



Tips to reduce sorting at the feed bunk

AS A NUTRITIONIST THERE is one aspect of my job that is a constant challenge. I have designed a balanced ration with the feeds available on farm but somewhere between the computer and the milking parlour something goes wrong. The ration that looks so nice on paper is not supporting milk production the way it should. The cows themselves are smart and sometimes they cause most of the problem by eating what tastes the best. They stand at the feed bunk and pick out all the goodies from the total mixed ration (TMR) leaving the longer forage particles behind. This can have a serious impact on cow health, milk components and production. So how do we solve this issue of sorting?

Traditionally adding water to the TMR has been thought to help make a more cohesive mix and to reduce sorting by cows. There is research to back up this common on-farm practice and it has been shown that adding water can reduce sorting in a TMR that is excessively dry, >80% dry matter (DM). A TMR that dry would not be typical in Ontario. Similar research was done with a >60% DM TMR and it also showed reduced sorting when water was added. However, if ensiled forages are excessively dry there are bigger problems than just the dry matter. These forages may not be properly fermented, or may be poorer quality which could cause reduced feed intake

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and poor milk yield.

More recent research has shown that adding water may not be the best solution to this sorting problem. Multiple studies done through the University of Guelph's Kemptville Campus have shown that if the TMR dry matter is between 40 - 60%, which is more in line with TMRs fed to most Ontario herds, then adding water increases sorting behaviour in cows. These studies also noted a decrease in dry matter intake (DMI) with added water. Adding water to the TMR increases the weight or bulkiness of the ration and rumen fill may then limit how much the cows can consume. This could have a negative effect on milk yield.

One of the studies was done during the summer months and the results indicate that with warm weather the addition of water to the TMR increased the temperature of the TMR itself after feeding. This increase in temperature may indicate increased feed spoilage which would also impact DMI. Increased spoilage of fermented feeds would also lead the cows to sort against these feeds and select for shorter, higher starch particles. The

increased intake of these starchy particles can affect rumen health, increasing the risk of sub acute ruminal acidosis, and can also impact milk components like butterfat.

There are other ways to increase the moisture of the ration, and decrease sorting, without adding water to the TMR. Decreasing the amount of drier forages in the ration and replacing them with wetter forages is a good first step. For very dry TMRs feeding wet co-products, like wet brewer's grains or wet distiller's grains, can lower the dry matter of the TMR without adding extra water. These feeds will also contribute nutrients rather than just bulking up the ration. Decreasing the dry matter of the TMR by changing the feed is a much safer route when trying to control sorting.

Adding a molasses-based liquid feed supplement to TMRs is the recommendation of many dairy specialists. These products provide some moisture but the sticky molasses works to bind forages and grains together in the TMR making it harder for the cow to sort. Molasses-based products are also a source of tasty sugars and have been shown to increase DMI in cows.

Reducing the size of longer forage particles can also reduce sorting. This makes the particle size of the TMR more uniform and gives the cows less opportunity to sort. Mixing the TMR longer or adding or replacing worn knives can help breakdown longer particles.

If a quick solution is required and changing or adding feeds is not an option, increasing the frequency of feeding has been shown to reduce sorting in cows. If the current feeding schedule is once per day try increasing it to twice a day. In hot weather this can also help reduce TMR spoilage by keeping the feed bunk fresh.

It is impossible to stop all the cows in the herd from sorting. Flinging the TMR around is a source of entertainment for cows, and just like there are some people who will pick all the cashews out of a bowl of mixed nuts, there will be cows that pick through the TMR. If sorting is a problem in your herd try adjusting your forages or try adding a new feed to your ration. The addition of water to a TMR to reduce sorting should be a last resort. The old story is that there are three rations for the cow: the one the nutritionist formulates, the one that gets mixed on-farm, and the one that the cows consume. The challenge is to get all three as close as possible for maximum benefit to everyone involved. **D**