



Reduce Hay Feeding by 2/3 or More!

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According to my calculations, if Michigan's corn stover (a.k.a. cornstalks) were to be grazed or harvested with just 15% efficiency, there would be enough to supply more than 10 tons annually for every beef cow in Michigan. Corn stover is corn residue that remains after grain harvest and includes dropped grain, husk, leaf, stalk, and cob. Corn stover is one of the least expensive feeds available, it can be grazed or harvested, it meets gestating beef cow requirements for energy, and currently there is little competition for other uses. So why do relatively few producers utilize this feed? Well, because admittedly, there are challenges with grazing, harvesting, and feeding corn stover. However, escalating feed prices (including opportunity cost for hay) are strong motivation for overcoming these relatively minor challenges.

Often cited reasons for not utilizing grazed corn stover include: lack of fencing, no water supply, concern of soil compaction, and lack of local availability. First, portable fencing options allow corn stover fields to be quickly and inexpensively enclosed and used as a feed source. Second, dry cows grazing stover during cool weather have a comparatively low water requirement. Most dry, pregnant beef cows will require 6 to 10 gallons of water daily. Therefore, hauling water may be a viable option for those fields without another source of drinking water. Third, research shows that grazing cows on frozen ground does not cause significant soil compaction or reduction in soil tilth, as long as cows are removed from fields before spring thaw. Finally, transporting cows to the feed resource may be economically advantageous if there is lack of local availability.

When cattle are grazing corn stover they will first select the portions of the residue with the highest digestibility and protein concentration, such as the grain, husks, and leaves before consuming the stalks. The amount of residue left in the field is approximately equal to the weight of the grain harvested. Corn yields of 140-bushels/acre will produce roughly 4 tons of corn stover. Expected grazing recovery of corn stover is between 15 and 30%. Therefore, one acre of stover remaining from a 140-bu. corn yield will provide one cow 45 to 90 grazing days under ideal conditions. A Corn Stalk Grazing Calculator can be accessed at <http://westcentral.unl.edu/agecon/> (<http://westcentral.unl.edu/agecon/>) The spreadsheet estimates the number of animals that can be supported on a given field and has an economic evaluation that is helpful in determining the value of a grazing lease. Phosphorus and vitamin A supplementation are necessary when grazing stover. As winter progresses, the residue will lose quality because of selective grazing and weathering. Because of the decline in quality, and the cows increasing nutrient requirements, protein supplementation becomes more important as length of the grazing period increases. Distillers' grains with solubles makes an excellent complimentary supplement for corn stover grazing.

Corn stover can also be mechanically harvested. Harvesting stover can overcome many of the obstacles listed above regarding grazing. Allowing residue to completely dry before baling stover is very important and is weather dependent. Stover that is baled too wet will mold and result in unacceptably low quality feed. Collection and harvest of corn stover can be done in a variety of ways depending on combine type, and whether or not chopped, mowed or raked. When determining value of residue removed, it is important to know that approximately 13.6 lb nitrogen, 3.6 lb phosphate, and 19.7 lb potash is removed per dry ton of harvested stover. However, depending on harvesting method, the resulting feed can have significant variation in nutrient content making testing important. Again, corn stover is generally low in protein, and will require protein supplementation if fed for more than a few weeks. Feeding 1/3 good quality hay and 2/3 corn stover is a common way of meeting the requirements for beef cows during the middle third of gestation. This can be accomplished by feeding these feeds simultaneously, or by simply feeding corn stover for two days, and feeding hay every third day (the cow is remarkable at recycling nitrogen). Condensed distillers solubles may also be used as a protein supplement.

Average nutrient content of corn stover

Dry matter, 80%; TDN, 59%; NE_m , 0.59 Mcal/lb;
Crude protein, 5%; Ash, 7%; Ca, 0.35%; P, 0.19%.



Now is the time to locate and negotiate a fall supply of corn stover, not at corn harvest. Crop farmers can be persuaded to enter into a win-win deal, but are more likely to do so when they can give it some forethought.