

Cornell University Cooperative Extension NWNY Dairy, Livestock & Field Crops Team

NORTHWEST NEW YORK DAIRY, LIVESTOCK & FIELD CROPS TEAM

Corn Silage Gets Better with Age & Attention to Detail

By: Bill Verbeten

eave Corn Silage in the Bunk

It is well-known that feeding "green" corn silage will result in lower milk production than "cooked" corn silage. This change in production is due primarily to the increases in starch and protein availability as the silage cures in the bunk or silo. Generally conventional corn silage varieties need to be stored for a minimum of 3 weeks, but the availability of starch will increase with up to 6 months in storage.

However BMR varieties appear to buck this trend seen in conventional hybrids. My observations on farms in western NY that are feeding "green" BMR corn silage indicate little, if any, drop in milk production in 2013. Follow-up research is necessary to confirm if the BMR varieties are truly out-performing conventional varieties in wet years and coming out of the bunk "green," but the initial observations are promising.

The Corn Silage Shake Down

A number of reports of poorly chopped and processed corn silage have come in from across western New York. Besides chemical analyses, using the Penn State Shaker Box and kernel processing scores to measure physical characteristics can help determine whether or not your corn silage was chopped and processed correctly.



When corn silage has been chopped & processed properly most of the material will be in the middle screen of the Penn State Shaker Box, *Table 1*.

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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

| Screen | Pore Size (inches) | Particle Size (inches) | Corn Silage (% of total weight) | Haylage (% of total weight) | TMR (% of total weight) |
|--------------|-----------------------|---------------------------|---------------------------------------|-----------------------------------|-------------------------------|
| Upper Sieve | 0.75 | > 0.75 | 3 to 8 | 10 to 20 | 2 to 8 |
| Middle Sieve | 0.31 | 0.31 to 0.75 | 45 to 65 | 45 to 75 | 30 to 50 |
| Lower Sieve | 0.16 | 0.16 to 0.31 | 20 to 30 | 30 to 40 | 10 to 20 |
| Bottom Pan | N/A | < 0.16 | < 10 | < 10 | 30 to 40 |

Table 1. Corn silage, haylage, and TMR particle size recommendations for lactating cows.

Source: Penn State University

But there is an exception to these guidelines---Shredlage. A higher portion of the particles (~30%) will be in the Upper Sieve compared to lower percentages found in normal corn silage. No sorting has been observed by dairy cows fed Shredlage.

Kernel processing scores are determined by drying corn silage, running it through a series of sieves (*Figure 1*), and ranking by the percentage of the starch (i.e. the kernels) that pass through the 4.75 mm screen, *Table 2*.

| Ranking | % Pass Through 4.75 mm screen | % of Samples* | | |
|----------------------------|-------------------------------|---------------|--|--|
| Optimally Processed | >70 | 7 | | |
| Adequately Processed | 50-70 | 46 | | |
| Inadequately Processed | <50 | 47 | | |

Table 2. Kernel Processing Scores & Percentage of Samples*Corn Silage Processing Score, 551 Samples, CVAS 2006 Crop Year



Figure 1. Kernel Processing Score Sieves

Most of the corn silage has room for improvement as less than 10% of all samples have optimal processing scores. Again Shredlage corn silage is the exception to the rule as most samples have received "Optimally Processed" rankings when analyzed for kernel processing scores. The reason why most scores are lower than desired is that adjustments are often not made to the chopping equipment during harvest.

Whether you are chopping your own corn silage or rely on a custom operator the only way to know whether or not your silage is being chopped and/or processed correctly is to get out in the bunk and measure it as it's starting to come in. While it is too late to change this year's silage, you can run next year's freshly chopped silage through the Penn State Shaker Box on farm when the first load

comes in and send a sample off for kernel processing score analysis at most of the commercial labs. If nothing else, get out of the tractor and down into the bunk to have a closer look at your corn silage. Using these tools and your experience will help make the necessary adjustments to theoretical length of cut and processing roll settings in order to improve the physical characteristics of your corn silage in future years.

Annual Farm Business Summary & Analysis Season Is Right Around The Corner

By: John Hanchar and Joan Petzen

For more complete coverage of this topic, please visit <www.nwnyteam.org>

<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.

Background

Risk management continues to be a common challenge faced by farm business owners. Recent succession planning workshops were presented by team members within the framework of successfully managing human resources, legal and financial risks. Many upcoming programs can be thought of as designed to increase risk management capacities. Risk management tools and their availability receive emphasis.

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

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

- ★ Where is the business now?
- ★ Where do you want it to be?
- How will you get the business to where you want it to be?

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.

The next few months present good opportunities to examine your business' financial management practices. As a farm business owner, you have financial objectives, written hopefully to 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.
- Producers compare their business performance to that of other DFBS cooperators.
- 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 the business.

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

<u>Financial Statements for Agriculture (FISA)</u> <u>Program</u>

- 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 us 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 2013. 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.

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Livestock Bits and Pieces

By: Nancy Glazier

Humane Handling Compliance Guide Developed The Food Safety and Inspection Service (FSIS) just released 'FSIS Compliance Guide for Systematic Approach to the Humane Handling of Livestock.' It was developed to address regulatory compliance related to slaughter with the goal of increasing and improving industry transparency. It is a guide for all USDA-inspected slaughter facilities, large and small.

Nine activities are tracked to address all aspects of humane slaughter: inclement weather; truck unloading; water and feed availability; ante-mortem inspection; suspect and disabled; electric prod/ alternative object use; slips and falls; stunning effectiveness; and conscious animals on the rail.

There are four parts to a systematic approach: assessment; design facilities and practices; periodic evaluation; and modification. A robust plan has written procedures, records and is reviewed by FSIS.

Why is this important? Consumers are concerned about the care and handling of livestock from the farm to the plate. This guide is to help plants meet regulations to ensure a higher quality meat product. Stress and rough handling can impact meat quality.

<u>New Monthly Market Report</u>

U.S. Department of Agriculture's (USDA) Agricultural Marketing Service recently began releasing monthly data covering grass fed beef. USDA Market News provides market and pricing information; over the years, reports have evolved to better meet the changing demands and needs of stakeholders who rely on the data to remain competitive. With the new market report and better access to information, USDA is helping producers who are considering converting to grass fed operations and those who are already producing grass fed beef.

In addition to market commentary, the new report includes three sections: prices paid for live cattle, wholesale beef prices, and direct-market beef prices. This monthly report brings market clarity and exposure to assist the grass fed industry in marketing their products. In the future, as the number of market reporting participants grows, USDA will continue to expand the report by including trade volume data, and adding graphs and other visuals.

Fostering marketplace transparency is just one of the many ways we meet this goal. In order for the report to be a reflection of current industry conditions, we encourage anyone involved in grass fed beef production to help support these new reports by volunteering information and production data to the USDA Market News office in Iowa at (515) 284-4460.

The most recent monthly report can be found here: http://www.ams.usda.gov/mnreports/nw_ls110.txt (Edited USDA news release)

<u>Scrapie Update</u>

Three hundred sheep from a flock in Oregon were recently euthanized. One animal tested positive for scrapie, a fatal, degenerative disease affecting the central nervous system of sheep and goats and is comparable to BSE. Others were exposed and deemed genetically susceptible. Although a limited number of sheep and goats are identified as infected with scrapie (18), USDA officials are taking the proactive approach to eradicate the disease by 2017. There were 44,955 sheep and goats tested in the U.S. this year. The disease most commonly spreads from ewe to offspring and to other lambs that come in contact with the placenta. Early signs of scrapie include the diseased animal scratching or rubbing against objects, like a fence post. It is more likely to show up in older animals.

The transmission mechanism is not known but there are three theories: (1) the agent is a prion, which is an abnormal form of a normal cellular protein, 2) the agent is a virus with unusual characteristics, and (3) the agent is a virino, a very small piece of DNA that acts like a virus.

New York is part of the eradication program though no infected flocks have been identified here. For more information, contact USDA, APHIS, Veterinary Services at (518) 218-7540.



Water May Be Everywhere, But Is It All the Same?

By: Jerry Bertoldo

W ater by weight is the biggest component of the dairy cow diet. It is no surprise that with ground water there is the possibility of extra minerals being carried along with each drink. There has been controversy for years whether it is healthy to drink distilled water on a regular basis. The theory is that skipping the intake of a variety of minerals commonly found in water, albeit in very small quantities, could lead to deficiencies. On the farm the concern is too many minerals, not too few.

Formulated diets address a dozen or so required minerals. Either book or lab determined values are used to balance these rations. Until recently it had been rare to determine the contribution of water borne minerals to the daily requirements of production animals. Research has pointed out that three of the most common minerals found in water – sodium (Na), chloride (Cl) and sulfur (S) – can be consumed via normal intake to significantly contribute to an animal's recommended daily requirement. Imbalances involving these three are rather common. Calcium (Ca), Iron (Fe), Magnesium (Mg) and Manganese (Mn) on the other hand may create "hard water," but do not greatly add to dietary mineral levels formulated in the rations.

We tend to judge the mineral content of water by how well it makes suds, how much scale builds up in the hot water heater, plumbing corrosion or how bad it tastes. Sodium and chloride together make salt, however these may be in a high-lo relationship independent of each other leaving no salty taste to the water. Sulfur is notorious as causing the rotten egg odor and taste in water if it is in the sulfide form. In the sulfate form as part of a calcium compound (gypsum) it does not have a particularly bad taste nor foul odor, but leaves an annoying soap scum after washing.

Sulfur in elevated levels will "antagonize" the absorption of copper and selenium from the diet unless more bioavailable forms of these are fed. High iron in the water contributes very little to potential health issues considering the relatively huge amount found in forages contaminated by dirt at harvest. The more practical problem can be the red, gelatinous slime that can plug up pipes and fill water tanks caused by an iron oxidizing bacteria. High manganese levels in water are responsible for depressing water intakes because of taste rather than any metabolic interference. These levels are many times less than the normal considered necessary in the diet.

Unfortunately, it can be tricky figuring out if your water is really a hindrance to animal performance and health. Just finding evidence of elevated levels of minerals may not be enough. What form are they in? What is the pH of the water? Minerals in water must be in an ionized or dissociated state to be absorbed in the gut or to biologically react. They are rather inert in the dry or bound form such as salt. How well compounds in the ground dissolve depends on water flow, rock and soil type, the pH of the water and the presence of other ionized minerals. The impact of precipitation on the water source can change the mineral values. Deeper water sources are less affected by drought and rainy spells but tend to support greater levels of dissolved minerals. Surface dependent water sources may vary widely in mineral content with heavy rains and snow melt.

The advent of the "strong ion difference" (DCAD as an example) principle in dairy cows' rations puts a sharper focus on what minerals are biologically active, particularly in the dry cow, and how they might be expected to affect the herd. There is an on-line model to help the dairy industry sort out some of this challenge. It is supported by Vi-Cor and can be accessed at www.WaterForCows.com

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Growing Numbers of Female Farm Operators Make Timing Right for Annie's Project in New York

By: Joan Petzen

Women engage in a wide variety of jobs on farms in Western NY and across the country. National Agricultural Statistics Service shows the number of women operators on farms is on the rise. In the Northwest Region of New York. Forty - three percent of the farms reported one or more of the farm operators as being female in 2007. The NWNY Team plans to engage farm women in discussions of farm business and risk management this winter through Annie's Project.

Female farm operators in the NWNY Region total 1,110. Nearly 15 percent of the region's farms are operated by а female primary operator. Thirtyone percent of all farm operators in the region are female. Hence the need to provide management learning opportunities targeted to the way women prefer to learn.

During February and

March, farm women across the region are encouraged to participate in Annie's Project at Cornell Cooperative Extension offices in Livingston, Orleans and Wayne Counties. Annie's Project is a series of six weekly discussion/networking sessions. Each participant will receive a professional resource binder including local contacts, fact sheets, worksheets, computer based tools and more. Our team believes this learning opportunity will help both experienced and newly engaged farm women to gain confidence in their ability to access information, understand farm economics, evaluate their businesses and make decisions leading to greater farm success.

Annie's Project, created in 2003 by Ruth Hambleton, University of Illinois Extension, is an agricultural risk management program dedicated to strengthening women's roles in their family businesses. The curriculum is designed to empower women farmers in managing information systems used in critical decision making processes and to build local networks. This program was recognized, in July of 2011, by the White House and named as Champion of Change with Ms. Hambleton appointed to the White House Rural Committee.

Those with questions or interested in registering should contact Joan Petzen, 585-786-2251, Ext. 122 or JSP10@Cornell.edu or visit the website

www.nyanniesproject.org. The course costs \$60 per person with limited scholarships available to those who inquire. The deadline for registration is

January 10th, 2014.

New York Annie's Project has been made possible by Cornell Cooperative Extension with gracious funding from Farm Credit East, Workforce Development Institute, NYS

Department of Agriculture & Markets, USDA Risk Management Agency, and the Northeast Center for Extension Risk Management Education. This material is based upon work supported by USDA NIFA (National Institute of Food & Agriculture) under award number 2012-49200-20031.

Plan today to join farm women across the state and nation in building your toolbox of decision aids and network of advisors by participating in Annie's Project. This is a great opportunity to reach out to a neighboring farm woman and get to know her better by inviting her to join you in participating in Annie's Project. Call or register today for your opportunity to become part of a growing number of confident farm women influencing decisions about their farm's future.



Farm Business Planning: A Roadmap to Successful Transition

By: Beth Dahl

I f planning is the key to success, a carefully designed business plan is the roadmap to get you there. For farms looking to make a major operational change or with a number of investments on the horizon, the process of developing a business plan can help save time and money by reducing costly stumbling blocks, limiting stressful on-the-fly decisions during transition, and improve the likelihood of securing financing.

A well-organized farm business plan will typically contain the following components:

Project Goals: develop goal statements that clearly identify what the farm wants to accomplish. Utilizing the SMART method will add to the likelihood your goals will be met. SMART refers to goals that are specific, measurable, attainable, realistic and time-bound. Having input from all key decision

makers involved in the farm can add to the overall value of your goal-setting process, providing you can meet a consensus on the direction the farm is heading in.

Defined Strategy: the thinking process to plan modifications to your farm business, operations, or facilities. A strategic plan details why changes are being made, and what you will accomplish in meeting your goals. Developing a strategy typically involves the "thinkers" associated with your business.

Tactical Plan: answers how you will bring your strategy to action. The tactical plan will outline the steps needed to create results that lead to meeting your goals, and the metrics that will be used to measure progress along the way. Developing this action plan should encompass input from the people who will provide the day-to-day work, to ensure realistic steps are planned.



Baseline Financials: because you can't change what you can't measure - a clear picture of where your farm stands today is essential to helping dictate where it will go in the future. This typically requires in-depth review of current and relevant historical financial performance, such as benchmarking tools, a current balance sheet, and a profit and loss statement. These values will be used to project costs, returns and cash flow projections associated with changes to your farm business.

Pro Forma Financials: using current values for production costs, assets, liabilities and equity, you and your financial planner will project the financial

performance of your farm during and after proposed changes are made. This will also include budgets, sensitivity analysis, and cash flow estimates, and will be updated throughout the duration of transition.

Project Summary: combines all of the above information into a narrative that describes what

your farm's proposed changes entails, why they are deemed necessary, and how they will be achieved. It will also touch on who is involved in the planning and implementation processes, what metrics will be used to measure progress, and a proposed timeline for achieving the goals identified. Think of the project summary as a way to introduce your farm's transition to a lender or collaborating specialist.

A completed business plan will look different for each farm, but with the time spent preparing these components, farm owners can gain insight into the profitability of a major change in operations, facilities or management, as well as develop the steps to bring them to fruition. With the high degree of complexity associated with making significant change to a farm business, a well-researched and carefully designed business plan is a powerful tool in helping to secure lending, save time and money during the implementation process, and ensure all those involved in the transition are in agreement on end goals and the steps to achieve them.

Rain Wreaks Havoc on Corn Silage Quality in 2013

By Bill Verbeten

Preliminary analyses are indicating that the quality of new crop corn silage is considerably lower in 2013 than in 2012. Higher fiber content, lower fiber digestibility, lower starch content, and smaller ears can all be linked back to higher than normal rainfall this year. Slower than normal dry-down also delayed corn silage harvest on many farms. However it appears that BMR varieties have weathered the storm better than conventional varieties.

2013 Corn Silage

In the November 2013 edition of *Hoard's Dairyman*, Dr. John Goeser of Rock River Laboratory discusses the decreased corn silage quality in the Midwest and the Northeast, *Figure 1*. "*Starch levels have decreased and NDF (fiber) levels have increased, decreasing energy levels. To make matters worse, TTNDFD (total tract fiber digestibility) has also dropped from last year's crop.*"

Figure 1. Midwest and eastern U.S. region corn silage crop quality from 2011 to 2013.



The data from the Northeast region included 2012 & 2013 samples from over a dozen farms in western New York, *Figure 2*. Samples included conventional hybrids, BMR varieties, along with some Shredlage corn silages.

Figure 2: Corn Silage Quality Google Map



These changes in fiber content and fiber digestibility are due to the higher than normal rainfall experienced in both regions. Like all plants, corn transfers water from its roots, through its xylem, and out its leaves into the atmosphere. Think of the corn plant as a giant straw. In wet years that straw needs to move a lot more water from the soil into the air. The plant senses this and reinforces the strength of the xylem by adding more cellulose (increase in NDF) and more lignin (decrease in total tract fiber digestibility) in order to handle the increased evapotranspiration load.

Despite these overall trends there were considerable differences between the BMR and the conventional varieties, Table 1. BMR samples had no change in CP content, while conventional varieties lost 0.5% on average. BMR samples also had higher CP content (~0.5% in 2012 and ~0.9% in 2013) than conventional varieties. While all corn silage had increased NDF in 2013, the BMR corn silage experienced less than half the increase (~1.3%) seen in conventional varieties ($\sim 4\%$). Surprisingly, the lignin content actually dropped in BMR varieties (-0.5%), but increased as expected in conventional varieties (+0.2%). BMR varieties also had increased starch content in 2013 (+1.6%) compared to the drop in starch (-3.5%) in conventional varieties. Fiber digestibility as measure by TTNDFD and Dynamic NDF kd also showed that BMR silages dropped less than conventional silages in 2013.



Table 1. BMR & Conventional Corn Silage from Western NY 2012 & 2013

| Year | Sample Type | CP* | NDF | Lignin | Starch | TTNDFD | Dynamic NDF Kd |
|------|-------------------|------|-------|--------|--------|--------|----------------|
| 2012 | 2012 BMR | 8.38 | 36.86 | 3.52 | 33.01 | 46.34 | 4.46 |
| 2013 | 2013 BMR | 8.38 | 38.18 | 3.02 | 34.63 | 43.12 | 4.07 |
| | | | | | | | |
| 2012 | 2012 Conventional | 7.87 | 36.75 | 3.40 | 35.79 | 47.01 | 4.39 |
| 2013 | 2013 Conventional | 7.30 | 40.82 | 3.59 | 32.26 | 41.83 | 3.92 |

 $*CP = crude \ protein \ \%DM, \ NDF = neutral \ detergent \ fiber \ \%DM, \ Lignin \ \& \ Starch \ are \ \% \ DM, \ TTNDFD = total \ tract \ NDF \ digestibility, \ Dynamic \ NDF \ kd = \ \% \ of \ NDF \ digested \ per \ hour.$

Besides changing the plant physiology of the corn silages, forage quality was changed by the high rainfall conditions through high losses of nitrogen throughout the region. Many farms went back in and put on 50-60 lbs/ acre of nitrogen as a side-dressing or through drop-nozzles at tasseling. Numerous fields that did not receive any additional nitrogen had smaller than normal ears as a result.



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Save the Date...

December 2013

- 4-5 *Calf Congress 2013 "Growing the Next Generation".* RIT Inn & Conference Center, 5257 West Henrietta Rd., Henrietta. For conference details and registration information please visit: http://nwnyteam.cce.cornell.edu/events.php
- 5 *Winter Grain Marketing Workshop*, 6:00 p.m., Davis Countryside Meadows, 11070 Perry Road, Pavilion. <u>RSVP</u> no later than December 1. Contact: Julia Robbins at 315.583.5296 or juliacrobbins@gmail.com
- 6 *Winter Grain Marketing Workshop*, 11:00 a.m., Du Mond Ag, 5083 White Road Union Springs, <u>RSVP</u> no later than December 1. Contact: Julia Robbins at 315.583.5296 or juliacrobbins@gmail.com
- 10 *Cornell Agribusiness Economic Outlook Conference*, 9:00 a.m. 3:30 p.m., B25 Warren Hall, Cornell University. For more information contact: Carol Thomson at 607.255.5464 or cmt8@cornell.edu or visit the website: http://dyson.cornell.edu/outreach/ag_outlook_conference.php
- 10 *Soil Health Workshop "Sprouting Stronger with Healthy Soils"*, 9:00 a.m. 12:00 p.m., Generation Center, 15 Center Street, Batavia. To register for this **FREE** event please call GCSWCD: 585.343.2362
- 11 *Planning for Succession: Managing Business Transition to a New Generation*, 7:00 p.m., CCE-Seneca Co., To register contact: Cathy Wallace at 585.343.3040 x138 or cfw6@cornell.edu
- 12 *Planning for Succession: Managing Business Transition to a New Generation*, 1:00 p.m., CCE-Monroe Co., To register contact: Cathy Wallace at 585.343.3040 x138 or cfw6@cornell.edu
- 13 *Planning for Succession: Managing Business Transition to a New Generation*, 7:00 p.m., CCE-Wyoming Co., To register contact: Cathy Wallace at 585.343.3040 x138 or cfw6@cornell.edu

January 2014

- 15 *Corn Congress*, 8:30 a.m. 3:00 p.m., Clarion Hotel, 8250 Park Road, Batavia. To register contact: Cathy Wallace: 585.343.3040 x138 or cfw6@cornell.edu
- 16 *Corn Congress*, 8:30 a.m. 3:00 p.m., Holiday Inn, 2468 NYS Route 414, Waterloo. To register contact: Cathy Wallace: 585.343.3040 x138 or cfw6@cornell.edu



From Our Home To Yours.... Happy Holidays

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