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Fruit Notes

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Cornell Cooperative Extension Lake Ontario Fruit Program

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Signing Off for Now

Soon apple harvest will be in full swing and everyone in the industry will be very busy for two months. The LOF team also takes it up a notch as we monitor apple maturity and conduct harvest related research trials. We will not be publishing Fruit Notes for the next 2 months and expect to resume in either late October or early November. The Fruit Facts has also winded down. Important information will go out through the Fruit Facts as needed. To stay up to date on harvest maturity and related issues, please subscribe to the harvest maturity reports here:

htps://lof.cce.cornell.edu/submission.php?id=309&crumb=harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest_storage|harvest

Outlook for U.S. and New York State 2020 Apple Crop and Implications for Harvest Mark Wiltberger

On August 20th & 21st, U.S. Apple had its first-ever "virtual" *Outlook 2020* conference, instead of its usual conference in Chicago, because of the COVID-19 pandemic. I was able to attend this year, from the comfort of my own dining room (which is where I have been for a lot of my other work this year as well!).

In addition to the industry presentations, the conference presents the forecast for the 2020 U.S. Apple crop (Table 1). U.S. Apple forecast 253.8 million bushels for the 2020 national crop, just slightly lower than the 2019 USDA final survey and the 5-year average.

Table 1. U.S. Apple 2020 Crop Forecast (units of thousands of bushels (42 lbs)

	2019	2020		USApple	% change from	
	USDA	USDA	5-Year	2020	USDA	
States	FINAL	Aug Est	Average	Estimate	2019	5-Yr Avg
New York	31,429	30,952	31,786	32,000	2%	1%
Pennsylvania	12,071	10,000	11,948	8,500	-30%	-29%
Virginia	4,524	3,810	4,734	3,800	-16%	-20%
Total East	48,024	44,762	54,463	44,300	-8%	-19%
Michigan	22,524	21,905	24,529	22,500	0%	-8%
Total Midwest	22,524	21,905	26,852	22,500	0%	-16%
Total East and Midwest	70,548	66,667	81,325	66,800	-5%	-18%
Washington	180,952	176,190	166,905	176,190	-3%	6%
California	7,262	6,429	5,900	6,429	-11%	9%
Oregon	3,571	4,286	3,886	3,886	9%	0%
Total West	191,786	186,905	176,691	186,505	-3%	6%
Total U.S.	262,333	253,572	258,805	253,305	-3%	-2%

Source: USDA, National Agricultural Statistics Service, Noncitrus Fruits and Nuts Summary, various years and USApple. **NC**

⁻ No change or the change is less than one percent.

New York State

NYS projected 32.0 million bushels, just slightly higher than the 2019 USDA final survey and the 5-year average. The estimate is about 1 million bushels higher than the USDA August estimate of 30.95 million bushels and 2 million bushels higher than the Premier Apple Coop June estimate of 30.0 million bushels.

A reduced crop is forecasted in the Hudson Valley due to freeze events early in the year and a hailstorm in June. The crop size in Western NY appears to be good. Freeze events in Western NY early in the year do not appear to have affected cropload significantly. However, there is uncertainty in the crop size due to the hot and dry conditions during most of the summer. The dry conditions may affect fruit size for unirrigated blocks and precipitation between now and harvest is needed to "size up." Final crop volume will be determined by sizing. Similarly, after the high summer daytime temperatures and more warm days forecasted in August, cool night temperatures are needed for coloring. Champlain Valley was not significantly impacted by freeze events early in the year due to the later timing of bud growth.

East and Midwest

Pennsylvania projects 8.5 million bushels, significantly lower than the 2019 USDA final survey of 12.1 million bushels and the 5-year average of 11.9 million bushels, due to freeze events early in the year and potentially lower packout rates due to freeze-related finish issues. Similar issues factored into the Virginia forecast of 3.8 million bushels, 20% below the 5-year average of 4.7 million bushels. Michigan forecasts 22.5 million bushels of good quality, equivalent to the 2019 USDA final survey and 4.3 million bushels below the 5-year average.

West

Washington forecasts 176.2 million bushels, 9.3 million bushels higher than the 5-year average and 5.2 million bushels lower than the 2019

USDA final survey. Participants in the forecast from Washington were divided on the amount of fruit on the tree. The USDA August estimate is at the midpoint of the range and was left unchanged. However, the group felt it was likely that the amount of fruit brought to the fresh market would be lower than last year's 134m 40-lb packed boxes and packers would exercise more selectivity this year, potentially resulting in 125-130m 40-lb packed boxes. California forecasted 6.4 million bushels, 9% above the 5-year average, and Oregon forecasted 3.9 million bushels, equivalent to the 5-year average.

Implications for 2020 Western NY Harvest

As was the case with the 2019 crop, there appears to be plenty of fruit of good quality in the state and across the country, implying that there will be a competitive market in general. In a competitive market it becomes more important to pick high quality fruit with high packout rates to be competitive and maximize returns. In addition, the analysis conducted by Matt Wells several years ago (Fruit Notes Vol 15 Issue 19, August 2015) still holds: Fruit that is held in storage as fresh, then culled from the packing line, and then diverted to process, will result in a very low return, a break-even return, or even a negative return, because of the costs associated with storing and packing fresh fruit. It is better for process fruit to be identified in the orchard and sent directly to process. For this reason, it is important to be in close contact with your packer to understand the particular quality packout criteria for an orchard block, and work closely with your pickers to ensure they are picking to those standards on that harvest day.

Size and color are a question mark for early-harvest varieties. For issues of coloring, see the article on the use of technologies to improve fruit color in this issue, and the article on the use of plant growth regulators near harvest in the previous issue of Fruit Notes (Vol 20, Issue 14, August 13, 2020).

Agricultural Seasonal Worker COVID-19 Testing Initiative

Mark Wiltberger

The Departments of Agriculture and Markets, Health, and Labor are partnering with county health departments, Cornell Cooperative Extension, New York Farm Bureau and community health partners in Clinton, Genesee, Orleans, Ulster and Wayne Counties to offer free COVID-19 testing to agricultural workers. These counties were selected for this opportunity as the counties that see the highest number of out-of-state workers during harvest season.

For more information and to register for the state initiative, see the post on the Ag Workforce Journal:

http://agworkforce.cals.cornell.edu/2020/08/20/a gricultural-seasonal-worker-covid-19-testinginitiative/

If your farm is not in one of the five counties served by the program, you can still get your workers tested on-farm by contacting the local health department or health clinic as follows:

West of Rochester: Oak Orchard Health, https://www.oakorchardhealth.org/. Niagara

County, Orleans County, and western Monroe County. Estela Sanchez-Cacique, Patient Engagement Manager, 585-589-5613 x152, esanchez-cacique@oochc.org.

East of Rochester: Finger Lakes Community
Health, https://localcommunityhealth.com/.
Oswego County, Wayne County, and eastern
Monroe County. Juan Saldana, Mobile Medical
Program Coordinator, 1-800-724-0862,
juans@flchealth.org. Employee group testing can
be requested online at
https://localcommunityhealth.com/

The state testing initiative is coordinating with the very same local DOH and health clinics above that you can contact directly. You can always call the local DOH or health clinic listed above to make testing arrangements.

You can call me about testing and I will answer questions to the best of my ability: 315-272-8530 (m), and mw883@cornell.edu.

The Use of Reflective Materials and Other Technologies for Improving Fruit Color on High Value Apple Cultivars in WNY

Mario Miranda Sazo, Craig Kahlke, Mark Wiltberger, Janet van Zoeren, and Elizabeth Tee

Reflective Materials (or RMs) have become an effective technology for improving fruit color on high value apple cultivars. Two main materials have been adopted in our region.

- (1) Reflective Fabric (brands include Extenday and Proline), a white cloth, more expensive, reusable material that can be rolled up and used again in subsequent years, with a lifespan of approximately 7 years.
- (2) Reflective Film (including white films and Mylar®, a metallic film), a less expensive non-reusable material.

The basic idea of RMs is to improve the light environment by reflecting light from the ground back up to the trees, especially at the lower part of

the canopy, onto high-value apple cultivars. In the last 2-3 years, most of the RMs have been installed the second or third week of August for cultivars to be harvested around Sept. 5-10. In 2020, several growers will be installing fabrics 7-14 days before anticipated harvest for a particular cultivar (earlyseason, mid-season, and late-season varieties). Reflective Fabrics can be installed with a tractormounted implement for unrolling, and attached to wooden posts with bungee cords. Reflective Films can be installed with grower-built roller machines. The learning curve for adoption of RMs has been very fast and collaborative between WNY growers. We envision that a significant amount of acreage will be covered with RMs in 2020 and the following years.

Testing the use of fabrics in two very different fruit coloring seasons: In 2018 and 2019, the Lake Ontario Fruit region experienced very different and almost opposite conditions for fruit coloring at harvest. In 2018, we had rainy and cloudy weather for approximately 10 weeks that made color on apples very challenging. In 2019, we had one of the most ideal stretches of good weather for excellent fruit color development and the production of high quality fruit.

In 2018, with a more stressful fruit coloring season in WNY, in one of our on-farm studies we measured better results only with a reflective fabric (Extenday) deployed between rows in a Minnieska[™] trial. But when we repeated the same study in 2019 with almost ideal weather conditions for fruit coloring, results from both methods (reflective fabrics deployed in the in-row and between row spacings) still improved fruit coloring more than the control trees (without nets and fabrics). In this two-year study, the use of fabric without nets significantly improved color development and a greater amount of fruit were harvested during the first and/or second picks in 2018 and 2019. Control trees always produced more fruit (number of fruit/tree and pounds of fruit/tree) at the end of the picking window in both seasons.

In another on-farm study in 2018, we measured that reflective fabric treatment with Extenday (without hail netting) yielded the highest percentage of Extra Fancy grade fruit for Fuji (a single pick harvest).

Last year we conducted an economic analysis by using some of our results from the 2018 studies. Assuming a seven-year life on the fabric (Extenday), the cost of the material would be \$358/acre. Annual labor costs for installation and removal are approximately \$150 acre. This totals an average annual cost of \$508/acre. A farm-built spool would have a one-time cost of ~ \$2,000. Storage in a dry/covered area is also needed. Assuming a yield of 1,000 bushels/acre, with an average return of \$10/bushel:

- 5 % increase in Extra Fancy grade would increase revenue by \$500 /acre
- 10 % increase in Extra Fancy grade would increase revenue by \$1000 /acre

- 15 % increase in Extra Fancy grade would increase revenue by \$1500 /acre
- 20 % increase in Extra Fancy grade would increase revenue by \$2000 /acre

Some data given by growers showed up to a 20% increase in Extra Fancy grade last year. For more details on this analysis, see https://blogs.cornell.edu/treefruitbusiness/files/20

19/08/Reflective-Groundcover-Infographic_05.pdf.

Other Technologies to Improve Fruit Color: In addition to the adoption of fabric materials in our region, some innovative WNY apple growers have also conducted leaf pruning (manual) and applied plant growth regulators. A more recent development has been the purchase of pneumatic defoliation machines (prices around US\$40-45k/machine) for improved fruit coloring by a few WNY fruit growers this season.

Leaf pruning (leaf stripping): Leaf pruning can precisely expose shaded fruit to sunlight for better fruit color before harvest. It is an effective but more expensive technique (US \$700-800/acre, or in some cases as much as US\$1,000/acre). It should be conducted from the base of the tree up to about 6-7ft above the ground (the tops of the trees should not be leaf pruned). We also recommend you stop leaf pruning at least 48 hours before the beginning of a period of hot temperatures. If you cannot wait, and you have the time and labor available for any type of leaf pruning, please consider conducting the pruning only on the east side of the canopy (assuming your rows are oriented North-South), to minimize any potential sunburn issues at the hottest time of the day. A more aggressive leaf pruning would be less detrimental if (1) it is coupled with an effective sunburn spray program, (2) it has at least targeted the east side of the tree rows, (3) it has been applied every 15-20 days, and (4) it was started in the middle or end of June.

A few growers have conducted leaf pruning on both sides of a single row. For this more intensive approach, growers leaf prune both sides of the rows at different timings, pruning first the east side and then the west side, 3-7 days apart. The time interval between leaf pruning for both sides of a single row depends on cultivar, canopy width, crop load distribution, and weather conditions.

Leaf removal machines: Last year WA growers were introduced for the first time to leaf removal machines that used air pressure to blow leaves for improved fruit coloring. Two machines were used at the orchard demos: one developed by German company Fruit Tec and the other developed by Italian company Olmi. Wine grape growers have used pneumatic defoliation for canopy control for years, but the bursts of air generated by those machines were not powerful enough to be effective in apple orchards, where the leaves have a stronger attachment. This year, a few WNY growers decided to invest in modern leaf removal machines to guarantee fruit coloring on high value apple cultivars. Removing leaves a few days before anticipated harvest can help to speed up the coloring process. Preliminary work done in WA orchards last year showed promising results by removing leaves in the season at pre-harvest. The machines can be used up to 3 weeks before harvest, depending on variety and conditions, but more often it should be used closer to harvest, 5-10 days out. Leaf removal for Minnieska[™] and Gala should be done around 5-8 days before harvest. Pneumatic machines for leaf removal are a lot faster than humans with hand pruners and can cover an orchard in just 2-3 hours or less. There will be a lot more investigation and learning about the specific timings for pneumatic defoliation for important NY apple cultivars under our weather conditions this fall season. Stay tuned!

Plant growth regulators: The use of plant growth regulators (PGRs) is the only chemical method described in this short article. There are currently 2 options which have been successful in trials conducted by Dr. Robinson at Cornell AgriTech. For an in-depth discussion of the use of PGRs this harvest season, see the previous issue of Fruit Notes (Vol 20 Issue 14, Aug 13, 2020).

Ethrel (300ppm) improves fruit color if applied 1 week before harvest but stimulates ripening and excessive drop 10 days after application. If NAA

is mixed with Ethrel then drop can be delayed 10 days, but if the fruit is not harvested on time then excessive drop will occur.

Blush is a plant growth regulator featuring a jasmonate PGR (active ingredient prohydrojasmon PDJ). Dr. Robinson found modest but significant improvement in red color when Blush is applied twice (3 weeks and 1 week before harvest of Honeycrisp). Its response was improved by combining with Stimplex (an algae extract that has low levels of hormones). Also the response was improved by waiting for application until fruit are entering maturation (DA meter reading of 1.25).

Summary

- There has been a rapid adoption of reflective materials (mostly Extenday and similar heavier, longer-lasting fabrics) in WNY in the last 3 years.
- Leaf pruning is also effective for enhancing fruit coloring but it can be very expensive.
- Early WNY adopters will be able to tell if the leaf removal machines will eliminate the need for reflective fabric and the extra cost and labor for installation/removal, along with the associated need for storage (Extenday) or waste with fabrics (Mylar®).
- Maximum fruit coloring improvements will be achieved in modern, narrow, mechanically-pruned orchards by using one of the above technologies, or a combination.

Acknowledgements

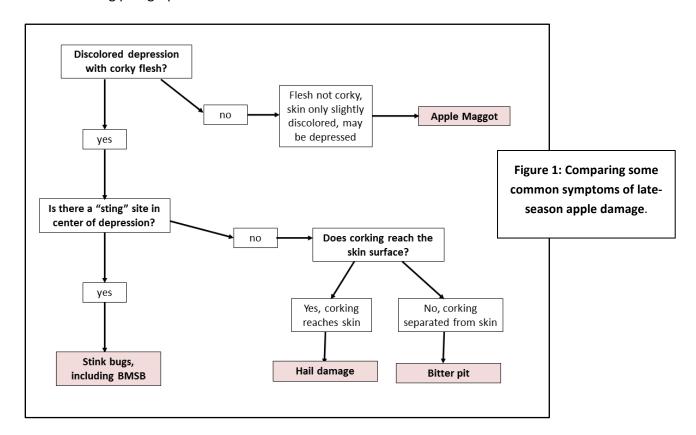
We would like to thank Tom and Alison DeMarree, Chris Whipple, and Ted Furber for their collaboration in the reflective and netting studies conducted in 2018 and 2019. Funding was provided by the NY Apple Research and Development Program.

Brown Marmorated Stink Bug and Other Late-Season Apple Damage

Janet van Zoeren, LOFT and Christelle Guédot, University of Wisconsin

Comparing BMSB to other late-season apple damage

A common question when discussing brown marmorated stink bug (BMSB) in apple orchards is, "how is BSMB damage different from other late-season apple damage?" Figure 1 provides a flow-chart to distinguish between some common late-season look-alike symptoms, which we will discuss in more detail in the following paragraphs.



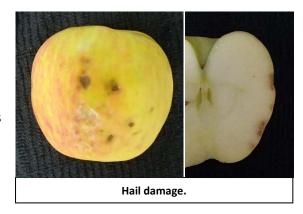
BMSB vs. other stink bug damage

Unfortunately, BMSB damage is indistinguishable from other stink bug damage, so the only way you can be certain of the culprit is if you are able to see the actual insect doing the feeding. All stink bug damage manifests in a discolored depression, with a stylet hole visible (with a handlens or microscope) in the middle of the discoloration. If you cut into the fruit, the flesh will be corky and brown along where the stylet of the bug was in the fruit, so the corky flesh will come all the way up **touching** the fruit skin.



Hail damage vs. BMSB

Hail damage is generally localized, follows a known hail event, and may be worse on one side of the orchard block or of the trees affected. Similarly to stink bug damage, hail damage shows a discolored depression where, if the fruit is cut into, flesh is corky all the way up to **touching** the fruit skin. Hail can be differentiated because the hail damage has **no** stylet hole visible in the depression on the skin. Thus, close inspection of the fruit is necessary and a magnifying glass may help in determining the presence of stylet holes, in particular if no hail events have been reported in the area.



Bitter pit vs. BMSB

Bitter pit is associated with nutrient imbalance. Similarly to hail damage, bitter pit also shows a discolored depression with **no** stylet hole visible. In general, most damage is seen on



Apple maggot damage. Photos by H.J. Larsen,

the calyx (bottom) half of the apple. Unlike stink bug damage, the corky flesh in bitter pit is deeper





Bitter pit. Photos by University of Georgia Plant Pathology , University of Georgia, Bugwood.org.

in the apple and **does not touch** the fruit skin (see image at right). Bitter pit is most likely to be found in highly susceptible cultivars (including Honeycrisp), and appears as often in the center as the edges of the orchard (unlikely insect damage, which is found more often on the orchard edges).

Apple maggot stings vs. BMSB

Apple maggot stings occur when the fly tries to oviposit into an apple, but does not lay an egg, or the larva fails to develop. There may be a slight depression with some discoloration, but generally less distinctive than in the other cases. There is always an oviposition hole visible, which is generally larger and more obvious than the stylet hole found following stink bug damage. Flesh is not corky, but flesh may be soft and mealy.

Pre-emergent Herbicides in the Fall – Advantages, Disadvantages, and Damage Symptoms

Janet van Zoeren, Mike Basedow and Lynn Sosnoskie

Throughout the summer, weed management predominantly consists of post-emergent (burndown) herbicides. These can damage any part of the apple tree if they come into contact with foliage, flowers, or fruit through drift,

volatilization, or improperly cleaned spray tanks. We addressed post-emergent herbicide damage in depth in Volume 20, Issue 12 of the Fruit Notes this year. Now, as we move into fall, we will discuss some of the advantages

and disadvantages of using a pre-emergent (residual) herbicide after harvest this year to prevent early spring annual emergence, and will also discuss concerns regarding tree damage from these products.

Advantages / disadvantages of fall residual use.

A traditional weed management approach consists of a spring pre-emergent herbicide application, to maintain weed control during the critical weed-free period of May through July, with follow-up post-emergent applications as necessary. However, recent research led by Debbie Breth found fall-applied residual herbicide applications can provide excellent long-term control of weeds into the spring.

If you choose to use a pre-emergent herbicide this fall, be sure to come in first with a burndown herbicide to clean up any summer weeds and prepare a bare herbicide-strip. This will help the pre-emergent herbicide to be evenly distributed across the soil, improving efficacy. Fall is a good time to use Stinger or 2,4-D to clean up perennial broadleaf weeds, if you have any of those problem areas (i.e. bindweeds, poison ivy, horse nettle, or other hard-to-control weeds).

There are several advantages to applying your pre-emergent herbicide in the fall instead of in the spring. For one thing, the pre-emergent herbicide needs to be applied during a short pre-germination period in the spring, which can be problematic in wet years, especially when other time-sensitive orchard tasks may take priority. Fall weather in New York often provides relatively even precipitation that allows pre-emergent herbicides to be moved to the seed germination zone. The fall application will reduce early seed germination the following spring, and will help keep the area around the trees weed-free over winter, which may help reduce rodent damage.

There are, however, disadvantages to applying residual herbicides during the fall. First, the fall application can be difficult to time if harvest is prolonged, or if there is an early cold snap, as some products do not work as well after a frost. Additionally, an orchard floor littered with dropped leaves and summer weed escapes will reduce the soil-herbicide contact needed to achieve effective weed control. Finally, the elimination of winter weed species could result in bare soils at a time when soil erosion has potential to occur. Having bare ground throughout the winter months has the potential to reduce orchard soil quality over time.

The choice of using a pre-emergent herbicide in the fall or waiting until spring will probably depend on many factors, including post-harvest weather, other priorities in your orchard during fall or spring, and the weed complex in your blocks. However, to provide better general guidelines on the effect of these timings on post-emergent herbicide use, tree health, and weed control, we are currently conducting a research project, funded by the ARDP, which will hopefully help provide answers to these questions in a few years.

Damage symptoms/identification.

Several of the pre-emergent herbicides will damage young trees (i.e. Matrix should not be used until 1 year post planting, Alion should not be used until 3 years post planting). Replants in an older orchard block would be especially susceptible to accidental damage from these products.

Some residual herbicides can also cause contact damage, if deposited on leaves, flowers or fruit through spray tank contamination or on low-hanging branches weighed down by fruit.

Matrix cannot be applied to trees until one year after planting. Be aware of re-plants, and turn off the sprayer near those young, sensitive trees.

Chateau has both pre-emergent and postemergent activity on weeds, and therefore also has a higher chance to cause damage to the tree. Chateau should not be applied to trees in their first leaf, unless they have a treeguard on during application, to prevent any trunk contact. Foliar contact can cause necrotic spots and leaf crinkling.

Alion cannot be applied to trees until 3 years after planting. Be aware of re-plants, and turn off the sprayer near those young, sensitive trees.

Casoron cannot be applied to trees until 1 year after planting. Casoron volatilizes easily in warm temperatures. For this reason, the Casoron 4G formulation can only be applied between November 15 to March 15, when soil temperatures are below 45°F, and the Casoron CS formulation is only labeled for use when air temperatures are below 70°F, in the late fall or early spring. Damage symptoms include chlorosis and necrosis of the leaf margins.

There are a couple of websites with excellent pictures of herbicide damage. Visit and bookmark: the <u>University of California</u>

<u>Herbicide Symptoms</u> page and the <u>OMAFRA</u>

<u>Apple IPM Herbicide Gallery</u>. The newly hired Weed Scientist at Cornell University, Dr. Lynn Sosnoskie, has been tentatively approved for a grant to develop an online gallery of herbicide injury images across New York's specialty crops starting in fall of 2020, so look for updates about its progress.

Of course, not all mysterious damage is caused by off-target herbicide applications. Herbicide

symptoms can be confused with damage caused by diseases, nutrition imbalance, drought, or winter injury. Some clues that herbicides may be a culprit include:

- Specific patterns of injury within the orchard block, such as damage predominantly in border rows, on one side of the tree, or only the outer leaves of the tree (drift shadows).
- Weeds showing similar symptoms near the orchard block, or between the orchard and suspected source of drift or volatilization.
- Symptoms that are consistent with recent herbicide applications made within or near the orchard.

To help identify herbicide damage, it is best to have a consistent way to keep records, both of all herbicide applications you make on your farm, as well as of any damage symptoms or other unusual things you notice while driving or moving through the orchard. Keep a pad and paper with you when scouting the orchard. If you see any unknown injury, jot down some notes if you notice any specific patterning, such as those described above. Be sure to document weather conditions at the time of and following application as well as details about travel speeds, nozzles used and heights, spray pressure, and weed density and canopy height.

In general, if you are concerned about herbicide damage to your orchard block, you can contact Janet van Zoeren (jev67@cornell.edu) or Lynn Sosnoskie (lms438@cornell.edu).

USDA Extends CFAP Deadline to September 11

The USDA has extended the deadline to apply for CFAP (Coronavirus Food Assistance Program) funding to September 11. In addition, growers will be paid the remaining

20% of the funding, according to the press release from the USDA:

https://www.ams.usda.gov/pressrelease/usda-announces-more-eligiblecommodities-cfap For an explanation of how CFAP funding applies to apple farms, see the previous issue of Fruit Notes (Vol 20 Issue 13, August 13, 2020).

Safe Harvest 2020: COVID-19 Office Hours

Beginning on Tuesday August 25th at 4:00 PM EST, Cornell CALS and CCE will host office hours for farmers and packers to answer any questions they might have about managing and responding to protect the farm workforce during COVID-19. Participants will be able to log in from a computer or call in from a phone to ask questions or just to listen. A panel of experts will be available to answer questions immediately, questions that the experts cannot answer right away will be recorded,

studied and answered later. The next 6 weeks are a critical time for the farm workforce as seasonal harvest ramps up, so the office hours will repeat every Tuesday at 4:00 PM EST through the end of September. Register at the Cornell Ag Workforce website (https://agworkforce.cals.cornell.edu/2020/08/24/safe-harvest-2020-covid-19-office-hours/) for more information. Registration is free but required.

Wage Board Hearings: Make Your Voice Heard!

Richard Stup, Cornell Ag Workforce Development

As part of 2019 New York Farm Laborer Fair Labor Practices Act (FLFLPA), The NYS Commissioner of Labor is convening a Wage Board to hear stakeholder input about the weekly hours threshold at which farm laborer overtime pay begins. The threshold is currently set at 60 hours per week for 2020 but the Wage Board can make a recommendation to keep it the same or lower it to somewhere between 40 and 60 hours. It is important for farm owners, managers, and employees to make their voices heard about any potential changes.

If you cannot attend a hearing but still want to be heard you can submit written testimony via email at this address: wageboard@labor.ny.gov Virtual hearing dates:

- Wednesday, August 26 at 6 p.m.
- Thursday, August 27 at 12 noon
- Monday, August 31 at 12 noon

To register, visit this post at the Cornell Ag Workforce Journal:

http://agworkforce.cals.cornell.edu/2020/08/25/wage-board-hearings-begin-tomorrow-make-your-voice-heard/

LOF Needs Your Feedback and Topic Ideas for Virtual Winter Meeting Programming

Craig Kahlke

With the uncertainties with the pandemic, all CCE educators are making plans for winter programming in a virtual format. We envision a virtual Winter Fruit School in the usual early February time period, with some pre-recorded presentations from invited speakers from out of region, and live presentations from CCE

educators and Cornell faculty. We also envision "expert" panels to garner more discussion. We also are thinking about sharing presentations with CCE-ENYCHP that would be more appropriate to a statewide format, such as we used to have at the Expo. All of this would be in a Zoom webinar format. We are also open to the

possibilities of some CCE association offices being remote Zoom sites for growers to gather (with appropriate social distancing) to also encourage more discussion and a meeting-type format. Short pre-recorded sponsor spots are also being discussed. Some sessions would be DEC-credit eligible. Since this is uncharted

territory, and we are here to serve our stakeholders, we value your feedback on our proposed format. In addition, we need your topic/talk ideas! Please email, text, or call any of the specialists with your ideas. You can also email our technician (Liz Tee at emt44@cornell.edu) with any talk/topic ideas.

MARK YOUR CALENDARS

- Monday August 31st Wage Board Hearings: Make Your Voice Heard! 12:00PM. Register at: http://agworkforce.cals.cornell.edu/2020/08/25/wage-board-hearings-begin-tomorrow-make-your-voice-heard/
- Tuesdays Aug 25 Sep 29th Safe Harvest 2020: COVID-19 Office Hours. Tuesdays at 4:00PM. Register: https://agworkforce.cals.cornell.edu/2020/08/24/safe-harvest-2020-covid-19-office-hours/

Subscribe now for Harvest Maturity Reports

Craig Kahlke

Now is the time to renew your subscriptions to the Harvest Maturity Reports if you have not done so. Your \$60 subscription (if in the Lake Ontario Fruit Program partner counties of Niagara, Monroe, Orleans, Oswego and Wayne) gets you critical information on a weekly basis during apple harvest. Fruit samples are collected early in the week from across the region and sampled for internal ethylene concentration, firmness, starch/iodine, and total soluble solids. Results are summarized and recommendations for harvest windows of major apple and pear varieties are either faxed or emailed to subscribers late in the week. Satellite subscribers outside of the four county regions can receive reports as well, for \$100.

Harvest Maturity Report Subscription

·	\$100 for those who live and farm outside of Monroe, Niagara,
Orleans, Oswego and Wayne counties) made payable to "Cornell Cooperative Extension" or go online and fill it o htps://lof.cce.cornell.edu/submission.php?id=309&cru	ut at:
And mail to: Orleans County CCE Attn: Kim Hazel 12690 NYS Rte 31 Albion, NY 14411	Email only –in the body of the email and as an Adobe pdf attachment Fax Only
	Email and Fax
Name	Email
Farm or Company Name	
Address	
Fax No Phone	e No.

Cornell Cooperative Extension

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

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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 I 315-719-1318 I mrm67@cornell.edu Cultural Practices

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



Janet van Zoeren I 585-797-8368 I 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