

Cornell University
Cooperative Extension
South Central New York Dairy & Field Crops Team

**Coupling Farm Tours
with Education**



ANNUAL REPORT
2017



We develop educational forums to help the regional industry implement research findings, stay current with technology, develop and hone management skills, and make beneficial economic decisions while addressing their business and personal goals.

Scope of the Dairy & Field Crops Industry that We Serve

(Broome, Chemung, Cortland, Tioga, Tompkins & Onondaga Counties)

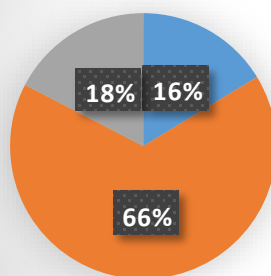
Annual Average Dairy Farm Gate Income

Milk Sales	\$ 207 Million
Crop Sales	\$ 96.9 Million
Cattle Sales	\$ 20 Million
Total Income	\$ 326 Million

Source: USDA Census of Agriculture
(2012) & The Market Administrator's
Annual
Statistical Bulletin 2013

County:	Broome	Chemung	Cortland	Tioga	Tompkins	Onondaga	TOTAL
Dairy Farms	37	23	91	88	62	68	369
No. Dairy Cows	4929	1914	10,351	6454	9085	19,155	51,888
Ac. Field Crops	31,037	21,239	51,465	40,193	44,119	89,478	277,531

Program Funding Partners



- CCE Admin
- County CCE Partners
- Team Generated Funds

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. We focus on areas that will help improve farm profitability within the region since farm financial success is key to sustaining the 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.

2017 By the Numbers

- 59 active participants in farmer-to-farmer learning groups
- 39 meetings and workshops with 1778 participants
- 110 consultations providing in-depth, personalized troubleshooting, evaluation, information and advice
- 500 responses to phone & email inquiries
- 14 Events with the Soil Health Trailer with 1397 Participants
- 10 Events to Increase Public Awareness of Agriculture - 4000 contacts

Predicting Timing of First Cutting – A key focus in May is our **Alfalfa Heights Project** to Target Date of First Cutting. We use the heights of alfalfa to target first cutting dates for grass hay, grass and legume or “mixed” stands and pure alfalfa stands. We use guidelines from research tested in NYS by our Extension Forage Scientist, Dr. Jerry Cherney. This effort provides “an early warning alert”.

While this spring was plagued with unneeded rain, many farmers heeded our projections and were able to get grass fields in early and with excellent quality. Weather patterns saw no improvement through late May, and many farmers lamented through the rain that they knew hay crop was ready, but had no window of opportunity to harvest. Weekly findings were posted on the webpage and facebook page as well as emailed out to farmers, nutritionists and other agribusiness personnel. Mike Baker, Cornell University also posted our weekly updates via his Beef Cattle Management Updates.

“These emails are very helpful!” – Chelsea Hoover, Shurgain nutritionist

Many farms around the region emailed requests to be added to the weekly update because they had been forwarded the information from someone that received it directly. Other emails from farms came in looking for information on insect damaged crops, sourcing

hay, and other general questions. The project has turned into something the producers in the region look forward to and use to make decisions regarding the timing of this very important crop. As one producer emailed Betsy this year, “On the downhill side of corn - about 20 acres left and should get done today. Then on to hay because those lovely ladies of CCE recommend that it be cut!”

“Thank you for doing the heights, I use them with my customers every year”,
Gabriel Carpenter,
Keystone nutritionist.

We measured 96 fields on 65 farms located in 43 townships across our 6 county region. Fields have different elevations and slopes.

First Cutting is important for two main reasons:

First it is the highest yielding of the summer’s 3-5 hay harvests. On average $\frac{1}{2}$ to $\frac{2}{3}$ of the total yield is represented in first cutting. Harvesting **high quality forage** is one of the most important things a dairy farmer can do to keep their feed costs under control. Feed costs can approach 60% of expenses on dairy farms.

First Cutting Updates – Utilizing Alfalfa Heights as a Predictor for Quality

The SCNY team is monitoring alfalfa heights again this spring to help predict quality and %NDF for first cutting hay crop. Alfalfa height has been proven to be a reliable indicator of NDF values in the field for alfalfa, alfalfa/grass mixed and all grass stands. Results will be compiled and emailed on a weekly basis – please feel free to forward on. To be included on the weekly email, or to be removed from the email, please contact Betsy Hicks, bjh246@cornell.edu.

UPDATES FOR THE WEEK OF MAY 15th, 2017:

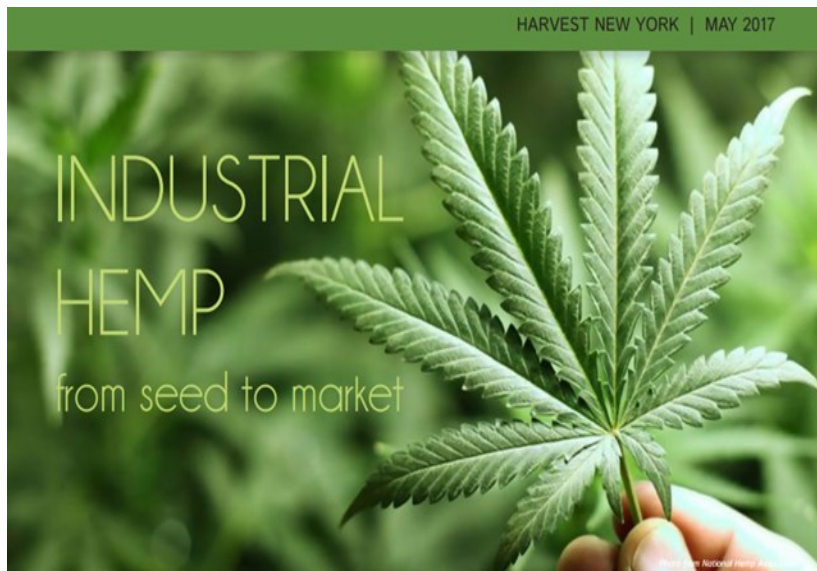
Comments from Janice: Mowing has begun and it's right on for clear grass fields since orchard grass is heading and other grasses will be heading in the next week. Alfalfa is approaching or at 2 ft this week. Only occasional early buds found. With the adequate soil moisture and the predicted heat for the week ahead we have the potential to gain significant yield in the next week to alfalfa. The weather windows and percent alfalfa will drive when to target harvest of mixed stands. The time is near and the switch from corn planting to hay harvest may be necessary to capture high quality. Wet fields will be a factor to consider when planning harvest. In soils that have been saturated or even waterlogged over the last 3 weeks the alfalfa is obviously stressed. It's growing very slowing and in some fields actually going backwards. There are spots of significant winter damage, mainly crown heaving. These fields are going to have a disappointing yield and may be candidates for turning into corn after first cutting.

Second the timing of first cutting sets the schedule for the rest of the season because subsequent are based on a set interval, like 30 days. The earlier the first harvest, the better chances for a better second harvest because we still have soil moisture. By mid-June we usually have hotter and drier conditions which slows hay growth.

An Old Crop is New Again

Industrial Hemp is said to have over 10,000 uses and unexplored economic development potential. New York State is taking advantage of a 2014 Farm Bill provision that allows states to develop research programs to explore the potential of industrial hemp production. Industrial Hemp has many potential uses such as fiber, cosmetics, pharmaceuticals, and food products.

Cornell University and Cooperative Extension are leading the efforts to support the development of NYS based research for best suited varieties, pest management, fertility requirements and harvest strategies. Cornell has put together a plan to deliver up-to-date science-based solutions and information about hemp production and facilitate exchange of information with growers to focus future research needs. Janice Degni, Area Field Crops Specialist on the South Central NY Dairy & Field Crops Team is one of 3 Hemp Technical Specialists appointed by Cornell Cooperative Extension.



The Soil Health Trailer –was featured at Sundaes on the Farm, hosted by Kwiatkowski family who run TRI-K Farm, outside Owego and the pasture walk at Red House Ranch in VanEtten.

Fay Benson was busy demonstrating and explaining the many different components of healthy soil. Janice had a display about crops and Betsy addressed dairy management and feeding questions.

Soil Health Trailer

- Reached over 1300 people in 2017
- Averaging over 15 events a year
- <https://www.facebook.com/nysoilhealthtrailer>



Farm Safety & OSHA Workshop



Many of our medium and large farms are subject to surprise OSHA inspections, known as the Local Emphasis Program (LEP) in NY. Managers on these farms have several aspects to stay on top of to remain OSHA compliant, including minimizing hazards on farm, keeping up-to-date records, and annual training of employees on hazards they may encounter during their daily operations. Knowing that operations change daily, new employees come to farms every year, and certain aspects of the LEP change periodically, many farm managers know that they need to get up to speed on being compliant with OSHA LEP standards but aren't sure about where to turn for help and resources.

In response to this need, the team organized a Farm Safety and OSHA Workshop held at the Volles Farm in late August. About twenty-two farm managers, employees and agribusiness participated in the workshop, where they heard from an array of speakers focused on safety and OSHA compliance.

Public Outreach

The team was involved in many public outreach activities again. The yearly staples such as Cortland's AgStravaganza with 4th graders and McMahon's EZ Acres 5th grade Dairy Farm tour were big hits. The team educated the students using information stations at Onondaga's Ag Awareness Day with 4th graders and Chemung County's Old McDonald's Farm.



Calf Managers Add Skills Through On-Farm Workshops

Through the collaborative efforts of the state wide regional dairy specialists, the SCNY team was able to offer a 2-day specialized course for calf managers that utilized on-farm learning and demonstrations to emphasize points learned in the classroom. Topics included:

- Maximizing calf potential before birth
- Colostrum management
- Pre-weaned calf nutrition
- Calf health
- Housing & ventilation.



Demonstrations included colostrum evaluation, health evaluations, housing evaluations, blood serum testing and calf necropsy. Fifteen people from across our region attended both days of the workshop. Evaluations from the workshops showed that one hundred percent of participants ranked the on-farm demonstrations of calf health scoring and necropsy as a 4 of 5, 5 being outstanding and 1 being poor. Comments from one evaluation stated that they "realize we aren't as good as I thought we were" when it came to colostrum management. Another evaluation stated that the best thing about the workshop was the information and the open discussion, while another liked the detailed presentations and the variety of topics.

Summer Meetings Highlight Current Topics Utilizing Farm Tours

Producers have little time but a great desire to visit other farms during the summer time to observe other operations and learn things that they can implement on their own farms.

A set of four farm tours were planned during the summertime to enhance learning around topics including **cow comfort** and **safe animal handling**, **robot technology**, **heifer growth and facilities**, and **farm safety** and **OSHA regulations**. The workshops utilized speakers from within industry, extension and the producers themselves to present information and give insight on the operation being toured.

Producer evaluations showed that the information shared at each workshop was beneficial to their farm business. At the Cow Comfort Workshop, three of the farms present said they plan to take action on cow comfort improvements and facility updates in the near future. In the Farm Safety workshop, one hundred percent of participants also stated they

would be taking some sort of action, the most common action being "implementing safety measurements" followed by "more employee safety training". Four of the farms present stated they would also be contacting either NYS DOL for a farm safety audit and/or contacting NYCAMH for safety training. Many evaluations at the Robot Farm Tour had several actions highlighted that they planned to do in the near future, including business planning, facility updates and improvements, and implementing new technology. At the Heifer Facilities Tour, one producer stated that "hearing farmers experiences with before and after facility changes is valuable, and seeing those facilities in action" is helpful to their farm business. Each workshop had ample attendance from producers from both large and small farms alike.



Crop Yield Improvements provide adequate home grown Feed to Expanding Organic Dairy Herd

An organic dairy farm's forage and home grown corn grain inventories were enhanced with advice from the farm's dairy profit team and Area Extension Field Crop Specialist. With funds from NY Farm Viability Institute to help with start-up, the farm owners organized a dairy profit team, facilitated by Betsy Hicks. One of the objectives that the team focused on was expanding the dairy herd, with the caveat that the increased forage needs would be met by home grown forages. Janice Degni was invited to help review the cropping plan with the farm's nutritionist and NYFarmNet financial advisor to help with a strategy to increase forage inventory and home grown corn grain in anticipation of more dairy cows to feed.

We reviewed the farms current cropping program and yields, and estimated the number of additional acres needed for increasing corn production. A second visit was made in early spring once cows were on pasture to assess the fields used for grazing versus crop production. Current crop stands were evaluated and recommendations for timing of first cutting were given specifically for their stands. Extensive discussions were held about yield potentials of different fields, convenience and suitability for planting and harvesting crop. We wanted to increase acreage planted as well as yields, but not create an unmanageable workload for the farm. Recommendations were made to ensure that fields had adequate fertility to meet the nutrient demands of a corn crop, all within the guidelines of producing forage under the organic umbrella. This plan was visited several times during profit team meetings over the summer and fall to ensure the farm was on track and adjustments were made in terms of projected cow numbers and winter feed needs for inventory needed.

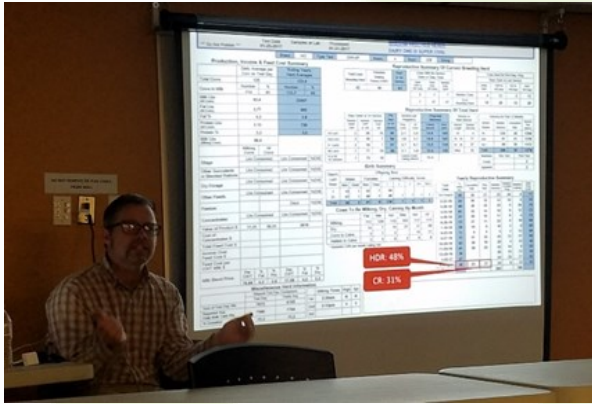


Supporting the Grass-fed Milk Market with Education and Benchmarks

Fay teamed up with Heather Darby, University of Vermont, and Sarah Flack, Sarah Flack Consulting, to secure a NESARE Research and Extension grant. The first goal of the grant sought to get a snap shot of the management used to produce grass-fed milk. To do this the group developed and sent out an initial survey and a follow up survey to all 100% grass-fed producers in the Northeast with assistance from milk handlers; Organic Valley and Maple Hill Creamery. The second goal of the grant was to collect in-depth data on the management of these farms. The team selected a group of 20 farms to participate in a monthly data collection tool called the "Grass-fed Monitor". The Grass-fed Monitor is sent monthly to this group of year-round grass-fed dairy farms to record monthly milk production, forage consumption and changes in herd inventory. The initial survey was sent to the 120-100% grass-fed dairies in the Northeast, and yielded over 80 responses. Of those responses, 60 farms agreed to participate further, bringing in 40 follow-up surveys. From the 40, 20 farms agreed to participate in monthly data collection. In April, the team began getting reliable information from participants, and now have 6 months of data from the farms and will continue for the next 18 months. Each month, the participants are given a series of graphs, showing their production level compared to the prior months in previous as well as their current production in comparison to the other farms in the project.



The 20 participants average of 20 years of farming, with 10 of those years, on average, being organic and have been 100% grass-fed for an average of 3.8 years. They range from milking 15 - 128 cows, with the average being 49%. Forty five percent of the farms feed an energy supplement to their animals. From April to September, on average, production ranges from 22.9 - 47.4 pounds milk produced per cow per day with fat percentages ranging from 3.5% to 5% and protein 2.7% to 3.7%. Additionally, the calculated energy corrected milk ranges from 24.3 - 48.3 pounds per cow per day.



Peer-to-Peer Learning - In response to requests from Tioga County area producers, the discussion groups held there in the past morphed into Small Group Learning Sessions. Producers were able to bring forage reports, diet summaries, herd records and more to more deeply understand their business. The first session focused on herd records and what numbers to pay attention to in order to impact profitability. The second session focused on nutrition and what questions producers should be asking their nutritionist. The third and final session focused on important documents and agreements that producers should have in place to protect assets. In total, fourteen producers attended the three workshops.

Organic Discussion Groups Three meetings each were held each in Tioga and Onondaga Counties from January to March. Topics covered included: the ins and outs of using QuickBooks, timing of mechanical weed control, and efficient use of grazing planning charts

Annie's Project Empowering Women in Agriculture

As the SCNY Dairy and Field Crops Team works to educate and offer guidance towards the goal of successful dairy and crop businesses in our area, we can tend to focus on the farmer *himself*. But we all know that *he* has a support team that works towards that success. This team can include fathers, brothers, sons, employees, veterinarians, and nutrition and crop consultants, to name a few. But, let's not forget the women that are also a key part of this team – mothers, wives, and daughters. They often play key roles and they need to be included in the group to educate and guide.



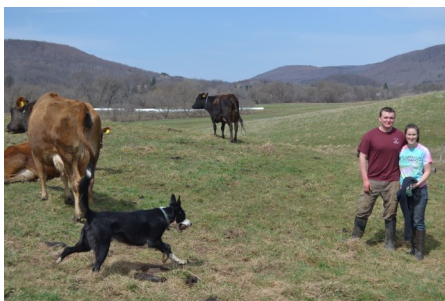
One program that the team offered as an educational opportunity for these women was Annie's Project - Managing for Today and Tomorrow: Succession, Business, Estate and Retirement Planning for Farm Women. A dozen women participated in the five-session program where expert guest speakers presented information on a variety of key business topics. There was one young lady that participated in this Annie's Project. She comes from a 150 cow dairy farm, working daily with her father and uncle. She had realized the importance of educating herself when the opportunities arise, knowing that she is the next generation for this farm business. She learned from the Annie's curriculum that she needed to include her father and uncle in this education process. She did not stop at Annie's. She showed leadership by applying for the Cornell Dairy Acceleration Program (DAP) and the NY Farm Viability Dairy Profit Team program (DBT). By doing this, she was able to bring many of the team members of this business together – father, uncle, feed consultant, veterinarian, CCE Regional team member, financial services representative, estate and retirement planning lawyer. Several DAP/DPT meetings were held with critical business issues being discussed – goals of the owners, cow comfort, forage quality, retirement plans, positives and negatives of the operation, and needed improvements for business success. A key result of the efforts of this young woman was to bring a business management team together to ensure that all are moving in the same direction as a successful business that will continue into the future.



As the SCNY Dairy and Field Crops Team strives to educate and offer guidance to the dairy and crop producers, the accomplishments of this young woman is an example of the importance of including *all* business team members in our education efforts.

Benchmarking Toward a Farm of Their Own

By: Kara Dunn



Participating in New York's Organic Dairy Farm Business Summary (ODFBS) has set Ryan Murray and fiancé Annie Grant on the road to owning their own farm. The couple will marry this year and

are looking for land to buy.

Murray, 25, started with 150 acres of rented hay and pastureland and facilities near Truxton in Central NY's Cortland County. His 30-cow, certified organic milking herd in 2013 has grown to 60 cows with calves today.

"When I heard Fay Benson (Cornell University Cooperative Extension Small Dairy Extension Educator) describe the organic edition of the Dairy Farm Business Summary that sounded like a good thing for my seasonal, lower-cost, lower-production business model," Murray notes.

"As a sole operator without employees, I was keeping good basic records, but I did not have a lot of time for analysis," he adds.

The Cornell Dairy Farm Business Summary uses data from farms of similar size and practices to create benchmarks against which operators measure their individual farm's performance.

"The organic edition of the DFBS factors in specific values for intensive grazing, organic purchased feed costs, cost savings based on pasture value, and other organic-specific practices," Benson points out.



Murray transferred his numbers on cows, milk production, costs, and receipts from Excel into the ODFBS program.

"I immediately began to see opportunities to cut costs and increase production," Murray says. "It reaffirmed

where to put my limited resources, both time and money, first to get the best return on investment."

The DFBS analysis shows the relationships among the diverse factors influencing how well a farm meets its goals. Success is analyzed across balance sheet and cash flow, debt-to-asset ratio, and per-cow milking, per-acre cropping, and labor efficiency data.

Benson connected Murray with Certified Crop Advisor Tom Kilcer to evaluate his cropping plan.

In part, the ODFBS analysis influenced Murray to plan for 60 calves this spring.

"With the goal of buying land, I have focused on managed internal growth to build equity in my cows. From the start, working the summary highlighted the significance of economy of scale," Murray says.

Continual progress towards goals helped Murray become a completely seasonal operation in 2015.

"Comparing my numbers to Dr. Larry Tranel's (Iowa State) data for 2015 for the top 15 percent of profit groups (higher and lower profit subsets in four geographic areas: eastern Iowa, southwest Wisconsin/northwest Illinois, Ohio, and Pennsylvania/NY) for totally grass-fed operations helped show where I was doing well and areas yet for attention," Murray comments.

The New York Farm Viability Institute has funded organic dairy production projects for more than a decade. In 2006, the Institute provided startup funding for the NY Organic Dairy initiative in response to consumer demand for organic milk.

"The Organic Dairy Farm Business Summary project supports development of topic-specific Profit Teams focused on benchmarking to benefit both the individual farm participants and to add to the larger dataset that benefits dairying industrywide," said Institute Executive Director David Grusenmeyer.

The Institute offers financial grants to encourage producers to participate in the ODFBS, and supports Topic-Specific Profit Teams for transitioning to organic milk production, and for using the Dairy Profit Monitor, reducing cow lameness, and enhancing cow comfort and health for any dairy operation.