



West Central News

by Dr. Jesse Goff

Check the Corn Silage Potassium Too!

Potassium in the diet of the pre-fresh cow wreaks havoc with calcium metabolism by inducing a metabolic alkalosis in the cow. The responsiveness of bone and kidney to the main calcium-regulating hormone, parathyroid hormone, is reduced under alkaline conditions. I think most nutritionists attempt to utilize low potassium forages in close-up cow rations to reduce the risk of milk fever. And a good number are also using SoyChlor® to further reduce DCAD and acidify the cows. Many producers now feed hay to dry cows only from fields that do not receive manure applications. Unfortunately, in the last few months I have had occasion to visit with nutritionists who have had Soychlor "failures". Soychlor "had been working well" but now the urine pH of close-up cows had risen above 7 and cows were having more trouble with retained placenta, metritis, and even some milk fever. With a little digging around it came to light in several of these cases that the corn silage was the culprit.

NRC values for normal corn silage suggest it should be about 1.20% K with

a standard deviation of about 0.3%. A couple of the problem corn silages were running 1.6% K. And because of the amount of corn silage in the diet, the corn silage was bringing a lot of K into the diet. I was hoping this was relatively rare but it may be more of an issue than I am aware of. Corn is a warm season grass - and we forget that even warm season grasses can take up K out of the soil in excess of their needs. They are not typically as prone to luxury consumption of K as the cool season grasses we are typically worried about for the dry cow. However, as nitrogen fertilizer costs have gone thru the roof, we are putting more and more manure on corn ground and it stands to reason that K values of the corn silage will continue to climb.

Bottom line: be sure to get wet chemistry done for K content of your corn silage to help you control dry cow diet K. Remember to sample regularly... corn going into the bunk can vary and silage coming out can vary over time! It makes sense for the lactating cows too!

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