

News Column
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AMMONIATING LOW QUALITY FORAGES

I watch Hallmark movies because I like predictability and happy endings. If you've seen one Hallmark movie, you know how the next one will go. There will be a budding romance, a misunderstanding somewhere along the way, and everyone will be happy at the end. It's predictable.

As I get ready to tell the same story I have already told at least ten times in my career, I feel like a Hallmark writer. The scenery may be different and the clothing styles and automobiles have changed, but the basic storyline hasn't changed much from 25 years ago.

Here we are again, dealing with limited feed supplies and high forage prices across much of the state. So, what do we do when feed supplies are tight? We talk about ammoniating low quality forages. It's predictable – we'll do it every time, with just some minor changes to the story.

The changes to the story this time around include higher prices for anhydrous ammonia and black plastic, and a lower application rate that may make ammoniating forages more attractive. Instead of a 3% per ton anhydrous application rate, you can get by with just half that much – 1.5%.

The reason we always revert to talking about ammoniation is because adding anhydrous ammonia to low quality forages will improve digestibility, intake, and cattle performance. Forages with less than five percent crude protein and 45 percent TDN (total digestible nutrients)

are candidates for ammonia treatment.

Ammoniation usually doubles the crude protein content of a forage and boosts feed intake by 15 to 20 percent. The combination of the increased protein and the increased intake can turn a low quality feed into something that can almost sustain a dry cow.

Traditionally, a 3% application rate of anhydrous ammonia has been recommended. That's 60 pounds of anhydrous ammonia per dry ton of forage. However, research conducted about 10 years ago demonstrated that a 1.5% rate (30 pound of anhydrous/ton of dry hay) produced proportionally greater improvements in both crude protein and dry matter digestibility.

While the 1.5% rate doesn't increase the quality of the feed as much as the 3% rate, you get more bang for your buck. The 1.5% rate makes better economic sense when anhydrous ammonia prices are high.

Ammoniation is accomplished by stacking bales in a pyramid and covering the pile with 6 mil black plastic. Edges of the plastic are sealed with dirt and anhydrous is inject through a pipe under the edge of the plastic.

A 40 foot by 100 foot sheet of black plastic is most commonly used and that will cost about \$325 now. We used to stack bales three high in a 3-2-1 pyramid, making stacks 12 to 14 bales long. Some bales are bigger today, so the top bales might have to be left off the stack but you'll still cover about the same tonnage with a sheet of plastic.

With \$1300 per ton anhydrous you'll spend \$20 to \$40 per ton for anhydrous, depending on the application rate, and you'll spend about \$9 per ton just for the plastic. Add in the original cost of the forage and some labor, and you'll quickly realize there is no cheap feed.

Now, because I've told this story before and I like predictability, you know how this message ends. Grazing crop residues is still the best way to make money in the cow business.

It is always cheaper to harvest forage with a cow than to harvest it with a swather and baler. If grazing stalks doesn't work out, then ammoniating low quality forages might be a good next option.

If you have questions, you can reach me at the Riley County Extension Office at 785/537-6350. Or, you can send e-mail to gmcclore@ksu.edu.

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