

## This Year's Funky Feeds

I'm going to be optimistic here... I think spring may come at a "normal" time this year. And the alfalfa crop will come through without hardly any winterkill.

I know, that's not what happened last year. As a result of that, we're feeding all kinds of alternative feeds-in addition to lots of corn silage. And the feeds this year, well, they have some special challenges. Let's talk about a couple of them.

### Funky Fermentations

There's almost nothing worse than planting a crop, carefully harvesting it and having it not ferment well. **Fermentation is the process in which anaerobic bacteria turn water-soluble sugars to lactic acid, lowering the pH of the feed to the point that it inhibits further microbial breakdown of that feed.**

In other words, all you need is to limit air exposure, put in at the right moisture and let the natural sugars and bacteria do their work to properly ferment the feed. Easy, right?

But not so fast. This year, it rained so much that the harvest window to get up the forages was pretty narrow and suddenly, "the right

moisture" became an issue. Also some plants became overly mature and the "natural sugars" were not available for good fermentation. See the problems?

Poorly fermented feeds contain other silage acids in addition to lactic acid, that can affect the cow's rumen adversely and reduce milk production. Also, molds, yeast or mycotoxins can also be hiding out in the feed if the fermentation didn't lower the pH of the feed enough to stop their growth.



Forage tests, unless specifically ran for acid profiles and mold/yeast counts don't always tell the story. For example, heat damaged and clostridial forages will appear higher in protein and give a false impression that they are better than they actually are.

Checking with the smell test is still a good on-farm method to check for problems. Here is what to smell for:

#### 1. The feed smells like rancid milk.

This is from clostridial fermentation that usually occurs when the feed is put up too wet. **Clostridia are bacteria that start to decompose the feed, causing it to start to rot-that's what you're smelling.** The process breaks down the protein into amines and that protein will be unavailable to the cow. It is also lower in energy than other forages, as the clostridial bacteria consume the sugars.

### Low test weight corn...

This year, the corn was delayed and in some cases, just refused to dry down. These delays interfered with the transfer of starch to the kernel, resulting in low test weight corn.

Normally, test weights will be around 56 pounds. This year, some corn is in the mid 40's-significantly lower starch. Here are some tips to try if you have low test weight corn:

1. Test the corn for starch and starch digestibility.

Many years, the corn itself doesn't vary, because there is good kernel fill and the starch levels are pretty consistent. Not with low test weight corn. Starch levels vary a lot.

Fortunately though, low test-weight corn starch usually has a higher digestibility level than regular corn. Get the test and adjust accordingly.

3. Reduce protein in the feed slightly.

Lower test weight corn is often higher in protein, so slight adjustments can be made here.

4. Process finer.

Processing will increase the availability of the starch and reduce the overall volume needed to be fed.

5. Check for molds and mycotoxins.

Low test weight corn is at a much higher risk of having high levels of mold or mycotoxins.



## Odds & Ends.....

Prices heard this week:

Corn: \$3.33-3.64 per bu.

Soybeans: \$7.91-8.12 per bu.

150 RFV Hay: Large squares are worth approx. 1.35-1.40 per point of RFV.

Springers: \$900-1000 med grade

Cull cows: \$0.42-0.55 per pound

Bull calves: \$35-80

### Connections:

Call us at 1-800-700-9334 or email us at [mctech@centurytel.net](mailto:mctech@centurytel.net) to get connected

\* For sale: heifers springers

\* For sale: 6 1-touch milking units

\* For sale: Surge trap & jar-3 in. inlet

\* For sale: Mueller bulk tank with digital read-out 1250 gal

\*For sale: Corn silage-63% moisture, good quality

Wanted: Large square straw and hay bales or baleage

If you have something to sell or are looking for something-don't hesitate to call or email. There is no charge for the posting.



A good laugh and a long sleep are the best cures in the doctor's book.-Irish proverb.

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On the test sheet, everything will look normal except the pH and ash contents.

Both are higher and a sign of possible clostridia fermentation.

Clostridia bacteria can also produce butyric acid, which gives the rancid smelling feed a really sharp smell. Butyric acid can be caustic to the rumen.

If you have feed with clostridial fermentation, reduce it as much as possible and never feed it to dry cows-it is a metabolic problem guarantee. Try feeding AB 20 to absorb the amines. If you suspect butyric acid as well, aerate feed 12 hours before feeding-some of the butyric acid will volatilize and be reduced in the feed.

### 2. The forage smells like vinegar.

Vinegar is acetic acid, which is one of the acids produced in a normal fermentation. However, since lactic acid promotes proper fermentation and milk production, having a feed smell like vinegar means that acetic acid is the predominant silage acid produced and something went wrong.

Acetic acid is usually produced in abundance when the time between cutting and harvesting is too slow, such as when feeds have been rained on before chopping. If you smell vinegar, get a VFA profile test to determine just how high the acetic acid.

### Acetic acid in the forage will promote fat test but will really limit milk production.

If you have feed that smells like vinegar, reduce so that it is no more than 1/3 of the cow's forage intake for the day.

Also, you can try adding calcium proprionate or rumensin to change the acid profile in the rumen and improve milk production.

### 3. The forage smells like alcohol.

When feed ferments slowly, it opens the door for undesirable elements. One of those undesirables is wild yeast. **Wild yeast affects rumen stability and can cause a whole host of problems: loose cows, immune suppression and fat test depression-to name a few.**

The end or waste product that yeast produces is ethyl alcohol. Forage that has been contaminated by wild yeast can smell like alcohol.

The problem is, unless you use a specific test for a yeast count, a regular forage test will not tell you if you have wild yeast or not. The test may look perfectly normal, but the cows are having problems.

Your way to recognize yeast is first: the feed smells like alcohol or bread dough and second: the feed heats, cools and heats again.

As usual, dilution is the best solution. You can also try feeding yeast cell wall components such as cellmanax or nutritek to help absorb any toxins produced by the wild yeast. Also, putting in a small amount of preservative containing acetic acid in the TMR will help kill the yeast.

### 4. The forage smells like tobacco.

Heat-damaged forages result from very slow fermentation, typically from the feed being put up too dry. As the bacteria work on the sugars, the process heats the feed up and burns/uses up the available carbohydrates



## THE BUZZ...

Here are some of the latest things going on out there and our personal opinions of them.

### Enogen corn:

Enogen corn contains a transgene that produces alpha amylase, an enzyme that breaks corn starch down to sugar.

Amylase is an enzyme that you can purchase as an additive and it will be very effective in breaking down starch and making it more available-the problem is, it's a pretty expensive additive.

The amylase-producing transgene itself was inserted into regular field corn. The corn is available in all sorts of maturities, and yields similar in bushels and tonnage to field corn. It is also priced similar to field corn seed.

The advantage with the Enogen corn is that the starch is available right away, because of the amylase enzyme.

Does this make it better than BMR? No, it's just different-so let's talk strategy:

If you are going to run out of corn silage and have to feed green corn silage right away, the Enogen corn starch is available right now-you don't have to wait 4 months before the starch kicks in.

For me, Enogen fits when fed in the situation that you are going to have to feed green silage right away and you don't want to experience the lag in production. That's it's spot-to chop enough of it to get through the lag period.

Then feed your fully fermented chopped BMR or dual purpose or silage specific corn silage.

My two cents.

Come check us out at [www.monsonconsulting.net](http://www.monsonconsulting.net)!

-that's what you're smelling: cooked sugars. The cows, of course love this feed. Who wouldn't love caramelized sugar?

But of course the energy value of the forage is significantly lower-the heat damaged carbs aren't very available, even if the cows do like it. And some of the available protein also sustains damage too.

Most forage tests record heat damage as AD-ICP and some tests will adjust the protein based on this value.

Unfortunately, the energy values are still estimated from the NDF and NDFD levels and are usually reported much higher than what is actually available.

**If you have heat damage feeds, you'll notice that the manure will be very dark-lots of bound proteins and sugars coming through.** Another way to determine that you're feeding heat-damaged feeds.

You probably suspected that you'd have to increase the protein and energy when feeding heat damaged feeds. You can also try a rumen stabilizer such as yeast or a microbial to help breakdown the bound portions of protein and carbs.

A final note: all feeds that are iffy, may contain molds or mycotoxins-whether you see visible mold or not. It's best to test for them and know for sure.

### Funky minerals

Nothing is really normal this year; even our normal corn silage and alfalfa aren't testing quite where they should.

Take the mineral values in the feeds, for instance. They are not where they "normally".

Blame late planting. Blame the growing season. Blame the rain. This year the feed has funky mineral values.

Mineral in small grain silage and sorghums are naturally funky. They tend to be very low in calcium and magnesium and high in potassium. This is a perfect set-up for milk fever, if you're feeding these feeds undiluted to dry cows. In lactating cows, they can cause lowered milk production.

But this year, it's not just the alternative feeds. Alfalfa and corn silage have basically shown the same set-up this year: lower in calcium and magnesium and higher in potassium. Even the corn silage, which is typically very low in potassium, is quite a bit higher than normal.

But the main surprise here is phosphorous.

Phos usually occurs in adequate levels in all silages, so we don't worry too much about it. This year, however, the actual values in the feed are lower than expected.

**Low phos can cause breeding issues-the cows aren't showing heats.** Long term, low phos can effect hoof health.

Most of us feed pretty low levels of phos-it's all they really need. But if you're having repro issues, the phos in your forages may be lower than what it indicates from your forage sample.

When in doubt, test the minerals by wet chemistry. This year, it will pay.

Great talking with you again. Hang in there!