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

SOUTH CENTRAL NY DAIRY & FIELD CROPS PROGRAM

2nd Quarter Report **April - June 2017**

The New York State Industrial Hemp Summit held April 18 focused on the economic potential of an unexplored market for the development of products from fiber, to cosmetics, farm-a-ceuticals, and as an ingredient in food products. 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.

Dr. Christine Smart is coordinating Cornell University and Cooperative Extension efforts to support the development of NYS based research from best suited varieties, pest management, fertility needs to harvest strategies. Cornell is putting 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. Cornell has established a web page to serve as a clearing house of information, https://sips.cals.cornell.edu/extension-outreach/industrial-hemp. The report, *Industrial Hemp from Seed to Market*, provides a review of known market channels, economics of production, legal issues, barriers to growth and a wealth of resources for more information (https://sips.cals.cornell.edu/sites/sips.cals.cornell.edu/files/shared/documents/industrial-hemp-from-seed-to-market.pdf).

Janice Degni appointed to the CCE Hemp Technical Team for the Southern Tier.

Cornell Cooperative Extension links the research and extension efforts at Cornell University, the Cornell University Agricultural Experiment Station and the New York State Agricultural Experiment Station, providing the knowledge to maximize New York State's agricultural and natural resources.

SCNY Dairy & Field Crops Extension Program

The Team in the News!

The Cortland Standard publishes a June Dairy insert every year. The Team had several articles published, as well as comments featured from Betsy after an interview with a reporter in an article titled, "A cow's veterinary care: Getting high quality milk out of a herd isn't always easy". The articles published that were written by the team encompassed modern dairy practices, from Janice's article, "Call it the Smell of Success – Technology and Practice Take the Stink out of Manure Spreading," to Betsy's article, "Modern Dairy Farming – A Leg up on Old MacDonald's Farm." Another article written by Betsy, "Cortland: Differences in Dairy Over Time," detailed what a farm in 1929 may have looked like compared to dairy farms in Cortland county today, using census data to tell the story. Farmers showed appreciation of our dedication to telling their modern story to the public in this way, as evidenced by the response received by email, "My hat is off to all the folks at Coop-Extension. Great stories about modern ag and how we are trying to be good neighbors. Thanks."

1929 Herd Sizes – Cortland County

	Number	Percent of total
1-2 cows	222	13.37
3-9 cows	432	26.01
10-19 cows	565	34.02
20-29 cows	283	17.04
30-49 cows	123	7.41
50-74 cows	25	1.51
75-99 cows	7	0.42
100+ cows	4	0.24
Total	1661	100

2012 Herd Sizes – Cortland County

	Number	Percent of total
<49 cows	36	39.56
50-99 cows	33	36.26
100-199 cows	13	14.29
200-499 cows	3	3.30
>500 cows	6	6.59
Total	91	100

Cortland County: Differences in Dairy from 1929 to 2012
By Betsy Hicks, Area Dairy Specialist, Cornell Cooperative Extension

Cortland County has a rich history in dairy. Back in the 1920's, Cortland had a plethora of dairy farms. The Census of Agriculture in 1929 counted 1,661 Cortland County Dairy Farms and roughly 24,258 milking cows. In comparison, the population of Cortland County was just over 30,000 people – almost as many dairy cows as people lived in the county. Of the 1,661 farms counted, almost 40% had under ten milking cows. Another third were represented by farms 10-19 cows in size. Only 4 farms had over 100 milking cows in Cortland County in 1929, but for that era, what operations those must have been!!

The most recent Census of Agriculture (2012) counted 91 operating dairy farms in Cortland County with 10,351 dairy cows. Population of humans in Cortland County for the same year was around 49,203. So for about every dairy cow we count here, there are five people, a huge difference from 80 years ago. Farm size has changed drastically in the time as well – in 2012 a third of our farms were under 50 cows, another third under 100 cows. The Census counted 22 farms over 100 cows, of which 6 were over 500 cows.

Production of milk in Cortland County has always been a strong point for the county. Back in 1929, our milk cows averaged 5,764 lb/year, roughly 16,250,000 gallons of milk from the over 24,000 cows. Today, our 10,351 dairy cows average closer to 23,000 lb/year, which translates into 28,283,000 gallons of milk. All told, from less than half of the cows in 1929, our cows produce almost double the amount of milk. Our farmers have done a pretty incredible job and have been a steady influence on the economy in the county over the last century.

A new Census of Agriculture is being done this year. While the trends of falling farm numbers are certain to appear again, the number of cows in the county will probably remain steady or even gain. We have great family farm businesses in the county that have been here for generations. Instead of siblings each having their own dairy, many families (and even neighbors,) have formed businesses to farm together. Farm sizes and numbers of cows per farm may be getting bigger, but it doesn't change the fact that the majority of farms are family operated. Cortland has had a rich history of dairy farming, and it's sure to continue.

"My hat is off to all the folks at Coop-Extension. Great stories about modern ag and how we are trying to be good neighbors. Thanks."

Cortland County 1929

Number of dairies: 1661

Number of cows: 24,258

Average dairy size:: 14.6 cows

Ratio of people to cows: 1.2:1

Cortland County 2012

Number of dairies: 91

Number of cows: 10,351

Average dairy size:: 113.7 cows

Ratio of people to cows: 4.8:1

Predicting Timing of First Cutting

For the third year in a row, the Team focused every Tuesday in May on measuring alfalfa heights as a predictor of quality for first cutting haylage. Fields in all six counties within the Team's region were measured utilizing help from Shona Ort (CCE Chemung), Margaret Ball (CCE Tioga) and Paul Gier (Tompkins SWCD) as well as getting Melanie's feet wet (literally) with the annual project. 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. We received many replies back such as: "These emails are very helpful!" – Chelsea Hoover, Shurgain nutritionist, and "Thank you for doing the heights, I use them with my customers every year", Gabriel Carpenter, Keystone 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 every year 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!"

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.

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".

We have identified 96 fields on 65 farms located in 43 townships across our 6 county region. We have fields with 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 ½ to 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.

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.

Public Outreach

The Team was involved in many public outreach activities again this quarter. The yearly staples of Cortland's Agstravaganza with area 4th graders and McMahon's EZ Acres 5th grade Dairy Farm tour were big hits once again. The Team also educated students throught stations at Onondaga's Ag Awareness Day with area 4th graders and Chemung County's Old McDonald's Farm.

June is Dairy Month activities in Cortland County organized by the Dairy Promotion Committee utilized the Team greatly this year. Janice, Betsy and Melanie helped line up floats for the annual Dairy Parade. Abbie Teeter graciously judged the Dairy Princess pageant, and Betsy helped organize the annual Dairy Breakfast, held at Cobblestone Valley Farm in Preble as well as helped organize the Dairy Princess Coronation Ceremony.

TieStall Lameness Project

The first quarter of Betsy's NY Farm Viability Institute grant on Linking Lying Time and Lameness in Tie-Stall Facilities started off strong. All five farms needed in the region were identified for this round, and initial surveys and visits completed. Two of these farms are producers that don't normally use Cooperative Extension as a resource, and one other farm had had no prior experience with the Team before Betsy stopped in. Three other interested farms also came forward to be included in the next round of funding for 2018. Two farms will have their first assessment of lying time via usage of the data loggers completed by the end of June, with the following three scheduled to be completed by the end of the summer. Already, farms are identifying cows that have signs of lameness earlier and making changes on their operations to increase cow comfort. One farm is planning to add additional fans after noticing that air movement had a dead spot in one end of the facility.

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 is 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 feed costs for purchased feed, 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 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.

"Adjustments to my cropping practices resulted in more feed from the same number of acres,

which is critical since my acreage is currently limited," Murray explains. "Increasing crop yield supported increasing cow numbers."

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 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 Pennsyvlania/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.