

Straight to the Bottom Line

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Title: My Evolving Love-Hate Relationship with the Shaker Box

I am not sure what year the Penn State Shaker Box showed up on the scene in the dairy industry, but I think it might have been pretty close to the same time I did! For most of my career, this tool for measuring forage particle length in a TMR has plagued me. In addition to it being a time consuming step in the dairy nutrition consulting process, it is also a bulky thing to carry around. It always seems to be in the way in your vehicle and totally unfit for carry-on only air travel.

For many years, I preached about the shortcomings of the shaker box. Part of the reason is that it does have shortcomings and part of the reason is that I just didn't want to use it. I think my first problem was that the standards sent out with the boxes seemed way too short to me back in Central Texas in the early 90's. I felt like the accepted values were way too short and would certainly result in a short particle length TMR that would lead to poor milk to feed conversion, bad feet and no test. At that time, we were using mostly alfalfa based rations as the pipeline of corn silage from the Waco and Hillsboro area was not yet established. In those days, it was not uncommon to feed 20 pounds or more of dry alfalfa hay. These rations were mixed with four auger horizontal feed boxes and were very hairy! We had learned the hard way what over mixing these type diets in the new vertical mixers would do to the cows. The rations that we had that hard lesson with, by my estimation would have shaken out to be just about right using the fancy set of boxes from up north. So, in view of this set of circumstances, I had made up my mind about the shaker box.

The situation that existed in my pre-corn silage love affair drove my thought process on several things, not just the shaker box. As we began to have the opportunity in Central Texas to start feeding corn silage, we also began to see the shortcomings of measuring forage percent in milk cow diets. We learned that forage that was counted as forage but was really corn grain had to be handled differently. What we later learned was the difference was the level of NDF in these very different forage sources; corn silage and alfalfa hay. It also became clear that the proving ground for the Shaker Box was not out west in alfalfa country but back east where the corn grows tall.

Over the coming years as we began feeding more corn silage in Texas and as my geography grew to extend outside the Lone Star borders, we started feeding shorter particle length diets that were more and more based on corn silage and less and less on alfalfa hay. All the sudden I woke up and decided that I needed to order a new shaker box! In next month's column, I will review what we learned about NDF levels in the ration and how we use that alongside the shaker box data. It turns out that the guys up North were right after all, as long as it was a corn silage based diet. With adding the step of combining the shaker box data with the fiber data in the diet, we ended up with a very good tool to be sure we were feeding diets that were long enough to keep cows healthy but short enough to allow for high milk production.