

Managing Overmature Corn for Beef Cow Grazing

Many corn crops in 2015 across the prairies have produced wonderfully, despite the early season drought. With an early seeding date and adequate corn heat units, corn in many areas may mature to physiological maturity or blacklayer. This is favorable if the intent is for grain, however this may pose risk if not managed properly for grazing. Below are some key points to help manage through grazing over mature corn.

Corn Hybrid Choice and Ideal Maturity

Ideally producers should choose a hybrid that is roughly 150 – 200 days longer than your corn heat unit area. The goal is to have corn freeze and thus be grazed about the R5 (dent) – R5.5 (1/2 milk line) stage. Choosing a later hybrid will help ensure the crop does not mature too much and will not produce black layer corn. This will reduce issues associated with acidosis, due to high starch accumulation in more mature corn. This will also ensure higher palatability of the whole plant, leading to more effective grazing and reduced residue on the field. However, of course we can't predict the frost and thus management will be crucial with an unexpectedly long growing season.

Management Considerations

Know the Maturity of Corn and Killing Frost

Kernel milkline may be the most widely used indicator for determining maturity of corn. This will allow the producer to manage accordingly. Take a whole-plant representative feed sample and have a feed test analysis completed. A feed test will allow you to compare the feed analysis to the requirements of cows grazing and provide supplements if necessary for a balanced feed ration, such as added roughage, protein and minerals.



1/4 milk line



1/2 milk line



3/4 milk line

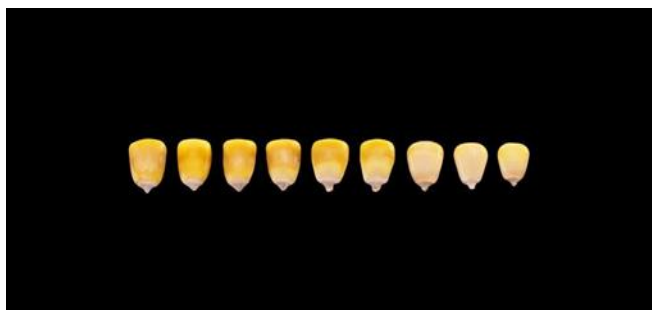


Full milk line

Cow History and Grazing Management

Remember that naïve cows will need time to adapt to a winter grazing system. Since corn is a high quality feed, especially if fully mature, take the time to slowly adapt cows to the grazing system by allowing them entry to the field with full ruminants, supplying additional feed (ie., hay, green feed) and only allowing a small grazing paddock initially (2-3 hours of grazing).

If cows are transitioned from a poor quality fall pasture, ensure they are fed good quality hay or green feed for 2 weeks prior to grazing corn to help adapt rumen. Know and manage the cow age by limiting winter grazing to the main cow herd. Older or younger cows may not be able to graze as effectively as the main cow herd.



Grazing Management

Limit graze the animals on a 2-3 day rotation. This will ensure they have access to new feed every 2-3 days for proper nutrition, but will also ensure they clean up the stalk/stover of the crop to limit residue. It is preferable to leave no more than 2000 kg/ha (1786 lb /ac) of residue behind. You want to make sure the cows are cleaning up the feed material, however you want some material to be left to ensure they are getting enough to eat or in other words fed ad libitum (allowed to eat according to their appetite – not limit fed). Ensure good, clean, adequate water supply. Ensure a proper mineral package is provided (2:1 Ca/P ratio, trace mineral and salt). This should be determined based on the feed test to insure proper minerals are being supplied to maintain herd health. Provide a source of shelter in the form of natural bush, if available, or windbreaks. Use electric fencing with a high quality energizer to divide paddocks. One suggestion is to clear alleyways through the corn for the fencing before turning the cattle onto the corn. Rebar (concrete reinforcement bar) makes good posts and can be hammered or drilled with a cordless drill into the ground before freeze-up. Always have an extra fence available and in order to fence the next paddock ahead of the cows before they enter a new grazing paddock. Cows will back graze the previous paddock to clean up residue.

Over Mature Corn

If corn is over mature, there are two main considerations to be aware of. Digestive upset or acidosis may occur if not managed properly and stalk/stover clean up of corn may be poor as palatability of corn stover will decrease with maturity. Supplementation of additional fiber, such as hay, will help combat both these issues. Firstly, as stated before proper transition and pre-grazing nutrition with high quality supplementation will be critical. Once cows are allowed access to corn, continue to supplement with forage, such as hay, or hay / straw blend. One strategy may be to place bales on part of field and allow cows to graze back and forth from corn to bales. With an over mature corn field, it will be very important to limit graze on a 3-4 d rotation so the cows are limited to the amount of grain they can consume.

Once a paddock has been grazed animals will continue to back graze, however supplemental feeding, such as shredding bales on top of grazed area will ensure better residue cleanup.

Additional Benefits!

REMEMBER:

The mature cow produces 60 lbs of manure (0.4%N and 0.2%P) and 20lb of urine (1.1%N and 0.01%P) per day!

One benefit to an extensive grazing system is the nutrient from urine that you would lose if you spread that manure from a corral.....80% of what a cow eats is excreted, so there is a lot of nutrients that are recycled in a grazing system.

This means increased nutrient input back into the soil, increased organic matter and better soil health!

How Many Grazing Days Per Acre?

- On average research has shown between 150 – 300 cow days per acre.
- For example, 200 cows with a desired grazing period of 30 days:
- 30 days X 200 cows = 6000 cow grazing days
- Based on 200 cow days per acre you would require:
- 6000 cow grazing days ÷ 200 cow days per acre = **30 acres of corn to winter 200 cows for 30 days**

