

DAIRYINFO

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Managing Dairy Cows with Limited Forage

A short supply of forage (for the coming winter season) is causing special concern among dairy producers, says North Dakota State University dairy specialist, J. W. Schroeder. "Forage is especially crucial for dairy producers. Other livestock species can substitute grains or other feedstuffs for most of their forage, but dairy cattle must have a minimum amount of forage in the form of long hay, corn silage or haylage to maintain production levels, feed efficiency and health. As feed supplies dwindle, producers of all ruminant species will be forced to abandon the ideals of production efficiency and move into a survival mode," he says.

Feed typically represents 40-60% of the cost to produce milk. If milk yield is forced down by feeding lower-quality forages, an even greater portion of the production dollar will go toward feed, Schroeder says.

For high-producing dairy cows, about 50% of the crude protein and net energy for lactation requirements are supplied by forage, along with 70-90% of the fiber (neutral detergent fiber - NDF) requirements. To successfully meet these requirements for high levels of milk production, high-quality forage must be a primary component of the diet. "Feeding excessively high levels of grain, even though that diet raises dietary net energy for lactation, will not match the performance of feeding high quality alfalfa with low to moderate grain levels," he explains. Research shows that cows fed high quality alfalfa hay (40% NDF) and 20% grain out-performed those cows fed low quality alfalfa hay (60% NDF) and 70% grain.

As forage quality declines, the amount of corn and soybean meal (or other appropriate energy and protein sources) in the ration must increase. The percentage of NDF from coarse roughage should be at least 70% of the total amount in the ration. The fundamental problem with feeding poor quality forage to dairy cows is the upper limit to intake in early lactation, Schroeder says. This occurs at about 32-34% dietary NDF or at 1.3% of bodyweight as NDF intake. Above these levels, intake decreases, resulting in reduced milk production, poor body condition, and difficulty in rebreeding.

To cope with poor quality forages, producers can feed more grain, alter grain composition, feed supplemental fat, use high-fiber byproducts as starch replacements or forage extenders, feed more corn silage, and properly allocate forages based on quality.

- When increasing the amount of grain in a ration, the key is to avoid acidosis. Often, high-grain rations don't contain enough fiber to prevent this problem. When dietary NDF falls below 25% of ration dry matter (DM) or the forage is finely chopped, cows may experience reduced rumination, less saliva

production, ruminal acidosis, low milk fat test, laminitis, chronic intake fluctuations, reduced milk production, and excessive weight loss during early lactation. To avoid these problems, limit grain intake to 3.18-3.64 kgs per feeding or 50 to 60 percent of ration DM.

- When feeding high levels of grain, consider adding high-fiber, high-energy byproducts to the grain mix, such as ear corn, corn gluten feed, hominy, beet pulp or soyhulls. These feeds often reduce the incidence of acidosis and related off-feed problems. Many high fiber byproducts such as soyhulls, oat mill byproducts, cottonseed hulls, corn cobs and beet pulp can be used as forage extenders at 15-20% of ration DM. Maintain minimum effective fiber levels of 19-21% acid detergent fiber (ADF), 27-28 NDF, 70% of NDF from coarse roughage and 40-50% forage in total ration DM.
- Two-thirds to three-quarters of the forage mix can easily be corn silage. Provide 1.82-3.18 kgs of hay or haylage dry matter per cow in the ration, to keep from overfeeding corn silage. When feeding corn silage, more protein supplements are needed, especially from soybean and animal sources. Use high-fiber, low-starch byproducts to stimulate rumination and reduce the potential for acidosis. Generally, adding a buffer and increasing feeding frequency will also promote better cow performance when feeding high corn silage diets.
- Adding proper amounts of fat to diets containing low quality forage can boost the energy content and avoid the risk of acidosis from overfeeding grain. A good rule of thumb is that the pounds of fat in the ration should equal pounds of butterfat produced per hundredweight of milk.
- The proper allocation of forages to the various classes of livestock can greatly improve the profitability of the feeding program. Make a forage inventory and allocation worksheet as part of your forage harvesting recordkeeping to organize and plan your forage feeding system.

(Edited from an article by J.W. Schroeder, Dairy Specialist, NDSU Extension)



Interested in discussing topics in this newsletter, or want to do a better job feeding and managing your cows? Call me! From calves to heifers, dry and lactating cows, my goal is to help you. That's Renaissance's commitment!

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THE TEAM FOR RESULTS

Happy New Year!

Maximizing dairy/livestock rations and nutrition is a daily necessity, ensuring they get what they need... when they need it! Good nutrition helps maintain body condition, while aiding improved productivity and profitability. Here are things I can offer...

- ❖ Comprehensive dairy programs/products for calves, heifers, dry/transition cows and lactating cows
- ❖ Nutritional and veterinary support, along with management insights and cutting-edge information
- ❖ Agronomy support, along with quality, research-tested corn hybrids, alfalfa, small grain and grasses
- ❖ Excellent programs/products for beef, swine, sheep, goats, poultry and equine species

Making the most of winter...

Maintaining dairy cows throughout the winter months can be challenging, since much of their time is spent indoors. It is important during this time to ensure your facilities offer good ventilation and a dry, clean and draft-free environment. This includes the quality and condition of bedding, along with the entire barn environment.

Dirty stalls (and a dirty barn) lead to dirty teats and udders, creating an environment that is conducive to diseases such as mastitis and other infections. This can also impact your Somatic Cell Count (SCC). Under the right set of circumstances, bacteria can play havoc on your herd's health, productivity and profitability. Consider these tips to maintaining a healthier and safer barn environment:

- Ensure adequate ventilation and fresh-air exchange at all times
- Keep facilities as draft-free as possible
- Keep bedding dry and clean, with adequate depth
- Make sure walkways and stalls are cleaned regularly
- Clear ice from any walkways used by livestock or people

Paying careful attention to these things throughout the winter and early spring will pay dividends, and can have a dramatic impact on your bottom line! There is no replacement for good management and good nutrition this winter and all year-round!



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January 2012...

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