A number of dairy cooperatives and milk processors in the U.S. and New York are testing loads of milk for aflatoxin. This testing is the result of concerns of potentially higher aflatoxin content in feeds produced during the 2012 growing season. The hot, dry and drought conditions experienced in this growing season increase the chance for elevated feed aflatoxin levels. The following points may be helpful in better understanding this situation.

What are aflatoxins?
A number of molds and fungi produce toxic compounds collectively referred to as mycotoxins. Aflatoxins are forms of mycotoxins produced by specific molds (Aspergillus flavus and Aspergillus parasiticus) that under certain conditions can be found in animal feeds and human foods.

What are the animal health concerns?
Dairy cattle consuming feeds with high aflatoxin levels may show lower dry matter intake, decreased milk production, slower growth in heifers and decreased immunity. Lower immunity decreases the animal’s ability to fight disease challenges.

What are the human health concerns?
Aflatoxins are best known for causing liver cancer and other liver damage in humans. These toxins also suppress the human immune system and interfere with the proper use of nutrients. For this reason, the maximum concentration of aflatoxin permitted in food consumed by humans in the U.S. is 20 ppb (parts per billion) except for milk for which the maximum is 0.5 ppb. These levels are set by the Food and Drug Administration (FDA).

Where do aflatoxins come from?
Aflatoxins are metabolites produced by fungi in feeds and foods. There are a number of forms produced in feeds. These include B1, B2, G1 and G2. Corn, peanuts and cottonseed are the crops most likely to contain aflatoxins. In the Northeast, corn grain would be the most likely source. There could also be aflatoxin present in corn silage or corn processing byproduct feeds. Whole cottonseed imported from the southern states could also contain aflatoxin.

What growing conditions support aflatoxin production in feeds?
Preharvest aflatoxin of peanuts and corn is favored by high field temperature, prolonged...
drought conditions and high insect activity. Postharvest production of aflatoxin on stored grains and peanuts is favored by warm temperature and high humidity. The molds (Aspergillus flavus and Aspergillus parasiticus) that produce the toxin grow best at 14-30% moisture and 77°F. They don’t grow well at less than 53°F and greater than 106°F. Samples with no visible mold may still contain high levels of aflatoxin.

**How does aflatoxin get in milk?**
The aflatoxin in milk is the M₁ form. When dairy cows consume feed containing aflatoxin, some of the feed aflatoxin can be converted to the M₁ form and excreted in the milk. It appears that 1-3% of the feed aflatoxin consumed is excreted in the milk.

**How fast does aflatoxin appear in milk after consuming feeds with high aflatoxin content?**
Research indicates that increased levels of aflatoxin in milk can be detected within 12 – 24 hours of consuming feeds with high aflatoxin levels. When these feeds are removed from the ration, milk aflatoxin levels decrease within 1 – 4 days.

**What are the regulatory guidelines for aflatoxin in animal feeds, human foods and milk?**
Aflatoxins are the only mycotoxins currently regulated by FDA. They have set the following action levels:

<table>
<thead>
<tr>
<th>Aflatoxin level, ppb (parts per billion)</th>
<th>Feed and species</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>Milk</td>
</tr>
<tr>
<td>20</td>
<td>Foods for human consumption</td>
</tr>
<tr>
<td>20</td>
<td>Feeds and feed ingredients intended for dairy animals, animal species or uses not listed below or if the intended use is not known</td>
</tr>
<tr>
<td>20</td>
<td>Feeds and feed ingredients intended for use in immature animals</td>
</tr>
<tr>
<td>100</td>
<td>Feeds and feed ingredients fed to breeding beef cattle, breeding swine or mature poultry</td>
</tr>
<tr>
<td>200</td>
<td>Corn and peanut products fed to finishing swine (&lt;100 lbs. body weight)</td>
</tr>
<tr>
<td>300</td>
<td>Cottonseed meal intended for beef cattle, swine or poultry (regardless of age or breeding status)</td>
</tr>
<tr>
<td>300</td>
<td>Corn and peanut products intended for finishing beef cattle (feedlot cattle).</td>
</tr>
</tbody>
</table>

Feeds, foods or milk exceeding the above action levels cannot enter the animal or human food chains.

**What levels of aflatoxin have been found in the 2012 crops?**
Dairyland Labs in Wisconsin recently summarized their data for samples submitted between September and December 31, 2012. These samples are primarily from the Midwestern states. Overall, about 9 to 14% of the samples analyzed (corn silage, corn grain and distillers grain) contained > 20 ppb of aflatoxin. Informal discussions with forage testing labs, feed companies and the two ethanol plants operating in New York indicate they are finding little if any aflatoxin in corn grain grown in New York or the distiller’s grain produced from local corn grain. The same pattern seems to hold for locally produced corn silage. The risk of high milk aflatoxin levels appears to be very low if New York produced feeds are used in dairy rations.

**Can feeds with high aflatoxin levels be blended with feeds containing lower aflatoxin levels?**
FDA does not permit this unless a special exemption is applied for by a state. New York has decided not to request this exemption. Corn grain that has been blended cannot be used in dairy rations.

**Can compounds be added to dairy rations to bind aflatoxin?**
The research data on binding ability from trials are contradictory and very few of these trials have been done with dairy cattle. Some hydrated sodium calcium alumino-silicates do have some ability to bind aflatoxin. Other clay type compounds, bentonites and yeast cell glucomannans are believed to have some binding capacity. The research data is not conclusive since there are a large number of compounds available and only a few have been tested for binding capacity. None of the compounds are approved by FDA to be added as mycotoxins binders in dairy rations. Some of these compounds may be
What analytical tests are available?
Aflatoxin content in feeds and milk can be analyzed using a number of tests. These include “dipstick” or other tests that can be used on the farm. Some of these give a negative or positive answer at a specified aflatoxin level. Other tests may provide a quantitative answer. These tests usually require some preparation of the feed including grinding and mixing with a solvent. Samples can also be analyzed by commercial labs using ELISA (enzyme-linked immunosorbent assay), HPLC (high pressure liquid chromatography) or other techniques. Feeds can be sent to the Dairy One Forage Lab (www.dairyone.com, 800-486-3344) or Cumberland Valley Analytical Services (www.foragelab.com, 800-2822-522). Other labs may offer similar analyses.

FDA Resources Used:
Milk:
Feed:
www.fda.gov/ICECI/ComplianceManuals/CompliancePolicyGuidanceManual/ucm074703.htm

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Crop Scouting: The Neglected Task
By Mike Hunter: Cornell Cooperative Extension of Jefferson County

If you currently hire an independent crop scout, you can stop reading this article. If you scout your fields on a weekly basis to catch problems early so that a corrective action can be taken to prevent crop losses, you, too, can stop reading this article. If you are a crop grower and do not have a structured crop scouting protocol on the farm, I would encourage you to continue reading this article.

What is crop scouting? Crop scouting is a regular and systematic field sampling program that provides field specific information on pest pressure, crop injury, crop health, and condition. Crop scouting is not driving around the farm in the truck and only looking at the fields from behind the steering wheel. In the agronomic world, this is called a windshield survey. Crop scouting is not taking the occasional stroll through a field. This is more commonly referred to as walking.
Growing crops is a huge investment; therefore, crop scouting should be viewed as a way to protect your investment. We can predict many of the challenges that we will face in the field each year. However, there are not many years that go by before a new pest or unexpected problem will show up in the field. Crop scouting on a regular basis will give you the information to make sound decisions before something becomes a serious threat or problem.

The true armyworm outbreak in 2012 demonstrated the importance of a regular crop scouting schedule or program. This pest took many by surprise and, in certain cases, serious crop losses occurred. Those crop growers that hire an independent crop scout or follow a regular crop scouting program on the farm certainly had much less crop losses from armyworms than those that were not prepared. Last season, it did not end with just the armyworm invasion; we were faced with major potato leafhopper populations in alfalfa, corn rootworms in corn,
two-spotted spider mites in soybeans, and cereal leaf beetle in spring wheat.

This is the perfect time of year to develop a crop scouting strategy for the 2013 growing season. Maybe you will decide to hire an independent crop scout or train an employee on the farm, or do the crop scouting yourself. It is so important to have accurate and up-to-date information on the current status of your crops throughout the growing season. A well-planned crop scouting strategy is the best way to know exactly what is happening in the field.

Before anyone takes on the task of crop scouting, one needs to have knowledge of pest biology and crop growth stages to help determine when and how frequently you need to scout the fields. If you need to brush up on your field crop pest knowledge or get up to date on the latest pest problems, there are many excellent resources available. The New York State Integrated Pest Management Program has an abundance of crop pest information, crop scouting procedures, and calendars available on their website: http://www.nysipm.cornell.edu. The 2013 Cornell Guide for Integrated Crop Management is another excellent resource and is available in both print and electronic versions. It can be accessed through http://ipmguidelines.org/FieldCrops/ or ordered from your local Cornell Cooperative Extension office.

During the growing season, it is important to stay in contact with your local agribusinesses and Extension offices. They will have information about locally developing situations in the fields and pest problems that are showing up in the area. Fortunately for those of us located in the Southern Tier, many pest problems will progress from areas south/west of us before they reach our area so we can be prepared for their arrival.

It is no secret that crop scouting is a neglected task on many farms. As crop input costs increase and the value received from the crop scouting will likely become more commonplace on the farm in the upcoming growing season. If you would like to learn more about crop scouting or do not have access to the internet resources mentioned in this article, contact the CCE-Steuben at 607-664-2300.

Managing Forage Inventories
Bill Verbeten.
NWNY Dairy, Livestock, & Field Crop Team

Many farmers will be short on hay and silage in the coming months and tough management decisions will need to be made in 2013. Most management options available boil down to one of four areas: 1) reducing on-farm losses of forage, 2) buying replacement hay or silage, 3) feeding alternative forage sources, and 4) selling animals to match forage inventories. Prior to making these decisions, a forage inventory should be taken in order to determine how long current stocks of forage will last.

Reducing On-Farm Losses of Forage
Silage and hay can be lost at many points from the field to the cow. Many steps can also be taken to minimize forage losses during storage and feed-out. Unfortunately for farmers many of the decisions that contribute to storage and feeding losses have already been made. However, maintaining at least 6 inches of feed-out a day from bunkers and bags, keeping hay stored out of the elements, and patching holes in the plastic covering silage can help reduce storage losses. A future blog post will discuss Reducing Hay and Silage Storage Losses in more detail. Large amounts of forage can also be lost at feeding. One example is that a lot of hay is often wasted because animals are fed with inefficient feeders. Well-designed feeders greatly reduce the feed that is wasted.

Buying Replacement Hay or Silage
This option for filling short forage inventories has already occurred on many farms, and farmers have paid record high prices across the nation for that hay and silage. In some areas there simply is not any feed left to buy. Many hay and silage pricing tools and auction prices are reported online to assist farmers in arriving at a fair local price for buyer and seller. The Weekly Hay Market Demand and Price Report for the Upper Midwest is one of most widely viewed sources. It quotes multiple hay auction prices for a wide variety of hay qualities and bale types. Archived prices are also listed on this website. Buying forage online is very risky proposition, especially if there is no off-line connection between buyer and seller. Only pay after hay has been delivered.
and verified by lab test or inspection that is the quality claimed by the seller.

Feeding Alternative Forage Sources
Most farms will seriously examine alternative forage sources in order to bridge the gap before the 2013 crop can be harvested.

Small Grain Silage
Many farms planted oats for silage last summer and harvested them last fall. Winter triticale, winter wheat, and winter rye have been planted across the country either as cover crops or for grain. Research from Cornell University (Winter Triticale--A Cropping Opportunity and Winter-Forage Small Grains to Boost Feed Supply: Not Just a Cover Crop Anymore!) has demonstrated that 2-5 tons of DM of 15%+ crude protein (CP) and less than 60% neutral detergent fiber (NDF) are attainable from winter small grain silage. Timely fall planting, sufficient nitrogen fertility in the spring (75-100 lbs per acre of total nitrogen from legumes, manure, or fertilizers), and harvest at the flag leaf stage (no seed heads emerged) are necessary to achieve high yields and quality. Work from the University of Wisconsin has shown that when harvest of winter wheat, winter rye, and winter triticale is delayed until the boot stage, yields are consistently 3 tons of DM per acre, but CP content declines to 12-14% (Winter Cereals for Spring Forage). A feeding trial from the University of Minnesota demonstrated that winter triticale silage with nearly 18% CP was equal to alfalfa silage in dry matter intake (DMI), fat corrected milk production, and milk composition when fed as the sole forage in the ration to dairy cows compared to alfalfa silage (Alternative Field Crops Manual: Triticale).

Work from Iowa State has shown that 1.0+ ton of DM of spring planted oat silage that has 20-22% CP, 52-54% NDF, and 75% total digestible nutrients (TDN) can be grown if harvested at the boot stage. Delaying harvest can increase yields up to 3 tons of DM per acre, but forage quality declines rapidly (Oats for Forage). The introduction of oats bred for forage production has increased the yield potential of spring planted oats to 2-3 ton DM per acre, and oat silage yields are generally higher for late maturity grain varieties than earlier maturity varieties (Pea and Small Grain Mixtures).

Fibrous Byproducts
Adding fibrous byproducts to rations can greatly extend forage inventories. By-Product Feedstuffs in Dairy Cattle Diets in the Upper Midwest by Randy Shaver, University of Wisconsin provides a great description of the feeding values of beet pulp, brewers dried and wet grains, corn gluten feed, cottonseeds, distillers dried and wet grains, hominy, malt sprouts, soy hulls, and wheat by-products. Generally these byproducts can replace between 10-30% of the forage without decreasing DMI or milk production. Dr. Shaver's paper also discusses high-protein and unusual by-products that can be fed to cattle. Farmers should consult with their local nutritionist to evaluate if these products or others can be incorporated into their rations.

Alkali Treated Straw or Corn Stalks
Beef producers have long used various methods of treating straw, corn stalks, or corn cobs with an alkali product in order to increase the digestibility of these materials for their cattle. Recent work from the Nebraska University (Digestibility of Crop Residues After Chemical Treatment and Anaerobic Storage) has shown a 10 to 15% increase of in vitro DM digestibility after treating with sodium hydroxide or calcium oxide and storing in sealed plastic for 30 days. The University of Nebraska-Lincoln Extension Midyear Husker Beef Nutrition Conference June 20, 2012 also discussed this topic in great detail (Use of Corn and Residues in the Future for Beef Cattle). See the video "Demonstration of treatment of corn stalks and wheat straw" for some practical ways to implement this practice on farm. Residue digestibility can be increased 15-60% according to Shane Gadberry's,
University of Arkansas outline of treating residues with calcium oxide, sodium hydroxide, ammonia and urea (Treating Corn Stalks and Other Crop Residues to Improve Feed Value) depending on the material and treatment method. Generally, these treatment processes involves grinding the material, rehydrating the residue to 50% moisture, applying calcium oxide or sodium hydroxide at 5% DM of residue weight, and then storing in a silage bag for at least 7 days. Urea is applied at 3% DM of residue weight after the residue has been brought to 50% moisture and stored for at least 21 days in a sealed bag. Ammonia is pumped through a pipe into a sealed stack of hay or straw at 3% of DM weight and left for at least three weeks prior to feeding. Safety is big concern with these practices, and precautions need to be taken when handling these materials. Rehydrating the residues also requires large quantities of available water.

Poor Quality Hay
Already many cattle have been consuming feed that normally would make their farmers cringe. Poor quality hay (i.e. an old pasture that has the feeding value of straw) fed in small amounts may buy farmers some time before finding better hay or buying an higher quality feed/byproduct. Feeding bad hay should be avoided at all costs. It is one of the most risky management decisions to make when short on forage. Foreign material, the presence of harmful alkaloids, and unknown residual compounds are just a few of the risks of feeding bad hay to cows.

Selling Animals To Match Forage Inventories
While no farmer wants to consider this option, it will need to be on the table on many farms in 2013. Beef farmers in the South and Great Plains have already liquidated much of their herds in recent years prior to the drought of 2013. Cull prices for dairy cows have been strong in recent months and farmers should consider removing the least productive and efficient animals before cull prices fall. This can be a very difficult decision, but seriously considering it, along with the other options will help farmers make it through until forage inventories are replenished.

Bottom Line
1. Taking forage inventories and discussing management options now is necessary across the US.
2. Farmers will be able to manage short forage inventories by a combination of reducing on farm forage losses, buying replacement hay or silage, feeding alternative forage sources, and/or selling animals to match forage inventories.


The 2013 edition of the Cornell Guide for Integrated Field Crop Management is now available. This annual publication provides up-to-date field crop production information for New York State. It has been designed as a practical guide for field crop producers, crop consultants, ag chemical dealers, and others who advise field crop producers.
In addition to the annual variety and pesticide updates, this year several additions and revisions have been made to the Field Crops Guide, including:

- a new section on spreading manure in adverse weather;
- updated corn nitrogen management strategies;
- revised management tactics for European corn borer and corn rootworm, including discussions on the use of GMO-BT corn varieties;
- adding western bean cutworm as a pest of concern;
- updated alfalfa snout beetle management practices;
- a new corn foliar fungicide efficacy comparison chart; and
- revised soybean disease management guidelines.

The 2013 Cornell Guide for Integrated Field Crop Management can be obtained through your local Cornell Cooperative Extension office or directly from the Pesticide Management Education Program (PMEP) Educational Resources Distribution Center at Cornell University. To order from the PMEP Educational Resources Distribution Center, call (607) 255-7282, send an email to patorder@cornell.edu, or order online at https://psep.cce.cornell.edu/store/guidelines. Or stop by Cornell Cooperative Extension of Steuben County. Cost for the Guide is $23.

Keys to Profitable Livestock Production in 2013

Thursday, February 21st
6:30 to 8:30 p.m.
Tyrone Fire Hall, St. Rte. 226; Tyrone, NY.

The Tri-County Graziers will host Steuben County native Dr. Greg Halich, Associate Extension Professor with the University of Kentucky’s Department of Agricultural Economics, for a special evening presentation that will focus on the economics of grazing and grass-fed production. Greg will also discuss the dollars and “sense” of buying, making, and feeding hay for different types of operations. All livestock producers interested in increasing the profitability of their operations should plan to attend. This event is free and open to the public. For more information, contact Kerri Bartlett of Steuben Cornell Cooperative Extension: 607-664-2311, ksb29@cornell.edu

Aflatoxins Causing Milk to be Rejected at Milk Plants
Jerry Bertoldo,
NWNY Dairy, Livestock, & Field Crops Team

This year’s drought conditions have increased the risk of finding aflatoxin in corn, corn by-product feeds, fuzzy cottonseed and sometimes silages. Corn ears are a prime candidate for the Aspergillus fungus invasion that produces this mycotoxin. It is commonly a problem in the warmer climates of the southern USA, but this year’s record heat particularly in the corn belt has widened the area of concern.

Olive green mold is typical of aflatoxin producing Aspergillus species. 5 infected kernels out of 1 million can result in illegal dairy feed levels.

Springwater Agricultural Products
8663 Strutt Street, Springwater, NY
Farm: 585-728-2386 Cell: 585-315-1094
Name Brand & Generic Pesticide Sales
NK, Garst, WL, Dairy Banquet & Agrilucer Seed Sales
Certified Corn, Soybeans, Wheat, Oats, Forage & Pasture Grasses

Open Everyday – Dave Votypka-Owner
Quality products with farmer friendly prices.
Aflatoxin rarely causes dramatic health issues in cattle. There is a public health worry, however. Aflatoxins are considered carcinogenic. Unlike other mycotoxins they are actively secreted by the cow into the milk. Levels over 0.5 parts per billion (ppb) in milk are considered illegal and trigger a rejection of milk at the plant similar to a positive antibiotic test.

Milk plants have been testing and finding positive loads across the country and here in New York. The legal limit for lactating dairy feed is 20 ppb. It takes nearly twice that level to cause noticeable problems in mature cows. Fortunately, cows will clear violative levels from their milk within 48 hours of having the contaminated feed removed from the diet. On the down side, finding out if your grain corn, high moisture corn, cottonseed or corn silage is “hot” for aflatoxin is not an easy task due to the spotty nature of contamination in these feed sources.

Testing milk is the “rubber meets the road” means to know if a real problem exists. You should be involving your nutritionist in determining whether homegrown feeds or more likely purchased products off the spot market might be a potential problem.

Tests for both milk and feed are available. Mycotoxin binders such as bentonite, certain silicates and MOS (mannan oligosaccharides) are effective at “neutralizing” aflatoxin in feed and are often used as insurance against mycotoxins in general.

Applications sought for 2013 Dairy of Distinction Award

The New York Dairy of Distinction Program invites interested farms to apply for this year’s Dairy of Distinction award from the Northeast Dairy Farm Beautification Program. Applications must be postmarked by April 15th.

The award is based on the idea that attractive farmsteads enhance consumer confidence in the wholesomeness of milk and stimulate milk sales and public support for the dairy industry. Roadside judging will take place in May. Winning farms will be notified in June, and will receive a Dairy of Distinction sign to display in front of their farm.

To download an application or to apply online visit the Dairy of Distinction website at www.dairyofdistinction.com or contact your local Cornell Cooperative Extension office.

Cash Rents Paid for Farm Land in Western NY

John J. Hanchar, NWNY Dairy, Livestock, & Field Crops Team

Cornell Cooperative Extension (CCE) staff often receive calls from individuals asking “What is the going cash rent for farm land in my area?” Many in the CCE system have ideas based upon word of mouth and perhaps some spotty statistics for the local area that they serve.

Not surprisingly, actual cash rents for farm land vary over some range. The range can be wide. Variability in productivity, intended use and other local supply and demand factors yield a range of cash rent values.

Historically, the lack of a consistent data set characterized the situation. The availability of data by county changed when the United States Department of Agriculture/National Agricultural Statistics Service (USDA/NASS) responded to customer requests and new requirements of the 2008 Farm Bill. Today, results from the initial late 2008 survey efforts by the USDA/NASS through the most recent efforts for 2012 are available online.

The averages reported in Table 1 were obtained by going to: <quickstats.nass.usda.gov> and using the query menu on the page to make the following selections

Program: Survey
Sector: Economics
Group: Expenses
Commodity: Rent
Data Item: Rent, Cash, Cropland Non-Irrigated …
The pull down menus within the “Select Location” section allow for the selection of desired locations.

Table 1. Cash Rents for Non Irrigated Cropland for Selected New York State Counties in Dollars per Acre, 2012.

<table>
<thead>
<tr>
<th>County</th>
<th>Average Cash Rent (Dollars Per Acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Niagara</td>
<td>36</td>
</tr>
<tr>
<td>Genesee</td>
<td>67</td>
</tr>
<tr>
<td>Livingston</td>
<td>61</td>
</tr>
<tr>
<td>Orleans</td>
<td>62</td>
</tr>
<tr>
<td>Monroe</td>
<td>36</td>
</tr>
<tr>
<td>Ontario</td>
<td>54</td>
</tr>
<tr>
<td>Yates</td>
<td>61</td>
</tr>
<tr>
<td>Seneca</td>
<td>46</td>
</tr>
<tr>
<td>Wayne</td>
<td>43</td>
</tr>
<tr>
<td>Wyoming</td>
<td>71</td>
</tr>
</tbody>
</table>

Source: USDA/NASS.

Please note that the values reported in Table 1 are averages, with individual observations likely varying over a wide range of values. Averages for some counties are also available for irrigated crop land and pasture land. Farmer prices paid indices available from USDA/NASS could be used to adjust the above to current price levels.

If an individual is interested in understanding guidelines associated with renting farm real estate, including approaches for establishing starting prices for negotiations from both the landlord and renters perspectives, then the following resource available at www.nwnyteam.org under the Ag Focus tab should prove valuable: Guidelines for Renting Farm Real Estate in the Northeastern United States.

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**Beef Cattle Comments**  
February 2013  
Prepared by: Mike Baker, Beef Cattle Extension Specialist, Cornell University

**FEEDING HAY TO COWS IN LATE GESTATION INCREASES MARBLING**

Researchers in Ohio were interested in learning the impact of three energy sources (2 low starch and 1 high starch) fed to cows in their last trimester on the subsequent performance of their progeny. Spring calving cows were full fed hay, or 4.4 lb hay, 8.5 lb dried distillers grains with solubles (DDGS) and 2.2 lb protein/mineral supplement or 4.8 lb hay, or 10 lbs of dry shelled corn (DSC) and 2.2 lb protein/mineral supplement. The energy source in the hay treatment was fiber (low starch) in the DDGS treatment was fiber, protein and fat (low starch), while the energy source in the DSC treatment was starch.

Steer calves from the cows were weaned at about 6 months of age, backgrounded on stockpiled fescue for 28 days and then placed on a common high energy diet. The steers were harvested when determined to be at 0.5 in backfat by ultrasound.

Birth weights of calves born to cows on all hay diet were smaller than DSC or DDGS supplemented cows but there were no differences in dystocia rate. Weaning weights of calves from corn supplemented cows was greater than calves from hay fed cows while those from DDGS fed cows were intermediate. Milk production was measured using the weigh-suckle-weigh procedure and found not to be different between treatments. Therefore differences in weaning weights were not due to milk production as might be expected.

Feedlot measures of initial weight, dry matter intake, ADG or feed efficiency were not different due to how the cows were fed in last trimester. Hot carcass weight, ribeye area, and yield grade were not affected by
maternal nutrition. However, the carcasses from calves out of cows fed the low starch (hay and DDGS) diets had higher marbling scores and fewer USDA Select carcasses than cows receiving corn supplemented diets. The authors surmised that maternal nutrition during gestation may affect fat deposition because the proportion of intramuscular fat per unit of back fat was greater in calves out of dams fed low starch (hay) diets compared to calves from calves out of dams supplemented with corn. What mechanism is involved in affecting intramuscular fat development in utero needs to be further evaluated.

In summary, the authors stated that maternal late gestation dietary energy source seems to alter fetal growth, affecting birth weight and having long-term effects on metabolism and body composition. Feeding a diet low in starch (HY or DG) vs. one high in starch (CN) in late gestation was associated with greater intramuscular fat deposition of progeny when measured at a constant 12th rib fat thickness.


TO/DO JANUARY/FEBRUARY

a) Cows should be in body condition score of 5.0-6.0 for March calving (Smooth appearance, last 3-4 ribs are just visible, and there is some brisket fat).

b) Heifers should be in body condition score 5.5-6.5 (slightly fatter than cows, can begin to see pockets of fat on either side of tail head).

c) If forage quality is low, send sample in for nutrient analysis. Contact your Cooperative Extension agent, your feed dealer, or Dairy One Forage Testing Laboratory at 800-496-3344.

d) If hay for the cow herd is in short supply, replacing up to three pounds of hay with two pounds of whole shelled corn will stretch hay supplies. Include corn at no higher than 50% of the ration. Small grains like barley, wheat and rye can also be used, but unlike corn, must be processed.

e) If corn or corn silage is a significant portion of the diet, calcium could be in short supply. Contact feed dealer or Cooperative Extension agent for assistance in balancing minerals in the ration.

f) A good windbreak, e.g., woodlot, building, hillside- can reduce energy requirements 10% in cow herd.

g) Watch of outbreaks of lice. Treat whole herd, not just affected individuals.

h) If calf scours have been a problem, consider vaccinating cow herd. Consult your veterinarian for assistance.

i) Calving season is here or fast approaching.

Do you have the following items:

1. Frozen colostrum
2. Calf pulling equipment.
3. Stomach tube, thermometer, dry towels.
4. Ear tags, navel dip (7% iodine).
6. Castration and dehorning equipment.
7. Therapy for scours and respiratory problems.
8. VETERINARIAN’S PHONE NUMBER.
2013 Steuben County Crop Symposium
Wednesday February 27, 2013
Civil Defense Center, Bath
10:00am – 2:00pm

Program
10:00am
Registration
10:30 – 11:30
Field Crop Insect Pest Update
Keith Waldron, NYS IPM Program, Cornell
11:30 – 12:30
Weed Management in Field Crops
Russ Hahn, Department of Crop & Soil Sciences, Cornell
12:30 – 1:00
Lunch
1:00 – 2:00
Nozzle Selection, Sprayer Maintenance & Calibration
Ed Starzec, Territory Manager, Hardi North America, Inc.

Pre-registration is requested by Monday February 25th, contact CCE at 607-664-2300. Cost to attend is $10 per person. Lunch will be provided.

DEC Pesticide Applicator Recertification Credits:
3 Credits in Categories: 1a, 10, 21, 23
You must be present at 10:00 AM & have your Applicator ID with you to receive credit!

How to Build a Better Cow
&
Designing a Winning Reproduction Program
March 7, 2013
10:30am – 2:30pm
Club 57, Hornell

Building a better cow through cross breeding & Getting the most out of a sire proof – Calvin Crosby, ABS Sales Manager, AI training, and Genetic Mating

Recent advancements in reproduction management, sync protocols, electronic heat detection systems, and walk and chalk program - Stacia True, Technician Supervisor, Select Sires

Pre-registration is requested by Friday March 1st, contact CCE at 607-664-2300. Cost to attend is $15 per person. Lunch will be provided.
### DAIRY MARKET WATCH

<table>
<thead>
<tr>
<th>Milk Component</th>
<th>Milk Class Prices</th>
<th>Statistical Uniform Price &amp; PPD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Boston) I (I(Boston))</td>
<td>II</td>
</tr>
<tr>
<td></td>
<td>$/gal. to farmer</td>
<td>$/gal.</td>
</tr>
<tr>
<td>Month</td>
<td>Butterfat</td>
<td>Protein</td>
</tr>
<tr>
<td></td>
<td>$/lb.</td>
<td>$/lb.</td>
</tr>
<tr>
<td>Dec11</td>
<td>$1.74</td>
<td>$3.34</td>
</tr>
<tr>
<td>Jan12</td>
<td>$1.72</td>
<td>$2.73</td>
</tr>
<tr>
<td>Feb12</td>
<td>$1.57</td>
<td>$2.66</td>
</tr>
<tr>
<td>Mar12</td>
<td>$1.53</td>
<td>$2.66</td>
</tr>
<tr>
<td>Apr12</td>
<td>$1.56</td>
<td>$2.66</td>
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<tr>
<td>May12</td>
<td>$1.45</td>
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<tr>
<td>June12</td>
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<tr>
<td>July12</td>
<td>$1.66</td>
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<tr>
<td>Aug12</td>
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<td>$3.12</td>
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<tr>
<td>Sep12</td>
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<tr>
<td>Oct12</td>
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<td>$3.73</td>
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<tr>
<td>Nov12</td>
<td>$2.02</td>
<td>$3.72</td>
</tr>
<tr>
<td>Dec12</td>
<td>$1.73</td>
<td>$3.31</td>
</tr>
</tbody>
</table>

December Utilization (Northeast): Class I = 39%; Class II = 23%; Class III = 25%; Class IV = 13%

[Class I = processed as beverage milk; Class II = soft products, cream, yogurt and cottage cheese; Class III = cheese (American, Italian), evaporated and condensed products; Class IV = butter, nonfat and whole milk powder.]

**Dairy Commodity Markets** (USDA Dairy Market News):

**Butter:** Friday CME cash prices: 12/28 $1.50, 1/4 $1.50, 1/11 $1.46, 1/18 $1.50, and 1/25 $1.51. Butter manufacturers indicate cream is still ample and multiples are still lower than what is needed to sell spot cream above flat market. Internally generated cream as well as cream coming from Class II operations is moving through the churns and into bulk butter inventories.

**Cheese:** Friday CME cash prices (40# blocks): 12/28 $1.74, 1/4 $1.76, 1/11 $1.72, 1/18 $1.69, and 1/25 $1.65. The December Cold Storage report showed that cheese in storage as of December 31, was nearly equal to a year ago, but 5% higher than November of 2012. Buyers are using the added inventory to justify lower bids. Prices remain above year ago levels for this time of year, but have dropped through much of January. The increased supplies and lower prices are attracting attention from export buyers.

**Dry Products:** A weaker market tone prevails over many of the dairy dry commodity markets. Active production of nonfat dry milk, manufacturers’ building NDM inventories and light buyer demand has put some pressure on NDM prices.

**Fluid Milk:** Farm milk production continues along seasonal trends in most areas, with processors noting fluid demand is mostly level except for intermittent small spikes as customers shop before snowstorms. Cream is readily available across the country. Churning is active.

**Milk Production:** Milk production in the 23 major states during December totaled 15.7 billion pounds, up 1.7 percent from December 2011. Production per cow in the 23 States averaged 1,848 pounds for December, 30 pounds above December 2011. The number of milk cows on farms in the 23 States was 8.49 million head, 5,000 head more than December 2011, and 16,000 head more than November 2012.
Comments:
On January 1st, 2013, the Senate and House passed the American Taxpayer Relief Act of 2012, which addressed some critical tax issues. The Act also extends existing agricultural programs under the Farm Bill by one year. MILC program has been extended through August 31st at the more generous formula and larger production cap (2.985 million pounds per farm per year) set by the 2008 Farm Bill. For all other agricultural support type programs, the extension simply changes dates from 2012 to 2013, meaning what programs applied to corn, soybeans, wheat, sugar, peanuts, cotton, etc. for the 2012 harvest will apply to the 2013 harvest.

More specifically on MILC, producers under the cap will receive a September 2012 payment of 59.44 cents/cwt. and an October payment of 2.37 cents/cwt. Since MILC contracts were automatically extended through Sept. 30, 2013, there is no need for producers to re-enroll in MILC. The remaining question regards the “start month” for producers exceeding the 2.985 million lb. threshold. With MILC contracts automatically extended, the “start month” selected by those producers in FY ’12 is applicable for FY ’13. However, because producers were not able to make timely “start month” selections, FSA will authorize a relief period (to be announced) to select any “start month” in FY ’13.

The University of Wisconsin’s Dairy Situation and Outlook report summarized that 2013 milk prices will depend heavily on the level of milk production. With feed costs remaining high and lower milk prices coming into 2013, returns over feed cost low remain tight for many dairy producers. The slaughter of milk cows averaged 6.1% higher in 2012 than the year before, the highest level since 1986. The effect of higher feed costs on dairy cow slaughter is more evident in regions that purchase more of their forages and grain. Milk prices also averaged lower in regions that purchase most of their feed. As a result, dairy cow slaughter was higher than a year before in the Southwest and Northwest while lower in the Upper Midwest. We can expect dairy cow slaughter to remain relatively high and at a level to decrease the number of milk cows for at least the first half of the year with the average herd size for the year ending up lower than 2012. Continued tight margins will also slow increases in milk per cow. The net result may be little or no increase in total milk production over that of 2012 for the year. USDA is forecasting no increase. But, so crucial to exactly where milk production ends up in 2013 will be how 2013 crops turn out and resulting feed cost for the last half of the year. Existing drought conditions for much of the U.S. remains a concern.

University of Wisconsin-Madison’s report also discussed milk futures and the projected milk price for 2013. Current Class III futures decline to $16.92 for March and don’t reach $18 until May and peak in August at $18.77. But, there still is a high probability that Class III prices will end up higher than this. Class III prices even approaching $19 by late summer and fall is still possible. These prices can all change rather quickly with any major differences in any of the following factors – milk production, domestic sales or exports from what we now think will happen. But, for these higher prices the pattern of milk production needs to change from the increases experienced during November and December. But, as of now it still looks like 2013 prices could end up averaging more than $1.00 higher than the 2012 average all milk price of $18.52.

Virginia Carlberg
Extension Community Educator
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TRADING POST:

NEED HELP? – “Would you like to have your own dairy farm but need help starting it? I may be able to help.” Phone: 607-776-1711

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COMING EVENTS:

Feb 27, 2013 – Steuben County Crop Symposium
10am – 2pm, Bath Civil Defense Center, State Route 54, Bath. 3 NYS-DEC pesticide recertification credits in categories 1a, 21, and 23.

March 7, 2013 – How to Build a Better Cow & Managing your Reproduction Program
10:30am – 2:00pm, Club 57, Hornell. $15 per person.
February 13, 2013 Country Crossroads Feed and Seeds is sponsoring a Managing Pest Course. NYS-DEC Pesticide recertification Credits will be offered in Category 21. STARTING PROMTLY AT 10:30 at the Farm Shop, 3186 County Rte 61 Andover. RSVP BY February 9, 2013 @ 607-478-8858  Lunch Provided

Feb 21 – WNY Potato Grower Processor Meeting
1:00pm – 5:00pm, Club 57, Hornell
The cost is $50 per person – please pay at the door. We would appreciate knowing if you plan to attend by Tuesday, February 19, 2013 so we can plan for dinner. To make reservations please call Robert Mahany at 585-335-2391 or Jim McCormick at 585-322-7274.

Feb 21, 2013 – Grazing for Profit
6:30 – 8:30pm, Tyrone Fire Hall
Special Guest - Associate Extension Professor of Ag Econ, Greg Halich, from University of Kentucky will make a special visit to our area to share his “Keys to Profitable Ruminant Livestock Production in 2013”. Reservations are appreciated and can be made by calling CCE-Steuben at 607-664-2300, there is NO charge to attend.

Feb 21- 23, 2013 – NY Farm Show
Syracuse, NY