

Straight to the Bottom Line – 2/1/11

By: Steve Martin

Is the dairy industry addicted to starch?

In my two previous columns, we discussed the importance of characterizing starch in lactating diets. We talked about how starch does not always act the same and can be influenced by things such as processing, genetics and growing conditions. In the field of dairy nutrition, we spend a lot of time discussing starch. This fact is due to the huge role that starch plays in dairy diets. In view of the current economics of corn, one might ask if there are options available that might reduce feed cost. Some options do exist, but will these alternate approaches support the same amount of milk production?

In many ways, we live and feed under a new set of rules. Sure, the corn price is still tied to things like acres, yields, ending stocks and exports. But what is different now is the way that corn prices are tied to world energy prices. If crude oil goes up, corn will most like go up with it. In the past, if acres, yields and stocks caused corn prices to soar, a dairy diet could be supplemented with fat to replace some of that corn with a lower energy and less expensive byproduct like wheat midds. In recent days however, guess what also follows the price of a barrel of oil? Fat does! The problem is that the costs of these energy rich materials all tend to move up together. So, what is a dairy producer to do? The answer may be in the old adage “to divide and conquer”.

When I say divide, I mean to divide the cows based on stage of lactation and make sure that you are investing the most feed cost in the right animals. With moderately high milk prices and very high feed cost, it is crucial that we do not leave milk on the table, but at the same time that we don't over feed any cow on the dairy. So how does this all relate to starch? We know that in early lactation, cows have the highest requirement for energy. This is where starch will offer the best return on investment in extra feed cost. Intakes are often lagging behind milk production the first few weeks resulting in an almost 100% sure return on every extra penny invested in more energy. This energy will come mostly from starch. Added

fat can also help. With high milk flow and limited intake, every pound of feed is precious. In this stage of lactation, alternatives to starch are not so evident.

Once a cow approaches and passes 100 days in milk, intakes are much better and positive energy balance should be a reality. Now we have a little more space to work with relative to feed efficiency and could thus drop the starch levels. With ample intake levels through the rest of lactation, there should be plenty of room to include some less expensive byproducts to replace some corn and some of your more expensive forages. Using this approach with strong intakes, energy densities can be moderated a bit and still support the milk production with fewer pounds of corn.

The challenge in every high production dairy diet is a classic example of wanting to have your cake and eat it too. Energy density and starch content are key, but you have to respect the forage levels needed to keep the cows healthy. There is quite a bit of tension in trying to accomplish both goals in an early lactation diet. Options to reduce starch and forage and replace that space with byproducts might support the milk but will potentially be a negative on cow health and feed efficiency. All angles have to be watched closely for maximizing profitability of milk sales while remembering the need for healthy cows.

So, as you moan every time you hear the price of corn, just be sure you are using this ingredient in the best way in the right diet to maximize your return on the investment in feed cost. In early lactation, good luck in finding many options. In mid to late lactation cows, consider options to support milk in higher intake diets and take advantage of some less expensive byproducts. Here is a thought in closing... if some day corn is too valuable to convert to milk in a dairy cow, the dairy industry will be fine. Cows can make milk without starch; just maybe not as much! If milk yield dropped due to no-starch diets, and milk prices adjusted appropriately, margins could be maintained. In this scenario, cow health and longevity would certainly improve. Remember, these cows were not created to consume starch in their diets. That was our idea! Just a thought to ponder...