

A partnership between Cornell University and CCE Associations in these ten counties:  
Genesee, Livingston, Monroe, Niagara, Ontario, Orleans, Seneca, Wayne, Wyoming & Yates.



## QUARTERLY HIGHLIGHTS October - December 2019

### Beef Quality Assurance Transportation, a New Training Requirement

There are many times where cattle are transported by producers or by a hired hauler, utilizing a pick-up truck and trailer. The line between agriculture and commercial hauling may be confusing; specific laws and requirements need to be followed depending on equipment weight and other factors. Cattle health and welfare need to be considered as well. Many auction barns and processors are now requiring drivers to be certified in Beef Quality Assurance Transportation, a new program through BQA in order to deliver to their facilities.

Small-scale haulers were targeted for the certification training. The Empire Livestock Marketing barn in Pavilion, Genesee County, hosted and along with support from Cargill, covered the costs of the training. Mike Baker, Beef Cattle Specialist and certified trainer led the training for certification. Topics included: cattle handling and loading, weather factors, biosecurity, and whether cattle are fit for transport.

Also present was the regional NY State Trooper who is the WNY contact for DOT requirements and check-point inspections. He led a "truck-side" discussion with the barn's pick-up and trailer to point out inspection points. He also explained licensing requirements needed by drivers and answered many questions.

Thirteen participants were certified from the region, including dairy and beef producers plus small scale cattle haulers. More of these trainings will be conducted as a NWNy team member is now a qualified trainer. Partnerships will allow these trainings to be free, thanks to the Beef Checkoff and industry sponsors.



A NYS trooper leads a discussion on truck and trailer safety. Photo by Nancy Glazier / CCE NWNy Team.

### Cow Comfort Workshops Provide Tools for Dairy Producers to Make Positive Changes



The NWNy Team, in conjunction with a statewide effort, hosted two Cow Comfort Workshops in Livingston and Yates counties in December 2019. Fifty-five dairy farmers and several consultants from Livingston, Wyoming, Yates, Seneca, Wayne, and Ontario counties attended the workshops, representing 2,677 cows in the region.

In answer to demands from dairy consumers and milk processors that are raising the bar on requirements for cow comfort, the workshops focused on cow comfort guidelines, economics, and facility analysis for both free-stall and tiestall producers. Attendees learned about the purpose and principles behind having comfortable cows, how to identify different levels of cow comfort, and the economics of making improvements on their dairies.

Rick Grant, President of the William H. Miner Institute and leading cow behavior scientist, spoke to producers with freestalls about cow time budgets and the social dynamics of the herd that influence cow comfort. Lindsay Ferlito, Dairy Specialist for the North Country Regional Team, spoke about her recent research in decreasing lameness in tiestall barns. NWNy Team Dairy Specialists presented on facility ventilation and partial budgets to complete the well-rounded morning session. Both groups discussed and learned how to assess cows and facilities for comfort while touring the host farm.

Participants left each workshop with the ability to conduct cow comfort assessments on their own farms along with simple tools to create a partial budget and make impactful changes on their own dairies. Farmers commented that the workshop helped them make the connection between cow comfort and overall wellness, and how that contributes to the farm's overall economic health.

Top Photo: Libby E. gives a presentation on partial budgets during the tiestall class.

Photo Right: Margaret Q. demonstrates measuring stall dimensions during the free-stall class.

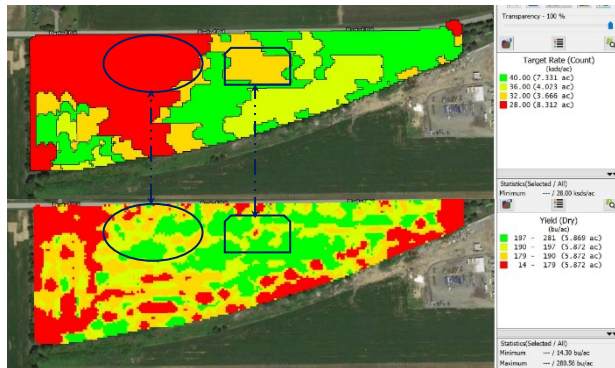
Photos courtesy of NWNy Dairy Specialists.



## Precision Agriculture - Implementing Variable Corn-Seeding Rates

The optimum seeding rate can vary within and among fields with differences in soil types and conditions. A new planter technology called Variable-Rate Seeding (VRS) allows growers to adjust seeding rates within a field as field conditions change. Farmers can use the seeding rate recommendations provided by researchers for a hybrid, incorporate with their previous yield potentials, and estimate their optimal seeding rates.

A variable rate corn-seeding project was conducted in cooperation with Branton Farms in Genesee County. Four seeding rates were planted at four different management zones, ranging from 28,000 to 40,000 seeds per acre (Fig. 1). The four zones were created based on multiple crop yield data and the grower's personal knowledge of the field.



The harvest data (Fig. 2) clearly shows the areas planted at lower seeding rate did not result in lower yields and actually improved the uniformity of yield into a higher yield. **Based on 36,000 seeds/ac conventional flat rate seeding rate, there was approximately 5% saving on seed using VRS system. On a farm planting 500 acres of corn, this is roughly a savings of \$6.50 an acre or \$3250 a year.** Chad Branton also commented, **"I believe overall yield was increased by using variable rate population. My plan for this year is to variable rate seed every corn field and possibly expand into other row crops"**. This project was initiated to help farmers conduct on-farm research and to assist them in adopting site-specific management zone techniques.

Figure 1. Variable Rate Seeding prescription map based on multiple year crop yield and grower personal knowledge of the field ranged from 28,000 to 40,000 seeds per acre.

Figure 2. Yield map and harvesting data, ranged from 34 to 281 bushel per acre (bu/ac).

Area: 23.48 ac, Yield Min: 14.30 bu/ac, Yield Max: 280.56 bu/ac, Yield Ave: 182.36 bu/ac

## Will Additional Sulfur Increase Soybean Yield Quality?

A number of factors go into the production of high-yielding soybeans, such as, variety selection, timely planting, row widths, early scouting and management of insects, weeds and diseases, and fertility. Soybean fertility is an area of research that has received a lot of attention recently, particularly micro-nutrients. Soybean response to nutrients depend on growth and yield potential, initial nutrient status and weather. Sulfur is one nutrient that is being scrutinized since levels in the soil have drastically decreased since the passing of the Clean Air Act in 1970. A good crop of soybeans takes up about 20 pounds of sulfur per acre. While these amounts are small, compared with the amount of fertilization for general crops, the world consumption of sulfur-containing fertilizers (e.g. ammonium sulfate, potassium sulfate) has increased. This data indicates that attention should be given to the nutritional balance of sulfur in soils and crops.

To address the possible influence of sulfur on soybeans, the NWNY Team was awarded grant funding through the New York Farm Viability Institute and New York Soybean Checkoff in 2018 and extended in 2019 to see if sulfur is a limiting nutrient for soybean production in the state. Seventeen on-farm trials were hosted by growers in Orleans, Genesee, Livingston, Ontario, Wayne and Seneca County. Each trial was replicated three times utilizing ammonium sulfate and gypsum as the sulfur treatments at a rate of

thirty pounds of sulfur to the acre. In-season tissue samples were collected and analyzed to determine plant sulfur levels within treatments. At harvest, seed samples were collected to measure crude protein content and sulfur status.

A preliminary economic analysis for New York suggests a yield increase of 2 bushels per acre is needed to cover sulfur application costs (break-even yield). Based on statistical analyses, sulfur fertilizer additions had no significant impact on yield or quality. These results indicate that even with the reduction in atmospheric deposition (1 lb. /S/a), soils are mineralizing enough S for optimum growth of soybeans at this point in time.



Seed collection and final weight of treatments taken at harvest. Photo by Josh Putman / CCE SWNY Team