

Lessen Feed Expenses By Feeding Corn Residues

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Parts of southern Illinois have not received rain in quite awhile. The lack of precipitation has taken a toll on pastures and prevented stockpiling of forages. Actually many beef producers have been feeding hay for a month now. Hay reserves may be lower than normal due to the wet spring hampering hay harvesting. Beef producers may want to consider using available residue to extend forage reserves and lower feed costs.

With the corn harvest almost complete, corn residues can offer a cheap alternative to feeding hay thus lowering input costs as the agronomic cost of production are borne by the crop enterprise. Remember, nothing is ever free, expenses associated with grazing corn residue include rent (for residue grazing only), fencing, water development, freight, and labor.

If you are considering putting your cows on a field of stalks, remember that the quantity and quality of crop residue available will vary. Under most conditions, one acre of residue from a combined field can provide 30 to 45 days of grazing for a 1,200-pound pregnant cow while other projections put a 1,000 pound bred cow on an acre of corn residue for 1.5 to 2 months.

The nutritional quality of grazed corn residue is quite high early in the grazing period; approximately 70 percent TDN and 8 percent crude protein. Over time the nutritional quality gradually will decline to approximately 40 percent TDN and 5 percent crude protein. This reduction is a result of the cattle selecting the highest quality feeds first and weathering, or leaching of nutrients from the residue over time.

Cattle generally eat the grain first, which is the most nutritious and has the highest palatability. Next they will choose to eat cornhusks and leaves, which, compared to grain, are low in nutrients but are still palatable. Finally, cattle are forced to eat some of the stalks, which are low in both nutrients and palatability.

One must consider that a percentage of corn residue will be trampled and wasted in the grazing process therefore this must be taken into consideration when determining the stock rate. Research indicates that cattle grazing a whole field will utilize only 20 percent of the residue, but this percentage can be substantially higher if fields are strip-grazed.

Strip-grazing fields can prevent the cattle from selectively grazing, extend grazing time, and

make the quality of the diet more uniform over the grazing period. Strip-grazing is a management practice that gives cattle a fresh allotment of cornstalks on a regular basis, e.g. every two weeks, thus keeping nutrients available for longer periods of time. Strip-grazing practices are most useful where there is an abundance of feed early in the season, and where providing the livestock with access to a larger area would result in wasted feed.

As the nutritional quality of the corn residue decreases, producers will need to provide supplemental protein. To determine when supplementation is necessary, producers should watch the manure from the cows. As the corn in the manure begins to disappear, it is time to begin protein supplementation. Generally mature, pregnant beef cows should receive 0.5 to 1 lb of supplemental protein from a natural source.

Grazing corn residue also brings a slight risk for digestive disturbances in the cattle. Nutritional disorders such as bloat, acidosis, and founder can occur in cattle grazing corn residue. However, the risk for these conditions will vary greatly with the amount of grain in the field.

Another potential health concern is nitrate toxicity, a potentially deadly disorder in beef cattle. It is generally accepted that the highest nitrate concentrations in a corn plant are in the lowest 18 to 24 inches of the stalk. As discussed previously, the stalk is near the bottom of the list of preferred feeds for cattle grazing corn residue. Thus, unless the fields are grazed extremely heavily, nitrate toxicity under grazing conditions is unlikely. The risk for nitrate toxicity is greater in drought conditions.

Corn residue is also quite low in most minerals, especially calcium, phosphorus and vitamin A. As a result, a well balanced vitamin and mineral mix should be provided free-choice. Keep in mind that many of the feeds used as protein supplements will provide significant amounts of calcium and(or) phosphorus and may reduce the need for additional supplementation. However, vitamin A and white salt should be provided at all times.

When grazing stalks, be sure to provide adequate fresh water, a balanced mineral/vitamin supplement, and protein and energy supplementation as needed. Those considering corn residues in drought stricken areas should be concerned with nitrate poisoning potential and have residues tested. Δ

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