



Forage optimization for 2025

ON THE heels of speaking about optimizing forage quality and diet formulation at the Florida Ruminant Nutrition Symposium in late February, let's continue covering the topic here. My session's aim was to explain evolving philosophies and concepts in forage production, focusing on evaluation and feeding. As we transition toward prepping fields and putting seed in the ground, here are some ideas to put into practice this growing season.

Understanding availability

Launching out of the gates, let's start with the end-product evaluation. In my opinion, we're talking in terms of total digestible nutrients (TDN). While we nutritionists place great emphasis on fiber digestibility, it's imperative to account for the total caloric value in forage as we evaluate new forage selection, production, and management practices.

Protein, starch, and fiber all bring valuable caloric content to forage. Combine the caloric potential in each nutrient with starch and fiber digestibility measures, and now we're cooking with gas, figuratively speaking. This digestible nutrient summative to the TDN approach is closely related to caloric value. The approach is similar in philosophy to milk per ton. While the new MILK2024 model is robust and well researched, it's also complex to understand. I've had more success in simplifying, and even customizing, forage evaluation with a summative TDN approach like that described here.

Cost per acre

With a robust TDN evaluation associated with given hybrid, variety, or practice, the next step to evaluating seed or economic impacts for your farm is to balance the caloric yield per acre relative to the crop production costs per acre. Use the Iowa State University crop production cost worksheet if you need a road map. The crop production costs per acre take into account all costs, including soil preparation and fertilizer, seed, postemergence fertility applications, crop protection, chemical, harvest, and preservative costs necessary to get the forage under plastic. With TDN yield and production costs, we've got the recipe for the cost per ton of forage TDN. Using this approach, we can also compare and contrast forage with nonforage options like soy hulls, corn gluten feed, or almond hulls in cost per ton of TDN.

More isn't always better

High forage diets are not always better. Cows do not have forage requirements. Instead, they have nutrient and energy requirements.

Case in point, I just wrapped up a meeting with a nutritionist in Mexico who described how they're meeting protein and energy demands with 40% or less forage in many diets. This is more common than you'd think, with many dairies in the western or southern U.S. showcasing expensive forage on their balance sheets. Cows are healthy and

can perform well, provided nutrient requirements are met.

There's another situation where more forage is less desirable, as more dairies are buying feed or contracting acres with growers. Often in these cases, dairies don't have control over these acres. This has been a recurring discussion point over the past year, with greater expense, management issues, and forage quality variation coming from these acres the dairy doesn't own or control.

Forward thinking

Pivoting back to the topic at hand with forage optimization strategies, we've found solid interest with forward-thinking dairy farms in the following: setting up corn hybrid trials, trying different soil fertility plans, testing seed or foliar applied biologicals, changing plant populations or row spacing, adding new crop protection practices, testing foliar feeding and micronutrient applications, experimenting with new sorghum and forage alternatives to corn, or trying out new forage harvester berry processors.

I continue to receive calls from readers about brown midrib (BMR) versus conventional, short corn, or other hybrids with new seed technologies that command our attention. The only common response I have when asked what I'm seeing in seed genetics or management practices is for dairies to take some control in their research. My advice is to do your own research, in addition to what is presented to you.

There will continue to be developing forage technologies that hit the market in 2025 and beyond. Some will substantially affect your bottom line. Further, foreign dairy producers are chasing the U.S. dairy industry given our leadership position and the emerging forage-related technology in the U.S. I see us continuing to lead by investing in research on our farms. This is another recurring theme in 2025, one that will continue to push the U.S. dairy industry forward in growth, efficiency, and sustainability. 🐮

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