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Nitrates in Feedstuffs Update
By Gene Schmitz, MU Extension Livestock Specialist

Many producers have harvested corn for silage and it has been in bags or piles for a few weeks. Corn is being harvested for grain now, and many producers are considering baling all or parts of the stalk fields. I thought it would be timely for an additional reminder about the nitrate situation in this year's corn crop.

Corn silage needs about 4 weeks' time to properly ferment. We have now reached the time when much of the silage has been in the silo for that long and producers have started sampling the silage. The few silage sample reports I've seen have been relatively high in crude protein (about 10 percent on a dry matter basis) and the energy values are also very good (60 to 65 percent TDN).

Nitrate levels in these samples have been in the 5,000 to 6,000 parts per million range in the finished silage. These levels indicate the necessity to limit the silage to approximately one half of the diet dry matter for beef cattle. If the corn was chopped and put in either piles or bags, limiting the amount of silage fed per day is relatively easy. If the corn was baled and put in bags to ensile, limiting the amount of silage fed per day is much more complicated and difficult. Producers with corn bales in plastic bags will need to think through how to limit feed potentially toxic silage in order to restrict individual animal intake.

Remember that proper fermentation reduces, but does not totally eliminate, nitrate problems in corn silage.

Corn grain is now being harvested and many producers want to graze or bale the corn stalk residue. Many of the corn stalk fields I have checked for nitrates have been quite responsive, indicating the presence of nitrates. Fields should be sampled and checked for quantitative nitrate levels before baling or grazing the stalks.

When considering baling corn stalk residue, the best material to bale is the tailings coming out of the back of the combine. Have the combine operator disengage the chopper and spreader to allow the tailings to pile behind the combine and bale those. This will keep a lot of the stalks in the field that may not be very palatable to cattle any way, plus reduce, but not necessarily eliminate, nitrate levels in the baled tailings.

Producers need to be aware that dangerous levels of nitrates are being found in finished corn silage and in corn stalk residue following grain harvest. Test these materials before feeding, or in the case of stalks, before grazing or baling an entire field. Once nitrate levels are known, feeding plans can be made accordingly.

If you have questions on the nitrate issue or about sampling or interpreting feed analysis reports, contact me at the Benton County Extension Center in Warsaw at (660) 438-5012 or by e-mail at schmitze@missouri.edu. University of Missouri Extension is an equal opportunity / ADA institution.