

For Immediate Release

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Corn Silage in Beef Cattle Diets

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Feeding corn silage to beef cattle is obviously not a new idea. For a variety of reasons though, many producers have not used this feed resource for several years. This year, many acres of corn were chopped or baled for silage. This is excellent feed for beef cattle, but does require a different approach than hay feeding.

Information from Iowa State University states that because drought damaged corn silage is often stored in make-shift or temporary facilities, a great deal of spoilage can occur due to poor packing, insufficient silage pack depth, and poor oxygen exclusion. Storage losses can be as high as 40% for uncovered stacks or piles. Make sure spoiled feed is discarded and only good quality material is used when feeding out of temporary storage structures.

Oxygen is the enemy of silage, and oxygen exposure results in increased spoilage. Silage should be kept fresh by feeding 3 to 4 inches of silage from the face of the silo daily. This limits nutrient losses in the silo due to oxygen exposure.

How much silage will cattle eat? Feeder calves can eat up to 5 to 7 pounds of silage for each 100 pounds of body weight. A gestating cow will easily consume silage at 2.5% of her body weight on a dry matter basis. A 1,200 pound cow consuming 35% dry matter silage could eat up to 86 pounds of as-fed silage. The level of silage included in rations is dependent on the stage of production of the animals being fed, the desired weight gain of the animals, availability of additional feedstuffs, and nutrient content of the silage, including nitrate concentration.

Nutrient analysis results of silage received in my office this year have had ranges in dry matter from 19.4 to 53.1 percent, crude protein values from 5.0 to 10.6 percent, and energy values of 35.8 to 70.9 percent Total Digestible Nutrients (TDN). Nitrate concentrations have ranged from negative to over 12,000 parts per million. This variation in nutrient and nitrate content highlights the need for forage testing.

Rations for non-lactating beef cows in mid-gestation have included silage at 15 to 40 pounds (22 to 49% of dry matter intake) and hay at 15 to 23 pounds (50 to 77% of dry matter intake). Additional protein or energy generally has not been needed with these silage/hay rations. Trace mineral salt and vitamins A, D, and E have been needed.

Lactation rations for fall-calving cows have been similar to the following: 45 to 55 pounds of silage, 12 to 15 pounds of hay, and 2 to 3 pounds of corn gluten feed or dry distiller's grains to provide additional energy and protein. Trace minerals and vitamins A, D, and E are also needed.

Rations based on specific silage and hay nutrient content and livestock production needs may be different than the above examples. Producers wanting more specific ration recommendations can contact me at the Benton County Extension Center at (660) 438-5012, by e-mail at schmitze@missouri.edu or by contacting your local MU Extension Center.

Information in this article was taken from MU Guide 2061 "Corn Silage for Beef Cattle", and articles from Iowa State University and the University of Nebraska. University of Missouri Extension is an equal opportunity / ADA institution.