by John Goeser

Tailor diets to your region's feed cuisine

UNIQUE cuisines and cultures can be evident when visiting different areas within a city. For example, there are Italian districts as well as Chinese districts, both with excellent food and drink, but the experience will be quite different. Similarly, the U.S. dairy industry has uniquely different regions and cultures.

The Eastern and Western dairy regions both continue to provide nutritious milk to consumers, yet, dairy cows do not have a specific cuisine that they require. Depending upon feeds available and the unique feed economic conditions in each area, the paths to producing a hundredweight of milk in each region are quite different. It took me several years to figure this out.

Thanks to experience working alongside tenured nutritionists and extensive nutrition discussions kicking around different feed and nutrition options with various groups, I can better grasp how unique dairy cattle diets are in California's Central Valley relative to Ohio, Pennsylvania, or New York. The regional differences ebb and flow as well thanks to continued research and novel insights from the field.

Let's dive into a couple of hot topics corresponding to Eastern or Western dairy diets and questions that have been hitting my inbox. We'll start out East with soybeans rich in oleic acid.

High-oleic acid soybeans

Soybeans rich in oleic acid are generating interest out East. The interest and research with oleic acid predates the uptick in interest with high-oleic soybeans. Over the past several years, oleic acid has been brought into supplemental fatty acid ingredients at specific amounts to enhance fat digestion and dairy performance. Oleic acid can bring calories as well as enhanced total fatty acid absorption, meaning it has an increasingly positive effect on total fat digestion and absorption. Oleic acid is also metabolized by dairy cows differently than other fatty acids.

High-oleic acid soybeans present a unique way to bring more oleic acid into diets without some of the potential negatives associated with feeding raw or roasted regular soybeans. The high-oleic soybeans have a trait that upregulates oleic acid yield.

Adam Lock's research at Michigan State University has shown that high-oleic soybeans can be fed at 10 pounds per cow or more without detrimental effects on rumen function, butterfat, or performance. Lock also documented an improvement in feed conversion efficiency, with a bit less intake corresponding to greater production. With the research experience in hand, Lock commented to me that he's quite intrigued with these results, as bringing this feed into the diet could replace both expensive protein and fat and potentially without the need for roasting!

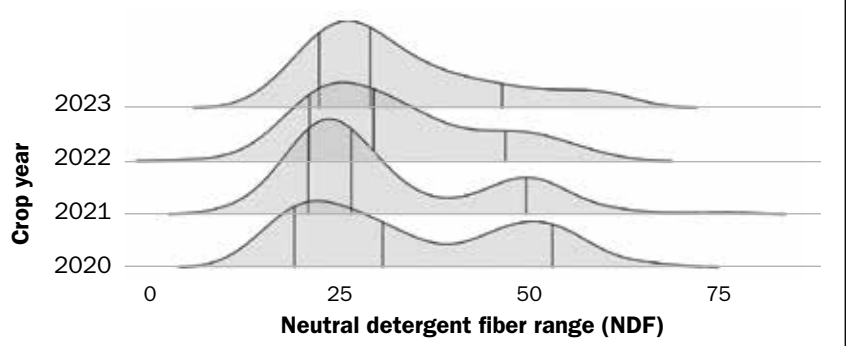
Dairies adopting this crop will need storage and handling capabilities for soybeans. However, the financial reward may quickly offset the infrastructure costs, assuming the research observations prove repeatable for commercial dairies. Stay tuned for more insight as we get another year or two experience with this feed.

Almond hulls can vary

Transitioning to the West, almond hulls continue to generate buzz. With nut growing trees representing more and more tillable acres in California's Central Valley, more almond processing also means almond hulls. While cropland planted to forage has shrunk, almond hulls are taking up more space in dairy diets.

Dairy cows are excellent in converting these higher sugar and mostly digestible by-products into nutritious milk. Almond hulls are fed in ranging quantities, and nearly all dairy diets in the Golden State include some level of hulls. Yet just like forage quality has long been recognized to vary from week to week, almond hulls' nutritional value is far from stable.

Almond hulls vary year to year



Ed DePeters and other researchers have demonstrated nutrition variation, and commercial feed analysis have more recently showcased the spread of quality out there. For example, the figure highlights the range in nutritional value for thousands of almond hull samples analyzed by Rock River Laboratory over the past several years.

The take-home point in this figure is to visualize the spread of the fiber content all across the valley. However, this laboratory database summary can be misleading. Reference the article, "Don't allow variation to become a cliché," on page 195 in the April 10, 2022, edition for more insight into uncovering and finding margin in nutritional variation.

Laboratory summaries highlight regional and annual variation. However, what's more important is to uncover the week-to-week variation in moisture and nutritional value, which your nutritionist can help your dairy take advantage of. There is margin to be captured in this week-to-week variance for almond hulls and many other feeds from West to East Coast.

Two different feeds

Drawing this article to a close, high-oleic acid soybeans and almond hulls are two very different feeds at the center of many conversations. While there may not be a direct application with these feeds at your dairy in the next month, it's important to continue learning from other regions.

The basis for the questions around high-oleic soybeans or almond hulls is margin opportunity. There will be things we learn from other dairies feeding these unique feeds that can be helpful for uncovering margin for your dairy.

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