

Straight to the Bottom Line 9/1/13

Title- Developing a Sound Forage and Ingredient Analysis Plan

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I am sure that in the forage analysis business, dairy is king. Because of the fact that dairy cows require such a high forage level in their diets, and these diets are constantly being fine-tuned, samples into forage labs are heavily weighted toward dairy production. As we talk about nutrition issues in this column, we often contrast our beloved dairy cow to feedlot cattle as well as range-fed beef cows. The issues related to the importance of forage analysis are another example of how the dairy cow is different from her also ruminating counterparts. Feedlot animals have such a low forage level in their diets, the exact quality of that forage is not as important. The foraging brood cow is on the other end of the spectrum with a very high forage diet. Her ability to adjust her intake up or down based on meeting energy needs, allows her to do well on a variety of ranges in forage quality. I don't mean to over simplify the non-dairy situation, but dairy nutritionists have to work every day with a non-terminal animal that has a limited ability to consume enough feed to support her genetic milk production potential. In fact, if her intake max has been met and she is still deficient of nutrients, she will actually sacrifice her own body flesh to meet the demands.

Forage quality is a key pillar in dairy nutrition. We know that these milk cows require a minimum level of forage in a diet to maintain their health and longevity while supplying enough digestible nutrients to support milk flow. In view of all of these facts, dairy formulators must know the nutrient content of the forages in the diet. The result of this need is the existence of a few large national feed testing businesses and no shortage of smaller ones as well. These labs are all very busy with samples and let's don't forget the support for the package shipping companies that also benefit from this whole process. The lab that a particular nutritionist or dairy might be most the comfortable with is just as likely across the country as they are across town.

With all of the activity around this process, I often wonder if we are getting all the good out of it. There is no shortage of effort in gathering, packaging, shipping, analyzing and reporting. I wonder at times if we are always being smart with the whole process. In view of the fact that the process is not cheap, we need to be sure to have a sound plan for sampling, sending and then reviewing results.

The first thing to consider as we differentiate between ingredients is how often each ingredient needs to be sampled. There are probably two main issues to determine this. The first relates to the feed rate of the ingredient. If the ingredient is fed at a high rate and thus has a large influence on the ration, it should be sampled often. The second factor would relate to the inherent variability that exists for that ingredient. If it is a fairly stable feed like canola or soybean meal, frequent tests are not needed. However, if it is a forage ingredient like alfalfa hay coming from variable sources or a byproduct like corn gluten feed, perhaps more frequent tests are necessary. So, what does frequently mean? In many cases, high inclusion feeds and ingredients with expected higher levels of nutrient variability might be sampled weekly.

In next month's column, we will discuss the different options available for sample analysis. For example, should you be using wet chemistry methods or is NIR a better option? Additionally, what nutrients should you be requesting on the different ingredients? Asking for the wrong nutrients on particular ingredients is a waste of money for sure. We will also discuss issues related to interpreting the analysis so the information can be useful for buying decisions and subsequent ration formulation.