition score below that will require extra care and nutrition if they are to cycle and breed during the upcoming breeding season. The spring calving cows with 90 -120 days before calving is a group which has the opportunity to easily gain back some condition if the winter nutrition program is adequate. Continued monitoring of body condition during the winter can provide the clues that your program is on track or if additional supplemental nutrition could be required to achieve a condition score of 5 or better before calving.

Spring calving cows which receive inadequate nutrition and lose body condition during the winter months tend to produce less colostrum which results in weaker calves that are more susceptible to disease. Additionally, cows calving in thin body condition are likely to produce lighter weight, weaker calves. Table 4 indicates the amount of daily gain and total gain necessary to change condition score from weaning to calving.

Table 4. Body weight gains (lbs) required in pregnant cows in varying body condition scores from 100 to 200 days prior to calving to achieve optimum calving body condition.

BCS Weaning	BCS Needed at Calving	Calf and Placenta Weight	Body Weight Gain*	Total Gain	Days to Calving	ADG
3	5	100	160	260	120	2.2
4	5	100	80	180	120	1.5
5	5	100	0	100	120	0.8
3	5	100	160	260	200	1.3
3	5	100	160	260	100	2.6

\*pounds to change BCS in moderate frame cows

Table adapted from Corah et al., 1991. Kansas Cooperative Extension Service C-817

As research indicates, monitoring cow condition directly impacts the reproductive performance of the herd. Failure to conceive is the most important factor in reducing net calf crop. Keeping cows in adequate condition throughout the production cycle can improve reproductive performance and positively impact the economics of the operation. The BCS system is relatively easy to learn and can be implemented in any farm situation. The Virginia Cooperative Extension publication *Body Condition Scoring Beef Cows* can be picked up at your local Extension office or on the web <http://pubs.ext.vt.edu/400/400-795/400-795.html#L4>