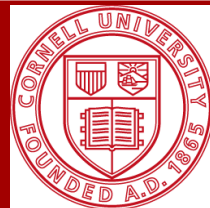




FRUIT NOTES

Lake Ontario Fruit Program



Volume 14 Issue 20

August 20, 2014

Managing Insect "Loose Ends"

Art Agnello

This has been another one of those seasons that wasn't able to make up its mind, with a delayed arrival and steadfast alternating patterns of hot and cool temperatures, punctuated with severe bouts of rain and brimstone. You'd think we should be used to this unpredictability by now, but it's still difficult to accommodate to all the curves that get thrown. At any rate, the impact on arthropod pests has varied accordingly, with our normal pests there, as usual, plus a few head-scratching outbreaks but not many actual crises, as most of this year's problems have been met appropriately by NY growers. Now, with harvest approaching, there may be just a few remaining pest management duties.

Of greatest potential concern are the **internal leps**, which have been noticeable, as usual, but not overwhelming in the normal trouble spots; however, there are still oriental fruit moths and even codling moths flying in problem sites. Therefore, to be cautious, we shouldn't rule out the possibility that blocks with a history of internal worm problems might need a last-minute application of an appropriate-length PHI material to help stave off the final feeding injury caused by young larvae. Before the harvest period begins in earnest, a fruit examination could help determine whether the last brood of any of the likely species needs a final deterrent before the sprayer is put away. Potential choices (and PHIs) include Altacor (5/10 days, pome/stone fruits, respectively), Assail (7 days), a B.t. (0 days), Belt (14/7 days, pome/stone fruits, respectively), Calypso (30 days), Delegate (1 day, peaches; 7 days, apples/pears/plums), a pyrethroid (PHI varies), or a sprayable pheromone (0 days), as applicable.

Apple maggots are also continuing to emerge, often in healthy numbers; possible late-season options include Assail (7 days), Calypso (30 days), Imidan (7 days), and various pyrethroids.

A couple of less common last-minute pests can surface in certain cases. One is **western flower thrips**, particularly in nectarines growing in drought-stressed areas. Adults move from alternate weed or crop hosts to fruit just prior to and during harvest, feed on the fruit surface in protected sites, such as in the stem end, the suture, under leaves and branches, and between fruits. This results in silver stippling or patches; injury is particularly obvious on highly colored varieties. An application of Delegate immediately before the first

harvest may prevent subsequent losses; however, an additional application may be needed if pressure is severe. The PHI varies from 1 day (peaches and nectarines) to 7 days (plums and prunes) to 14 days (apricots).

Another season-end problem that may deserve consideration now is **pearleaf blister mite**, a sporadic pest of pears that shows up in a limited number of commercial pear orchards and is a fairly common problem in home plantings. The adults are very small and cannot be seen without a hand lens; the body is white and elongate oval in shape, like a tiny



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Building Strong and Vibrant New York Communities

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

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.

sausage. The mite causes three distinct types of damage. During winter, the feeding of the mites under the bud scales is believed to cause the bud to dry and fail to develop. This type of damage is similar to and may be confused with bud injury from insufficient winter chilling. Fruit damage is the most serious aspect of blister mite attack. It occurs as a result of mites feeding on the developing pears, from the green-tip stage through bloom, causing russet spots. These spots, which are often oval in shape, are usually depressed with a surrounding halo of clear tissue. They are 1/4–1/2 inch in diameter and frequently

run together. A third type of injury is the blistering of leaves; blisters are 1/8–1/4 inch across and, if numerous, can blacken most of the leaf surface. Although defoliation does not occur, leaf function can be seriously impaired by a heavy infestation.

For those plantings that might be suffering from this errant pest, a fall spray is recommended sometime in early October, when there is no danger of frost for at least 24–48 hr after the spray. Options include Sevin XLR Plus (1.5–3 qt/A) or 80S (1.88–3.75 lb/A), or 1–1.5% oil plus Diazinon 50WP (1 lb/100 gal).

Envirdor Miticide Labeled In NYS

The NYS DEC has announced that they have approved a FIFRA 24(c) Special Local Need label for Envirdor 2SC miticide (Bayer CropScience, EPA Reg. No. 264-831) for use against mites, including European red mite and Twospotted spider mite, on pome fruit. A maximum of 1 application per season is allowed at a rate of 16-18 fl. oz./A, with a PHI of 7 days; this product is not for sale, distribution or use in Nassau and Suffolk Counties. As we are past the normal time during

the season when rescue miticide applications should normally be required, since mite populations are normally subsiding now with decreasing foliar quality, it is not expected that this material will actually be needed at this time unless mites have been uncontrolled all season and have built up to numbers that are still damaging the trees. The normal recommended threshold in August is 15 motile forms per leaf.

Dry Mid-Summer Period after Harvest is a Great Time to Summer Prune Sweet Cherries

S. A. Hoying, M. Miranda Sazo, and T. L. Robinson

The best time to prune sweet cherries is after harvest during a dry period. Work done by Julie Carroll indicates this timing minimizes bacterial canker infections. This timing can also reduce the overall vigor of the tree helping to maintain smaller trees. Summer pruning is especially beneficial for overly vigorous, very tall, and/or shaded trees. It is also a good time to remove bacterial canker infections potentially reducing the infections next spring. Pruning after harvest is also a good time to reduce tree height. Large cuts made in the tree top result in very little regrowth. A single large cut at the desired tree height (with a chainsaw if needed) can contain tree height for up to 3 years.

Here are some of the main horticultural tips for summer pruning sweet cherries this season: (1) Pruning should be done during dry periods which allow cuts to dry out or heal before a rain event. (2) Leave a 6-12 inch heading stub (never make flush cuts on the leader! - if canker gets in this stub it will progress slowly toward the trunk but will not girdle the trunk) to reduce the movement of bacteria into the trunk or main limbs and to leave vegetative buds for regrowth of a new branch, (3) proper summer pruning can improve the light environment within the tree, strengthening fruit buds and possibly improving next year's bloom and fruit set. Remove whole limbs to open windows for light penetration into

the canopy. (4) Cherry trees generally are so vigorous that removal of some wood does not affect carbohydrate accumulation for the winter and following season.

The style of summer pruning used depends on sweet cherry tree architecture. Dormant cuts made into 1 year old wood generally result in the production of 3 new shoots. Usually 2 shoots are laterally placed (flat) while the third is upright. Simply removing the upright will open the tree and allow much improved light penetration to the interior fruiting wood. Allowing a small stub to

remain can increase the number of cherries since fruit buds generally form at the base of one year old wood. Leaving stubs might be an excellent practice for shy bearing varieties such as Regina, Ulster, and Attika. Shoots should be completely removed on cherries that bear excessively such as Whitegold, Rainier, Lapins, and Sweetheart. Another reason to leave stubs is to limit the potential spread of bacterial canker on extremely susceptible varieties.

Late Summer Weed Control Options for Berries

Laura McDermott, Eastern NY Commercial Hort Program

Strawberry Weed Control: Controlling fall germinating winter annuals such as chickweed and shepherds purse is critical at this time of year. Devrinol (napropamide) is a pre-emergent herbicide that can cause problems with rooting of daughter plants so this material should be used after early forming daughter plants have rooted. Because daughter plants that form after late August don't usually contribute as much to the yield, Devrinol can be applied without much effect at that time, but BEFORE winter annuals emerge. Devrinol must be moved into the soil by cultivation or water after application. Sinbar (terbacil) is a preemergent herbicide with some postemergence activity. Usually Sinbar is applied after renovation or after the berries have gone dormant in the fall. If leaves are present during application, immediately apply 0.5-1 inch of water to wash the chemical off the strawberry foliage. Otherwise severe injury may result. Do not use Sinbar on soils with less than 2% organic matter and do not use on Guardian, Darrow or Micmac, as these cultivars have shown extreme sensitivity while some growers report that Honeoye and less vigorous cultivars have an increase in root rot following Sinbar use. Sinbar is limited to 8 oz/A per growing season. Poast (sethoxydim) is a postemergent, grass herbicide. This material works well applied in late summer or early fall to actively growing grasses. Don't waste your time and the product on summer

annual grasses like foxtails and crabgrass that will be killed by frost. Poast can be used in the fall to suppress perennial grasses such as quackgrass, control early emerging small grains, and kill winter annual grasses such as wild oats. Poast must be applied with crop oil.

Highbush Blueberry Weed Control: August is the time to focus on problem weeds, especially woody perennial plants. As perennial weeds begin to move carbon stores to their roots, they will efficiently move systemic herbicide to the root zone. But, so will blueberry plants! Be very careful with your application. A shielded sprayer is a must, better yet would be a wick applicator. A 2% Round-Up solution (41% a.i./gallon) will kill most of your problem herbaceous weeds, but if you have large woody material, you might want to use a higher solution. The Round-Up Pro label gives mixing instructions for many concentrations up to a 50% solution. The cut-stem application method is also listed for problem woody plants. Using a 50-100% solution of Round-Up, apply the material directly to the woody stem using a wick applicator immediately after cutting. Many growers use a roller/wiper application to the edges of their mulched row to keep grass from encroaching. Be sure that your mulch is nice and thick and that no blueberry roots are obvious. For pre-emergent control of fall annuals there are several choices. Sinbar can be used after harvest

in all but 1 -year old plantings. Devrinol should be cultivated or watered in within 24 hours of application. Solicam is also a good choice at this time of year, IF you did not apply this material in the spring.

Bramble Weed Control: Late summer and fall is an excellent time to control troublesome perennial weeds like thistle, dock, smartweed, and morning glory by spot spraying with Round-Up, but take EXTREME caution to avoid getting herbicide on bramble canes. For grass control, now is the time to apply the second Poast application. This should be done while grasses are actively growing. The further you get in August, the poorer the control. To suppress winter annual germination, both Sinbar and Devrinol can be used. Solicam, if not applied in

spring, is a good choice unless you have a new planting or light soils.

Make sure that you read the label as herbicides have caveats re: soil organic matter content and rates.

Organic Options: If you are an organic grower or trying to reduce your herbicide usage, late summer is a good time to consider going through the berry plantings with a crew to hand weed or use a flamethrower in plantings. Cultivation is an option for strawberries and materials like vinegar could also be very helpful for weed control. Cleaning up a patch, then applying mulch where it is appropriate will save time next season. Do not ignore late season weed control just because you don't use herbicides.

Subscribe to 2014 Harvest Maturity Reports Now!

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 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 and critical information from "in the field" crop consultants, growers, researchers, extension agents, etc. are summarized and recommendations for harvest windows of major apple varieties are either faxed or emailed to subscribers usually on Wednesday afternoons. There are approximately 10 reports. Satellite

subscribers outside of the four county regions can receive reports as well, for \$100.

For current LOFP enrollees who wish to enroll for the supplemental Harvest Fax (Harvest Maturity Reports)- You can fill out and scan and email or fax the completed subscription form and mail a check-see the form in this newsletter. You can also email Craig at cjk37@cornell.edu to inform him "the check is in the mail" and start receiving the reports. The first HMR of the season is coming out on Wednesday, August 20. **If you are not enrolled in the Lake Ontario Fruit Program, go to our website:**

<https://lof.cce.cornell.edu/enrollment.php>.

The first 2 issues are complementary to a wider list-serve.

Planning for Winter Meetings

Believe it or not, it is time to start planning winter meetings like the 2015 EXPO and LOF Winter Schools. Before you get consumed by harvest season, we are looking for your ideas on topics you want to hear about or any speakers

you would like us to bring in from other places. Please tell us what you need to hear or learn more about. Call or email LOF teammates (emails and mobile numbers on front page) with your ideas/requests.

A Needs Assessment for Farmers' Markets: A Survey of Market Managers

Jarmila Haseler

Cornell Cooperative Extension – Wayne County (from Smart Marketing, March 2014)

The number of farmers' markets in New York continues to grow but some have struggled or floundered after their initial establishment. For this reason Cornell Cooperative Extension offices in a 10-county region in Western New York initiated a project to study various factors that might contribute towards this instability.

The objective of this study was to identify challenges faced by the market managers. Gaining a better understanding of these challenges could provide a foundation for developing tools and educational resources that would help market organizers establish successful markets. These tools could help create stable, profitable and successful markets and thereby provide a viable sales channel for local farmers.

This study began in November 2012 with a total of 64 farmers' markets scattered across a nine-county region called the Genesee Valley Region comprised of Genesee, Livingston, Monroe, Ontario, Orleans, Steuben, Wayne, Wyoming and Yates with one additional county outside the region – Seneca County. A questionnaire was developed in collaboration with the Farmers' Market Federation of New York.

Given the geographic scale, the questionnaire was administered via phone interviews. Contacting the managers was challenging due to their busy schedules, and several attempts were needed to reach them. The duration of the interview averaged about 45 minutes; the shortest lasted 15 minutes and the longest 3 hours! We did not limit the interview time.

At the end of each survey, the manager was asked to evaluate the overall performance of their market, using a 1 - 10 scale, with 1 being the lowest and 10 the highest performance. Although this is a subjective measure of success, market managers are in a position to have in-depth knowledge of the market and its operations and can be experts in assessing their market performance. Because this rating is of particular interest, we gave it a name, the 'rating value'.

The Results

Length of Service: Being a good farmers' market manager takes a combination of skills and talents. An inexperienced or incompetent manager can be a leading factor in the success or failure of a market. Since it takes time to build expertise, we assume that length of service might be one measure of a manager's proficiency.

Table 1. Average Length of Service of Market Managers

County	Average Length of Service (years)	Average Age of Market (years)
Genesee (n=4)	4.5	15.3
Livingston (n=5)	5.3	15.2
Monroe (n=14)	5.8	13.4
Ontario (n=9)	4.3	11.2
Orleans (n=0)	n/a	n/a
Seneca (n=1)	5.0	10.0
Steuben (n=4)	4.0	10.8
Wyoming (n=0)	n/a	n/a
Wayne (n=5)	3.6	14.7
Yates (n=4)	5.8	14.6
Grand Average (46)	4.8	13.2

Note: The missing data were due to manager inaccessibility.

The average length of service was 4.8 years. Given that the average number of years in operation of our markets was 13.2, we can say on average that each market has had two to three managers to date.

Compensation: Running a farmers' market requires time and energy. It was of interest to find out how managers were compensated for their efforts.

Our findings show that a majority of managers, 70%, were uncompensated. Only 23% were paid. The remaining 7% were given non-monetary rewards such as free market baskets or gift certificates at the end of the season. Of the 23% who received monetary compensation, 15% worked through a temporary, year-to-year contract and 85% held a part-time or full-time position.

Table 2. Market Manager's Compensation

Compensation	Number of managers	Percentage	'Rating value'
Uncompensated	40	70	6.18
Non-monetary compensation	4	7	8.00
Paid	13	23	7.98
Total	57	100	

On average, the markets with paid managers and those receiving non-monetary compensation did show higher 'rating values' than the markets with unpaid managers.

Level of Experience: Running a farmers market, helping it grow, making it profitable, and assuring that it has a sustainable future, is a tall order! Hence, it is most beneficial if market organizers are familiar with event running and have management skills. Such skills, perhaps learnt from previous jobs or volunteer activities, prove valuable during routine, day-to-day market operations, as well as during more challenging times when critical thinking and quick decisions are required.

If they lack experience, then networking and learning from more seasoned market managers can be very beneficial. Experience and networking together can increase a manager's effectiveness.

We enquired whether the manager had experience organizing farmers markets or organizing events in general prior to starting their markets or stepping into the manager's job. Table 3 shows that 31% of managers had prior experience and also engaged in networking activities. Another quarter or 25% had past experience with event management only while 19% were inexperienced but learnt via networking. Another quarter (25%) had neither experience nor networking activities. They ran their markets as best as they could.

Table 3. Market Manager's Level of Experience and 'Rating Value'

Attributes	Number of managers	Percentage	'Rating value'
Both past experience and networking efforts	18	31	7.0
Past experience only	14	25	6.0
Networking effort only	11	19	6.3
Neither past experience nor networking efforts	14	25	5.2
Total	57	100	

Table 3 also shows the average 'rating value' for each level of manager attributes. The success and stability of a farmers' market may be very dependent on the level of experience the manager has.

Organizational Structure: Markets have adopted an assortment of organizational structures from

very formal to very informal. Using the data from the survey, three market structures were identified and used for analysis of management structure. These were markets run by a board of directors, a loosely formed group, or a single market manager.

Table 4. Market Organizational Structure and 'Rating Value'

Organizational structure	Number of markets	Percentage	'Rating value'
Single manager	23	40	5.1
Loosely joined	15	25	6.0
Board of directors	20	35	6.9
Total	58	100	

Our data show that the most common market organizational structure is single manager operators (40%). Perhaps making decisions 'on your own' might bring certain advantages like simplicity and rapid implementation of change. But many dangers outweigh this advantage. Inexperience or low level of diplomacy skills can cause problems through the entire course of market operation. An inexperienced and low diplomacy skill manager can jeopardize the relationship between market participants, affecting different aspects of market management such as vendor retention, rule enforcement, building community connections, fund raising, etc. This can negatively affect the market's performance.

A quarter of our markets were organized by loosely formed groups. Again, the members' collaboration can be formal or informal, but in either case this set-up offers a better job distribution. Sharing responsibilities, exchanging

ideas, and solving problems jointly can be easier than for a single market manager.

Only 35% of markets operated with a board of directors. But those had the advantage of combining wider skills sets and expertise, helping managers and the market face challenges and barriers.

Markets organized by single managers only had the lowest average 'rating value'. Markets with a board of directors had the highest rating. These results and others included in the full project report will guide the development of future training programs for market managers, for farmers' markets governing institutions, and for community development agencies. A copy of the full report will be available soon from Cornell Cooperative Extension of Wayne County.

"Smart Marketing" is a marketing newsletter for extension publication in local newsletters and for placement in local media. It reviews elements critical to successful marketing in the food and agricultural industry. ***Please cite or acknowledge when using this material.*** Past articles are available at <http://agribusiness.dyson.cornell.edu/SmartMarketing/index.html>.

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Harvest Maturity Fax Subscription

You must first be enrolled in the Lake Ontario Fruit Program (in not, please click on your county or satellite enrollment on our website at <http://lof.cce.cornell.edu/> Please print and submit this form with a check for \$60, (\$100 for those who live and farm outside of Monroe, Niagara, Orleans, Oswego and Wayne counties) made payable to “Cornell Cooperative Extension”

And mail to: Orleans County CCE
Attn: Kim Hazel
12690 NYS Rte 31
Albion, NY 14411

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