TMR Consistency Requires a Team Effort

By John Hibma for Progressive Dairyman

Reprinted with permission from Progressive Dairyman April 12, 2010 issue.

FeedWatch Factsheet

I remember back in the 1980s when the first TMR mixer boxes started showing up. Boy, those were something. No more pushing and dragging bales of hay around by hand – dump them into a big box with your front-end loader, add your commodities and presto, it's all mixed up and sitting in the manger in the perfect proportion ready for Madam Milk Cow. It just about made the pitchfork obsolete.

Having a TMR mixer on your dairy should make feeding cows easier. High-producing cows eat upwards of 50 pounds of dry matter each day and when you have high-moisture feeds such as corn silage, the total weight of the ration is closer to 100 pounds. When you're milking over 1,000 cows, that adds up to some serious tonnage every day. For that reason alone, mixer boxes, whether they're a truck-mount or a trailer, horizontal or vertical, have contributed greatly to the dairy industry's ability to increase milk production, as well as feeding and labor efficiencies. But, as with any type of technology, it's only as good as the person operating the machinery. I've seen TMRs make a lot of milk and I've seen TMRs lose a lot of milk.

"Everyone on a dairy farm who is involved with feeding cows by way of TMRs must have a solid understanding of how critical it is to mix feedstuffs correctly."

Ease of moving feedstuffs notwithstanding, the primary purpose of TMR technology is to provide your cows and heifers with a consistent and cost-effective ration that delivers the necessary nutrition for milk production or growth rates. The challenge for many, though, is getting it done each and every day with as little variation in the mix as possible. Everyone on a dairy farm who is involved with feeding cows by way of TMRs must have a solid understanding of how critical it is to mix feedstuffs correctly and, especially for those large dairies, teamwork is essential to accomplishing that task. In a cow's perfect world, every mouthful of a TMR provides the same amount of nutrition with little or no variation in protein, energy or fiber levels.

For dairy cows to reach top levels of milk production and sustain those peaks requires consistent diets day in and day out. The more consistent the ration is, the more efficiently a cow's rumen will perform. If there's a large variation in the mixing of a TMR from day to day, the proportions and amounts of forages and commodities that move into the rumen and are presented to the rumen microbes will also be different.

My wife has one of those bread machines at home. When all the ingredients are put in correctly, it produces a wonderful loaf of bread. There's a very limited amount of combinations that she may combine ingredients in order for the bread to ferment and rise properly. If you don't measure things correctly, the final product sort of looks like bread and sort of tastes like bread, but there's something definitely lacking.

With dairy cow nutrition we must focus on the fermentation in the rumen in order for a cow to be healthy and produce milk. There's a fairly narrow window of how much variation in starch and sugar levels, rumen-degradable protein and soluble fiber that rumen microbes can tolerate before fermentation is detrimentally affected. Maintaining a consistent TMR is the responsibility of the entire dairy management team, including the nutritionist who formulates the rations and the feeder who loads the mixer. Lines of communication must be open and continuous, allowing for adjustments in dry matter intakes and mixing charts whenever and as often as needed.

CONTINUED ON BACK

It's always natural and convenient to blame the feeder when milk production suffers. Yes, he/she certainly has a big responsibility to make sure the loads are loaded with the correct amounts of feedstuffs and in the proper order and not over or undermixed. But equally as important are the other aspects of the feeding management in knowing what level of milk production is being fed for and whether or not the cows in any given group are matching up with the ration they are being fed. It's easy to under-formulate for a group of cows, which keeps them from meeting their productive potential. That's not the fault of the feeder.

With the confidence that the feeder is paying attention to the load charts, loading the mixer in proper order, not overmixing and the scales on the mixer being accurate, the one variable that affects the feeding program on any dairy farm is the dry matters of the feeds. Especially with rations with high percentages of high-moisture feeds such as haylage and corn silage, dry matters can be all over the board. A difference of only two or three points in the moisture content of silages will have a profound impact on the total weight going into the mixer and consequently if a group of cows is being overfed or underfed. Silages should be routinely tested for moisture levels. The nutritionist may believe the ration is formulated correctly, but the cows are telling you they're still hungry. Do you blame the feeder because he miscounted the cows or do you blame the nutritionist because he's way off on the dry matters?

Total mixed rations have proven themselves to be profitable on most dairies that have invested in that technology. As in most any production process, the end product is very much dependent on quality control. The successful implementation of TMRs on dairy farms requires the education, experience and close cooperation of all people involved with the feeding program.

For more information on how FeedWatch Feed Management Software can help you manage your herd for increased productivity, call CanWest DHI today at 1-800-549-4373.