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Driven by Data

This week's article will take a break from the news of the month and my interpretation to focus on an animal nutrition topic. Each dairy farm generates a tremendous amount of data. Some of it is utilized to make management decisions but there is much of the data that does not see the computer screen. What is the key to analyzing data? We have to have good data to start with!

We do a lot of work in Kansas who has been hammered with weather since the end of December. If the wind was not blowing 50 miles per hour then it was snowing 6-8 inches. There were even times when both were happening. We feed several dairies as well as a large heifer yard. We were diligent to make proactive ration adjustments prior to the weather events even though most of those adjustments involved increasing energy, which increased cost. Our clients agreed that they wanted to stay in front of nutritional needs and not get into a deficit that would cost even more later.

We collect weights for heifer development as they move from each ration to the next step. We instituted this process early on to monitor feed efficiency and to evaluate if we were hitting our age and weight targets for each ration. This all corresponds to and is connected to age and weight at breeding in order to reach source farm goals for pregnant females returning to the dairy. We were expecting these younger calves to struggle with weight gain and even maintenance during these extended periods of environmental stress. Initially we observed very consistent gains moving through the rations even with bad weather. I was personally monitoring these weights weekly to make sure we did not get behind and to make quick ration adjustments as needed. Then all at once it appeared that the weight gain just stopped completely especially in the younger calves that were moving onto the pre-breed ration. The manager, the breeding crew and myself went into a panic mode as we were concerned these heifers not going to obtain adequate weight for pubertal onset and ultimately not get bred on time in the breeding pen. I scrambled for new diets, the manager alerted yard staff and the breeding crew started looking for ways to sort heifers so we did not have a lag in pregnant heifers going back to the dairy. Basically everyone went into a panic mode. I was trying to understand how physiologically we just all of a sudden had a nutritional crash. The more we all discussed, the more we started to question the weight data. Most of the weights were averages from truckloads moved from one location to another. These averages had always served us well in the past as a way to monitor weight gain. The difference in weight gain was close to 100 pounds less than normal.

The staff at the yard was willing to do some individual weights during routine vaccinations. These weights were much more inline with what we had been observing and would expect from the nutritional plane being provided by the rations. We believe the weather accentuated the poor performance of some calves that normally would have been able to keep up but even with the increased nutrition they fell behind. Those lighter calves were able to lower the load average enough to skew the overall average data that were used to observing. We went back and checked the records on these calves and all had been treated for something

either at the heifer yard or at the dairy before they were shipped. In this instance, we had the data and were making decisions from the data but in the end the data was not accurate. When we make data driven decisions we have to make absolutely certain that are data is clean and accurate.

Another client called and was in a panic regarding pen averages of weaned heifers. We discussed some management strategies to improve the situation. I got a call the next day that the averages were not correct because someone on the previous day did not download new weights from the handheld so he was using the previous weight data on those calves!

Using data to make good nutritional and management decisions is wise but we have to double check to make sure all of our data is correct. Experience and knowledge should provide us a good check and balance. If some data looks off, we need to verify then act accordingly. Good data and good management will always have a positive effect on the bottom line.