

Prairie News

Amino Acids

The days of balancing diets for crude protein are long gone. Many of you probably have paged through your Hoard's Dairyman or some other dairy industry periodical and come across one article or another talking about balancing ration for high producing dairy cows. One thing you may or may not have heard about, but is all the rage the last few years, is balance rations for amino acids.

What are amino acids, you might ask? Simply put, they are building blocks for protein. If you break down protein into smaller fractions, you get amino acids. Only in the last few years has the industry really started looking at what different amino acids can do for the dairy cow in terms of milk production and milk components.

There are two amino acids in particular researchers have found to have a substantial impact on production and components. They are lysine and methionine. Lysine and methionine should be balanced in your cow's diet as close to a 3:1 ratio as possible. As competitive as the dairy industry is today I think it is really important that you have a nutritionist that knows how to balance for lysine and methionine in your dairy's ration.

There are many different sources of lysine and methionine that go into a cow's diet however some are far more effective than others. By effective I mean they need to have the ability to bypass the cow's rumen and be absorbed in the small intestine where they can be utilized to produce milk and components.



High quality bloodmeal is a great source of lysine.

Some of the more common sources of lysine are from soybean products like roasted beans, soy bean meal, various bypass soy products like Soy Plus, Soy Best, or Exceller meal. Canola and fish meal are also good sources of lysine, but probably the best natural source of lysine is blood meal.

Blood meal from ruminant, pork, and poultry are all very high in lysine and can be fed to optimize the lysine to methionine ratio in

the diet. One disadvantage, however, is that it can be somewhat unpalatable, so feeding it in a top dress situation can be challenging.

Some of the more common sources of natural methionine come from corn by-products. Corn gluten meal is 60% protein and is a very good source of bypass methionine. Corn gluten feed, and corn distillers are also sources of methionine, however, less concentrated. Also, be cautious that distillers has a fairly high vegetable fat content and may have adverse effects on butter fat test.

Methionine can also be produced synthetically and has been for a number of years by various feed companies. They provide a source of bypass methionine that is more concentrated, more efficient, and many times, less expensive. Three popular sources that you may have seen in your rations are, Metasmart, Smartamine, and Mepron. There are more, but these are probably the most common and most proven by our nutrition staff.

Some of the latest information, new to the dairy industry, is the development of synthetic lysine.

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Upcoming Events

- > October 8th—Dairy Comp 305 users meeting, Emerald, WI
- > October 13th—Calf Care Connection, Eau Claire, WI
- > December 1st— DBA Annual Business Conference, Madison, WI
- > December 2nd— Commodity Marketing Series, Baldwin, WI

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Corn gluten meal is a natural concentrated source of methionine.



Roasted soybeans work well for herds that need a topdress source of lysine and bypass fat.

"The recent depression in milk fat appeared to start in November 2009"

Amino Acids continued...

It has been particularly difficult to produce because of its affinity to breakdown in the rumen.

Many companies have been trying to develop it for a number of years and have finally started having some success. You may have seen an add in one of the dairy magazines about Megamine-L or Aminosure-L. These two products have some decent research behind them and are becoming more popular in the industry. However, one challenge in utilizing them is their cost.

Thus far, they are fairly expensive, so blood meal or soy based products to figure into rations more effectively. As time passes and more companies begin producing synthetic lysine, these products may become less expensive, and no doubt, you will see one show up in your ration.

For now, have no doubts about your nutritionist at Prairie Ag Supply. Working with Akey, as our VTM supplier and technical support, we have been leading the industry with rations balanced for amino acids for over 12 years now.

Now, we are starting to look at a number of other amino acids and their possible roles in dairy nutrition. The technology that is being discovered is constantly changing and we at Prairie Ag Supply, will keep up to the evolution.

Tom Pfeilsticker
Nutrition Consultant

Milk Components 2010

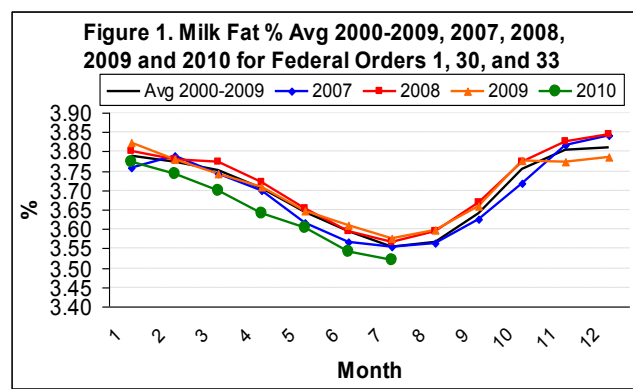
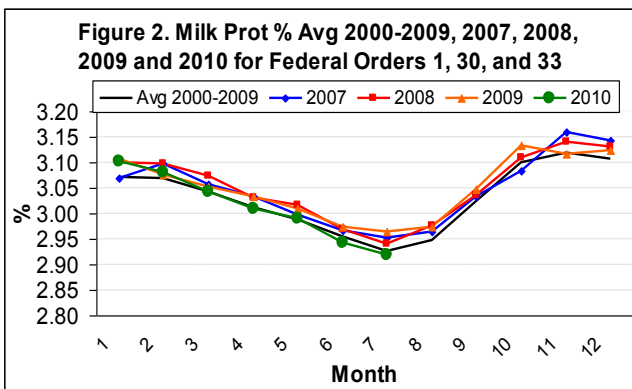
Based on several comments from the field that components are lower in 2010 compared to other years, we looked at the components of Federal Orders 1, 30 and 33. These three orders basically cover the area from Maine through Minnesota. The milk fat curve for 2010 (green line in Figure 1) appears to be lower than other years.

Some have suggested that the hot summer of 2010 could be a cause of the lower milk fat per-

centage. However the recent depression in milk fat appeared to start in November 2009. Normally milk fat content reaches its highest point in December. In 2009, milk fat content appeared to plateau in October 2009 to January 2010 and then has declined. A couple of theories could explain the lower milk fat content. One of them is extensively culling in 2009. We would expect that culling would remove lower producing cows. These cows probably produce

milk with higher component values. Another theory could be reduced feeding of additives shown to benefit milk yield or components in 2009. Due to the worst financial year in the history of dairy production, a lot of feed additives have been removed from the diets of cows. Milk protein content (Figure 2) also tended to be lower especially starting in the Spring of 2010.

(From Akey's Dairy Newsletter)



Metrics That Matter: Transition Cows

The dairy industry is chock-full of statistics, metrics, indexes, and benchmarks. Given the right context, perspective, and assumptions they all serve some purpose. However, on many dairies there becomes an information overload.

Adding to the confusion is the presence of traditional terminology that does not accurately describe transition cow performance

For example, ketosis is a term familiar to most dairymen and industry professionals but how is it measured? Nearly every farm has a different definition and it is usually a subjective evaluation. Similarly, peak milk has become a part of industry lingo, but this too is full of error and does not correlate well with overall lactation performance.

So what metrics do matter? When evaluating transition cow performance I focus on three metrics, Retained placenta (RP) risk, 1st test fat%, and week 4

milk.

RP risk is a fairly objective metric. Either the placenta is present after 24 hours or it's not. Recording RP's and calculating the RP risk on a weekly or monthly basis can be a valuable indicator of changes in transition cow health. Also, monthly displaced abomasum (DA) risk can be helpful, but the lag time between a transition cow problem and a DA limits its value.

1st test fat percentage indicates how rapidly cows are losing weight and is a good indicator of ketosis. Cows in a severe negative energy balance will be mobilizing fat from their body reserves and the increased levels of fat in the blood stream result in elevated butterfat percentages. For Holstein herds, no more than 10% of cows should have a 1st test fat percentage >5.0.

Finally, week 4 milk can be set up in DC305 to estimate milk production in the fourth week of

lactation. This metric has a lot more to offer than "peak milk" because it contains less error, has less lag time, and has a much stronger correlation to overall lactation performance. In general, it can be used to illustrate the impact of nutritional and management changes on production. Analyzing a herd's week 4 milk history can tell us if the changes we've made are having a positive or negative effect.

There are many more tools available for measuring transition cow performance and they all have some merit. However, just focusing on these three metrics (RP risk, 1st test fat%, and week 4 milk) will tell a lot about the transition cow program on any dairy. For more information on ways to utilize transition cow metrics on your dairy contact your Prairie Ag Supply Consultant.

Kyle Taysom

Nutrition Consultant

Employee Profile—John Miller

John (No Shoes) Miller can be recognized nearly anywhere he goes by the fact that he refuses to wear shoes. In his 11+ years of working at Prairie Ag Supply no amount of snow, ice, or sharp objects has convinced John that shoes were actually an advancement in society.

In sharp contrast to his caveman footwear, John appears to have been born with wrenches for hands. As our maintenance

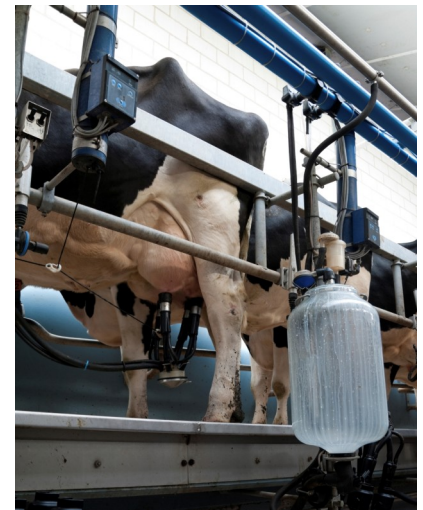
supervisor he is relied upon heavily to fix anything from cars, and feed trucks, to mineral mixers and elevator legs. His motto is, "You break it, I fix it."

Outside of work John is known for his devotion to two things; his family and fishing. John and his wife Lori are the parents of 5 children (David, Michael, Tim, Joy, and Grace) ranging from 5-28 years old. He is never bashful about how much he loves his kids

and most conversations with John include references to their numerous athletic achievements.

John is less likely to talk about his personal achievements but his fishing accomplishments are beyond your average enthusiast. He enters over 20 tournaments per year, and has won over \$1,000 in a single tournament.

There's no doubt John is a unique individual and an asset to our team at Prairie Ag.



Key Transition Cow Metrics

RP risk = < 8% of all calvings

1st test fat % = <10% of cows with >5.0%

Week 4 milk = dependant on production goals, look for changes over the previous year



John Miller with a large Canadian Smallmouth.

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Commodity Transportation

Prairie Ag Supply transports a variety of feed ingredients from locations in Minnesota and Wisconsin back to the mill in Rusk. In an effort to minimize transportation costs we are always looking for grain to haul to the Twin Cities or Mankato on our trips to pick up ingredients.

Please check with Randy or Bob for freight rates for corn, soybeans or small grains to the River Markets

or soybeans to Mankato.

We also deliver a variety of ingredients direct to the farm including: Soybean Meal, Exceller Meal, Beet Pulp, Cottonseed, Distillers, and Roasted Soybeans. We have a variety of trucks and semi's equipped with augers or hopper bottoms to accommodate your delivery needs.

For pricing on ingredients

delivered directly to the farm contact Randy or Tom K.

715-235-2425 (office)

1-800-535-4485 (toll free)



Prairie Ag Supply has a variety of auger and hopper bottom trucks available for hauling commodities to and from your farm.