



ON FEED

A newsletter of Dakotaland Feeds

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Grazing Crop Residue

With harvest in full swing, it won't be long before we kick the cows out to crop residue for a while. There are a few management tips to keep in mind when grazing crop residue in order for you to get the best results and best bang for your buck.

In a Nutshell

- * Check corn fields before turning cows into residue
- * Laminitis results from starch overload
- * 1Ac of residue from 100 bu corn maintains a cow 30 days
- * Supply additional protein to mid-gestation cows on stalks
- * Consider talking to the neighbors about renting corn stalks
- * Check nitrates in small grains, sorghum/sudan, and silages

Check the fields before turning the cows into corn stalks. Make sure that if you spilled some grain in a certain spot that you have cleaned up what you can. It only takes one episode of overeating to cause some hoof issues later on. If you are renting a field, make sure that you check the whole field for standing corn. It is pretty frustrating to turn cows out only to find a couple of acres of standing corn in a low spot that the combine couldn't get. The cows will find it, and it won't take them long to harvest the grain.

Laminitis is not a fun thing to deal with. Some of the information we know about laminitis is that typically there is ruminal acidosis which causes a release of endotoxins from rumen bacteria that are absorbed into the bloodstream. Histamines are also found in the bloodstream during early acidosis. These endotoxins and histamines cause disruptions in the building of hoof tissues and damage to the blood vessels in the foot, resulting in laminitis.

Unfortunately, no silver bullet exists for making sure laminitis doesn't happen. No protein supplement, or mineral supplement, or some myriad of fermentation by-products will not simply take care of acidosis and laminitis. Most of the time, as long as there isn't standing corn, a pile left on the ground, or more than about 10 bushels per acre on the ground, you would not expect an issue with acidosis and laminitis. If you do have substantial ear drop, or standing corn, you need to manage that differently by either adjusting cows to a high grain diet before grazing that field, or fencing it out. A starch overload is still going to be a starch overload, resulting in rumen acidosis.

When grazing stalks, we generally figure that there is enough residue generated from 100-120 bushel corn to last one 1400-lb spring-calving cow about 30 days. The energy value of cornstalks is typically adequate for a cow in mid-gestation. But, if you leave them on the same stalks too long, the energy value of what is left is significantly poorer than when they first started grazing. Also, protein and mineral nutrition are very important when grazing stalks. The corn stalks are not adequate in protein for a mid-gestation cow. Generally **supplementation with a 30-13 protein tub will help fill the gap between what is available and what the cow needs.** Minerals are deficient in corn stalk also. If cows consume around 1 lb/d of the 30-13 ZC tubs, they are getting adequate mineral. The tubs do not contain any salt, so **additional salt must be supplied alongside the tubs.** If consumption is much lower than 0.75-1.0 lb/d, you should consider supplying loose mineral also.

If you have neighbors who are farmers only, consider talking with them about renting corn stalks to graze. Some data suggests farmers consider residue management a considerable problem and that farmers spend an average of \$12/ac on residue management. **If a farmer could increase their average bushel corn price by \$0.10-0.15 per bushel, they would probably be interested.** If you rent cornstalks for \$0.50/hd/d, and corn that yields around 100 bushels can maintain one cow for about 30 days, then \$15 for one month of grazing equates to adding

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\$0.15/bu to your corn price. And the cows will process the residue in the field into manure. Cows grazing cornstalks don't remove a lot of nutrients from the field. If they put on a little weight, that is really all that is lost. Instead, your stalks are processed into a form that will be more readily incorporated into the soil and add to the biology of the soil.

The University of Nebraska conducted studies over a long period of time to investigate the impact of grazing on subsequent crop yields. They implemented two different grazing strategies; fall grazing, which was from November to February, and spring grazing, which was from February to mid-April. The spring grazing was designed to have maximum negative impact on the soil by grazing when frost was coming out and compaction was assumed to be the worst. The data below is from UNL's 2013 Beef Report (adapted from McGee et al, 2013). The data showed that for corn-soybean rotations, **grazing crop residue in fall or spring did not negatively impact subsequent crop yields and statistically increased subsequent soybean yields.**

Years of Study	Cropping System	Crop	Yield of prior grazed ac	Yield of ungrazed ac
1996-2011	Fall Graze Corn-Soybean	Soybeans	62.4	60.4
1996-2011	Fall Graze Corn-Soybean	Corn	208.9	205.8
1996-2011	Spring Graze Corn-Soybean	Soybeans	61.7	60.4
1996-2011	Spring Graze Corn-Soybean	Corn	207.2	20.8

Grazing corn stalks can be one of the most cost-effective ways to maintain cows through mid-gestation. A few precautions can help you get the most out of grazing crop residue.

Another reminder that nitrates have been a big concern this year and we highly recommend having your grain forage tested for nitrates, including any small grain hay, sorghum/sudan, and any silage. Much of the oat hay has been testing high in nitrates. With nitrates, if we know how much is there, we can blend it off at a safe level. If you don't check the feed and decide to feed it free-choice, you could have a wreck. Oftentimes, the first sign of nitrate poisoning is a dead animal so it is cheaper to check than to find out the hard way. Check with your local Dakotaland Feeds Consultant to help develop feeding programs to fit your needs.

Roxanne Knock, PhD

Timely Tips:

- * **Order your Stress Care for weaning-** planning ahead will help ensure you have it when you need it!
- * Talk to your vet about getting a VFD if you want to use Aureomycin at weaning time
- * Remember to HEAT TAPE lines on liquid systems- this keeps the line fluid. C&R Supply has videos on how to maintain the John Blue pumps at <http://www.crsupply.com/index.php/products/liquid-feed/>
- * Get **30-13 tubs** for grazing corn stalk residue
- * Implant calves during backgrounding to get the best gain and efficiency
- * Get your forages tested for quality and have your Feed Consultant set up starting/growing rations
- * Set up a herd health plan for vaccinations, de-worming program, and treatment protocols with your veterinarian
- * Inventory your projected feed resources and project your winter feed needs so you can plan accordingly
- * Pregnancy check cows and decide on a strategy to sell or feed them- implant them if you decide to fatten them