This Month’s Grain Highlights

By: Brad Wagner

As of June 10, 2015

Corn: $4.15 / bu compared to $4.80/bu last year and $7.55/bu in 2013
Soybeans: $9.70 / bu compared to $15.00/bu last year
Soybean Meal: $379 / ton compared to $569/ton last year

Corn:

Interestingly, the corn outlook right now is very similar to the situation a year ago. The crop is in the ground, 74% is rated good or better, and the crop is off to a great start. Overall the corn sentiment is bearish. In addition, what impact will 40 million euthanized poultry (turkeys, layers, broilers, etc.) have on our current corn supply? The outbreak of avian influenza in the Midwest will have a significant impact on grain prices – 40 million birds eat a lot of corn! Barley harvest is about to begin; cheap barley may replace some corn in the region.

Current corn prices are $4.15/bu compared to $4.80 per bushel last year, $7.55 two years ago.

Soybeans and Soybean Meal:

The U.S. has approximately 79% of the beans planted; which is off of the 90% planting pace we were experiencing this time last year. 69% of the crop is rated good-to-excellent. Current soybean value is $9.70/bu; quite a bit cheaper than $15.00/bu last year. Trailer load prices on soybean meal are approximately $379/ton compared to $563/ton last year.

I enjoy talking with you when you call in to our office. Please feel free to call me to discuss grain purchasing and forward contracting opportunities.

Important Dates to Remember:

June 30th- USDA Acreage Report July 11th- USDA Crop Production Report

June is Dairy Month! Hoobers Feeds has partnered with WJTL (FM 90.3) to bring you the “Milk Money” contest and “Moo or False”. Be sure to listen every morning for your chance to win!

Our office will be closed on Friday, July 3rd for the Independence Day Weekend.

Milk Protein: Part 2

By: Tom Nauman

Last month we began a series on milk protein and how we can help our cows to make more milk protein. We began by talking about the protein side of the diet and how important it is to give cows the right amount of protein. We went on further to say that the amino acids, which make up the proteins are actually more important than the total protein itself. We also said that the best protein nutrition starts with good forages that are clean and well fermented. We concluded by saying that synthetic amino acids can be helpful but will not cover up for low forage quality or normal protein sources that are not balanced into the diet properly. Now, we want to turn our attention to the energy side of the diet. Energy plays a very important role in the protein nutrition of the cow and in the milk protein manufacturing process that occurs in the udder. Let’s dig into these two areas.

Energy as a source of protein.

We all know that energy and protein are two very different things. Energy that is consumed by the animal has a whole bunch of functions and protein that is consumed by the animal has a whole bunch of functions and the two are not the same. However, we must always remember that cows are ruminants and in between the food and the cow are billions upon billions of microorganisms. These microscopic organisms live in the rumen and reticulum of the cow and they are the first ones to see the food that the cow eats. One teaspoon of rumen fluid contains about 150 billion of these microbes. These microbes are so small that you could never feel the weight of them. However, when you add up the billions upon billions that grow in the cow each day, you come up with 10 to 12 lbs of pure bacteria that are growing in the rumen of the cow each day. These microbes are about 50% crude protein, so that translates into 5 to 6 lbs of crude protein per day that is being grown in the cow. For an average cow, that is more than half of her protein needs being supplied by the rumen microorganisms. We know how expensive protein is so if we can get the cow to grow lots of rumen bacteria for a cost that is less than the protein we feed her, we can cheapen up the diet. Not only can the cow grow a lot of her own protein, it is better protein that anything we can buy for her.

Last month we presented a chart that has the amino acid content of the meat and of the milk of the cow. That chart is below. However, this month we are adding one more column to the chart; the amino acid content of the rumen bacteria. Take a look at how closely it resembles the amino acid content of the milk and meat of the animal:

<table>
<thead>
<tr>
<th>Amino Acids For Dairy Cows</th>
<th>Essential AA</th>
<th>Milk</th>
<th>Meat</th>
<th>Lactory</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lysine</td>
<td>16.0</td>
<td>18.3</td>
<td>16.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methionine</td>
<td>3.5</td>
<td>5.1</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arginine</td>
<td>7.2</td>
<td>16.8</td>
<td>10.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Histidine</td>
<td>5.5</td>
<td>6.3</td>
<td>4.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leucine</td>
<td>19.5</td>
<td>17.0</td>
<td>15.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isoleucine</td>
<td>11.4</td>
<td>7.1</td>
<td>11.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenylalanine</td>
<td>10.0</td>
<td>8.9</td>
<td>10.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threonine</td>
<td>8.9</td>
<td>9.9</td>
<td>11.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tyrosine</td>
<td>3.0</td>
<td>2.5</td>
<td>2.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valine</td>
<td>13.0</td>
<td>10.1</td>
<td>12.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

So the similarities that we see should make it even more apparent that we should do everything we can to get the rumen of the
ThermoCAD INCLUDES:

**Tasco®** - Shown to lower core body temperatures during heat stress, thereby improving performance.

**B-Vitamins** - Play an important role in cellular metabolism. In times of low energy balance, they are necessary for meeting the animal’s nutritional needs. Nicacin and Thiamine have shown to play a role as vasodilators which assist cattle in times of low energy balance, they are necessary for meeting the energy and that is the missing part of the puzzle.

**Gladiator Yeast Culture Concentrate** - Promotes dry matter intake and improved fiber digestion through the use of Palatability Factors and Nutritional Metabolites.

**Energy as a stimulator of milk protein synthesis.** Beyond what is happening in the rumen of the cow to help the cow make milk protein, the energy side of it is a bit more complicated. We need to grow in the cow to help the cow make milk protein, the energy side of it is a bit more complicated. We need to think about a ration that we are using as much forage as we can but not so much as to dilute out the rumen available energy for the rumen microbes. The whole goal is to get the cow to grow as much rumen bacteria she can at the cheapest cost. This is how we can put together low protein diets for the people that use P1. A pound of starch or sugar will grow a lot more bacteria than a pound of NDF. By keeping P1 in the diet we can feed a higher level of starch and sugar and therefore need less protein because the cow grows more of her own rumen microbes. The chart above shows us that it is the best kind of protein for the cow in terms of amino acid content.

**Energy** High quality values several things. First, it means that the levels of simple carbohydrates are high. This is accomplished by harvesting at the proper stage of maturity. It also means that fiber (complex carbohydrate) digestibility is high. This is accomplished by variety selection, proper fertility, good fermentation and the right kind of weather. Lastly it means no contamination from molds and yeasts. This is accomplished by harvesting at the right moisture level and treating the forage with the right crop stabilizer.

**Feeding Adequate Amounts of NFC and NSC** Your high quality forage will supply a lot of these items but you can’t be afraid to fill in the rest with grains. When we give grain recommendations we are trying to fill in the rest of the needs. Always let us know if the recommendations seem to be more than the cows can consume and handle well.

**Availability of the NFC is critical**. You may have high moisture corn that has a high NFC level but if it is ground too coarse or if it has a high moisture level it can be more than the cows can consume and handle well. Always let us know if the recommendations seem to be more than the cows can consume and handle well.

**Feeding Many Times During a Day** Rumens fermentation patterns are changed every time the cow takes a meal. Many small meals result in better patterns than a few big meals. The beauty of a TMR is that the cow eats a little all day long and every bite she eats is the same. However, TMR’s that are poorly mixed or that are getting warm can lower both milk protein and milk fat tests.

**Making Ration Changes Slowly** Every time the diet changes the microbes in the rumen suffer. They need to shift to make the best use of whatever is being presented to them. They are much better off if they are allowed to shift slowly with the change rather than having an abrupt change that causes them to stall out while they are trying to get used to the next new feed.

Next month we will look at a number of other items, many of them non-feed-related, that can effect milk protein tests.