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

Feed Options for Surviving Winter

For many areas of western Canada the summer of 2018 was one of the driest in several years. Reports of hay crops yielding half or even a third of normal production coupled with very little carryover from this past winter has many livestock producers wondering what they are going to do. In my own area, I have never seen as many annual crops baled; nor have I been as happy to be given a neighbour's yard or waste lands to make hay on.

Decent feed can be made out of many failed crops. With threats of frost and many crops still looking green, being able to purchase a damaged crop may be a viable option. Canola is ideally harvested late flower to mid-pod, but has a tendency to take several days to dry down and because of the high sulfur content, it should be fed with other feeds. I have never heard of sulfur toxicity occurring from feeding canola hay, but I would still proceed with an "ounce of prevention is worth a pound of cure" philosophy. Naturally increased sulfur concentrations in feed are most likely to interfere with copper and selenium availability so you had better have a sound mineral feeding program. If cut at the right stage, canola can be comparable to alfalfa hay, but its value declines substantially with plant maturity. Too much canola forage and cattle do not perform very well, so limiting it to no more than 50% of the ration is a good idea.

Many crops, particularly cereals and canola, will accumulate nitrates in the days following frost damage. The levels will decrease after about 10 days so if frost damage has occurred don't be in a big hurry to cut. Unfortunately, clipping a few plants and submitting them to the lab is NOT an effective way to check a crop. Cut, dry and bale then collect samples from several bales for the lab. Concentrations greater than 1% definitely require feed management; however, animals should not be exposed to large quantities of feeds containing more than 0.5% nitrate if they have not been consuming nitrate containing feed already. Mixing higher nitrate forages with low nitrate forages through grinding and mixing is the best way to handle nitrate intake. Offering a high nitrate bale and a low nitrate bale at the same time is a recipe for disaster. Hungry cattle exposed to high nitrate feed are most at risk for acute nitrate poisoning as they will consume large quantities of feed very quickly, resulting in the release of huge quantities of nitrate in the rumen. Depression, muscle tremors, salivation, labored breathing, staggering, disorientation and an inability to get up are signs of acute toxicity in live animals. Many animals may simply be found dead with signs that appear like they were struggling to get up before they died. Signs are likely to appear with five to 10 hours of consuming a large quantity of contaminated feed. Weeds such as lambsquarter, pig weed, kochia and thistle can accumulate nitrate as well, so be careful when cutting weedy crops or the commonly weed infested corners of fields.

For most producers, if you haven't considered straw you should. Cereal and pea straw are great products for stretching feed resources. The best feed value, of course, is the grain kernels, so never consider straw to be as good as green feed. Both cereal and pea straw lack sufficient energy and protein to meet the maintenance requirements of a dry beef cow so if fed alone your cows will perform poorly. Cattle will not be able to eat as much straw as hay because it does not move through the gut as fast. In fact, feeding too much straw in the ration can lead to impactions. Increasing protein in the ration will improve the digestibility of straw, increase throughout and go a long way toward meeting dietary needs. One approach is to ammoniate straw - rumen microbes are able to utilize alternative forms of nitrogen to facilitate their function in building new proteins. Providing grain and/or hay; especially alfalfa hay, is another way to increase the protein content of the ration. Late gestation and lactating cows have even greater nutritional requirements which are difficult to meet when straw is a significant part of the ration. A good idea would be to finish feeding straw during mid gestation and to limit feeding of straw to cows in at least average body condition (BCS 3, 5-point scale).

Feed testing is advisable because available nutrient contents of feeds can vary greatly. I often hear the argument, "why feed test, it is the only feed I have so what am I supposed to do not feed it!" Well no, but perhaps modest purchases in pellets, some high quality grains and tub grinding etc. can be made to ensure that healthy viable calves are born and that cows rebreed in a timely manner. We have found that purchase of a modest amount of pellets complete with a mineral pack and ionophores, i.e. Rumensin®, is very efficient way to supplement home grown feeds and improve productivity. Ionophores fed at appropriate levels can improve feed efficiency and reduce the incidence of bloat.