

Lake Erie Regional Grape Program

A cooperative program between Cornell and Penn State Universities, Cornell Cooperative Extension Associations in Chautauqua, Cattaraugus, Erie and Niagara Counties, Penn State Extension – Erie County, NYS IPM Program, National Grape Cooperative, Constellation Brands, Walker's Fruit Basket and growers of the Lake Erie Grape Industry



Cornell University
Cooperative Extension



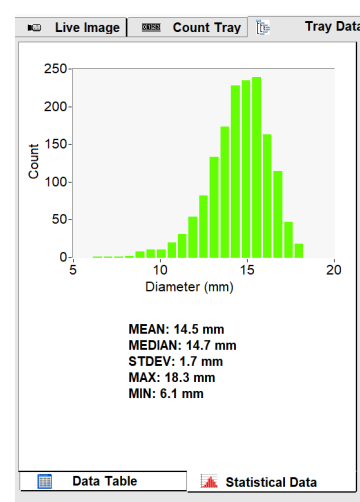
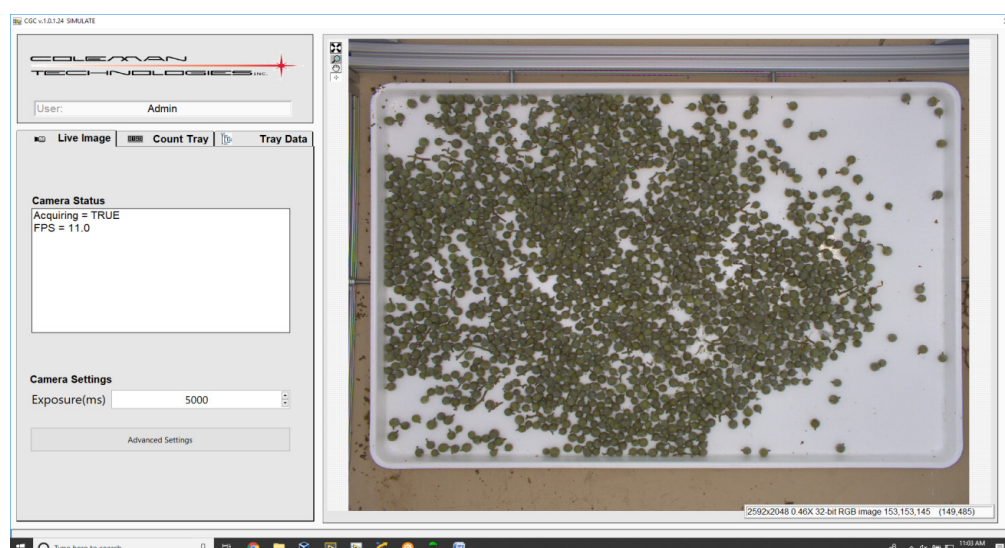
PennState Extension

Third Quarter Report 2019

Crop Estimation with the Cornell Grape Counter

2.0 with the incorporation of digital scale for instant sample weights and accurate berry count to aid with industry stakeholder crop estimation. The principal outcome of improved crop estimation is savings to stakeholders including optimized scheduling of labor, efficient coordination of space for fruit and juice, improved delivery scheduling, reliable reporting to government agencies and distributors, early projection of revenues, proactive filing of crop insurance claims if the estimate is critically low and a reliable basis to make crop reduction decisions if the estimate is critically high. The CGC system employs computer vision to automate the tedious process of counting and sizing grape crops and accurate weights. A custom image-processing algorithm was developed to automate the grape counting process. Software was created to export data for user analysis and as a viticulture tool. With manual assist, the CGC machine can achieve >99.5% accuracy and 2-5 minutes for a tray of 3-5k grapes, which historically was counted by hand. Often, the most practical way to decrease the margin of error is to increase the sample size. The time savings that the CGC allows could be allocated to the collection of more samples to obtain a more precise crop estimation. Though this work is tailored to Concord growers, it would be easily applicable to other juice, wine, or table grape production systems. The development of an accurate automated berry counting machine with accurate sample weights would streamline the estimation process improving efficiency with savings in labor improving profits.

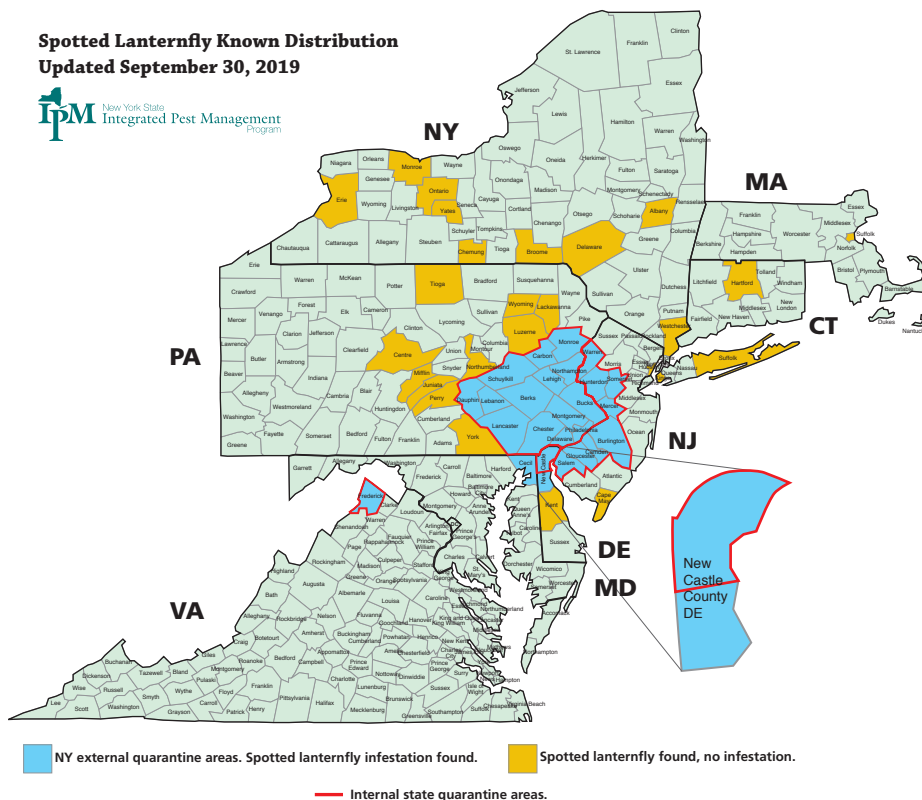
The new viticulturist, in a joint effort with Coleman Technologies, developed the Cornell Grape Counter (CGC) Machine



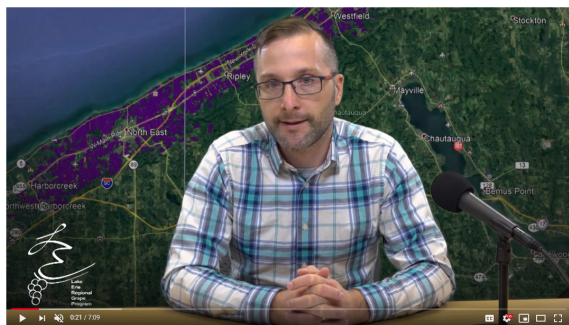
Spotted Lanternfly

Spotted lanternfly continued to be on the radar of the grape team. Reports from southeast Pennsylvania show that spotted lanternfly will preferentially feed on grapes compared to other horticultural and agricultural crops and is the only crop that has shown plant death from feeding. Pennsylvania grape growers have reported vine death after two successive years of heavy infestation by spotted lanternfly. The LERGP extension team continues to work with the NYS IPM Program to update and disseminate a spotted lanternfly distribution map used by researchers, extension staff and regulatory personnel across the northeastern United States. The map, with much more information on spotted lanternfly, can be found on the team's website at: <https://lergp.com/spotted-lanternfly>

Spotted Lanternfly Known Distribution Updated September 30, 2019



Business Management



New York's Minimum Wage and the Domestic Worker | CRPD Podcast #197

With the help of materials from Cornell's workforce development program, Business Management topics focused on labor this quarter to help ensure that NYS growers are in compliance with NYS regulation. The program also focuses on the impact the regulations have on Pennsylvania. In some instances, we discuss competitive advantages. In other areas we discuss how the available labor pool in neighboring county changes.

The efficient use of labor, as regulations increase the cost of labor, are also integrated into the effort to disseminate research based information on the labor market.

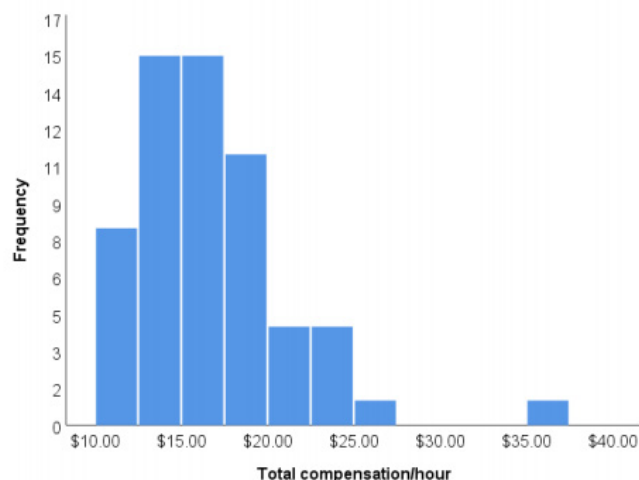
The program has put together three podcasts, two newsletter articles and two crop updates.

The program has also shared articles written by Dr. Strup. He'll be speaking at the winter conference this year as well.

By reaching all of our growers we intend to provide the knowledge and investment advice necessary to minimize overtime cost; prevent unnecessary fees and fines by making sure employers have access to training materials to share with their employees; and to provide capital equipment pricing and guides to reduce labor costs through more efficient equipment and technology.

FIGURE 2

Distribution of frontline workers' total compensation per hour



Vineyard Improvement Program

This past quarter has brought 3 more applicants bringing the total applicants to 12 and total grape acreage covered with this program to 115.46 acres (14.33 acres this quarter). Site visits were conducted for those

three applicants and verified that they were Concord vineyards. There are currently 7 applicants from Chautauqua County, 1 from Steuben, 1 from Schuyler, and 3 from Niagara county. Information was disseminated to growers and landowners through press releases, crop update articles, newsletter articles, field representative meetings and coffee pot meetings. The first and largest reimbursement has been finalized this quarter with a check for \$50,000 sent to the applicant. During this quarter we were invited to do a "final" site visit for one of the applicants and found incomplete removal of the vineyard. We asked that he do some more work to ensure the complete removal prior to moving toward reimbursement. Additionally we have been in contact with two of the three new applicants with ongoing clarification of budget items so that appropriate reimbursement can be made when their respective projects are completed. A number of growers/landowners have inquired about the Vineyard Improvement Program during this quarter. They were given information and directed to the lergp.com website to learn more and fill out an application when ready. One potential applicant did not currently have a GIS map of his vineyard operation, so one was created for him.



NEWA June – September 2019

Keeping the 23 weather stations in the Lake Erie region providing up to date and accurate information requires regular maintenance and upkeep of both the station and the communications equipment. During this quarter there

have been a number of issues that needed attention. Calls were made to the owners of the Lake City, PA; Ransomville; Watkins Glen; Lansing; Silver Creek; Westfield; and East Westfield stations. In most cases the issues could be handled over the phone with the owners of the stations. Often the issue seems to be the internet connection of the IP-100. In some cases there has been equipment parked between the station and receiver that blocks the signal.

The Westfield and East Westfield stations were both not recording precipitation accurately during this quarter. Both sites received a visit to clean the screens and ensure the proper functioning of the tipping gauge.

During a visit to Niagara County, we were informed of an interest in setting up a station. This would be in an underrepresented area. The owner was sent information regarding the possibility of purchasing a HOBO station. No confirmation yet as to whether or not they are going to follow through.



To date in 2019:

Publications - Lake Erie Vineyard Notes Newsletter (6) and LERGP Crop Update (27)

Podcasts - 12 weekly podcasts (137 total) available on <http://lergp.com/podcasts/>

Web resources - <http://lergp.cce.cornell.edu>, <http://lergp.com> and <https://www.efficientvineyard.com>

Like us on Facebook - Cornell-Lake-Erie-Research-and-Extension-Laboratory and EfficientVineyard

LERGP Home Pages: <http://lergp.cce.cornell.edu>; <http://lergp.com> Phone: 716.792.2800