Cornell University
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NWNY Dairy, Livestock & Field Crops Team

NORTHWEST NEW YORK DAIRY, LIVESTOCK & FIELD CROPS TEAM

Ag Focus

Could Forages Be Hurting Your Breeding Program?

By: Jerry Bertoldo

Hormones are the powerful chemicals made by animals to regulate the various systems of the body. In cattle, we talk about progesterone and estrogen as being the key hormones that regulate estrous, fertility and pregnancy. Some plants and lower forms of life produce similar compounds even though they have no known use for them. Plants such as alfalfa, clover and pea beans produce estrogens called "phytoestrogens." Molds can produce a mycotoxin with estrogen-like activity known as zearalenone. These all have additive estrogenic effects in farm animals.

Combine these outside sources with the cow's natural estrogen production, unusual sexual behavior and physical characteristics can occur. Pregnant animals in all stages will stand for mounting or aggressively ride other cows in estrous. They may exhibit mucous discharge consistent with normal heat. In open cows, estrous activity may be prolonged, heat cycles may be shorter and irregular or the number of cystic animals might increase. Mid-pregnancy heifers will often develop enlarged udders with fluid build-up. Occasionally, enlargement of the vulva and abnormal vaginal discharges will be observed.

Research has indicated that phytoestrogens and zearalenone can impact fertility if fed within two weeks of insemination. Some work suggests

that early embryonic death may be attributed to these compounds as well. There have been reports of abortions brought on by the sudden removal of forages high in plant estrogens. Zearalenone is the only mold-produced compound thought to cause abortion directly.

Phytoestrogens have been most commonly associated with alfalfa. The

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Mission Statement

The NWNY Dairy, Livestock & Field Crops team will provide lifelong education to the people of the agricultural community to assist them in achieving their goals. Through education programs & opportunities, the NWNY Team seeks to build producers' capacities to:

- Enhance the profitability of their business
- Practice environmental stewardship
- Enhance employee & family well-being in a safe work environment
- Provide safe, healthful agricultural products
- Provide leadership for enhancing relationships between agricultural sector, neighbors & the general public.

Continued from page 1

level of coumesterol, the estrogen produced by alfalfa, increases in the plant with maturity. As the leaves age, the coumesterol content increases. This is more pronounced in the leaves of the mid to lower stem. The estrogen content of the alfalfa leaf increases markedly near mid and full bloom. Rain on newly cut hay increases the estrogen content as well. First cutting alfalfa grown and harvested as dry hay or haylage in wet conditions such as we have experienced this year is the worst offender.

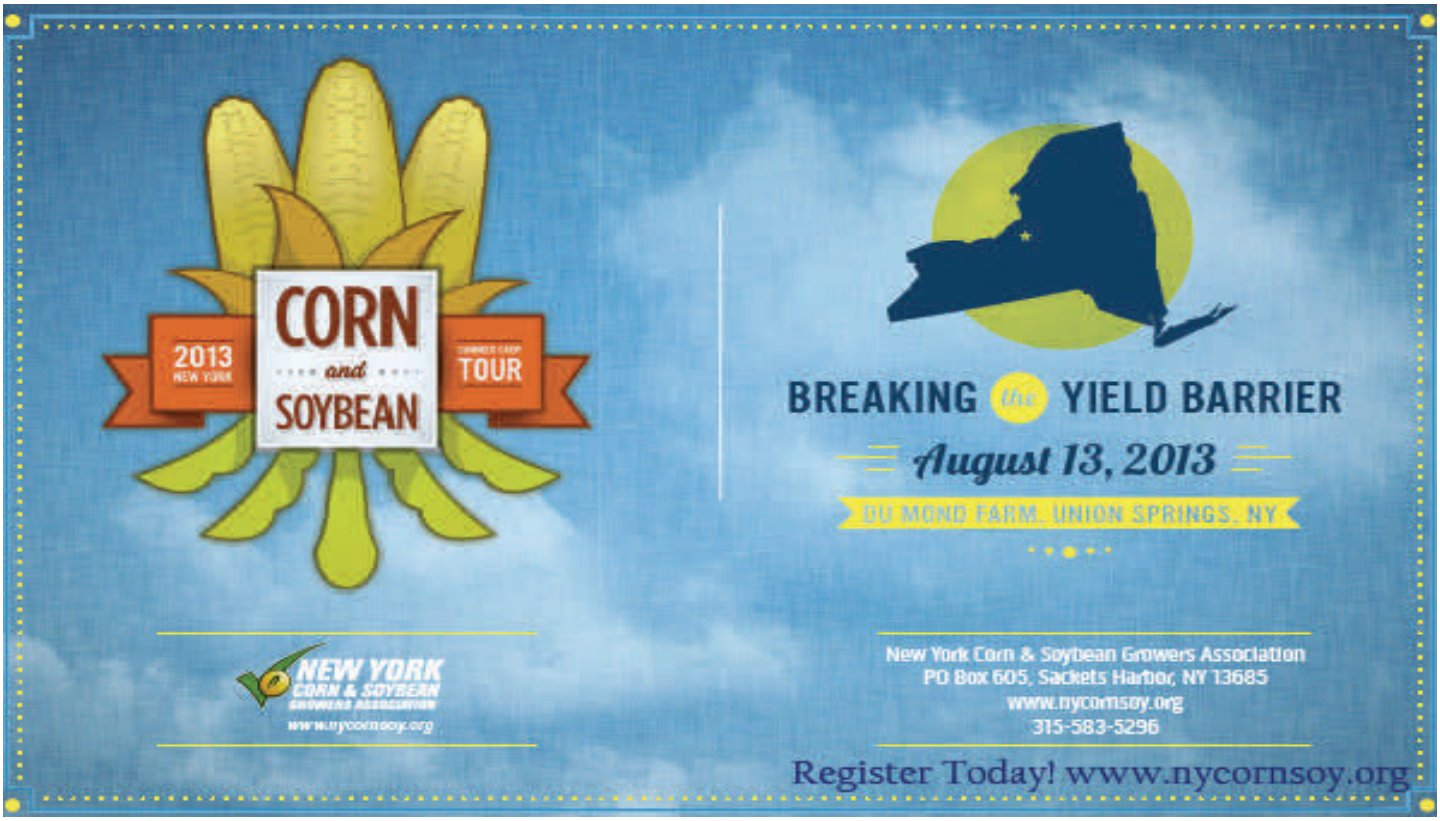
The North Dakota State VDL under the supervision of Dr. Michelle Mostrom is one of the few labs that tests forages for phytoestrogens. Coumesterola and four other estrogen compounds are included in the screening test. The total cost for each out-of-state sample will run about $100. The lab can be reached at: 701.231.7529.

Zearalenone is a mycotoxin produced by certain molds that grow on grain crops such as corn, wheat and barley. Silages made from these plants are most apt to promote the growth of these molds given the right combination of maturity, moisture and oxygen content of the silo. Molds are commonly found in the environment. They favor growing in damp conditions with exposure to air. Sugars are the main source of energy for molds. Corn silage, ear, shelled and high moisture corn are the usual suspect feed stuffs subject to zearalenone contamination on dairy farms.

Ensiling will greatly reduce the growth of molds and mycotoxin production if the pH drops to low enough levels in a timely fashion. Dry matter, packing density and stage of maturity are factors important to good fermentation of corn silage and high moisture corn.

Zearalenone is routinely included in mycotoxin analysis screening available for feed evaluation. Mycotoxin binders are less effective against zearalenone than other mycotoxins. A healthy rumen will destroy a large percentage of it; however, rumen acidosis and short rumen retention times dramatically affect this breakdown.

These estrogen-like compounds may be part of what has been confounding our attempts to explain abnormal estrous behavior, erratic prostaglandin response and epidemics of cystic cows. Minimizing these substances in our feeding programs gives us an added reason for applying best management practices to our forage and home grown grain programs.



Anaerobic Digesters: *energy, bedding & fertilizer opportunity*

By: Elizabeth Newbold,
Sustainable Ag Educator, CCE - Yates County

Anaerobic digestion systems for dairy farms are growing in popularity across the United States. In July 2010, the EPA estimated that 157 digester projects were operating on a commercial scale nationwide.

Most basically, "anaerobic digestion is the process where plant and animal material is converted into useful products by micro-organisms in the absence of air." The useful products from the digestion process are biogas and digestate. Biogas is made up of 60% methane, 40% carbon dioxide and small amounts of other gases. Digestate is a wet product that is comprised of plant nutrients and partially decomposed organic matter. Remember these terms, since this article will revisit the usefulness of biogas and digestate shortly.

Of those 157 digesters found nationwide, 143 digester systems are farm-owned and operated and use only livestock manure. Using the example of an 1800 cow dairy, the process begins by scraping manure into a pit where it is pumped to two silo-like digester units with a capacity of 400,000 gallons.

The temperature in the digesters is set at the optimal degree for the naturally occurring bacteria found in the cow manure, 104 degrees. At this temperature, the bacteria are able to feed and multiple. The manure mixture begins to exude biogas, one of the useful products of anaerobic digesters. As the biogas exudes, it collects in balloon-like rubber caps which create sufficient pressure to move the gas along to a 1-megawatt generator.

BIOGAS

Once at the generator, the biogas can be used to produce several different forms of energy. Some anaerobic digesters are designed to combust heat from the biogas. This heat can be used to warm buildings or hot water. It can also be used to heat, dry or process agricultural feeds. Application in greenhouses is yet another use for the heat.

When anaerobic digesters are designed to produce electricity, it is not uncommon for the system to produce more electricity than the farm can use. Generally, farms are interconnected to the grid. This interconnection to the grid acts as a battery for the farm. Since the number of animals on the farm may change over time, so will the availability of manure. At times when the farm cannot meet its own electric demands, then it can rely on the grid. In the event of excess electricity, then the farm will feed into the grid and the extra will be used by other consumers.

Many digesters are designed to produce electricity. Given their size, the generator runs almost constantly and is only shut down during times of maintenance and repair. Since the pumping system is automatic, when the pressure in the digester starts to drop then more manure is pumped into the digester, allowing it to operate continuously. In its first 13 months of operation, the 1,800 cow dairy farm generated 5,200 megawatt-hours for the grid. With start up concerns addressed the facility is projected to produce about 8,000 megawatt-hours for the grid each year.

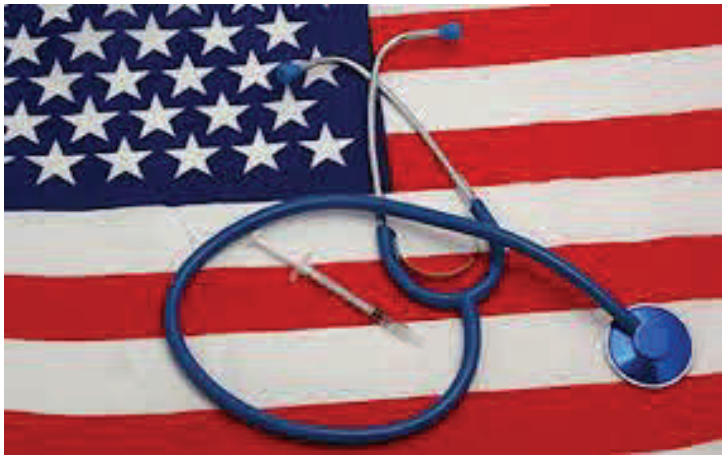
DIGESTATE

As the mixture within the anaerobic digester breaks down, the spent material leaves the silo-like containers and enters a liquid separator where the plant materials are separated from any remaining liquid. The dried plant materials are used on the farm for cow bedding. The liquid material is applied to fields and serves as a nutrient source to the soil, as would raw manure.

There are several benefits to spreading the liquid product from anaerobic digesters that range from neighbor satisfaction to nutrient management planning on the farm. The liquid material has significantly less odor than raw manure resulting in fewer neighbor complaints. The lack of manure smell allows the farm to spread in the summer and on fields previously skipped due to neighbor proximity. Finally, the crops are able to more readily take up the nutrients provided in the liquid material.

Affordable Care Act Mandate

By Joan Sinclair Petzen



The Affordable Health Care Act (ACA) requires employers with 50 or more full-time equivalent (FTE) employees to provide affordable minimum essential healthcare coverage to their full-time workers. Health insurance exchanges or "marketplaces" where individuals or small businesses can compare and purchase health insurance coverage are also required by ACA. All employers are required to provide notices of ACA to employees. The purpose of this article is to give employers an overview of ACA requirements and deadlines.

How does an employer know if they meet the 50 FTE threshold?

Employers determine whether they meet the 50 FTE threshold by averaging their FTE employees for the previous calendar year. First determine the number of FTE employees for each month. Then take an average for the twelve months.

For each month: 1) count the number of employees who worked 130 or more hours during the month. Then, 2) add the total hours for all other employees who worked less than 130 hours during the month and divide by 120. 3) add the results of step 1 and step 2 together to determine the number of FTEs for each month. 4) finally, average the 12 months in the previous calendar year. If the average exceeds 50, the employer is required to offer affordable essential health insurance coverage. There is a seasonal worker exception to the 50 or more test. A seasonal worker is defined as someone who is employed for a period of less than 120 consecutive calendar days: http://www.irs.gov/pub/irs-drop/n-12-58.pdf. If the only factor that drives the employer over the 50 FTE threshold is seasonal workers, employed during a 120 day seasonal period, then the employer would not be considered a large employer.

What about Multiple Entity Businesses?

If multiple entities are more than 80% owned by the same entity or group of entities, they are considered a controlled group. Another way multiple entities can be related is as an "affiliated service group." These groups are entities who either provide services for or receive services from one another and also have a management or ownership relationship. Both controlled groups and affiliated service groups are considered as one entity for the purposes of ACA. The bottom line: it is not possible to just go out and get multiple tax identification numbers and have each entity employ a few people to avoid being considered a large employer by ACA.

AHCA Employee notification required by October 1 for all employers

By October 1, 2013, all employers must notify all current employees (both full and part time) about the availability of health care coverage through Health Insurance Marketplaces. New hires after October 1, 2013 must be notified within 14 days of their first day of employment. The United States Department of Labor has provided notification forms for employers to use. You can find the notice form for employers who offer coverage at: http://www.dol.gov/ebsa/pdf/FLSAwithplans.pdf. If you do not provide coverage a different form is provided: http://www.dol.gov/ebsa/pdf/FLSAwithoutplans.pdf.

"Play or Pay"

Large employers, those with 50 or more FTE, must "play or pay." Large employers who fail to offer affordable essential health coverage will have to pay a tax of $167 per month for each full-time employee, who would have been eligible for the minimum employer-provided coverage, if an employee seeks subsidized coverage through a Health Insurance

Marketplace. This is a **Big IF** because employees may not seek coverage. On the other side, all large employers are required to do is offer the coverage and employee does not have to take the offer.

Affordable and Adequate defined

A health care plan will be deemed affordable if the premium required of the employee does not exceed 9.5% of their current W-2 income. To be considered adequate the plan must provide "minimum coverage." Minimum coverage pays for at least 60% of covered health care services. In 2015, minimum coverage must be offered for dependents of full-time employees but will not be required to cover a spouse. An employer is only required to subsidize coverage for the employee. Dependent coverage must be offered but the employer does not have to help pay for dependent coverage.

What do employers need to do now?

First and foremost determine if the "Play or Pay" mandate applies by determining if your farm business meets the 50 or more FTE threshold. Designate your lookback period (historical months you will use to determine an employee's status as either full time or not) and stability periods (future months the employee will be designated as a full time employee or not based on the determination in the lookback period). Employers will also need to model the financial impact of a decision to play or pay. Lastly follow further developments as the process and procedures relative to this law evolve. Both New York Farm Bureau and Farm Credit East are keeping up with this evolving issue. Check their web sites for more detailed information as it becomes available.

Bovine Reproduction & A.I. Course

August 20 - 21, 2013

Classroom sessions at: CCE - Wyoming County
401 N. Main Street, Warsaw
Hands - on at farm - TBA
Cost: $200/person

Genex Cooperative, Inc.

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Two day program will cover such topics as:
- Reproductive anatomy and physiology
- Hormonal regulation of estrus
- Follicle and CL formation
- Heat detection
- Estrous synchronization protocols
- Successful AI techniques
- Semen handling and thawing techniques
- Care and maintenance of the nitrogen tank
- Loading the insemination gun

Each afternoon will be on farm covering:
- Cow handling & restraint
- Handling semen
- Liquid nitrogen safety
- Loading insemination guns
- Working in the cow
- Proper placement of semen

Cost of the course includes lunch and manuals. Experienced trainers will guide participants through AI techniques using both reproductive tracts before the in-cow practice sessions and cow side.

Questions??? Contact Jerry: 585.281.6816

To register please contact the WCDI office at WyomingCountyDairyInstitue.com or telephone: 585.786.2251 ext. 132

North West New York Dairy, Livestock & Field Crops

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2008 Mack Pinnacle CXU613, MP8-415C Mack 338 h.p., 9 spd., eng. brake, air ride, 207,358 miles, 12,000# F/A, 40,000# R/A, wetline, no rust southern truck, like new, stk# 4224, **$49,900.**

(5) 2009 & (2) 2008 Mack GU713 C&C, Mack MP8 12.8L 485 h.p., 18 spd. Eaton Fuller manual, eng. brake, PTO, 8.27 ratio, 20,000# F/A, 65,000# R/A, Camelback susp., 252" w.b., triple frame, 52k-61k miles. **$71,900.**

2000 Volvo ACL64, Cums. N14 435 h.p., diesel, 8LL trans., eng. brake, Hend. susp., 4.56 ratio, 203" w.b., 22.5 on alum./steel, 12,000# F/A, 46,000# R/A, 488,951 miles, clean, stk# 4341, **$26,900.**

(2) 2007 Western Star 4900, CAT C15 475 h.p., 2 tank diesel, 18 spd., eng. brake, 4.10 ratio, 18,000# F/A, 46,000# R/A, air susp., 11R24.5 on alum., 500k miles, 19'5" alum. dump body, stk# 4236.4237, **$61,500.**

(2) 2008 Peterbilt 365, CAT C13, diesel, 9LL trans., 105,680 miles, Haulmaxx susp., alum./steel wheels, 234" w.b., T/A, 20,000# F/A, 46,000# R/A, stk# 3837/3838, **Special Price: $79,900!**

2001 Sterling LT9513 6 Axle Dump Truck, CAT C12 430 h.p., 8LL trans., eng. brake, air lift 3 self-steering axles, Hendrickson RB suspension, 316" w.b., 24' aluminum box, **$61,000.**

2005 Volvo VHD64 w/17'6" J&J Steel Dump, VED12 435 h.p., diesel, 8LL trans., eng. brake, 147,433 miles, 18,000# F/A, 20,000# L/A, 44,000# R/A, D.F., 22.5 tires on steel, tri axle, stk# 4343, **$55,900.**

1999 Int'l Paystar 5000, Cums. 350 h.p., diesel, 9LL trans., Hend. HMX460 susp., 5.38 ratio, 214" w.b., 22.5 tires, T/A, 20,000# F/A, 46,000# R/A, 191,732 miles, D.F., 20' of frame behind cab, stk# 3327, **$19,500.**

2002 Freightliner FLD w/18' Steel Box, Det. 12.7L 470 h.p., diesel, Jake Brake, Allison auto., 20,000# F/A, 65,000# R/A, 50,796 miles, rubber block susp., 12R24 tires, 244" w.b., ECM plug-in verified, **$47,900.**

1993 Mack CL613, Mack E7 400 h.p., 18 spd., eng. brake, air ride, 230" w.b., 22.5 on alum./steel, tri axle, 14,000# F/A, 46,000# R/A, 563,578 miles, D.F., wetline, air slide 5th, 50% drive tires, 70% steers, recent clutch & engine work, stk# 4339, **$18,900.**

1985-1997 Mack RB Dump Trucks, Mack 400 h.p., Eaton Fuller 8LL trans., air lift 3rd axle, double frame, 20,000# F/A, 46,000# R/A, Camelback susp., 248" w.b., 19'6" steel box.

2001 Kenworth T800, Det. 12.7L 500 h.p., diesel, 8LL trans., eng. brake, air ride, 4.33 ratio, 513,560 miles, 24.5 on alum., 233" w.b., 12,000# F/A, 46,000# R/A, 85% rubber, ready to go, stk# 3824, **$32,900.**

1988 Mack DM690 w/15' Steel Dump Body, Mack E6 275 h.p., diesel, 12 spd., Camelback susp., 22.5 on spoke, 192" w.b., T/A, 20,000# F/A, 44,000# R/A, stk# 4354, **$14,900.**

2001 Mack MR688S, Mack E7 300 h.p., diesel, auto., 160,280 miles, Haulmax susp., 22.5 tires, 208" w.b., 20,000# F/A, 46,000# R/A, D.F., rubber 75%, 20' of frame behind cab, 187" C-T, 6x4, stk# 3994, **$36,500.**

1990 Pacific P512S, CAT 3408 525 h.p., diesel, Allison 6 spd. auto., eng. brake, 20' steel htd. box, spring susp., 14R25 on all steel, T/A, 25,960# F/A, 100,000# R/A, 16,198 miles, triple frame, stk# 4318, **$52,900.**

2000 Peterbilt 379, Cums. N14 460 h.p., diesel, eng. brake, air ride, 206" w.b., 24.5 on alum., T/A, 12,000# F/A, 44,000# R/A, 860,930 miles, new cyl. head, 2 line wetline, 90% rubber, stk# 4325, **$31,500.**

2002 Freightliner Argosy w/32" Flat Top Sleeper, CAT C12 410 h.p., diesel, 10 spd., eng. brake, 779,385 miles, air ride, 3.21 ratio, 243" w.b., 12,000# F/A, 35,000# R/A, 25'x102" flatbed, stk# 4334, **$28,900.**

2000 Freightliner FL112, CAT C10 300 h.p., diesel, auto., Chalmers susp., 170,945 miles, 22.5 on all steel, 209" w.b., T/A, 13,220# F/A, 46,000# R/A, stk# 4051, **$28,900. 2002 Also Avail. Same Spec: $32,500.**

1999 Int'l 2674 w/22' Flatbed, BH300 Int'l 300 h.p., diesel, 8LL trans., 356,178 miles, Hend. susp., 22.5 on spoke, 235" w.b., 20,000# F/A, 46,000# R/A, Moffet lift mounts, 12'2" C-T, stk# 4039, **$21,900.**

1986 Mack RD688S, Mack E6 315 h.p., diesel, 15 spd., eng. brake, Camelback susp., 652,071 miles, 22.5 on spoke, 200" w.b., T/A, 18,000# F/A, 44,000# R/A, stk# 4181, **$15,500.**

2001 Kenworth T800, CAT C12 370 h.p., diesel, auto., eng. brake, 15'6" steel dump (needs patching), Chalmers sup., 4.88 ratio, 22.5 tires, tri axle, 18,000# F/A, 46,000# R/A, 309,159 miles, can remove body, 15' of frame behind cab, stk# 4278, **$36,900.**

2010 Western Star 4900SA, Det. 14.8L 560 h.p., diesel, 18 spd. Eaton Fuller, eng. brake, PTO, 6.75 ratio, 20,000# F/A, 65,000# R/A, walking beam susp., 219" w.b., dual exh. & air cleaners, D.F., 28,159 miles, **$84,900.**

2006 Freightliner CL12064ST Columbia 120, Det. 14L 515 h.p., 13 spd., eng. brake, air ride, 22.5 on all steel, 205" w.b., 14,000# F/A, 46,000# full locking R/A, 470,944 miles, ruber 75%, 6x4, stk# 4267, **$49,900.**

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Late Summer & Fall Forage Seedings

By: Bill Verbeten

During the months of August and September farmers across western New York will be seeding many different forage crops. Proper planting date, field preparation, and fertility management are essential for successful establishment of a forage crop this time of year.

When to Plant

If trying to establish a perennial forage like alfalfa, grasses, or clover, an August seeding is needed to give the plants enough time to germinate and grow enough roots to survive the winter. Oats planted for a fall silage harvest or pasture should also be seeded in August in order achieve higher yields (2.5+ tons DM/acre) than oats planted in September (~1.0 ton DM/acre).

If planting a small grain for spring silage harvest (winter triticale, winter rye, winter wheat, or winter barley) a September planting can have up to double the yields (3-4 ton DM/acre) than an October planting (1.5-2 ton DM/acre). Sorghum-sudangrass and other warm season grasses (like teff) will not survive beyond the first hard frost and should not be planted in late summer. These and other warm season grasses are better suited to June and July plantings.

Preparing the Field

One the biggest challenges for August planted alfalfa is extremely high competition from winter wheat that was left in the windrow beyond the combine. In years where little rain falls after the July wheat harvest, the grain remaining in the field often does not germinate until after the fall planted alfalfa/grass mixture. In these situations delaying planting the grass until the spring and applying a herbicide, such as Poast Plus (or glyphosate to Round-Up Ready alfalfa) often planting will greatly increase forage establishment by killing wheat. Alternatively farmers can wait until sufficient rains result in wheat emergence and use a surface tillage tool such as an Aerway, field cultivator, disc, vertical tiller, etc. to kill the wheat prior to planting the alfalfa/grass mixture.

Fertility

As with all crops, use a soil test from within the past 3-5 years as the basis for the lime and fertilizer recommendations. Having sufficient phosphorous and potassium levels is very important for the establishment of perennial legume forages, especially in mixtures with grasses. Grasses tend to outcompete legumes for these nutrients due to their shallow, fibrous root systems. Established forages respond to up to 25 lb/acre per year of sulfur, but late summer & fall planted perennial forages will likely only respond to about half of this rate. Winter small grains will likely be more responsive to spring applied sulfur than fall. Legumes may respond to 1 lb/acre of boron at planting, more likely on lighter, sandy soils. Legumes may respond to small rates of nitrogen application (10-15 lb/acre), while small grains and grasses will likely respond up to 50 lb/acre of nitrogen if planted at the proper time.

Incorporating manure as soon as possible after application will increase the amount of nitrogen available for late summer & fall planted forages. If significant changes to the animal diets or manure storage have taken place in the past year, it will be necessary to test the manure to re-evaluate nutrient content.

On a Farm NOT Near You...

Spruce Mountain Ranch, Larkspur, CO

By: Nancy Glazier

I attended the Beef Quality Assurance State Coordinators meeting in Denver mid-June and had the opportunity to tour a nearby ranch with Mike Baker, Cornell Beef Cattle Extension Specialist and Carol Gillis, Executive Director of the NY Beef Industry Council. Spruce Mountain Ranch is not your typical western beef operation. What started as a 13-cow hobby operation on 450 acres owned by Tom and Lois Ames has grown into a respectable 20,000 acre operation, in 2 locations. Sales come from bulls, embryos, females, and meat. What's unique is it's a destination venue for weddings and corporate events.

Mitch Rohr, chief operating officer, started the tour for us at the sale/show facility, housed on the ranch's original 450 acres. Cattle are brought to this part of the ranch and held until sales or private treaties. A few cows fall-calve there as well. They are cleaned, clipped, and very well-fed to show positive images of animal agriculture. Sale pens are irrigated and nicely mowed. The sale barn can accommodate seating for a couple hundred potential buyers. These buyers are well cared for prior to and during sales. These sales occur only a handful times a year. To fully utilize the facility, the ranch opens up for corporate events. The day I visited, they were preparing for a group of accountants who were in Denver for a convention. Attendees are usually bused the hour-drive from Denver, close enough to the city yet far enough away to get a taste of ranch life. For many of the visitors, this is the first time they step foot on any type of farm. The goal of Mitch and crew is to make the visit a positive experience.

Also located on this site is a wedding and reception area. A barn was converted to a guest house where the bride and bridesmaids wait. The groom and groomsmen wait in the 'sports room' – big screen tv, couches and a bar. Weddings are hosted through the warmer months from Thursday through Sunday, sometimes two weddings a day. Brides are the most interested in holding their weddings on the ranch, and want pictures out in the pastures. The fee of $10,000 covers the use of the facility for 4 hours and a bridal party shuttle for photos around the ranch. The parties have a choice of 4 area caterers that are acceptable to the ranch, which has to do with which ones purchase beef from the ranch. They certainly don't want poor quality beef at an event there.

We did not make it to the larger portion of the ranch, about 20 minutes away. This 16,000 acre parcel is home to about 500 cow-calf pairs. Colorado has been in a drought for 3 years, and this has impacted their grazing planning. Under normal conditions a cow-calf pair requires 28 acres for grazing. That number is now 42 acres. They have had to cull some cows, as well as neighboring ranches. This has impacted their bull sales; fewer cows means less bulls needed since most bulls are sold within a 250-mile radius. Their bull sales in normal years are 150.

Since the ranch has an elevation of 7200 ft, all bulls are tested for Brisket Disease. The Pulmonary Arterial Pressure (PAP) test provides an indicator of the animal's resistance to Brisket Disease. As described in the Valles Caldera 2009 Livestock Grazing Report, Brisket Disease, also known as High Mountain Disease or Pulmonary Hypertension, is one of the Rocky Mountain region's most costly diseases. It generally affects animals less than one year of age residing at an elevation above 5000 feet and is caused primarily by an oxygen shortage; oxygen

availability reduces considerably at higher elevations causing increased resistance to blood flow in small arteries in the lungs. The heart compensates for higher resistance by stretching and building up a higher pressure. The pressure can continue to build up until fluids leak out of the blood stream and collect in the chest cavity, the brisket, and other places. Eventually, the heart wears out and stops beating. Susceptibility or resistance to Brisket Disease is an inheritable trait. The goal of this program was to identify bulls with the greatest resistance to Brisket and promote that genetic trait, adding value to the animal and reducing the incidence of the disease.

The visit was cut short by wildfires in the area, and Mitch got a call from his son to head home to move cattle. He passed the tour over to Andrew Maupin, Cattle Sales Manager and he quickly finished the tour. By the end of the day Mitch's own small ranch was under a mandatory evacuation order. His family raises 4-H cattle and cares for the ranch's sick animals. They had cattle to move. Mitch recently emailed me that the fire came within 2.5 miles of his home. Many people lost their homes and belongings.

On a Farm Near You...

Muranda Cheese Company - Looking to the Future with Value-Added Products

By: Libby Gaige

Milking cows and working hard isn't always enough to be profitable these days, and an increasing number of dairy farmers are looking to value-added products as a way to increase profitability as well as make room for the next generation on the farm. Cheese is the value added product of choice at Muranda Holsteins.

In 1991 Tom and Nancy Murray bought a small farm with 150 acres in Waterloo, NY. They milked 90 cows, slowly transitioning from grade animals to a registered herd. By 2003, the herd's genetic value was so high that they had a milking herd dispersal. In the down time that they had until they began milking a full herd again, Tom began researching what it would take to develop and sell a value-added product. On July 4th, 2007, they made their first batch of cheese and Muranda Cheese Company was born.

So what does it take to go from selling milk to selling cheese? You might think that it would be much less work, but that's not how the Murrays operate. The on-farm tasting room is open 7 days a week from 10am to 5pm, but the OPEN flag on the farm sign never comes down. If people take the time to drive to the farm, Tom thinks that making them feel welcome is the least he can do. While 60% of cheese sales are made right on the farm, retail continues to grow. Muranda Cheese Company sells cheese to a number of wineries, restaurants, and bed and breakfasts across the Finger Lakes region.

The aging room at Muranda cheese.

Tom places a high priority on the personal connection allowed by doing all the company's marketing. By delivering cheese to all the locations where it's sold, he's able to develop a personal relationship with each and every customer. This is certainly good for business, as most of their customers learn about them through word of mouth.

The open sign never comes down at Muranda Cheese Company.

While they considered producing cheese on the farm, they decided to hire a proprietary cheese maker. They currently use three different cheese makers, and while the milk is shipped to the cheese maker to be processed, the cheese comes back to the farm to be aged, cut, and packaged. They recently added two more aging rooms, doubling their capacity. That's certainly a good thing, as they currently have trouble keeping all 15 cheese varieties in stock!

It's a Family Thing. Tom and Nancy's son Blane, a 2010 graduate of Cornell University, came back to the farm after spending his post - graduation summer learning to ultrasound cows on a dairy in Colorado. He now manages the dairy, which allows Tom time to take care of the cheese side of the business. "I probably wouldn't be here without the cheese business," Blane commented. Renting their land and buying back forages hasn't been the most profitable business model with high feed prices over the last few years, but cheese has made it profitable. They currently have two part-time employees helping Blane with the cows. Tom has eight part timers helping in the tasting room and with special events, including his wife Nancy and Blane's fiancée Mary Clark. Mary, who is employed full time off the farm as a dairy nutritionist, also does the nutrition for the herd.

Mary offers a cheese tasting to customers.

Always open to the public. While most farms have visitors only on occasion, it's a daily occurrence at Muranda Holsteins. The day that I stopped by, a Friday afternoon in late June, 130 people had already dropped in to taste or purchase cheese! They average about 50 visitors per weekday and more than 200 per day on the weekend. As the tasting room parking lot is right next to the tiestall, Blane eventually had to put up a rope to keep people from wandering in. He's happy to offer tours when he's not busy, but certainly doesn't want people to wander around unguided.

Blane and Mary bring fresh ideas to the business about how to reach out to the public. They're active on Facebook, Twitter and Vine, and recently organized a Dairy Day celebration in conjunction with the Finger Lakes Cheese Trail, complete with farm tours, educational displays and a chance to get pictures taken with the cows. This group of nine cheese producers organizes events throughout the year to highlight their products and the dairy industry.

Has this article got you craving cheese? Visit Muranda Cheese Company at 3075 State Route 96 South, Waterloo, NY 13165. Order cheese and view upcoming events at their website: http://murandacheese.com/.

Blane & Mary bring fresh ideas to the business.

Does Precision Dairy Technology Have a Place on Your Dairy Farm?

By: Beth Dahl, WNY Dairy Modernization Specialist

What comes to mind when you think of dairy farms of the future? If you picture drones milking cows and monitoring crops, automated feeding of your herd and self-guided harvest equipment, you may not be far off.

Farms across the country are utilizing GPS guidance for crop equipment- improving yields and maximizing inputs and acreage- but the technology doesn't stop at the fields. Recent advancements have made it possible for dairy owners to improve efficiency in the barn as well, bringing more and better information to their fingertips, and improving how cattle management decisions are made. Farms of every size are implementing robotic milking, automatic and precision feeding, activity and rumination monitors, and a variety of other technologies helping to reduce costs, increase production, and improve quality of life for owner and animal.

The cost of investing in precision dairy tools is often steep. However, the potential to greatly improve profitability exists as well. If any of these tools are of interest to you, there are key considerations as you start to determine if these technologies have a place on your farm.

Will the technology in question:

- replace poorly performing/outdating equipment?
- save time, reduce labor, lower feed cost or other expenses?
- increase milk production/improve milk quality?
- allow you to grow as part of a larger expansion project?

A partial budget is a valuable tool for estimating the potential economic impact of adopting precision farming technologies. Analyzing the expected increase or decrease in expenses against the increase or decrease in revenue for a small piece of your farm business, helps to determine if the proposed change is economically beneficial. It is important to keep in mind that a partial budget can only predict estimated, not guaranteed, outcomes! Cornell Cooperative Extension offers resources and support to aid in analyzing such decisions.

The adoption of precision dairy technologies offers a host of potential benefits, with many users enjoying improved reproductive performance, reduced hired labor, earlier detection of disease and injury, and an abundance of milk and animal performance data, sent directly to their computer. This information can maximize the time of key people and assist even the largest herd in better managing the individual cow. There are tradeoffs for these benefits however; investment cost is frequently high, and users experience a learning curve as they adapt to new systems. Early adopters run the risk of new or better products becoming available as well. Even so, the potential to improve cow performance and herd profitability are attracting farms of all sizes to consider precision dairying technologies.

Cover Crop Options Following Small Grains

By: Mike Stanyard

Winter wheat and oat harvest should be just about wrapped up. That leaves a lot of open ground out there to plant some cover crops. Some farms may have already put some acres in the last week of July. The past couple of years have shown us that the first half of August has been the optimal planting window for success. Even if it's dry, get it in the ground. The rain will come.

There are a lot of options when it comes to choosing a cover crop species. You have to ask yourself, "What do you want to accomplish." The Nutrient Management Spear Program at Cornell recently put out a survey regarding cover crop usage to NY producers. Those who were already using cover crops were asked for their top reasons. The five top answers were: Soil Conservation, Increase Organic Matter, Trap Crop for Nitrogen, Comply with Conservation Payments, and Weed Control. Another thing to consider is cost (See table below). Do you want a species that winterkills or overwinters? Is compaction an issue? Do I need some extra forage?

	Drilled	Broadcast	Price/lb.	Winterkill?
Annual Rye Grass	10-20 lbs	20-30 lbs	$1.00/lb	N
Sorghum-Sudangrass	30-40 lbs	30-40 lbs	$1.12/lb	Y
Crimson Clover	12 lbs.	20 lbs.	$2.25/lb.	N
White Clover	5-9 lbs.	7-12 lbs.	$3.96/lb.	N
Red Clover	7 lbs.	10 lbs.	$2.52/lb.	N
Field Peas / Austrian Winter Peas	120/50 lbs.	140/60 lbs.	$.65/.89/lb	Y/N
Hairy Vetch	15 -20 lbs.	25-30 lbs.	$2.78/lb.	N
Forage Radishes	8-10 lbs.	12 lbs.	$3.30/lb.	Y
Forage Turnips	4-7 lbs.	10-12 lbs.	$4.50/lb.	N
Oats (Spring or Forage)	80-110 lbs.	110-140 lbs.	$.46/lb.	Y
Triticale	80 lbs.	110 lbs.	$.70/lb.	N
Wheat	70 lbs.	100 lbs.	$.36/lb.	N
Winter Cereal Rye	60 lbs.	85 lbs.	$.39/lb.	N

We have seen cover crops planted with many different drills, airflowed, and broadcast. I have personally not seen an airplane used but I know it is done! All can be successful; however proper calibration can be tedious and frustrating. Most planters do not have

Cover Crop Species/Rates

1	Tillage Radish (8 lbs.)		
2	Tillage Radish (4 lbs.) +	Forage Oats (1 bu=32lbs.)	
3	Tillage Radish (4 lbs.) +	Clover (10 lbs.)	
4	Tillage Radish (4 lbs.) +	Peas (30 lbs.)	
5	Tillage Radish (2 lbs.) +	Forage Oats (32lbs.) +	Peas (30 lbs.)
6	Forage Oats (64lbs.)		
7	Forage Oats (50 lbs.) +	Peas (50 lbs.)	
8	Forage Oats (32lbs.) +	Clover (10 lbs.)	
9	Clover (12 lbs.)		

settings for some of these non-traditional plants. Take the time to work it out! You do not want to waste your time by putting on too little and you do not want to waste money by putting on way too much. Included is a list of cover crop treatments, combinations and rates that we have had success with the past three years.

Forage radishes need some nitrogen applied at planting (30-50 lbs.) or they will stunt, yellow and not get to full size. Volunteer wheat will also steal available N! A history of manure application will help. Clover and peas planted in the same plot will provide some N to the radish.

We need to look a little closer at the practice of planting radishes by themselves. We know they do a great job of loosening up the soil. However, there is some concern that we may not get the nitrogen back that we put into them. Radishes degrade very quickly in the early spring. Is the N gone by the time the corn is ready for it? It might be more beneficial to plant an overwintering species with the radish to pick up that N and keep it around longer so the corn can utilize it. Sounds like a good research project for next spring.

Cooperative Extension Association of Livingston
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Save the Date...

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1-4 ***Monroe County Fair***, Northampton Park, Hubbell Rd. (near ski hill & lodge) Ogden

1-4 ***Niagara County Fair,*** 4487 Lake Avenue, Lockport, Contact: 716.433.8839

6 ***Small Scale Anaerobic Digester Workshop,*** 10:00 a.m. - 2:30 p.m., Benton Fire Hall, 932 State Route 14A, Penn Yan. Registration: 315.536.5123

10-17 ***Wyoming County Fair***, 70 Main Street, Pike, Contact: 585.493.5626

12-17 ***Wayne County Fair***, 250 W. Jackson Street, Palmyra, Contact: 315.597.5372

13 ***NY Corn & Soybean Summer Crop Tour***, Du Mond Farm, Union Springs, NY

20-21 ***Bovine Reproduction & A.I. Course***, CCE - Wyoming Co., 401 N. Main St., Warsaw. Registration: 585.786.2251 x132