

Practice Tips

Moderator — Duane Miksch

Urine pH to Monitor Anionic Salt Programs

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Anionic salts help prevent milk fever by causing a mild compensated metabolic acidosis. The acidosis also leads to acid urine. Dr. Jesse Goff of the National Animal Disease Laboratory in Ames, Iowa suggests close-up dry cow urinary pH values above 8 indicates cows that are at greater risk of milk fever. Values below 7.3 indicate decreased risk of milk fever. These values have not been well worked out and over interpretation should be avoided. However, if anionic salts are fed and the method of action is through a metabolic acidosis, it is reasonable to expect some level of aciduria.

One possible cause of alkaline urine in close-up cows on anionic salts is mixing errors. The anionic salts may have been omitted or added at an amount less than the desired level. The error could happen on the farm or at the feed mill. A nutritionist using this technique found a dairyman feeding 0.5 lb of mineral instead of 1.0 lb as prescribed. One dairyman discovered the reason for a milk fever outbreak was due to calf mineral being fed

instead of close-up dry cow mineral. Another nutritionist found that there were no anionic salts in the close-up mineral/grain mix after discovering urine pH values above 8. There must have been a mixing error at the feed mill.

On one dairy, the feeds had changed and were higher in sodium and potassium, and lower in sulfur and chloride. These changes led to a minor milk fever outbreak and alkaline urine. Dairymen may use urine pH to monitor the fixed ions in a ration and save on ration analysis costs. If the urine becomes alkaline they know to add more anionic salts or retest the feeds.

Urine pH can be measured with a meter, pH paper, or urine dip sticks. We have found narrow range pH paper to be inexpensive and work very well. There are several brands available. We use Fisher Scientific's 6.0 to 8.5 pH range. (Phone # 800-766-7000, Catalog # A983, \$10.40 for pack of 3)

Tidbits From Tennessee, Part IV

Hugh McCampbell, BS, MS, DVM
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Good evening from Tennessee. It's nice to be invited back to talk again in the practice tips session. I appreciate it. For those of you who heard me in Nashville, Buffalo, or Kansas City, this talk won't be any better than those, so your friends who aren't here tonight

won't be missing much by not hearing me.

I was in practice for about 12 years before becoming the Head Extension Veterinarian in Tennessee, so I put in a lot of time on the road treating a lot of cows, horses and so forth. I hope you can use some of what I