

## INTERMOUNTAIN NUTRITION CONFERENCE

Several presentations at the recent Intermountain Nutrition Conference reminded 150 participating dairy producers, nutritionists, managers and students that feed continues to be the major production input cost on a dairy farm. The substantial cost of feeding has directed considerable attention to the creation of "least cost rations" and a focus on "profits over feed costs". Feeding ruminants a balanced ration to achieve maximum production, maintain livestock health, enhance fertility and improve narrow profit margins really is a science. Successful managers are always looking for ways to incrementally increase output while holding the line on inputs.

As existing ethanol plants in the Midwest are being expanded, and new plants planned and built, the utilization of a growing supply of distillers grains is a major focus of livestock nutritionists. Dr. Randy Shaver, University of Wisconsin-Madison, shared an illustration to help put the expanding volume of distillers grains into perspective.

The national dairy herd of approximately 9 million cows would need to consume 7.2 pounds of distillers grains per day for their entire 305 day lactation to balance the growing supply. Distillers grains can also be utilized in the rations of dairy replacements, in the diets of other classes of livestock and poultry and can become an important export commodity. There is a potential win-win for ethanol plant managers and livestock producers if distillers grains, a by-product of various cereal grains (corn, sorghum, wheat, rye, etc.) used to produce ethanol, can be produced with less nutrient variability.

Shaver taught that, as a rule, distillers grains are relatively high in fiber and phosphorus, moderate in fat and protein, low in starch and very low in lysine. The digestibility of the fiber fraction is enhanced by the ethanol production process. Highly digestible fiber and moderate fat content classify corn distillers grains as a high energy feed. There are also some beneficial yeast cells and B-complex vitamins and other nutrients formed during the fermentation-distillation process. Feed analysis shows there is a significant amount of variation in the product, however. The three-fold concentration of phosphorus in distillers also creates environmental concerns when formulating dairy diets to minimize phosphorus excretion into the environment.

Shaver shared results from several studies where rations were formulated using as much as 30 percent distillers grains (DM basis) in dairy diets. Typical consequences resulted in an increase of ruminally undegraded protein (RUP) above dietary recommendations and a potential depression in rumen ammonia levels. When this occurs, rumen microorganisms are starved for nitrogen, reducing microbial production and depressing fiber digestion and dry matter intake. Obviously milk production drops with lower intakes.

Shaver told attendees that distillers grains are excellent feed resources for dairy cattle, but must be competitively priced to displace feedstuffs currently included in the ration. Feeding 10 percent distillers in the diet is a “no-brainer” and successfully feeding up to 20 percent (DM basis), is a distinct possibility. He also discussed handling procedures at the plant and acceptable on-farm storage strategies in order to capture the maximum feeding value. It was an interesting lecture.

Another practical presentation came from Jared Froetschner, DSM Nutritional Products, Inc. from Parsippany, New Jersey. Froetschner spends his time traveling the country inspecting feed mills and feed mixer wagons for mix uniformity. He explained the process of determining the coefficient of variation (C.V.) as impacted by mixing practices. The unique characteristics of feedstuffs are similar to mixing basketballs with baseballs. The baseballs will all be at the bottom of the feedwagon without proper mixing protocol.

Froetschner emphasized the necessity of (1) accurate ingredient weighment, (2) proper mixer loading, and (3) establishing consistent mixing procedures. Without proper mixing of multiple feed ingredients, the true nutritional benefits of a formulated ration cannot be realized, especially for some of the micro nutrients that may be added at levels as low as 1 pound per ton.

Participants were also reminded of the need to clean feeding equipment on a regular basis. It was suggested that some feedwagons have not been cleaned since the day they were purchased. As such, the build-up on moving parts is causing wear on the feedbox, ingredients are not being mixed accurately, and mixing costs are magnified because of increased friction on augers or paddles.

For only \$15, a 300 page book of proceedings is available for anyone with an interest in reviewing the presentations. Proceedings can be ordered by calling Karma at 797-2145.