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Fruit Notes

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Cornell Cooperative Extension
Lake Ontario Fruit Program

Volume 21 Issue 1 January 13, 2021

Registration is Now Open for CCE's 2021 Tree Fruit Conference February 2nd - 4th!

Sponsored jointly by the CCE Eastern NY Commercial Horticulture & CCE Lake Ontario Fruit Programs

The Cornell Cooperative Extension Eastern New York Commercial Horticulture Program and the Lake Ontario Fruit Program will be cooperatively hosting the 2021 Cornell NYS Tree Fruit Conference online from Feb 2-4. Due to COVID-19 limitations on live meetings, this program replaces CCE-LOF's Winter Fruit Schools and CCE-ENYCHP's Fruit & Vegetable Conference (tree fruit section).

Live meetings will be hosted over the Zoom webinar platform, and will consist of 12 sessions over the course of three days: two morning sessions and two afternoon sessions each day. DEC credits (5.25 total) are being offered for the first three sessions on February 2nd.

In addition to the live webinars, attendees will receive access to a conference webpage, which will contain vendor content, and additional educational materials relevant to each session.

Early registration price (available through January 26th) is $85 for LOFP and ENYHCP enrollees, and $95 for unenrolled farms. Prices will increase by $10 following the 26th. Please note that each attendee must sign up with their own email address in order to access the conference page, attend the live webinars, and receive DEC recertification credits.

Click Here to Register
http://blogs.cornell.edu/nystreefruitconference/registration/

Full details are available now at the NYS Tree Fruit Conference website at:
http://blogs.cornell.edu/nystreefruitconference/
There you'll find all the information, including full session descriptions, registration, sponsorship, and what you need to know to receive DEC credits.

Participant requirements for joining the Cornell Tree Fruit Conference:

- A computer (preferred) or tablet with high-speed internet access
- A computer (preferred) or tablet with video conferencing capabilities to view presentations
- Download Zoom onto your computer or tablet
  - Don't have zoom? Sign up for free at https://www.zoom.us and click on "Sign Up, It's Free"
- A quiet space to listen to presentations

Don't have access to a computer or the internet? Please reach out to Craig at 585-735-5448 for more information.

If you have any questions regarding the conference registration process, please get in touch with Andy Galimberti at ag2422@cornell.edu or at 734-660-4273.

Is your organization interested in being a conference sponsor? Find out more at the following page!

Sponsorship Information
http://blogs.cornell.edu/nystreefruitconference/sponsorship/

2021 Cornell Tree Fruit Conference - Full Schedule

Tuesday, February 2

Session 1: Insect Management: 7:45 - 9:50 AM

7:45-8:00 - DEC Credit Sign-In

8:00-8:05 - Welcome, Session Intro, and Vendor Videos - Janet van Zoeren and Craig Kahlke, CCE-LOFP

8:05-8:20 - Cherry Fruit Fly in New York Update - Margaret Kelly, NYS Department of Agriculture & Markets

8:20-8:35 - Preparing for Spotted Lanternfly in New York - Heather Leach, Penn State Extension

8:35-9:00 - Monitoring and Management of the Brown Marmorated Stink Bug in NYS - Peter Jentsch, Cornell HVRL

9:00-9:25 - Quantifying the Relationship between Cherry Development and the Risk of SWD infestation to Improve Management of this Pest - Dr. Larry Gut, MSU

9:25- 9:50 - Terrible Tortricids: Perspectives on the Biology and Management of Internal Feeding Lepidoptera in Apples – CM, OFM, and LAW - Dr. Art Agnello, Cornell University

9:50- Adjourn

Break: 9:50- 10:10 (Remain Logged in for DEC Credits)

Session 2: Phytopathology: 10:10 AM - 12:00 PM (9:55 for DEC credits)

9:55 - 10:10 DEC Credit Sign-In

10:10 - 10:15 - Welcome, Session Intro, and Vendor Videos - Dan Donahue, CCE-ENYCHP

10:15 - 10:42 - Efficacy of New Fungicides for Apple Scab, Bitter Rot, Rust and SB&FS Management - Dr. Srdan Acimovic, Cornell HVRL

10:42 - 10:54 - *Erwinia amylovora* Survival in Cankers and Resistance Mechanisms in Bark to the Pathogen - Dr. Ricardo Santander, Cornell HVRL

10:54 - 11:06 - Emergence of *Diplocarpon coronaria* causing Apple Blotch Disease in Eastern United States: Identification, Characterization, and the Analysis of Resistance-related Genes Expression Profile in two Apple Cultivars, Fuji and Honeycrisp, in Response to this Pathogen - Dr. Fatameh Kholdiradi, Cornell HVRL

11:06 - 11:33 - Highlights from 2020 Fire Blight, Apple Scab and Powdery Mildew Field Research at Cornell AgriTech - Dr. Kerik Cox, Cornell University

11:33 - 12:00 - Apple Breeding and Fire Blight Resistance - Dr. Awais Khan, Cornell University

Lunch Break: 12:00 - 1:05 PM

Session 3: Weed Management: 1:10 - 3:00 PM

12:50 - 1:10 DEC Credit Sign-In

1:10 - 1:15 - Welcome, Session Intro, and Vendor Videos - Mike Basedow, CCE-ENYCHP

1:15 - 1:30 - Preemergent Herbicide Use - Dr. Lynn Sosnoskie, Cornell University

1:30 - 1:45 - Perennial Weed Management - Dr. Lynn Sosnoskie, Cornell University

1:45 - 2:15 - Thermal Weed Management in Highbush Blueberry - Dr. Marcelo Moretti, Oregon State University

2:15 - 2:35 - Integrated Approaches to Organic Weed Control in Apple Orchards, Dr. Greg Peck, Cornell University

2:35 -2:45 - Fall vs. Spring Residual Statewide Study - Mike Basedow, CCE-ENYCHP; and Janet van Zoeren, CCE-LOFP

2:45 - 2:55 Weed ID Website Announcement - Carri Marschner, CCE

2:55 - 3:00 Q & A and Discussion

Break: 3:00- 3:15 PM

Session 4: Fruit Quality and Post-Harvest: 3:15 - 5:00 PM

3:15 - 3:20 – Welcome, Session Intro, and Vendor Videos - Craig Kahlke, CCE-LOFP

3:20 - 3:50 - Update on NY1 & NY2 Storage Trials - Dr. Chris Watkins, Cornell University

3:50 - 4:25 - Controlled Atmosphere (CA) Basics and Outlook for DCA - Dr. Chris Watkins, Cornell University

4:25 - 4:55 - PGR Effects on Storage Disorders - Dr. Chris Watkins, Cornell University

4:55 - 5:00 - Additional Q & A

5:00 - Adjourn Until Tomorrow!

Wednesday, February 3

Session 5: Precision Thinning and the Pollen Tube Growth Model: 8:00 – 9:55 AM

8:00 - 8:10 - Welcome, Session Intro, and Vendor Videos - Craig Kahlke, CCE-LOFP

8:10 - 8:35 - Bloom Thinning Using the Pollen Tube Growth Model - Dr. Greg Peck, Cornell University

8:35 - 9:10 - Precision Thinning, From Dormant to Rescue Sprays, Dr. Terence Robinson, Cornell University

9:10 - 9:55 - Grower Panel - Robert Brown III, Orchard Dale Fruit Farm; Tom Ferri, TK Ferri Orchards; Rusty Lamb, Yonder Fruit Farms; Jesse Mulbury, Northern Orchards; Win Cowgill, Win Enterprises International LLC)

9:55 - Adjourn

Break 9:55 - 10:15 AM

Session 6: Orchard Canopy Management for Maximizing Fruit Quality and Adoption of Computer Vision Technology: 10:15 AM - 12:15 PM

10:15 -10:20 - Welcome, Session Intro, and Vendor Videos - Mario Miranda Sazo, CCE-LOFP

10:20 -10:40 - Re-engineering the life cycle of an apple tree to produce a calmer, narrower, and more fruitful apple tree for a 2-D canopy - Mario Miranda Sazo, Cornell LOFP

10:40 - 11:10 - Coming technology for crop load management will require better and more precise canopy management - Dr. Terence Robinson, Cornell University

11:10 - 11:35 - How to transition from 3-D to 2-D canopies or fruiting walls – Mario Miranda Sazo, Cornell LOFP

11:35 - 12:10 - The WA mechanized/robot harvest experience - closing remarks for efficient farming and orchard automation - Karen Lewis, WSU

12:10 - 12:15 - Q & A and Discussion

12:15 - Adjourn

Lunch Break 12:15 - 1:15

Session 7: Business Management I: Economics of Apple Production: 1:15 - 2:45 PM

1:15 - 1:20 - Welcome, Session Intro, and Vendor Videos - Mr. Mark Wiltberger, CCE-LOFP

1:20 - 1:40 - Cost of Production of Apples in Washington State - Dr. Karina Gallardo, WSU School of Economic Sciences

1:40 - 2:10 - Trends in Supply and Demand of the 2020 Apple Crop in Washington State - Mr. Brian Focht, Washington Apple Growers Marketing Association (WAGMA)

2:10 - 2:25 - Market Trends from the Premier Apple Cooperative Perspective – Bill Dodd, Premier Apple Cooperative

2:25 - 2:45 - Q & A and Discussion

2:45 – Adjourn

Break 2:45 – 3:00 PM

Session 8: Business Management II: Impact of COVID-19 on the Produce Industry: 3:00 - 4:45 PM

3:00 - 3:05- Welcome, Session Intro, and Vendor Videos - Mark Wiltberger, CCE-LOFP

3:05 - 3:30 - Impact of COVID-19 on the Apple Industry - Dr. Karina Gallardo, WSU School of Economic Sciences

3:30 - 3:55 - Impact of COVID-19 on the Fruit and Vegetable Industry in New York - Dr. Bradley Rickard, Cornell Dyson School of Applied Economics and Management

3:55 - 4:10 - HR Tools for Smooth Onboarding of Employees of Fruit and Vegetable Farms - Ms. Elizabeth Higgins, CCE-ENYCHP

4:10 - 4:45 - Q & A and Discussion

4:45 Adjourn Until Tomorrow!

Thursday, February 4

Session 9: Adapting to Extreme Weather: 8:00 - 9:50 AM

8:00 - 8:05 - Welcome, Session Intro, and Vendor Videos - Mike Basedow, CCE-ENYCHP

8:05 - 8:35 - Internet of Things (IoT) for Precision Irrigation Management in Tree Fruit Orchards - Dr. Long He, Penn State University

8:35 - 8:55 - Use of Reflective Materials & Other Technologies to Improve Fruit Color in High Value Apple Cultivars - Mario Miranda Sazo, CCE-LOFP

8:55 - 9:15 - Efficacy of Shade Netting and Spray Products in Sunburn Protection - Dana Acimovic, Cornell HVRL

9:15 -9:45 - Constructing a Strong Trellis System Grower Panel -Kelly Snide, Chazy Orchards; Rusty Lamb, Yonder Fruit Farms; Ted Furber, Cherry Lawn Fruit Farms; Robert Brown III, Orchard Dale Fruit Co.

9:45 - 9:50 - Q & A and Discussion

9:50 - Adjourn

Break 9:50 - 10:15

Session 10: New Varieties and State Updates: 10:15 AM to 12:15 PM

10:15 - 10:20 - Welcome, Session Intro, and Vendor Videos - Craig Kahlke, CCE-LOFP

10:20 - 10:55 - Update on NYAA's Promotional & Marketing Programs - Cynthia Haskins, New York Apple Association

10:55 - 11:15 - Current Regulatory Issues in Albany & DC - Paul Baker, Ag Affiliates

11:15 - 11:45 - New Cornell Apples and Breeding Progress - Dr. Susan Brown, Cornell University

11:45 - 12:10 - MAIA1 (Evercrisp™) Harvest Maturity & Storage Updates Craig Kahlke, CCE-LOF and Dr. Chris Watkins, Cornell University

12:10 - 12:15 - Additional Q & A

12:15 - Adjourn

Lunch Break 12:15 - 1:15

Session 11: Utilizing the Cornell Peel Sap Test and Passive Models for Improved Quality of 'Honeycrisp' Fruit after Storage: What we Learned in 2020: 1:15 - 2:45 PM

1:15 - 1:20 - Welcome, Session Intro, and Vendor Videos - Mario Miranda Sazo, CCE-LOFP

1:20 - 1:30 - Developing the Cornell Peel Sap Test with the WNY Fruit Industry: Fruit Collection, Peel Sampling, Advantages, and Implementation - Mario Miranda Sazo, CCE LOFP

1:30 - 1:55 - Nutrient Management Recommendations for Honeycrisp and Assessment of Bitter Pit Risk with Peel Sap Analysis – Dr. Lailiang Cheng, Cornell University

1:55 - 2:25 - The Passive Method for Bitter Pit Prediction – Where do we go from Here as we Reflect on the 2020 season? – Dr. Chris Watkins, Cornell University

2:25 - 2:40 - The Multi-pronged Initiative for Controlling Bitter Pit in WNY in 2020: How it Worked – Dr. Terence Robinson, Cornell University

2:40 - 2:45 - Additional Q & A

2:45 - Adjourn

Break 2:45 - 3:15

Session 12: New Findings on Bitter Pit Prediction/Mitigation, Crop Load Management, Rootstock Choice, and Water Management, and (b) The Future of Cornell Honeycrisp Research and Extension Activities in 2021 and beyond: 3:15 - 4:45 PM

3:15 - 3:20 - Welcome, Session Intro, and Vendor Videos - Mario Miranda Sazo, CCE-LOFP

3:20 - 3:50 - Highlights from Five Years of an ARDP/NYFVI Honeycrisp study: Apogee, Calcium, Rootstocks, EMR Model Bitter Pit Prediction, and a Few Curious Findings as Well – Dan Donahue, Cornell-ENYCHP

3:50 -4:20 - Rootstock Choice is Critical for Managing Bienniality, Vigor, and Bitter Pit in Honeycrisp - Dr. Lee Kalcsits, WSU

4:20 - 4:40 - A Statewide Effort in 2021 to Manage Crop Load, Nutrient Status and Bitter Pit of Honeycrisp – Dr. Terence Robinson, Cornell University

4:40 - 4:45 - Final Q&A and Wrap Up

4:45 PM: CONFERENCE ADJOURN

Thank you to Our Full Conference Sponsors to Date!

Farm Wage News for New York January 2021

Richard Stup, Cornell Ag Workforce Specialist

New York's Farm Laborer Wage Board Recommends Retaining 60-hour Overtime Threshold

The year 2020 was certainly eventful for the agricultural workforce, and the drama extended until late in the afternoon on New Year's Eve. The **New York Farm Labor Wage Board:** (https://www.labor.ny.gov/workerprotection/farm-laborer-wage-board.shtm) was created and charged by the 2019 Farm Laborer Fair Labor Practices Act (FLFLPA) to consider the overtime threshold of 60 hours and make a recommendation about whether the threshold should be lowered. In-person hearings were scheduled early in 2020 but only one event took place before the COVID-19 pandemic obliterated such events. Farm managers and employees were dramatically engaged as essential workers providing needed food supplies throughout the pandemic, nevertheless, they showed up in huge numbers to testify during virtual Wage Board hearings in August and September. The Wage Board continued its deliberations with December hearings that included very unusual, last-minute scheduling's and postponements. Finally on December 31, 2020 at 4:00 PM, only hours before the deadline, the board met to render a decision. Chairperson Brenda McDuffie offered a motion to retain the 60-hour overtime threshold for 2021 and to reconvene a Wage Board near the end of 2021 to consider further action. Her motion was based on the extreme uncertainly and stress caused by the COVID-19 pandemic in the agricultural industry. NY Farm Bureau President David Fisher seconded the motion. Former AFL-CIO union president, Denis Hughes, offered a different motion that would include a two-year freeze on the current 60-hour threshold, followed by an 8-year incremental decrease of the threshold until it reach 40 hours per week, this motion died for lack of a second. Ultimately, McDuffie and Fisher voted as the majority to pass the recommendation to retain the 60-hour threshold for 2021, to let the industry get through the pandemic, and to revisit the issue with more data and input during November and December of 2021.

New York Minimum Wage Increased On Schedule

Employers should adjust wages to reflect required minimum wage increases that took place effective at 12:00 AM on December 31, 2020. Minimum wages in New York City were already at $15/hour and did not increase, for Long Island and Westchester the minimum wage increased to $14/hour, for the remainder of upstate New York the minimum wage increased to $12.50/hour. See the **NYS Department of Labor's website**: (https://labor.ny.gov/workerprotection/laborstandards/workprot/minwage.shtm) for more information about this issue. Long Island and Westchester minimum wage is scheduled to reach $15/hour next year while the remainder of upstate will be notified about increases by the NYS Commissioner of Labor by October 1, 2021 and each year thereafter.

This article appeared first **in The Ag Workforce Journal** (https://agworkforce.cals.cornell.edu/)

Get Ready for Sick Leave

Libby Eiholzer, Northwest NY Dairy, Livestock and Field Crops Team

Beginning January 1, 2021, NY employers are required to provide sick leave to their employees. The following article describes some of the requirements of the new law. More information on this and other recent changes to NY farm labor laws can be found on the ***Ag Workforce Development website*** *at https://agworkforce.cals.cornell.edu/regulations/2019-new-york-flflpa-labor-law-changes/.*

In 2020, New York State law changed to require paid sick leave on an annual basis. This includes private sector employers, like farms. The amount and type of sick leave depends on farm size and income, *see the table below*. Employers are

required to start offering sick leave on January 1, 2021, but were required to begin accruing hours of sick leave on September 30, 2020. All employees must accrue sick leave at a rate no lower than 1 hour of sick leave per every 30 hours worked. The employer can allow accrual of more sick leave once the minimum threshold is met (either 40 or 56 hours, depending on the business), but this is not required. This policy covers all employees including full time, part time, seasonal, and youth.

Employees can use sick leave for "mental or physical illness, injury or health condition" as well as for safe leave. NYSDOL defines safe leave as when the employee or a member of their family has been the victim of "domestic violence, family offense, sexual offense, stalking, or human trafficking." These quotes come directly from the NYS Department of Labor, and I would encourage you to read them in full. The safe leave especially is quite detailed and perhaps not what you might expect.

Employees simply need to make a written or oral request to their employer in order to use leave.

Employers can choose to require that leave be used in increments, but the increment can't be greater than 4 hours. Employers can limit the amount of leave that employees can use in one year to the maximum that the employee can earn in a year (either 40 or 56 hours). Realistically this could mean that an employee maintains a leave balance in excess of what he or she can use within one year. If the employer chooses to set any limitations on the use of leave, employers must notify the employees in writing before they earn leave.

Applying the New Policy on Your Farm

If you already have a policy for sick leave and/or vacation, review it carefully. If your current policy meets or exceeds the requirements of **accrual, carryover and use**, then you should be all set. However, most farms will have to make some adjustments to stay within the law. Here are a few scenarios commonly seen on farm and some things to take into consideration.

Some farms require employees to work for a certain period before earning vacation pay (perhaps six months or a year). However, according to NYS law, employees are now entitled to begin accruing sick leave as soon as they start.

A common policy is to award vacation/sick leave at the beginning of the year (January 1, or at the beginning of another 12-month period). That is an option under the new law, and may be appealing to employers who would rather just award the sick leave rather than keeping track of accruals. However, once given, employers can't later revoke sick leave if the employee works less than expected.

Many farms pay out unused vacation at the end of the year. This is not permitted with the new sick leave policy. Any unused sick leave hours must be rolled over to the next year. NYSDOL explains that this is so employees will have access to leave at the beginning of the year. If paying out unused vacation is a policy you really want to continue, you could consider keeping sick leave and vacation separate, though it is one more thing to keep track of.

If employers choose to have employees accrue sick leave as it is earned, it will be important to track this regularly and stop accrual of additional sick leave when the minimum accrual for a year is met.

For part-time employees, you will want to either track each time a new 30 hours is reached and award another sick hour or provide a prorated amount of sick leave each week until the employee has accrued the amount of leave they are entitled to for the year.

Find full details on the law on the **NYSDOL website** https:/www.ny.gov/new-york-paid-sick-leave/new-york-paid-sick-leave. The FAQ section at the end is particularly helpful in answering questions that you may have.
Additional articles on this topic can be found on the **Ag Workforce Journal** (https://agworkforce.cals.cornell.edu/) website.

Number of Employees	Sick Leave Requirements
0-4	If net income is $1 million or less in the previous tax year, the employer is required to provide up to 40 hours of **unpaid** sick leave per calendar year.
0-4	If net income is greater than $1 million in the previous tax year, the employer is required to provide up to 40 hours of **paid** sick leave per calendar year.
5-99	Up to 40 hours of **paid** sick leave per calendar year.
100+	Up to 56 hours of **paid** sick leave per calendar year.

Someone at the Farm Tested Positive for COVID-19 — Now What?

Joan Sinclair Petzen and Libby Eiholzer
NWNY Dairy, Livestock and Field Crops Team

At this writing in Mid-December 2020, community spread of COVID-19 is gaining momentum in rural areas of New York. As employers, farmers have certain responsibilities when one of their workforce tests positive for COVID-19. Because farmworkers are essential workers, there is sometimes confusion about what quarantine means for those who have come in close contact with the person who has received a positive diagnosis. In this article, you will find resources to help you sort out your responsibilities as an employer and know what steps to take should someone associated with your business test positive.

Once someone tests positive, the local health department (LHD) will work closely with that individual to isolate and trace contacts who may have been exposed during the incubation period for COVID-19. Businesses will be asked to assist the LHD with identifying close contacts of any worker who tests positive. This is where your **NY Forward Safety Plan** (https://agworkforce.cals.cornell.edu/ny-forward-business-safety-plan/) will come in handy. All businesses including farms are required to have one. The LHD will likely ask to review your plan to help you strengthen the processes you have in place to help stop the spread of COVID-19. Now is a good time to review the plan, update it if needed and be certain you are doing a good job of tracking contacts at your place of business. For assistance, your first and most knowledgeable resource **is your local health department (LHD):** (https://www.health.ny.gov/contact/contact_information/)

Please reach out to them. They are striving to connect with people who test positive and complete contact tracing within forty-eight hours of the report of a positive test. Essential workers on farms may continue to work on farms during quarantine. Guidance from **New York State Department of Agriculture and Markets (NYS DAM):** (https://agriculture.ny.gov/system/files/documents/2020/05/agm-doh-dol_covid19_operatorchecklist.pdf) addresses quarantine for essential workers who have been exposed to someone who has tested positive for COVID, as well as isolation and requirements for going back to work for people with positive tests. The Centers for Disease Control and Prevention (CDC) provides information **on quarantine and explains the difference between that and isolation:** https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/quarantine.html.

The United States Department of Labor details the responsibilities of employers under **the Families First Coronavirus Response Act (FFCRA):** (https://www.dol.gov/agencies/whd/pandemic/ffcra-employer-paid-leave) to provide paid leave for employees affected by COVID-19 or who are caring for family members affected. Employers with fewer than 500 employees are able to receive **a tax credit for paid leave provided under FFCRA** (https://www.irs.gov/newsroom/covid-19-related-tax-credits-for-required-paid-leave-provided-by-small-and-midsize-businesses-faqs-0#overview-paid-sick-leave-refundable-credit). The tax credit reimburses the employer for qualified sick or family leave wages, qualified health plan expenses

and Medicare tax credit. To claim the credits, employer can (1)assess federal employment taxes that would otherwise be deposited, (2)claim the tax credit on their Form 943, Employers' Annual Federal Tax Return for Agricultural Employees or (3) request an advance of the credits not covered by assessing federal employment tax deposit by filing **Form 7200 Advance Payment of Employer Credit Due to COVID-19**: (https://www.irs.gov/pub/irs-pdf/f7200.pdf).

Local health officials confirm that most of the spread of COVID-19 in our rural communities can be traced back to small gatherings of people without adequate precautionary measures. Now is a good time to remind your workforce about the importance of wearing a face covering, hand washing or sanitizing, social distancing and staying home to stay healthy. Many people are craving social interaction after many months of limiting our interactions to prevent the spread of COVID-19. With cases on the rise and our health care system once again being tested for its capacity to take care of those seriously ill with COVID-19, everyone must continue to adhere to prevention practices until vaccinations and warmer seasons have slowed the spread of the virus.

In summary, if someone from your farm tests positive for COVID-19, follow your Forward NY Safety Plan, and be sure you are doing a good job of tracking contacts. Work with your LHD to quarantine or isolate individuals as required. Understand when your essential workers may still be able to work during quarantine. Be aware of your employees' rights and your employer responsibilities under FFCRA for paid time off if employees are sick with COVID-19 or caring for a family member who is. Know you can apply for tax credits for qualified wages, health care plan expenses and Medicare tax paid under FFCRA. And most importantly, continue to do the very best you can to provide a safe and healthy work environment where people have adequate time for rest, so they are ready and able to come to work as needed.

Intentional Delay of Dormant Pruning for 'Honeycrisp' & Other Important Biennial Cultivars (Fuji)

Mario Miranda Sazo and Terence Robinson

When pruning a Honeycrisp block without knowing the floral bud percentage (% of floral buds in a 100 bud sample of spurs from randomly selected shoots in a Honeycrisp block), you are risking removing too many of the flower buds if return bloom is low. If the previous crop load was too high then flower bud numbers will likely be below or close to the target number and pruning is likely to remove too many. Floral bud identification at the dormant stage is not easy without dissecting buds and viewing them under a microscope. It can only be accomplished by a professional lab or by a trained grower and/or employee. For this reason, it is helpful to delay pruning until the spring. **We suggest that annual bearing varieties (Gala, McIntosh, Empire, NY1, etc.) be pruned first and the biennial bearing varieties last.** There is a 3-4 week window from green tip to bloom when it is easy to identify and count flower buds per tree and then prune to the target flower cluster number at that time.

However, many growers who have significant acreages of Honeycrisp (or other biennial bearing varieties) cannot wait to prune all of their trees in the spring. If you must begin pruning biennial varieties during the winter, we suggest two approaches you could consider.

1. **Before pruning determine the number of flower buds per tree** by sampling 10 branches (3/4-1 inch in diameter) from 5 representative trees in the orchard and dissecting all the spurs on the branches and examining the dissected buds under a microscope to determine what percentage of the spurs are floral. Then, adjust pruning intensity to ensure that the target number of flower buds are left on the tree. Few growers are prepared or trained to sample branches, dissect, and examine buds with a microscope. To help growers with this task, we are planning to develop a training video on how to do this in the next few weeks.
2. Another approach is to **lightly prune Honeycrisp during the winter** by only removing 1-3 large limbs (remember to always leave a longer stub with

Honeycrisp, 2-3 fingers length to secure shoot renewal). Then between green tip and full bloom **'touch up' the trees which have too many flower buds by removing additional whole limbs and by spur pruning.**

Lastly, we remind growers that to avoid biennial bearing of biennial varieties and to improve fruit size of annual varieties, precision pruning is essential. We suggest counting the total number of flower buds on 5 representative trees and then through pruning the removal of extra flower buds leaving a precise number of buds. To accomplish this, the first step of precision pruning is to determine the target number of final fruits at harvest which is a function of desired fruit size, yield and the potential of the trees. Secondly, calculate the number of buds to leave based on the recommended bud load and thirdly, adjust the number of buds to be left after pruning by the percentage of buds that are floral. The following is an example of a final fruit number target and the calculated spur number to leave after pruning on Tall Spindle Honeycrisp trees planted at 3X11 ft. spacing (1320 trees/acre).

Target yield=900 bu/ac * target fruit size (72 count @260gr) / tree planting density (1,320 trees/acre) = 50 fruits /tree. Remember we suggest leaving a few extra flower buds as insurance against frost or poor set. Based on the most recent Cornell Honeycrisp pruning research we are currently suggesting that growers leave 80% more flower buds than the target fruit number as insurance. In the example where we need 50 final fruits/tree we suggest increasing that number by 1.8=90 flowering spurs**.** Lastly, if only 50% of the spurs are floral then the number of spurs to leave after pruning would be double that number (180 spurs). The table below gives bud load factors and target final flowering spur numbers for annual and biennial bearing cultivars.

Bud load factors for annual and biennial bearing varieties	**Target Final Flowering Spur Number**			
	60 fruit per tree	**80 fruit per tree**	**100 fruits per tree**	**120 fruits per tree**
1.5 buds per final fruit number for annual bearing varieties	90 flowering spurs	120 flowering spurs	150 flowering spurs	180 flowering spurs
1.8 buds per final fruit number for biennial bearing varieties	108 flowering spurs	144 flowering spurs	180 flowering spurs	216 flowering spurs

See Terence Robinson in NYFVI Webinar this Friday January 15th, 1-2:15 PM.

In the continuing webinar series of the New York Farm Viability Institute (NYFVI), they've asked Dr. Robinson to share his perspective on why NY apple growers were willing to try Tall Spindle Orchard Systems as well as implement the ongoing optimization practices once these orchard were established.

More info: https://nyfvi.org/2020/12/21/jan-15th-webinar-why-did-they-do-it-exploring-new-yorks-transformation-to-tall-spindle-apple-orchards/

Direct registration link: https://register.gotowebinar.com/register/6984178931447782 52

Congrats to the 2020 Good Fruit Grower of the Year Rod Farrow of Lamont Fruit Farm!

Since the Good Fruit Grower of the Year has been presented since 1997 by the magazine with the same title, no New York grower had one it- until 2020! Congrats to Rod, Jose Iniguez, Jason Woodworth, and the entire crew from Lamont Fruit Farm on the very deserving award! The December 2020 hard copy of the magazine is chock

full of articles about the farm. More info is online here: https://www.goodfruit.com/profit-by-precision-2020-good-fruit-grower-of-the-year/

Remote Good Agricultural Practices Training & Farm Food Safety Plan Writing Session (Virtual Training (Zoom), January 27 & 28)

Join Cornell Cooperative Extension of Broome County, the Cornell Vegetable Team, Harvest NY, the Lake Ontario Fruit Team, and the Eastern NY Commercial Horticulture Program on January 27th for a remote GAPs training. Instructors will walk growers through how to conduct a risk assessment on their farm utilizing the seven areas of farm food safety. Participants will gain hands-on experience in creating a traceability system for their farm, as well as learn about packing house design with food safety principles guiding placement of equipment and suggested materials. Students will also learn about how to train their employees related to food safety and understand what they will need to implement on their farm in order to pass a third-party food safety audit, such as GAPs.

On January 28th growers can join us for a day focused on writing their farm food safety plan. Trainers will be joined by NYS Department of Agriculture & Markets Farm Products inspectors to give guidance and input for farms in creating their farm food safety plans to meet the needs for a potential audit. At the conclusion of day two growers will have all components of their farm food safety plans outlined with the most critical pieces.

The price is $35 for a farm to attend both days, or $10 to join on the second day for the farm food safety plan writing session. Day two is only for those who have previously attended a Produce Safety Alliance Grower Training or GAPs training. The price for both days includes a "Farm Food Safety Decision Tree", worker training posters for use on the farm, and a flash drive pre-loaded to the farm food safety plan template, standard operating procedures, and log templates for use by the farm.

In order for a farm to participate, you must have the newer version of Microsoft Word loaded onto your computer, or be comfortable working within Google docs. We are utilizing Zoom for the training, you will need a high speed internet connection for smoothest participation experience. We also recommend a microphone to help in communication with both students and trainers.

Registration is limited to 25 growers on either day so register by January 21st to ensure enough time to receive the workshop materials. Any questions can be directed to Laura Biasillo at lw257@cornell.edu. Click here to register: https://reg.cce.cornell.edu/gapstrainingfoodsafetyplan_203.

Comprehensive Book on Sweet Cherry Production Released

SWEET CHERRIES by Lynn Long, Gregory Lang and Clive Kaiser

This new book provides comprehensive coverage of the history, genetic improvements, production physiology of growth and cropping, orchard establishment and management, and harvest considerations for sustainable cherry production. Sweet cherries are a specialty crop, subject to significant production risks for growers, yet with high potential market returns due to strong consumer demand for the fruit's intensely enjoyable flavor and nutraceutical benefits.

Written by a renowned team of experts, this book emphasizes the scientific principles underlying cherry production practices. It acts as a resource for a scientific foundational understanding of plant growth and cropping, providing the key to both reasoned choice of orchard practices and the solution of future problems.
Heavily illustrated and presented in full color throughout, *Sweet Cherries* is written with practical details and underlying physiological concepts for use by beginning and established fruit growers,

consultants, and advisors, with a primary focus on fresh market sweet cherries, in addition to students and professionals in horticulture.

Lynn Long is a retired Professor and an Extension Horticulturist, at Oregon State University.
Gregory Lang is a Professor of tree fruit physiology at Michigan State University and program leader for the stone fruit physiology laboratory.

Clive Kaiser is a Professor at Oregon State University and Interim Director of Hermiston Agricultural Research & Extension Center.

In the Americas, available from Stylus Publishing, for $60.
https://styluspub.presswarehouse.com/browse/book/9781786398284/Sweet-Cherries

Reminder to Re-Enroll in the Lake Ontario Fruit Program Now!

By now most (if not all) of our partner counties have sent out their enrollment forms for 2021. If you haven't gotten yours, or it always gets lost (the dog ate it?) you can go to the Enrollment portion of our website here and print the form and mail in to Kim at Orleans CCE with a check. Then you'll be all set to save $10pp on our conference and knowing you won't miss any important information from our team.

Mark Your Calendars

Meeting Title	**Remote Good Agricultural Practices Training & Farm Food Safety Plan Writing Session**
Dates	January 27-28
Time	All day, both days. Breaks/lunch time built in.
Location	Virtual, via Zoom
Brief Description of Meeting	See article this newsletter.
Cost	$35/farm to attend both days, $10/farm to attend Day 2 only.
Registration/Contact	Registration is limited to 25 growers on either day so register by January 21st to ensure enough time to receive the workshop materials. Any questions can be directed to Laura Biasillo at lw257@cornell.edu. Click here to register: https://reg.cce.cornell.edu/gapstrainingfoodsafetyplan_203.
Meeting Title	**2021 Cornell Tree Fruit Conference sponsored by the CCE Eastern NY Commercial Horticulture Program and the CCE Lake Ontario Fruit Program**
Dates	Feb 2-4
Time	We have 12 sessions over the 3 full days of the conference (2 AM/2 PM per day). Time will be built in for both AM/PM breaks (15-30 minutes each, and ~1 hr for lunch) See this article for full schedule or click here: http://blogs.cornell.edu/nystreefruitconference/agenda/
Location	Virtual (Zoom™, through the Teachable™ platform)
Cost	$85 for enrollees, $95 for non-enrollees
Brief Description of Meeting	**See full article in this issue or go to:** http://blogs.cornell.edu/nystreefruitconference/ For 2021, this will replace CCE-LOF's Winter Fruit Schools and CCE-ENYCHP's Fruit & Vegetable Conference, along with LOF's participation in the Empire Producer's Expo. **DEC Credits available** in 3 sessions!
Registration/Contact	Full info on our conference our landing page at: http://blogs.cornell.edu/nystreefruitconference/ Direct registration link: http://blogs.cornell.edu/nystreefruitconference/registration/ **If you have any questions regarding the conference registration process, please get in touch with Janet van Zoeren at jev67@cornell.edu or at 585 797 8368**

Cornell Cooperative Extension
Lake Ontario Fruit Program
12690 Rt. 31
Albion, NY 14411

Contents

Fruit Notes

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

Fruit Specialists

Craig Kahlke | 585-735-5448 | cjk37@cornell.edu
Team Leader, Fruit Quality Management

Areas of Interest: Fruit Quality and factors that affect fruit quality before, during, and after storage,
Crops: Blueberries, Raspberries / Blackberries, Strawberries, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums

Mario Miranda Sazo | 315-719-1318 | mrm67@cornell.edu
Cultural Practices

Crops: Blueberries, Raspberries / Blackberries, Strawberries, Apples, Apricots, Asian Pears, Cherries, Currants, Gooseberries, Nectarines, Peaches, Pears, Plums

Janet van Zoeren | 585-797-8368 | jev67@cornell.edu
Integrated Pest Management (IPM)

Areas of Interest: IPM of tree fruit and berry pests, biological control, and pollinators.
Crops: Blueberries, Raspberries / Blackberries, Strawberries, Apples, Apricots, Asian Pears, Cherries, Currants, Nectarines, Peaches, Pears, Plum

Mark Wiltberger | 315-272-8530 | mw883@cornell.edu
Business Management

Crops: Apples, Cherries, Nectarines, Peaches, Pears, Plums

For more information about our program visit us at lof.cce.cornell.edu