Cornell Cooperative Extension
Eastern NY Commercial Horticulture Program

Tree Fruit News

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Planning for Dramatic Changes for Farm Labor Management in NY

Adapted from an article by Richard Stup, Cornell Ag Workforce Development

On Wednesday, June 19, the New York State Legislature passed the Farm worker Fair Labor Practices Act (S6578/A8419). Governor Cuomo is expected to sign the bill into law. With the understanding that some things could still change, it's time for farms in New York to start thinking about how to manage in a different legal environment. The essential goals for farm human resource managers remain the same:

- Operate a profitable, growing agricultural business.
- Provide high-quality, engaging, and safe jobs that can attract farm employees and provide them a good standard of living.
- Produce excellent, safe, and nutritious food for people who live both near and far.

The challenge is to plan and manage to meet the goals above while complying with both federal and (new) state labor laws which will likely come into effect in January 2020. This article begins with discussion of 3 likely major changes: overtime, collective bargaining, and a weekly day of rest. Each of these issues is complicated and we will discuss more completely in later articles, but following is a summary of these major changes and initial management considerations.

Overtime

Under the bill, New York farm employees will be eligible for overtime once they have completed 60 hours of work in a week. Overtime pay is defined as 1.5 times the regular rate of pay so a worker at $12/hour regularly would go to $18/hour for hours worked beyond 60 inside a week.

Management Considerations: It will be more important than ever to control which employees are scheduled for how many hours and to be mindful of hours worked as they approach 60 in each week. This may be a good time to upgrade your scheduling and time recording systems to provide the information, alerts, and accurate records you need. Consider

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each production process, system, and job in your business… where can you cut out waste and improve the efficiency and effectiveness of labor? Are there parts of your production process that could be outsourced to another business, or discontinued, while you focus your labor on crops and processes with the highest return?

Some farmers have floated the idea of converting hourly employees to salaried to avoid overtime. Caution is required here. The federal Fair Labor Standards Act (FLSA) provides exemptions from overtime and minimum wage only for certain workers and these federal guidelines are generally followed by New York. These workers are mainly executive, administrative, professional and outside sales employees. The New York State Depart of Labor provides an FAQ document (https://www.labor.ny.gov/legal/counsel/pdf/overtime-frequently-asked-questions.pdf) that defines these types of employees in more detail. Some farm employees may qualify for this exemption such as those who manage a department and formally supervise 2 or more other full-time equivalent employees. The employees must also be paid at least a weekly salary of $885/week in Upstate and $975/week in Long Island and Westchester as of 12/31/2019.

Collective Bargaining (Unions)

Farm employees will have the right to form or join a union in order to bargain as a group with their employer about their employment. This concept is incredibly complicated and quite new to most of us in agriculture so there will be much more discussion and education in the future about the meaning and implications of this change. Farm employees are not automatically unionized by this law, a majority of farm employees at a particular business must choose to sign up with a union in order to bargain collectively. If a majority of employees at a farm business choose to join the union, then the farm would be obligated to recognize the union and enter into negotiations to establish a union contract with the farm employees. Contract negotiations are complicated and beyond the scope of this post. There are some special limitations in the new law that will govern collective bargaining. Farm employees will not be permitted to strike or otherwise slowdown work on farms. Farm employers, on the other hand, are not permitted to "lock out" or prevent farm employees from working during the course of contract negotiations.

Management Considerations: Broadly speaking, employees tend to unionize in work situations where they feel as if they have no "voice." Essentially, that's the purpose of a union, to move employees from a position of feeling like powerless individuals to a position of feeling like a powerful "collective" group of employees. Employers who wish to avoid having a union on the farm must focus on being great, progressive human resource managers. That means having policies and plans in the workplace that promote employee success, fair treatment, and employee "voice." Poor management breeds employee frustration and opens the door wide for unionization efforts.

Weekly Day of Rest

The new law will likely stipulate that farm employees must be allowed at least 24 consecutive hours of rest in each and every calendar week. This day of rest should be on the employee's day of religious observance whenever possible, but it can move to another day in the week if crop or weather conditions prevent work. Employees can voluntarily waive their day of rest and choose to work but employers would have to pay the overtime rate (1.5X) for every hour they worked on their day of rest. This new requirement is rife with potential for confusion.

Management Considerations: Farms need to adopt very robust employee scheduling and timekeeping systems that can manage day of rest requirements and provide documentation that it was consistently provided.

The Cornell Agricultural Workforce Development Program http://agworkforce.cals.cornell.edu/ is following these changes and will provide more detail in complying with the new law as information becomes available.

Planning Your Irrigation with Malusim: A 'How-To' Video

Mike Basedow, CCE Eastern NY Commercial Horticulture

If you attended one of our petal fall meetings in May, you might remember Dr. Terence Robinson discussing the Malusim app, where you can enter spray records, use the fruit growth rate model, the carbohydrate thinning model, and the irrigation model. If you have a NEWA station on your farm, the irrigation model can be a useful tool to more precisely manage your water usage throughout the season. The tool uses the Cornell evapotranspiration model and weather data off your station to determine how much irrigation is needed for each block. The evapotranspiration, or "ET" model was developed at Cornell to more precisely model water needs in apple trees. The irrigation tool has further refined this model, by accounting for some additional variables such as soil characteristics, tree age, and block and emitter spacing. This, combined with your actual weather data, can be helpful in determining how much water your trees need.

I've been finding the Malusim model to be a useful tool, but it can be a little confusing when you first look at it. So, rather than writing an article for our newsletter this month, I thought I'd put together a quick how-to video on how to sign up with the app, how to set up a block in it, and how to run and interpret the results from the irrigation model.

To view the video, use the following link: https://www.youtube.com/watch?v=1zfeRxultIl

If you find videos like these helpful, and have ideas for other how-to tutorials you would like to see, please let me know at mrb254@cornell.edu, or give me a call at 518-410-6823.

Unemployment Hits 50 Year Low and Ag Robots are on the Horizon

Richard Stup, Cornell University

The U.S. Bureau of Labor Statistics (BLS) released the April jobs report showing that employers created 263,000 jobs and pushed the unemployment rate down to 3.6%. That is the lowest rate of unemployment since December of 1969, almost 50 years ago, according to the Society for Human Resource Management. Unemployment declined for almost all demographic groups in the country. The average weekly hours worked across private-sector, nonfarm jobs was 34.4 hours and the average overtime worked in manufacturing jobs was 3.4 hours, according to BLS. From the employer perspective, in other words, it's the tightest job market in 50 years. Average weekly earnings for April 2019 was $785.55 compared to $762.19 in April 2018, an increase of 3%.

We're simply running out of people to fill jobs in this country but robots are coming more quickly than we might have thought. Agricultural engineers at the Dutch university, Wageningen UR claim that in agriculture robots will "be doing all the menial, repetitive work in 10 to 20 years from now." This is largely driven by the difficult and repetitive nature of much frontline farm work and by the worldwide shortage of farm employees. Earlier this year an apple picking robot was commercially used in New Zealand. Will robots eliminate all jobs in agriculture, certainly not! Automation and mechanization have been part of agriculture for at least 150 years already. There will always be need for skilled agriculturists who understand plant and animal biology, can organize production, keep machines running, work effectively with others to solve problems, and can market their products successfully. Exciting times are ahead as we learn to make the most of rapidly developing robotic technologies!

Implementation and Evaluation of Two Bitter Pit Prediction Methods for Honeycrisp Across New York State for the 2019 Season

Dan Donahue and Mike Basedow, CCE Eastern NY Commercial Horticulture, and Craig Kahlke, CCE Lake Ontario Fruit

The refrigerated storage of 'Honeycrisp' is a financially risky proposition. When asked about Honeycrisp marketing strategy, most producers respond, "sell as quickly as possible in the fall, don't store". As the fall market becomes saturated, FOB pricing will likely drop, reducing grower returns. Strong FOB's are essential for HC profitability, due to relatively low (2-year) yields, high cullage rates, and higher than average per-unit production costs for this very challenging variety. Bitter pit can be partially suppressed through rootstock choice, consistent crop load management, application of 'Apogee TM' at pink stage, and application of foliar calcium sprays during the cell division phase of fruit development. An alternative and complimentary strategy toward the reduction of financial losses is to implement BP prediction protocols that will aid producers and marketers in the selection of orchard blocks for longer-term storage with greatly reduced risk of losses to BP which appears after 30 days+ in refrigerated storage. High variability makes BP prediction impossible when based only on block history or fruit appearance at harvest. From our 3-year survey study we observed:

- BP incidence varies by year, and at this point we really don't understand all of the factors involved.
- Some blocks are consistently high in BP, others low, many with considerable annual variability.
- Unbiased BP incidence evaluation is a real challenge in the orchard at harvest::
    - The commercial fruit picking process results in a sample biased towards lower BP numbers, therefore evaluating BP in the bin by eye, counts, or over the packing line is inherently unreliable.
    - Depending on the season, BP symptoms can be rare at harvest, but appear after a short period of refrigerated storage. For example, in the Hudson Valley in 2018, BP incidence at harvest averaged 8.1%. An early version of our peel mineral analysis model was predicting a bad BP year, and this was announced to ENY producers via the E-Alert in late August. However, many producers at harvest were lulled into complacency by observations on the tree and in the bin of 'clean' fruit. Reality hit later on as HC from the same "clean" blocks after 60 days of refrigerated storage averaged 34.3% BP incidence, resulting in serious financial losses and the cullage of entire storage lots.
- Annual changes in management practices (discussed earlier) could (should?) influence BP symptom expression.

Precision bitter pit prediction: Two economical methods.

Research conducted at Cornell and funded by the NYS ARDP, have produced two BP prediction protocols with the potential to benefit NYS HC producers and marketers. The 1st is the development of a BP prediction model by Donahue et. al. based on pre-harvest peel mineral analysis and additional factors that is designed to identify orchard blocks that are likely to express 10% or less BP incidence after 60 days of refrigerated storage. To date, this model has demonstrated a conservative bias when tested on an independent validation data set from 2017 and 2018. The term 'conservative' is used because the model appears to be biased towards preventing the storage of blocks with a significant risk of BP at the 'cost' of occasionally recommending the prompt marketing of an orchard block that in reality would have stored just fine.

The second prediction protocol is termed non-mineral "passive" BP prediction model and was developed by a group of researchers led by Dr. Christopher Watkins. The passive method is simple to implement, with only a modest labor commitment and no lab analysis fees. There are advantages and disadvantages to each model, but it is a positive for the producer to be able to choose the prediction method most suitable for the size of their business and management style.

Interested? How to participate in our 2019 HC BP Prediction Implementation Study

CCE regional tree fruit specialists Mike Basedow mrb254@cornell.edu , Craig Kahlke cjk37@cornell.edu , and Dan Donahue djd13@cornell.edu have a limited pool of grant funds available from the New York Farm Viability Institute and the Northern New York Agricultural Development Program to evaluate the implementation of our two BP prediction protocols across New York State in 2019 and 2020. For this season our goal is to evaluate both prediction protocols on 20 orchard blocks west of Rochester, 20 in Wayne County, 20 in the Champlain Valley, and 20 in the Hudson Valley. We would prefer that producers interested in cooperating with us contribute fruit from several orchards with variable BP histories, four (4) might be ideal number, provide a minimal amount of labor support, storage space for the bushel boxes

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of samples (six bushel boxes for each block sampled), and we would strongly encourage participation in the sampling and evaluation process. Research has little value if it is never implemented, and our goal is to develop prediction options that are economical and easy to implement. For this we need producer involvement and input into the process. The peel mineral analysis costs $50 per orchard block to cover both "wet ash" and "sap analysis" methods and will be conducted by Dr. Mike Rutzke at the Cornell Nutrition Analysis Laboratory on the Cornell campus in Ithaca. Fruit industry consultants Jim Eve of Eve Farm Service jfwe@aol.com and Jeff Alicandro of Agrassistance jeffalicandro@agrassistance.com are cooperators in this study and may be contacted as well if you are interested in participating. For producers selected to participate in this study, the cost of peel mineral analysis fees and a Norpro apple peeler will be covered by grant funds.

HC BP Prediction Protocol #1: Peel Mineral Analysis BP Prediction

1. Select a Honeycrisp block you would like to consider for storage.

2. Five (5) weeks prior to anticipated first pick, sample 12 apples total, one apple from each side of six representative trees. Apples should be of consistent 'average' size, not misshapen, and sampled at approximately eye level.

3. Wash the apples, distilled water (preferred), or 'soft' water.

4. Using a simple kitchen spiral apple peeler such as a Norpro, peel the calyx (bottom) half of the apple. Peel thickness should be in the range of 0.75 – 1.0 mm.

5. Label a quart-sized plastic 'zipper' bag with farm name, date, block location/number, county, and the code "NYFVI HC BP". Bag the 12 peels and store in your refrigerator. Complete a form (provided) with the following background information:

- Rootstock
- Orchard age
- Region (HV, NNY, WNY)
- Did you apply a single application of Apogee at pink stage? (Yes or No)
- Did you apply any Apogee (or Kudos) after petal fall stage? (Yes or No)
- Describe your foliar calcium program: (no sprays, started PF or earlier, started with summer cover sprays).
- Describe the quality of bloom in the block: (light, normal, "snowball")
- Describe final crop load in the block: (light, near perfect, too heavy)

6. Processing time should be approximately 20 minutes/block, or one hour and twenty minutes to evaluate four orchard blocks, plus travel and sampling time in the orchard.

7. Contact your regional tree fruit extension specialist for further instructions on how to arrange for peel mineral testing.

8. At harvest, take a validation sample of 100-120 apples into two (2) bushel boxes, label in a similar manner, and place in a 36-38F refrigerated storage room. After a minimum of 60 days, evaluate BP incidence by simply scoring the apples as "clean" or "BP", and calculating the % of apples with BP. As discussed earlier, simply evaluating your commercially picked apples in storage will not be sufficiently accurate for our study.

HC BP Prediction Protocol #2: Passive BP Prediction

1. Select a Honeycrisp block you would like to consider for storage.

2. Three (3) weeks prior to anticipated first harvest, sample two bushel boxes of apples, 100-120 total. Apples selected should be representative and free of obvious defects.

3. Label the two boxes of apples with farm name, date, block location/number, county, and the code "NYFVI HC BP" and store at room temperature.

4. A day or two prior to first pick, evaluate each of the stored apples for BP incidence, simply scoring the apples as "clean" or "BP", and calculating the % of apples with BP. The result will approximate the % BP incidence you can expect if you place fruit from this orchard block in storage for 60 days or more.

5. In the same manner as the pre-harvest sample was taken in step two (2), take a second, validation, sample of 100-120 apples, label in a similar manner, and place in a 36-38F refrigerated room. After a minimum of 60 days, evaluate BP incidence as described in step four (4) above. As discussed earlier, simply evaluating your commercially picked apples in storage will not be sufficiently accurate for our study.

6. Contact your regional tree fruit extension specialist if you have questions or would like to contribute your results to our study.

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Our goal is to produce two storage recommendations for each orchard block based on a 10% or less BP incidence threshold, one recommendation for pre-conditioned fruit, the other for no pre-conditioning.

Finally, a cautionary note:

Our bitter pit prediction protocols are experimental, and we cannot guarantee results. Please implement model recommendations with caution and closely monitor stored fruit for the expression of BP symptoms as well as other common Honeycrisp storage disorders such as soft scald, soggy breakdown, senescent breakdown and flesh browning.

Fire Blight Survey 2019

Kerik Cox's lab will be conducting a fire blight survey again this year, investigating streptomycin resistance and strain distribution across NY State and New England. **In the event fire blight does show up in your orchard, please send a sample to our lab! For a submission form, visit: bit.ly/2019FireBlightSample**

You may take a sample yourself, or you may wish to contact Dan Donahue or Mike Basedow to come and help you collect the sample. Samples submitted without the form will not be processed!

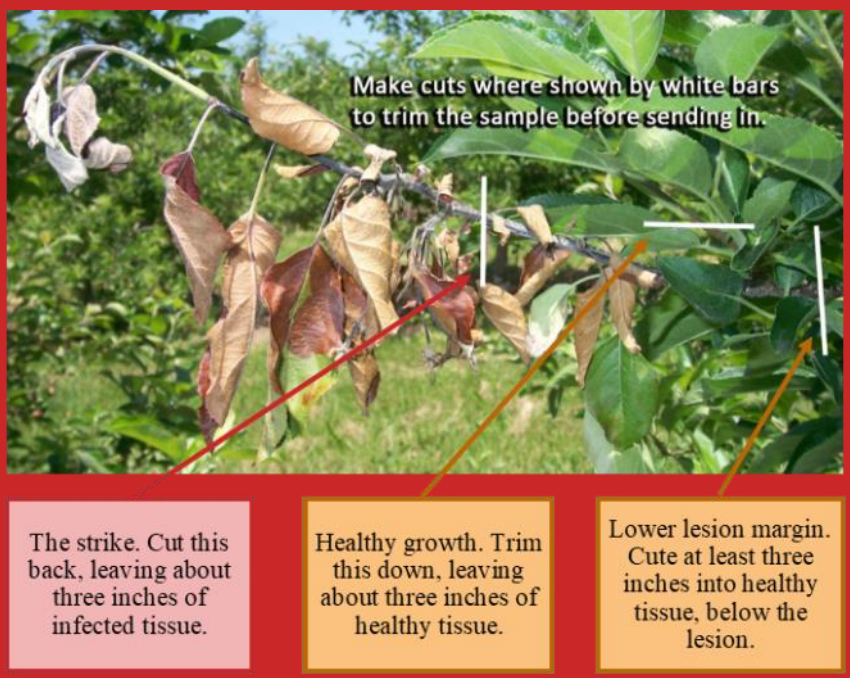
It is imperative that we receive living (green) cambium tissue from the canker margin (i.e. where the necrotic and healthy tissue meet). Otherwise, the pathogen cannot be isolated. Samples should be sent as soon as possible after being removed from the tree, and kept cool if possible.

Instructions for sampling

It is only possible to isolate the bacteria (Erwinia amylovora) from fresh, active lesions, where healthy tissue meets the diseased tissue, i.e. the lesion margin. It is impossible to isolate fire blight bacteria from dead, dried out tissue.

The Lesion Margin

Collect samples that include about 3 inches of healthy tissue beyond the infected tissue, and include about 3 inches of infected tissue. Do not submit all the dead branch of the strike, this is often too long and can be cut back, as described, to 3 inches of infected tissue above 3 inches of healthy tissue. If possible, refrigerate infected trees and strikes. Protect samples from drying out prior to submitting them. Do not collect entire branches or trees unless symptoms are unusual.



Cornell Cooperative Extension
North Country Regional Ag Team

Preventing Sexual Harassment on Farms- Tools for Employers:

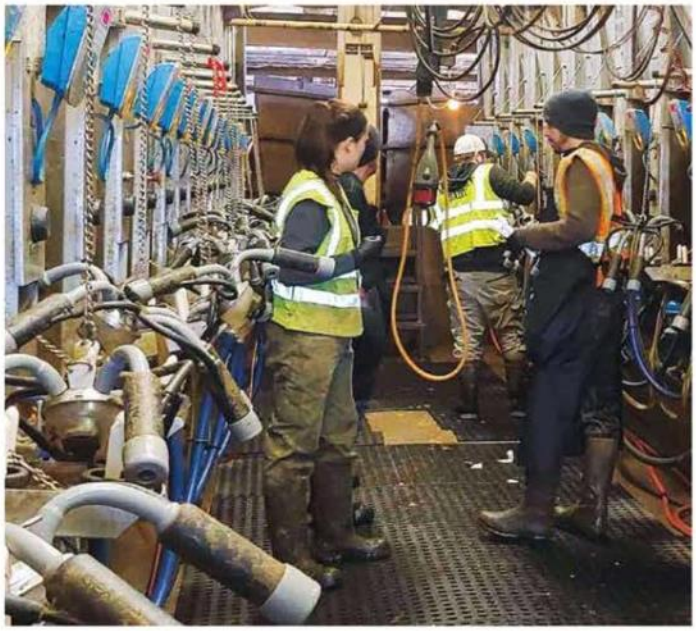
Updates and Resources for the NYS Sexual Harassment Regulations.

Dates: July 29th & July 30th
Cost: $10 (to be paid to each office directly)
Time: 10:00AM-1:00PM

Locations: Speakers will be located across the state and connected via Zoom. Each extension office listed will have the Zoom Meeting Projected and a light lunch provided. Farmers will be able to ask real time questions and engage with other farmers. **PLEASE REGISTER BY FRIDAY JULY 26th.**

July 29th-

Lewis County Cooperative Extension Office
St Lawrence County Cooperative Extension Office
Clinton County Cooperative Extension Office
Onondaga County- Farm Credit East, One Technology Pl, Homer, NY 13077
Orleans County Cooperative Extension Office
Yates County Cooperative Extension Office
Schoharie County Cooperative Extension Office
Chemung County Cooperative Extension Office
Herkimer County Cooperative Extension Office



July 30th-

Jefferson County Cooperative Extension Office
Essex County Cooperative Extension Office
Franklin County Cooperative Extension
Cortland County- Dryden Fire Hall, 26 North St, Dryden, NY 13053
Wayne County Cooperative Extension Office
Livingston County Cooperative Extension Office
Chenango County Cooperative Extension Office
Tioga County Cooperative Extension Office
Saratoga County Cooperative Extension Office
Fulton/Montgomery Cooperative Extension Office
Madison County Cooperative Extension Office

Registration Link:
https://forms.gle/duASeZ35oqP1e28M9

Recording of this will be made available on July 31st.

10:00-10:15- **MARY-KATE WHEELER** *Introduction to the New Rules: Overview, deadlines, and dates.*
10:15-11:00- **RICHARD STUP** *Resources Available from Extension: How to use reviewed case studies.*
11:00-11:30- **KELSEY O'SHEA** *Legal Concerns: Compliance, implications, and risks.*
11:30-12:00- Lunch/Break
12:00-12:30- **LIBBY EIHOLZER** *Outside Materials: Other agencies resources, risks and concerns.*
12:30-1:00- **NICOLE TOMMELL** *Closing Remarks: Summarizing action items, updates on other labor research.*

The North Country Regional Ag Team is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in Jefferson, Lewis, St. Lawrence, Franklin, Clinton, and Essex counties.

Upcoming Events

Lake Ontario Summer Fruit Tour
July 18, 2019 - All day, free lunch
Niagara County

This tour will make 4 stops: David Tower Farm, Two of Clubs Orchard, Krull Park, and Russell Farms. For more information and to register, visit https://lof.cce.cornell.edu/event.php?id=1212 .

IFTA Summer Study Tour
July 21-24 - Ontario, Canada

Tree architecture transition and orchard systems, apple production under super structure including cement posts, and management and economics of modern orchard systems. More information: https://www.eventsquid.com/event.cfm?id=6359

Hudson Valley Tour
July 26, 2019

Afternoon tour beginning at the Hudson Valley Research Laboratory, then onto Milton, Marlboro and Walden. Focused on management of apples including exclusion netting of hail, birds, and insects pests, fire blight and apple scab disease management, bitter put management or Honey Crisp, wooly apple aphid management and mating disruption of dogwood borer, coding moth and oriental fruit moth with low rate/A dispensers. More information: bit.ly/HudsonValleyTour

Management Options and Rootstock Varieties for Organic Apple Production
August 1, 2019 - 3:00pm-7:00pm
Cornell Orchards, Ithaca

Join us for an afternoon and see how mulch compares to tillage and allowed herbicides in terms of weed suppression and soil health in a block of 'Honeycrisp', and how 'Modi' performs on different rootstocks in a high-density tall spindle orchard. More information: https://www.nofany.org/our-events/2019-on-farm-field-days

2019 Young Fruit Growers of WNY Study Trip to the Hudson Valley
August 5-7, 2019

Lake Ontario Fruit Program is excited to be partnering with the Young Fruit Growers of Western NY to offer the 2019 Young Grower Study Trip to the Hudson Valley. The tour will include innovative grower orchards and packinghouses in the Hudson Valley. The study trip is focused on helping next generation growers develop the knowledge and skills needed to take their family farms into the future. To register, visit: https://lof.cce.cornell.edu/event.php?id=1209

2019 Cornell Storage Workshop
August 8, 2019
Stocking Hall, Cornell University, Ithaca

Topics will include issues such as DCA and food safety, and review of storage recommendations, and varieties such as Gala and Honeycrisp, especially in relation to disorders and quality control. To register, visit: https://hort.cals.cornell.edu/content/2019-storage-workshop/

Cornell's Hard Cider Program Work Team Summer Tour
August 12, 2019

The 2019 Hard Cider Program Work Team will hold its second annual Summer Tour on August 12th. They'll be delving into the art of growing cider apples and producing NY's craft cider and stepping into the industry in the beautiful Delaware River Valley and Catskill foothills. More information: bit.ly/CiderTour

The Eastern New York Commercial Horticulture Program is a Cornell Cooperative Extension partnership between Cornell University and the CCE Associations in these seventeen counties: Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Orange, Montgomery, Putnam, Rensselaer, Saratoga, Schenectady, Schoharie, Ulster, Warren & Washington.

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