Biography:
Dr. Colin Palmer is an Associate Professor of Theriogenology (Animal Reproduction) at the Western College of Veterinary Medicine. Originally from Nova Scotia, Dr. Palmer worked in mixed practices in Ontario and British Columbia and has owned/operated a practice in Saskatchewan. Dr. Palmer along with his wife Kim and children Lauren, Emily and Carter run a herd of purebred Red Angus cattle under the KC Cattle Co. name.

A Breeder's... Veterinary Perspective

Problem #1 - Open Cows

"Hello. I would like to talk to a vet about a problem I have with open cows". As a veterinary reproductive specialist (theriogenologist) this is the most common telephone inquiry I receive. The calls start in the fall after pregnancy checking, but there is also a peak in late spring and early summer once calving has wrapped up. My usual first response is to determine the extent of the problem. How many open cows? Are there open heifers too? How big is the herd? Are they managed as one group? If more than one breeding group, were they all affected similarly? etc., etc. Taking notes is important so that I can go back and explore items of interest more deeply. Crunching a few numbers on my calculator puts things in perspective very quickly. If pregnancy rate (proportion of females confirmed pregnant / Total females exposed to bulls x 100) is greater than 90% then I don't believe there is a real problem; 80 – 90% tweaking is needed; < 80% you have a problem!

The greatest challenge is the fact that we are trying to pin point a main or primary cause that in most cases likely occurred several months to over a year prior. Were cows cycling? Were cows cycling, but not getting pregnant? Or, were the cows getting pregnant and losing their pregnancies? If we are able to speculate on a primary cause, then we have to explore all of secondary causes. For example, if cows are cycling, but not getting pregnant reasons (secondary causes) might be a lack of bull power; a subfertile or infertile dominant bull; an acute bovine viral diarrhea virus (BVD) exposure; Tritrichomonas foetus (trich) infection; campylobacteria (vibriosis) infection; or perhaps a mineral deficiency. Trich is often a concern for producers in western Canada because of wide spread reports of its occurrence over the last couple of decades. Trich can be devastating as the proportions of open cows can easily reach 25 to 40%, in otherwise well-managed herds. Abortions up to 4 months of gestation may occur and it is not uncommon to have a few cows with pyometra (pus in the uterus). Trich usually surfaces in community pastures and is not a problem in closed herds, or herds that purchase clean bulls; however, for some bulls fences mean nothing so spread of disease from neighbouring herds is possible.

Open heifers may be a different story. A big question for me is always how many were actually cycling during the breeding season. Late-born and poorly grown heifers may have not yet reached puberty at the time of the breeding season and the chances of becoming pregnant at the first heat are much lower than during subsequent heats. Heifers of certain breeds, breed lines or sired by bulls with smaller scrotal circumferences will reach puberty later than others.

I am a strong advocate of not only having breeding soundness examinations performed on bulls, but also taking the time to watch bulls breed. Excellent semen quality is a moot point if a bull is injured or has libido issues. Try to observe your bulls breeding a few cows, write some cow numbers and dates down and watch those cows again for returns to heat within an 18 to 24 day window. You might just discover a problem before it becomes a full-blown wreck.

Suitable vaccination programs fitted to your region and situation should be put into place. Your local vet clinic or herd veterinarian should be able to provide you with all that you need.

Proper nutrition is often the last thing considered. Everybody thinks they feed their cows right! Cows and heifers need to be fed well to cycle properly. An adequate energy level in the ration is the most important component, but don't neglect minerals and vitamins. Minerals need to be provided year-round, not just during the breeding season. Phosphorus, selenium, and copper and other mineral deficiencies have all been linked to poor reproductive performance. Using a line paraphrased from a colleague ... "blue salt blocks (cobalt iodized) do not equal a mineral program!" Water quality may also be an issue as certain minerals in hard water can limit the availability of other minerals provided in the ration. Boosting the quantity of limited minerals, using chelated minerals or providing a new water source may be necessary. It is gratifying to hear producers talk about improvements in reproductive performance i.e. shorter calving season, fewer open cows just by utilizing a proper mineral program.

Late calving cows can also contribute to the proportion of open cows occurring in a herd. Cows need 40 to 50 days after calving to repair the uterus and return to cyclicity – 3 weeks is not enough. Many calving season stragglers will deliver an encore performance and are more likely than others to come home open. Stragglers might be over-represented in the open cow population during years with nutritional challenges, or when bull power petered out at the end of the season.

In addition, to all of the questions I ask I also believe that a farm visit by a veterinarian is warranted. Trained eyes with a fresh perspective to look at your management system, examine some animals and maybe point out some things that you may not have thought of. I try to avoid making a diagnosis over the phone as I have been dead wrong on a few occasions. Suggestions of things to look at I can do, but that is it! Truth be known, we are often unable to isolate the cause of open cows. What we usually find is that there are one or more management factors that need to be adjusted. Heifer management, nutrition, bull related issues are the most common. It is very hard to diagnose fertility issues with certainty in a bull 1 year later or if he has been culled. If changes are made we are able to follow up and to see if there has been an improvement. When the situation normalizes, and it usually does, we may then be able to confirm our suspicions.