REPRODUCTIVE ISSUES WITH OVER- AND UNDER-CONDITIONED COWS

www.BodyConditionScoring.ca Fact Sheet Series

Profitability Criteria for the Cow-Calf Herd

1. Calf crop percentage (number of calves weaned/cows exposed to the bull)
2. Average weaning weight of calves
3. Selling price of calves

BCS

Reproductive Goals

High percentage of cows pregnant (95%)

Front load **the breeding season** (65% bred in first cycle)

Uniform calf crop (breeding season of 42 - 45 days for heifers and 63 days for cows)

Breed heifers to calve as **two-year-olds**

It's pretty easy to blame the bull for lower than expected pregnancy rates or weaning weights, but sometimes the fault may lie with the cows. Cows' fat cover (condition) plays an enormous role in reproductive efficiency, calf immunity, calf health, and even calf growth rate.

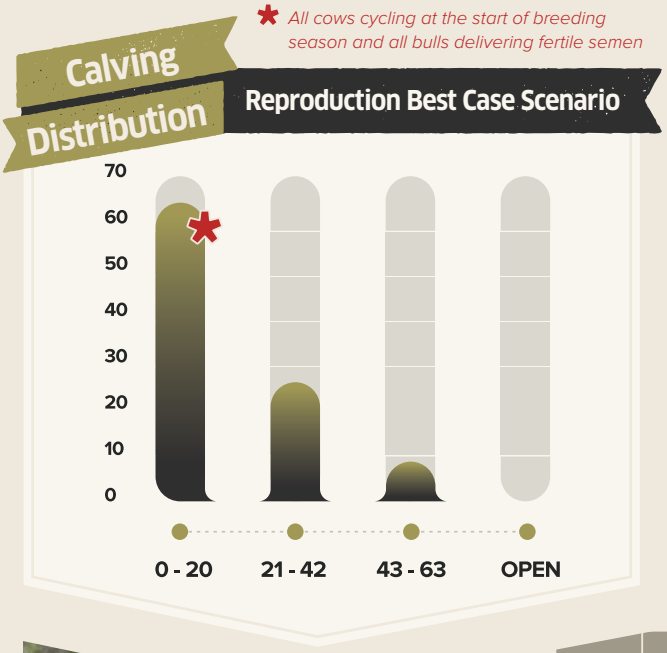
Ideally, a cow should maintain a calving interval of 365 days. This means she has 80-85 days, at best, to cycle and rebreed after calving. Every missed cycle can result in as much as 42 lbs of calf weaning weight lost, not to mention dragging out the calving season and decreasing the uniformity of your calf crop.

Cows' available energy is first used for general maintenance, then growth, and finally reproduction. In under-conditioned cows, cycling and rebreeding are the first things to go. Over-conditioned cows usually don't have a problem getting bred, but excess fat tends to accumulate in the udder and birth canal, causing reduced milk production and increased incidence of calving problems. Feeding cows to excess condition is also economically impractical.

Post partum interval (PPI) is the length of time from calving to the first heat after calving. Research from Purdue University demonstrated that PPI increased substantially with a lower body condition score (BCS) at calving. Cows with a BCS of 3 at calving had an average PPI of just over 59 days, while it took those with a BCS of 2 more than 88 days to come back into heat – meaning a calving interval longer than one year in those thinner cows. It is also important that cows do not lose condition after calving prior to breeding. Cows that decline in condition after calving have a PPI 20-30 days longer than cows that maintain condition until breeding.

Similar results are seen when comparing pregnancy rates. Oklahoma State researchers compared pregnancy rates for different BCS in beef cows. At a BCS of 2, only 50% of the cows became pregnant over the 90 day breeding season, while 81% of cows at a BCS 3 became pregnant during the same time period.

BCS also affects calf immunity, with thinner cows producing less colostrum that contains lower levels of immunoglobulins. The results from a large field trial (601 calves) in Saskatchewan showed calf immunoglobulin G (IgG) levels as much as 19% higher from calves born to cows with a BCS of 3 or greater. This same research demonstrated that the odds of both calf treatment and death increased when IgG levels in the blood fell below 24 g/L.



Cows that decline in condition after calving have a post partum interval 20-30 days longer than cows that maintain condition until breeding.

BCS of cows does not seem to affect calf weaning weight directly, however calves born earlier in the calving season will obviously be older and therefore larger at weaning time than calves born later in the season, so the total weaned calf weight per cow is heavier for cows in optimum condition.

So what does all this really mean in the bigger picture? The bottom line is that cows with an optimum BCS are more profitable. The numbers speak for themselves.

BCS	Pregancy Rate (%)	Calf Age at Weaning (days)	Calf Weaning Weight (lb)	Calf Price ($/lb)	Income ($/calf)	Income ($/cow)*
2	61	223	460	3.36	1545.60	896.45
3	93	240	515	3.05	1570.75	1413.68

**Calculated by multiplying pregnancy rate minus death loss (3%) by income/calf*

Check out the feed cost calculator:
on BodyConditionScoring.ca

for a specific example of what it might cost in feed to improve condition scores. When calf prices are as high as $3.00-$3.50/lb, taking cow condition for granted could cost you about $700/cow in your herd.

Reproduction is the most valuable trait in any cowherd. By simply taking the time to use the hands-on method of body condition scoring your cows at key times during the year and adjusting feed as needed, you are ensuring you're not leaving dollars on the table.

*For more information about body condition scoring, explore the training materials and interactive web tools at **www.bodyconditionscoring.ca**, talk to your veterinarian or consult a beef extension specialist. If Internet access is an issue call 403.275.8558, ext. 302 to receive all the information and interactive tools on a free USB data stick that plugs into your computer.*

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