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# PRO-DAIRY

2015



ANNUAL REPORT 2015

# GROWING NEW YORK'S DAIRY INDUSTRY

THROUGH EDUCATION AND RESEARCH

# PRO-DAIRY Mission

*Facilitate New York State economic development by increasing the competitiveness and sustainability of New York's dairy farm businesses through industry-applied research and educational programs that enhance farm profitability while advancing dairy producers and agribusiness professionals' knowledge, skills and enthusiasm.*



*Dr. Thomas Overton  
Director PRO-DAIRY*

2015 was a solid year overall for the dairy industry in New York. Although milk price paid to farmers was not as exceptional as the previous year, New York dairy farmers continued to reinvest in their businesses and position themselves for the future.

For more than 25 years PRO-DAIRY has linked New York's dairy farmers and agribusiness professionals to critical research and resources, giving them the information they need to build and manage robust businesses. PRO-DAIRY's contributions to educational programming and applied research have helped New York farmers continue to lead in milk production and remain among the top dairy states. According to national agriculture statistics, New York has been a national leader in dairy growth for the past 10 years.

PRO-DAIRY is committed to excellence in educational programming and applied research for the New York dairy industry in: farm business management; dairy farmer discussion groups; field crops and nutrient management; manure handling and integrated waste management systems, including renewable energy; cattle housing; animal health, well-being and productivity; and dairy youth and Extension educator programs.

PRO-DAIRY is particularly appreciative of increased funding from New York State in 2015 - 2016, which will enable us to enhance our capacity in Dairy Herd Health and Management and Dairy Forage Cropping Systems. Opportunities in these key management areas will help keep New York dairies on the cutting edge of cow care, environmental stewardship and land use.

## In 2014 - 2015, PRO-DAIRY:

- Involved more than 141 dairy producers, representing more than 90,000 cows, in its Discussion Group program, which was created originally as a funding partnership with the New York Farm Viability Institute. Groups are located across the state with several multi-county groups. Participants and focus areas range from young farmers, to grazing and organic dairies, to groups based on herd size.
- PRO-DAIRY specialists worked directly with producers and through other Extension and agriservice professionals to implement the Cornell Dairy Farm Business Summary and Analysis program. These efforts reached 120 New York dairy farms, representing more than 102,935 cows through individual, group comparison, business-focused discussion groups and other forums. Participating farms reinvested more than \$145 million in their businesses in 2014 -15.
- Began the fifth class of the Academy for Dairy Executives in Northern NY, which had 20 participants, representing 17 farms, 3 agribusinesses and 12,400 cows. The majority of participants were the junior generation of their farm.
- Partnered with Northeast Agribusiness and Feed Alliance to develop and deliver the Herd Health and Nutrition Conference as a one-day program in Syracuse, NY and West Lebanon, NH. The Syracuse site was attended by 162 agribusiness professionals, dairy producers, Cornell faculty and Cornell Cooperative Extension educators, representing nearly 86,000 cows.
- Continued to partner with *DairyBusiness East* on PRO-DAIRY's "The Manager" insert, which is delivered to 16,597 subscribers, representing 4.45 million cows, in the Eastern US. *The Manager* is also mailed to about 4,000 additional farms in New York. In 2015, publication dates were switched to correspond with distribution of the magazine at premier farm shows in the US, including World Dairy Expo in Madison, WI and the World Ag Expo in Tulare, CA, which expanded PRO-DAIRY's outreach.
- Published regular press releases about PRO-DAIRY programs and work in regional media outlets and a bimonthly column in *Lancaster Farming*. Also, published and distributed an online e-Alert for urgent notices and a monthly e-Leader newsletter.
- Partnered with NYS Energy and Research Development Authority (NYSERDA) on the Anaerobic Digestion Workforce Development Project to train a workforce of supporting engineers, technicians,

operators, and service personnel needed to grow the anaerobic digestion industry in New York, and to enhance renewable energy production from dairy biomass. 6 short courses were developed, and 5 were delivered to 26 farms directly, and 271 farms were impacted.

- Developed and conducted two continuing education workshops for professional engineers who provide environmental and CAFO engineering services to New York State dairy farmers. 56 NYS professional engineers attended and received certificates, with a total of 392 credit hours earned.
- Worked with the Department of Agriculture and Markets (DAM), Department of Environmental Conservation (DEC), Northeast Dairy Producers Association (NEDPA), and NY Farm Bureau (NYFB) on environmental and CAFO issues, particularly related to manure runoff and well contamination.
- Partnered with NEDPA, NYFB, Farm Credit East, DAM and DEC to create and deliver the CAFO Road Show 2014 with over 400 farm and planner staff attending at 4 live locations.
- Continued work with NEDPA, NYFB, Cornell Cooperative Extension and New York Center for Agricultural Medicine and Health (NYCAMH) to educate producers about Occupational Health and Safety Administration (OSHA) farm safety inspections. A bunker silo work group was formed and will work on safety issues.
- Developed and conducted the 2015 PRO-DAIRY Winter Management Series roadshow focused on "Increase Milk Components Profitably." This program was presented at 13 sites to 172 attendees.
- Worked to enhance program collaborations among Cornell Cooperative Extension Regional Specialists. A Calf Management short course was offered in November and February. 12 hours of training were provided at 13 sites with 169 farmer participants. An intensive Milk Quality short course provided 15 hours of training at 6 sites with 21 farmer participants.
- Trained 29 youth through the statewide Junior DAIRY LEADER program. Many of these graduates will choose to pursue agriculturally related careers in college. Over the program's history Junior DAIRY LEADER has introduced 346 youth to dairy careers and enhanced their skills and knowledge.
- Implemented the Dairy Acceleration Program designed to foster development of business plans

and comprehensive nutrient management plans to assist dairy farmers in strategic planning for growth of their dairies from a profitability and environmental perspective. New in 2015 was the addition of funds for the design of best management practices to assist farms with implementation of their comprehensive nutrient management plans (CNMPs). Since the program was announced in August 2013, approximately 190 farms have been awarded funds to develop a business plan, to develop a CNMP, to design best management practices, or a combination of the practices. Dairies have reinvested more than \$15 million to implement their business plans.

- Planned and held a Dairy Environmental Systems and Climate Adaptation conference with international attendance that focused on regional climate trends; climate adaptation strategies, including emerging dairy housing and manure management systems; and national and international market force drivers.

Extensive collaborations help PRO-DAIRY accomplish its mission. PRO-DAIRY's many collaborators are listed on the inside back cover. PRO-DAIRY especially appreciates the continued strong support of the New York State Department of Agriculture and Markets, the Department of Environmental Conservation, the New York State Legislature, and the Cornell University College of Agriculture and Life Sciences. Also valuable is the partnership with New York Farm Viability Institute, which brings together many organizations on behalf of the dairy industry, and has supported several PRO-DAIRY programs.

Since 1988 PRO-DAIRY specialists have committed themselves to provide top-notch programs, research and leadership to the New York State dairy industry. The results of this effort are clear: New York's dairy farmers are among the leaders in growing US milk production, managing their dairy farm businesses and ensuring environmental stewardship.



Dr. Thomas Overton  
Director, PRO-DAIRY

**Dean of the College of Agriculture  
and Life Sciences  
Kathryn Boor and  
PRO-DAIRY Director Tom Overton**



PRO-DAIRY is a valuable resource for New York Farm Bureau. The expert guidance it provides helps shape the growth of the New York dairy industry and supports how dairy farmers respond to the critical issues of the day. The wonderful collaboration between our two organizations benefits our members and the greater agricultural community.



**DEAN NORTON**  
President  
New York Farm Bureau

**The following 2014 - 2015 PRO-DAIRY programs illustrate the degree of participation by the dairy industry.**

Program	Approximate Number of Cows Represented (if available) and Attendance
Cornell Dairy Farm Business Summary and Analysis Program	103,935 cows, 120 farms (direct PRO-DAIRY contribution)
Dairy Profit Discussion Group Program	More than 90,000 cows on 141 farms
Dairy Business East Magazine (quarterly)	4.5 million cows (31 states), 16,597 dairy farmers and agribusiness professionals
Dairy Environmental Systems and Climate Adaptation Conference	130 local, national and international guests attended the conference to learn from over 40 invited speakers and 20 poster presenters.
Dairy Profit Monitor (monthly benchmarking tool)	69,059 cows (88 dairy farms)
Academy for Dairy Executives (Western and Central NY)	12,400 cows (17 dairy farms)
Operations Manager's Conference	83,172 cows, 187 participants
Winter Dairy Management Series	172 attendees (mostly producers) across 13 sites
CAFO Off-Road Show Programs	128 attendees (dairy farmers and their staff) representing 22,500 cows
Herd Health and Nutrition Conference (with Northeast Feed Alliance)	The Syracuse site was attended by 162 agribusiness professionals, dairy producers, Cornell faculty and Cornell Cooperative Extension professionals, representing nearly 86,000 cows.
CAFO Engineer Training Program	Continuing education workshop offered in two sessions. 56 Continuing Education Unit certificates, with 7 credit hours for each certificate, were earned by NYS professional engineers.

**2014 - 2015 New York Dairy Industry**

- 4,950 farms, 615,000 cows
- 4th nationally in milk production
- 13.73 billion pounds of milk annually
- \$3.5 billion (est.) in farm-gate milk revenue annually



New York's dairy industry is a major driver for the economy, constituting approximately half of the state's total agricultural receipts, and creating both direct and indirect jobs and economic growth in communities across the state. The PRO-DAIRY program serves as the critical link between New York's dairy farmers and agribusiness professionals, and the research and educational resources that support the growth of the industry. PRO-DAIRY's extensive partnerships, outreach and programming are integral to the competitiveness and sustainability of New York's dairy farm businesses, and are helping New York lead the way in our country's milk production

**RICHARD A. BALL**  
State Agriculture Commissioner  
New York State Department of Agriculture and Markets



PRO-DAIRY is an important part of NY's dairy industry. The PRO-DAIRY staff is instrumental in bringing both education and research to our dairy producers and industry partners. NEDPA is grateful for their commitment to outreach education, collaboration in solving industry challenges, and for the staff dedication to areas such as environmental stewardship, OSHA's NY Dairy LEP, participation in the NY Dairy Issues Team, coordination of comments for NY's Clean Energy initiative, and ongoing education through meetings and webinars.

**JON GREENWOOD**  
Chair  
Northeast Dairy Producers Association

# Dairy Farm Business Management

## PRO-DAIRY Specialists



**JASON KARSZES** is a Senior Extension Associate and specializes in dairy business management. His focus areas are in management education, financial analysis, decision making, budgeting and business planning. The Cornell Dairy Executive Program, Dairy Farm Business Summary, Discussion Groups and Activity Cost Analysis are some of the programs he manages.



**BETSEY HOWLAND** is a Dairy Farm Business Specialist who administers the Dairy Profit Monitor, an online, monthly profit and benchmark program measuring net milk income over feed costs. She also leads Dairy Activity Analysis projects, facilitates Dairy Profit Discussion Groups, helps plan the Academy for Dairy Executives and assists with the New York State Junior Dairy Leader Program. She received her BS in Animal Science from Cornell University.

## Dairy Farm Business Summary (DFBS) and Analysis Program

PRO-DAIRY specialists are directly involved with the statewide DFBS program, working closely with Dr. Wayne Knoblauch, Director of the DFBS program, Extension educators and producers across the state to improve business success and increase participation in the program.

### ► Impact

- For the 2014 - 2015 business year, PRO-DAIRY specialists worked directly and with other Extension and agriservice professionals to conduct the DFBS with 120 New York dairy farms, that represented a total of 103,935 cows. 95% of the farms that participated in the program in 2013 completed the DFBS for 2014.
  - Average herd size increased by 6.0%.
  - Milk sold off the farms increased by 5.2%.
  - Labor hours increased by 7.6%.
  - \$145,371,428 was invested back into the businesses in 2014.
- Reports were developed and presentations were given at 18 meetings for producers, students and agriservice personnel. Focus was on the financial performance and use of the information in managing the business. DFBS summary data was used to develop case studies that analyzed multiple years of individual farms for use in Extension programs. The case studies and other relative educational materials were used to train farm management and private consultants on using the DFBS with farm businesses. DFBS benchmarks and trends were used in an additional 6 presentations to dairy producers and industry groups. With PRO-DAIRY involvement in the DFBS program, DFBS has compiled business analysis summaries for small and large herds, along with regional and statewide publications, which facilitates comparisons between similar farms.

## Dairy Profit Discussion Groups – Business Focused

Through the efforts of the Dairy Profit Discussion Group Program, another discussion group was added, with 9 groups around the state now focusing on financial and business management development and utilizing their individual business performance data at their meetings. The Dairy Farm Business Summary, Dairy Profit Monitor, and activity analysis tools are used for the discussions.

### ► Impact

- PRO-DAIRY specialists directly facilitate 6 of the business-focused groups, and prepare reports and interact with 3 additional groups that are facilitated by local Extension and agriservice personnel, interacting with 90 farms representing 83,800 cows. Because of their participation in the program, survey results indicate:
  - 95% of participants made changes to some aspect of their business.
  - 93% of participants felt that they had improved their business.
  - 52% positively changed income and/or expenses.
  - 95% stay in contact with other members of their groups outside of formal meetings.

## Cornell Dairy Executive Program

The Cornell Dairy Executive Program (CDEP) is a multi-session executive level management training program for dairy producers interested in improving their business management skills in an increasingly complex business environment. Class 2014 - 2015 has started and is the largest class registered to date. Of the 31 participants registered for the program, 26 are dairy producers who own over 40,489 cows. The program consists of three one-week programs during the year.

## ► Impact

- Class 2012 - 2013 graduates indicated as a result of participation:
  - 90% felt that they improved some aspect of their business.
  - 95% made a change in their business as a result of attending the program.
  - 40% saw a positive impact to revenue and expenses while they attended the program.
  - 45% felt that 50% or more of the information and ideas presented during the program were new and useful.



## Dairy Profit Monitor

This online business analysis tool continues to be updated and improved. The tool provides a monthly snapshot of key operating parameters and efficiencies at the farm level and is used to track progress and trends over time, assess impacts of management changes and highlight potential areas of opportunity within the business. In addition, the programming allows farmers and their consultants to create a customized benchmark report for a particular month based on selected characteristics. Farmers can benchmark according to size, geographic area and management practices.

In the 2014 program year, a report created in 2013 was updated to allow farmers to compare how their performance on certain parameters changed from month to month and against other farms. In addition, data from the USDA Margin Protection Plan (MPP) was used to calculate the MPP Margin and compared it to individual farm's Income over Feed Costs to help farms make better-informed decisions on MPP participation.

## ► Impact

- In 2014, 88 dairies representing 69,059 cows entered information online to use the program's report generating capabilities. Information from the DPM program was used in a variety of venues, including business-focused discussion groups, on-farm Dairy Profit Teams, management meetings set up by the farm to assess progress and goal setting, and case farm projects for college students. PRO-DAIRY staff presented educational programs using the Dairy Profit Monitor information and decision-making to 18 groups.
- From July 2012 to August 2014 participating farms in the Dairy Profit Monitor increased their Net Milk Income over Total Lactating Feed Costs

by an average of \$187,471 per farm annually. This is calculated using a fixed milk price and fixed feed cost over that period of time.

## Enterprise Analysis Project

The Cost of Manure Application Study was published in January 2015.

## ► Impact

- This project involved 27 farms representing a total of 22,676 cows. 13 farms milking 11,640 cows completed analysis of the cost of raising dairy replacements. 13 farms completed analysis of the cost of mixing and delivering feed.

## Academy for Dairy Executives

The Academy for Dairy Executives was started in 2010 to address the need for educational programs targeted at new business managers interested in managing today's modern dairy businesses.

## ► Impact

- In November 2014, the 5th class started the Academy for Dairy Executives in Northern New York representing 17 farms, 3 agribusinesses and 12,400 cows. The majority of participants were the junior generation of their dairy farm and will use the training to effectively communicate and cooperate with the senior generation on the farm. This year's program was conducted in collaboration with Cornell Cooperative Extension educators from Northern NY.

### **Farm family uses PRO-DAIRY analysis tools to support generational transfer and farm financial success.**

#### **Profile of the Beller Family Carthage, NY**



Glenn and Emily Beller have seen a number of changes on their century old farm. One of the biggest has been the introduction of computers and the amount of data that is collected.

The Bellers have turned to PRO-DAIRY supported programs Dairy Farm Business Summary (DFBS) and Dairy Profit Monitor (DPM) to make sense of it all.

The century farm started when Glenn's father bought 9 cows from his father. Glenn went into partnership with his father in 1975 and married Emily in 1978. Their son Jon joined the now nearly 600-cow farm 11 years ago. His wife, Taren, is a school teacher.

"When we started farming we didn't have computers. On the information side it has been quite exciting. It cuts across all areas," Glenn said.

He points to GPS use in harvest to data collection in the milking center. "We have a lot of data. A challenge to this is gathering information and getting it in a way so it can be kept. A lot of the data is historical. Unless you have a number of years of data you don't really see changes," Glenn said. "It's also helpful to look back when a problem does arise."

Benchmarking through DFBS, DPM and other programs has allowed the farm to compare itself against itself and to other farms to help identify potential areas of improvement. The farm family evaluates milk production, feed costs, veterinary costs, per cow and per hundredweight costs, cost of raising heifers, and labor costs.

"Hands down it's helping you use all the information you have. It's important to compare benchmarks, to compare yourself to yourself, and to the top farms in the industry," Glenn said. "It really challenges you to see your farm as the business that it is."

One constant for the farm has been strategic growth, supported by advisory teams, Farm Credit and PRO-DAIRY's analysis tools. Back when they had 89 cows their veterinarian and herd consultant Dr. John Ferry had them begin envisioning and planning for their retirement. About that same time they made a "pivotal" decision to build a new freestall barn. More recently through an advisory team the farm family envisioned "what if" scenarios. Their planning paid off and when wished for land became available, and with the return of their son, they were poised for action.

"We don't want to be on the cutting edge of everything, but we also don't want to be old and obsolete," Glenn said. "Jon's return supported a more aggressive approach."

The advisory team has also supported generational transfer and each partner has separate and clear responsibilities. Jon manages the dairy and the workers, Glenn the crops and the feeders, and Emily the youngstock and bookwork.

The farm has grown so that Glenn and Emily no longer milk cows themselves, but still maintain hands-on management.

"I used to do all the milkings," Emily said. "The younger generation

doesn't want that lifestyle. It was a life change for us to have Sundays off and to have evenings off."

"We've always had good luck and build relationships with employees. The employees have to enjoy what they're doing, even if every job isn't enjoyable," Glenn said.

And, many of the positions require skilled labor, which often surprises legislators during tours held at the farm, he said.

"It's not unusual to operate a \$100,000 of equipment," Glenn said. "There's a responsibility that comes with that."

Growing large enough to support hired labor has also meant that the farm family has more life balance and can occasionally leave the farm to attend meetings, conferences and participate in leadership programs. Five years ago, when the farm had 180 cows, they participated in PRO-DAIRY's Cornell Dairy Executive Program. Jon is a graduate of PRO-DAIRY's Academy for Dairy Executives.

"We've met nice people and kept in contact," Emily said. "We always come home with a few things we need to work on."

They would like to travel more. And for this farm family that means incorporating stops to visit with other farmers and to tour other farms. Because of their planning, this is possible.

"It's a very rewarding occupation," she said, "especially to see grandchildren involved."

# Field Crops/Nutrient Management

## PRO-DAIRY Specialist



**KARL CZYMMEK** uses his background in production agriculture and legal training to work on nutrient management, environmental and other regulatory issues of importance to the NY dairy industry.

The PRO-DAIRY Field Crops and Nutrient Management Program provides nutrient management educational programs. Emphasis is on optimizing crop yields; reducing fertilizer costs; accounting for manure nutrients; identifying related environmental benefits; compliance with CAFO and nutrient management regulations; and training for farm staff to increase awareness of CAFO Permit regulations, and to reduce the risk of causing water quality problems. Programming efforts also addressed Occupational Safety and Health Administration (OSHA) related worker safety in response to an OSHA Local Emphasis Program that focuses on dairy farm safety.

Overall, nearly 1,200 people attended nutrient management and related programs that involved PRO-DAIRY efforts, including farm managers and staff, CAFO planners and support staff, Natural Resources Conservation Service (NRCS) and Soil and Water Conservation Districts (SWCD).

## CNMP Training for Public and Private Sector Staff

PRO-DAIRY continued to help train and add to the pool of planners that can develop CAFO plans.

### ► Impact

- Basic nutrient management training was delivered to 22 individuals in March 2015. These trainees consisted mostly of new public and private sector conservation planning staff.

## CAFO Off-Road Show for Farm Staff

The CAFO Off-Road Show continues to evolve and is an important programming effort as more continuing education requirements for manure applicators are likely to be required in the next CAFO Permit. The program is designed to reach all farm staff and emphasizes issues of safety, regulations, and the importance of following application rates, spreading setbacks, keeping records and knowing what to do in case of a spill or related emergency.

### ► Impact

- The Off-Road Show nutrient management training was provided to staff from 7 farms, reaching 38 individuals and representing dairies with an estimated 7,500 cows.
- Additionally, assistance was provided to Dairy Support Services Co, Cayuga Soil and Water Conservation District, and DEC staff, to deliver programming similar to the CAFO Off-Road Show to 90 individuals, representing many medium and large dairies in the Cortland and Cayuga County area with at least 15,000 cows represented.
- A similar program was delivered to 30 individuals at the NEDPA Annual meeting. Farm managers report that after this training staff ask more questions about setbacks and are more vigilant about potential manure related risks.

## Nutrient Management SPEAR Program

PRO-DAIRY continues to work with the Nutrient Management Spear Program in a strong and productive partnership to develop and interpret soil fertility research data from commercial and research farms and to develop guidelines for cover crops, as well as improved manure and nitrogen and phosphorus management.

## ► Impact

- PRO-DAIRY continues to partner on the grant to evaluate phosphorus (P) indices across the Chesapeake Bay Basin. The NY P index has undergone significant testing compared to selected models and is likely to result in future revisions to the NY P Index.
- PRO-DAIRY continues to support Department of Agriculture and Markets, DEC and Upper Susquehanna Coalition (USC) staff to address nutrient management issues related to implementation of NY's Upper Susquehanna Total Maximum Daily Load (TMDL) work plan. This effort continues to strengthen the case that NY's broad Agricultural Environmental Management (AEM) partnership is doing an excellent job of protecting our natural resources.

## Groundwater Work Group and Manure Work Group

PRO-DAIRY staff continues to provide leadership to the Groundwater Work Group that investigates well contamination issues where dairy manure is a suspected contaminant, and makes recommendations regarding manure management practices to reduce risk of groundwater contamination.

## ► Impact

- Additional locations are being evaluated in 2015, with new situations in Central and Northern New York karst soil areas.

## Water Quality Work Group

Significant effort was placed on winter manure application and how to reduce runoff risk post application. The challenging weather of winter and spring 2014, along with similar challenges in 2015, suggest that additional steps need to be taken by dairy producers to reduce risks. PRO-DAIRY worked with NYFB and NEDPA to develop a Water Quality Work Group of farmers with organizational staff and technical advisors from PRO-DAIRY, the Department of Agriculture and Markets and the private sector. The goal was for farmers to proactively create unified solutions to reduce environmental risk. Additionally, a campus academic group was formed to address technical aspects of winter manure application, to review and update existing guidelines, and to review the conditions experienced during the winter of 2014.

## ► Impact

- This group is revising the winter and wet weather manure application guidelines document for release in late 2015.

## PRO-DAIRY Water Use Calculator

This is a joint project between PRO-DAIRY and DEC to educate NYS dairy producers about additional changes to New York's water use reporting law and related requirements.

## ► Impact

- In January 2015 the calculator was again updated to reflect minor changes in the form made by DEC so that farmers can continue to use it to estimate and report water use.

**Use of drag hose equipment to spread manure increases fertilizer efficiency and reduces soil compaction.**



***PRO-DAIRY serves as a technical advisor on an Issues Management Group with American Dairy Association and Dairy Council Inc. (ADADC), New York Animal Agriculture Coalition (NYAAC), New York Farm Bureau (NYFB) and Northeast Dairy Producers Association (NEDPA).***

Communications professionals from American Dairy Association and Dairy Council Inc. (ADADC), New York Animal Agriculture Coalition (NYAAC), New York Farm Bureau (NYFB) and Northeast Dairy Producers Association (NEDPA) partnered nearly five years ago to form a cross-industry issues management group.

The group meets quarterly to proactively create a unified strategy to respond to industry challenges and outreach opportunities. The group seeks to span the gap between industry and consumers. Issues discussed include animal care, environmental management, water quality, communication with non-farm neighbors, and construction of new manure lagoons.

“It was a realization that when issues were happening that people were going to different groups, and the industry would be better served if we worked together,” said Beth Meyer, ADADC Vice President, Industry Communications. “Farmers are seeing the need to be more transparent. Our role is to help them.”

“It’s a quicker response and a better response for the industry,” said Jessica Ziehm, NYAAC Executive Director. “It helps us all to divvy up responsibilities and to tap into expertise.”

PRO-DAIRY’s Karl Czymmek joined the team in 2015, and the group relies on his legal and technical expertise.

“The dairy community is engaged with doing things well and is looking to improve stewardship. Karl has been a wonderful resource. He gives us the

professional experience to understand the issues at a more technical level, so as an industry we can respond more effectively. It’s important to get the facts right. He makes sure what we are saying is correct. He is approachable, relatable and an educator at heart,” said Steve Ammerman, NYFB Public Affairs Manager. “That’s important whether it’s a farmer, a lawmaker, a legislator or a neighbor. He helps us to be proactive in the message. He’s boots on the ground and works with farmers every day and knows their needs.”

“Karl Czymmek is a key resource as we work to support farmers, consultants and the public on both nutrient management education and clarification for industry standards, best management practices and regulatory compliance,” said Tonya Van Slyke, NEDPA Executive Director.

“It’s fantastic to have someone on board with Karl’s skill set. He puts technical topics into laymen’s terms and he brings to our attention points we might not have thought of. He allows us to be of better service to farmers,” Meyer said.

“A lot of crises are nutrient related, including issues around manure spills or odor. Karl helps balance the outreach strategy from a legal and technical perspective. He brings a wealth of resources through his contacts with CAFO planners and engineers. This kind of service is a definite benefit as we try to bridge the gap between farmers and consumers in cases where emotions can be high. He helps farmers understand the importance of safety and that the public image of agriculture is important,” Ziehm said.



# Dairy Environmental Systems and Renewable Energy

## PRO-DAIRY Specialists



**CURT GOOCH** is a Dairy Environmental Systems and Sustainability Engineer with the PRO-DAIRY program and heads up the Dairy Environmental Systems group. The group conducts applied research, develops and delivers Extension materials, and performs farm consultations for range a topics, including: cow comfort and well-being, ventilation/heat stress mitigation, dairy facilities, manure and byproduct management, renewable energy, odor and air emissions, and farm safety.



**SAM STEINBERG** is a Dairy Facilities and Environmental Systems Engineer in Training with PRO-DAIRY. His responsibilities within PRO-DAIRY include advising dairy farms on various aspects of project development and management, assisting in the preparation of design drawings for dairy housing and manure handling and processing systems, and participating in the conduct of educational programs related to facilities and manure systems engineering.

The Dairy Environmental Systems and Renewable Energy program focuses on the technical, economical, practical and managerial aspects of dairy cattle systems. Focus is on quality housing for cattle and farm byproducts that promote environmental stewardship and sustainability, including air quality, water quality, and renewable energy opportunities, specifically anaerobic digestion with energy conversion coupled with advanced manure handling, treatment, storage and land application.

## Dairy Biomass-Based Renewable Energy

PRO-DAIRY specialists are primary developers and providers of information and education on bio-mass-based renewable energy and sponsored projects. This area continues to be a major focus.

### *Anaerobic Digestion Workforce Development Project*

The *Anaerobic Digester Workforce Development Project* (WFDP) was a NYSEERDA-funded multi-year project to develop and deliver educational programs targeted to workforces in the dairy farm-based anaerobic digestion sector of the clean energy field. This project trained supporting engineers, technicians, operators and service personnel, all needed to grow the digestion industry. Included in the project is the development of technical short courses that provide educational training to persons who are involved in the planning and implementation of dairy farm-based anaerobic digestion systems and to those currently, or who will soon be, managing existing operating systems.

### ► Impact

- The *Technical Feasibility of on-farm Anaerobic Digestion* short-course was delivered in 2 workshops, with 62 farms receiving indirect impacts.
- The *Economic Feasibility of on-farm Anaerobic Digestion and Economic Assessment Model Instruction Guide* short-course was delivered in 3 workshops, with 90 farms receiving indirect impacts.
- The *Practical Considerations and Implementation of Anaerobic Digestion System from Planning and Design to Construction* short-course was delivered in 2 workshops, with 40 farms receiving indirect impacts.
- The *Technician's Start-Up and Operation* short-course curriculum is in final development.
- The *Biogas Clean-up and Utilization Systems Selection, Operation and Maintenance* short-course was delivered in 1 workshop, with 36 farms receiving indirect impacts.
- The *Public Relations* short-course was delivered in 4 workshops, with 43 farms receiving indirect impacts.

Also included was the development and implementation of on-farm laboratories for the diagnostic and performance evaluation of anaerobic digesters. Although anaerobic digestion is well understood at the technical level, system failures on-farm are still too frequent. Recent applied studies conducted in NYS revealed that some anaerobic digester systems generated less than 60% of their electric energy potential due to poor anaerobic digester performance and system failure. Since most of these problems occur as a result of inadequate operational management and lack of process control, PRO-DAIRY implemented a program to educate and support a workforce of anaerobic digester operators and technicians across the state. Analytical laboratories were conceived, developed and installed on five selected farm-based anaerobic digester systems to diagnose digester problems and evaluate their performance. Preliminary results of the program implementation reveal that periodic monitoring is essential to detect system upsets more efficiently, and to identify and correct the source of the problem

before system failure occurs. The project demonstrated that with adequate training existing farm personnel are capable of monitoring their systems autonomously and with efficacy.

## ► Impact

- It is expected that more anaerobic digester systems in NY and throughout the US will implement operator-training programs and monitor their process periodically. This would positively impact the waste treatment and bioenergy production performance of digester systems in this country.
- An important lesson of this project was that manure-only anaerobic digesters may not need to perform the thorough analysis protocol initially developed to assess process stability. As opposed to co-digestion operations, manure-only systems have steady loading rates and influent characteristics. Because of this, these systems are very stable, and have a fairly low risk of experiencing major process upsets, unless operating conditions are dramatically changed. As a result, PRO-DAIRY developed a customized protocol for the main types of operations in the US. Some operations, such as manure-only digesters, may only require sporadic performance analyses rather than a frequent stability assessment. Co-digestion operations may require longer lab time and a more complex lab setup to accommodate the additional analyses to assess process stability.
- The WFDP team also created and expanded an online resource library (see: [www.manuremanagement.cornell.edu](http://www.manuremanagement.cornell.edu)) to provide current information (targeted towards multiple audiences and knowledge levels) relating to biogas systems, as this is the only place where concise, unbiased information for these systems in New York exists.

### ***Dairy Manure-Based Anaerobic Digesters with Commercial Greenhouses: Develop, Quantify and Disseminate Synergistic Opportunities***

This project is a 3-year funded project, that commenced in October 2012, with federal funds. This project seeks to expand upon a published theoretical analysis that showed a digester could meet nearly all of the energy needs of a digester and an energy-intensive commercial greenhouse operation.

PRO-DAIRY's project entails the development of a greenhouse energy model that would allow the user to quantify the energy usage (heat and electricity) of a greenhouse size of their choice. Coupled with the anaerobic digestion model, the greenhouse model would allow a user to estimate the size of greenhouse facility that could be supported by a digester.



## ► Impact

- The past year has focused on finalizing the two models using information collected from the collaborating dairy farms. Digesters on these farms were outfitted with project-specific instrumentation installed to collect long-term data needed for model development and verification. Several “what if” scenarios were run using the models and initial outputs and results from this effort were used as a basis for development and delivery of Extension and outreach materials.
- Longer term, this project may lead to positive outcomes, including reduced greenhouse gas emissions, increased revenue streams for anaerobic digester owners, lowered cost of renewable energy supply for greenhouse owners, and contribution to sustainability of rural communities through income and employment opportunities. Optimized greenhouses provide consistent year-round production that is attractive from a local production perspective and from the ability to provide long-term production contracts to wholesalers. Local diversified and distributed production is more resilient to climate change and makes more efficient use of water and nutrients.

### ***Comprehensive Investigation into the Use of On-Farm Generated Renewable Combined Heat and Power (CHP) Energy to Mitigate the Effects of Environmental Stress on Dairy Cows in New York State***

This project looks at the use of anaerobic digester system surplus heat for cooling cows. In working with other project collaborators at Cornell University's Department of Biological and Environmental Engineering, PRO-DAIRY supplied, programmed, assisted in installation, and monitored the data logging system needed for the project. PRO-DAIRY also assisted with the design of the cow cooling equipment. Research results are being developed by a PhD candidate working on this project. Extension and outreach materials will be written after the project

final report is accepted by NYS Energy Research and Development Authority (NYSERDA), the project sponsor.

### ► **Impact**

- Results of this work will provide a clear understanding of the overall potential to conductively cool cows when they are resting in stalls. If the results are favorable, new methods to cool dairy cows will be made available to farmers.

## **Animal Agriculture and Climate Change**

The Animal Agriculture and Climate Change project, funded primarily by the USDA, is a partnership among five land grant universities nationwide. The first objective is to equip Extension personnel and stakeholder representatives to assess stakeholder needs relative to climate change mitigation and adaptation and to deliver educational programs that target those needs. The second objective is to provide on-demand web access to science-based information, educational resources, and decision-support tools to stakeholder groups and the public on climate change related to animal agriculture. The third objective is to coordinate efforts so information and resources are utilized optimally at state, regional and national levels.

### ► **Impact**

- The primary desired impact is that stakeholder decisions result in reduced greenhouse gas emissions while enhancing America's capacity to produce meat, milk, eggs and other animal products.
- In July 2015, a 3-day Northeast regional Dairy Environmental Systems and Climate Adaptations Conference and tours were held with a focus on emerging dairy housing and manure management system topics in conjunction with regional climate trends and national and international market force drivers. 130 local, national and international guests attended the conference to learn from over 40 invited speakers and 20 poster presenters. A full conference proceeding was developed and disseminated at the conference, and most oral and poster presentations were recorded, edited, and posted on our website.

## **Regulated Air Emissions**

PRO-DAIRY continues to remain engaged with National Air Emissions Monitoring Study (NAEMS) data analysis being performed by the US Environmental Protection Agency (EPA). The EPA is still in the process of analyzing data presented from reports filed in 2011. The outcome of EPA's analysis will be the development of a standardized method for all US dairy farms to estimate their regulated air emissions (ammonia-

nitrogen, hydrogen sulfide, dust, and volatile organic compounds). Release date of the final standardized method is unknown.

### ► **Impact**

- Dairy farmers who are participating in the EPA Air Emissions Consent Agreement and the Final Order are informed about the progress of data analysis and development of the resulting planned Emission Estimation Methodologies to remain in compliance with US Clean Air laws.

## **CAFO Engineer Training Program**

PRO-DAIRY developed a training session specifically to educate engineers on dairy industry topics. Two sessions were held in 2015 in Ithaca, NY and focused on professional engineering ethics; professional liability; farm safety and the OSHA LEP inspection program; concrete quality control; Dairy Acceleration Program updates and implementation guidelines; and winter manure spreading challenges.

### ► **Impact**

- 56 Continuing Education Unit certificates, with over 7 credit hours for each certificate, were earned by NYS professional engineers.

## **OSHA Dairy Local Emphasis Program (LEP)**

The NYS Occupational Safety and Health Administration (OSHA) Dairy Work Group comprised of PRO-DAIRY, Northeast Dairy Producers Association (NEDPA), NY Farm Bureau (NYFB), NY Center for Agricultural Medicine and Health (NYCAMH) and Cornell Cooperative Extension (CCE), continues to work with OSHA on the topic of farm safety, and specifically on the LEP random inspections. Focus in 2015 was on conducting an on-farm in-house OSHA training session for OSHA LEP inspectors to learn more about dairy farmsteads. Farmers are additionally engaged through PRO-DAIRY e-Alerts. Specific work continues in the area of bunker silo hazard mitigation.

### ► **Impact**

- Work conducted in 2013 - 2014 by the OSHA Work Group resulted in a delay of specific inspections of bunker/trench silos under the Local Emphasis Program (LEP) by OSHA, but the Work Group was charged with continuing to collaborate with dairy farmers and OSHA to address the challenges with horizontal silo safety. In 2015, OSHA LEP inspectors participated in on-farm training sessions and over 30 NYS dairy producers received OSHA feedback on hazard mitigation in and around horizontal silos.

## 2015 Dairy Environmental Systems and Climate Adaptation Conference and Tours a Success!

Over 125 visitors from several countries attended the Climate Change and Animal Agriculture conference held on Cornell's campus in July. The conference presented a unique opportunity to learn about emerging dairy housing and manure management systems in conjunction with regional climate trends and national and international market force drivers. Climate adaptation strategies for the Northeast and upper Midwest were also a conference focus.

"The recent Climate Change and Animal Agriculture conference was one of the best conferences I have participated in for quite some time. The conference was exceptionally well organized, and with over 50 speakers, covered all of the main topics associated with dairy systems and climate change," said Michael P. Hoffmann Associate Dean, College of Agriculture and Life Sciences. "I hope that the conference raised the profile of the enormous risks posed by a rapidly warming climate."

The conference featured multiple tour options showcasing on-farm integrated waste handling/treatment systems and on-farm climate adaptation strategies.

Speakers included:

- Hans Johr: The Corporate Head of Agriculture for Nestle in Switzerland. He discussed the role of climate change with respect to global ag policy decision making, while highlighting the importance of planning for and adapting to perceived changes in climate and their impact on ag facilities.
- John Fiscalini: California dairyman and cheese-maker, home of the world-famous Fiscalini farmstead cheese.
- Frank Mitloehner: Professor and Extension Specialist at UC-Davis, specializing in agricultural air quality and sustainability.

Some key highlights, according to PRO-DAIRY's Curt Gooch, who organized the conference, are that average temperatures are predicted to be higher than they are now. There will be a change in rainfall patterns and intensity, with more precipitation in the winter, wetter springs, and hot and dry summers.

"We're already having to adapt, with different seed varieties, and this will continue," he said. And, he said, "It will be even more important to put heat mitigation strategies in the barn if you're not already doing so now."

Also, he said, more thought will need to be given to manure storage as rainfall patterns may increase the amount of storage needed, and the window to apply manure and plant crops in the spring may be shortened.

Another consideration will be implementing more soil conservation practices, including use of cover crops.

"The good news is in upstate NY we're not going to run out of water," he said. "It's both an asset and a liability. We will need to manage manure and runoff."

## New York State's Clean Energy Fund and Renewable Energy Vision

In 2014 the Public Service Commission (PSC) directed the New York State Energy Research and Development Authority (NYSERDA) to develop a new plan to advance renewable energy in NY.

### ► Impact

- PRO-DAIRY worked with key stakeholders to re-introduce the recommendation for the development of a NYS Anaerobic Digester Task Force, which resulted in the development of the NYS Clean Energy for Agriculture Task Force (CEFATF), organized by NYSERDA. PRO-DAIRY is an organizational team member and is a member of the CEFATF and the leader of the anaerobic digester work group.

## Dairy Facilities/Production Systems Industry Support

There are many ways to have meaningful impact on the NYS dairy industry. Extending reach through "multipliers," such as other Extension educators and agribusiness personnel is one, and working directly with dairy producers is another. PRO-DAIRY worked with producers across NY on a wide variety of projects, ranging from new housing facilities to renovations on existing facilities, to increase productivity and efficiency.

### ► Impact

- One-on-one help with dairy freestall renovation plans, including stall designs, ventilation, cow cooling, manure gathering and transfer, and water delivery.
- One-on-one design assistance with group-fed pre-weaned calf barns.
- One-on-one assistance with anaerobic digester feasibility, troubleshooting and modifications.
- Cow comfort assessment through the use of position logger and environmental instrumentation.
- Comparison of various types of lighting systems (LED and fluorescent) at different lighting levels for use in photoperiod manipulation for production dairy farms.
- Estimated construction budgets for new and renovation projects – some of these requests were for the Dairy Acceleration Program.
- Feed facility design layouts, including bunker silo sizing, commodity storage and leachate collection systems.
- A document about snow removal from barn roofs in response to heavy winter storms.

***“Curt was very willing to listen to our concerns. It took a lot of planning. He understood this system and saw value in it.”***

**Angie Pieper  
Delaware County, NY**

Farmers in Delaware County, NY have a heightened awareness of the environmental impact of farms as the Cannonsville Reservoir serves as an unfiltered water source for New York City.

Angie and Lenny Pieper chose to move to New York from Maryland, initially renting a farm in Delaware County, that they now own. PRO-DAIRY engineer Curt Gooch was tagged to help the farm with a calf housing project that was prioritized by the region’s New York City Watershed Agricultural Program. The watershed is a voluntary program intended to protect drinking water quality for the nine million users of New York City’s reservoir system, while helping to sustain agriculture’s economic viability in the region.

“We knew NY was dairy friendly, so we looked for a few years before we found a farm to rent,” Angie said about their 110-milking cow farm. “We get so much help from the watershed project that it’s hard to not want to stay.”

Before this project calves were housed in hutches in front of a freestall barn, located near a stream that feeds the reservoir, which raises concerns about Cryptosporidium and Giardia contamination, said Dale Dewing, Watershed Team Leader, Cornell Cooperative Extension of Delaware County, Watershed Agricultural Program.

“We investigated a number of options and decided that the conversion of a tie stall that was structurally in good condition provided the most promise if it could be properly ventilated based on calf needs. That’s where we brought Curt in to help us. We asked, is it possible? And if so, how would it be engineered?”

The tie stall was a show cattle barn in the 1970’s and was a “Cadillac” system of the time.

“It was great to use parts of it in our modern system,” Dewing said.

The barn was converted to LED lighting for a bright and efficient space. Watershed engineering staff designed concrete work to create more headspace for Skid Steer use, and designed pens and other best management



practices. But the stumbling block was ventilation, so Gooch’s expertise was tapped.

“PRO-DAIRY provides expertise that is not available otherwise and provides us with resources we couldn’t justify to have all to ourselves,” Dewing said. “It was hard to find solutions to retrofit the ventilation at Piepers. Some other engineers said it couldn’t be done.”

Gooch has partnered with the watershed on a number of other projects. For the Piepers, he knew how to retrofit the barn in a way to meet the calf needs, showed the farm owners and watershed partners examples of similar barns, and designed an automated system of fans and baffles where air is drawn up and around the barn, so animals have a constant flow of fresh air but it is never directly blown on them.

“Curt was very willing to listen to our concerns. We worked with him for about a year. It took a lot of planning. He understood this system and saw value in it,” Angie said.

Calves moved into the renovated barn in October 2014.

“Calves have done great. They are gaining more weight than they used to now that they’re in a constant environment. Weather conditions are difficult in a hutch. It was extremely hard to keep them dry. Less grain is wasted to weather now, too,” she said. “Environmentally friendly is good for everyone. We need efficiency as hired help is limited.”

The watershed presents a unique challenge, Dewing said, as many farms aren’t large enough to be required to meet CAFO regulations, but do need CAFO level infrastructure. All of the agencies in the watershed work together to make sure farms are in compliance with environmental regulations.

“We have unique skills and we’re very strong together,” Dewing said. “Our role is a critical resource role to make sure we are all connected to the best and brightest with research-backed projects.”

# Dairy Profit Discussion Groups

## PRO-DAIRY Specialist



**KATHY BARRETT'S** program focus is statewide dairy management programs, including providing leadership for the Dairy Profit Discussion Groups, and coordinating statewide programs, including Winter Dairy Management, the Hoof Health and Lameness workshop and Empire Farm Days Dairy Profit Seminars. She draws on years of experience working directly with farmers through Cornell Cooperative Extension and a farmer-led board of directors.

## Dairy Profit Discussion Groups Increase Farm Profitability

Dairy Profit Discussion Groups, established by PRO-DAIRY and the New York Farm Viability Institute, continue to be an effective method to increase farm profitability and quality of life for farm families and rural communities. The program brings farmers together to share ideas and experiences and to learn new ways to improve the profitability of their farms. The groups represent the diversity of the industry both in geography and production management systems. Each group has a targeted membership so that there is a shared commonality. This ensures that the group discussions are meaningful and valuable for the group members. Extension educators and agribusiness professionals facilitate and coordinate the groups. Some of the groups are: young farmer, dairy women, organic, middle managers, grazing, large herd, mid-size herd, small herd, dairy managers in transition and herd managers.

Groups meet regularly and self-select goals and topics to maximize the benefits to the members. Consequently a broad-spectrum of dairy farm management topics are covered. Topics included: reproduction technology, forage quality, income over feed costs, nutrition, transition cow management, facilities design, ventilation, barn renovation, parlor considerations, expansion considerations, employee management, calf and heifer raising, automated calf feeding systems, financial record keeping, neighbor relations, risk management strategies, cow comfort, stocking density impacts, quality milk production, bedding systems, cull cow handling and marketing, managing feed shrink, milk marketing, farm transfer, use of the Cornell Dairy Profit Monitor, and the Cornell Dairy Farm Business Summary.

Dairy Profit Discussion groups provide farmers with the opportunity to:

- Discuss and exchange ideas with farmers they respect.
- Draw on the strong knowledge base of their peers.
- Progress toward individual farm goals for profitability.
- Learn from the substantial real world experience of the other farmers.
- Interact with industry professionals and other invited resource people in a manner directed by the farmers.
- Build professional relationships and networks with other farmers.



## ► Impact

- 9 Dairy Profit Discussion Groups currently operate with over 141 farmers participating, collectively milking over 90,000 cows. Groups are located across the state.
- Farmers were surveyed and interviewed by group facilitators to determine changes in farm practices and adoption of production and management tools as a result of participating in these groups. All group facilitators reported that their discussion groups made progress towards improving profitability and implementing appropriate technology.

# Professional Development Opportunities

## Winter Dairy Management

The Winter Dairy Management Program of 2015 focused on how to increase a farm's profitability by increasing milk component yields. Presentations included Impact of Milk Components on Milk Check with Jason Karszes, Betsey Howland and Kathy Barrett of Cornell PRO-DAIRY; Understanding Income over Feed Costs and its Impact on Profitability with Jason Karszes, Betsey Howland and Dr. Tom Overton, Cornell PRO-DAIRY; Dairy Nutrition's Impact on Milk Components with Dr. Tom Overton, Cornell PRO-DAIRY and Dave Balbian, Regional Dairy Specialist Cornell Cooperative Extension; and a presentation by a local farmer who increased profitability with increased milk components, including discussion about nutrition and environmental factors.

### ► Impact

- The program was presented at 13 sites across the state to 172 producers.

## Empire Farm Days Profit Seminars

PRO-DAIRY continues to partner with *DairyBusiness* Communications to develop and deliver the annual Dairy Profit Seminars at Empire Farm Days. The August 2015 seminars featured panel discussions and speakers on "Milk Quality: How and Why," "Re-Investing in Your Dairy – The Planning Process," and "Using Income Over Feed Costs to Manage Your Dairy."

### ► Impact

- This year's seminars were well-received with attendance ranging up to 100 participants each day.

## 2015 Operations Managers Conference – in collaboration with Northeast Dairy Producers Association (NEDPA)

In collaboration with NEDPA, PRO-DAIRY planned, organized and hosted the 2015 Operations Managers Conference. This conference is bi-annual and presentations focus on management skills and techniques that can improve the daily operation and performance of modern dairy farms. General session topics included: Increasing Employee Engagement: Getting the Best Through Understanding Your Organizational Climate; The Positive Power of Servant Leadership; and Communicating for Results.

### ► Impact

- In 2015, 187 attendees participated in the conference, representing more than 83,000 cows.

## 2015 Herd Health and Nutrition Conference – in collaboration with Northeast Agribusiness and Feed Alliance

In collaboration with the Northeast Agribusiness and Feed Alliance, PRO-DAIRY planned, organized and hosted the Syracuse site of the 2015 Herd Health and Nutrition Conference. This conference is also held in West Lebanon, NH. Topics for the 2015 conference included: Starch Availability, Measurement and Implications for Ration Formulation; Fiber Digestion: New Concepts to Improve Feeding of Higher Forage Diets; The Metabolism and Productive Responses to Heat Stress: Potential Nutritional Strategies; and Fatty Acid Nutrition and Milk Fat Depression.

### ► Impact

- The Syracuse site was attended by 162 agribusiness professionals, dairy producers, Cornell faculty and Cornell Cooperative Extension educators, representing nearly 86,000 cows.

## Collaborators for Dairy Discussion Group, Winter Dairy Management and Regional Short Courses

- Cornell Cooperative Extension educators
- Cornell Cooperative Extension regional teams
- PRO-DAIRY staff
- Cornell faculty
- Wyoming Dairy Institute
- New York Quality Milk Promotion Services
- Perry Veterinary Clinic
- NYS Department of Agriculture and Markets veterinarians
- University of Vermont faculty and Extension educators
- Miner Institute
- Co-Vale Farms
- SUNY Cobleskill
- SUNY Morrisville



"Northeast Agribusiness and Feed Alliance has been a long-time collaborator with PRO-DAIRY because we highly value the programs and services it brings to the dairy industry. We partner with PRO-DAIRY on the annual Herd Health and Nutrition Conferences and further support the program's efforts with regard to business and environmental management programs. The Agribusiness and Feed Alliance is bullish about the future of the Northeast dairy industry and we know PRO-DAIRY will continue to lead the way with programs that enhance dairy farm profitability."

### **RICK ZIMMERMAN**

Executive Director, Northeast Agribusiness and Feed Alliance

***“Sharing programs across the region enables us to provide high quality educational programs to more farmers in a way that maximizes our resources,” said PRO-DAIRY specialist Kathy Barrett.***

To expand program outreach and quality of speakers, PRO-DAIRY has coordinated regional programs on calf management and milk quality with Cornell Cooperative Extension specialists, and this year successfully implemented use of web conferencing technology.

The Calf Management short course was offered in November and February. 12 hours of training were provided at 13 sites with 169 farmer participants. An intensive Milk Quality short course provided 15 hours of training at 6 sites with 21 farmer participants.

“Sharing programs across the region enables us to provide high quality educational programs to more farmers in a way that maximizes our resources,” said PRO-DAIRY specialist Kathy Barrett.

The topics were timely and the impact on farms is real.

“We’re in the thralls of people building calf facilities. We’ve been working with some on ventilation aspects,” said David Balbian, Central NY Dairy Specialist, Cornell Cooperative Extension. “It gave them information to do a better job and to make their farm more competitive.”

Three farmers who attended the Clinton County session are now reinvesting in their farms, said Kim Morrill, PhD, Northern NY Dairy Specialist, Cornell Cooperative Extension.

Sharing resources to develop the programs means more time is available to support individual farmers.

“It allows us to offer more programs and assistance with program planning and materials,” Morrill said.

The team approach leads to more ideas and attracts high quality speakers.

“There is no way we could offer that high quality of programming on our own. Shared organization creates robust programming,” said Libby Eiholzer, Northwest NY Bilingual Dairy Specialist, Cornell Cooperative Extension.

The team used web conferencing technology, which allowed the program to be offered at more sites and reach farmers who may not have attended programs before. Extension specialists paired the online programming with local speakers.

“It expanded the audience,” Balbian said. “It’s an opportunity to make more effective use of resources.”

“We try to balance with a live speaker at each location,” Morrill said. “WebEx allows time for discussion.”

“People were very receptive,” Eiholzer said.

“At the end of the day it went really well,” Barrett said.

## **Dairy Profit Seminars tent at Empire Farm Days**



# Dairy Acceleration Program

## PRO-DAIRY Specialist



**CAROLINE POTTER** is the Dairy Acceleration Program Coordinator and works closely with the PRO-DAIRY Director and specialists to develop and deliver educational programs, and coordinate specific initiatives within the PRO-DAIRY program, including the Dairy Acceleration Program. Caroline is an experienced professional who came to the PRO-DAIRY program after serving in key leadership positions in the dairy industry. She earned her Associates Degree in Agricultural Economics from SUNY Cobleskill and her BS in Agricultural Economics from Cornell University.

## Dairy Acceleration Program Promotes Business and Environmental Planning on Farms

The Dairy Acceleration Program (DAP) under the leadership of Governor Cuomo and in partnership with the NYS Department of Agriculture and Markets and the NYS Department of Environmental Conservation is designed to enhance long-term viability of New York dairy farms while maintaining a commitment to environmental stewardship. The program is coordinated through Cornell PRO-DAIRY and delivered to the farms in partnership with Cornell Cooperative Extension and other agriservice professionals.

“The Dairy Acceleration Program has been an important tool for individual dairy farms to plan for their future,” PRO-DAIRY Director Thomas Overton said. “Farms across the state benefit from the program which enhances their ability to make strategic business decisions as well as environmental improvements on their dairy. DAP increases the capacity of awarded farms to engage agriservice professionals to develop business and environmental plans that contribute to the long-term success of the state’s dairy industry.”

For eligible farms, awarded funds may be used for one or a combination of the following:

- a.) creation of strategic business plans for long-term viability, and design of new or remodeled facilities;
- b.) environmental planning via a farm Comprehensive Nutrient Management Plan (CNMP); and
- c.) design of Best Management Practices (BMPs) to assist with implementation of their CNMP.

### ► Impact

Response to the Dairy Acceleration Program is strong. Since its inception two years ago a total of 196 dairy projects were awarded funding to small and mid-size farms across NY. An estimated \$15 million has been reinvested in dairies as a result of these projects.

- 48 farms were awarded both business planning and environmental planning funds.
- 67 farms were awarded business planning funds only.
- 81 farms were awarded environmental planning funds only for either a CNMP and/or design funds for BMPs identified in their farm CNMP.
- The business plans have assisted these owners with making sound business decisions for their dairies. Farms are analyzing options to improve profitability, from replacing an aging parlor with robotics, to building a brand new facility. Approximately 50% of the farms awarded business planning funds are using the plans to achieve the family goal of bringing in the next generation.



“DEC’s continued partnership with Cornell PRO-DAIRY is helping dairy farms across the state to get the on-farm technical assistance they need to support environmentally responsible growth. As farms develop better plans and designs we are helping to build more resilient systems that will sustain our farming infrastructure in the face of a changing climate. DEC is pleased to contribute to a program that is simple and fits well with other federal and state programs resulting in real, on-farm conservation and improvements to water quality.”

**JAMES TIERNEY**  
DEC Water and Watershed Assistant Commissioner

## *Conway Dairy Farms LLC expands farm and transfers management to the next generation with the support of the Dairy Acceleration Program.*

### *Profile of the Conway family in Turin, NY.*

- An estimated \$15 million has been invested in a combination of facility and environmental improvements on dairies to implement their plans. This does not include funds from programs such as Agricultural Nonpoint Source Pollution Model (AgNPS) or Environmental Quality Incentives Program (EQIP).
- The CNMP results in development of manure and fertilizer management plans and identifies best management practices for implementation to optimize water quality around the farmstead. Farmers using DAP funds for CNMPs describe less fertilizer use. Plans for implementation of BMPs, such as building a new manure storage to accommodate growth of the herd, bunk silo improvements due to extra forage, waste water management and vegetative treatment areas, require capital investment.
- 50 professionals assisted with Dairy Acceleration Program projects, including Extension associates, farm business consultants, facility planning professionals, Agricultural Environmental Management (AEM) Certified Planners and Professional Engineers (PEs).

A Northern NY farm family has used Dairy Acceleration Program funds to take steps to secure the farm's future. Randy Conway, and his sons Derek and Jake, are transferring management and ownership, as well as expanding their farm, Conway Dairy Farms LLC in Turin, NY.

They began the process with the return of Derek from Morrisville State College in 2004 and continued after Jake's Morrisville graduation in 2008. Initial projects included conversion of a tie stall to a parlor and construction of a freestall barn to house the expanding herd. With the opportunity to purchase a neighboring farm, Dairy Acceleration Program (DAP) funding was used for business planning, which resulted in an addition that doubled the size of the existing freestall barn and construction of a new manure storage.

With DAP funding the Conways hired Mark Mapstone, Farm Business Consultant with Farm Credit East in Central NY, to conduct a SWOT (strengths, weaknesses, opportunities and threats) analysis, write a formal business plan, and develop cash flow budgets and capital spending plans as preparation for their future. To maintain equity the Conways decided to purchase 400 acres of a neighboring farm and rent the remaining acres. Cows were moved into the new 117 by 410 foot deep-bedded sand freestall in January. The next step is to grow the herd to over 400 cows to match the available land.

"The Conways are a great example of generational transfer, from a smaller farm to a larger farm transition, and taking it in steps. It can inspire other farms who are going from 100 to 500 cows, and are transitioning the next generation into full management," Mapstone said. "The Conways are typical of many of my farm clients -- very close knit and not afraid of hard work. They've established common goals and have a healthy respect for each other. They are sharing equity growth in the farm together through a profits interest agreement. With a profits interest agreement, next generation LLC members may have limited capital ownership to begin with, but share at a higher level the future equity growth that they help create."

DAP is an initiative of Governor Cuomo in partnership with the NYS Department of Agriculture and Markets and the NYS Department of Environmental Conservation designed to enhance profitability of New York dairy farms while maintaining a commitment to environmentally responsible dairy farming. The program is coordinated through Cornell University PRO-DAIRY and in collaboration with Cornell University Cooperative Extension. DAP information is online at: <http://prodairy.cals.cornell.edu/dairy-acceleration>.

Funds may be used for the creation of strategic business plans focused on increasing the viability of the dairy, design of new or remodeled facilities, development or update of Comprehensive Nutrient Management Plans (CNMPs) and the design of eligible Best Management Practices (BMPs) identified in the farm CNMP. Farms must have lactating dairy cattle and be shipping milk. 62 farms have completed projects since the program's inception two years ago.

**DAP information is online at:**  
<http://prodairy.cals.cornell.edu/dairy-acceleration>.



Investment per project has ranged from \$5,000 to \$10,000, and an estimated \$15 million has been reinvested in dairies as a result of these projects.

The Conway family has worked with Mapstone for four years, and the DAP program supported additional planning and budgeting with him.

“I started with the Conways in 2011. At that time they were around 220 cows. They had a vision to expand to 400 to 500 cows over the next five years. They had an opportunity to buy a neighboring farm. How do you do that without more cows? They started with small steps including budgeting, benchmarking and profitability analysis. Their strategy was to buy a neighboring parcel in steps rather than all at once. Renting allowed them to keep debt lower and to have funds to expand the dairy herd,” Mapstone said. “The DAP program helped put more intensity into planning of the latest phase of expansion. With the expansion they needed to plan facility layout and design, buy cows, plan for dry cow and heifer housing, invest in machinery and equipment, and further define management roles and responsibilities in the farm’s organizational chart. DAP touched on a lot of that. We had extra time to do the process correctly. They were willing and appreciative of the help.”

While Jake initially thought the farm could do their own planning he soon recognized the value of hiring a professional business planner.

“Business planning was most important. It opened our eyes to see what kind of position the business is in financially and to see where the business can go. The biggest value was setting up the LLC,” Jake said. “Mark helped us budget five different scenarios with varying herd sizes. It gave us confidence to begin the new facility. Our goal is to have 400 cows by the end of the year.”

The business planning process has also helped prepare them to meet successfully with loan officers and to develop a relationship that will support them as the farm heads into a year of tight milk prices, Jake said.

“They had to take two leaps of faith: one was with the initial barn and parlor and with production improvement, and they did it. The second big leap was purchase of the neighboring farm, which started the second phase.

They’re still not where they want to be in the long run, but they have a lot of determination. One of our goals is to increase to 400 cows quickly to help with cash flow,” Mapstone said.

The farm also is implementing a Comprehensive Nutrient Management plan. As part of that, new manure storage was built and plans are underway to build feed storage. While Environmental Quality Incentives Program (EQIP) funds were used for the manure storage construction, the Conways said it was useful to have DAP funding for the planning process while they were waiting to receive EQIP funding.

“One of the biggest challenges to building a barn is cash flow. The hardest part of the manure storage was waiting on grant money,” Jake said.

“The process to receive funding through DAP is simple,” said PRO-DAIRY DAP program coordinator Caroline Potter. “It fits well with other programs and facilitates design of funded projects to get Best Management Practices implemented quickly. They can begin planning while waiting for project funding from other grant sources to come through.”

DAP also encourages farmers to tap into outside expertise and through DAP consultants are working with farms they haven’t worked with before, Potter said.

“DAP has helped me get in contact with the next generation on many farms that I may never have had the opportunity otherwise,” Mapstone said. “DAP really helps bring smaller farms along in monitoring budgets, timelines and financial understanding. The process of benchmarking helps them improve financial performance and record keeping, to see where they compare, and to develop strategic moves.”

Farms who are thinking about expansion or generational transfer should use the system, Randy said. He also recommends a profit team, because, he said, it helps all their consultants be more accountable.

“There are a lot of experts out there. The more ideas you have, the better management decisions you can make,” Randy said. “It’s really helpful to bring a team together to help plan for the future. Even if you’re not expanding there’s always planning to do.”

The next steps for the farm depend on land availability. The herd can grow to 500 cows with existing land resources. But, the brothers can also envision growing to 1,000 cows, if more land were to become available.

“We’re really blessed. I certainly wouldn’t be doing this without the boys. I have the best job because I get to work with my boys. I want to be financially stable so hopefully they will have free time and quality of life,” Randy said. “In this day and age you can’t farm without all the consultants and the extra help. As we’ve grown there’s been a learning process. Without them it would be overwhelming.”

***Reprinted from the July 2015 issue of The Manager in DairyBusiness East.***

# Dairy Youth Programs

## PRO-DAIRY Specialist



### DEBORAH GRUSENMEYER

is a Senior Extension Associate in the College of Agriculture and Life Sciences at Cornell University in addition to being part of the PRO-DAIRY Team and Dairy Management Group for over 17 years. She provides leadership for developing, coordinating and implementing the New York State Dairy Youth programs, which include state level 4-H Dairy Programs, Dairy Discovery and dairy track of Animal Crackers. She is also the director of the New York State Junior DAIRY LEADER Program, which is a year-long program designed for youth between the ages of 16 to 19 who have interest in exploring careers in the dairy industry and builds their leadership skill, along with personal, professional and career planning.

## Junior DAIRY LEADER Program

The PRO-DAIRY initiated and directed Junior DAIRY LEADER program has introduced 346 youth to dairy careers and enhanced their skills and knowledge through a year-long experience of workshops, hands-on activities and travel.

In 2014 - 2015, 29 youth between the ages of 16 and 19 years participated in the program. During the year, the youth:

- Prepare for successful careers in the dairy industry.
- Gain an in-depth understanding of the dairy industry's scope and opportunities.
- Are exposed to progressive and profitable agricultural businesses.
- Learn communication and teamwork skills that aid in problem solving.
- Explore and enhance their career planning through discussions with dairy industry leaders.
- Develop personal, professional and leadership skills necessary to make positive contributions to the dairy industry.
- Obtain work experience in the dairy field.
- Develop technical skills through training workshops.
- Take charge of their college and career planning.

Through visits to Wisconsin, the National 4-H Dairy Conference, and agri-businesses in New York, youth interacted with professionals who have positive and enthusiastic attitudes about the dairy industry.

### ► Impact

- 98% of the 346 Junior DAIRY LEADER graduates continue their education beyond high school.
- More notable is that 94% of these youth have attended or are attending college to study agriculture. Prior to participating in Junior DAIRY LEADER, 46% of these youth indicated that they had not been planning to pursue agricultural careers or had been undecided.

## Dairy Discovery

Dairy Discovery is a statewide program for 14 to 19 year olds and is a hands-on workshop held annually at Cornell University. Young people spend a day and a half on campus to learn about dairy careers and probe the specifics of dairy cattle production. Dairy Discovery 2015 Calf and Heifer Production Management topics included: colostrum management, heifer growth, calving procedures, economics of raising heifers and disease control.

### ► Impact

- In March of 2015, 110 young people and adults participated in this program representing 30,507 cows and 24,682 heifers.
- On a 1 to 5 scale evaluation, with 5 being the highest score, the overall program was scored a 4.50. Participants ranked their increased knowledge and understanding of calf and heifer production management a 4.44. Their score for recommending the program to other participants was a 4.80.

## Traditional 4-H Dairy Youth Programs

Traditional 4-H youth programs provide positive learning opportunities for young people ages 9 to 19 to learn about the dairy industry and careers. Key program areas include dairy challenge (skill-a-thon in the dairy field), dairy cattle quiz



**Youth Dairy Judging at the 2015 NYS Fair**



**Junior DAIRY LEADER anaerobic digester tour in Wisconsin**

bowl (a Jeopardy-like activity that tests technical knowledge and awareness of current issues in the dairy industry), and dairy cattle judging which focuses on ranking cattle based on breed characteristics and defending their decision. The practice of dairy judging can translate into the life skill of decision making and defending the reasons for making those decisions. Resources for many of these dairy youth educational programs are provided by PRO-DAIRY, along with leadership for state level programs in these areas.

► **Impact**

- The program attracts more than 400 participants each year.
- Challenge is a skill-a-thon for youth and 150 youth participate yearly.

**National 4-H Dairy Conference**

PRO-DAIRY participates on the planning committee for the annual National 4-H Dairy Conference. This four-day experience exposes 4-H members to new dairy science technology and dairy-related careers. Through a combination of workshops, speakers, educational off-site experiences, and networking with other dairy-oriented youth, 4-H members gained information they can use to strengthen their future in the dairy industry. Hands-on learning workshop topics included biotechnology, genetics, foods evaluation, animal nutrition and marketing.

► **Impact**

- The national conference is attended by over 200 youth from across the US and Canada.

**Junior Dairy Leader Graduation at Empire Farm Days**



***“Junior DAIRY LEADER helped me decide to attend Cornell. I saw the opportunities in the dairy industry. These programs opened my eyes to what this industry has to offer.”***

**Megan Vaill**  
**Vernon, NY**

Meghan Vaill is no stranger to youth programs coordinated by PRO-DAIRY specialist Debbie Grusenmeyer. She has participated in nearly every program offered, including being part of the NYS 4-H Dairy Bowl team and the 4-H Dairy Cattle Judging team, which both won the National Championship. After winning the dairy cattle championship, the team traveled to Europe to compete in the international contest and then traveled on a week tour of Scotland, England and Wales.

Now a 2015 Cornell University graduate, she has returned to her family's farm, a 500-cow dairy, Vaill Brothers, LLC in Vernon, NY and credits Junior Dairy LEADER Program with this choice.

“I grew up on a farm, but I wasn't extremely involved in its day-to-day operation, and wasn't aware of the opportunities it could offer,” Vaill said. “Without Junior DAIRY LEADER I wouldn't have had the personal interest in exploring what the industry has to offer and its future.”

“It created interest and value in this small business. She realized that there is this available business, but it does take a lot of management, and there is a lot of challenge to it. It helped her to see other operations and inspired her interest in coming back here,” said her father Milton Vaill.

Junior DAIRY LEADER is an intense year of hand-on learning, exposure to industry issues, networking, farm tours and travel, designed to push comfort zones and promote leadership growth. Entry into the program is competitive, with applications being a pre-cursor to the college applications that are the next step for many graduates.

Vaill credits Junior DAIRY LEADER with her decision to attend Cornell, where she majored in animal science, and also completed many agriculture business courses. Although initially interested in becoming a large animal veterinarian, through the program she came to realize the opportunities available to her at home, where she now assists her mother on financial management and works with the herdsman.

“Junior DAIRY LEADER helped me decide to attend Cornell. I saw the opportunities in the dairy industry,” she said.

Farming is more technical than she originally realized, with needs for nutritionists, and a number of other specialized skills.

“These programs opened my eyes to what other avenues are available within the industry, and it exposed me to people of the industry. I made friends who are passionate about agriculture. At high school not as many students shared my interests,” said Vaill, who participated as a high school junior.

Vaill appreciated the practical application of Junior DAIRY LEADER, with activities that included writing a resume, personality analysis and public speaking.

“Through Junior DAIRY LEADER we had a lot of different experiences that were a complement to school, and I still draw from things that we learned. It's definitely applicable for a long time,” Vaill said.

Although, she said, the strongest asset is the program's leader. “Debbie takes every single student and makes you feel like family. She is a personal and professional mentor. She knows how to engage students. She keeps programs dynamic and age appropriate. Kids are always learning. In Junior DAIRY LEADER she took 28 students and gave them freedom and responsibility,” Vaill said.

And, she said, youth programs are vital to the future of the industry. “The dairy industry is an important industry to give attention to because we feed the world every day. The average age of a farmer is 58, so it's important to gauge the interest of youth in agriculture for the future of our food supply,” Vaill said. “I think this program does an amazing job at doing just that: encouraging youth to explore how their interests may find a perfect niche in the world of agriculture. I can't even imagine what path I'd be on today if I had not had the opportunity to participate in this program, but I am fairly certain that I would not have developed my passion for my family farm and the future of agriculture.”



**MEGAN VAILL**

## The Manager in DairyBusiness East

Since 1999, DairyBusiness Communications has worked with PRO-DAIRY to provide educational materials to the dairy industry in magazine form. Starting in January 2009, the magazine was reformatted to serve the Eastern US dairy industry and is now known as *DairyBusiness East*. The magazine's circulation reaches about 16,597 dairy producers and agribusiness professionals in the 31 states in the Eastern US that produce more than half of the nation's milk and a total of 4.45 million cows.

In 2015 PRO-DAIRY's converted *The Manager DairyBusiness East* to 12 pages and switched publication months to January, June, July and October to coordinate with magazine distribution at national events, including the World Ag Expo in Tulare, CA and the World Dairy Expo in Madison, WI. In addition, this PRO-DAIRY section is mailed independently to more than 4,000 New York dairy producers who do not regularly receive the magazine.

### PRO-DAIRY specialists organized and developed:

- The January 2015 issue of *The Manager* focused on "Managing Manure" and was distributed at the World Ag Expo in Tulare, CA. The "Managing Manure" issue reviewed practices that producers are using to manage manure to supply nutrients to crops when plants need them and to protect waterways and the environment, including having adequate storage, using satellite manure storage, drag hose equipment, manure injectors, manure storage covers and optical sensors for nitrogen.
- The April 2015 issue of *The Manager* focused on "Making Milk" and included various perspectives on how people drive operations management and business success. Articles outlined how to increase profit through increasing milk components and quality. Features included profiles of farms and technical articles written by PRO-DAIRY and Cornell specialists. Article titles included: Can you join the 7 lb club?; Focus on milk quality; Co-Vale Farms – Feeding accuracy to maximize nutrition; Maintain equipment for quality milk; Impact of components on milk price; and Shredlage—What's new?
- The July 2015 issue of *The Manager*, was distributed at Empire Farm Days in Seneca Falls, NY and focused on the Empire Farm Days Dairy Profit Seminars. Articles were a supplementary resource and supported the seminar themes of Milk Quality: How and Why;" "Re-Investing in Your Dairy – The Planning Process;" and "Using Income Over Feed Costs to Manage Your Dairy."
- The October 2015 issue of *The Manager* focused on "Business Reinvestment," and was distributed at World Dairy Expo in Madison, WI, the largest dairy cattle show in North America that showcases dairy cattle and the newest technologies available to the dairy industry. Article topics included planning for your future, workforce investments, preparing for capital investments, using a dairy advisory team, developing people, business leadership, management development and youth programs to develop future leaders.

## PRO-DAIRY Specialist



**JULIE BERRY** is PRO-DAIRY's communications manager. She edits *The Manager in DairyBusiness East*, coordinates annual report and promotes PRO-DAIRY efforts. She has over a decade experience in journalism and communications, with a BS in animal science from Cornell University and a MA in science writing from Johns Hopkins University.



## ► Impact

- *DairyBusiness East* reaches approximately 16,597 dairy producers and agriservice professionals in 31 states east of the Mississippi. Those dairies produce more than half of the nation's milk.

## PRO-DAIRY e-Leader Monthly Electronic Newsletter

In 2011, PRO-DAIRY initiated the PRO-DAIRY e-Leader monthly newsletter with an email list that has grown to nearly 7,000. e-Leader features upcoming PRO-DAIRY events and conferences, specialist programs, and recaps recent events. In addition, e-Leader provides timely information specific to the New York dairy industry that recipients are unlikely to receive from media-based newsletters that focus more on national issues. An e-Alert is delivered to the same list with specific and timely news information.

## ► Impact

- e-Leader and e-Alert provide timely meeting information and news to a list that has grown to nearly 7,000 farmers, agribusiness professionals and legislators each month.

## Program Outreach

PRO-DAIRY started a new bimonthly column in *Lancaster Farming* that features PRO-DAIRY work and programs and regularly sends out press releases about PRO-DAIRY to increase leverage of PRO-DAIRY

outreach. Topics included the Dairy Acceleration program and a profile of farmers who use PRO-DAIRY farm management tools.

## ► Impact

- PRO-DAIRY's column in *Lancaster Farming* reaches 56,000 paid subscribers in Pennsylvania and 15 other states, including NY. *Lancaster Farming* is the leading Northeast and Mid-Atlantic farm newspaper and has been in continuous weekly print since 1955.

## PRO-DAIRY on the Web

PRO-DAIRY programs are highlighted at:

- <http://pro dairy.cals.cornell.edu/>
- <http://ansci.cornell.edu/pro dairy>
- <http://pro dairy facilities.cornell.edu>
- <http://dairy profit.cornell.edu>
- <http://manure management.cornell.edu>

PRO-DAIRY specialists work closely with Cornell dairy industry related programs represented online at:

- <http://nm sp.cals.cornell.edu>
- <http://dfbs.aem.cornell.edu>

## ► Impact

- From July to June, 54,063 people visited PRO-DAIRY's website. Of these, 40,261 were unique visits.



# PRO-DAIRY Collaborators



*PRO-DAIRY thanks the State of New York and the New York State Department of Agriculture and Markets for their financial support and years of commitment. Significant additional NYS-based funding for PRO-DAIRY programs is provided by the Department of Environmental Conservation, NYSEDA and the New York Farm Viability Institute. Through collaboration with these partners and the over 130 listed here, PRO-DAIRY will continue to provide expertise and leadership within New York's dairy industry.*

Advanced Ag Systems  
Advanced Dairy Services  
Agricultural Engineering Services  
Agri-Mark Cooperative  
AgModels, LLC  
Agricultural Consulting Services  
Agrinetix  
Agro-One Cooperative  
Alta Genetics  
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Battenkill Veterinary Clinic  
Bayer Animal Health  
Boehringer Ingelheim Vet Medical  
Bourdeau and Bushey Inc.  
Brown's Feed  
Capital Area Ag Consulting  
Cayuga County Economic Development  
Cargill Animal Nutrition  
Cayuga Marketing LLC  
Central New York Dairy, Livestock  
& Field Crops Program  
Champlain Valley Agronomics  
Community Bank NA  
ConsulAgr  
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Agriculture & Natural Resource  
Educators  
Cornell University College of Veterinary  
Medicine  
Countryside Veterinary Clinic  
County-based Soil and Water  
Conservation District Programs  
Cows Come First  
Dairy Farmers of America  
Dairy Health and Management Services  
Dairy One Cooperative Inc.  
Dairy Support Services  
Dehm Associates  
DeLaval Direct  
Diamond-V  
DuPont Pioneer  
DairyBusiness Communications  
Eastview Veterinary Clinic  
Elanco Animal Health  
Erie Niagara Insurance

Farm and Country Insurance  
Farm Credit East  
Feed Commodities International  
GEA Farm Technologies  
Genex/CRI  
Granville Veterinary Services  
Growmark FS  
Harry Austin Milling  
Hewitt Brothers  
Holtz-Nelson Consulting  
Intervet/Schering-Plough Animal Health  
Jefferson County Industrial  
Development Agency  
JEFO, USA  
Jess Engineering  
Jim Henion  
Dr. John Ferry  
Keseca Veterinary Clinic  
Lallemand Animal Nutrition  
Lamb and Webster  
Land O'Lakes Animal Milk  
Linwood Management  
Lowville Farmers' Cooperative  
Lowville Digester Work Group  
Lutz Feed  
McDowell & Walker  
McLanahan Corporation  
Mercer Milling  
Merck Animal Health  
Micronutrients, Inc.  
Midland Bioproducts  
Midstate Veterinary Clinic  
NBT Bank  
New York Animal Agriculture Coalition  
New York Center for Agricultural  
Medicine and Health (NYCAMH)  
New York Farm Bureau (NYFB)  
New York Organic Dairy Initiative  
New York State Agriculture  
Mediation Program  
New York State Cattle Health  
Assurance Program  
New York State Certified Agricultural-  
Environmental Planners  
New York State Energy Research  
Development Authority  
(NYSEDA)  
New York State Soil & Water  
Conservation Committee  
Northeast Agriculture Technology Corp.  
New York Corn and Soybean  
Growers Association  
Northeast Agriculture  
Education Foundation

Northeast Agribusiness and  
Feed Alliance  
Northeast Certified Crop  
Advisor Program  
Northeast Dairy Producers Association  
Northeast Farm Credit Ag  
Enhancement Program  
Northern NY Dairy Regional  
Extension Team  
Northwest New York Dairy, Livestock  
& Field Crops Program  
Novartis Animal Health  
Novus International  
Palmer Veterinary Clinic  
Papillon Agricultural Corp  
Perry Veterinary Clinic  
PikeSide Enterprises  
Pioneer Hi-Bred  
Poulin Grain Inc.  
Progressive Dairy Solutions, Inc.  
Purina Animal Nutrition  
Quality Milk Production Services  
Rapp Dairy Nutrition  
Reisdorf Brothers  
Renaissance Nutrition Inc.  
Rupert Veterinary Clinic  
Select Sire Power  
Shur-Gain USA Inc.  
Springville Veterinary Services  
Spruce Haven Farm  
Starland Veterinary Services  
Synergy Biogas, LLC  
The Old Mill-Troy Inc.  
The Voss Group  
U.S. Geological Survey  
Upstate Niagara Cooperative  
USDA Farm Service Agency  
USDA Natural Resource  
Conservation Service  
Venture Milling  
Ward and Van Scoy  
Watertown Animal Hospital  
Western New York Crop  
Management Association  
Western New York Energy LLC  
Whitman's Feed Store  
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Research Institute  
Wyoming County Dairy Institute  
Wyoming County Industrial  
Development Corporation  
Yankee Farm Credit  
Zinpro  
Zoetis Animal Health



# ANNUAL REPORT 2015

## The PRO-DAIRY Mission:

Facilitate New York State economic development by increasing the competitiveness and sustainability of New York's dairy farm businesses through industry-applied research and educational programs that enhance farm profitability while advancing dairy producers and agribusiness professionals' knowledge, skills and enthusiasm.

**For information on the PRO-DAIRY program, contact:**

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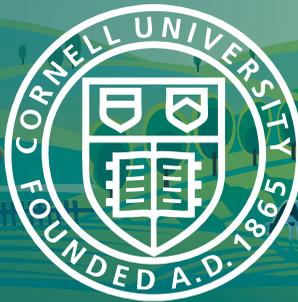


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