

## **COW FERTILITY: THE PROFIT KEY**

### **Introduction**

There is no doubt that herd fertility is the single most vital attribute that distinguishes between profitable and non-profitable beef herd, like good looking animals, well muscled animals, impressive weaner calves etc, herd fertility is the crucial key factor that always needs to be the focus objective.

Essentially, the fertility game can be divided into three strategies namely:

- Limiting all the poorer fertility performing cows in the herd,
- Choosing the most fertile replacement females
- And to make sure that the Management actions ensure top performers the chance to perform.

### **How important is fertility**

Biological and economical efficiencies of cow-calf production are largely dependent on successful reproduction. Improvements in reproductive performance can be up to fourfold more important than improvements in end-product traits in a conventional cow-calf operation selling market calves at weaning.

Consider some fertility objectives:

- Compact calving (80% of cows calved in 60 days).
- A365-day calving interval.
- Replacement heifers are bred from bulls showing genetic potential for fertility.
- 6-7 calves/cow/lifetime on average.
- 0.95 calves reared/cow/year.
- Less than 5% calf mortality by 28 days.
- Maximum use of grazed grass.

### **Heritability**

Estimates of heritability for many reproductive traits are low, some exist that have moderate heritability, and there are important genetic correlations between reproductive traits and other production traits that are moderately heritable.

Beef female fertility has been recorded and measured in a multitude of ways, including age at first calving, calving date, first insemination conception (nonreturn rate), days to first breeding (days open), pregnancy rate, calving interval, longevity, and stay ability.

### **Management of Body Condition**

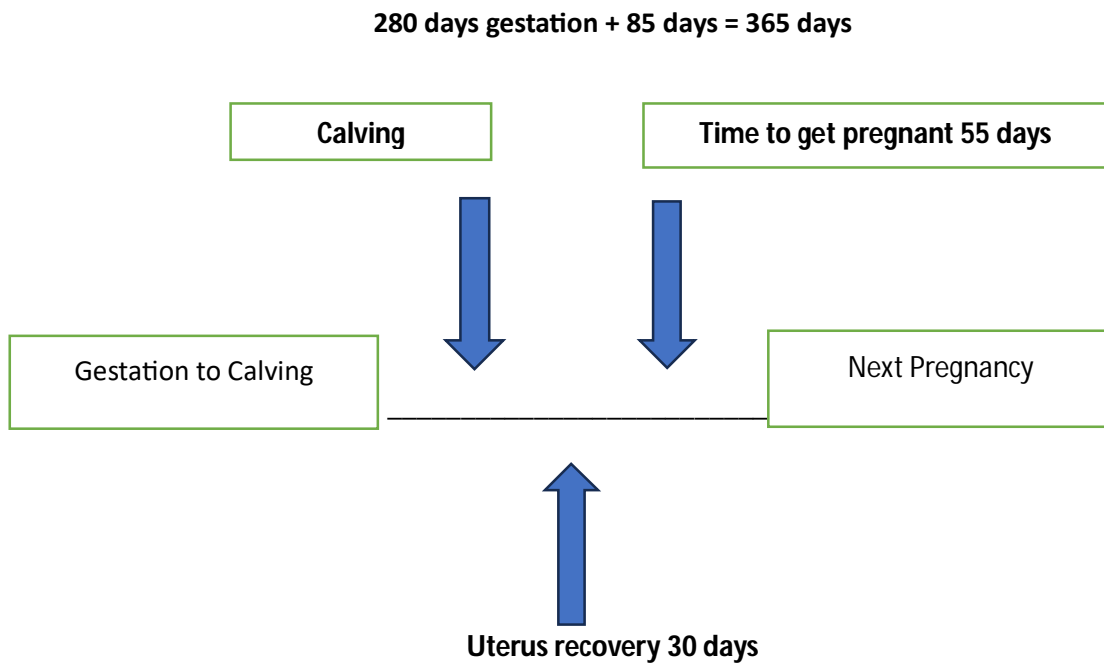
The Body Condition Score of a cow at calving is critical in determining when cows commence oestrous cycles after calving. The negative effects of low BCS at calving are only partially reversed by putting cows on a high plane of nutrition after calving. Consequently, producers should regularly body condition score their cows during the dry period. Cows with a low body condition score (less than 2.5) should be put aside for additional feeding to reach a target of 3.0 at point of calving. Cows at BCS greater than 3.5 can afford to lose some body condition without it affecting their subsequent reproductive performance. It is suspected that very low body conditions in mid winter, when ovogenesis of the ovum due to be released later during the breeding season, can negatively influence the pregnancy rates. It is therefore important not to let the body condition score fall too low even in the winter/dry period.

## Regular Calvers

Cows that are slightly less fertile or less adapted tend to calve late in the season and also miss a season or two. In strict systems cows that skip are eliminated from the herd. In harsh environments some argue that only one skip her lifetime can be condoned. The bottom line is that cows are expected to produce a calf every year. Cows that do not perform are failing the test. Rather replace them with new fertile heifers.

## Inter Calving Period

In order to calve every 365 days, a cow must be mated and come into calf again within 85 days of having calved. Once she has calved, however, allowances must be made for a 30- to 45-day period in which her reproductive organs can recover. If she had no calving problems, is healthy and in good condition, she has only 55 days after the recovery period in which to reconceive.



## Select the right heifers

A highly efficient target is to have heifers calving at 23 months of age. Harsh and extensive conditions do have a valid argument for calving at 35 months of age. Aiming at 23 months age at first calving also leaves the heifer with a better chance of conceiving early in the next season. The earlier calving season does require a higher management input but it does have a huge influence in the efficiency of the herd in total.

The heifers that become pregnant in the first 62 days of the breeding season are the heifers destined to become future cows in the herd. Avoid those that take later in the breeding season as potential breeding cows.

## Shorter Breeding Season

A breeding season enables group actions with cattle and make overall management a lot easier. In harsh environments where the rainfall is very unpredictable a fixed breeding season may well be difficult to adhere to. When calving is limited to a specific time of the year it is easier to identify the top performers. The more unproductive heifers and cows can easily be identified much earlier than the calving date through pregnancy diagnosis. These passengers can be culled immediately, or once their calves have been weaned, so as to limit further unnecessary costs and earn an income.

Cows that conceive early in the breeding season are generally more productive give that they have a longer period in which to recover post calving, which improves the probability of re-conception. This happens to be a repeatable trait and worth building a future fertile herd on.

### **Consider the fertile cow**

If Cow 1 calves at 23 months of age and maintains an inter calving period of 365 days, by the time she has reached the age of 10 years old, she has given 9 calves. Take Cow 2 that calves at 35 months of age and skips one season up to the age of 10 years, she will have produced 6 calves. Extrapolate this calculation to a herd of 100 cows and the difference is vast.

### **Conclusion**

Considering the challenge to ensure the profitability of a beef herd, fertility is the most vital consideration. First ensure a fertile cow herd without exceptions and then move on to other attributes. Fertility beats all other traits every time

**John Rafferty**

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Peter Bronn