

# **Northern Michigan FruitNet 2016**

## **Northwest Michigan Horticultural Research Center**

### Weekly Update

**FruitNet Report – June 21, 2016**

#### **CALENDAR OF EVENTS**

<b>6/24</b>	<b>CIAB Grower Meeting</b> SW MI Research and Extension Center, 4:30 – 6:30 PM
<b>6/27</b>	<b>CIAB Grower Meeting</b> Oceana Intermediate School District, 8:30 – 10:00 PM
<b>6/28</b>	<b>CIAB Grower Meetings</b> Peninsula Township Hall, 9:00 – 11:00 AM Milton Township Hall, 1:00 – 3:00 PM NWMHRC, 7:00 – 9:00 PM
<b>5/3 – 6/28</b>	<b>Leelanau County IPM Updates, 12PM – 2PM</b> Jim and Jan Bardenhagen's Farm (details below)
<b>5/3 – 6/28</b>	<b>Grand Traverse County IPM Updates, 3PM – 5PM</b> Wunsch Farms (details below)
<b>5/4 – 6/29</b>	<b>Antrim County IPM Updates, 10AM – 12PM</b> Jack White Farms (details below)
<b>5/4 – 6/29</b>	<b>Benzie County IPM Updates, 2PM – 4PM</b> Blaine Christian Church (details below)
<b>7/1</b>	<b>Natural enemies, new insecticide options, perimeter spray programs-- Rufus Isaacs, MSU</b> Hawthorne Vineyards on Old Mission Peninsula, 3-5PM
<b>7/13</b>	<b>Income Taxes for Foreign Agricultural Workers (H-2A)</b> NWMHRC, 8AM – 4:30PM
<b>8/25</b>	<b>NWMHRC Open House</b>

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## What's New?

- **NW Report**
- **End of primary apple scab season in east Michigan**

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### **Northwest Michigan Fruit Regional Report – June 21, 2016**

*Ripening cherries should be protected from spotted wing drosophila if this pest has been detected in your area.*

Nikki Rothwell and Emily Pochubay

#### **GROWING DEGREE DAY ACCUMULATIONS AS OF June 20, 2016 AT THE NWMHRC**

<b>Year</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>26 Yr. Avg.</b>
<b>GDD42</b>	1108	1037	969	991	1454	976	1074.0
<b>GDD50</b>	633	577	553	579	871	542	606.4

### **2016 Growth Stages as of 6/20/16**

Bartlett Pear – 20 mm fruit

Potomac Pear – 24 mm fruit

Mac – 22 mm fruit

Gala – 24 mm fruit

Red Delicious – 29 mm fruit

HoneyCrisp – 24 mm fruit

Montmorency – 12 mm fruit

Balaton – 14 mm fruit

Hedlfingen – 16 mm fruit

Gold – 13 mm fruit

Napolean – 14 mm fruit

Riesling – first bloom

### **Weather Report**

Conditions were very warm over the weekend, and daytime temperatures reached into the mid-80s. Nighttime temperatures only fell into the low to mid-70s. The temperature hit 80.5 degrees F at the research station on Monday 20 June. Thus far, we have accumulated 1108GDD base 42 and 633GDD base 50. Future weather predictions suggest that temperatures will remain in the 70s for the week and increase into the 80s for the weekend. The next chance for rain is 23 or 26 June. Rainfall has been variable across the Enviro-weather stations in the north, which fell on 15 and 16 June. The NWMHRC only received 0.25". The remainder of the weather stations reported the following rainfall totals: 0.69" in Bear Lake, 2.55" in Benzonia, 0.83" in East Leland, 1.29" in Eastport, 0.42" in Elk Rapids, 0.73" in Kewadin, 0.53" in Northport, and 2.14" on Old Mission Peninsula.

### **Crop Report**

Cherries are really starting to color with the recent heat, and both sweet and tart cherries are showing some straw color into pink. Some of the early sweet cherry varieties are pink to red in color. We are seeing some drop in sweet cherries, particularly in var. Sams. Growers are questioning if SWD can lay eggs and develop in dropped fruit. We have a small research project underway to test this hypothesis. We have been observing cracks in developing sweet cherries, likely from the past few rain events. We are continuing to look into the non-bearing Ulster situation. Growers are hedging apples at this time. The predicted harvest dates for apples are normal to ahead of normal by 2-5 days. More information on prediction harvest dates is forthcoming.

### **Pest Report**

We are continuing to see shoots collapse from fire blight and some of these symptoms could be a result of either blossom blight during bloom or trauma blight from the high winds and stormy conditions on the evening of 10 June. We have observed and had reports of fire blight infected orchards with fresh ooze and if trees and/or leaves were damaged during recent windy conditions, fire blight bacteria could spread to wounded areas and cause trauma blight. Where it is feasible, some growers are pruning out fire blight infected tissue as new symptoms appear and applying a material to kill the bacteria that are growing in the fire blight ooze. Continuing management of the bacteria until tree growth slows and fire blight symptoms subside will help to prevent the possibility of trauma blight during stormy weather this summer. Copper materials are the best chemistries to dry up fire blight ooze.

The primary phase of apple scab is over. Spore discharge numbers were at zero following Monday's rain, and prior to this rain, spore numbers had been in the single digits for several wetting events (Table 1). Most commercial orchards are also at the end of primary apple scab at this time.

However, if an orchard became infected during primary, scab management should continue until fruit and leaves are less susceptible to infection later this summer. Since biofix (17 April), the NWMHRC had a total of five scab infection periods, but we have not found scab lesions in apple blocks at the NWMHRC. Fortunately, there have been very few reports of secondary scab infections in the region this season. If scab is found, we ask growers and consultants to contact the NWMHRC – we would like to collect samples for fungicide resistance screening.

**Table 1. Apple scab spore discharge**

Date Collected	Time Collected	Rod 1	Rod 2	Avg # Spores
4/21/16	1:30 PM	NA	10	10
4/25/16	9:30 AM	37	50	43.5
4/26/16	8:15 AM	9	4	6.5
5/1/16	1:30 PM	0	0	0
5/5/16	8:00 AM	44	77	60.5
5/12/16	3:00 PM	78	5	41.5
5/14/16	12:00 PM	136	112	124
5/16/16	2:00 PM	0	0	0
5/26/16	8:00 AM	46	22	34
5/28/16	10:30 AM	15	9	12
6/2/16	10:30 AM	117	58	87.5
6/5/16	12:00 PM	6	7	6.5
6/6/16	10:00 AM	36	12	24
6/7/16	11:30 AM	21	15	18
6/11/16	11:00 AM	1	2	1.5
6/13/16	11:30 AM	2	0	1
6/16/16	2:30 PM	2	1	1.5
6/20/16	11:30 AM	0	0	0

Spotted wing drosophila adults have been detected in Leelanau and Old Mission so far this season. The rule of thumb for determining when to apply an insecticide for SWD is when one fly is caught in an on-farm trap or when 5-10% of traps in a region are catching SWD. Defining a region can be difficult, but our best use of this word is either county or a locale within a county. For instance, if we captured SWD in Benzie County, we would consider that county as a region. Manistee County would also be its own region. In the case of Leelanau County, we would consider the following 'regions': Bingham, East Leland, Centerville Township/Cedar, Northport-Omeana, and just north of Suttons Bay. In Antrim County, the following areas could be considered regions: Elk Lake Road, Kewadin, Eastport, and Central Lake. In Grand Traverse County, we have regions south of Traverse City, Yuba, and Old Mission Peninsula. We may not have traps in all of those regions, but we have over 250 traps in orchard across northwest Michigan. We will inform growers of the

Catch Date	Location	Crop	No. of SWD
5/31	Centerville Twshp.	Tart Cherry	1
6/16	S. of Suttons Bay	Sweet Cherry	1
6/20	M-72 W corridor	Tart Cherry	2
6/17	Old Mission	Woodlot	2

SWD catch with a precise location to assist with management decisions. The following chart

shows the SWD trap catch through 20 June:

The current forecast is calling for a slight chance of rain on Thursday morning, and if rain comes, cherry leaf spot protection could be needed. Temperatures this week are

predicted to be in the upper 70s, a little cooler than last weekend's temperatures. However, temperatures could jump back up in the 80s over the weekend and growers should be careful if they are planning to apply copper or Syllit.

We observed sporulating American brown rot on cherry mummies in some early sweet cherry varieties at the NWMHRC last week, and this fungus was starting to spread to adjacent healthy fruit. Some varieties have clusters that have many cherries and ensuring that these fruits are protected from brown rot is critical particularly in wet, humid, and warm weather. Additionally, some orchards had high levels of first generation green fruit worm and obliquebanded leafroller larvae and cherries that were damaged by insects and or birds or those that cracked after rainfall are favorable hosts for brown rot to get a foothold. Damaged, poorly pollinated, and June drop fruit have begun falling from trees at this time; however, keeping brown rot in check will be difficult if this fungus sporulates on June drop fruit that does not drop and spreads to good fruit clusters before the damaged fruit drop.

Cherry fruit fly have not been detected at the station, and we have not received reports of fruit fly activity in the region at this time. We anticipate that fruit fly will become active this week possibly following Monday's rain. After emerging, cherry fruit flies undergo a feeding period of 7-10 days called the pre-oviposition period and control measures are typically implemented during this timeframe.

Obliquebanded leafroller adults are active, and we have received reports that populations of this pest are high in southwest Michigan. The NWMHRC biofix for this pest is was 17 June, but there were earlier obliquebanded leafroller catches in the northwest region during the week of 12 June. At the NWMHRC, we found an average of 17 moths with the highest catch at 30 moths per trap. In recent years, obliquebanded leafroller numbers have been relatively low; however, as we observed previously in 2010, there is the potential for the larvae of this pest to be shaken from trees into tanks at harvest timing. Furthermore, populations of obliquebanded leafroller larvae earlier this season seemed higher than we have seen in a few years, and because pollinators were still in the orchard after bloom, many growers had a delayed or missed post-bloom spray for larvae that could contribute to a higher pre-harvest population this season.

We have had reports that mite populations are building, but mite populations are low at the station. This season has been dry and some insecticides, in particular the pyrethroid class of insecticides, are toxic to mite predators and may cause a buildup of pestilent mites. While growers should review pesticide labels for preharvest intervals (PHIs) prior to application, we remind growers to pay particular attention to the miticides as some of these materials have long PHIs of 21 to 28 days.

Codling moth catches were the highest of the season at the research station this week with an average of 8 moths per trap. According to the Enviro-weather codling moth

model, we have accumulated ~412 GDD base 50 degrees F since the NWMHRC's biofix (25 May) and we are approaching peak egg hatch.

Greater peachtree borers became active at the NWMHRC over the weekend. Lesser peachtree borer activity is ongoing with higher catches this week than last but overall numbers are on the decline. American plum borers remain low, in the single digits.

### **Wine Grapes**

*Duke Elsner, MSU Extension*

The earlier-blooming hybrid varieties, such as Frontenac and LaCrescent are approaching full bloom at the research center. Noiret and St. Croix are showing some bloom. No bloom was found on any of the *vinifera* cultivars, but it will likely start before the end of this week.

We are now in the prime window for powdery mildew infections of berries. Blocks with a history of trouble with powdery mildew should be kept covered with protectant materials for the next few weeks. Rose chafer numbers have been low in a number of sites, but as is typical for this insect, there are hot spots where treatments may be needed.

### **Saskatoons**

*Duke Elsner, MSU Extension*

Berry samples from an untreated block showed a resurgence of apple curculio egg laying during the past week. Eggs and larvae of all sizes can be found inside fruits at this time. Saskatoon sawfly larvae have mostly completed their feeding and dropped out of fruits at advanced sites, but small larvae were still present in fruits at later locations. Rust has continued to be a minor problem this year, but there are still a couple of weeks before harvest begins and keeping fruit protected from this disease is advised. Rose chafers have been found in high numbers at a few sites. They can consume quite a bit of leaf material in a short time, so sprays may be required, especially in young plantings. At high numbers, rose chafers may even feed on the fruits.

There is a "First Friday" meeting scheduled for next week—July 1, 3-5 pm at Hawthorne Vineyards, 1000 Camino Maria Drive, Traverse City, on Old Mission Peninsula. Dr. Rufus Isaacs is scheduled to be our featured speaker, presenting information on perimeter spray programs, new insecticide options and natural enemies.

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## **To Manage or Not Manage SWD in Young Tart Blocks?**

N. Rothwell and E. Pochubay

Across Michigan, we have many young tart cherry blocks that have a substantial fruit load. In many cases, this situation is a result of cool weather in 2015 that contributed to a poor response of Pro-Gibb applications last season. In cool conditions, plant growth regulator activity decreases, and many Pro-Gibb applications were made in cooler temperatures in 2015. As a result, there is more fruit in orchards with young trees (3-5 years old) than is typical. With the concerns about spotted wing drosophila (SWD), growers will need to decide if they will manage these young blocks for SWD.

Observations from previous research suggested that keeping the overall SWD population low improves management outcomes. In the case of the efficacy trial at the Northwest Michigan Horticultural Research Center (NWMHRC), we found larvae in all of the treatments, even treatments with efficacious insecticides and tight intervals. For this experiment treatments were applied to single tree replicates, and the trees between the replicates were unsprayed. We hypothesize that SWD reproduced in the unsprayed trees between the treated trees thereby building the overall SWD population in the block. Consequently, larvae were detected in all of the treatments including those with the most efficacious SWD insecticides and spray intervals. This study and other anecdotal evidence suggest that it is necessary to prevent the build up of a high SWD population that can overwhelm even the best spray programs. Hence, growers need to decide whether or not to manage SWD in blocks of young trees with a higher than usual fruit load that will not be harvested. These blocks could serve as a breeding ground for SWD, and female flies will emigrate from these young orchards into adjacent commercial blocks intended for harvest.

Several considerations influence the decision to manage SWD in young blocks. First, what is the proximity of the young block to a block that will be harvested in 2016? If the young block is isolated (3+ miles from commercial block), growers could opt to not manage for SWD in that block. However, growers should consider applying insecticides to young blocks that are adjacent to commercial plantings. Second, what is the cost of the materials used in a block that will not be harvested? This scenario uses the most economical sprays. Some pyrethroids are inexpensive options, but pyrethroid residuals are typically shorter in the orchard than other insecticides and multiple pyrethroid applications may be needed. Repeated sprays of the same insecticide mode of action and/or those with the potential for cross-resistance exacerbate the likelihood of SWD insecticide resistance. Because SWD reproduce and develop quickly, the potential SWD insecticide resistance is high. Therefore, growers should adequately rotate materials to prevent resistance development. Lastly, SWD presence and fruit susceptibility dictate when to begin management programs. MSU Extension has over 300 SWD traps across Michigan, and we provide traps catch numbers weekly through local newsletters and MSU News for Ag. If growers will manage SWD in young blocks, they should begin spray programs when 5% of the traps in a region (i.e. county) are catching flies or if a single SWD is caught on that particular farm. Additionally, fruit does not become susceptible to SWD until it loses its green color; management should begin when fruit are

susceptible and SWD are detected either on farm or at a threshold of 5% of traps in the region.

If growers decide to manage SWD in young blocks, we have developed some guidelines to assist with this management strategy. First, growers should not spray insecticides until the fruit is straw colored; SWD females do not lay eggs in green fruit. Although we have been recommending every row applications for SWD control, in small trees, alternate row spraying will likely be adequate. This strategy will help keep costs down. Growers should make their first applications when SWD are present and fruit are no longer green. Imidan is likely the best insecticide option as it is both efficacious against SWD and has a longer residual time in the orchard compared with pyrethroids. When fruit are susceptible, two half sides of Imidan at a 10-D interval should be applied within one week of SWD detection; this strategy will help to prevent the SWD population from increasing in the young block and moving into the harvestable orchard. If populations do not appear to be increasing rapidly, these two half sides of Imidan may be adequate for the remainder of the season, if spray programs are impeccable in adjacent harvestable blocks. A third half side to full cover of a second material may be warranted if SWD populations in the region explode; we will be sure to alert growers if this sudden rise in population is the case. This additional application could be another Imidan or a pyrethroid, but there is a risk of cross-resistance with these two classes of insecticides. Moreover, the harvestable crop next to the young block should be harvested as soon as possible. Growers do not want to let these fruit hang in the orchard if they have an adjacent young block with little to no residues left on the fruit.

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## **End of primary apple scab season in east Michigan**

**Apple growers with clean blocks can now relax their control measures for apple scab for the rest of the 2016 season.**

Posted by Bob Tritten, Michigan State University Extension, MSUE News

With rain finally this morning, April 16, at my apple scab spore trapping location (after 11 days without a rain event), I am not catching any apple scab spores and am therefore calling an end to primary apple scab season in east Michigan for the 2016 growing season. This has been an unusual apple scab season, as I was catching apple scab spores much earlier than normal, followed by several periods without any precipitation to trigger spore release. So, even though we had early spore release, with the dry weather I am calling an end to primary apple at about the usual time of the season, that being mid-June.



Apple growers with clean blocks can now relax their control measures for apple scab for the rest of the season. For growers with just a touch of scab in certain blocks, you should continue to keep on top of the situation. Remember, if you do have scab showing up, it takes two or three fewer hours for secondary scab infections to get started than it does for primary scab. Do a good job of scouting all of your blocks for apple scab lesions before you stop spraying.

Visit the [Michigan State University Extension Fruit & Nuts News](#) website for fruit-related articles. The [Enviroweather](#) website is a great resource on weather, crop and pest information. If you are looking for MSU Extension publications and bulletins, visit our [MSU Extension Bookstore](#) website to find them online.

If you need to see me at your farm for a farm visit, don't hesitate to contact me via email at link [tritten@msu.edu](mailto:tritten@msu.edu) or calling my office at 810-244-8555 or call or text my cell at 810-516-3800.

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## CIAB Grower Meetings

The CIAB meets June 23, 2016 at 8:00 AM, at the Amway Grand Plaza, in Grand Rapids, MI to discuss the Optimum Supply Formula and to set restriction percentages, if any. The CIAB will hold grower meetings to discuss the outcomes with growers and the prospects for this harvest.

The meetings will be at the following locations and times. Please attend the one that is more convenient for you.

Friday, June 24	4:30 – 6:30 PM	Southwest Michigan Research and Extension Center 1791 Hillandale, Benton Harbor, MI
Monday, June 27	8:30 – 10:00 PM	Oceana Intermediate School District 844 Griswold Street Hart, MI
Tuesday, June 28	9:00 – 11:00 AM	Peninsula Township Hall 13235 Center Rd. Traverse City, MI
Tuesday, June 28	1:00 – 3:00 PM	Milton Township Hall Kewadin, MI
Tuesday, June 28	7:00 – 9:00 PM	NWMHRC

		6686 S. Center Highway Traverse City, MI
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## **Income Taxes for Foreign Agricultural Workers (H-2A) – Meeting**

### Meeting Dates and Times:

**Tuesday, July 12, 2016**

**Ottawa County Fillmore Complex Main Conference Room 12220 Fillmore Street West Olive, MI 49460**

**Wednesday, July 13, 2016**

**MSU Northwest Michigan Horticultural Research Center 6686 S. Center Highway Traverse City, MI 49684**

Michigan's agricultural industry has been seeing a decline in recent years of the traditional labor resources that have been used in the past. The use of the H-2A Guest Worker Program has seen a significant increase in use recently with continued significant growth in coming years. With this increase there is a need for legal and tax professionals to have an understanding on how to prepare taxes for H-2A guest workers, common pit-falls and challenges.

This Continuing Education Program will provide a four hour presentation with three hours of hands-on workshop to help tax professionals understand how tax law impacts foreign agricultural workers and their employers and give them a better understanding of the challenges faced by tax professionals, employers and the workers themselves as they strive to comply with federal and state tax laws.

The information included also applies to all taxpayers who use ITINs when filing tax returns and/or have spouses and/or dependents living outside the United States.

This program will use IRS Publications 519 and 51 and others as a guide throughout this training. Participants will gain an understanding of tax preparation for H-2A Guest Workers, the appropriate method to fill-out an ITIN documentation/application, how to appropriately calculate the time a guest worker has been "in country" over the past 3-years to determine the correct tax documentation needed to be filed in the present tax year. Participants will also receive an overview of the tax deductions, credits available and not available to H-2A Guest Workers.

This program will also discuss payroll and tax withholding issues and responsibilities of

an Employer and H-2A Laborer that all tax and legal professionals should be aware of when working with their clients.

Registration fee is \$125.00 per person which includes lunch, refreshments, handouts and materials. **Register online** by July 8, 2016 at <http://events.anr.msu.edu/H2ATaxPrepWorkshop/> . Online registration offers payment by credit card or check. Or to register by mail, mail completed registration form at right with check payment no later than July 5. Please indicate the location you would like to attend.

More information can be found in the attached PDF flyer.

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## **2016 IPM Update Schedule**

**Emily Pochubay and Nikki Rothwell**  
**Michigan State University Extension**

Tree Fruit IPM Updates beginning the first week of May through mid-July (as needed) will highlight management of the seasons current potential pest challenges dictated by weather and pest biology. Attendees are encouraged to bring examples of pests and damage found on the farm to these workshops for identification and discussion. Workshops will be held weekly in Leelanau and Grand Traverse counties and bi-weekly in Antrim and Benzie counties in May. Beginning in mid-June, we will hold weekly meetings in all four locations. Tree fruit growers are welcome to attend meetings at any of the locations and times that are most convenient (see below). These workshops are free and do not require registration. For more information, please contact Emily Pochubay ([pochubay@msu.edu](mailto:pochubay@msu.edu)), 231-946-1510.

### **Leelanau County**

**Location:** Jim and Jan Bardenhagen, 7881 Pertner Road, Suttons Bay

**Dates:** May 3, 10, 17, 24, 31; June 7, 14, 21, 28

**Time:** 12PM – 2PM

### **Grand Traverse County**

**Location:** Wunsch Farms, Phelps Road Packing Shed, Old Mission

**Dates:** May 3, 10, 17, 24, 31; June 7, 14, 21, 28

**Time:** 3PM – 5PM

### **Antrim County**

**Location:** Jack White Farms, 10877 US-31, Williamsburg (south of Elk Rapids on the southeast side of US-31)

**Dates:** May 4, 18; June 1, 15, 22, 29

**Time:** 10AM – 12PM

### **Benzie County**

**Location:** Blaine Christian Church, 7018 Putney Rd, Arcadia, MI 49613

**Dates:** May 4, 18; June 1, 15, 22, 29

**Time:** 2PM – 4PM

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### **WEB SITES OF INTEREST:**

Insect and disease predictive information is available at:

<http://enviroweather.msu.edu/homeMap.php>

This issue and past issues of the weekly FruitNet report are posted on our website:

<http://agbioresearch.msu.edu/nwmihort/faxnet.htm>

60-Hour Forecast:

<http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous46ktvc>

Information on cherries:

<http://www.cherries.msu.edu/>

Information on apples:

<http://apples.msu.edu/>

Information on grapes:

<http://grapes.msu.edu>

Fruit CAT Alert Reports:

<http://news.msue.msu.edu>

