



UMass  
Extension

# Healthy Fruit

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Prepared by the University of Massachusetts Fruit Program

Jon Clements, Author (unless otherwise noted) and Editor-in-Chief (Except this edition which has been hijacked by Hawkeye)

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## Upcoming Pest Events

Coming Events	Degree Days Base 43°F	Degree Days Base 50°F
Apple maggot 1st catch	1217-1743	764-1138
Apple maggot first oviposition punctures	1605-2157	1144-1544
American plum borer 2nd flight start	1560-2140	1028-1434
Codling moth 2nd flight peak	1954-2672	1302-1846
Comstock mealybug 1st flight subsides	1818-2132	1216-1418
Lesser appleworm 2nd flight start	1429-2108	924-1405
Obliquebanded leafroller 1st flight subsides	1637-2049	1065-1381
Peachtree borer flight peak	1060-2016	644-1368
Spotted tentiform leafminer 2 <sup>nd</sup> flight subsides	1989-2349	1314-1620

## Upcoming Meetings

**Saturday, August 3, 2019 - 9:00am to 3:00pm**

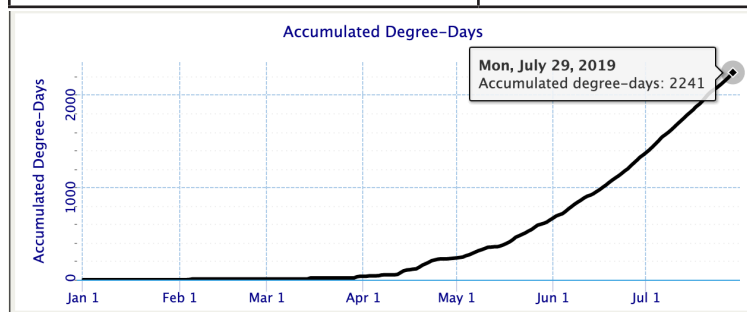
**UMass Agricultural Learning Center (911 N Pleasant St., Amherst MA)**

[“Non-Chemical Varroa Management Tools That Work”](#)

Are you interested in using non-chemical management tools to reduce Varroa levels in your hives? Have you heard about “brood breaks” and “splits” but don’t understand how and when to use them? Join Sam Comfort and Angela Roell

## Current Degree Day Accumulations

UMass Cold Spring Orchard, Belchertown, MA	1 Jan. - 23 July, 2019
Base 43°F	2061
Base 50°F	1357



Accumulated and forecast degree day accumulations, base 43°F, for Belchertown, MA



Powered by ACIS  
Northeast Regional  
Climate Center

- beekeepers, queen rearers and educators - as well as UMass extension educator Hannah Whitehead for a hands on day at the apiary. We will also talk about sampling for mites, and how to incorporate these strategies into an integrated pest management plan.

### **The Way I see It**

Jon is in and out for the next few weeks. Stay tuned for the next exciting installment of “The Way I See It” in the August 20 issue of Healthy Fruit!

### **New England Tree Fruit Management Guide**

The New England Extension tree fruit specialists -- which include myself, Dan Cooley, Jaime Pinero, and Elizabeth Garofalo at UMass. Mary Concklin at UConn, Heather Faubert at URI, Terry Bradshaw at UVM, George Hamilton and Anna Wallingford at UNH, and Glen Koehler and Renae Moran at UMaine -- have officially launched, and updated for 2019 -- an online edition of the New England Tree Fruit Management Guide. Note that it is easy to print any of the sections, if you want to have old-school reference, for example, to hang on your spray shed wall. Also, it is quite mobile-friendly so make a home screen shortcut to here: [New England Tree Fruit Management Guide](#) Or, if you would like to purchase a hard copy, please visit the Extension Bookstore here: [Online Catalog](#)



Another great Massachusetts Fruit Grower’s Association Annual Summer Meeting in the books! Thanks to Joanne Dinardo and Sholan Farms for hosting and to all of you for being there!  
(Photo Credit: Sonia Schloemann)

### **New England Small Fruit Management Guide**

Likewise, the New England Extension small fruit specialists-- Sonia Schloemann, Hilary Sandler, and Elizabeth Garofalo at the University of Massachusetts; Mary Concklin at the University of Connecticut; David Handley and Lily Caulderwood at the University of Maine; Becky Sideman, Cheryl Smith, and Anna Wallingford at the University of New Hampshire; Heather Faubert at the University of Rhode Island, and; Ann Hazelrigg and Gabriella Maia, and Christopher Callahan at the University of Vermont-- have all work together to bring you the most updated version of the New England Small Fruit Management Guide which you can access online for free here: [New England Small Fruit Management Guide](#) Or, you can order a hard copy from the Extension Bookstore here: [Online Catalog](#)

### **Insects**

**Jaime Piñero**

**Codling moth (CM), Oriental Fruit Moth (OFM) and leafrollers.**

If you are using a Degree Day model to time the sprays against second-generation larvae of both OFM and CM, then here is some information (DD numbers apply to Belchertown):

-Oriental Fruit Moth (Text revised 7.25.19): According to PennState University, insecticides can be applied targeting the second-generation larvae when 1,450 – 1,500 DD (base 45F) have accumulated SINCE biofix. For Belchertown, biofix occurred on 6 May 2019. Given that in some orchards OFM populations are currently high (see research update, below), then consider applying insecticides this week. Below is the output of the NEWA calculation of DD45, with an accumulation starting date of May 6th:

<b>Degree Days (Base 45) for Belchertown-2</b>								
	Past	Past	Current	5-Day Forecast			<a href="#">Forecast Details</a>	
Date	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28	Jul 29	Jul 30
<b>Daily Degree Days</b>	22	26	24	28	29	31	32	34

-Leaf Rollers. In Belchertown, sustained catches (BIOFIX) of oblique-banded leafrollers took place ca. June 13th. Timing for treatment of 1st -generation larvae was some weeks ago, when 400-450 DD43 had accumulated (for Belchertown, the threshold was reached in early July).

Because most of the eggs of the 1st generation OBLR already hatched, then timing of treatment against the 2nd generation should take place at 2750 DD43, which should happen in August.



-Codling Moth BIOFIX was around May 20th in Belchertown. The spray window for the 2nd brood larvae starts at 1260 DD50 after initial biofix. Currently, we are at 1175 DD50 in Belchertown, which means that sprays targeting CM larvae need to be applied this week (the DD threshold is expected to be reached by July 27th, in Belchertown). Below is the NEWA output for DD50 accumulations using May 20th as biofix:

## Degree Days (Base 50) for Belchertown-2

	Past	Past	Current	5-Day Forecast			<a href="#">Forecast Details</a>	
Date	Jul 21	Jul 22	Jul 23	Jul 24	Jul 25	Jul 26	Jul 27	Jul 28
Daily Degree Days	32	21	15	18	21	23	25	26
Seasonal Accumulation	1138	1160	1175	1193	1213	1236	1261	1287

Under low to moderate population pressure, 1-2 sprays will be necessary to control the second generation. However, 3 sprays may be needed if the first generation was not well controlled and trap counts continue to exceed 5 CM per trap per week.



Wing traps deployed in the field, baited with pheromone for codling moth.

**CM, OFM, and lefrollers research update:** With support from Trécé Inc., traps baited with plant volatiles targeting female CM were deployed at three commercial orchards. In one week, 30 odor-baited traps have killed 160 female OFM, 16 female CM, and 30 female red-banded leafrollers. Note that the number of OFM females killed in traps is particularly high, especially in one orchard located in Leominster. This information, when combined with DD data (see above) indicate that sprays against OFM are recommended this week.

The above information points to a potential good performance of traps to kill female moths. But seven more weeks of research are needed.

-Apple Maggot Fly (AMF). While our monitoring system indicates that captures of AMF have been quite low for the last two weeks, growers need to monitor for this pest in their own orchards to get a more accurate picture

of AMF pressure. The recommended treatment threshold is an average of 2 AMF per unbaited trap or 5 AMF per baited trap. Trap captures for a week following insecticide treatment are ignored. Subsequent sprays can be applied once the threshold is reached again.

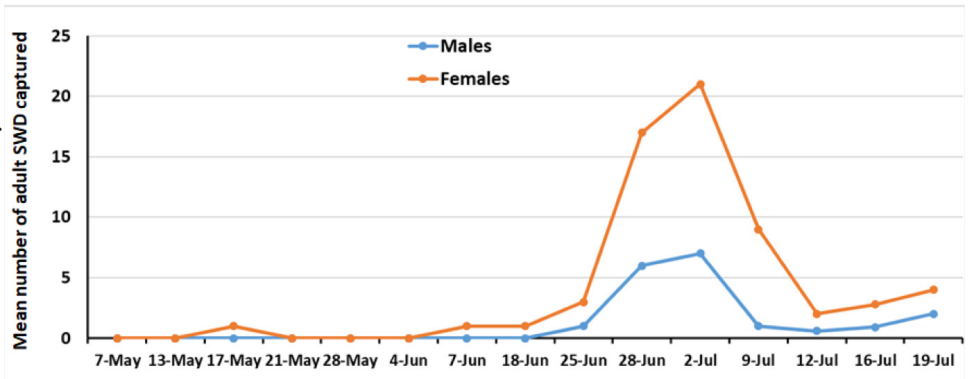
Border row applications are an effective option for AMF if no other insects need control. Imidan is suggested at the rate of 1 lb./acre, but other materials (Assail, Avaunt, etc.) can also be used at the labeled rate for effective control.

**AMF research update.** On July 15th, we initiated a field study in six commercial orchards (3 in MA, 2 in NH, 1 in ME). The main goal of this research is to determine whether the addition of sugar to the tank mix in association with AMF lures deployed on perimeter-row trees can effectively control AMF throughout the season. Trap capture and infestation data will be compared with data obtained from grower control plots. We are collaborating with Dr. Anna Wallingford (Univ. of NH Extension) and Renae Moran and Glen Koehler (UME Cooperative Extension) and are appreciative of grower support from MA, NH, and ME for this research.

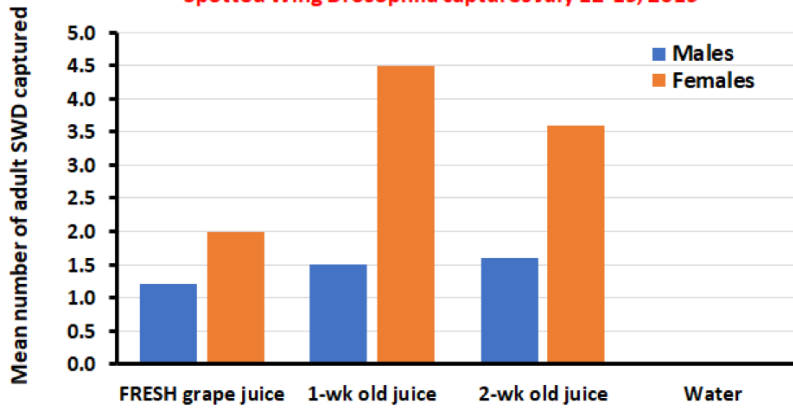
-Spotted Wing Drosophila (SWD). Captures of SWD in monitoring traps (Belchertown) have decreased substantially for the last two weeks or so (see graph below; blue lines indicate male captures; orange lines indicate female captures). At least in Belchertown, it is possible that some adult SWD may have succumbed to the comparatively higher temperatures (as of July 21st, each day in July reached an ambient temperature of 80 degrees F - or higher, except for two days) and the lack of rain. However, SWD numbers are expected to start increasing again rapidly.

**SWD research update:** We know that diluted grape juice (1 part of juice in 3 parts of water) is very attractive to SWD.

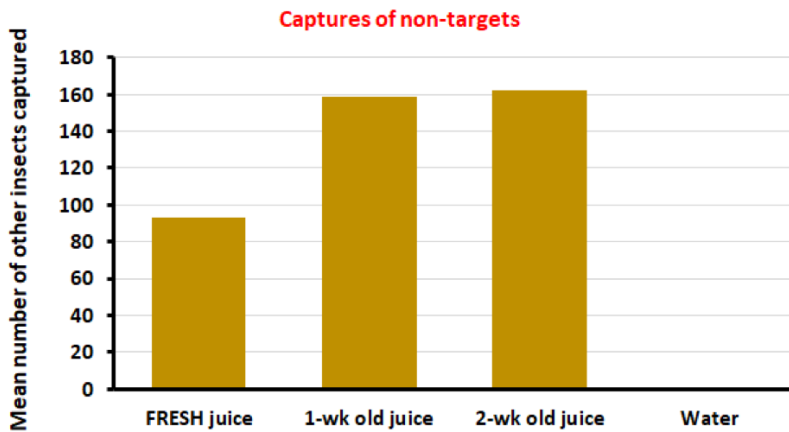
Results from an on-going field experiment involving traps and diluted grape juice that was aged in the laboratory indicate that diluted grape juice that has been fermented for 1 or 2 weeks is significantly more attractive to female SWD than diluted fresh juice (see graph below which presents information collected over a 2-week period - this study continues).



Spotted Wing Drosophila captures July 12-19, 2019



**Bottom line:** Traps baited with grape juice can be kept in the field for 2 weeks and expected to perform well. However, the number of non-targets (other Drosophilids) captured in fermented juice nearly doubled when compared to diluted fresh juice.



**THANK YOU NOTE:** I would like to acknowledge the important support provided by Xiaojian Wen (visiting scholar from China), Victoria Salemme, Emily Begonis, and Katherine Chiu (they are depicted in the picture in that order, starting from the left). They conducted an extensive amount of research with SWD (some with PC and AMF), both in the field, and in the laboratory. Xiaojian just went back to China, and Emily will be finishing her work in my lab this week.





# Diseases

Liz Garofalo

**Scab**, either you have it or you don't. You can tell that with a quick trip through the orchard, this isn't your first rodeo, you know what to do. I won't belabor this one. The largely dry weather that we have been having has gone a long way to decreasing the spread of secondary scab in orchards that do have foliar infections. While it has seemed awfully dry the last couple of weeks, we seem to have largely made up for anything that was approaching a water deficit. According to the [US Drought Monitor](#), we never reached drought conditions in Massachusetts, although the Westfield area did get "abnormally dry". **Sooty blotch/fly speck** will require management with the rain that has just moved through much of the state. In most locations the rain we have just gotten is enough to wash off any residual fungicide (or insecticide for that matter, but, that's for Jaime to cover). Check rain fall accumulations for your site, if it didn't rain, you likely won't need an additional fungicide application any time soon, depending on how long it's been since your last one.

**Brown rot** in peach is currently the biggest concern on my radar. All this rain plus ripening peaches means you better cover up! We are already seeing it in our blocks here, so, if you see it in yours, get those nasty peaches out of the trees so they don't spread it around like kids with a cold. Also, insect and canopy management will help you reduce pressure by reducing wounds from feeding and increasing airflow, and subsequently drying the fruit surfaces more quickly.

# Horticulture

Duane Greene

## Choosing a Preharvest Drop Control Strategy

The time is rapidly approaching for choosing the preharvest drop control strategy you will use this harvest season. The approach for each variety will undoubtedly be different. There are a number of factors to consider in making this decision including the variety, the product to use, the weather before and after application, the time from application to harvest and the intended use of the apples (immediate sale, short storage period, long storage period). A successful preharvest drop control strategy requires consideration of all of these factors.

As an apple matures and approaches the time of harvest it starts to produce the gas ethylene. The ethylene generated by the ripening apple further stimulates fruit ripening. The ethylene moves through the intercellular spaces in the apple to the abscission zone which connects the spur of the apple with the pedicel of the fruit. The ethylene weakens the abscission by stimulating synthesis enzymes that destroy cells in the abscission zone and the enzymes that hold cells together. Ethylene plays a significant role in the fruit abscission process and controlling it is a key component for drop control and regulation of ripening.

Orchardists have the choice among three currently-available preharvest drop control compounds: ReTain (aminooxyvinylglycine, AVG), NAA (naphthaleneacetic acid and its many formulations) and Harvista (1-aminocyclopropane-1-carboxylic acid). Each compound is different. Their modes of action are different which determines in part how they are used and the responses you can expect following application.

### Harvista.

This is the newest drop control compound to be made available. It influences physiological responses in the apple by inhibiting the action of ethylene. As a fruit starts to ripen it produces ethylene receptor sites. In order for ethylene to influence any response in an apple (ripening, fruit drop etc.) it must bind to a receptor site. Harvista works by irreversibly binding to these ethylene binding sites. As apple ripens it continues to produce new binding sites. Loss of preharvest drop control activity from Harvista is not due to Harvista being inactivated or metabolized but rather the apple continues to produce new ethylene binding sites which are then available for ethylene to attach to and stimulate fruit ripening and preharvest drop. In initial research using a different method of Harvista application we found that application of more than one low rate of Harvista was able to extend the period of drop control of Harvista. Two to three applications of low rates of Harvista, equal to the sum of one application at a higher rate, resulted in longer drop control. Another obser-

**Sooty Blotch and Flyspeck Risk Predictions for Belchertown-2**

Petal fall date for McIntosh: 5/20/2019

Petal fall date above is estimated based on degree day accumulations or user input. Enter the actual date for blocks of interest and the model will calculate the accumulated leaf wetness hours since 10 days after petal fall more accurately.

Most recent fungicide application date: 7/13/2019  
If petal fall has passed, enter the date of your most recent fungicide application. If no fungicide applications have been made, do not enter a date.

In the Risk Summary table, note the accumulated leaf wetness hours since petal fall (Leaf Wetness Hours) and the Risk Level. Leaf wetness hours, rain events, and the last fungicide application date are taken into consideration in assessing risk level. To estimate risk in the near future, look at the probability of rain.

Consult the Risk Level IPM Guidelines below the Risk Summary table.

Sooty Blotch and Flyspeck Risk Summary - Northeastern US Model								
	Past	Past	Current	5-Day Forecast			Forecast Details	
Date	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28
Days since petal fall	62	63	64	65	66	67	68	69
Accumulated Leaf Wetness Hours - ALWH	278	290	306	316	324	331	340	348
Risk Level	Low	Low	High	High	High	High	High	High

**Rain Events and Fungicide Depletion Estimate**

Days since last fungicide application	8	9	10	11	12	13	14	15
Rain since last fungicide application	0.44	1.40	2.65	2.65	2.65	2.65	2.65	2.65
Daily rain amount (inches)	0.00	0.96	1.25	0.00	0.00	0.00	0.00	0.00
Rain probability (%)			-   18	11   10	10   10	10   11	12   10	17   10
Night/Day								

NA - data not available. Download Time: 7/23/2019 9:00

**Risk Level IPM Guidelines for Sooty Blotch and Flyspeck:**

- NO RISK** - No action needed.
- LOW RISK** - If first cover application has not been made, make first cover fungicide application for apple scab. Otherwise, no action needed.
- MODERATE RISK** - Check the 5-day forecast; a cover application should be made if two or more days with precipitation are predicted. See Fungicides below.
- HIGH RISK** - A cover application for Sooty Blotch and Flyspeck should be made. See Fungicides below.

NEWA SBFS forecast for Belchertown, MA

vation made during the early evaluation of Harvista was that loss of drop control of Harvista can occur very rapidly, within 2-3 days. The current application of this compound made is through a proprietary in-line injection system where sprayers are retrofitted to make this specialized application. Recommendations for the use of Harvista are being handled and overseen by Agrofresh.

### **ReTain**

ReTain (AVG) has been available to growers for over 20 years. During that time it was the main drop control compound used by growers. The mode of action of ReTain is by blocking a key enzyme in the biosynthetic pathway, thus inhibiting production of ethylene in apples. It requires at least 10 days following application for the drop control of ReTain to become effective.

There are several factors that growers should keep in mind when using ReTain as a drop control compound.

1. The more ReTain you apply the greater the response (more drop control and a greater delay in fruit maturity) you can expect. In general the response to ReTain is linear with the amount you apply.
2. The earlier you apply ReTain in the season the greater the retardation of ripening and red color development will occur.
3. When one pouch of ReTain per acre is applied on McIntosh effective drop control (less than 20%) will generally last for 30 to 35 days. Supplemental application of ½ to 1 333g pouch will extend the period of drop control and continued retardation of ripening.
4. Split applications of ½ pouch of ReTain will have much more drop control than 1 application of 1 pouch.
5. Trees under water stress, heat stress or severe mite damage do not respond to ReTain well and its use on these trees is not recommended.
6. This use of an organosilicate surfactant (Silwet L-77 or Sylguard 309, 6-12 oz/100 gal) is strongly suggested. It improves the performance of ReTain and it imparts a certain amount of rainfastness.
7. The maximum amount of ReTain that can be used per years is two 333g pouches. Maximum drop control will be achieved using this amount.

### **Naphthaleneacetic acid (NAA).**

Since the discovery of auxins (including NAA) in the 1930s, this group of has been known to retard preharvest drop. NAA is available in many commercial formulations. It is generally applied at a rate of 10 ppm. One can expect drop control to last 7-10 days from one application. A second NAA application of 10 ppm will extend the drop control to about 14 days. Generally, it requires 2-3 days for the drop control of NAA to take effect. NAA is most effective if it is applied just prior to the start of drop. Determining this time may be difficult. The label suggests that NAA should be applied when the first few sound fruit are found under a tree. NAA is most effective when applied prior to the start of drop. Careful monitoring of the orchard is recommended. Unlike ReTain and Harvista, NAA is known to have the ability to advance ripening and shorten the storage life of fruit. Advanced ripening can be accentuated when warm to hot weather follows application, harvest is delayed, used on stressed trees or applied at rates higher than 10 ppm.

NAA may be useful when applied with other drop control compounds. NAA can be used in conjunction with ReTain. Some researchers have reported that it can enhance the drop control of Retain. Some growers wish to delay the application of ReTain to 10 to 14 days prior to anticipated harvest to minimize the influence that ReTain may have on delaying red color development and ripening. In this case NAA can provide near term drop control until the drop control properties of ReTain can start to take effect. There are no reports on the use of NAA in conjunction with Harvista. Another frequent use of NAA is when it is applied with ethephon to increase red color and advance the ripening of apples early in the season. In this case, NAA can be tank mixed with ethephon or it may be applied separately 2-3 days after ethephon application.

### **Specific Drop Control Recommendations Differ with Cultivar**

Suggestions for preharvest drop control in New England were initially developed to be used on traditional New England cultivars that had a prehavest drop control problem, most notably McIntosh and Macoun. However, recently the popularity and the extensive planting of Honeycrisp and Gala have presented new challenges. Both of these cultivars are low ethylene producing cultivars, thus rates used on these cultivars must be lower to minimize the inhibitory effect of ReTain on red color development.

-Honeycrisp.

Honeycrisp has a significant drop control problem, that if not countered with a drop control compound, could result in preharvest drop losses of up to 50% before harvest. Frequently, 1/3 to 1/2 a pouch per acre is applied to minimize the reduction in red color development. The timing of this could be 2 to 3 weeks before harvest or a split application of 1/3 to 1/2 333g pouch at 3 week and 1 week before harvest. Depending on the situation, a low rate of NAA may be included with the ReTain to enhance drop control. Low rates of NAA applied on Honeycrisp will probably have a limited influence on adversely influencing flesh firmness and fruit quality. There is limited information available to document the effects of Harvista on Honeycrisp drop and fruit quality.

More recently we have published work that documents the advantages of making a split application of one pouch of ReTain 3.5 weeks prior to anticipated harvest and a second 1 333g pouch application 2 weeks later. This results in a significant the delay of preharvest drop until early October. Under this scenario fruit ripen under more favorable weather conditions and red color at harvest was excellent.

-Gala.

While preharvest drop is not a malady suffered by Gala, fruit frequently experience stem-end split as they ripen, develop an undesirable “greasy” feel and internal browning may develop in storage. Under warm to hot conditions this can occur very rapidly. ReTain can delay ripening and thus reduce these maladies, but it comes at the expense of retarded red color development. Low rates of ReTain (1/3 to 1/2 pouch/ acre should be used to minimize the delay in red color development. NAA is not useful here since it does have the tendency of advancing ripening and aggravate the problem. Little information is available for the use of Harvista on the delay ripening on Gala.

## **Small Fruit Update**

Sonia Schloemann

Spotted Wing Drosophila (SWD) - Trap captures for SWD around the region are still increasing although the hot weather slowed things down a little bit. The recent rain and cooler temps will probably allow for SWD to resume a more normal population pattern. Susceptible crops now are mainly summer raspberries and blueberries. See the last HF for more detailed recommendations.

Also, MSU has published some interesting data on the effect of weather on different SWD insecticides. Click [here](#) for the article.

Summary (Carlos Garcia-Salazar, Michigan State Univ.)

Timing insecticide applications: Based on your monitoring program for flies and fruit infestation:

1. Determine if an insecticide application is required. You may require targeting both SWD flies and larvae at the same time.
2. Check ENVIROWEATHER ([www.enviroweather.msu.edu](http://www.enviroweather.msu.edu)) for current and forecasted weather conditions (check the extended weather forecast for the next 24, 48, and 72 hours) before programming or reapplying an insecticide application.
3. Look at Graphic 1 to know which insecticide to spray.
4. Select and match the properties (resistance to degradation by temperature and rain, and, penetration into fruit) of the insecticide with current and forecasted weather conditions.
5. Organophosphate and carbamate insecticides such as Imidan and Lannate, are more toxic at temperatures ranging from 62 a 99 degrees Fahrenheit.
6. Pyrethroid insecticides toxicity is adversely affected by temperatures higher than 86 degrees Fahrenheit. Brigade is the exception; the higher the temperature, the more toxic the compound.
7. When selecting an insecticide consider its penetration to meet Maximum Residues Limits allowed.
8. Understand the labels (PHIs, REIs, season limits).

Main recommended insecticides are:

Broad spectrum: Lannate, Malathion, Imidan, Mustang Max, Danitol, Brigade, Hero (Brigade+Mustang Max).

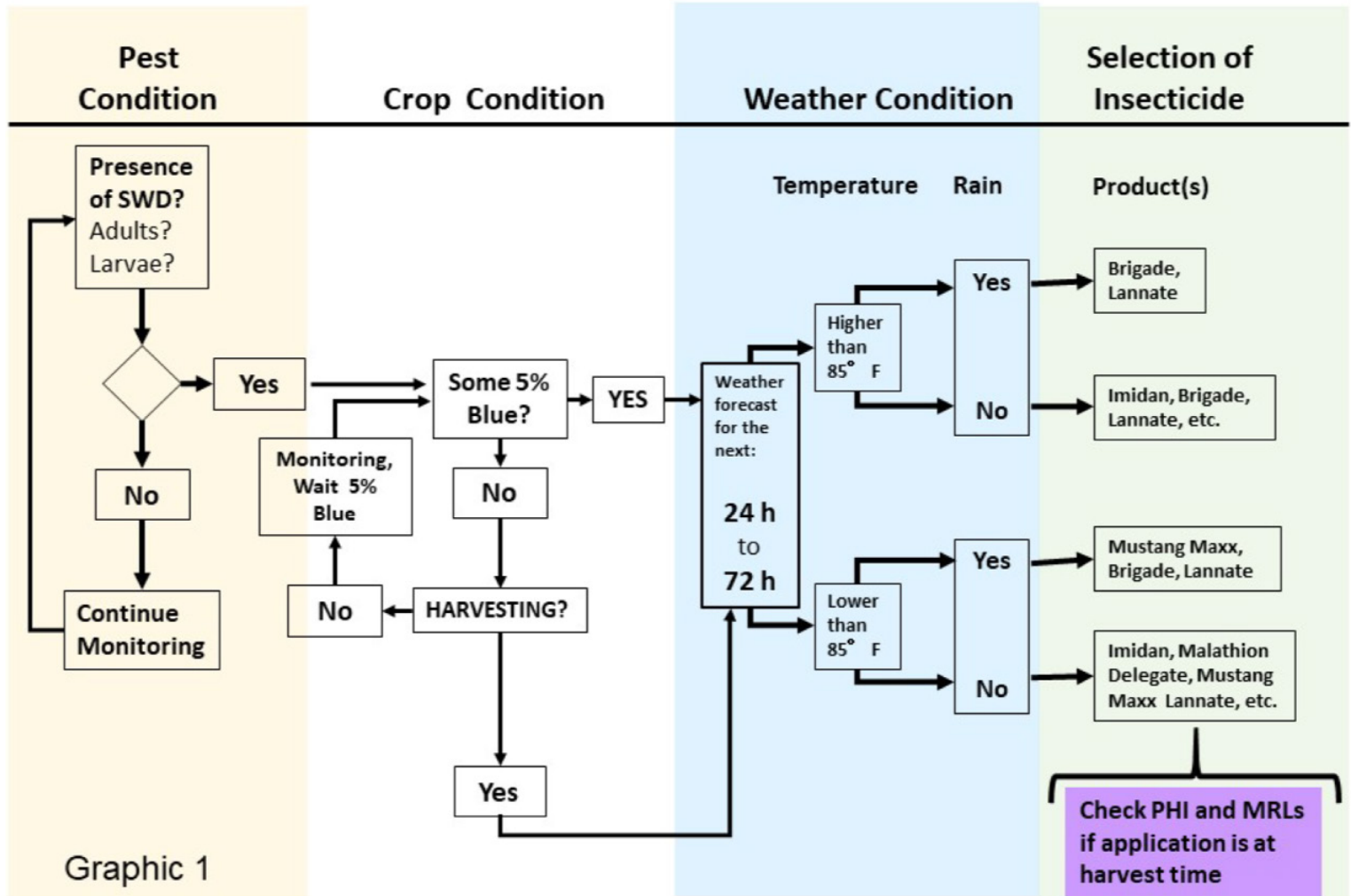
Reduced-risk: Delegate/Radiant

Organic: Entrust, Pyganic

NOTE: Recommended insecticides listed in Graphic 1, are the only insecticides for which their behavior on blueberries has been amply studied and information regarding fruit penetration, translocation and rainfast characteristics are

available. You may find other recommended insecticides at the Michigan Fruit Management Guide (Extension Bulletin E-154).

## When and what to spray to control the SWD under a *Systems Approach*



Management of the spotted wing *Drosophila* (*Drosophila suzukii*) under a systems approach to pest management (C. Garcia-Salazar, R. Isaacs, A. Gomez-Rodas, S. VanTimmeren, M. Longstroth, and G. Shelle. 2018. Great Lakes Fruit and Vegetable Expo, Grand Rapids, MI).

### Crop Conditions:

-Strawberries: June-bearing fields have completed renovation. New plantings are setting runners. Day-neutral fields will begin summer fruiting soon. Weed management is important at this time.

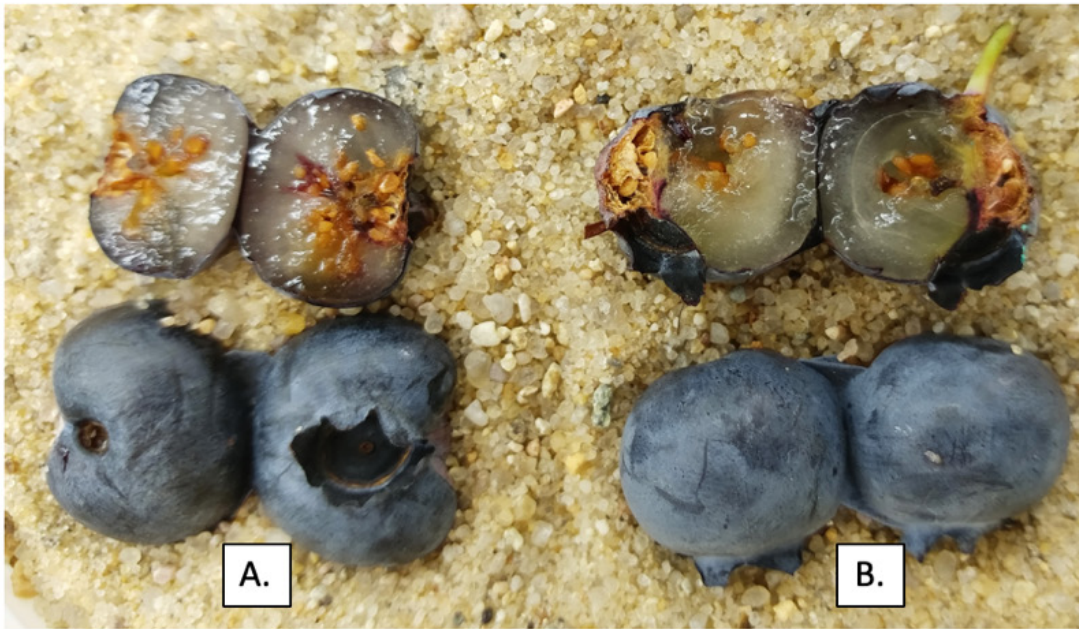
-Brambles: Floricane fruiting types are still in harvest and primocane types are forming fruit now. Irrigation is important to maintain plant health and fruit size as well as to cool down fields in extreme heat. SWD continue to be the main pest management challenge at this time.

-Blueberries: Harvest is underway. As with Brambles, SWD is the main challenge. We've had more reports than usual of Cranberry Fruit Worm this year. Too late to do much about it now (except maybe hand picking and destroying damaged fruit containing larvae), but be prepared to control them next year. Some areas experienced hail a few weeks ago. Hail damage in blueberries results in a corky lesion in the fruit (see photo below). This could be confused with insect damage, but the fruit stays firm rather than going soft after a while.





Sometimes a hole is visible with the sunken, dry spot, sometimes not.



A. Transverse cut – blow end on the right.

B. Vertical cut – through the stem and blow end.

There are no insect larvae or eggs visible under 20x magnification. The brown material is dry, corky, hard and very noticeable if you bite into a berry with just the smallest blemish. No fungal development on berries kept in a closed plastic container for 6 days. Berry does not collapse over several days either.

## ***Hawkeye's Notes From the Field***

Liz Garofalo

### **Important Note from Jon!**

Now is the time to do tissue testing on apple! Send your sample to the [UMass Soil and Plant Nutrient Testing Lab](#). You can find forms and fees at the site the above link will bring you to.

Meanwhile, what's going on in the field RIGHT NOW? Seek, and you shall find:



-Pear psylla! Hardshell nymphs (above left) and summer generation adults (above right) are on the move in Belcher-town, which means, a new round of egg laying is underway. If you have been struggling with Psylla, you may want to take a minute to go pokibg through the pears to see where you are at on your site. Once eggs are laid, growth regulators are a good choice. ALWAYS ROTATE ACTIVE INGREDIENTS. Remember, Psylla is the poster child of insecticide resistance.



-You will also find predators feeding on aphids trying to make a meal of your trees. Pictured to the left are at least four aphid midge larvae making a tidy little snack out of green aphids, the empty shell of dried up aphids as well as (if you look REALLY closely) eggs of the next round of larvae to feed on the aphids.

## **Guest Article**

No guest article this week.



# Thank you sponsors...



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