

# Cutting off

# LOW FERTILITY

There are few things on the beef farm which rob profit as quickly as poor cow fertility—yet it often escapes scrutiny

GOOD FERTILITY IN the beef herd is essential for profitability. It is estimated that fertility has a five-times greater impact on profitability than calf growth.

Low fertility is fairly common in Ontario beef herds, yet often unrecognized. How can that be? It is something that most of us don't measure, and that long calving seasons (such as longer than 60 days) can hide.

The best measure of fertility explains the concept quite well. How many of your cows/heifers conceived in the first two cycles (42 days) of the breeding season? Herds with excellent fertility will have as high as 85 per cent of their breeding herd conceive during this time.

Very few producers measure that, so lower fertility goes unrecognized and a longer breeding season gives less fertile cows more chances with the bull so many of them eventually get in calf - no problem is detected. Due to lim-

itations in estimating gestational age beyond four months, you should have your herd pregnancy checked within two to three months of removing the bull if you wish to use this measure.

So what's the problem? How does low fertility cost? In a herd with suboptimal fertility, more calves will be born later in the calving season, will have a shorter period of time in which to grow, and will therefore be weaned off lighter, bringing less money at sale. Furthermore, the late calving cow has a shorter period of time to breed back before the end of breeding season, will most likely give you a late born lightweight calf next year, or may not breed back at all.

## What causes low fertility in cows?

After calving, cows enter a period of anestrus when they are not cycling. The number of cows cycling before 50 days post calving is small, but it increases dramatically between 60 and 90 days. There is marked variation from herd to herd in average onset of cycling, from as low as 60 days to over 100.

The biggest factor in this difference is dietary energy intake prior to and after calving, and body condition (which is mostly an effect of past energy intake).

Thin cows take longer to breed back, and so do cows that calve in good condition, but milk off their back. Cows have their highest energy requirement in the two months leading up to calving, and in the first few months of nursing. If they are being shorted in dietary energy at those times fertility will suffer. In many herds this is the case, but with long breeding seasons you



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don't notice it because eventually, the cows start cycling and they do get bred. Nobody is measuring it, so it isn't detected, but it still costs.

Note that many research investigations have found that starving a heifer prior to calving (to slow calf growth) in fact has very little effect on the size of the calf, but a measurable effect on calf vigour (reduced), calf mortality (increased) and heifer fertility at breeding time (reduced). Though this idea is very prevalent, it is a myth.

## **Invest in your haycrop**

Especially in today's economic climate, the least expensive way to ensure your cows are getting enough energy is to put up good hay – harvested reasonably early and not left uncovered for long in the weather.

Good forage should cost no more to make than poor forage, but it will certainly save you money, either in less grain purchased (if you compensate for your poor forage) or in later born and lighter calves (if you don't).

Good forage requires a higher level of feeding management. Early in the winter you may have to limit feed to avoid your cows getting too fat, which in turn requires adequate feeding space per cow (and especially per heifer, which is more likely to be shoved aside or bullied away from the feed), a situation best served by a fence-line type feeder.

Another suggestion I have seen for diluting the energy content of good hay is to feed the good stuff every second day, and the poorer hay on alternate days. Do not set out the good hay in one feeder and the poor hay in another – the boss cows will eat the good stuff and get too fat, and the meek cows, including most of the heifers, will only get the poor stuff, and become too thin.

Be aware of how environmental conditions can increase energy requirements – wet, muddy conditions, louse infestation, an exposed windy location. Cows living in these conditions need more energy to maintain weight. As a manager, you should consider whether an improvement in housing (possibly as little as a wind break) might be more economical than feeding extra year after year.

Dietary protein is less directly important to fertility, though it has an impact on colostrum quality, calf vigour and retained placenta. If you are feeding forages that are high in energy, then protein is more than likely to be adequate as well.

# Fertility

## Body condition scoring

We can measure the energy status by a procedure no more complicated than simply looking at our cows with an eye to how well conditioned they are – are they fat or skinny, and how fat or skinny? A common system for cattle uses a nine point system where one is emaciated and nine is rolling in fat.

Cows should calve at about 6. Another important thing to notice – are they fairly even in body condition – answering this question gives some indication whether competition at the feeder is hurting your wallet. I believe that the

importance of competition for feed is greatly overlooked by most of us. Competition at the bunk is more than being pushed aside so it is hard to reach the feed – it is about being afraid to eat for fear of being on the receiving end of a head butt that in some cases cracks ribs.

## Minerals and vitamins

Minerals are important as well, and in our animals, frequently deficient (like copper, selenium). Ideally, they are best fed mixed into a grain, or even top-dressed onto a moist forage. If they are fed free choice, choose one with salt, and provide no other source of salt to ensure that the cows eat what they need of mineral as they are seeking salt.

Ensure that your mineral has at least as much calcium as phosphorus. If feeding much grain, the mineral should have more calcium than phosphorus. Vitamin E, important to calf vigour, cow immunity and cow fertility, should also be fed in the last two months prior to calving.

## Vaccinations

Cows will fail to get pregnant from a variety of infectious agents, a many of which we can vaccinate against. Leptospirosis, Campylobacter (Vibrio), and BVD can interfere with fertility (apart from their role in causing abortion), and vaccines to enhance immunity against these agents are available. There are many different types of vaccination programs that can be used, depending on the needs of your herd. Take the time to discuss a vaccination program with your veterinarian that is specifically suited to protect your herd.

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