



## **“Fruit Facts” – Tuesday, November 2, 2021**

Registration is open for *Financial Future - Futuro Financiero - Classes for Hispanic Ag Managers* in the winter months of 2022 (previously known as *Master Class in 2018 and 2019*)

Register here: [https://lof.cce.cornell.edu/event\\_preregistration\\_new.php?id=1585](https://lof.cce.cornell.edu/event_preregistration_new.php?id=1585)

Increase the leadership, financial, & managerial skill-sets and confidence in English language communication with this 5-course week (3-4 hrs/class) professional development program for Hispanic Ag Managers. This 5 week course will consist of 1 class (3-4 hrs) each week. Final dates, times, and locations will be determined once participants have registered. A final location of Orleans, Monroe, or Wayne County will be chosen based on the most central location to enrolled students to minimize travel time. This professional development course is free of charge. However, it will occur during work hours and employers are expected to pay employees for their time spent in the course (19-20hrs total for entire course).

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**Monitoring and sampling tools to improve spotted-wing drosophila management** webinar

**Nov 10th at 1pm**

Register in advance [https://ncsu.zoom.us/webinar/register/WN\\_JhupsLFhSKI\\_f8z4mzl56g](https://ncsu.zoom.us/webinar/register/WN_JhupsLFhSKI_f8z4mzl56g)

The 1hr SWD webinar will share current guidelines for SWD adult and larval sampling methods and practical applications of these tools for fruit growers. Presenters include:

- Rufus Isaacs & Steve Van Timmeren (Michigan State University)
- Hannah Burrack (NC State University)
- Cesar Rodriguez-Saona (Rutgers University)
- Phil Fanning (University of Maine)
- Vaughn Walton (Oregon State University)

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### **Pawpaws in New York: A guide on how to grow and care for pawpaws**

A [pawpaw guide](#), written by Anya Osatuke, Sean Dembrosky and Marvin Pritts, is now available online at [https://harvestny.cce.cornell.edu/uploads/doc\\_215.pdf](https://harvestny.cce.cornell.edu/uploads/doc_215.pdf).

### **Pawpaws in New York**

A Guide on How to Grow and Care for Pawpaws



Fall application of **pre-emergent herbicides** takes one more time-sensitive task off the busy spring to-do list, and allows you to take advantage of all the rain we are getting this fall to wash in the product (although be aware that many products do require some hours without rain post-application).

To maximize your weed control success, first determine which species are present in your orchard, and consult the [herbicide selection spreadsheet](#) when choosing materials. Remember that many herbicides cannot be used in young orchards or in certain conditions, so be sure to read the label carefully.

In a 2014 Hudson Valley trial, fall-applied Alion was most effective at controlling weeds the following year through until mid-summer, followed by Chateau and GoalTender. All products were combined with paraquat. Full details on this trial can be found in the [Fruit Quarterly article](#).

Pre-emergent herbicides are most effective when applied to a relatively clean herbicide strip for optimum soil contact; litter on the herbicide strip, such as fallen leaves and drops, should be cleaned up ahead of the application. If tall weeds are present at the time of application, the pre-emergent should ideally follow (or at least be paired with) a burndown material, such as paraquat.

If perennial weeds are a problem in your orchards, systemic materials will likely be necessary to mitigate perennial weed issues, and it may require multiple seasons to get them fully under control. **Avoid applications of glyphosate (Roundup) in the fall due to concerns that contact with green tissue will result in translocation of the active ingredient into the tree, with a negative impact on winter hardiness.** 2,4-D is recommended in fall applications for perennial broadleaf control, both in the herbicide strip and the grassy row middles. 2, 4-D in the row middles this fall can also help keep down tarnished plant bug next spring.

As always, read each label carefully before applying!

**Fall Sanitation – leaf removal.** Immediately post leaf-fall is a good time to use Urea and/or flail mowing to clean up leaves and remove possible sources of inoculum from within the orchard. This is typically considered to be used against apple scab, which was not particularly prevalent in most locations this past year. I would recommend you still use some form of leaf removal – both to remove other disease inocula (i.e. Marssonina, which often shows up post-harvest taking advantage of the gap in spray coverage) and to eliminate any potential scab inoculum to as close to zero as possible for next summer.

Cherry leaf spot also overwinters in leaf litter, so it will be worthwhile to use Urea and/or leaf flailing in your cherry orchards as well.

Urea on its own is fairly effective, and when combined with flail mowing is extremely effective. Urea should be applied as close to leaf fall in the autumn as possible. Dissolve 40 pounds of feed grade urea in 100 gallons of water (i.e. a 5% solution), and apply at 100 GPA. Flail mowing can be used in the fall after Urea application, to increase efficacy.

**Fall Sanitation – pruning.** It is always a good idea to go through and remove any fire blight strikes, cankers, mummified fruit, and other damaged or diseased tree tissues during winter pruning. This year, given the high levels of both fire blight and Botryosphaeria canker, it will be especially important. In cherry orchards, you will be watching for black knot, as well as rotten fruit, cankers, and other damaged tissues.

If you have labor crews available now, it would be ok to move them into fall pruning and fire blight removal in your mature orchards. Remember that recently pruned trees can be damaged if temperatures suddenly drop from 50-60 degrees to 0°F or below. This increased sensitivity is greatest within 48 hours after pruning and gradually declines over a 7-10 day period.

Even better, if time allows, would be to paint asap where the pruning cuts should go (because it can be much easier to see the shepherd crook flags and places where the leaves are clinging to the tree in the fall than it will be later). Then come back through in winter or early spring to make the cuts.

**San Jose Scale** hotspots can often be identified as areas where the tree holds onto its leaves into the winter; then under closer inspection you will be able to see the insects overwintering on the tree bark in the “black cap” stage. As you move through the orchard pruning and doing other tasks this winter, watch for scale hot spots, and mark or map those to remember where you will need to focus delayed dormant oil applications in the spring.

**Fall foliar urea application to improve tree reserve nitrogen for the coming season:** As we have had a very mild fall so far, there is still time to apply foliar urea to the blocks that had **heavy crop load** and **marginal leaf nitrogen** (right around 2% or even less). For these blocks, we suggest you make one to two sprays of 3% foliar urea (25 lbs. urea/100 gal) to build up tree reserve nitrogen level for the coming season. With ‘Honeycrisp’ and other varieties that are sensitive to nitrogen, we have been recommending a fairly low N status (2%) to improve fruit quality. These trees will benefit from foliar urea sprays in terms of nitrogen reserve status. Some growers may be concerned that foliar urea application in the fall might compromise tree cold hardiness, but research done at Cornell on both ‘McIntosh’ and ‘Empire’ showed that two foliar applications of 3% urea (25 lbs urea per 100gal water) after fruit harvest in the fall does not affect winter tree cold hardiness.

**Chemical defoliation for on-farm nurseries in WNY:** If nursery trees are to be dug in the fall and then fall planted or stored during the winter and spring planted they need to be defoliated before digging. Trees should not be dug with leaves on them since leaves transpire large amounts of water and can dry a tree out in a matter of days. Also the leaves become moldy in storage resulting in molds on the tree itself.

Most commercial nurseries use chemical sprays to aid in defoliation. Most commonly copper is used to defoliate the trees. However, if the copper concentration is too high the bark, lateral buds and the cambium of the tree can be damaged resulting in poor growth or tree death the next year. Over the last 30 years, we have seen numerous examples of copper damage to trees from nursery defoliation treatments.

Recent Cornell research showed that the best results for chemical defoliation were obtained with low doses of copper chelate plus ABA (ProTone). However, ABA is not yet labeled for use as a defoliant in the nursery. The second best treatment was a **low doses of copper chelate plus Urea plus an organosilicone surfactant (Silwet)** (see Table 1). Be careful not to exceed the recommended rate of Copper chelate because higher rates can damage lateral buds which are needed next year in the orchard for branching. Two sprays worked best (4 and 2 weeks before expected digging) but one spray at 4 or 3 weeks before digging also gave acceptable results. With warm temperatures in October, complete defoliation was achieved 4 weeks later but with cool temperatures 5 weeks was required. Trees should be dug in early November but before the ground freezes or the first severe cold snap which usually occurs in late November in Western NY.

**Table 1.** Recommendation for chemical defoliation of nursery trees in NY State.

Timing <sup>1</sup>	Product	Concentration	Rate of Formulated Product
Early October to mid-October	Copper EDTA (7.5% Cu) +	2%	256 oz/100 gal
	Urea+	1-3%	1-3 lbs./ 100 gal
	Silwet organosilicone surfactant	0.1-0.25%	1-2.5 pt./acre

<sup>1</sup>Apply 4 and 2 weeks before expected digging.

**Soil pH determination is more reliable in the Fall:** Now is a good time to take soil samples. By doing so you can compare the results every 2-3 years. Soil sampling in the fall can provide valuable information. Moreover, taking a representative soil sample is important to determine lime and fertilizer requirements and avoid costly over or under fertilization. Most soils should be sampled every 2 - 3 years; more often for sandy soils, or problem areas. Fall is generally considered to be the most reliable time to pull samples, especially when it comes to pH. Soil pH fluctuates and tends to be lower in the summer when temperatures are higher and soils are dryer. Soil pH determination is more reliable in the Fall when soil moisture is a bit higher. Please be aware that optimal pH range for growing most apple varieties is from 6.0 to 7.0. Recent Cornell research has shown that for ‘Honeycrisp’ (all strains on a dwarfing rootstock), we need to target the **upper half of the optimal pH range from 6.5 to 7.0.**

**Is Fall the best time to plant, or are there any concerns to consider?** Fall planting is only a good strategy if properly done and at the right time. In general, fall planted orchards have shown a strong growth the first year compared to spring planted trees. Fall planted trees have also shown better blooming synchrony with older established orchards and thus are more

likely to be protected for fire blight with streptomycin spray programs on the farm. While new spring planted trees bloom later than established orchards when temperatures are warmer, they are at higher risk of blossom blight if left unprotected or with fewer streptomycin sprays.

**Successful fall planting requires a combination of conditions:** (1) a well-prepared site with good drainage, weeds under control and minimal rodent and deer populations, (2) mild weather and warm soil temperatures for several weeks after planting to encourage root establishment, (3) nursery trees that begin their dormancy process early, including leaf drop, (4) a nursery supplier that is willing to fall dig trees, (5) sufficient labor to plant trees quickly without drying, and (6) proper soil conditions to re-close the soil around the roots without leaving air pockets. The soil should flow when plowed or disced to allow the soil to flow around the roots as the tree planter passes. This last point is probably the most critical. There are some fall seasons in Western NY that are just too wet and proper soil conditions are never achieved after Oct 15. It may be a costly mistake to “mud” tree in if the soil is too wet this year. This can lead to tree dessication and death. In wet years we recommend that the trees be left in the nursery or stored until the spring.

Every effort has been made to provide correct, complete, and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying any pesticide. Copyright 2021. All rights reserved. No part of this material may be reproduced or redistributed by any means without permission. Cornell Cooperative Extension provides equal program and employment opportunities.

**The Lake Ontario Fruit Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extension Associations in Monroe, Niagara, Orleans, Oswego and Wayne counties.**