

## Reproduction for Next Year Starts Now

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You are probably wondering how this applies to you if your cows are still pregnant and calves aren't expected just yet. Let's take a few minutes and review events prior to and after calving that have an impact on subsequent reproductive processes (and calves). Each one of these needs to be studied and carefully considered on an individual basis. Please contact me for more in-depth information and discussion. Or, attend an educational program on reproduction in beef cattle.

Here is a list of some factors that can impact calf health and weaning weight, calf crop uniformity, re-breeding efficiency, and profitability. These ultimately affect economic efficiency and profit.

- plane of nutrition (protein and energy, pre- and post-calving)
- cow body condition score at calving (set up well before calving)
- dystocia (calving difficulty; set up at breeding, during pregnancy, and at delivery)
- replacement heifer selection (well developed and feminine looking)
- bull selection (calving ease, scrotal circumference)
- calving interval (one calving date to the next)
- breeding/calving season length (well-defined breeding seasons)

The following is a closer look at each of these factors.

I am starting with the nutrition. I know, I know, I always focus on NUTRITION. That is because it is one of the most important factors affecting your cattle and your pocketbook, and I don't think it is given enough attention on many ranches. Proper cow nutrition promotes optimal BCS at calving, the production of high quality colostrum, strength and endurance for calving, cow recovery after calving, and adequate colostrum and milk production for a healthy calf without unduly impacting re-breeding success. Protein and energy requirements of the cow are at the highest level during the first 3 to 4 months after calving; lowest level during the period of non-lactation, middle third of pregnancy; then pick up again and are at medium level during the last third of pregnancy; and increase rapidly over the last month of pregnancy. Make sure you're not just feeding cows, but feeding cows optimally (nutritionally and economically). Feed costs are the single largest expense for livestock producers, representing as much as 50% of variable production costs. Please see the OSU [Beef Nutrition Workbook](#).

Pregnancy rate for re-breeding cows and weaning weight of subsequent calves is strongly linked to body condition score (BCS) of cows at calving with previous calf. BCS is an estimate of cow energy reserves. Thin cows take longer to rebreed than cows in good condition. Delayed rebreeding results in lower weaning (sale) weights than timely rebreeding, especially if calves are sold on one date. The BCS scale goes from 1 to 9; 1 is extremely emaciated, 9 is obese. In order to have good reproductive success, BCS at calving should be 5 for mature cows, but needs to be 6 for heifers because they are still growing and need more reserves to make it through calving. It takes about a 70 lb increase in weight for a cow to increase one BCS.

It is easier to put weight on cattle during the fall compared to winter and during mid-gestation compared to late. It pays to plan ahead and have your cows and heifers in good body condition prior to the winter feeding period. However, if your cows and heifers are looking especially thin now, it should still pay dividends for you to step up your feeding program now.

Dystocia (difficult calving) also influences rebreeding. Provide assistance without delay to those that are having trouble ([see OSU Calving School Handbook](#)). Heifer development is important and is often a point of inefficiency on cow-calf operations. Heifers that are at least 65% of their mature weight at breeding are more likely to have a good productive (reproductive) life than those that are under-developed. Failure to re-breed young cows to become pregnant with their second calf in a “timely manner” is the number one reason cows end up on the cull list. Under-developed heifers have a higher incidence of dystocia and usually take longer to return to estrous after calving. Again, we are talking economic efficiency; Money.

For next breeding season, pick easy calving bulls, especially for heifers. Choose bulls with high fertility by selecting bulls with appropriate scrotal circumferences. Also, make sure bulls are properly grown and developed for use in your breeding program. Breeding soundness exams need to be conducted on any and all bulls in your battery. Cull sub-fertile bulls. Also, select feminine-looking cows because this is related to fertility. The reproductive hormone, estrogen, is responsible for reproductive function and also affects appearance of cows.

The economics of a beef enterprise hinge on the production of one calf per cow per year. The calving interval (CI), time of birth from one calf to the next, should not exceed 365 days. Long CI decrease lifetime productivity and profitability of cows. Monitor CI for your cows. If you are having problems with long CI, check your nutrition, health, and breeding programs to make sure you are doing your part

to promote CI that equate to success. Adjust your management as necessary and cull low fertility/infertile cows. One less calf over the lifetime of a cow and she may slip into the “not profitable/looser” category!

The highly profitable beef operations in the United States have well-defined breeding seasons of 45 days (Profile of a Profitable Producer, by Harlan Hughes). This weeds out sub-fertile cattle and works with only the top tier animals. Others choose a 60 day breeding season. Longer is less profitable. The average gestation length in cattle is 284 days. So, if you don't have your cows rebred within 81 days after calving, the interval to the next calf will exceed 365 days. This is the least profitable situation.

Weaning weight, often synonymous with sale weight, is affected by age of calf at weaning. Because many ranches wean calves in groups, calves that are born at the beginning of the calving season are older and heavier at weaning than calves born at the end of the calving season (see Figure 1). The older calves provide more pounds of calf to profit from. Also, the shorter the breeding season, the shorter the calving season, the more uniform the calf crop, which in some systems leads to better marketing potential.

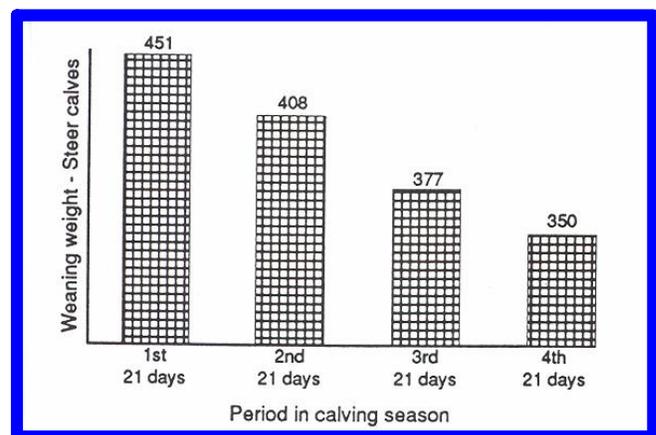


Figure 1. Period in Calving Season and Weaning Weight (Univ. of Wyoming)

Call me to discuss any of these topics, to get additional study materials (references), and/or for help assessing your herd's situation.