

HOARD'S DAIRYMAN

Sugar has a place in cow rations

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By Maggie Gilles, Associate Editor



Although nutritionists have a good feel for where many of the ingredients fit into a healthy dairy ration, USDA's Mary Beth Hall said we still have much to learn when it comes to sugar in rations.

"We need a better understanding of how the impact of sugars on nutrient supply and rumen function are affected by the levels of sugars fed and other feeds and components in the rations," the U.S. Dairy Forage Research Center scientist said at the Tri-State Dairy Nutrition Conference.

Her research has indicated that the type of sugar and what's provided with it produce different results in the rumen.

"When peptides were added with glucose, we got about twice the microbial protein that we got when adding urea at the same nitrogen level or lower nitrogen level," she explained.

In other words, she predicted that sugars could improve the production of microbial protein in the rumen if it was the right protein source provided at the right time. This is one of the areas that research still has answers to find.

“We have the potential to manipulate the yield of microbial protein of carbohydrates as we modify protein degradability and source in our diets,” Hall said.

Another feature that has sometimes been associated with sugar in diets is an effect on milk fat. Hall shared that this improvement might be tied to changes in biohydrogenation and butyrate production. However, research has been a bit inconsistent in this finding.

Hall left the conference with this final thought, “All sugars are not the same; protein affects how microbes handle it; and sugars and starch give you different responses.”

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