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Tree Fruit News

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Petal Fall/Thinning Meeting

June 4, 2014 at 2:00 pm

Forrence Orchards, 86 River Road, Peru, NY

Announcing the 4th Petal Fall/Fruit Thinning informational meeting of the year. We will introduce your new ENYCHP Tree Fruit Specialist, review the 2014 insect and disease situation; and make variety specific thinning recommendations and national crop predictions. Speakers will include Dave Rosenberger, Peter Jentsch, Dan Donahue, Terence Robinson, Steve Hoying, and Aaron Hoshide. Free and open to the public. Contact: Dan Donahue 845-691-7117.

Degree Day Accumulations (as of 05/26/2014, via NEWA)

Location	Base 43 F	Base 50 F
Peru	500.1	256.6
Watermill	499.7	188.8
Clifton Park	535.7	273.5
Marlboro	621.6	308.6
Hudson	646.0	338.1
Clintondale	683.7	352.0
Highland	682.0	353.9

Seasonal Rainfall at the HVL (inches)

Weekly	Total for May	Total from March 1st
0.74	2.80	11.00

Upcoming Pest Events

Ranges (Normal + - Std Dev)

Upcoming Pest Events	Ranges (Normal + - Std Dev)	
	43 degrees	50 degrees
Oriental fruit moth 1st flight peak	338-544	170-290
Codling moth 1st catch	398-572	200-310
Lesser appleworm 1st catch	263-561	121-303
Mullein plant bug 90% hatch	472-610	247-323
Mullein plant bug hatch complete	508-656	264-358
European red mite 1st summer eggs	447-555	237-309
Lesser peachtree borer 1st catch	480-680	251-377
Plum curculio oviposition scars present	485-589	256-310
Pear psylla hardshell present	493-643	271-361
San Jose scale 1st catch	433-615	217-339

Introductions

We are pleased to announce that Dan Donahue has started as a Cornell Cooperative Extension Regional Fruit Specialist in the Hudson Valley. Dan has been hired by Cornell Cooperative Extension of Ulster County as part of the Eastern New York Commercial Horticulture program. He will be based out of the Hudson Valley Lab in Highland, NY and will be filling the vacancy left by Mike Fargione.

Dan is a near-native of the Hudson Valley, having moved to the area with his family at the age of 5. He completed a Bachelor of Science degree in agronomy at Cornell University, then went on to receive a Master of Science degree in entomology from Virginia Tech. Dan's graduate research produced three journal articles on reproductive and dispersal responses of the Two-Spotted Spider Mite (TSSM) *Tetranychus urticae* to certain pyrethroid insecticides.

Dan's career experience encompasses almost the entire scope of the commercial fruit industry in New York State, including: agrochemical research; commercial fruit production & farm management; fruit purchasing and packing; cider production & retail produce operations; government & university relations; fruit industry education, as well as organizational administration, information technology, sales, and marketing.

Dan has been a resident of the Hudson Valley for the last 14 years, predominantly working for a local agricultural and commercial power equipment vendor. His commercial affiliations have included Red Jacket

Orchards, Inc., DeeJay Orchards, the New York State Horticultural Society, and Keil Equipment Company, Inc. Over the years he has collaborated closely with Cornell Cooperative Extension educators at grower events such as CCE Regional Fruit Schools, the annual NYS Horticultural Society Meeting & Trade Show, and Apple Industry Leadership Forums. Dan has written for newsletters and the New York Fruit Quarterly, generally on the topics of industry economic development and government relations issues such as farm labor, disaster relief programs for specialty crop producers, and pesticide regulation.



The Eastern NY Commercial Horticulture Program provides educational support in the form of formal and informal educational programming, on-farm research and troubleshooting for all commercial fruit and vegetable growers in the 16 county regions in eastern NY. The program is supported by Cornell Cooperative Extension Associations throughout eastern NY in conjunction with Cornell University. If you are a commercial grower and would like more information, please call 518-272-4210.

Disclaimer: While I can agree with the bio, I really think I have more hair than appears in the photo - Dan

Controlling Fabraea Leaf Spot on Pears

By Dave Rosenberger, Cornell Dept. of Plant Pathology, in Scaffolds No. 11, 6/3/13, <http://www.scaffolds.entomology.cornell.edu/2013/SCAFFOLDS%206-3-13.pdf>

Fabraea leaf spot caused by *Diplocarpon mespili* (formerly *Fabraea maculata*) can cause severe defoliation of pear trees in late summer (Fig. 1). Trees that lose their leaves during August cannot mature their fruit, and most fruit on defoliated trees have spots that make them unmarketable anyway (Fig. 2). This fungal pathogen can attack most pear cultivars, but it is especially severe on Bosc and Seckel. The disease has been confounding pear growers in the Hudson Valley, southern New England, and the Cumberland-Shenandoah region for many years.

The fungus can overwinter either as twig canker on last year's shoots or in fallen leaves. Peak ascospore discharge from fallen leaves occurs several weeks later than for apple scab. Fabraea epidemics usually begin very slowly and surreptitiously, then accelerate during hot humid



periods in July and August. The disease first appears as occasional tiny purple spots on leaves that easily escape notice, but controlling those early infections is critical for

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Continued from previous page preventing the disease from gaining an early start. When initial infections begin to produce conidia, the disease can spread extremely rapidly if trees are not protected with fungicides. Even the best fungicide programs may fail if the disease becomes established and there is a lot of rain during late July and August.



Figure 2

infection, but they can only be applied seven times at a maximum rate of 3 lb/A, and they have a 77-day preharvest interval. The best strategy for controlling Fabraea is to apply mancozeb at weekly intervals starting at green cluster and continuing until either all seven of the allowable applications have been made or until the 77-day

The initial spots on leaves and fruit produce distinctive conidia (Fig. 3) in a gelatinous matrix. Spots on leaves and fruit that appear totally desiccated when dry will suddenly swell when wetted as the spore matrix absorbs water (Fig. 4). Spores are then disseminated by splashing or wind-blown rain. The sticky spores can also be disseminated by insects such as pear psylla and pear rust mite that contact the matrix and then move to other parts

of the leaf or to other leaves. Arthropod dissemination can be important during long periods of dry weather if there is enough wetting from dew to allow new infections. Infections can occur anytime that trees remain wet for eight hours during summer.

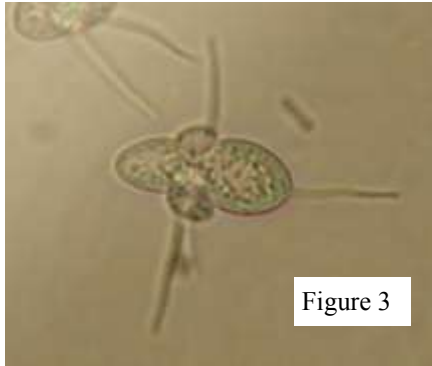


Figure 3

preharvest interval is reached. The mancozeb applications should prevent spring and early summer infections. After mancozeb can no longer be applied, the best alternatives are Syllit, Flint, and Pristine, all of which have labels allowing summer applications for pear scab and/or sooty blotch and flyspeck (SBFS) even though none of them are specifically labeled for Fabraea.

In 2012, we tested several fungicides that are labeled for use on pears, along with Merivon, which is not yet labeled in New York. We found that Inspire Super was less effective against Fabraea than either Flint or Syllit. Merivon and Fontelis-plus-Flint were no more effective than Flint used alone (Table 1). Thus, the SDHI fungicides (i.e., Fontelis, and the non-strobilurin component of Merivon) either lack activity or are no stronger than the strobilurins with which they were applied in our test. Pristine was not included in this trial, but it is presumably equivalent to Flint for controlling Fabraea, and Pristine will also suppress postharvest decays in pears if it is applied shortly before harvest.

Most pathogens causing foliar diseases on apples can infect only newly unfolded leaves, so the pace of infection slows as terminal growth slows in summer. Unfortunately, pear leaves and fruit do not gain resistance to Fabraea as they age. Therefore, the disease can spread rapidly to all of the leaves and fruit on the tree any time that there is a gap in fungicide protection. Fungicide protection is usually exhausted after 1.5 to 2 inches of cumulative rainfall following a fungicide application, and none of the fungicides seem to have much post-infection activity against this disease. Therefore, it is very important to recover orchards immediately after rains that are sufficient to deplete protective residues, especially in orchards that had Fabraea last year or where some leaf spotting is already visible this year.

Mancozeb fungicides provide the best defense against Fabraea



Figure 4

Syllit, Flint, and Pristine should be effective if applied on a 14 to 21 day interval during summer so long as insects and mites are controlled and fungicide coverage is renewed after every 1.5 to 2 inches of accumulated rainfall. None of the treatments in our 2012 trial provided complete disease control (Table 1), perhaps because the accumulated rainfall during the interval preceding fungicide applications on 15 Jun and 3 Jul totaled 3.0 and

2.5 inches, respectively. All of the treatments might have provided better control if we had shortened those two spray intervals by reapplying fungicides before we accumulated 2 inches of rainfall.

Syllit provides a different chemistry group that can be used in rotations during summer to control Fabraea leaf spot. Syllit can be applied only three times in a season. We tested the maximum label rate of Syllit, so the effectiveness of lower rates is

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unknown. Syllit will not control SBFS or late-season fruit rots. SBFS, along with sooty molds that develop on honeydew deposits from pear psylla, can pose problems on smooth-skinned pear cultivars like Bartlett. Therefore, it may be advisable to use Syllit during early summer, either in three back-to-back sprays, or in alternating sprays with Flint. In previous trials we found that, although Flint controlled both *Fabraea* and SBFS, it was not very effective against the sooty molds associated with high psylla populations. Topsin M controls both SBFS and psylla-related sooty molds, but it is relatively ineffective against *Fabraea* even though it is labeled for that disease. Topsin M could be combined with Syllit or any of the other fungicides if protection against psylla-related sooty molds is needed.

Several years ago, Peter Jentsch and I noted in one of his pear insecticide trials that *Fabraea* leaf spot was less severe in plots that received regular oil sprays. We followed up by testing oil sprays the next year and found that 1% oil, when applied instead of fungicides, delayed *Fabraea*-induced defoliation even though it did not delay the time that *Fabraea* first appeared in the oil-sprayed trees. Lab studies showed that oil suppressed spore

production and release, thereby slowing progress of the epidemic. Regular applications of 1% oil can adversely affect tree health, with the most visible evidence being enlarged lenticels on new wood. Because our observations showed that oil is less effective than fungicides for preventing infection, we suggest that oil be added to fungicides only if/when initial symptoms of *Fabraea* are observed on foliage. Our assumption is that adding oil with late-summer fungicide sprays in orchards where *Fabraea* is visible on foliage will enhance fungicide activity by decreasing conidial production/dissemination. Fungicides always perform better as inoculum levels are reduced, and using oil with fungicides should suppress spore production and therefore improve fungicide performance in orchards where *Fabraea* is not completely controlled by the fungicides alone.

The pathogen causing *Fabraea* leaf spot on pears also infects quince, hawthorn, *Amelanchier* sp. (shadbush or serviceberry), *Chaenomeles* sp. (ornamental flowering quince), *Cotoneaster* sp., *Mespilus* sp. (Medlar), *Pyracantha* (firethorn), *Photinia*, and *Sorbus*. Trees of these species growing adjacent to orchards may provide inoculum for orchards even where the disease within the orchard is controlled.

Effectiveness of fungicides for controlling *Fabraea* on pears at the Hudson Valley Lab in 2012.

Fungicides and amounts of formulated product/100 gal of dilute spray (multiply by 3 for an equivalent rate/A) †	Foliar ratings on Bosc ‡			
	% leaves infected	% defoliation	% fruit with <i>Fabraea</i> §	
	29 Aug	29 Aug	Bosc 4 Sep	Bartlett 22 Aug
1. Untreated control	95.5 e *	54.7 c	95.2 b	81.4 b
2. Flint 0.83 oz †	46.0 bc	17.4 a	18.5 a	11.0 a
3. Fontelis 4.67 oz + Flint 0.67 oz †	61.3 cd	21.8 a	28.1 a	6.5 a
4. Merivon 1.33 fl oz †	32.3 ab	23.0 ab	23.8 a	7.2 a
5. Syllit 16 fl oz †	18.3 a	20.8 a	0.0 a	6.0 a
6. Inspire Super 4 fl oz †	74.5 d	34.2 b	-- †	4.2 a

* Between 7 April to 21 May, all plots including controls received seven weekly airblast applications of Manzate 3 lb/A + LI-700 6 fl oz/100 gal. The treatments listed were applied (in combination with LI-700 at 8 fl oz/100 gal) on 1 & 15 June, 3 & 17 July, and 1 & 16 Aug.

† Based on counts from 20 shoots per plot.

NYS DEC Clean Sweep Agricultural Chemical Disposal Program

Just a heads-up to expect an opportunity to dispose of obsolete, no longer registered agricultural chemical through the NYS Department of Environmental Conservation’s “Clean Sweep” program, sometime in the Fall of 2014, or the Spring of 2015. As we move through the thinning period, and settle into our summer programs, it’s a good time to take stock of your spray shed. Spray materials should be clearly labeled, and organized by type (insecticides, fungicides, herbicides, growth regulators, foliar nutrients, etc.). Obsolete materials must be set aside, marked “Do Not Use”, and clearly labelled as to content.

Precision Thinning Meeting with Dr. Terence Robinson Held on May 6, 2014

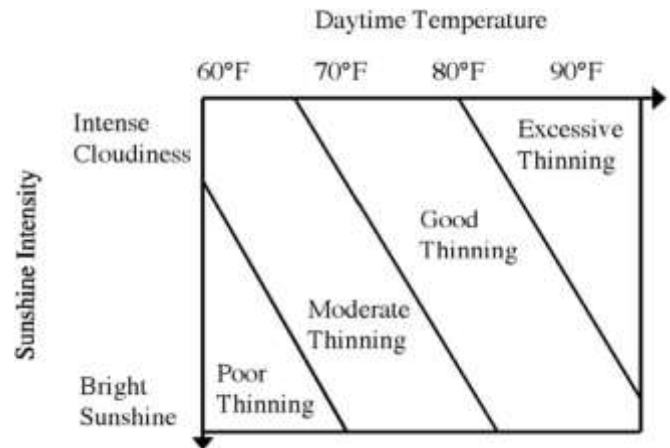
Through the wizardry of modern communication technology, interested growers across New York State were able to participate in a training session on how to implement the apple precision thinning program their own farms. Growers were encouraged to trial the program on their farms, taking size measurements of individual fruits, sending the data to Dr. Robinson, with his customized thinning recommendation returned to the grower within 24 hours.

Tis the Season to be Thinning

By Dan Donahue, CCE ENYCHP

Chemical thinning was covered in detail by Phil Schwaller in the last issue of Tree Fruit News. Please refer back to that article, as well as to Cornell Recommends for answers to your specific questions. Fruit size is moving along quickly, and it is possible that growers in the southern Hudson Valley may find the following reminder of little help. The information that follows is presented as a general reminder of factors to consider when deciding on spray timing and rates for chemical thinning of apples:

The traditional method for worrying about your thinning strategy: The “Light Intensity/Temperature” Table
(from the 2014 Cornell Pest Management Guide)



**The hi-tech method for worrying about your thinning strategy:
The Carbohydrate Thinning Model**

Step #1: Go to the NEWA website: <http://newa.cornell.edu/>.

Step #2: Hover over “Crop Management”, and click on “Apple Carbohydrate Thinning.”

Step #3: Select the weather station that best represents your farm. The “DATE” field will show today’s date, which is most likely what you are looking for, then click on “CONTINUE.”

Step #4: The “Green Tip” date is already filled in for the weather station you chose, but you can change it if you disagree. Click on the “BLOOM DATE” field to bring up a calendar, and select a date which reflects 80% full bloom on the variety you are evaluating.

Step #5: Click on the “CALCULATE” button.

Step #6: Read the results, possible recommendations are:

- Decrease standard (Cornell Recommends) rates by 30% for this variety
- Decrease standard (Cornell Recommends) rates by 15% for this variety
- Apply standard (Cornell Recommends) rates for this variety
- Increase standard (Cornell Recommends) rates by 15% for this variety
- Increase standard (Cornell Recommends) rates by 30% for this variety

Computer models will not replace common sense and field experience. However, they are a valuable tools to use during this crucial time of the year, so it is worth running the model alongside your traditional method for determining your thinning rates and timings. Ultimately, I think it will develop into the most reliable method we have, but giving it a try is the first step. Give me a call (Dan) on my cell at 518-322-7812 if you would like me to “walk” you through the model. I have a tablet and internet connection configured so that I can run the model anywhere, including in the orchard. While I won’t need to be in front of a computer when you call, for best results, you should be.

Progress of Precision Thinning Counts at the Hudson Valley Lab

Steve Hoying, with the assistance of a certain rookie extension educator, has been following the precision thinning protocol on gala and honeycrisp in the research orchard at the Hudson Valley Lab. The initial thinning application was made on May 19, the initial fruit size measurements taken on May 21, with follow-up measurements on May 25. The second thinning application was made on May 27, according to the recommendations of the precision thinning model. Initial blossom counts indicated that we need only to set and retain 3.6% of the total blossoms in order to produce a “full” crop in this tall spindle orchard. Let’s see how close we can get, stay tuned.

Mite Management Without Oil at PF-1C

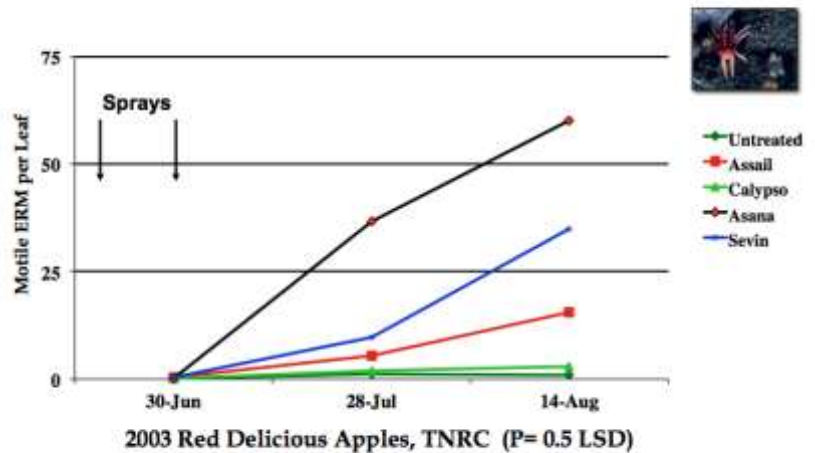
From online blog posting May 23, 2014 by Peter Jentsch, Cornell University Dept. of Entomology. You can read Peter's blog at <http://blogs.cornell.edu/jentsch/peter-j-jentsch/>. Click on the link, subscribe to his blog, and you will find a wealth of entomological wisdom.

Over the past two years, the brown marmorated stink bug has become an economic pest in Hudson Valley apple. A number of farms have employed effective insecticides against this pest, primarily those in the pyrethroid and carbamate groups. These insecticides have reduced the numbers of biological control agents in the orchard to suppress the *T. pyri* phytophagous mite populations (*Typhlodromus pyri* [Acari: Phytoseiidae]) giving rise to early season European red mite and two spotted spider mite populations. The use of Carbaryl at thinning will also contribute to the rise of mite during the season, all of which will require mite management as warm dry weather contribute to mite success.

In years of frequent rainfall and low sunlight from overcast skies, foliage and fruit tend to be very succulent. The lack of leaf cuticle coupled with the tender skin of fruit at petal fall from this weather often makes plant tissue susceptible to spray injury. The use of Captan as a contact fungicide against apple scab (*Venturia inaequalis*) is considered to be an essential part of early season scab management in apple production, especially in years of intermittent showers leading to reduced fungicide residual. The use of oil employed in insect and mite pest management, acts as a penetrant to pull Captan molecules into foliage and fruit, where its activity as a biocide causes phytotoxicity to surface plant cells, resulting in economic damage to leaves and fruit. Oil use will also increase the uptake of Carbaryl, increasing the thinning response. With overcast skies leading to a greater carbohydrate deficit, products or combinations with oil may lead to excessive thinning. In years of sustained succulence, the use of oil in the presence of Captan may injure the fruit of certain apple varieties (e.g., russetting on light-skinned varieties such as Golden Delicious).

Yet, for many growers, the backbone of mite management in the Hudson Valley since the late 1990's has been the use of Agri-Mek®. The active ingredient, 2-abamectin, is a naturally occurring compound, developed through the fermentation process by *Streptomyces avermitilis*, a soil bacteria in the

Mite Flaring Potential of Apple Insecticides*



*John Wise - Michigan State

actinomycete group. Abamectin is a very effective material for use as a miticide against the pome fruit mite complex. It is one of the most effective materials against apple and pear rust mite, providing season long control of this pest in most years.

Agri-Mek® SC (Syngenta) is a new water based formulation of abamectin, employing increased concentration (8.0% Abamectin) for lower use rates between 2.25 and 4.25 fl.oz./A. It replaces the long standing Agri-Mek 0.15 EC formulation (2.0% Abamectin) used at a rate of 10-20 fl.oz./A, both formulations in IRAC's Group 6 mode of action. Both of these formulations MUST ALWAYS be mixed with a penetrating non-ionic surfactant, in combination with

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Relative Efficacy Table for Insecticides / Miticides on Mites.

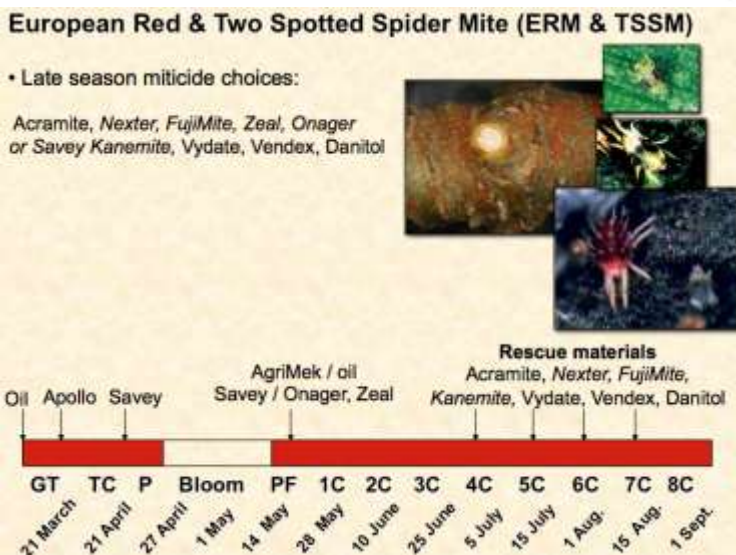
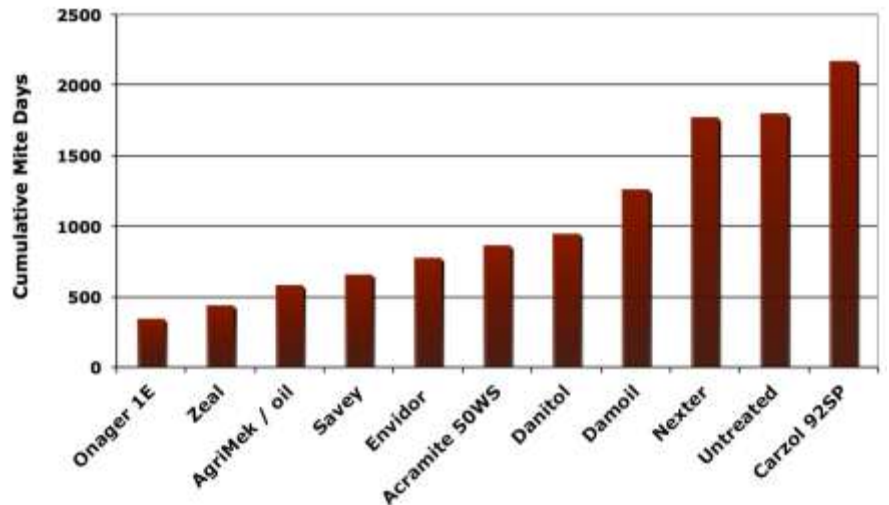
Insecticide / Miticides	Class	European red mite	Twospotted spider mite	Pear / apple rust mite
Oil	-	High	Low	Moderate
Carzol 92SP	1A	Moderate	Moderate	Moderate
AgriMek 0.15EC	6	High	Moderate	High
Mesa	6	Moderate	Moderate	None
Proclaim	6	Moderate	Moderate	No Data
Apollo 4SC	10A	High	Low	Low
Savey 50DF / Onager 1EC	10A	High	Low	No Data
Zeal 72WS	10B	High	High	None
Vendex 50WP	12B	Low-Moderate	Moderate-High	Moderate
Portal 15SC	20B	Moderate	Moderate	No Data
Kanemite 15SC	20B	High	High	No Data
Nexter 75WS	21	High	Moderate	Moderate-High
Envidor 2SC	23	Moderate	Moderate	None

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horticultural spray oil used at 0.25% to be effective. And applications of Agri-Mek without a penetrating surfactant such as horticultural spray oil will likely result in significant reduction in the efficacy and/or residual control of the insect and mite population. This would include formulations of abamectin in Agriflexi (Syngenta), a premix formulation with thiomethoxam (Actara) and abamectin (Agri-Mek)

Here are charts of recent studies comparing miticides near petal fall. Hexythiazox (Savey 50DF at 3-6 oz./A, Onager at 12-24 oz./A) in IRAC 10A

Evaluation of Miticides to Manage Cumulative European Red Mite Days on Red Delicious Apple. Campbell Hall, NY - 2007



and Etoxazol (Zeal at 2.0-3.0 oz./A) in IRAC 10B provided excellent control of the European red mite (ERM) population. These active ingredients act primarily as larvacides (nymphs) and ovicides (egg) of ERM. Through translaminar movement, Zeal enters the leaf and is fed upon by the mite, leading to low viability of the ERM egg (reduced hatch) when fed upon by adults. Hexythiazox is much less effective against the two-spotted spider mite population on apple, whereas Etoxazol provides excellent TSSM control, making it a better late season miticide.

Fire Blight Update

By Dave Rosenberger, Cornell Dept. of Plant Pathology

The first fire blight symptoms are just now appearing, so any dying blossom clusters or shoots should be investigated carefully to determine if fire blight is causing the die-back. Early evidence of the blossom blight phase of fire blight will include blackening of small fruitlets (or the remnants of flowers), with black discoloration that extends down the flower stem. Often there may be tiny droplets of ooze along the blackened tissue that can best be seen against a light background. Within a few days, leaves on spurs and/or bourse shoots will begin to develop blackened veins and shoot tips will droop into the traditional shepherd's crook. We had enough heat units during bloom this year to trigger fire blight even on some of the more resistant cultivars such as Empire, so check all cultivars carefully, especially if you only sprayed some of the cultivars on your farm with streptomycin during bloom.

Newly planted trees that are in bloom this week are still at high risk for fire blight infections and should have been treated with strep or strep-plus-copper on Monday or Tuesday. They may need a second treatment if bloom is still present. I suggest using the combination of strep-plus-copper on newly planted trees because strep will be far more effective than copper for protecting blossoms so long as there are no strep resistant strains (which so far have not been detected in the Hudson Valley), but adding copper will provide some protection in the event that strep-resistant fire blight was present in the trees you purchased this spring. Getting a free dose of fire blight in nursery stock is not a common event, but it can happen.

If newly planted trees come down with fire blight, and especially if any newly planted trees appear to have root stock blight (i.e., dying tissue and/or oozing on the

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rootstocks), the diseased trees should be removed ASAP (yesterday is even better!), and then a sample should be shipped to Dr. Kerik Cox at the Geneva Experiment Station so that it can be tested for strep-resistance that might have come with the trees from the nursery. Do not let samples you collect for testing dry out: keep them refrigerated prior to shipping, ship via over-night service, avoid Friday shipments, and be certain that the sample includes the canker margins. The latter is best accomplished by ensuring that any branch selected as a sample has both healthy and dying leaves still attached to the sample. Fire blight in older trees may also be sent to Geneva for resistance testing if there is reason to believe that well-timed strep sprays failed to control the disease.

Some folks choose to eliminate fruiting on newly planted trees by pinching out the flowers during bloom, but that activity can also spread fire blight if inoculum is present on the trees. Thus, given our hot humid weather, flower pinching should be done only after a strep spray has been applied, and no pinching should be done when trees are wet from rain or dew. This caution applies to any pinching or fruit removal in young trees over the next few weeks.

If fire blight does show up, it should be pruned out ASAP unless the numbers of infections make removal unfeasible (e.g., in larger trees with many strikes per tree). In pears and in apple trees less than five years old, one must almost always attempt to remove strikes as they appear to avoid losing entire trees and to limit the amount of inoculum that those infections will produce if they are not removed. On older trees, severe infections can sometimes be allowed to run their course, but older trees with active blight may act as an inoculum source for other nearby plantings until at least mid-summer. If infections appear limited to just a small grouping of trees in one location within an orchard, then it may be prudent to immediately remove all of those

trees so as to eliminate the inoculum source. Given all of the potentially competing considerations, decisions on how to deal with fire blight after it appears in orchards must always be made on a case-by-case basis.

Where fire blight is present in an orchard or an adjacent orchard, violent thunderstorms and/or hail storms can create visible or microscopic wounds that allow wind/rain-blown inoculum to spread over large acreages. Streptomycin should be applied within 24 hours of any wind/hail event if there is any known source of fire blight evident in the orchard or within a half-mile up-wind from the orchard in question. The next few weeks pose the greatest risks for hail-exacerbated fire blight because blossom infections are producing an abundance of inoculum and shoots are still extremely susceptible.

Finally, there are some things that can be easily confused with fire blight, and you can breathe a sigh of relief if you can verify that either of the following factors have caused the shoot die-back that you might see in the next few weeks. First, some shoots are dying due to secondary infection of cicada egg-laying scars from last year. Second, some orchards may have shoots that are dying from *Nectria* twig blight. The latter is most common on Rome trees, but it can occur on other cultivars as well. *Nectria* infections can usually be traced back up the stem to a fruit cluster base from last year where pulled stems were left attached to the tree (i.e., the stems pulled out of the fruit during harvest). Eventually, these fruit cluster bases will sprout orange-pink fruit structures, and the canker rarely extend much beyond these initial infection points, but all of the new growth beyond the infection points will die, causing symptoms that look like shoot blight caused by the fire blight bacterium. Unlike the case with fire blight, there is no need to prune out *Nectria* infections prior to either normal summer pruning or pruning during the next dormant season.

Asana XL 2(ee) Registration

The New York State Department of Environmental Conservation has approved a 2(ee) recommendation for the use of DuPont Asana XL Insecticide (EPA Reg. No. 352-515) on apple, pear, and stone fruits against the unlabeled pest spotted wing drosophila. A copy of the approved 2(ee) label is available on PIMS at: http://pmep.cce.cornell.edu/profiles/insect-mite/ddt-famphur/esfenvalerate/asana_2ee_0414.pdf. Users must have a copy of the 2(ee) and the primary product label in their possession at the time of application.

Source: Scaffolds Fruit Journal, edited by Art Agnello

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 possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide. This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension.

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.