

Northern Michigan FruitNet 2014

Northwest Michigan Horticultural Research Center

Weekly Update

April 15, 2014

CALENDAR OF EVENTS

- | | |
|-------------|---|
| 4/17 | Vineyard Weed Identification and Management Meeting
NWMHRC |
| 4/17 | Tractor Safety Class #2
NWMHRC |
| 4/21 | MDA Pesticide Applicator Testing
NWMHRC |
| 4/22 | Responding to an S.O.S. from the Commercial Bee Industry – Webinar |
| 4/24 | Tractor Safety Class #3
NWMHRC |
| 5/1 | Tractor Safety Class #4
NWMHRC |
| 5/3 | Tractor Safety Test
NWMHRC |
| 5/6 | IPM Update – Leelanau Co.
Bardenhagen Farm, 12:00-2:00 p.m. |
| 5/6 | IPM Update – Grand Traverse Co.
Wunsch Farms, 3:00- 5:00 p.m. |
| 5/7 | IPM Update – Antrim Co.
Jack White Farm, 10:00-Noon |
| 5/7 | IPM Update – Benzie Co.
Loy Putney Farm, 2:00-4:00 p.m. |
| 7/2 | IPM Updates End |

Northwest Michigan Fruit Regional Report

Emily Pochubay, Nikki Rothwell, and Duke Elsner, MSU Extension

Sap is flowing but trees and vines remain dormant in this cool weather.

Weather Report

Growing degree-days are continuing to slowly accumulate in the northwest region (Figure 1). At the Northwest Michigan Horticultural Research Center, we have observed daily minimum temperatures ranging from 21.7 – 42 degrees Fahrenheit and daily maximum temperatures of 38 – 55.2 degrees Fahrenheit since last week's report. At base 42 degrees Fahrenheit, we have accumulated 39 GDD and 7 GDD base 50 degrees Fahrenheit. Current growing degree-day accumulation at the NWMHRC is higher compared to this time last year (17 GDD base 42 degrees Fahrenheit and 1 GDD base 50 degrees Fahrenheit), which seems unlikely given the duration of the winter conditions. However, both 2013 and 2014 GDD accumulations are lower than the NWMHRC 24-yr average of 113.3 GDD base 42 degrees Fahrenheit and 43.8 base 50 degrees Fahrenheit on this date.

Prior to yesterday's cold temperatures and snowfall, slightly warmer temperatures had hastened melting of snow cover and the ground was visible in much of the region. Thawing of Grand Traverse Bay is evident, and we have observed open water along a stretch of M-22 between Suttons Bay and Greilickville. Just as our hopes of spring's long anticipated arrival raised, cold air moving in from the northwest brought lake effect snow yesterday. This cool air will continue to bring temperatures that are abnormally low for this time of year into late-April in the northwest region and across the state. Additional snowfall is predicted for tonight and potentially into tomorrow.

Figure 1.

Weather Station Location	GDD42	GDD50
Bear Lake (Manistee)	54.1	12.3
Benzonia (Benzie)	49.4	9.7
East Leland (Leelanau)	37.7	7.8
Eastport (Antrim)	44.3	8.4
Elk Rapids (Antrim)	53.6	14.2
Kewadin (Antrim)	45.8	9.4

Northport (Leelanau)	26.9	4.9
Old Mission (Grand Traverse)	42	9.5
NWMHRC (Leelanau)	39	7

Crop Report

Although temperatures were slightly warmer over the last week, fruit trees and vines continue to remain dormant. We have received additional reports from growers regarding damage on peach due to cold temperatures. It is still too soon to determine the extent of damage on peaches at this time. The status of damage in tart and sweet cherry remains the same – we have had some reports of bud damage in young sweet cherry orchards, and no cold damage to apples has been reported. Recent cold temperatures may have an impact on damage but likely very little as most trees are still dormant.

Rodent damage continues to be of primary concern to growers. Snow cover melted in the last week and has revealed severe rodent damage that is widespread in tree fruit orchards across the region. Soils are saturated in most orchards, and there have been reports of flooding in the five NW counties. Growers are still pruning, but most brush remains in the orchard due to wet soil.

TREE FRUIT IPM UPDATE SERIES – 2014

Emily Pochubay and Nikki Rothwell
Michigan State University Extension

After a one-year break, Michigan State University is back to offering on-farm IPM workshops in Leelanau, Grand Traverse, Antrim, and Benzie counties in northwest Michigan for the 2014 season. Workshops begin the first week of May in hopes of providing commercial tree fruit growers with a review of good practices for developing sustainable pest management programs as well as key information on early season disease protection. Workshops through the first week of July will highlight management of the season’s 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. These IPM workshops are free and do not require registration. Certified crop advisor continued education credits and pesticide recertification credits will be available. Tree fruit growers are welcome to attend meetings at any location and time that is most convenient. We are looking forward to

interacting with you all at these meetings. For more information, please contact Emily Pochubay at pochubay@msu.edu or (231) 946-1510.

IPM Update Locations

Leelanau County

Location: Jim and Jan Bardenhagen, 7881 Pertner Rd, Suttons Bay

Dates: May: 6, 13, 20, 27; June: 3, 10, 17, 24; July: 1

Time: 12PM – 2PM

Grand Traverse County

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

Dates: May: 6, 13, 20, 27; June: 3, 10, 17, 24; July: 1

Time: 3PM – 5PM

Antrim County

Location: Jack White Farms, 10877 US-31, Williamsburg

(south of Elk Rapids on the southeast side of US-31)

May: 7, 21; June: 4, 18; July: 2

Time: 10AM – 12PM

Benzie County

Location: Loy Putney Farms, 4286 Raymond Rd, Frankfort

May: 7, 21; June: 4, 18; July: 2

Time: 2PM – 4PM

2014 FRUIT INSECTICIDE REGISTRATION UPDATE

Summary of insecticide and miticide label additions, clarifications and corrections to the 2014 MSU Fruit Management Guide (E-154).

Posted on **April 1, 2014, MSUE News**, by [John Wise](#), Rufus Isaacs and Larry Gut, Michigan State University Extension, Department of Entomology

Below is a review of insecticides and miticide label changes and restrictions to the [Michigan State University Extension](#) Bulletin E-154, "[2014 Michigan Fruit Management Guide](#)." Agricultural labels and regulations can change quickly, so use this information within the context of each compound's legal label.

Insecticide 2014 label additions, clarifications and corrections

Compound	Label changes and restrictions	Crop	Target pests
Endosulfan	EPA Phaseout complete 2013	Pear	
Imidan 70W	new label rate	Tart cherry – reduced to 2.125 pounds per acre	
Malathion 8F (Gowan)	24C label approved	Blueberry – higher rate of 2.5 pints per acre (2 apps)	
Calypso 4F	Voluntary cancellation	Pome and stone fruits	
Closer 2SC	New label	Pome and stone fruits, grapes	Aphids, plant bugs
Exirel .83SE	New label	Pome and stone fruits, blueberries, grapes	Lepidoptera, fruit flies, fruitworms, spotted wing <i>Drosophila</i>
Apta 15SC	New label	Stone fruits	Fruit flies, leafrollers, plum curculio

New insecticide label information for compounds listed in 2014 E-154

MSU Fruit Management Guide E-154 product numbers are in parenthesis ().

Apta (tolfenpyrad) is a new insecticide belonging to a class called Mitochondrial Complex I Electron Transport Inhibitors (METI), which work by inhibiting cellular respiration in the mitochondria. Apta is registered in stone fruits for control of a range of pests including leafrollers, leafhoppers, plum curculio, *Rhagoletis* and *Drosophila* fruit flies (suppression of spotted wing *Drosophila*). The maximum yearly amount of Apta that can be applied is 54 fluid ounces in stone fruits with a 14-day pre-harvest interval (PHI).

Closer (8) (sufloxaflo) belongs to a new class of insecticides called the sulfoximines, which exhibit interactions with the insect nicotinic acetylcholine receptors that are distinct from those observed with neonicotinoids. Closer is registered in pome fruits, stone fruits and grapes for control of several sap-feeding insects, including aphids, leafhoppers and mealybugs. Closer displays translaminar movement when applied to foliage and is xylem mobile. It has shown to

be relatively safe on many beneficials. The maximum yearly amount of Closer SC that can be applied is 17 ounces in pome fruits, stone fruits or grapes per season.

Exirel (2) (cyazypyr) belongs to the Diamide class of insecticides, which work on the insect by activating ryanodine receptors, thus depleting internal calcium and preventing muscle contraction. Exirel is now registered in pome and stone fruits, grapes and blueberries. Labeled uses are expected for a range of pests including leafrollers, codling moth, oriental fruit moth, grape berry moth, fruitworms, *Rhagoletis* and *Drosophila* fruit flies, aphids and leaf-feeding beetles.

Malathion 8F (13) (dymethyl dithiophosphate) is an organophosphate insecticide labeled for use in most fruit crops and has relatively short residual activity. It is active on a wide range of insect pests and has lower human toxicity than many other organophosphates. New commercial product will include a reduced legal rate of 1.25 pints per acre for use in blueberries with a maximum of three applications per year and a five-day interval between sprays. Older product that lists the rate of 1.5-2.5 pints per acre can still be legally used.

A 24C application has been approved through 2017 for blueberries to increase the application rate to 2.5 pints per acre and two applications per season (total of 5 pounds AI) with a seven-day interval between sprays. On caneberries, this insecticide now has a maximum rate of 2 pints per acre and a minimum of seven days between treatments. A 24C application has been approved for caneberries through 2017 with an application rate of 2 pints per acre and four applications per season, and a minimum of seven days between treatments.

Calypso (62) (thiacloprid) is registered for use in pome and stone fruits with a maximum yearly allowable amount of 16 ounces on pome fruits and 12 ounces on stone fruits. [Bayer CropScience](#) has notified [EPA](#) of a voluntary cancellation of the Calypso insecticide registration, including the technical registration of thiacloprid. This decision has to do with EPA's registration review process and the new water model, adopted by EPA in early 2013. Bayer CropScience will notify the states and request that Calypso be allowed for use through the existing stocks provision. Bayer CropScience will plan to maintain the state registrations through 2016.

Imidan 70W (9) (phosmet) is an organophosphate insecticide labeled for use in many fruit crops, including tart cherries. It is phytotoxic on sweet cherries. It provides good broad-spectrum control of many fruit pests in Michigan. To prevent premature product breakdown from alkaline hydrolysis, spray-tank water should be buffered to a pH of 5.0-5.5. The maximum yearly allowable amount of Imidan 70 WP per acre is 22.125 pounds on apples; 16 pounds on pears; 17 pounds on peaches; 13 pounds on plums and prunes; 6.5 pounds on grapes; 7.125 pounds (5 apps) on blueberries; 15.6 pounds on cranberries; and 7.5 pounds on tart cherries. A 24C application is pending, but expected in May 2013, which proposes for tart cherry to increase the application rate to 2.5 pounds per acre.

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

WHEN TO REMOVE STRAW MULCH IN STRAWBERRIES

The time for straw removal from strawberries is approaching in Southern Michigan.

Posted on **April 8, 2014, MSUE News**, by [Bob Tritten](#), Michigan State University Extension

A frequent question asked by strawberry growers in spring relates to the timing of straw mulch removal in matted row strawberry culture. Straw is often used to prevent winter injury in strawberry beds. With our unusually late spring this year, it is particularly hard to determine the exact timing of this important cultural practice.

The best method [Michigan State University Extension](#) recommends in determining the proper timing for mulch removal is to look for the beginning of leaf growth under the mulch. Strawberry growers will need to inspect their fields several times a week at this time in the annual spring green up period. Randomly pick a half dozen spots in your earliest variety and earliest site and gently pull the straw off of a section of row a few feet long. If you see newly emerging leaves – they may be a yellow color – that are beginning to emerge from the crown of the plant, generally that is telling you that the strawberries are ready to begin growth for the season and that straw needs to be removed. You can then recover these short sections of row.

Again, concentrating on the earlier fruiting strawberries is usually a technique that will help to pinpoint timing of straw removal. Move into the patch to do this sampling and avoid the temptation to look only at the ends of rows – the berries are always earlier than the rest of the planting.

The condition of your soil also is a factor in determining when to remove the straw mulch. If you are on heavy soil and your soil has not dried yet, either wait for a cold morning when there is a crust on the soil surface to reduce soil compaction or simply wait a few days for your soil to dry out more.

Lastly, before you remove straw, check the weather forecast. If cold weather is predicted, you should consider delaying a few days.

The typical time for removing straw in Michigan is mid- to late March for the lower half of the Lower Peninsula, mid- to late March for the northern half of the Lower Peninsula, and most likely early April in the Upper Peninsula. Strawberries growing close to Lake Michigan may also be uncovered a bit later than inland sites. However, the proper timing of straw removal varies greatly from year-to-year.

The earlier you remove the straw mulch, the earlier fruit will mature. Early growth may also necessitate more frost protection. For early springs like 2012, growers may consider delaying straw removal in order to delay harvest. Then again, in late springs like we are experiencing this 2014 season, there is also a danger of leaving straw on too long. A study was conducted a number of years ago in New England where straw was removed periodically over a six week period. The highest yields came from plants that were uncovered earliest in spring as was practical, following either snow melt or ability to move straw removal equipment through the field without creating ruts. The later the straw was removed, the more yield was reduced.

I also suggest that a light layer of straw be left on the plants. This layer would be about an inch thick. Leaves and flowers can grow up through this thin layer of straw. Many times this will help reduce disease problems later in the season and will also help prevent some weed seeds from germinating if bare soil is exposed to sunlight. Lastly, mulch removal just prior to a rain event helps the plants respond well and keeps the mulch in place.

This article was published by [Michigan State University Extension](http://www.msue.msu.edu). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

VINEYARD WEED IDENTIFICATION AND MANAGEMENT MEETING

Duke Elsner, Small Fruit Extension Educator, NW Michigan

Thursday, April 17, 1-4 p.m. in Traverse City and Benton Harbor

Weed control is one of the most critical issues in vineyard establishment, and weeds remain as an issue throughout the lifetime of the vineyard. In addition to competition for water and nutrients, weeds harbor insect pests, serve as hosts for viruses, and interfere with vineyard operations related to culture and harvest. Certain weeds, such as horsenettle, produce berries that can taint harvested grapes.

Although numerous herbicides are available for use in vineyards, they aren't equally effective on all weeds. Application timing is important to get optimum results. This workshop will help you identify problem weeds and understand their lifecycles— the key to choosing effective management strategies— whether they are cultural or chemical.

Plan now to attend the Vineyard Weed Identification and Management Meeting on Thursday afternoon, April 17, to get answers on how to manage troublesome weeds in your vineyard. Via a teleconference connection, Dr. Wayne Mitchem, a weed scientist at North Carolina State University will discuss herbicide selections and other management practices. Eric Hanson from the Department of Horticulture at Michigan State University will handle the weed identification topic. Dr. Hanson will speak in person at the Benton Harbor site and appear in Traverse City through a teleconference connection. Participants will be able to have interactive discussions with the speakers.

Growers have a choice of two locations for the workshop, either the Southwest Michigan Research & Extension Center in Benton Harbor, or the Northwest Michigan Horticultural Research Center near Traverse City. Contact Duke Elsner elsner@anr.msu.edu 1-231-922-4822 for additional information. See <http://events.anr.msu.edu/2014vineyardweedmanagement/> for registration information and the meeting agenda. The registration fee for the workshop is

\$25 per person and includes handouts and refreshments. Three RUP credits have been requested for the workshop. Attendance is limited.

MDA PESTICIDE APPLICATOR TESTING AVAILABLE

For those that still need to get their pesticide applicator license renewed or need to apply for a pesticide applicator license, MDA has set up a test date on **Monday, April 21**, from **1:00-5:00 p.m.** at the NW Michigan Horticultural Research Center. For a Private Applicator license, the fee is \$50 and for Commercial \$75, payable to State of Michigan. To register or for additional information, go to MDA's website www.michigan.gov/pestexam.

RESPONDING TO AN S.O.S. FROM THE COMMERCIAL BEEKEEPING INDUSTRY

Date: April 22, 2014

Time: 1 p.m.

Location: Webinar

Contact: Rosa Soliz, soliz@msu.edu

Webinar URL: <http://connect.msu.edu/newtech>

Mala Spivak (University of Minnesota) - Given the chronic health problems facing honey bees and the increasing demand for pollination services from almond, blueberry, cranberry, apple, vine crops and many other growers, commercial beekeepers and breeders have requested assistance in maintaining healthy colonies. To this end, we began a novel "Bee Tech Transfer Team" program through the Bee Informed Partnership, a 5-year grant funded by USDA-NIFA. These teams consist of independent beekeepers that provide on-the-ground services to commercial beekeepers to assess and record colony health information; survey beekeepers about management; test for bee diseases and parasites and assist in breeding bees that are more resistant to diseases and parasites.

There is demand for this program nationwide and we are exploring ways to ensure that the Tech Team services are economically sustainable after the funding ends in 2016. As bees are directly or indirectly responsible for 35% of our diet through their pollination services, it is critical to increase effort to keep bees healthy and to provide hands-on assistance to the beleaguered beekeeping industry throughout the U.S. Marla Spivak is a MacArthur Fellow and McKnight Distinguished Professor in Entomology at the University of Minnesota. She has bred a line of honey bees, the Minnesota Hygienic line, to defend themselves against diseases and parasitic mites. Current studies include the benefits of propolis to honey bees, and the effects of agricultural landscapes and pesticides on honey bee and native bee health.

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WEBSITES 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 is available at the new cherry website:

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

Fruit CAT Alert Reports has moved to MSU News

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