



by Steve Martin



## String samples can help manage feed cost

**I**N TIMES of tight dairy margins, I look for the best angle to help my clients weather the storm. Though the frequent ups and downs should keep us in good practice, it seems every return to the “squeeze” needs its own playbook.

I have friends in the industry who I truly respect that are going to find issue with this

column. These are the one-group total mixed ration (TMR) supporters. I am not against the concept; however, I am usually “for” the other approach.

In dairies where we feed fresh, high-, mid-, and late-lactation diets, we have an opportunity to more closely and carefully manage feed cost.

In my list of potential rations, there was no mention of a “low” ration. I agree with the potential detractors that low rations make low cows. Let us agree to not do that! Instead, let’s consider how multiple rations can help us manage feed cost and, through the use of string milk samples, verify that we are feeding successful diets.

### The center of the debate

Some of the rub in this discussion of multiple rations compared to a one-group TMR might center around this question: Do we feed cows amounts of nutrients or concentrations of nutrients? In the one-group TMR approach, we lean on the fact that if cows get pregnant on time and do not spend time as long days in milk (like unprofitable cows do), the level of milk production will drive intake and the ration will meet those needs.

There is also the notable benefit of not losing milk on cows when mov-

ing them from a high ration to a mid-lactation one. In my world, this change would also coincide with a pen move, which is likely more of a milk loss risk than dropping a ration from 79 to 77 net energy of lactation (NEL).

Where do string samples fit into this frequently debated topic? The answer centers around using either bulk tank components and milk urea nitrogen (MUN) measurements or using this same information but on a pen basis. MUN is probably the most straightforward measurement to make the point.

We know that MUN as a measurement has its issues. It often moves with no explanation, and the day-to-day variation seems to defy the rules of biology. But, when looking at a weekly average from many loads of milk, it offers a solid opinion on how the ration is being balanced for protein.

### A bit deeper

Yes, it is more complicated than that, but for this discussion, let’s assume I am sitting with a client who is telling me to find a way to feed less soybean meal (SBM), which has climbed in price to as much as \$500 per ton. I expect that both the good and not-so-good nutritionists will go directly to the most recent MUN report immediately after this conversation.

We may be overfeeding protein or have a poorly balanced blend of proteins. Or, there may be a disconnect between the protein supply and the situation with the carbohydrates in the diet. In any of these cases, if MUNs are high, there is an opportunity to perhaps feed less of the expensive SBM.

In a one-group TMR fed herd, this is an easy process. After looking at the co-op or creamery report and checking the ration, you might send in a TMR sample to the lab. Then, basic ration tweaks can drop the MUN, require less SBM, and improve the client’s margins.

In the short term, all is well. It could be, though, that a few months later, the next challenging conversation with the client relates to a drop in peak milk. Among other things that can cause cows to give less peak milk, it could be that the previous reduction in ration protein may have in fact shorted those cows that are in early to peak lactation. It may have been too subtle to be noticed in milk shipped.

Let’s replay the conversation about the \$500 SBM in a situation using multiple diets. We could look at adjustments to formulation and cost in a different way in the high ration compared to the longer days in milk (DIM) ration. After some thoughtful formulation and an approach that is probably a little more “risky” in the mid-to-late-lactation rations, we could use string or pen samples to see if the MUN changed in ways that did not risk milk loss.

### How much feed?

Now, let’s go back to the reason that formulating for amounts or percentages matters in this discussion. The answer centers around the fact that most dairies allow cows to eat as much as they want. In our part of the world, it seems more often than not, they eat a little more than I think they should. In this situation, if you know their milk production and have string components to energy correct that milk and study the MUN, you may find opportunities to save feed cost.

It should be said that carbons must go somewhere, and if you suspect you are overfeeding energy in late lactation, any reduction in supply would likely reduce weight gain. This may be good or bad depending on the situation.

However, feeding excess protein is always a negative for cost, a waste of energy, and, in some geographies, an environmental issue. Using string samples for MUN information is a great way to manage this, and by feeding multiple rations, you can target the protein reduction to the cows that won’t take your savings back from you with lower peak milk levels.

### What about your farm?

Every dairy is different and can answer this “one versus multiple” rations question for themselves. In some situations, a one-group TMR is the best fit. If we agree to not make low cows by feeding low rations, maybe we can take advantage of this cost-saving approach. We can carefully group cows, consider the intakes and milk solids they produce, and try to best target the correct nutrient supply. And for sure, when margins are tight and feed costs are high, we should be very careful to not oversupply any nutrients.

My job is to build healthy diets to convert feed to milk in a way that maximizes dairy margins. Utilizing multiple rations when possible helps me achieve that goal. 🐄



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