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






Year In Review 2015

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.

Calf & Heifer Congress Continues to Serve the Dairy Industry

The fourth annual state symposium on dairy replacements was held at the RIT Conference Center near Rochester, organized and hosted once again by team specialists and staff. Over 180 attendees joined all or part of the day and one half "Calf & Heifer Congress 2014 – Birth to Breeding" with its blend of university and industry speakers from the US and Canada. Dairy owners, calf care employees, students, extension personnel and agriservice reps were represented in the audience. A wide spectrum of health, growth, environmental and new technology topics of interest to any sized dairy were presented. Numerous positive exit evaluations received from both sponsors and attendees will be used to develop the agenda, invite speakers and producer panels for the 2015 event in December.

Dairy Businesses Advance Employee Transition Cow Skills

The Transition Cow Module of Dairy Skills Training wrapped up in April with an on-farm hands-on learning session. Twenty-two participants stretching from Strykersville to Palmyra attended modules at either Ontario or Wyoming Cornell Cooperative Extension offices. These individuals represented 19 different dairy farms and dairy industry businesses. Participants learned about the ideal environment for a pre-fresh cow from internationally renowned Dr. Kathryn Proudfoot. Additional topics included post-partum infectious and immunological diseases, post calving metabolic disorders, monitoring and treatment for transition cow disorders, records protocols and tracking tools for assessing and improving transition cow performance.

Forage Focused Field Day Offers Timely Advice

The 2015 growing season was unusual with extremes in moisture and growing conditions. Decisions as to when to start chopping corn and what do you do if forage inventories are not up to snuff are best made before the growing season goes to slumber. To answer this problem the team organized the Pre-Harvest Field Day at a centrally located farm near Avon.

An attentive mix of 80 producers and consultants were in attendance to hear about the best management practices for forage harvesting and strategies for getting more tons per acre. Resource materials were readily picked up and taken home.

The morning featured four speakers "under the tent". Topics included dealing with corn silage harvest variables such as maturity, hybrid differences and digestibility, adding to forage inventory by double cropping with triticale and sorghum, optimal preservation methods and dealing with the consequences of poor fermentation.

Four local machinery dealers brought forage harvesters and other equipment for inspection, provided machine-side explanation of features and capabilities in addition to sponsoring the event. Five other agribusinesses supported the field day as well. The event was well-received by both producers and agri-business representatives alike, all of whom were pleased with the opportunity to gather timely information from unbiased resources.

Updated Technology Provides an Advantage

What We Learned by Studying LED Lighting and Long Day Photoperiod (LDPP).

Between August 2012 and January 2014, the NWNY Team worked with a dairy farm from the region, engineers, a vet, reps from the electricity industry and others to complete a study evaluating the energy savings and effective light provided by Light Emitting Diode (LED) and T8 (a tubular fluorescent fixture) lighting systems in dairy barns. Also assessed were the impacts of the two lighting systems on manipulating photoperiod and milk production. A summary of the work based upon an article from the January 2015 issue of Ag Focus appears below.

- Researchers concluded that the LED, LDPP or the T8, LDPP treatment did not affect milk production when compared to the T8, non LDPP control. However, differences in energy use among lighting technologies were measured.
- Using data from three nearly identical barns, assuming no expected milk response, partial budget and Net Present Value (NPV) results per barn suggest that LDPP using LED or T8 technology cannot be expected to increase profit or to yield NPVs greater than or equal to zero when compared to the T8, non LDPP control. Results are sensitive to bulb lifetime in hours, energy cost per kilowatt hour (kWh), expected milk response and others. For example, if expected milk response is 3 pounds per cow per day, then the LDPP treatments can be expected to increase profit and yield NPVs greater than or equal to zero for all combinations of fixture life and energy cost per kWh evaluated.
- Partial budget and NPV results suggest that LED and T8 fixtures can be expected to increase profit and yield NPVs greater than or equal to zero when compared to 400Watt (W) High Pressure Sodium (HPS) High Bay fixtures. Results are sensitive to fixture lifetime in hours and energy cost ($ per kWh).

Young Managers Trip to PA Encourages Thought

There has been a discussion group for young dairy managers in Ontario County for many years, but a recent trip to visit dairies in Pennsylvania served to further strengthen the group. Ten young farmers traveled with the team's two dairy specialists in March to visit dairy farms and other agricultural businesses. Even though PA is not far away, the group members were exposed to some very different dairy facilities and management strategies. Some on-farm examples included using flush lanes to clean manure from barns and posting goals for milk production. Quality and efficiency are both important for all farm employees to monitor. The group was also impressed with the Turkey Hill Experience, an attraction that does an outstanding job of teaching visitors about dairy farming and processing.

While the participants haven't implemented any big changes on their farms as a result of the trip, many of them are currently employees on dairy farms and thus not at the point in their careers where they can make large management decisions. This type of learning experience will help them to build a broad base of knowledge for future management opportunities.

Economics of Double Cropping on NY Dairy Farms

Double cropping involves planting, managing and harvesting two crops over a 12 month period on the same land area. NY dairy farmers practice double cropping by following corn silage with planting, management and harvest of winter cereals for forage, such as rye or triticale. NY dairy farmers, through various channels, including the NWNY Program's Field Crop Advisory Committee, identified work on the double cropping topic, including economic analysis, as a need of high priority. To aid decision making, producers want to know what place double cropping might have in the management of their farm businesses.

NWNY Program members collaborated with other Cornell University researchers and extension staff, producers, and industry reps to develop and conduct economic analysis. Analysis reflected differences among the state's regions with respect to growing conditions and cropping practices, and three different farm sizes. Researchers reported the work and its results in: *"What's Cropping Up?"* a Cornell University newsletter targeting producers and their advisors, researchers and extension staff; *Ag Focus*; and the NWNY Program's website.

Readers of the above learned that double cropping a winter cereal for forage following corn silage has the potential to be an economically attractive, beneficial change in practice for dairy farms in NY. This includes double cropping's role in successfully managing risks related to meeting forage needs of the herd over time. Risks can relate to variability in forage production due to poor growing conditions and to rising forage needs relative to land constraints. Producers can apply information from the analysis to make decisions regarding double cropping's place on their farms.

Analysis suggests that to achieve breakeven yields, producers can expect to spend a minimum of about $105 per acre on variable inputs -- fertilizers, seeds, sprays and other crop inputs, labor, machinery repairs, and fuels -- for each double cropped winter cereal acre.

DFBS Cooperators, a Significant Source of Economic Activity in 2014

Applying financial management skills, owners of 45 dairy farm businesses from the region cooperated with regional specialists, PRO-DAIRY staff, and agribusiness consultants to complete the Dairy Farm Business Summaries (DFBS's) for 2014. 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 45 cooperating businesses invested a total of $25 million in land, buildings and improvements in 2014, and a total of $19.6 million in machinery and equipment. Estimates suggest that the 45 farms employed a total of 743 worker equivalents, excluding owner operators, where an equivalent represents 230 hours worked per month for 12 months, and generated a total of $267.2 million in cash farm receipts from milk, cattle, crops and other receipt items.

Dairy Acceleration Program Assists Farms with Evaluating Change

In 2013, the Governor announced a new partnership with PRO-DAIRY at Cornell University, the Dairy Acceleration Program (DAP). Eligible farms apply to receive assistance with business or facility planning, the development or update of their comprehensive nutrient management plan (CNMP) or engineering for implementation of best management practices to protect the environment. NWNY Team specialists play a pivotal role in recruiting farms to participate and facilitating projects. To date, 33 farms in the region are receiving assistance through DAP. Eighteen farms received funding for business or facility planning from the Department of Agriculture and Markets. Team members have developed business plans for three farms. Twenty-five farms leveraged Department of Environmental Conservation funds, 8 for development of a new CNMP, 9 have updated their CNMP and 10 have received funding for the design of structures to implement a best management practice. Some farms have taken advantage of funding from multiple aspects of the program. Business planning funds have been used to evaluate current business operations and address production bottlenecks or to evaluate the feasibility of a capital project like a new barn or manure storage. Overall, DAP, is helping the region's dairies to evaluate opportunities for cost savings or generating new revenue while putting measures in place to protect the environment.

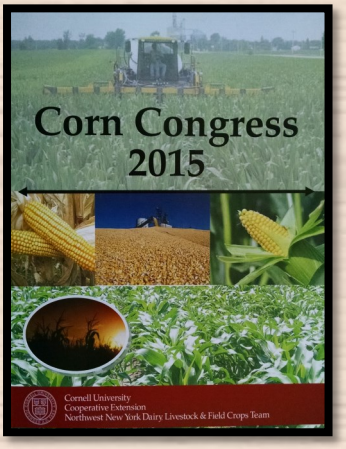
Economics of Intensive Wheat Management Revisited -- 2014

An estimated 100,000 acres of soft winter wheat are grown each year in New York. Eighty percent of those acres are grown in the ten counties covered by the NWNY Dairy, Livestock, & Field Crops Team. The most recently available data, 2011 through 2013, indicate that the value of production averaged about $44 million annually. Many wheat producers continuously seek information about changes in practices that possess the potential for improved economic viability. To achieve optimal profitability given prices and expected conditions, winter wheat producers need to manage their crop as a true grain crop, not just a rotational crop, and manage the crop more intensively.

Team members collaborated with a wheat producer from the region that has considerable experience implementing intensive wheat management systems to develop economic analyses based upon 2014 experiences. Analysts estimated the change in profit attributed to the switch to an intensive system from a base, standard system, including sensitivity analyses examining the effects of wheat price, yield and others. Project members disseminated information from the analysis to attendees at the Soybean/Small Grains Congresses, and via the team's newsletter and website.

Approximately, 360 Soybean/Small Grains Congress attendees learned the following. Estimates suggest that an intensive wheat management program outperformed a base, standard program – expected change in profit per acre attributed to an intensive system compared to a base, standard system was estimated at about $52 per acre, given 2014 prices and conditions. Estimates suggest that intensive wheat management adopters spend about $160 per acre more on nutrients, pest management and other operating inputs compared to base, standard cultural practices to realize the above increase in profit. Attendees learned that results would be sensitive to wheat price, change in wheat yield, and others factors. Research studies show that producers that apply profitability analysis during decision making achieve greater profit compared to producers that do not apply profitability analysis.

Corn Congresses Hit the Mark with Producers in 2015



The Western NY and Finger Lakes Corn Congresses attracted almost 600 producers and agri-business representatives to the two-day event in Batavia and Waterloo. Forty-five exhibitors participated in our trades shows to update growers on the latest technologies and management tools. The congresses featured a wide range of corn production topics including: grain hybrid variety trials, GMO grower education, nitrogen sensing technologies, herbicide resistant weed management, western bean cutworm update, interseeding cover crops into standing corn, and unmanned aerial vehicles in NWNY. One of the most popular presentations was, "What's your 30 Second Elevator Speech on GMO's", by Margaret Smith, Cornell University corn breeder. Her presentation was aimed at educating growers on the science behind GMO corn and soybeans that they produce so that they can accurately and intelligently respond to questions from their non -farming neighbors and the general public. One producer wrote me, "Margaret Smith's talk on GMO education was the best idea for an agenda item in years. I thought that was extremely valuable. I would think about doing that again next year."

Crop Alerts and Crop Cam Keep NWNY Growers Well Informed

The NWNY Team continues to develop and create media to inform and educate the local agricultural community about what is happening in the field "right now". In 2015, eighteen **Crop Alerts** were sent to over 800 farmers, consultants, and members of the agriculture industry during the growing season, http://nwnyteam.cce.cornell.edu/newsletter.php. These bulletins covered a wide range of topics including pest & disease outbreaks, weather impacts on crop management, timely management tips & reminders, and upcoming educational events. A survey this spring showed an overwhelming support to continue with this form of local reporting and extension advice. **Crop Cam** was new this year and utilized short narrated educational in-field videos to identify potential pest problems and crop management issues. Nine videos were produced this year, http://nwnyteam.cce.cornell.edu/submission.php?id=479. They range from "How to Identify the Flowering Stage of Wheat" to "How to Scout for Black Cutworm in Corn".

NY Corn and Soybean Contests are Big Hit with Grain Producers

A little friendly competition is a good thing. The team organizes and supervises the NY Corn and Soybean Yield Contests sponsored by the NY Corn & Soybean Growers Association. Almost 160 entries were received for the 2014 contest. Plaques are awarded to regional and statewide winners at the Corn and Soybean Expo held in Syracuse in January. The overall grand champion for corn and soybean wins a traveling trophy and an all expense trip for two to the annual Commodity Classic (Phoenix, AZ). The 2014 NY Corn Champion was Matt Kludt of Orleans County was a yield of 282.35 bu/a. John Mizro of Cayuga County was the NY soybean champion with a yield of 83.30 bu/a. Data from all the contest entries is summarized and presented at the Corn and Soybean Congresses to demonstrate what the top growers are doing to increase their yields. Growers benefit not only from the peer competition but also by pushing yields on their own farm, experimenting, and setting that personal yield benchmark higher each season.

Beef Workshops Certify Producers during BQA Month

The NY State Beef Quality Assurance Committee designated October as BQA month. BQA is a tool to promote consumer confidence in beef production by teaching producers good cattle husbandry and proper vaccination handling and recordkeeping. The national voluntary program was developed based on scientific research. For certification, New York requires a classroom portion or self-study and test, along with a chute side portion. The host farm's veterinarian assisted and demonstrated to participants how to give an injection to a beef animal. Recertification is needed every three years and is accomplished by attending an hour-long educational event covering a health topic. The NWNY Team hosted three workshops in the region to certify and recertify local producers. Through these trainings in Seneca, Wayne and Orleans Counties 48 producers were BQA certified or recertified, nearly half the number for the entire state.

Manure Gas Education: Keeping Farmers Safe

Injuries and deaths have occurred in surrounding states and 'close calls' regionally from hydrogen sulfide gas being released during manure storage agitation. The immediate risk is within a relatively small radius of the storage, generally 50 feet or less. The NWNY Team along with Yates County Soil & Water Conservation District (YC SWCD) were awarded one of 11 farm safety grants from Agricultural Safety and Health Council of America (ASHCA). The purpose of the program was to educate farmers, manure haulers, and local fire departments about the hazardous gases that form in the storages, specifically hydrogen sulfide. This gas is a by-product of the anaerobic digestion process and is exacerbated with the addition of gypsum, a material high in sulfur. This project also provided education and cost-share for 24 personal monitors for farmers and three multiple gas meters for fire departments.

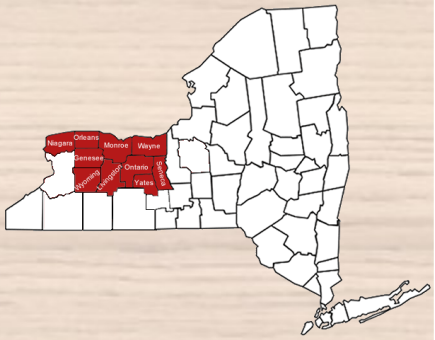
Several educational meetings were held for farmers, custom manure haulers and volunteer firefighters. Topics covered were manure gas basics, how gases form, and why gypsum bedding usage increases gas production. YC SWCD and NWNY Team presented on how to identify manure gas hot-spots around the farmstead. Feedback from one meeting led to scheduling an on-farm demonstration where 67 firefighters and farmers learned safety around manure lagoon agitation, gases and silo gas safety. Through this project a total of 202 participants have learned the hazards of manure gases. One farmer said, "Keep up the good work. You're saving lives!"

Temple Grandin Visit a Huge Success

In September the NWNY Team hosted Dr. Temple Grandin in an on-farm workshop at Lawnhurst Farms, LLC in Ontario County. Dr. Grandin is a professor of Animal Science at Colorado State University, a world-renowned expert on animal handling and one of the most well-known autistic professionals. More than 100 local dairy and beef farmers, extension educators, and people working in associated industries met in the farm shop to hear Dr. Grandin speak on reducing stress in animal handling.

Dr. Grandin raved about the excellent animal health and the clean, modern facilities. She stressed that farms such as Lawnhurst should be looking for ways to tell the public the real story behind modern dairy farms. Animal welfare and the public's perception of it are major concerns for dairy and beef farms. Hosting Dr. Grandin in Ontario County was a unique opportunity for the Team to offer our producers one of the best speakers on the topic, and the high registration and positive feedback from attendees proved the event to be a resounding success. Several 4-H extension educators and club members and parents attended. As a direct result, they have decided to implement quality assurance trainings and practices with their market animal program to ensure they are raising their livestock properly.

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.



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