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North West New York

Dairy, Livestock & Field Crops



NORTHWEST NEW YORK DAIRY, LIVESTOCK & FIELD CROPS TEAM

## A Few Words From Our New Team Member

By: Bill Verbeten

Greetings! My name is Bill Verbeten and I have recently joined the NWNY Dairy, Livestock, and Field Crops team based out of Lockport, NY in Niagara County. I will

be developing outreach programs focused on forage production and nutrient management in my new role as a Regional Field Crops Support Specialist. Growing up on a dairy and beef farm in northwest Wisconsin gave me a passion for farming and a strong desire to learn. After I for left the farm college I had a wide

variety of experiences in and out of the classroom working within agriculture. As an undergrad at the University of Wisconsin I worked with many of the agronomy faculty in field, greenhouse, and lab settings during the school year. During the summers I worked as a camp counselor for the Wisconsin Farmers Union, as an intern for a dairy and beef rotational grazing research project, and as a crop scout for an independent crop consulting firm on 50,000 acres of dairy and cash grain land in northeastern Wisconsin. I earned Bachelor's degree а in Agronomy in 2009 and then I decided to pursue a career in Extension. During my graduate work I had numerous

opportunities to interact with farmers at field days, meetings, and through an online blog. After completing my research on incorporating high quality grasses into dairy rations and evaluating grass seeding rates with



alfalfa I earned a joint Master's degree in Agronomy and Dairy Science in 2012 from University the of Wisconsin. I have had the privilege to work with a wide range philosophies farming and practices and I look forward to learning the needs of the farmers in northwestern New York. I can be reached

at my email at wdv6@cornell.edu or on my cell at (585) 313-4457.

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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.

AG FOCUS NOVEMBER 2012 WWW.NWNYTEAM.ORG

# Joan Petzen Receives National Award

#### By: Jerry Bertoldo & Lisa Kempisty

A belated congratulations to Joan Petzen, NWNY Team Farm Business Management specialist and Agriculture Program Leader of Wyoming County CCE, on her recent recognition at the National Association of County Agricultural Agents Annual Meeting and Professional Improvement Conference held in Charleston, SC this July. NACAA is the nationwide, professional organization of extension educators dedicated to both the professional improvement and personal growth of its members.

Joan received the 2012 NACAA Agricultural Appreciation Award which Awareness and recognizes extension educators for their efforts to teach the public about agriculture. Joan was honored with a certificate and cash award at the luncheon where she made a superb presentation on her winning project. She was recognized for her leadership in organizing and implementing the Wyoming County Agri-Palooza launched in 2011 to address the need for local public education about agriculture. As co-chair of the Agri-Palooza, Joan worked with various Wyoming County agencies including the Chamber of Commerce, Farm Bureau, Farmland Protection Board, and Soil and Water Conservation District. Joan helped coordinate some 150 volunteers who provided farm tours, children's discovery activities, good food and fun to over 2,000





Joan receives her award from NYS Ag Agents President Audrey Reith in Charleston, SC

visitors to VanSlyke's Dairy Farm in 2011. In 2012 Agri-Palooza was again a success with over 2,800 attendees hosted at the Sondericker's Friendly Acres this past summer.

Agri-Palooza is just one example of Joan Petzen's tireless efforts to advance and promote agriculture in western New York and her commitment to community involvement that is so much part of her life.



# Practical ways to decrease Somatic Cell Count

By: Jackson Wright

The recent construction of two yogurt plants in western New York will likely result in increased demands for high quality milk in western New York. Many factors can affect milk quality, however main-

taining a low SCC may be the most important. This is because many consumers associate mastitis with inadequate animal welfare and milk with a high SCC affects taste and may limit future export markets. Moreover, cows with a high SCC can reduce milk quality premiums and are likely to lose milk production over the course of lactation.

Milk production is a function of mammary epithelial cell number and activity. In other words, the more actively producing mammary epithelial cells the more milk produced. When a cow gets mastitis, organisms invade the quarter stimulating an immune response. This process results in damage to the milk producing cells within the gland. Moreover, somatic cells are not exclusively white blood cells. Soma is latin for "body" and somatic refers to "of the body", meaning that somatic cells are cells of the body and actually consists of multiple cell types; including white blood cells, cells lining the milk ducts, and milk producing mammary epithelial cells. As the infection gets resolved the damaged milk producing cells in the udder get replaced with scar tissue, decreasing the milk production potential of the infected quarter. Put simply, as SCC increases milk production decreases (See Figure 1).

Linear Score	SCC (cells/ml)	Production Lost Per Lactation (lbs)
2	50,000	0
3	100,000	400
4	200,000	800
5	400,000	1,200
6	800,000	1,600
7	1,600,000	2,000
8<	3,200,000	2,400<

The question then becomes how can we practically decrease SCC? Many times the answer lies in the

milking routine. Briefly, udder preparation needs to be firm but not harsh. Using the calf as an example, a calf will suck and head-butt the udder until milk is letdown. This cow/calf interaction causes the release of oxytocin into the blood stream. Once oxytocin reaches the mammary gland it acts on the myoepithe-

lial cells to initiate milk letdown. This entire process takes approximately 60-90 seconds. Therefore proper udder preparation should consistently clean and dry the teats while timing attachment of the milking unit with peak oxytocin release. If the milking routine is painful, adrenaline may be released

which can counteract oxytocin and prevent milk letdown. Finally, post dipping should ensure complete coverage of the teat. Adequate post-dipping should result in excessive post-dip pooling near the teat end orifice, providing a barrier to entry until the teat sphincter can close.

Often breakdowns occur when the milking unit is attached to dirty or moist teats. Many times this is the result of milking personnel using dirty gloves between cows. Consider this: the recommendation for milking personnel to use latex gloves stems from the fact that bacteria are present on our skin. Using gloves makes it harder for bacteria to "stick". However, if gloves become contaminated with manure they too harbor pathogens. This creates a dilemma because a consistent milking routine can be difficult to maintain if milking personnel are constantly changing gloves. One way to address this issue is to mix rubbing alcohol with water at a 70:30 ratio of rubbing alcohol to water, in a standard spray bottle. This can be used as an effective hand-sanitizer, disinfecting latex gloves that otherwise should be changed. Since this is an alcohol based mixture, this quickly evaporates, making it a practical way for milking personnel to clean their gloves during milking. Similarly, because this can be performed quickly milkers can maintain a consistent milking routine while improving hygiene. This can provide additional incentives for milk quality premiums and improved milk production throughout lactation.



Cornell University Cooperative Extension



## **The Academy for Dairy Executives** *Developing Management and Leadership Skills*

Come to the Academy for Dairy Executives to develop the necessary leadership and business management skills to lead your dairy business into the future!

Topics to be covered will include:

- Economic Decision Making
- Risk Management
- Partial & Whole Farm Budgeting
- Mission & Vision
- Communication



Participants will attend three sessions in 2013:

January 22-23, 2013 Country Inn & Suites, 130 N. Main Street Mt. Morris, NY

#### March 12-13, 2013 Beaver Hollow Resort & Conference Center 1083 Pit Road Java Center, NY

**November 19-20, 2013** The Inn on the Lake, 770 South Main Street Canandaigua, NY

For more information contact Joan Petzen: (Email: jsp10@cornell.edu, Office Phone: 585-786-2251 x122, Cell Phone: 716-378-5267) or visit our website: **www.ansci.cornell.edu/prodairy/academy**.



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# Maintaining Stored Grain Quality over the Winter

By: Mike Stanyard

Despite another dry year, it looks like a better harvest than expected for NY producers. Grain storage is an important step in protecting your investment and lots of money can be lost in reduced quality when it's time to deliver. Longer term storage has become an important part of the marketing strategy particularly as current grain prices are at an all time high. As a result, chemical and cultural management of yield robbing pests becomes even more important.

I have talked about the importance of chemical and cultural control of insect pests prior to harvest in the past but temperature and aeration are also a crucial pest management tool. Dry grain should be cooled to less than 60 degrees F as soon as possible after harvest, and to 20 - 30 degrees F for winter storage.

#### Temperature benchmarks for stored grain:

- 80°F: The ideal temperature for insect and mold growth.
- 70°F: Insect reproduction begins to decrease.
- 50°F: Insects become dormant below this temperature.
- 40°F: Mold growth prohibited below this temperature.

20-30°F: Grain should be cooled to this range for winter storage.

Stored grain should be cooled by aeration whenever the grain temperature exceeds the average outdoor temperature by 10 to 15 degrees. Expect storage time to approximately double with each 10 degree reduction in temperature. Grain should be cooled to about 25 degrees as outdoor temperatures get colder. Check the condition of stored grain about every two weeks while grain is cooling, then about monthly after grain has cooled for winter storage.

When the fans are off during the winter holding period, they should be covered (with canvas or plywood) to prevent the grain near the ducts from getting too cold during severe winter weather. Large temperature differences result in condensation in the cold grain. Spoiled grain over the aeration ducts or perforated floor is a common problem caused by not covering the fan during extended off periods. Also



look for melting snow on the roof of the bin as a telltale sign of temperature problems.

Accumulation of fine particles, weed seeds, and other foreign material interferes with airflow. Such accumulations are prime locations for increased mold and insect activity, which result in localized heating and grain deterioration. Normally, these fines collect in the center of the bin as the grain flows toward the walls.

Several good management practices can reduce the storage risks incurred through accumulation of foreign material. Screening the grain reduces the amount of foreign material and greatly improves long-term storability. Spreaders are used to more uniformly distribute fines throughout the bin and helps provide more uniform airflow during aeration.

A common practice in bins equipped with center unloading hoppers is to unload some grain from the center "core" to remove some accumulated fines. Fill the bin so it is peaked and unload some of the grain (300 to 1,000 bu, depending on bin size). This removes some of the accumulation and increases airflow in the center if enough grain is unloaded to allow the center core to fill with clean grain.

References: "Management of Stored Grain with Aeration", University of Minnesota, http://www.extension.umn.edu/distribution/cropsystems/DC1327.html.

## On a Farm Near You...

## Schrader Farms Meat Market

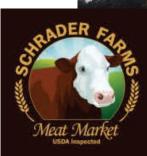
#### By: Nancy Glazier

Just one year ago, Keith Schrader and JR Westervelt

began the planning procedure for a processing facility. The Schraders saw a need for a need for a USDA facility for their livestock processing and their neighbors. USDA processing of meat allows for retail sales of single cuts of meat. Keith turned to JR, an experienced meat cutter. The two put their heads together and by March were breaking ground for their USDA market in Rom-

ulus, Seneca County. They opened their doors August 23, 2012.

Record time for a USDA plant? Not really, Keith says. All the elements came together nicely. Keith already owned the property, and critical pieces were nearby public water and sewer. The market is just a short distance off Rt. 96 in Romulus. Their USDA inspector was helpful in advising them how to get the job done. To help with the process, Keith worked with a consultant to write the Hazardous Analysis and Critical Control Points (HACCP) plan. The plan outlines critical areas where meat needs extra care to stay "clean". An example of a critical point is hide removal; it is essential to keep the carcass clean from any dirt and manure. A crucial piece to the puzzle was the fact that JR was a trained meat cutter and now plant manager. Keith admitted the occupation is a dying breed. Some of the Schrader family members involved with the market have gone through the Penn



State HACCP training short course.

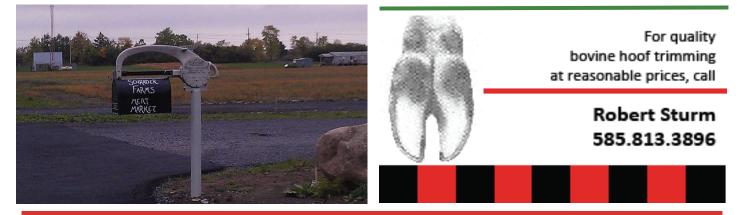
The Schraders had the shell of their structure built and did the rest themselves. What helped keep the costs down was purchasing used equipment from a

facility that closed. Stainless steel is expensive. The rail system was the most beneficial since that piece was a costly component. The goal of the meat market is to slaughter 25 head of cattle a week and 15 hogs, plus some sheep and goats. They are not at capacity yet. They have been busy processing meat for other producers. They have a retail sales room and sell frozen cuts of beef and pork. They will soon have a cooler for fresh cuts.

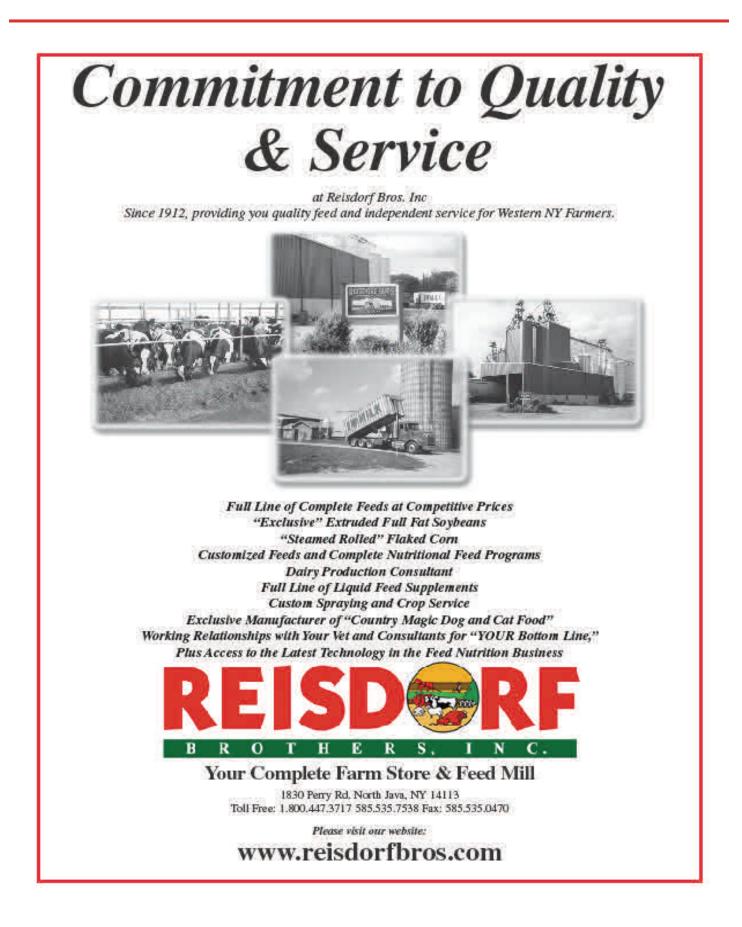
Keith has a renderer come twice a week and pick up offal. As processing numbers increase, pickup may be increased.

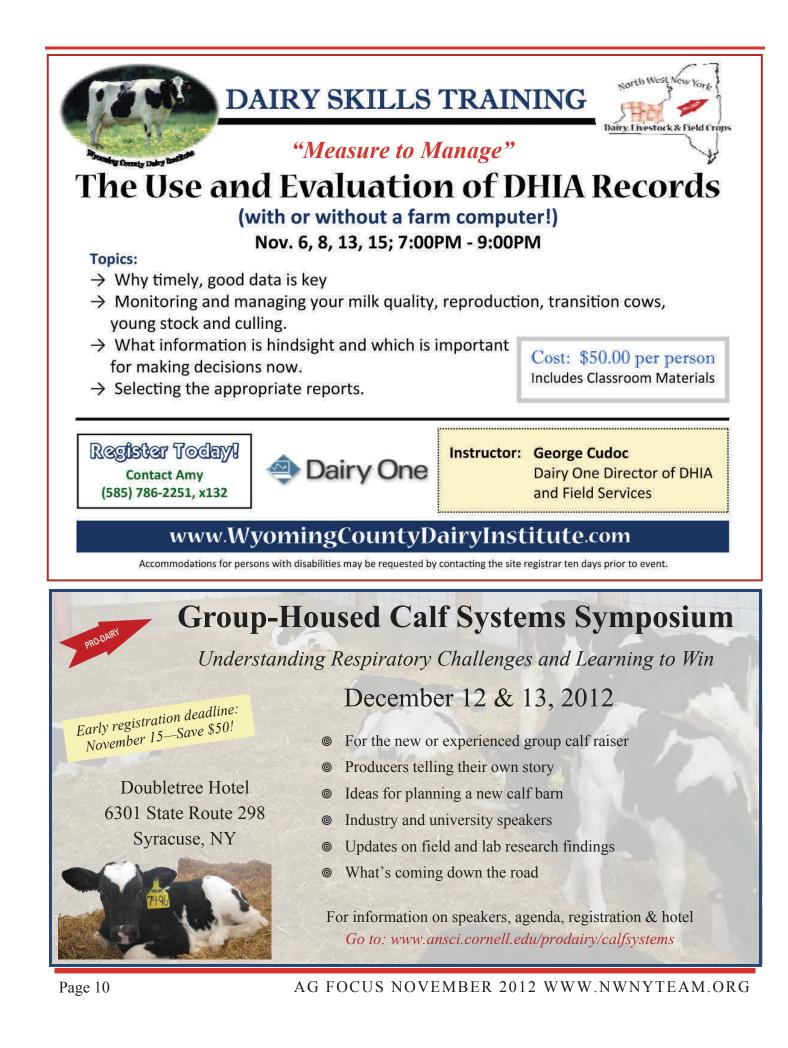
I've heard quite a bit of interest in the new facility. I'd like to get a tour together to visit. It would be an evening or Saturday afternoon. If interested, let me know!

Nancy Glazier: nig3@cornell.edu or my cell: 585.315.7746









# Dairy Skills Training Keeps Rolling On

The continuing practical training of dairy farm personnel continued in September with 25 participants taking part in the "Hoof Health and Lameness" module. The team continued its collaboration with the Wyoming County Dairy Institute led by Bill Maddison. Although not a new offering, this module was notable for the number of partners involved with teaching and the degree of practical information presented. The Cornell Vet School, NYSCHAP program, Zinpro Corporation, Agro-Chem and the Hoof Trimmers Association joined with NWNY team members in this 15 hour program.

Next on the list is a four evening look at dairy records, "Measure to Manage" – The Use and Evaluation of DHIA Records (see facing page for details). We are pleased to have the very busy and talented George Cudoc and Wayne Saxton of DHIA as our instructors for this module. This module is designed for farms not using computer based records programs, but will be quite useful for anyone using DHIA generated reports or those from your own computer. For those not on test, you will be able to see how records are the basis for sound economic decisions. To manage something you have to be able to monitor changes and monitoring means collecting and recording good information on things that you can measure.



## Coming in 2013...

*QuickBooks for Dairies*: January 7-11, *Calf Management*: February 5,7,12, 14 & 16 *Nutrient Management*: March 5,7,12, 14 & 16

For more information or to register for these courses please contact Wyoming Co. Dairy Institute:

585.786.2251 or visit www.WyomingCounty DairyInstitute.com





## Annual Farm Business Summary and Analysis Season is Right Around the Corner

#### By: John Hanchar

R isk management continues to be a common challenge faced by farm business owners, and a prominent element in agricultural policy development and debate. Risk management tools and their availability continue to receive emphasis.

#### <u>Summary</u>

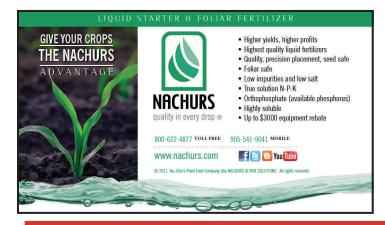
- Sound financial planning and control are keys to successfully managing agricultural risks.
- The next few months present good opportunities to evaluate your business' financial management practices.
- The NWNY Dairy, Livestock, and Field Crops Program has the capacity to work with a variety of producers as they seek to improve their business' financial management practices.

#### <u>Risk</u>

Risk is variability in outcomes. Agricultural risks relate to production, market, legal, human resources, and financial aspects of the business. For farm businesses, production, prices (both output and input), and financial outcomes, among others vary. Results are not known with certainty. The ability to meet cash obligations in a timely manner, the ability to generate profits, and other financial outcomes are not known with certainty -- they vary over time.

#### <u>Sound Financial Planning and Control are Keys</u> to Successfully Managing Risks

An overall strategy for successfully managing finan-



cial risk includes sound financial planning and control.

Financial planning is using financial information to answer the following questions.

- 1. Where is the business now?
- 2. Where do you want it to be?
- 3. How will you get the business to where you want it to be?

Financial planning practices include

- generating financial statements (balance sheet, cash flow statement, and income statement)
- using results to identify strengths and weaknesses
- developing projections, including those associated with proposed changes to the farm business.

Financial control involves measuring financial condition and performance over time to determine whether or not the business is achieving desired results, and if not asking, "Why not?" to identify and implement needed changes.

As the end of the year draws near, the next few months present good opportunities to examine your business' financial management practices. As a farm business owner, you have financial objectives and goals, written hopefully, or unwritten. These direct your efforts. Do you measure the financial condition of your farm business using the balance sheet? Do you measure financial performance using the cash flow statement and income statement? If you don't measure financial management factors, then how do you expect to successfully manage the business toward achieving desired financial results?

The statement "If you can't, or don't measure it, then you can't manage it" with its emphasis on measuring outcomes underlies the value and need for sound financial management, especially as it relates to successfully managing risks.

#### **Business Summary and Analysis Tools**

#### Cornell University Cooperative Extension's Dairy Farm Business Summary (DFBS) Program

- The objective of the DFBS Program is to allow producers to analyze their production and financial situation, set future goals, and make sound financial decisions.
- The DFBS also allows producers to compare their business performance to that of other dairy producers.
- The summary and analysis for each farm includes profitability analysis, balance sheet analysis, analyses of annual cash flows and repayment ability, capital and labor efficiency as well as analyses of the cropping and dairy aspects of the business.

The DFBS program is a preferred financial management tool for summary and analysis for dairy farm businesses of all kinds.

#### Financial Statements for Agriculture (FISA) Program

- FISA is a computer based spreadsheet program that can be used by all types of farm businesses to achieve an objective similar to the one above for the DFBS Program.
- In practice, FISA's ability to provide for peer to peer comparisons is limited.
- The summary and analysis for each farm includes profitability analysis, balance sheet analysis, analyses of annual cash flows and repayment ability, as well as some capital efficiency measures and analysis. The program does not summarize and analyze production aspects of the business.

#### Farm Business Summary and Analysis with the NWNY Dairy, Livestock, and Field Crops Program

If you are interested in improving your farm business' ability to practice sound financial management, then please contact me to learn more about some of the tools available and their value and/ or to discuss plans for completing a farm business summary and analysis for 2012. Owners of all types of farm businesses are encouraged to contact me. The NWNY Dairy, Livestock, and Field Crops Program has the capacity, using the above tools, to develop valuable farm business summary and analysis. The NWNY team has the capacity and desire to work with a variety of farm businesses -dairy (small, medium, and large; conventional; organic; grazing; and others), field crop, livestock, and others.

John Hanchar, jjh6@cornell.edu, (585) 233-9249.

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# Agri*cultura*

By: Libby Gaige

#### Queso in Guatemala

o you know where your Hispanic employees are from? The majority of Hispanic employees that I've met in Western New York come from Mexico, though I've also come across a number from Guatemala. Regardless of their nationality, most are from rural areas, and many grew up with animals; possibly cows, horses, pigs or goats, but almost certainly chickens. (It's quite difficult to escape the crackly wakeup call of a rooster in Guatemala, even in urban areas!) Despite the fact that many worked with cows in their home countries, most come to New York having had no experience with modern dairying. Did you ever stop to think what the dairy industry is like where they come from? While I can't speak to Mexico, I can speak from personal experience about Guatemala.

During my service as a Peace Corps volunteer, I lived in a village located in a mountainous region of eastern Guatemala. The cool climate makes it a much more suitable environment for dairy cows than the hot, humid climates at lower elevations, so many families have a few cows. My host family milked their herd of 10 cows once a day by hand and sold most of the milk to a local cheese maker. The cheese maker owns a small building in the village where dairymen bring their milk by truck or horse every morning. He makes cheese daily and sells it in the larger towns within about an hour's radius from the village. The whey left over after making cheese is given to local women who feed it to pigs they raise to sell for meat.

Since Central America has two seasons (6 months of rain and 6 months without rain) and farmers rely primarily on pasture to feed their cows, milk production is very seasonal. Therefore farmers don't get paid much during the green, grassy, rainy season, but get paid handsomely if they have cows producing milk during the dry season. Some farmers have small stationary choppers they use to process the dry corn stalks left over from the grain harvest (corn is a sta-

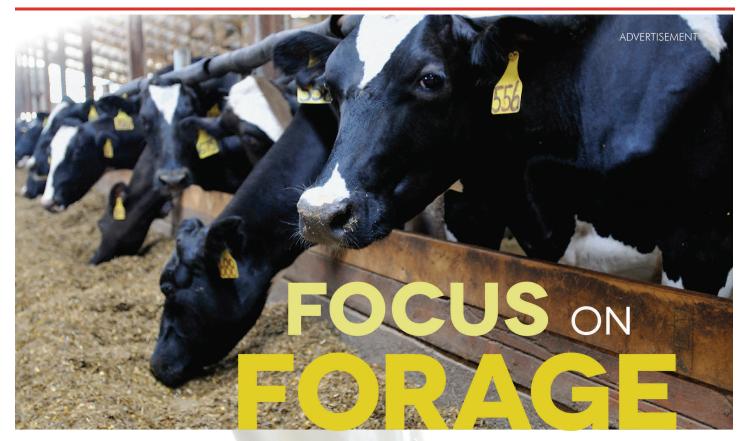


One pound blocks of cheese are formed by pressing it into wooden molds.

ple in the Guatemalan human diet). A few actually plant corn to make silage.

I enjoyed my host mom's fresh cheese for months before she taught me how to make a traditional queso fresco. The milk is strained, and then heated (if not still warm from the cow). Rennet is added and the milk is left at room temperature for three to six hours, until it solidifies. Then it's strained through a cheese cloth, salted, kneaded, and pressed into forms that make a one pound block of cheese. After about an hour the cheese will hold its form and can be removed from the mold and eaten. A one pound block of cheese sells for about 12 Quetzals (roughly \$1.50). Alternately, the cheese can be left to cure for a few months to produce an aged cheese, or the whey can be boiled to produce *requeson*, which is similar to ricotta cheese. An interesting bit of local lore: pregnant women can't make cheese because the milk won't curdle.

When was the last time any of you milked a cow out by hand? My host family was shocked when I told them that I had only ever milked a cow with a machine. (They remedied that situation pretty quickly.) As can be expected from the production system I've described, cows in Guatemala don't make much milk. But I suspect that fifteen or twenty pounds a day looks a lot better than 85 when you milk by hand!



Whith the widespread drought across much of the Eastern and Midwestern parts of the United States, forage quality and quantity are going to be a concern for 2012 and 2013. Corn yields for silage are predicted to be low, with small and reduced numbers of ears. Maximizing milk production with low starch corn silage will be a matter of maximizing fiber digestion in the rumen and getting the most out of your forage.

The rumen is a large fermentation vat (40 to 60 gallons in a mature dairy cow) that contains microbial populations of bacteria, protozoa and fungi. These microbes produce enzymes that digest fiber, starch, and protein into glucose and ammonia to fulfill a majority of the cow's requirements for energy and protein. The main fuel source for these rumen microbes is fiber from forage, and maximizing microbial activity will maximize forage utilization.

In order to function, rumen microbes require protein and energy. Not only do the microbes require a sufficient amount of protein and energy, they require a consistent supply of these nutrients to power them throughout the day. A typical dairy ration will provide the microbes with energy in the form of quickly degraded starch and more slowly degraded fiber to provide a complete profile of energy sources. To match the supply of energy, you need a protein source that will supply nitrogen to the rumen microbes at a consistent rate.

Optigen<sup>®</sup> is a slow-release nitrogen source that meets the nitrogen needs of the microbes without over- or undersupplying nitrogen. It is critical to give the microbes the nutrients they need to maximize forage digestion. Shorting the rumen of nitrogen will result in more undigested feed leaving the rumen and ending up in the manure.

Another way to assist fiber digestion is to supplement the microbe's natural enzymes with an enzyme source in the feed to increase the rate of fiber digestion as well as the amount of fiber digested in the rumen. Fibrozyme<sup>™</sup> is a fiber degrading enzyme that works especially well with corn silage, even when it is poor quality. By increasing the rate of digestion, we can effectively improve the quality of forage that has been drought stressed by getting more energy out of the fiber.

Both of these technologies, Optigen<sup>®</sup> and Fibrozyme<sup>™</sup>, not only maximize rumen function and forage utilization, but can give farmers flexibility in ration formulation. With limited supplies and high cost of both forages and corn grain, we can include more underused and undervalued feedstuffs. Feeds like citrus pulp, distillers grain, and wheat midds, which are typically fed at low levels in the ration, can be used to replace a portion of forage and grains. We can get more out of these by-product feeds by ensuring the rumen microbes have the nutrients to perform at their best and supplementing their natural enzymes.

The Alltech Dairy Advantage program is the natural way to improve your dairy herd health and performance while increasing your profitability. To learn how the Alltech Dairy Advantage program can help you, please contact your local Alltech representative or email dairy@alltech.com.



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# Save the Date...

### December, 2012

- 12 Field Crop Dealer Meeting, 1:00—5:00 p.m., Genesee Grande, 1060 East Genesee St., Syracuse. Cost: \$15, credits pending. Please pre-register for the meeting online at: http://nysaba.com/meeting\_registration Contact: Mary McKellar 607.255.2177
- 12-13 Group-Housed Calf Systems Symposium, Doubletree Hotel, 6301 State Route 298, Syracuse. For more information go to: www.ansci.cornell.edu/prodairy/calfsystems

# Save the Date for 2013...

## January, 2013

- 16 WNY Corn Congress, 9:00 a.m.—3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia. DEC credits pending. For more information contact: Cathy Wallace 585.343.3040 x138 or cfw6@cornell.edu
- 17 Finger Lakes Corn Congress, 9:00 a.m.—3:00 p.m., Holiday Inn, 2468 NYS Route 414 Waterloo. DEC credits pending. For more information contact: Cathy Wallace 585.343.3040 x138 or cfw6@cornell.edu
- 22-23 Academy for Dairy Executives, Country Inn & Suites, 130 N. Main St. Mt. Morris. For more information contact: Joan Petzen 585.786.2251 x122 or jsp10@cornell.edu

## February 2013

- 6 WNY Soybean/Small Grains Congress, 9:00 a.m.—3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia. DEC credits pending. For more information contact: Cathy Wallace 585.343.3040 x138 or cfw6@cornell.edu
- 7 Finger Lakes Soybean/Small Grains Congress, 9:00 a.m.-3:00 p.m., Holiday Inn, 2468 NYS 414 Waterloo. DEC credits pending. For more information contact: Cathy Wallace 585.343.3040 x138 or cfw6@cornell.edu

## March, 2013

12-13 Academy for Dairy Executives, Beaver Hollow Resort & Conference Center, 1083 Pit Road, Java Center. For more information contact: Joan Petzen 585.786.2251 x122 or jsp10@cornell.edu



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