Plan Forage Needs For The Whole Herd

Grasses help give balance in alfalfa-corn silage rations

by Fae Holin

Charlie Sniffen is convinced that dairy producers should plan their herds' total annual forage needs and that grasses should be an integral part of those plans.

The dairy scientist also believes forages should be grouped, stored and used according to where livestock are in the production cycle.

And that a whole-farm management approach is essential for dairies to stay profitable.

"We need to understand the soils, the drainage and the fertility, understand the climate constraints and understand the irrigation management constraints where irrigation is a part of this system," says Sniffen. He's a nutritionist who has worked at Michigan State University, Cornell University and the W.H. Miner Institute, and now owns his own consulting company, Fencrest, in Holderness, NH.

"When I go on a farm to do a farm evaluation, I start at the crop end. I ask, 'What do you have for soil resources? How much tile do you have in? What exactly is happening on this farm?' "

With that information, a dairyman can develop a forage plan and strategy for what's planted, harvested and stored.

That means looking at grasses, alfalfa and corn silage and matching their characteristics to the needs of their replacement animals, dry cows, fresh cows and the rest of the lactating herd, he says.

Grasses offer medium protein, high fiber effectiveness in making a good mat that allows for efficiency improvements, and a high sugar content.

Alfalfa hay characteristics include high protein, very digestible available fiber and high sugars and pectins. Alfalfa's fiber effectiveness isn't as high as grasses', but high-quality alfalfa is high in malic acid, which helps prevent acidosis.

Corn silage is low in protein and minerals and has high starch with variable digestibility in the rumen and small intestine.

"If we place emphasis on forage balance to the whole farm, the farm will be profitable. There has been such a focus on the lactating cow that we have forgotten all the other animals. We have gone into a corn silage-alfalfa silage syndrome and we solve this problem (too much energy in that ration) by feeding them straw. There is something wrong with that."

Some dairymen are moving toward high-chop corn silage. "Well, that takes a 41-43% NDF and knocks it down to 35-36% NDF. You are not gaining that much on fiber digestibility by not cutting at a normal height and you're leaving stuff in

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the field when we are buying straw because the cows are DAing (showing the effects of having displaced abomasums)."

He suggests more forage diversity. "Consider a mixture of perennial and annual grasses with legumes and corn silage."

At a recent farm visit, Sniffen noticed alfalfa was being grown on heavy soils with a high chance of winterkill for lack of snow cover. "It really didn't fit an alfalfa program, but they were planting alfalfa. So I said, 'Think about your soil. This is kind of hilly terrain here and some of those soils are a little on the heavy side. You really need to grow grasses.' "

The dairy consultant believes too much alfalfa and corn silage are being fed to heifers and dry cows that don't need the high energy. Replacements become overconditioned, and "recent research at the University of Illinois has shown that we need low-energy grasses for dry cows – 0.6 Mcal/lb DM, NEL," he says.

His general recommendations include feeding replacement heifers good grasses, dry cows good grasses with high NDF and moderate protein and fresh and other lactating cows good grasses with legumes and corn silage. "I'm talking about high fiber in the 55-60% range for a lactating herd. If you get up into the 60-70% range, that fits your dry cows."

The percent of forage in a ration – if it's good-quality forage – should be 50-70% and maybe even higher, Sniffen says. "But the challenge in today's world, as we increase the portions of forage in the ration, is the increase in need for good forage analysis. We need to reduce variation in forage quality from day to day and week to week. That places more emphasis on inventory control."

Dairymen need to separate forages by quality when storing them, he says, to provide more consistency in rations.

"I have been on too many farms where they are mining these huge silos and you never really quite know where you are (quality-wise)."

Store forages in smaller silos or bags, then store each cutting or change in quality separately. Be sure to take samples going into storage for NIR analysis of dry matter, protein, NDF, ADF and lignin.

"Keep that record in a spreadsheet or notebook, so when there is inventory disappearance, you can be ready for a change."

As forage is taken out of storage, it should have a chemistry analysis as well as NIR. Add the NDFd 24-hour test and test for ash and fat, VFA, sugars, starch and macro and micro minerals, he says.

To maintain a whole-farm management strategy, dairymen should know their soils and climate and figure what forages can be grown best in those conditions, Sniffen points out.

Then they should look at their herd requirements and expansion or reduction plans and plan a forage inventory for the entire herd. By inventorying forage, they can provide the right rations to animals with differing nutrient requirements.

That can prevent overconditioning and promote good cow health and reproductive performance, which translates to lower herd turnover and a higher profit, he says. ♦