

COW/CALF CORNER

The Newsletter

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by Glenn Selk, OSU Extension Cattle Reproduction Specialist

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The common tradition for weaning spring-born calves is to wait until late October and even early November. Most mature cows that have been feeding on adequate summer forages will be in very good body condition, despite the pressure of nursing a rapidly growing calf. These cows will still be in a body condition score of about 5 to 6 at weaning time each fall. However, very often two-year-old cows and even some three-year-old cows will be in marginal body condition at the end of summer. They have a nutrient requirement for continued growth and in the case of the two-year-olds, they are replacing baby teeth with adult teeth and are not good forage harvesters. Therefore many of these young cows go into the fall season in a body condition score of 5 or less.

If the rancher chooses to wait until late October to wean the calves from these marginal young cows, there is very little time between weaning and the first killing frost. This is a time when a young cow could recover consider body condition, if she has access to a plentiful supply of late summer, warm season grass. Without the nutrient drain of producing and delivering milk, she can use this pre-frost period to great advantage and replenish her own body stores.

Louisiana State University recently conducted a study to determine if weaning calves two months earlier than normal would increase weight and condition score of cows and their subsequent reproductive performance. They weaned half of the calves on August 19 and weaned half of the calves on the more traditional date of October 14. First calf two-year old cows and second calf three-year old cows as well as mature cows were included in the study. Condition scores of October-weaned mature cows were high during the course of the winter and the cows

achieved the expectedly high reproductive rate. The younger 2 and 3 year old cows that were weaned in October also maintained acceptable body condition and produced acceptable rebreeding rates.

The following table (Table 1) reports the condition score improvement between early-weaned and October-weaned of the first and second-calf cows.

Table 1. Difference in body condition due to early weaning

Date	1st calf heifers	2nd calf cows
Aug 19	0	+1
Oct 14	+6	+1.0
Feb 4	+3	+3
Apr 14	+3	+2

(source: Sanson and Coombs, 2001 LSU Beef Cattle Research Report)

Results from this study indicate that we can change the weight and body condition of beef cows by altering the time the calf is weaned. There was no significant improvement in conception rate, but the condition scores of the cows whose calves were weaned in October were higher than 5 both at calving and at the beginning of the breeding season. If the condition of these cows had been lower at weaning differences in reproduction would probably have been observed.

South Dakota State examined this scenario (albeit using mature cows) by comparing the effect of weaning date on performance of the beef cows. They weaned half of the cows at the time of the first real cool spell (September 14). The other half of the cows had their calves weaned at a traditional time (October 23). The scientists then monitored body condition and rebreeding performance of the cows. We should note that this study included two different nutritional levels: A low group to mimic an early winter or a dry summer; A moderate group to mimic more ideal summer and early winter seasons. Only the data for those cows exposed to the low nutritional group are presented here. They more nearly reflect what may happen for 2 and 3 year olds than will the moderately fed mature cows.

Table 2. South Dakota study of earlier weaning on mature cows

Weaning time	September 14	October 23
December body condition	+5	-----
% cycling 1st 21 days of breeding	83	74
% pregnant to 21 day AI	70	35
Average conception date	June 26	July 3

(source: Pruitt and Momont; 1994 South Dakota Beef Report)

This data indicates that the 40 days earlier weaning allow the cows to regain 1/2 of a body condition score going into winter. More of the early weaned cows were cycling at the start of the breeding season, conceived early in the breeding season and should wean heavier older calves the following year. In addition a small amount of high protein supplement (i.e. cottonseed meal

or soybean meal) will enhance the cow's ability to utilize the declining quality of the late summer forage. Therefore adding more body condition to the young cows before frost arrives. This combination of management techniques should be a cost effective way to increase re-breeding rates of young, spring calving cows. However, mature cows in excellent body condition (BCS = 6) appear to benefit very little from the earlier weaning.

Successful transfer of passive immunity in calves born due to a difficult birth

by Glenn Selk

Calves born after a difficult birth are at a high risk of failing to receive adequate colostrum by natural suckling. The antibodies in colostrum provide the only disease protecting mechanism for the baby calf. The primary reasons that some calves fail to receive adequate antibody protection and are more prone to getting calf diarrhea is because of greatly decreased colostrum intake and decreased antibody absorption. They just don't get enough colostrum in time. A prolonged delivery would be one that takes more than an hour from first appearance of the water bag to complete expulsion of the calf. Some calves born to a long, difficult delivery will be very sluggish and slow to get up and seek the teats for nourishment. Changes taking place in the intestine of the baby calf reduce the antibody absorption rate as the hours tick by. Also calves that are born to a prolonged delivery very often suffer from severe respiratory acidosis. Acidotic calves are less efficient at absorbing colostral antibodies even if artificially fed colostrum. Therefore efforts should be made to provide weak newborn calves with the best source of colostrum available via bottle suckling or tube feeding. These calves may need to be hand-fed soon after birth to insure adequate passive immunity.

A practical "rule-of-thumb" is to feed natural colostrum at the rate of 5 to 6% of the calf's body weight within the first 6 hours and repeat the feeding when the calf is about 12 hours old. For an 80 pound calf, this will equate to approximately 2 quarts of colostrum per feeding. If natural colostrum is unavailable, several commercial colostral substitutes are on the market. Read more about these important topics in [OSU Fact Sheet F-3358, Disease Protection for Baby Calves](#). This is available online or at any county OSU Extension office.

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