

dhia

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QUESTION: For the past few years we have seen MUN values increase when we started to feed new crop corn silage. What should we expect with drought-stricken corn that we will be feeding shortly?

ANSWER: The trend that you have seen in your MUN values over the years is a reflection of corn silage changes that occur during fermentation.

This year with dry conditions and some less than optimal corn to be chopped for silage, we can expect to see more dramatic MUN changes.

The first part of the question is an observation about MUN levels in cows and how feed changes can affect them.

A TMR that is put together with the same target amounts of feed does not necessarily generate the same efficiency or productivity.

We have thought in the past that there is little difference in a crop such as corn silage — now that thinking is different.

We see documentation about

variety selection being very important to the performance of the cattle using it. While this is valuable in planning next year's crop, some thought needs to be given to what we have now.

Feeding new cut corn silage presents new challenges daily for a considerable length of time.

Corn from the same field can vary quite a bit in feed value to the cows.

Each day until full fermentation, we feed something different than the day before. Going from green chop to corn silage is what occurs on most farms.

Protein content, protein type, and carbohydrate levels in the diet influence MUN values. Looking at how much urea shows up in milk samples shows relationships between rumen available protein and carbohydrates.

A feed such as corn silage that is used primarily for energy in the diet can change MUN values significantly.

The fermentation process of corn silage not only allows us to store it for long periods, but it also

starts the digestive process that will continue in the rumen.

Looking at corn silage during the fermentation process, we see that carbohydrate levels increase and fiber levels decrease around 30 to 60 days into ensiling.

Matching this up with what we know about MUN trends, new silage increases MUN output of a cow due to lower carbohydrate levels in her diet.

The way to offset this effect is to increase other sources of carbohydrates to levels that will not diminish rumen health, but will better balance the protein in the diet.

We also have the option of slightly lower protein levels to maintain a correct balance.

The drought-stressed corn that many have this year will have the same effects during the fermentation period but to a greater degree.

We will see higher MUN values than we did in the past due to the added fact that there are less carbohydrates in the beginning. I would expect that the time between green chop and full fermentation would increase, because

fewer carbohydrates are available to enhance fermentation.

Lastly, I would expect the MUN levels to be higher for the whole feeding season if we do not adjust for the lower energy corn silage that is currently going into some silos right now.

What strategies should we adopt to avoid high MUN?

I would expect to see more grain feeding than has been necessary in the past. At least grain prices are favorable to this approach.

We could lower protein feeding to stay in balance with the available carbohydrates. This may not be best when trying to maintain high levels of production.

Feeding a higher ratio of corn silage to hay crop forage could help and may be a good choice if your corn crop has low grain yields

anyway.

Any combination of these will probably work in most situations.

Plans might include additional storage to reduce the drastic feed change that accompanies green chop corn.

One last thought for today: Ruman health should always be our top priority.

For the time period when we know that MUN will increase, maybe we should anticipate what to do to minimize this rise and make some adjustments.

Be proactive in management based on trends of the past and estimates of what our feeding program is doing. Be reactive to what our cows tell us when they are tested and fine-tune further when necessary. When cows tell us the true story we cannot ignore them.



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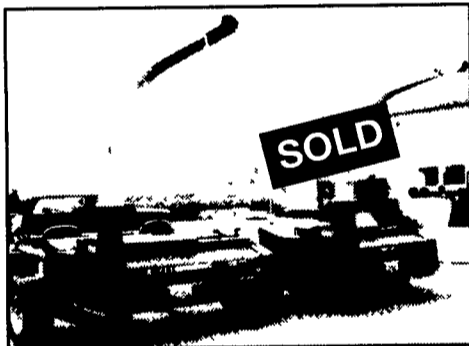
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