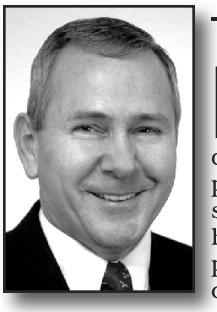
Cattlemen Must Optimize Dry Matter Feed, Maintain Normal Rumen Function



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Managed intensive grazing is a viable management tool for improving dairy profitability. Successful pasture-based dairy feeding systems use a combination of high-quality pasture and supplemental stored and purchased feedstuffs. In order to maintain optimum milk production, producers need to optimize dry matter feed intake and maintain normal rumen function while grazing lush, high-moisture grasses.

The challenge with a pasture-based feeding program is to maintain normal rumen pH values from 5.8 to 6.2 that will support optimal digestibility, nitrogen flow and desirable milk components. If pasture quality is less than 35 percent NDF (neutral detergent fiber) and more than 80 percent digestibility, rumen pH can drop below 5.8. If additional fermentable carbohydrates are added (such as molasses or barley), pH levels could drop even lower.

Lush pasture will be low in effective fiber due to low level of NDF and rapid rate of passage. New Zealand workers reported cows consuming only clover and grass pasture (no concentrate) experienced rumen pH under 5.5. Adding 2 to 5 pounds of long forage particles (over 1 inch) will help to maintain a rumen or hay raft in the cow's stomach and increase her cud chewing activity. In addition, limiting the amount of a concentrate mixture to 5 to 6 pounds per meal to avoid "slug feeding" of starch will help maintain a higher rumen pH. Providing the 2 to 5 pounds of long forage prior to the grain and pasture consumption can help manage rumen pH and the rate of passage by slowing down rapidly fermentable pasture fiber. Various processing methods of grains can change the rate and site of starch fermentation, while by-product feeds (such as wheat midds, soy hulls, or corn gluten feed) can help by diluting the starch levels in grain mixtures.

It is also important to balance the rate of available nitrogen (protein) and carbohydrate degradation in the rumen by feeding grain and/or corn silage before lush pasture is consumed. The challenge is that pasture is low in rumen fermentable carbohydrate but contains excessive degradable and total protein. Therefore, feeding starch or digestible NDF (by-product feed such as corn gluten feed or soy hulls) before milking allows cows to return directly to the pasture after milking. Δ

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