

Annual Report | 2021

Cornell Cooperative Extension

South Central NY Dairy and Field Crops Program

Dairy Education

Farm Business

Grazing

Field Crops

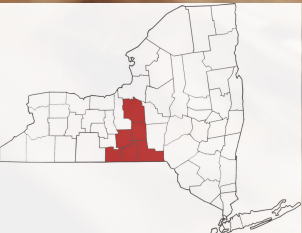
Soil Health

"The CCE team has proved to be an invaluable resource for our farm. We have reached out to Betsy, Mary Kate, and Janice numerous times over the years with simple questions about recommended practices as well as complex issues our farm is facing. The programs offered have been informative and timely. We will continue to avail ourselves of their up-to-date knowledge and ease of access."

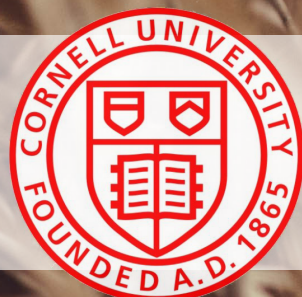
- 600-cow dairy

"The dairy team programs have broadened my knowledge of herd, crop, and employee management through discussion meetings, webinars, and newsletters. My father and I attended the virtual grazing seminar this past winter, and we were very impressed with the speakers and information provided. The information was very practical and the dairy team was always willing to listen to any questions and help in any way they can."

- 300-cow grazing dairy



Cornell Cooperative Extension links the research and extension efforts at Cornell University, and Cornell AgriTech, the New York State Agricultural Experiment Station, providing the knowledge to maximize New York State's agricultural and natural resources. The South Central New York Dairy and Field Crops Program is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in 6 Counties.





CCE Regional Dairy Educators across the state collaborated to create podcast series to expand virtual learning opportunities for dairy farmers.

The first podcast series entitled, ***Dialing into your Best Dairy***, was created. There are eight episodes in the series that focus on strategies and best practices that high performing herds use to be successful. A second series was created, entitled, ***Troubleshooting Herd Health*** Issues, which focuses on looking into health issues on dairies and includes 16 episodes. The dairy educators worked together to create content, record, edit each recording and produce each episode. Soundcloud hosts the podcast, and was shared via Cornell PRO-DAIRY's e-leader email list, as well as in team blog posts, YouTube Channels, and newsletters. Between SoundCloud and YouTube there have been over 6700 plays through the fall of 2021. Hoard's Dairyman Intel, a weekly e-newsletter, featured the podcast in several different articles. Hoard's reaches several thousand people weekly across the nation, and highlighted many of our episodes as they were released weekly. The podcast series were also highlighted as one of the top dairy podcast series in the US.



Betsy Hicks,
Dairy Specialist

Dairy Education

CCE Dairy Specialists offered *Critical Calf Care* webinars to focus on impactful areas for dairy farmers to improve calf care directly. Dairy calves experience many challenges during the first 6-8 weeks of life, and it is one of the most vulnerable time periods during the animal's life. While many producers have implemented excellent housing, bedding, and nutrition protocols, one area that proves to remain a challenge for New York dairy producers is decision making during critical periods in the pre-weaned calf's life. CCE Dairy Specialists, which included Betsy Hicks, developed a series of webinars to help producers develop the skills and confidence to make decisions during urgent cases. The series was titled "Critical Calf Care: Urgent Decision Making for Urgent Dairy Calf Health Situations" and was offered weekly for seven consecutive weeks starting in January 2021. The series focused on disease diagnosis and recognition, dystocia, record keeping, hydration therapy, scours and total calories, and euthanasia decision making. The series was well attended with anywhere from 30-61 people joining each session. Each webinar was recorded and posted to YouTube for future use – an aspect that proves to be important, as the recordings have been viewed up 163 times.



"I do like the smaller segments of calf care. With past programs, it was sometimes hard to digest and remember all the info"

SCNYDFC Helps Farmers Access Grant Funding for Business & Succession Planning

- The SCNYDFC Team provides outreach and support to help farms in our region access funding through various grant and government programs.
- In early 2021, the team collaborated with American Farmland Trust to promote the new Dairy Forward Grant Program. Three farms in our region received mini-grants to pay for professional services that will support farm transfer and succession planning.
- In the first quarter of 2021, the team facilitated four Dairy Advancement Program awards. The four farm recipients used DAP funds to hire business consultants to improve record keeping systems, conduct business planning activities, and prepare for farm succession.



Business Management

Mary Kate MacKenzie,
Farm Business Management Specialist



QuickBooks for Farmers Teachable Course Meets a Need for Online Bookkeeping and Farm Accounting Instruction

- In 2020, Mary Kate launched a Teachable School and developed a 5-week QuickBooks for Farmers online course.
- The course includes original content comprised of articles, handouts, quizzes, five live webinars, and 21 pre-recorded videos totaling almost two hours of video instruction.
- 53 students completed the QuickBooks for Farmers curriculum in January & February 2021.
- Upon completing the course, students reported an increase in knowledge related to farm business accounting, QuickBooks Online software, cash flow analysis, enterprise analysis, and farm business benchmarking.
- Three graduates received FSA Borrower Education Credits for the course.
- Course fees generated at total of \$6,698 in revenue for the team.



Impacts

- One dairy farm implemented a rotational grazing plan in 2021 as a direct result of our team's grazing education and individualized grazing support. The farm reported a measurable increase in pasture productivity and a reduction in feed costs due to this management change.
- We helped two dairy farms complete their first Comprehensive Nutrient Management Plans supporting environmental conservation goals and making the farms eligible to apply for grant funding to implement additional soil and water conservation projects.
- Three farms developed crop and fertility plans with direct support from our Field Crop Specialist. One organic dairy developed a forage plan that included an expansion of their grazing system and forage production to support a significant herd expansion. Two dairies developed crop and fertility plans to target manure applications and meet additional fertility needs while controlling fertilizer costs.
- Eight dairy farms received recordkeeping and financial analysis education through participation in the Dairy Farm Business Summary. These farms strengthened their business planning skills while contributing financial data to a statewide applied research effort. Operators identify strengths and opportunities for improvement by comparing their DFBS reports to their own performance in past years and to the performance of other dairies in the current year.
- Four dairy farms with a total of 94 workers implemented an employee onboarding procedure and additional HR improvements through participation in Round 2 of the Onboarding Dairy Farm Employees project, with direct support from team members. Onboarding can improve worker safety, performance, and job satisfaction while reducing employee turnover. This brings our total impact up to 8 farms with 184 workers for Rounds 1 and 2 of the Onboarding Project.
- After collaborating on the Design Your Succession Plan webinar series, our team provided in-depth support to several farms engaged in planning and executing business transitions. By facilitating DAP business planning awards and NYFVI Profit Teams, we brought our expertise and that of other advisors to farms at a critical time in the business lifecycle. As a result, the senior generation on an organic crop farm completed a detailed financial analysis, identified a possible successor, and formed an LLC. The junior generation on an organic dairy improved their recordkeeping system, updated their LLC operating agreement and farm lease agreement, and prepared a buyout plan with support from their lender. Operators of a 600-cow dairy analyzed possible transition strategies and selected one to implement with help from an attorney.
- Our outreach and direct support helped farms access funding through various grant and government programs in 2021, including the Paycheck Protection Loan Program (PPP), the Dairy Advancement Program (DAP), and the new Dairy Forward Grant Program administered by the American Farmland Trust (AFT). Across the SCNY region, 348 agricultural production businesses received 420 PPP loans valued at \$18.6 million dollars.
- We facilitated six Dairy Advancement Program grant awards for recordkeeping or business planning, ranging in value from \$2,500 to \$5,000 each. Three farms in our region received AFT grants to pay for professional services that will support farm transfer and succession planning.

2021 Program Highlights

- Fifty-three students completed a new online QuickBooks for Farmers course. After the course, students reported an increase in knowledge related to farm business accounting, QuickBooks Online software, cash flow analysis, enterprise analysis, and farm business benchmarking.
- We co-hosted several webinars with other regional dairy educators, including a Critical Calf Care Series; a Healthy, Hardy Heifers Series; and Transition Cow Tuesdays. Live webinar content was recorded and shared on our YouTube channel, reaching hundreds of farmers.
- We facilitated a NYFVI project with five dairies on areas of opportunity and excellence related to calf care, cow comfort, and transition cow care. Project impacts were highlighted in American Agriculturist and shared with additional farmers through farm tours, articles, and videos.
- The team took a multifaceted approach to grazing education, including a pasture prep webinar series, weekly pasture regrowth monitoring during the grazing season, and three in-person pasture walks. Over 200 people benefitted from our grazing education in 2021.
- Farmer-to-Farmer Discussion Groups brought together over 90 farms to discuss a variety of topics: engaging a multicultural workforce, creating and using employee handbooks, understanding the beef x dairy industry, improving grazing management, and analyzing financial performance using the Dairy Profit Monitor and the Dairy Farm Business Summary.
- Activities that focus on targeting the timing of crop harvest for optimum feed quality (alfalfa measurements & corn silage harvest clinics) help dairy farms improve their bottom line by controlling purchased feed expenses.
- Field assessments and trouble-shooting during the growing season helped farmers avert crop damage, evaluate options, and identify solutions for pest management and other agronomic issues.
- We contributed to two dairy podcast series covering calf care and cow comfort. Published on Soundcloud, these podcast episodes have seen over 4,000 plays.
- Articles by team members were featured in Hoard's Dairyman, Progressive Dairy, Country Folks, Cornell Small Farms Quarterly, the Cortland Standard, and GRAZE Magazine.
- Two CCE Summer Interns were mentored by our team leader. The interns were exposed to CCE as a career path. The interns reported learning about extension, the future of the dairy industry, and themselves.
- The team delivered 51 educational events including webinars, meetings, workshops, tours or clinics, totaling 91 hours of instruction and reaching 2,009 participants.



Grazing Education throughout the Seasons: Sharing Management Strategies and Decision-Making Tools with Dairy Graziers

Grazing education throughout the year provided varied opportunities for dairy farmers to learn and hone their grazing skills. Pasture, when cared for and used appropriately, can be a valuable management tool that promotes the health of animals and profitability on farm. However, reaching optimal management and maximizing the benefits of pasture grazing can be difficult. CCE regional educators worked to put together a host of opportunities for graziers to learn throughout the year, including collaboration with outside grazing resources and agencies.

- **Pasture Prep: Virtual Ruminations for 2021 Grazing Program**

Attendees also expressed interest in continuing to meet on a more regular basis to discuss pasture management, highlighting the need for continued resources on this topic.

- **Pasture Regrowth Monitoring Project**

Troy Bishopp's weekly "Pasture Pontifications" give readers a sense of what is "normal" in the grazing season as well as strategies for resiliency during the period.

- **Dairy Grazing Pasture Walk Series**

The series attracted 108 attendees representing beginning and experienced dairy graziers, livestock graziers, and agricultural service providers including representatives from conservation agencies, milk coops, organic certifying agencies, and agricultural lending institutions.



Photo by A.F. Benson:

Carey Farm in Groton, NY



**Collaborators: Troy Bishopp, USC
Fay Benson, CCE Cortland
Karen Hoffman, NRCS**

Grazing

**Betsy Hicks,
Dairy Specialist**

**Mary Kate MacKenzie,
Farm Business Management Specialist**



Understanding Pasture Soil Compaction

The slow and furtive nature of soil compaction of northeast pasture soils has led to erosion and declining productivity on farms where compaction is not managed. The consequences of compaction are often present without the farmer's knowledge, due to its compounding affect. Since compaction increases while soils are moist, the pastures located in the Northeast are especially at risk to future compaction with the prediction of increased rainfall events of two inches or more, due to climate change. Funding was received from NESARE to accomplish these three tasks:

- **Train the Trainer Workshops** – Two six-hour workshops were organized and attracted 19 grazing educators from four states.
- **Outreach** - The grazing educators attending the trainings agreed to host the New York Soil Health Trailer at events in their area. Twelve pasture walks were held in four states.
- **Research** -We used two readings of the penetrometer in the pasture, one from under the fence line and one from an impacted area in the pasture. The ratio of the two areas will hopefully capture any changes in the pasture compaction, since the fence line reading will always be optimum.

The trainings were well received and the educators who participated agreed to host meetings with the Soil Health Trailer in their home states of New Hampshire, Vermont, Pennsylvania, Maine, and New York.

**A. Fay Benson,
Small Dairy Technology Specialist**

Soil Health

Building Resilient Cropping Systems

As predicted by climate change scientists, we are experiencing a greater incidence of extremes in weather. Precipitation events are more frequently delivered in short, powerful bursts. During our crop seasons, we experience deficient or excessive water expressed as drought, waterlogging or flooding. Erosion damage to open ground is evident when streams run brown. In the short-term, this has a negative impact on water quality and in the long-term, overall productivity of our fields as the soil becomes degraded and yield potential declines. These conditions provide season-long challenges to farmers and their crop systems and require new management strategies to maintain productivity.

During the winter of 2021, soil health seminars helped drive successful adoption of practices, technologies or equipment that build soil health.

- A no-till corn planter specialist explained the components of a no-till planter and proper adjustments
- An Ontario farmer, on the cutting edge of compaction research, discussed how he minimizes and corrects compaction.
- Weed scientists discussed; 1) residual herbicides used in corn and soybean production and their impact on fall seeded cover crops, 2) herbicides to terminate spring cover crops.
- A dairy farm panel shared the details of their practices growing cover crops, including inter-seeding, seeding mixes, tillage and crop rotation.

Improving soil health provides resilience to growing season weather challenges.

Farmers benefit with improvements in organic matter, improved water infiltration, reduced soil erosion and nutrient loss in run-off.

Soil health provides environmental benefits to the greater community since a reduction in non-point source pollution reduces the potential of water pollution and the potential of algal blooms, harmful or otherwise.



Field Crop Education

Janice Degni,
Field Crop Specialist



CCE Summer Interns - an opportunity to mentor the next generation of CCE leaders

Janice Degni, Regional Field Crop Specialist mentored two CCE summer interns in collaboration with Dr. Ketterings and her group on Dairy Sustainability Issues. Interns, Megan Whitmeyer and Lydia Young, grew up in dairy. Both were curious about how their careers and future lives would intersect with dairy.

The interns learned about the operation of CCE in the community, agronomy and IPM in the field. They learned through doing: The role of nitrogen, manure and PSNT in corn production * Monitored insect traps, checking for invasive species and western bean cutworm * Counted soybean plant populations * Monitored and assessed potato leafhopper * Assisting teaching 4th graders, "Growing Crops: An Ecological Loop" * Collected data for applied research project in CBD hemp * Tracked records during livestock shows at the Cortland County Junior Fair * Created a Dairy Sustainability Display for Empire Farm Days and interacted with the public * Attended a team meeting, Women in Ag meeting, Broome Cty Ag Taskforce and a Large CAFO inspection * Visited a range of dairies, exposing them to unique management approaches. * Visited Chobani Case Study farms, on-farm dairy processing, new livestock housing, a robot dairy and others * Met Cornell CALS Dean, Ben Houlton

Both interns reported a greater understanding of the work of CCE, the future of the dairy industry, and their own perspectives and goals.



Megan Whitmeyer



Lydia Young

Mentoring CCE Interns

<https://scnydfc.cce.cornell.edu/>

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Team Administrative Assistant



Cornell Cooperative Extension

South Central NY Dairy and Field Crops Program

The South Central NY Dairy & Field Crops Program provides educational opportunities and technical assistance to help the industry with emerging issues, production bottlenecks, and new technologies. Our primary audiences are dairy and field crop producers as well as agri-service providers with secondary audiences of the media, non-farm residents and consumers. We focus on areas that will help improve farm profitability within the region since farm financial success is a key to maintaining a viable dairy and field crops industry. Our program's education helps our industry respond to both internal and external forces that help it keep pace in a rapidly changing world.

Our Mission:

- Enhance the profitability of farmers to maintain a strong regional dairy industry
- Create greater awareness of trends and options to help producers achieve family and business goals
- Maintain environmentally responsible agricultural practices
- Encourage a better understanding of agriculture by the general community