ADVANCED AG SYSTEMS'S

# Crop Soil News

http://www.advancedagsys.com/

August 2011

"It is the crops that feed the cows that make the milk which creates the money."

Advanced Ag Systems
*Research, Education, Consulting*

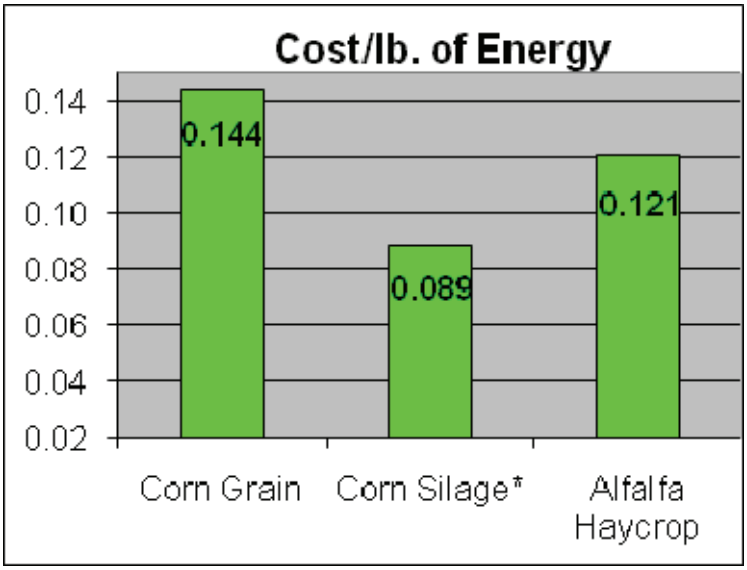
## Dealing with This Crazy Season

When you are up to your butt in alligators, remember you are there to drain the swamp. The crop season this year has been one of extremes. Some areas were very dry, others were very wet, and many were both – wet spring, dry summer and now swamped fall. The forecast for the fall is not good as the Northeast is slated to move into a cool and wet phase (in addition to the hurricane dump). This is not what we want or need for getting the corn crop harvested. Remember: you are there to profit selling milk. You need to produce at a price that is less than what you sell it for. Cost of nutrients is a large factor in that profit

**The first step is to have enough dry matter.** No, I am not talking about what you used to do, but enough to stay on the more profitable high forage feeding. Corn grain energy is going up and may hit record levels. I do not believe the forecasts of bumper crops, as large swaths were not planted until late and yes the corn looks tall and green, but the late planting reduces grain yield. Adding to the situation is that at temperatures over 85 F the corn stops growing and higher temperatures the pollen can be killed. Both decrease grain yield.

The biggest shot out of left field that will catch a number of farms by surprise is that **YIELDS ARE NOT WHAT YOU THINK.** The delayed planting, high temperatures and dry conditions during pollination have left fields that look nice and tall and green but will **NOT yield**. Dr. Cox at Cornell has been growing corn for many year and following the various impacts of weather. He indicates that his corn planted the beginning to middle of May will be **down in yield by 40%** while the June planted corn will be **down by 55%.** This is calculated on full stands! Those skips from the wet spring will hammer yields even more as you get to the end of the field and the wagon/truck is still not filled. This means if you had 100 acres in by early May that normally is 20 tons/acre for 2000 tons, you probably will at best chop only 1200 tons from that same acreage and will need to look for another 67 acres to get enough to meet your planned needs of last year – before you try to keep profit in by offsetting high grain prices with more forage feeding. Those with some corn planned for grain have at least the advantage of chopping it. The worse decision you could make is to only chop the acres you always do in order to have some grain corn. This is penny wise and pound foolish as you leave a tremendous amount of very expensive energy laying in the field – just so you can have some grain to feed. The situation becomes critical when you quickly

run out of corn silage in the middle of winter or early spring.




You can't change the price of corn grain but you can change how much is needed to produce milk. Work I did earlier this year (http://www.advancedagsys.com, click on newsletters at bottom of page and go to January 2011) showed that meeting the cow's nutritional needs through forages is much less expensive than through concentrate. You can see this in the graph at the right. At $299/ton in most diets corn grain is barely breakeven (*see attached article "Dairy Cows Don't Need Corn" from Cornell University*). Looking at the table in the article you find that corn silage is a good buy. Many farms are still stuck at 50% forage in the diet. Those determined to stay in business in the Northeast are all over 60% forage in the diet and **an increasing number are at or above 70% forage in the diet,** over 85 lbs of milk/cow and very high components. In a simple answer, **MAXIMIZE THE NUTRIENTS FROM THE CHEAPEST SOURCES.** This may sound fundamental, but on a distressing number of farms are not optimized. **To maximize forage YOU NEED ENOUGH FORAGE TO FEED!**

You need to figure your forage needs and then keep chopping until you have enough for ALL your animals (dry cows and heifers eat also), at the feeding level you are targeting, plus 15% (cover fermentation and storage losses). If you are at a typical 50 – 55% forage diet and want to go to a high forage diet (assumption was forage quality was not changed, only the forage feeding level to maximize the use at the present forage quality), the **total tons of forage increases by 20%.** If you need to increase corn silage in the diet to offset poor or non-existent haylage, the number goes up even more. In the above example of the reduced yields from this weather pattern, if the farmer had not been feeding high forage and then switched, with the low yielding corn silage he will need double the acreage to accomplish both objectives of having enough forage at present feeding levels and to increase to more profitable high forage diet.

## The Bottom Line:

- high grain prices can be offset by getting more energy from your forage sources such as corn silage.
- Corn silage yields are going to be much lower.
- You need to chop more or line up additional forage supplies NOW, before the rush next spring.
- If you can get some winter triticale or if that is out - even winter rye, it can give you very high quality haylage early next spring if harvested at flag leaf stage.

## When Should I Start Checking My Corn?

With the wet year you should target **1/2 milk line** for checking moisture levels as the corn silage will run wet.
If your corn is currently at:

| | |
|---|---|
| **Full Dent Stage** | 1 week – 10 days away from ¼ milk line |
| **Early Dent Stage** | 2 weeks to ¼ milk line |
| **Late Milk Stage** | 2 ½ weeks to ¼ milk line *(doesn't squirt, but does not have much dent.)* |
| **Early Milk Stage** | 3 weeks to ¼ milk line (*squirts when the kernel is pressed*.) |
| **Blister Stage** | 25 days to ¼ milk line |
| **Just tasseled** | 40 days minimum to ¼ milk line |
| | Wait for a frost to dry it before chopping. Store in a separate pile and NOT feed to milk cows. |

# Dairy Cows Don't Need Corn!

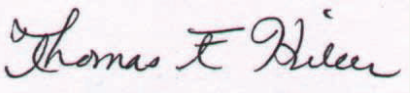
Dr. L. Chase and Dr. T. Overton
Department of Animal Science, Cornell University

With corn meal process bumping $300+/ton, we are getting questions about the need for including corn in dairy rations. Traditionally, corn grain has been used in dairy rations as a source of starch and carbohydrate energy and has been a good feed buy. There are a couple of key points to remember as part of this decision making process. First, we are really feeding a large rumen microbial population. The products from microbial fermentation are then used as nutrients to support milk production and other functions in the dairy cow. The rumen microbes need rumen fermentable carbohydrates (RFC) as an energy source to synthesize microbial protein. They don't require starch! The RFC can come from fiber, starch, sugar, pectin and other compounds. Thus, corn grain is not required in the ration. Even though there is not a specific starch requirement, most of our New York dairy cows do get some starch in their ration when fed corn silage. The decision to include corn grain in the ration depends on availability and economics. Is corn grain a good feed buy? Recently, Dr. Normand St. Pierre from The Ohio State University used the Sesame feed evaluation program to examine this question. He used Ohio feed prices as the base. In this run, corn grain was $299/ton and 48% soybean meal was $378/ton. This program evaluates the economic value of a feed based on energy, protein and effective fiber. There were 28 different feeds evaluated in this exercise. The feeds can be placed into 3 groups when market cost is compared to value on a nutrient basis. The results for this run are in the following table.

| Good Feed Buys | Breakeven Feed Buys | Over Priced Feeds |
|---|---|---|
| Canola meal | Alfalfa hay | Beet pulp |
| **Corn silage** | Bakery byproduct | Blood meal |
| Cottonseed meal | Wet brewers | Citrus pulp |
| Distillers grain | **Corn grain** | Fish meal |
| Corn gluten feed | Whole cottonseed | Corn gluten meal |
| Molasses | Feather meal | Hominy |
| Expeller soybean meal | 44% soybean meal | Soy hulls |
| 48% soybean meal | | Roasted soybeans |
| Wheat midds | | Tallow |
| | | Wheat bran |

What does all of this mean? At current prices, corn is a breakeven feed when comparing market price versus price calculated on a nutrient basis. This is related to it being a concentrated carbohydrate energy source. It is priced about right! The feeds listed as good feed buys are those where the market price is lower than the calculated value. Current market value is higher than predicted value for the overpriced feeds. The list above can be helpful as you consider various energy and protein sources for use in your ration. Work with your nutritionist or feed company representative to determine which of these feeds may fit your situation and maintain milk production.

Sincerely,



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