

Cornell University  
Cooperative Extension  
Northwest New York Dairy, Livestock & Field Crops Team



*Building Strong and Vibrant New York Communities*

*Cornell Cooperative Extension is an employer an educator recognized for valuing AA/EEO, Protected Veterans, and Individuals with Disabilities and provides equal program and employment opportunities.*

# Year In Review 2016



## ***A Proactive Approach to Hoof Care Saves Money***

Over the course of four days in April, the NWNY Team brought a new hoof trimming course to 25 dairy farmers and employees from across the region. Renowned hoof trimmers Chip Hendrickson and Vic Daniels taught the class while Libby Eiholzer translated for the 17 Spanish-speaking participants. Jerry Bertoldo taught them how to mitigate on-farm environmental issues that can contribute to lameness, how to gait score cows, and how to identify lame cows.

The class focused on teaching participants how to identify cows before they become clinically lame and how to treat them quickly and effectively. The cost of one case of clinical lameness is estimated to range from \$300-\$500, due to factors such as decreased milk production, poor reproductive performance and increased risk of culling. Each of the 25 participants is now equipped to save their farm thousands of dollars a year, simply by identifying and treating lame cows before they can become severely lame.



An older study estimated that if a herd was able to improve their incidence of lameness from average to excellent through this level of observance and remediation, they could save almost \$5,000 annually per 100 cows in milk production losses alone using today's low milk prices (\$15/cwt). On a 1,000 cow dairy, that's nearly \$50,000 per year in savings.

## ***Calf & Heifer Congress – A National Draw with Local Impact***



The NWNY Team continued the tradition of a year-end dairy replacement conference started in 2011 by Cornell PRO-DAIRY. The Dairy & Heifer Congress 2015 was held on December 15-16 in Syracuse. Nationally recognized university researchers, industry experts and dairy producers joined together for a well-received program attended by over 180 people. Two dozen sponsors provided support and exhibits for the event. The displays proved to be quite popular and a source of updates on newer technology and products.

Presentations varied from dealing with calving difficulties, newborn care, barn design, ventilation, feeding strategies and economic expectations of conventional versus more intensive feeding programs. A section focused on the new Veterinary Feed Directive, antibiotic stewardship, drug residue trends and public concerns of antibiotics in the food supply. Popular producer panels showcased animal friendly and labor efficient barn features as well as effective protocols.

One dairy owner who attended with his calf manager said it was “a great refresher and stressed attention to detail. We have changed how we handle electrolyte use for scours cases and pay more attention to making sure just born calves are positioned upright and not laying out flat. Both of these protocols have resulted in less problems and fewer treatments.” A dairy veterinarian in the region noted “The conference was an excellent resource for calf raisers and like-minded individuals to share thoughts and learn new strategies for managing youngstock. The topics were timely and relevant to many of the progressive dairies.”



## **Spanish Language Dairy Services: A Valuable Resource for Producers**



Over the past four years the NWNY Team has expanded the scope of the Spanish Language Dairy Services program by visiting farms across the Team's region to provide Spanish-language training to dairy workers. Often-requested training topics include milker training, mastitis prevention, calf care and calving assistance. In addition to in-person training, written translation of standard operating procedures (SOPs) and employee handbooks is provided. Farms also frequently request assistance in translation and facilitation during employee meetings and evaluations. In the past year, 124 farm trainings, meeting facilitations and SOP translations have been provided.

Farm managers and employees alike often comment on how valuable these services are. First and foremost, the opportunity to be able to communicate more readily with their employees goes a long way in improving understanding between managers and their employees. The majority of on-farm trainings focus not only on *how* employees are expected to complete tasks, but also on *why* employees are expected to complete tasks in a certain way. Once an employee understands that *why*, they are much more likely to adhere to SOPs.

### **Keeping Dairy Farm Workers Safe**

Through a collaboration with the New York Center for Agricultural Medicine and Health (NYCAMH), Libby offered 26 safety trainings to 18 farms across 6 counties. Farm workers were trained on safety topics including bunker silo, confined space and chemical hazards, machinery and tractor safety and safe animal handling measures. As the Occupational and Safety and Health Administration's (OSHA's) Local Emphasis Program on dairy farms is ongoing in New York, farms are eager to improve their safety programs not only to keep employees safe, but also to avoid the fines and headaches that go along with unannounced OSHA inspections.



### **Feeder Basics Course Draws High Participation**



In early 2015 our dairy advisory committee suggested that we offer a very basic course for dairy workers who feed cows. As this is a position on dairy farms that is more frequently being filled by Spanish-speaking employees, we decided to offer the class in both Spanish and English.

We held this four hour class on-farm in two locations which allowed us to include both classroom time and hands-on learning. Overall, we had 40 employees attend of which one quarter were Spanish-speaking. Reviews were overwhelmingly positive!

Providing this type of continuing education class is extremely important, as it helps employees gain new skills needed for advancement, gives them a greater sense of job satisfaction and can ultimately lead to better employee retention. Feeders handle materials on a daily basis which account for over 50% of a farm's expenses, so ensuring that they have the right skills to limit waste and feed cows accurately has a huge impact on a dairy farm's overall profitability.



## **Entry Point Precision Agriculture Technology: Benefits and Costs for Decision Making**

The PrecisionAg Institute defines precision agriculture as “managing crop production inputs on a site specific basis to increase profits, reduce waste and maintain environmental quality.” Greater accuracy with respect to rate, timing and/or location of input use, including machinery operations, can lead to improved economic and environmental results. The Field Crops Advisory Committee for the NWNY Program identified a range of precision agriculture topics as high priority to help direct applied research and extension work of the program. Initially, auto steer, auto guidance received emphasis.



Auto steer helps reduce operator stress and increase work quality leading to less overlap (costs of production effects). To realize benefits a farmer would invest about \$12,000 additional on average for an auto guidance system versus manual steering.

To provide farmers, their advisors, and research and extension staff with information for decision making on auto steer, the team worked with Erick Haas, the Cazenovia Equipment Company, to estimate expected economic and financial effects.

Producers and their advisors can develop and apply analyses that will likely find auto steer attractive under many scenarios. Two benefits attributed to auto steer mentioned frequently by producers and their advisors are reduced stress and reduced fatigue. Combine these benefits with expected favorable economic and financial impacts, and auto steer has the potential to be a beneficial change in practice for farmers, one that farmers will likely want to evaluate for its ability to achieve improved results.

## **Price Analysis for Corn Silage**



Several years ago, in response to the program’s Field Crops Advisory Committee’s desire for work on pricing forages, the team developed an empirical price analysis for corn silage. The team updates the work annually. Estimates are posted to its website ([www.nwnyteam.cce.cornell.edu](http://www.nwnyteam.cce.cornell.edu)) and reported in Ag Focus. The September 2016 estimate reflects an update to the data set and other changes to the statistical model to better capture changes in supply and demand relationships. Corn silage price estimates combined with understanding of relevant supply and demand factors from the individual farm business owner’s perspective, including local conditions, for example, effects of drought in 2016, aid decision making regarding corn silage price. Given most recently available

data, price analysis for NY suggests an estimated corn silage price of about \$60 per ton. The estimate reflects greater scarcity in the market for corn silage when compared to the Fall 2015 estimate of about \$50 per ton. Regarding the original work, one producer commented, “I think that your work on this will be helpful for many folks.” Regarding the updates, producers comment that the work has been a valuable addition to the tool set for determining corn silage price.



## **Dairy Farm Business Summary Cooperators, a Significant Source of Economic Activity**

Applying financial management skills, owners of 42 dairy farm businesses from the region cooperated with regional specialists, PRO-DAIRY staff, and agribusiness consultants to complete DFBS's for 2015. Cooperators learned about the strengths and weaknesses of their businesses using their summary and analysis results, DFBS data for the Western New York region as a whole, and by using DFBS data for a group of most profitable businesses by size using the two page Comparison Report. Research studies conclude that producers using DFBS with analysis achieve greater levels of profit compared to producers that do not. Greater profitability contributes to enhanced economic viability, increasing the likelihood that businesses have the capacity to invest in replacement and, or expansion assets, and maintain and, or increase employment levels. Estimates using DFBS results suggest that the 42 cooperating businesses invested a total of \$39.4 million in land, buildings and improvements in 2015, and a total of \$13.8 million in machinery and equipment. Estimates suggest that the 42 farms employed a total of 767 worker equivalents, excluding operators, where an equivalent represents 230 hours worked per month for 12 months, and generated a total of \$227.3 million in cash farm receipts from milk, cattle, crops and other receipt items.



## **Dairy Acceleration Program Leads to New Dairy Investment in NWNY Region**



The Dairy Acceleration Program delivered consulting services to 37 dairies in the Northwest New York Region. With funding from the New York State Departments of Agriculture and Markets and Environmental Conservation, Cornell University's PRO-DAIRY Program partners with local Cornell Cooperative Extension Educators to provide business, facility and comprehensive nutrient management planning and engineering for

implementation of best management practices to protect the environment.

Through the project, Northwest New York Team Specialists have worked with 15 farms that have been awarded \$72 thousand for business or facility planning. At this writing, eight of these farms have reported new investment in their dairies of \$6.1 million dollars in new barns, real estate and renovating existing facilities. Statewide staff has worked with 2 additional farms who have invested \$2.95 million in facilities. For each \$1,000 of New York State investment in planning through the project, these farms have invested \$84,000 to improve their infrastructure.

Ten of these same farms have been awarded \$62 thousand in environmental planning funding to either develop a comprehensive nutrient management plan or design structures required for implementation of best management practices to protect the environment. Another 15 farms, who are participating in only the Comprehensive Nutrient Management Planning or Best Management Practice Design, have received \$117 thousand. Once planning and engineering is complete these farms will seek grants and invest business resources to install systems to protect the environment from runoff of nutrients and recycle farm produced nutrients to grow future crops for feeding their dairies.

The Dairy Acceleration Program is stimulating reinvestment in dairies across the Northwest New York Region. The Northwest New York Dairy, Livestock and Field Crops Team is a gateway that producers are using to learn about and access these funds. These investments will lead to increased production and profits for farm owners and additional dairy related employment. At the same time, the program is helping farms to improve environmental protection practices through nutrient management planning and design of environmental protection facilities.



## **Improving Malting Barley Production Practices to Meet Industry Needs**



The resurgence of malting barley production spurred on by the growing craft beer industry has kept the NWNY Team busy determining the best management practices to maximize barley yields under current NY growing conditions. Approximately 2,000 acres of malting barley was harvested in NY in 2016. Half of these acres were grown by producers in the NWNY region.

Establishing which barley varieties grow best under NY growing conditions has been at the top of the list. Three variety trial locations were established across NWNY this year. A malting barley twilight tour was held on June 23<sup>rd</sup>. Twelve producers and four malt houses went on a guided tour of all the winter malting barley varieties being evaluated. They also were updated on current fertility, disease management, harvest, and drying recommendations.

We will need to triple the current malting barley production by 2019 to meet the standards set by the NY Farm Brewery Law that beer brewed under the farm brewery license must utilize 60% NY grown ingredients.

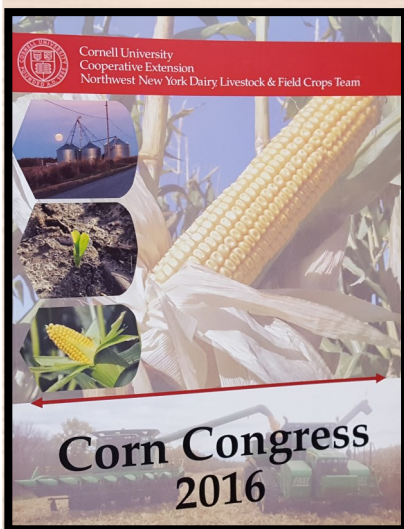
## **Tactical Ag (TAG) Teams: Educating the Next Generation of Corn Growers**

This year's TAG Team consisted of a young group of seven corn producers who collectively grew and managed 3,200 acres of corn grain on the family farm. This was a unique TAG as it was requested by many of the participants' parents who had been through the program 15 years ago.

Participants completed twelve hours of in-field and classroom training covering crop production and IPM practices with a focus on weed, disease, and insect pest sampling and management. Participating producers benefited from the educational materials and timely sampling techniques to make the most economical crop and pest management decisions to maximize their corn production. Participants learned how to correctly identify, sample, assess and apply different management tools on potential corn pests and make management decisions based on economic thresholds. Pre and post-tests were given at the first and last meetings of the season. Collectively, participants increased their general knowledge of corn management from 37% to 78%; an increase of 52%.



## **Corn Congresses Keep Producers on the Cutting Edge in 2016**



The Western NY and Finger Lakes Corn Congresses featured a wide range of precision agriculture topics to keep growers up-to-date on the latest cutting edge technologies in corn production. Topics included: Drones: Update on Applications and Regulations, Inter-Seeding Cover Crops into Corn, 360 Y-Drop™ Nitrogen Sidedress Application System, and Optimizing Variable Rate Seeding Technology.

Invited speaker Dr. Dwight Lingenfelter from Penn State University spoke on, "Horseweed and Waterhemp Resistance Status & Management". Weed resistance will become a huge issue for NWNY producers as we have now confirmed two weed species resistant to glyphosate in the last year. If not managed correctly, herbicide costs could triple and we could lose glyphosate as a management tool forever. Almost 600 producers, consultants and agri-business representatives from WNY attended the two-day event in Batavia and Waterloo. Fifty-two exhibitors participated in our trades shows to update growers on the latest technologies,

management tools and crop protection products.



## **Manure Gas Safety on Dairies**

A safety grant project concluded with Yates County Soil & Water Conservation District, Yates County Office of Emergency Management and Cornell Cooperative Extension's NWNYS Team. This funding came through the Agricultural Safety & Health Council of America, one of 11 awarded in 2015 across the country. This grant had three components: purchase three multiple-gas meters, at 50% cost, for three fire departments; purchase 25 single-gas hydrogen sulfide gas monitors, for use by the farming community; two educational events aimed towards farmers, custom manure haulers, and fire departments. The education and outreach component of this grant application was successful with several additional requests for training sessions. In response to the success of the initial training sessions, five more educational events were held: Yates County EMS advisory board; manure pit safety training for farmers, manure haulers, and fire departments featuring a national farm safety trainer; two manure agitation on-farm training sessions; and manure gas and gypsum bedding dangers to the Yates County Sheriff's Department. Calls from local counties, veterinarian offices, and other interested parties continue to come in asking for related presentations. Approximately 240 people learned about hazards of manure gases through this project. A quote from one of the farmers after hearing about the project was, "Keep up the good work, you are saving lives!"



## **Helping the Next Generation Learn about Extension**

The summer of 2016 was busier than usual for the NWNYS Team. Five interns worked with the team covering projects from artificial insemination with beef heifers to precision agriculture. Three of these were through Cornell's CALS/CCE Internship program, one was completing college requirements, and one was grant-funded summer employment. Chelsey Downs worked on the Beef Farm Business Summary program with farm business management specialist Joan Petzen. Peter Bertoldo was a malting barley pest management scout working with field crops specialist Mike



Stanyard. Dennis Atiyeh, Brooke Ryan, and Lindsey Chamberlain are all Cornell students in CALS. Brooke worked with collecting surveys on dairies with bilingual dairy specialist Libby Eiholzer; Dennis worked on estrous synchronization and artificial insemination with a beef farm and small farms specialist Nancy Glazier. Lindsay Chamberlain worked with precision agriculture technologies with Mike Stanyard. Presentations on campus highlighted the important connections they made and the practical 'field' knowledge they learned.

## **Working Through the Drought of 2016**

The hot, dry summer of 2016 challenged farmers' abilities to produce adequate quality forages. Farm business owners sought information regarding best management practices for harvesting, storing and feeding forages, and other best management practices that might help them achieve farm business objectives over the next several months.

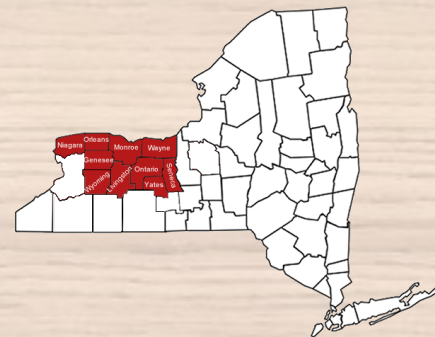
For the September 2016 issue of AgFocus titled, "Working through the Drought of 2016," team members researched and wrote on a variety of topics focusing on best management practices for conserving every ton of forage that could be harvested. Approximately 645 readers learned about reducing losses from harvest to feed, balancing animal numbers with forage inventories, and emergency forages with double cropping. A list of Fall Feeding Decision Tools was posted to the team's website.



Resources were shared across the state. NYS Department of Agriculture and Markets highlighted them in their recent Drought Resources guide, [http://www.agriculture.ny.gov/Drought\\_Resource\\_Guide.pdf](http://www.agriculture.ny.gov/Drought_Resource_Guide.pdf).



The NWNY Dairy, Livestock and Field Crops Team is one of the outstanding regional agricultural Cornell Cooperative Extension programs in New York, serving a 10-county region in the western part of the state. The team's specialists work together with Cornell faculty and extension educators to provide service to the farms large and small whether dairy, livestock, forage or grain focused. Educational programs and individual assistance cover a wide area of production practices and as well as farm business and financial management. For dairy farms, a bilingual dairy specialist provides producers with employee training and human resource facilitation in Spanish. Educational and support venues range from individual farm management team meetings and troubleshooting to multi-day classroom and hands-on training and from ongoing farmer group discussion meetings to thematic day long congresses.



## SPECIALISTS

**JERRY BERTOLDO** dairy management

Calf care, forage management, dairy skills training programs and animal health

585-261-6816 cell

grb23@cornell.edu

**LIBBY EIHOLZER** dairy management, bilingual

Employee management, on-farm training/meeting facilitation, document translation

607-793-4847 cell

geg24@cornell.edu

**NANCY GLAZIER** small farms / livestock

Grazing, production, management, marketing to enhance viability of family farms

585-315-7746 cell

nig3@cornell.edu

**JOHN HANCHAR** farm business

Economics analysis, farm financial management education, family business transition

585-233-9249 cell

jjh6@cornell.edu

**JOAN SINCLAIR PETZEN** farm business

Financial analysis, taxes, business succession planning, managing & motivating employees

716-378-5267 cell

jsp10@cornell.edu

**MIKE STANYARD** field crops, team leader

Crop production & storage, pest management

585-764-8452 cell

mjs88@cornell.edu

**CATHY WALLACE** administrative assistant

585-343-3040 x138 office

