



Farm Animal Council of Saskatchewan Inc.

Problem Feeds

Knowledge of how to deal with problem feeds may allow use of some low cost alternatives when drought reduces pasture and winter feed supplies and producers are faced with buying feed. Having a nutrient content analysis of any feedstuff and seeking advice from a nutritionist and veterinarian will also help prevent and/or alleviate problems, which may occur.

Mouldy feeds have reduced nutritional value as mould growth leads to loss of dry matter, digestible energy and vitamin E. Mouldy feeds may be dusty from fungal spores. Inhaling or ingesting spores may cause fungal pneumonia, uterine infections, and mycotic abortion. Mycotoxins from moulds may cause vaginal bleeding, rectal or uterine prolapse, and abortion, though cattle are somewhat less susceptible than pigs.

- Screen samples at a Feedtest Lab for presence and types of moulds and toxins.
- Do not feed to pregnant or lactating cows or young animals.
- Dilute with good quality feeds, introduce slowly.
- Balance the ration. Slight nutritional deficiencies can increase susceptibility to mycotoxins.
- Feed adequate levels of Vitamin ADE.

Mouldy sweet clover silage or hay (not other clovers) can produce dicoumeral, which results in bloodclotting disorders in cattle.

- Feed 7 to 10 days, then feed another hay for 7 to 10 days to allow dicoumerol to clear the system and stop feeding entirely 2 to 4 weeks prior to calving and during calving.

Ergot contaminated grain can cause impairment of blood circulation to the extremities resulting in a dry gangrene in cattle with loss of tail, ears and perhaps hooves.

- Ergot contaminated grain should be diluted with clean grain until the ergot bodies are fewer than 10 per litre of grain (0.1%).
- NEVER feed ergot contaminated grain to pregnant or lactating animals.

Canola hay and silage, if cut in mid bloom, make excellent feed (similar to good alfalfa-grass hay, however at later stages nutritional quality is more like slough hay):

- Canola contains high sulphur levels in the range of 0.5 to 1.3%. Over 0.4% sulphur in total dry matter intake can reduce Cu absorption and cause copper deficiency.
- High sulphur in the diet can also cause impairment of thiamine (Vitamin B1) production and result in Thiamine Deficiency Polioencephalomalacia, especially in younger animals.
- Include sulphur and nitrates in feed analysis.
- Feed TM salt with 2500 mg/kg or higher of copper and 90 to 120 mg/kg selenium, or 1:1 minerals with Cu 2500 mg/kg or higher and 25 to 60 mg/kg selenium.
- Limit to 50 to 60% of total dry matter intake.

Slough hay is variable in quality. It may have adequate quality to winter a beef cow, or may be not much better than straw, (low in energy and protein).

- Watch for poisonous plants unless you are familiar with the source. Roll out bales and let cows eat selectively.

Russian thistle, if cut green is quite palatable and equal to fair quality hay in CP but lower in TDN and is VERY laxative because of high ash content.

- Contains small levels of oxalates which are likely not harmful to livestock and may also contain high levels of nitrates.
- Include testing for oxalates and nitrates in feed analysis.

Wild Barley or **Foxtail** has very rough awns, which can become impacted in the mouths of cattle and cause abscesses in the jaws and throats. Grinding with a hammermill may help.

- AVOID feeds with any quantity of "Foxtail".

Kochia weed, if harvested before maturity, has protein and energy contents as high as good alfalfa hay, but it has a high mineral content and is extremely laxative.

- Kochia has been shown to be toxic to a variety of grazing animals due to high levels of oxalates, nitrates and alkaloid.
- Kochia should not make up more than 30% of the total diet. Balance the mineral levels carefully. Feed 3:1 mineral or add limestone to a mixed ration to ensure enough Ca in the diet.
- Unconditioned hungry animals allowed to graze kochia may develop clinical signs which may include depression, dehydration, weight loss, muscle weakness, photosensitivity (liver damage), kidney damage and death.
- Beware also of overgrazed pastures in the spring, where young kochia plants may be available in abundance.

Cereal straw, stockpiled forages and other low-quality roughages are not "problem" or "alternate" feeds, however there are a few issues, which should not be overlooked.

- Straws differ dramatically in nutritional content and digestibility. Oat straw is better than barley straw, which is better than wheat straw.
- Flax straw is very palatable but should be tested for high levels of prussic acid if green or frozen.
- Digestibility and rate of passage limits useful dry matter intake of straw to about 1.25% of body weight. Grinding or chopping straw will increase intake but consumption in excess of what the cow can digest can lead to rumen impaction. Intake of year-old straw is somewhat higher because fungal activity on the cell walls improves rate of rumen passage.
- Pulse straws are better than cereal straws, but dry matter intake is still limited to about 1.6% of body weight.
- Feeding protein supplements to cows fed low quality roughage, including stockpiled forages, can increase intake by as much as 30% and digestibility by as much as 10 percentage units. Feeding protein balances the diet for the rumen microbes, enabling cattle to eat more roughage and get more energy from each pound eaten.
- The key to wintering cows on straw based diets is properly balanced rations. Feed with adequate energy, protein, vitamins and minerals and increase grain feeding in cold weather to prevent over-consumption of straw and possible rumen impaction.

Cereal greenfeeds and silages are not considered either problem or alternate feeds. However, they can accumulate nitrates when drought or frost stressed, and have high potassium and low calcium contents that can cause milk fever (hypocalcaemia) in lactating cows.

- Include nitrates and potassium in feed analysis.
- Feed 2:1 or 3:1 mineral, plus extra limestone if necessary.

For more information:

- Western Forage Beef Group (Foragebeef.ca) – www.foragebeef.ca
- Western Beef Development Centre – www.wbdc.sk.ca
- Prairie Feed Resource Centre – www.feedresources.usask.ca
- SAFRR – www.agr.gov.sk.ca/Livestock.asp?firstPick=Livestock
- AAFRD – www1.agric.gov.ab.ca/app21/rtw/index.jsp
- MAFRI – www.gov.mb.ca/agriculture/livestock/index.html



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FACS represents the livestock industry in advancing responsible animal care and handling practices in agriculture.

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This FACS initiative is funded by the Saskatchewan Beef Development Fund and endorsed by the Western Beef Development Centre, Saskatchewan Livestock Association, the Canadian Veterinary Medical Association and the Saskatchewan Veterinary Medical Association.