# Northern Michigan FruitNet 2017
# Northwest Michigan Horticultural Research Center

## Weekly Update

**FruitNet Report – February 24, 2017**

**CALENDAR OF EVENTS**

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| **3/21** | **Viticulture Educator Candidate Seminars** NWMHRC |
| **3/13** | **IFTA Scholarship Application Submission Deadline (see details below)** |
| **3/22** | **Benzie Manistee Hort Society Bus Tour –** RSVP required |
| **3/24** | **NW Michigan Think Tank - "Exploring Climate Variability and its Impacts on Tree Fruit and Winegrape Production"** NWMHRC, RSVP required |
| **4/18** | **IPM Kickoff** NWMHRC |

## What's New?

- **Scholarship Opportunity for 2018 IFTA Annual Meeting in New Zealand**

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**Scholarship Opportunity for 2018 IFTA Annual Meeting in New Zealand**

The Northwest Michigan Horticultural Research Foundation (NWMHRF) Board is offering two $3,000 scholarships for two young growers to attend the upcoming 61st annual International Fruit Tree Association (IFTA) conference to be held in New Zealand next winter.

The IFTA annual conference will provide scholarship recipients with valuable research-based tree fruit production knowledge, the opportunity to visit new and innovative orchards, and a unique setting for networking with other fruit tree growers from around the world. The dates for the Intensive Workshop and Conference are February 16-27, 2018.

**Space will be very limited for the 2018 IFTA trip to New Zealand; hence, scholarship applicants must be ready to register as soon as registration opens on March 20th, 2017 at 12:00 PM.** To apply for this scholarship, interested growers should write a letter of request stating why they would like to attend this meeting. There has been a great deal of interest from area growers to attend this meeting, and as a result, we anticipate that this application process will be competitive. Letters should be addressed and emailed to Adele Wunsch (wunschad@gmail.com), President of the NWMHRF Board and cc'ed to Jenn Zelinski at the NWMHRC (goodr100@msu.edu). Priority will be given to *first-time* applicants of the NWMHRF IFTA scholarship as well as young and/or new tree fruit growers. Growers from the five counties: Antrim, Benzie, Grand Traverse, Leelanau, and Manistee, will also be given priority.

Request letters should be sent to the email addresses above by *March 13th, 2017 by 5 PM* and scholarship recipients will be notified by *March 16th, 2017.* The Foundation will contact recipients by March 16th to ensure that they will be ready to register on March 20th at 12:00 PM for the IFTA meeting. Recipients will need to register for the meeting online at: http://www.ifruittree.org.

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## Save the Date! - Benzie Manistee Hort Society Bus Tour – March 22, 2017

The NWMHRC is helping host two really great programs in March.

On **March 22**, the Benzie Manistee Horticultural Society is hosting a bus tour to the Grand Rapids area to discuss opportunities for fresh market fruit in Michigan. We will be visiting high density sweet cherry orchards, and Drs. Greg Lang and Todd Einhorn will be on hand to talk about pruning and training strategies for managing these orchard systems. Todd is our new horticulture faculty member who has worked extensively on sweet cherries in Oregon. We are so pleased he is part of the MSU team.

We will also talk to some growers in the Grand Rapids area that have been growing high density sweet cherries for the fresh market. During lunch, we will also explore the challenges of growing cherries on these systems as well as an economic forecast. Lastly, we will discuss the labor issues associated with managing fresh market cherries.

This tour will also take us to a stop to look at multiple-leader apples. This modern way of growing apples has been on the radar of many growers, and we will visit with Bill Nyblad and Phil Schwallier about the challenges and opportunities for growing these unique orchard systems.

TENTATIVE AGENDA

**Exploring Opportunities for Growing Fresh Market Fruit in Michigan**

Benzie Manistee Horticultural Society
Michigan State University Extension
Bus Tour and Educational Workshop to Grand Rapids Area
March 22, 2017

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| 7:00am | Load bus at Blaine Christian Church<br>*7018 Putney Road, Arcadia, MI 49613* |
| 7:30am | Bus pick up at Ellen's Corners gas station<br>*6052 W M-115, Mesick, MI 49668* |
| 10:45-11:00 | High Density Sweet Cherries: Short and Longer-Term Goals for Planting and Marketing Fresh Market Sweets<br>*RiveRidge Orchards, XXXXX, Grant MI*<br>*Don Armock and Justin Finkler, RiveRidge Produce Marketing* |
| 11:00-12:00 | Strategies for Pruning, Training, Irrigating, and Fertigating High Density Sweet Cherries<br>*Riveridge Orchards, Grant MI*<br>*Dr. Greg Lang, Dept. of Horticulture, MSU*<br>*Dr. Todd Einhorn, Dept. of Horticulture, MSU* |
| 12:00-12:15 | Travel to Cronk's Oakridge Restaurant<br>*9103 Mason Drive (M-37), Newaygo, MI 49337* |
| 12:15-1:00 | Lunch<br>*Cronk's Oakridge Restaurant* |
| 1:00-1:30 | Economic Outlook to Move to Fresh Market Apples and Sweet Cherries on Old Mission Peninsula<br>*Isaiah Wunsch, Wunsch Farms, Old Mission Peninsula* |
| 1:30-2:00 | Helping to Address the Labor Issue for Fresh Market Fruit<br>*Mark Doherty, Crop Production Services, NW Michigan* |

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| 2:00-2:30 | Economic Successes and Challenges to Produce and Market Fresh Apples and Sweet Cherries<br>*Justin Finkler, RiveRidge Produce Marketing* |
| 2:30-2:45 | Travel to Nyblad Orchards |
| 2:45-3:30 | Experiences with Multi-leader Apples<br>*Bill Nyblad, Nyblad Orchards*<br>*Phil Schwallier, Michigan State University Extension* |
| ~3:30 | Travel back north |

The Hort Society will hire a bus to travel to the multiple stops, and we encourage growers to sign up early to ensure a seat on the bus. **Please call the NWMHRC to reserve a seat on the bus: 231-946-1510. If there is no answer at the station, please leave a message with Bill Klein as Jenn will be out of the office during the next few weeks.**

**The cost for the day, which includes lunch, is $40**. Checks can be made payable to the Benzie Manistee Horticultural Society. Growers can send their checks to the NWMHRC, 6686 S. Center Highway, Traverse City, MI 49684 or bring money to the bus tour.

This trip is a great opportunity to see excellent examples of high density apples and cherries. We will also have great speakers and researchers on board to discuss the opportunities to grow fruit on these modern systems. We hope you will join us on March 22nd!

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## Save the Date: March 24, 2017
## "Exploring Climate Variability and its Impacts on Tree Fruit and Winegrape Production"
## Hosted by the NW Michigan Think Tank

The NW Michigan Think Tank is pleased to present, "Exploring Climate Variability and its Impacts on Tree Fruit and Winegrape Production," at the Northwest Michigan Horticulture Research Center.

In recent years, northwest MI growers have endured weather-related challenges, and this program is designed to explore the implications of variable climate on fruit grown in this region. The program will feature Dr. Julie Winkler's climate related research that focuses on the future of growing tart cherries in five countries around the world. This project has yielded some insightful information on growing tart cherries here in Michigan with current predictions related to climate. Presenters will also speak on pollination research in cherry orchards, and the importance of good pollinating

weather to achieve quality yields. Additionally, this program will include recent work on the impacts of changing weather and climate on diseases in vineyards and cherry orchards.

This program will include information for both wine grape and cherry growers. This information is unique and much of it has not yet been shared with Michigan growers. **Cost is $30/person and will include lunch**. **Please call the NWMHRC at 231-946-1510 to RSVP for the meeting . If there is no answer at the station, please leave a message with Bill Klein as Jenn will be out of the office during the next few weeks.**

**TENTATIVE AGENDA**

**Northwest Michigan Think Tank 2017: Exploring Climatic Variability and its Impacts on Tree Fruit and Winegrape Production**

Northwest Michigan Horticultural Research Center

March 24, 2017

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|---|---|
| 9:00-9:30 | Importance of pollinators in orchard systems<br>*Emily May, Xerces Society* |
| 9:30-10:00 | Pollinating Tart Cherries in Michigan<br>*Dr. Julianna Wilson, Dept. of Entomology, MSU* |
| 10:00-10:30 | Hail canons: Should we use this tool more with the recent hail storms in NW Michigan?<br>*Chris Kropf, Crop Production Services, Grand Rapids area* |
| 10:30-10:45 | BREAK |
| 10:45-11:05 | Practical implications of fungicide use in orchards during bloom<br>*Jackie Albert, Dept. of Entomology, MSU* |
| 11:05-11:20 | Researching climatic change impacts on tart cherry production across five countries: Review of the Climate Change and International Market Systems (CLIMARK) project<br>*Dr. Julie Winkler, Dept. of Geography, Environment, and Spatial Sciences, MSU* |
| 11:20-12:00 | The impact of climate change on the characteristics of the frost-free season over the contiguous United States<br>*Dr. Julie Winkler, Dept. of Geography, Environment, and Spatial Sciences, MSU* |
| 12:00-12:45 | LUNCH |

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| 12:45-1:30 | Integration of mid-century tart cherry yield projections with current trends in weather variables impacting tart cherry yields<br>*Dr. Jeff Andresen, Dept. of Geography, Environment, and Spatial Sciences, MSU* |
| 1:30-2:15 | Climatic impacts on growing winegrapes in northwest Michigan<br>*Dr. Paolo Sabbatini, Dept. of Horticulture, MSU* |
| 2:15-2:45 | Influence of changes in climate on cherry diseases<br>*Dr. George Sundin, Dept. of Plant, Soil, and Microbial Sciences, MSU* |
| 2:45-3:00 | BREAK |
| 3:00-3:30 | Past and projected future climatic trends and potential impacts on cherry leaf spot in Michigan<br>*Dr. Jeff Andresen, Dept. of Geography, Environment, and Spatial Sciences, MSU* |
| 3:30-4:00 | Environmental drivers of grape diseases and what to expect under climate change<br>*Dr. Annemiek Schilder, Dept. of Plant, Soil, and Microbial Sciences, MSU* |
| 4:00-4:30 | Does the public care about how climate change might affect agriculture?<br>*Dr. Julie Winkler, Dept. of Geography, Environment, and Spatial Sciences, MSU* |
| 4:30 | Adjourn |

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## 2017 Tree Fruit IPM Kick-off

**April 18, 2017, 5:00 – 8:00 PM**
**Northwest Michigan Horticultural Research Center**

Please join Michigan State University Extension at the Northwest Michigan Horticultural Research Center on Tuesday, April 18 from 5:00 – 8:00 PM for the annual Tree Fruit IPM Kickoff! This year, we are pleased to host Ontario Ministry of Agriculture's Application Technology Specialist, Jason Deveau, using ZOOM teleconferencing. Deveau will discuss spray strategy techniques including application rates, calibration, coverage, and canopy management – the foundations of optimizing spray economy and effectiveness. Following last year's challenging fire blight scenario, MSU's Dr. George Sundin will join

us to present considerations for fire blight management this season. Dr. Sundin will also discuss the implications of new data on SDHI efficacy for cherry leaf spot management. Eric McCumber will provide a summary of the key Worker Protection Standard changes for 2017 and preparations for future changes. We will cover the annual pesticide label changes and updates and have a brief discussion on the future of borer pest management. This event is free of charge, and pesticide recertification credits and certified crop advisor credits will be available. We are looking forward to kicking off the 2017 season with you!

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| **4:45** | **Welcome and Refreshments** |
| **5:00 – 5:15** | **Pesticide Label Changes and Updates**<br>*Emily Pochubay, MSU Extension* |
| **5:15 – 6:00** | **Fire Blight and Leaf Spot Considerations for 2017**<br>*Dr. George Sundin, Dept. of Plant, Soil, and Microbial Sciences, MSU* |
| **6:00 – 6:45** | **Crop-Adapted Spraying**<br>*Jason Deveau, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) via ZOOM Teleconference* |
| **6:45 – 7:00** | **Break** |
| **7:00 – 7:45** | **Worker Protection Standard Update**<br>*Eric McCumber, MDARD* |
| **7:45 – 8:00** | **Borer Management Challenges in Stone Fruit**<br>*Dr. Nikki Rothwell, MSU Extension and AgBioResearch* |
| **8:00** | *Fill out pesticide recertification and certified crop advisor sheets.* |

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## 4-H Tractor Safety Registration Now Open!

Teens can improve their chances of employment by completing a tractor safety training. MSU Extension will host a **4-H Tractor Safety Program** for 14 and 15 year old youth on **Wednesdays, April 5, 12, 19, 26 from 6-8:30 pm** at the NW Michigan Horticultural Research Station. The written and driving **test** will be held on **Saturday, April 29 from 8:30am – 2:30pm**. Participants must attend all five sessions to become certified. The cost is **$80 per student** and some scholarships are available if finances are an issue. Youth must be 14 years of age by June 1, 2017. Space is limited. The registration deadline is March 24. Registration is online only in a two-step process. First, register and pay at events.anr.msu.edu/TractorSafety, and second, become a 4-H member and create a profile online at www.4honline.com. For more

information, contact **Rosali Collier** Leelanau County 4-H Program Coordinator at collierr@anr.msu.edu or 231-256-9888.

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## Worried about February warmup to fruit crops?

**Warmer weather has perennials off to an early start. Does that increase the risk of cold damage or spring freezes?**

Posted by **Mark Longstroth**, Michigan State University Extension, MSUE News

Apple blossom killed by cold temperature near 28 degrees Fahrenheit during bloom. Photo: Mark Longstroth, MSU Extension.

I receive many calls about what warm weather will do to fruit in the wintertime. Often, I will say there is no need to worry, they have not completed their chilling requirement. When perennial plants go dormant in winter, they track the hours just above freezing (between 35 and 45 degrees Fahrenheit) to avoid winter cold. This is the chilling requirement. Temperatures below freezing do not matter. During winter dormancy, the trees can acclimate to very cold temperatures. Once the chilling requirement is met, then the plants can grow with warmer weather.

The fruits we grow in Michigan require about 700 to 1,300 hours chill hours to satisfy their dormancy requirement before they will begin growth in spring. Normally, we get over 1,400 hours in Michigan and chilling is not a problem. Chilling can be a big problem

in the southern United States with its warmer winters and earlier springs. Different species have different chilling requirements and varieties differ within the species. Peaches require 700 to 1,000 hours (there are lower chill varieties), cherries require 600 to 1,300 hours (most in Michigan 900 to 1,300) and apples require 800 to over 1,500 hours. In Michigan, I assume most peaches need 800 to 1,000 hours, cherries 900 to 1,000 hours, apples about 1,200 to 1,300 hours and blueberries are about the same chilling as apples. Grapes have a relatively short chilling, but need a warmer temperature (above 50) to start growing.

The North Central Climate Center maintains a Chilling Hours Map (above 35 F and below 45 F) using weather data. On this map, it looks like most of Michigan has 800 to over 1,000 hours of chilling. I also have been tracking chilling hours for several Michigan State University automated weather stations on the Enviroweather system. These stations are in southwest Michigan (Benton Harbor, SWMREC), west central Michigan (Clarksville, CHES) and northwest Michigan (Traverse City, NWMHRS). I get results that indicate the southern portion of Lower Michigan has completed chilling for many varieties with a chilling requirement of less than 1,000 hours and many others are close to completing chilling. The central and northern portion of the state will be close to completing their chilling requirements once this current warm ends.

This does not mean Michigan's fruit crops will be wiped out by cooler temperatures below freezing. It only means they have lost the ability to acclimate to deep winter cold. As fruit plants begin to grow in spring, we use a table of critical bud temperatures to tell us what temperatures will harm the flower buds. This table gives a temperature that can kill 10 percent and 90 percent of the buds. At the earliest stages of growth, the spread for the critical bud temperatures between a 10 percent kill and a 90 percent kill is very wide. For example, at the earliest bud stages in apples, 15 F will kill 10 percent of the flower buds, but it would need to go to 2 F to kill 90 percent. In peaches, 18 F will kill 10 percent, but it would need to go to 1 F to kill 90 percent. For peaches and apples, the trees have many more flowers and can set more fruit than we want to harvest, so growers need to thin their crop after bloom. Other fruit show the same pattern where temperatures need to fall down to around 10 F to cause significant damage.

I do not expect temperatures down to 10 F any time soon and in fact, I consider them very unlikely. Most of the last month has felt like March and I consider the spring warmup has begun. Some people are worried about snow. I would be happy to see snow. This time of year, when it snows the temperatures are just below freezing in the 20s and this would not cause any damage.

Fruit growers remember the early spring of 2012 when two summer-like weeks in March set the Michigan fruit industries up for widespread losses to spring freezes in April. Growers ask me how far ahead of 2012 we are and that makes no sense to me because we are just starting growth in southwest Michigan. There is nothing to compare yet. We are in the middle of several days of warmer weather with daytime highs near 60. In 2012, we had a week of highs in the 80s and nighttime lows in the 60s.

When I want to compare years, I look at the growth stage of the plant (bud break, bloom, harvest) or the growing degree-days (GDD). For tree fruit and blueberries, I look at the GDD base 42. For grapes, I look at GDD base 50. Last week, we were at the same place for growing degrees where we were in 2012, but in 2012 we had a couple of weeks of summer in March. In 2013, we actually had a warmer February than in 2012. However, in 2013 the spring cooled down, plant growth slowed and we did not have any spring freeze damage in most areas, and actually had a huge crop. It all depends on whether we stay warm or if we cool back down in March and April.

In southwest Michigan, we have warm and cold spells in spring. When it is warm, the plants grow a little. When it is cool, the plants slow down or stop growing. I am always happy in spring if the nightly lows are below freezing, because that makes the plants slow down and stop at night. I expect to see some plant growth down in southwest Michigan during this warm spell.

I am concerned, but not worried about a damaging freeze soon. As the buds swell, I am still only concerned. When growth continues and the buds begin to burst or open, then I will be worried. Generally, as buds burst they can be damaged by temperatures around 20, and the difference between light damage (10 percent) and severe damage (90 percent) is much smaller. Freeze events with lows down to 20 are common in March.

Yes, it looks like we are off to an early start this spring in southern Michigan, but it seems unlikely we will suffer any damage in the near future. Colder weather will slow down plant growth. If warmer than normal temperatures return and are the rule this spring, our fruit crops will be more advanced and will probably bloom early. (See the MSU Extension article "2013 Bloom dates for southwest Michigan tree fruit crops.")

If we are in a vulnerable growth stage before and during bloom, that will increase the chance of damaging spring freezes. All we can do is watch the weather forecasts and hope for cool weather. If you want to compare 2017 to the last five years, you can easily select the "Degree-day comparisons: last 5 years at this station" from the homepage of any weather station on the Enviroweather website.

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## Help MSU Modernize Enviroweather

Beth Bishop

Enviroweather is working on modernizing it's website programming structure and appearance. As we make these changes, we want to ensure that our changes meet the most pressing needs of our users.

We are hoping you can help us by taking our short surveys that are applicable to you. There are three surveys available:

1. General Weather tools (not crop specific). Everyone can take this survey: https://www.surveymonkey.com/r/GeneralTools

2. Tree Fruit tools for tree fruit producers: https://www.surveymonkey.com/r/TreeFruit

3. Small Fruit tools for berry crops producers: https://www.surveymonkey.com/r/SmallFruit

Finally, stay tuned for announcements on an Enviroweather mobile-friendly site that is also in the works. Please contact Beth Bishop (bishopb@msu.edu) with any questions or comments regarding Enviroweather modernization and these surveys.

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## Michigan spring peach meeting scheduled for March 2, 2017

**The best way to learn about all aspects of peaches and peach growing is at the Michigan Spring Peach Update in southwest Michigan on March 2nd, 2017.**

Posted by **Bill Shane**, Michigan State University Extension, MSUE News

High quality peaches are always in demand and appreciated by consumers. The 2017 Michigan Spring Peach Update is the best annual meeting in Michigan to learn about this crop. This one-day meeting will take place at the Southwest Michigan Research and Extension Center, 1791 Hillandale Road, Benton Harbor, MI 49022, which is 2.5 miles east of I-94 exit 30 to Hillandale Road. Registration and socializing begins at 8 a.m. with the program starting at 9 a.m. and ending at 4:30 p.m.

The meeting will focus on peaches varieties, insect and disease management, marketing strategies, rootstocks, tree training, H2A labor options and processing peaches. Topics will include information on chemicals for delaying bloom, oriental fruit moth, stink bug and spotted wing Drosophila.

Guest speakers include Chris Eckert of Eckert Farms in Illinois; Tom Beekman of USDA in Byron, Georgia; Katie Vargas of Michigan Farm Bureau; Mark Schilling of Hawkeye Farms; and Michigan State University Extension and research specialists Courtney Hollander, Greg Lang, Julianna Wilson and Bill Shane. Attendees will be eligible for credits toward their recertification of their Michigan pesticide applicators license.

Deadline for early registration is Monday, Feb. 20, 2017. Registration is $30 per person or $25 for current Michigan Peach Sponsor members, with lunch provided by Cravings Catering, coffee breaks and handouts included. Registrations mailed after Feb. 20 or at the door are $5 more per person.

To pay in advance by check or money order, please fill out the registration form and mail with payment by Feb. 20. After this time, you may register at the door with check, money order or cash. Credit cards will not be accepted.

For additional meeting information, contact the conference coordinator Bill Shane at 269-944-1477 ext. 205 (office), 269-208-1652 (cell) or email shane@msu.edu

Numerous accommodations are available close by at I-94 exits 23, 27, 28 and 29.

This meeting is sponsored by the Michigan Peach Sponsors, Crop Production Services, MSU Extension and the Michigan Society for Horticultural Science.

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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