

# Texas Dairy Matters

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## BE SURE ANIONIC SALT DRY COW RATIONS ARE EFFECTIVE

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Dry cow rations have changed dramatically in recent years. More and more nutritionists include anionic salts in their ration recommendations so that the dietary cation anion difference (DCAD) is negative. Research shows that using anionic salts to create negative DCAD rations reduces the incidence of milk fever and subclinical hypocalcemia. There are many factors which must be considered when formulating rations with anionic salts. How do you determine if the rations are working?

Of course, one way is to evaluate the number of cases of milk fever before and after including the anionic salts. However, other factors such as season and age of cows calving can influence that number. And feeding anionic salts is not an all-or-none effect. For each unit of DCAD decrease, urine pH drops and blood Ca rises. Thus, your cows may show some positive effects of feeding a negative ration without receiving the full benefit possible.



A more direct method of evaluating *effectiveness of adding anionic salts* is to check urinary pH. Urine pH changes within 0 to four days of feeding anionic salts.

A common question when implementing a urine pH monitoring program is, "How does time when cows are fed affect the urine pH?" When cows are fed multiple times per day, there is no effect of feeding time on urinary pH. However, when cows are fed only once a day, urine pH varies in relationship to time after feeding.

With this in mind, when setting up an on-farm monitoring program, follow these procedures:

- Collect urine from a minimum of 10 cows.
- Select a time 2 to 6 hours after feeding.
- Sample once weekly at the same time on the same day.
- Use standard pH paper or a field pH meter.
- Make ration changes to alter the DCAD if the average urine pH is outside the desired range of 6.0 to 6.5 for Holsteins or 5.8 to 6.2 for Jerseys.

Urine pH readings higher than these recommendations indicate the ration isn't producing the desired effects. Check your feed analysis and ration calculations. Use only wet chemistry analysis for feedstuffs used in these rations. NIR is not accurate for minerals.

Feeding rations that reduce urinary pH below recommendations costs in two ways: One, you are paying for more anionic salts than needed in the ration. Two, anionic salts aren't very palatable. Feeding too many reduces dry matter intake, just the opposite of what you want. Maintaining maximum dry matter intake during the transition period is critical to overall lactation performance.

Make sure you get your money's worth from feeding a negative DCAD ration. Check urine pH regularly. Adjust the amount of anionic salts up or down to optimize urine pH. There's no point in spending more than you need to if urine pH is too low. And you aren't getting the full value of your investment if urine pH is too high.