Northern Michigan FruitNet 2017
Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – April 14, 2017

CALENDAR OF EVENTS

4/17	**Spring Sweet Cherry Pruning Demonstration – CHANGE OF TIMES** Lutz Farms, Kaleva, MI – 10AM Kings Orchards in Central Lake, MI – 2PM
4/18	**IPM Kickoff** NWMHRC
5/5	**Wine Grape Spring Kick-Off** **NWMHRC, 9 am – 5 pm** Pre-registration required; information will be posted at Parallel 45 Vines & Wines web site soon. http://www.p45michigan.com/
5/19	**Save the Date: Apple Thinning Meeting** NWMHRC, 10 – 1 PM, **RSVP by May 17** More information to come!
5/9 – 6/27	**Leelanau IPM Updates** Jim and Jan Bardenhagen's Farm, 12PM – 2PM
5/9 – 6/27	**Grand Traverse IPM Updates** Wunsch Farms Packing Shed, 3PM – 5PM
5/10 – 6/28	**Antrim IPM Updates** Jack White Farms, 10AM – 12PM
5/10 – 6/28	**Benzie IPM Updates** Blaine Christian Church, 2PM – 4PM

What's New?

- **GROWING DEGREE DAY ACCUMULATIONS and growth stages AS OF April 10, 2017 AT THE NWMHRC**
- **2017 IPM Update Schedule**

GROWING DEGREE DAY ACCUMULATIONS AS OF April 10, 2017 AT THE NWMHRC

Year	2017	2016	2015	2014	2013	2012	27 Yr. Avg.
GDD42	109	73.4	43.7	29.5	12.9	317.2	83.7
GDD50	37.6	20.5	9.7	5.2	0.3	169.4	30.1

2017 Growth Stages as of 4/10/17

Bartlett Pear – Bud swell

Potomac Pear – Bud swell

Mac – Silver tip

Gala – Green tip

Red Delicious – Silver tip

HoneyCrisp – Ear. silver tip

Montmorency – Bud swell

Balaton – Ear. side green

Hedelfingen – Side green

Gold – Side green

Napoleon – Side green

Riesling – Scale crack

Spring Sweet Cherry Pruning Demonstration - UPDATE

April 17, 2017

The NWMHRC will host Drs. Greg Lang and Todd Einhorn for a high-density sweet cherry pruning demonstration on April 17, 2017 at Kings Orchards in Central Lake, MI, at 10AM and Lutz Farms in Kaleva, MI at 2PM.

New times below:

10AM - Lutz Farms, 8328 8 Mile Road, Kaleva, MI 94645

2PM - Kings Orchard, 5200 Church Rd, Central Lake, MI 49622

At the demonstration at Kings Orchard, we will visit a new planting of vigorous trees and will discuss pruning strategies to manage excessive growth. Canopy management and renewal pruning will be the topics of discussion in a mixed variety block of Kings' bearing trees. Finally, with regard to spotted wing drosophila management in sweets, this demonstration also offers the opportunity for growers to visit the Kings' unique block that was planted specifically with pre-harvest pest management spray strategies in mind.

At the demonstration at Lutz's farm, we will visit their 2015 planting with rootstock Gisela 12. Their varieties include Benton, Regina, and Sam. Trees are planted with 15 feet between rows x 5.5ft between trees. Trees are trained to a TSA.

Sweet cherry growers won't want to miss this opportunity to visit this cutting-edge operation in northwest Michigan. Stay tuned for more details.

2017 IPM Update Schedule

Emily Pochubay and Nikki Rothwell
Michigan State University Extension

Tree Fruit IPM Updates beginning the second week of May through June 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. Additionally, we are planning to revisit some of the new Worker Protection Standards as well as host invited speakers from local organizations and MSU at this year's meetings. Workshops will be held weekly in Leelanau, Grand Traverse, Antrim, and Benzie counties. Tree fruit growers and consultants 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. Restricted use pesticide applicator recertification credits (2 credits per meeting) and Certified Crop Advisor credits will be available. We are looking forward to seeing you in a few weeks! For more information, please contact Emily Pochubay (pochubay@msu.edu), 231-946-1510.

Leelanau County

Location: Jim and Jan Bardenhagen, 7881 Pertner Road, Suttons Bay
Dates: May 9, 16, 23; June 6 (tentative), 13, 20, 27
Time: 12PM – 2PM

Grand Traverse County

Location: Wunsch Farms, Phelps Road Packing Shed, Old Mission
Dates: May 9, 16, 23; June 6 (tentative), 13, 20, 27
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 10, 17, 24; June 7 (tentative), 14, 21, 28
Time: 10AM – 12PM

Benzie County

Location: Blaine Christian Church, 7018 Putney Rd, Arcadia, MI 49613
Dates: May 10, 17, 24; June 7 (tentative), 14, 21, 28
Time: 2PM – 4PM

Respirator Guidelines to Meet New Worker Protection Standards

Growers will need a medical evaluation and respirator fit test to handle and apply some pesticides this season.

Emily Pochubay and Amy Irish-Brown, MSU Extension

Requirements for a medical evaluation, fit testing, and specific training for use of respirators and the associated record keeping became effective on January 2, 2017. At this time, most growers are aware of this revision to the Worker Protection Standard (WPS) regulation that requires pesticide handlers and applicators to wear a respirator

during mixing/handling, spray applications, and potential other uses as outlined on pesticide labels. Additionally, those who use pesticides with respirator requirements must receive documentation from a physician or licensed health care professional (PLHCP) that has 'respirator evaluation' as part of his/her license to ensure that the pesticide handler is medically able to use a respirator. Not all PLHCPs are qualified to provide the respirator evaluation, but primary care physicians should be able to refer patients to appropriate medical personnel. Alternatively, growers can contact local occupation and environmental health professionals who are more likely to have the credentials needed to provide the appropriate respirator medical evaluation and documentation. Please review the following guidelines to help address some of the recent questions we have received from growers.

Who needs to receive a medical evaluation and how often?

Employees that could be exposed to hazardous airborne contaminants may be required to wear a respirator; respirators and respirator use requirements will be outlined on individual pesticide labels. Some pesticides may require respirators for employees that mix spray material and/or require applicators to wear a respirator during applications of certain pesticides. Employers are responsible for ensuring that employees receive the appropriate equipment, evaluation, respirator fit test, training, and record keeping that conforms to OSHA standards.

According to the EPA, the medical evaluation is required one time per employee unless another evaluation is required due to one of the following reasons:

- The medical determination is only good for a specified length of time.
- The employee reports medical signs or symptoms related to respirator use.
- The PLHCP, supervisor, or program administrator recommends a re-evaluation.
- Fit-test or other program information indicates a need for re-evaluation.
- When changes in the workplace increase respirator stress on an employee.
- The initial medical examination demonstrates the need for a follow-up medical examination.

Who provides the evaluation? What kind of evaluation and documentation are needed?

A physician or licensed health care professional (PLHCP) with respirator evaluation as part of their license will provide the appropriate evaluation using a medical questionnaire or exam that conforms to the OSHA standard. Contact the PLHCP to determine whether a questionnaire or exam will be used and to receive appropriate paperwork. Prior to completing the questionnaire or exam, employers must provide employees with:

- The type and weight of the respirator that the handler will use.
- How long and how frequently the handler will use the respirator.
- How much physical work the handler will do while using the respirator.
- Other PPE the handler will use.

- The temperature and humidity extremes of the working environment.

Contact a primary care physician to receive a referral for a licensed professional, if necessary. Another low-cost (~$25) and fast alternative for a medical evaluation is OshaMedCert (http://www.oshamedcert.com/Default.aspx), an online service that involves filling out a form and sending it for approval or denial by a PLHCP; individual's health information remains confidential throughout the process. A respirator fit test (see below) will be needed after receiving the medical determination from OshaMedCert.

A written medical determination of the respirator evaluation for each employee is required before the employee can use the respirator. The employer must keep the medical determination documentation for two years. According to the EPA, the required written information to be provided by the PLCHP to the employer must only include:

- Whether or not the employee is medically able to use a respirator.
- Any limitations on respirator use in relation to the medical conditions (if any) of the employee or workplace conditions.
- Need for any follow-up medical evaluations.
- A statement that PLCHP provided the employee with written recommendation; in some cases, this recommendations may simply state that the applicator/person that will use the respirator is capable of wearing a respirator.

Again, the information outlined above is the *only* information that should be provided in the PLHCP's recommendation to the employer to protect the employee's private medical information and avoid violation of HIPAA laws.

What's Next? Respirator Fit Tests.

After receiving a medical evaluation, a fit test is needed to ensure that the respirator forms an adequate seal with an employee's face to provide appropriate inhalation exposure protection. A new fit test is required annually or whenever there is a change to the respirator or a physiological change to the employee that could affect the seal between the respirator and the user's face. Furthermore, fit tests are required for each type of respirator that will be used as indicated by pesticide labels. Finally, employees must undergo the fit test using a respirator with the exact specifications of the respirator that will be used on the job.

Fit tests must follow OSHA protocols, and there are two methods for fit testing. The quantitative fit test (QNFT) requires special equipment and a trained person to conduct the testing. Fit test kits are also available to perform qualitative fit tests (QLFT) by a person that can accurately prepare test solutions, calibrate equipment, perform the test properly, recognize invalid tests and ensure test equipment is working properly. Sources for fit tests include pesticide suppliers or companies such as Gempler's or Grainger.

A primary care physician may be able to provide additional options and referrals for fit test providers in the area. We confirmed that Munson Medical Center's Occupational Health and Medicine Clinic (550 Munson Ave. Traverse City, MI 49686; Ph: 231-935-8590) is equipped to perform the appropriate respirator exam (~$80.00) and the fit test (~$25.00) in one visit by appointment only. Spectrum Health Services in other areas of Michigan provide similar services. Patients that wish to only receive a fit test need to provide appropriate respirator exam result documentation prior to the test.

Additional information regarding respirator requirements and other WPS revisions can be found in the EPA's *How to Comply with the 2015 Revised Worker Protection Standards for Agricultural Pesticides* (https://www.epa.gov/sites/production/files/2016-10/documents/htcmanual-oct16.pdf).

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!

4:45	**Welcome and Refreshments**
5:00 – 5:15	**Pesticide Label Changes and Updates** *Emily Pochubay, MSU Extension*
5:15 – 6:00	**Fire Blight and Leaf Spot Considerations for 2017** *Dr. George Sundin, Dept. of Plant, Soil, and Microbial Sciences, MSU*

6:00 – 6:45	**Crop-Adapted Spraying** *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** *Eric McCumber, MDARD*
7:45 – 8:00	**Borer Management Challenges in Stone Fruit** *Dr. Nikki Rothwell, MSU Extension and AgBioResearch*
8:00	*Fill out pesticide recertification and certified crop advisor sheets.*

Video presents results of Riesling early leaf removal

Learn results on Riesling with cluster zone leaf removal around bloom to reduce fruit set and consequently reduce cluster compactness.

Posted by **Paolo Sabbatini**, Michigan State University Extension, Department of Horticulture, MSUE News

Viticulture in Michigan is limited by a cool and humid climate, often evidenced by harvest season cluster-rot, poor ripening and reduced technological maturity for economically important wine grape varieties characterized by the compactness of the berries held on the cluster rachis. Thanks to funding from the Michigan Grape and Wine Industry Council, growers can watch a short video on "Leaf removal: A tool to improve crop control and fruit quality in vinifera grapes." This video presents results on Riesling (the most-planted white wine variety in Michigan) on cluster zone leaf removal around

bloom to reduce fruit set and consequently produce a controlled reduction in cluster compactness, improving fruit technological maturity and harvest and reducing bunch rot.

The defoliation treatments were effective in reducing the bunch size, consistently showing a reduced number of berries when compared to the control. The removal of six basal nodes appeared to be a stress threshold above which the vines were no longer able to effectively maintain a supply of resources to the reproductive organs of the vine. The reduction of leaf area, achieved with defoliation of six basal nodes, did not significantly affect the final yield per vine, but did affect the number of bunches per vine. Early removal reduced yield per vine, and such yield reduction corresponded to an increased level of berry sugar accumulation as well as to a reduced fruit acidity.

The development of this project helped growers to better understand using a practical tool in canopy management (leaf removal) that can have a great impact on yield per vine and fruit ripening. Although manual defoliation is a time-consuming operation, the value of its positive effects in improving quality traits is fundamentally important and proved to far outweigh the initial expense by providing drastically improved quality and yield. The positive impact on the formation of looser clusters is also important, especially in wet years, which reduced the incidence of bunch rot and increased the quality of the fruit (basic fruit chemistry, color and skin/flesh ratio).

Early leaf removal proved to be a valid technique for reducing crop, improving fruit quality and decreasing the incidence of bunch rot, taking the place of multiple fungicide applications reducing the amount of chemical sprayed on a vineyard and the labor cost associated with it.

To access "Leaf removal: A tool to improve crop control and fruit quality in vinifera grapes" and other wine grape research videos on a variety of topics, go to the Michigan State University Extension Grapes Research page.

The Protection Plan for Managed Pollinators in Michigan draft release

Michigan has released its draft plan to protect managed pollinators from pesticide threats. This joint effort is designed to provide clear actions that can be taken to reduce pesticide exposure to bees.

Posted by **Sarah Scott**, and Meghan Milbrath, Michigan State University Extension, Department of Entomology, MSUE News

Image courtesy of Sarah Scott, MSU.

The Michigan Department of Agriculture and Rural Development (MDARD), along with Michigan State University and Michigan Farm Bureau, is releasing its draft Protection Plan for Managed Pollinators in Michigan (referred to as the plan), which aims to increase communication to reduce the risk of pesticides to pollinators across our state. The steering committee is seeking feedback from the public on the proposed draft to produce a document that has the most positive impact and acceptance among Michigan citizens.

The draft plan can be found online at The Protection Plan for Managed Pollinators in Michigan. The document includes voluntary strategies for growers, beekeepers, landowners and pesticide applicators to mitigate the risk of pesticides while still supporting a robust agricultural economy. Michigan's plan follows the National Strategy to Promote Pollinator Health, which includes the Pollinator Research Action Plan and the Pollinator-Friendly Best Management Practices for Federal Lands.

Our plan follows the National Association of State Departments of Agriculture guidelines for creating a managed pollinator protection plan. Over time, the plan will be reviewed to determine how well it is working to help protect managed pollinators.

The plan is meant to provide a way to mitigate the risk of pesticides to bees and other managed pollinators while supporting the use of crop protection. This will be accomplished by establishing a framework for open communication and coordination between individuals who are applying pesticides and beekeepers that have colonies in areas that could be impacted, and supporting best management practices. The key goals of the document are:

- Mitigate potential exposure of honey bees to pesticides.
- Foster positive relationships between beekeepers, growers and applicators.

- Allow for crop and honey production.
- Refine public understanding of pollinator health issues, factors affecting pollinators and what can be done to mitigate negative outcomes on pollinator populations.
- Find ways to minimize risk to pollinators that citizens, businesses, agencies and Michigan residents can follow.

If you would like to provide input and feedback on the plan, please complete the Protection plan for managed pollinators in Michigan feedback survey, or email any comments to MMP3@msu.edu by June 1, 2017. Sign up for the plan mailing list to stay up-to-date on developments or changes to the plan.

For more information on other states' Managed Pollinator Protection Plans, resources on Michigan's Plan or pollinators in Michigan, visit MSU's Michigan Pollinator Initiative Managed Pollinator Protection Plan page. The final draft of the plan will be available at MDARD's Managed Pollinator Protection Plan website.

Chestnut Orchard Establishment Workshop

Join us to learn about commercial chestnut production in Michigan this April!

Erin Lizotte, MSU Extension

The Michigan chestnut industry has been growing steadily over the last decade, with a lot of interest in production from new growers. To address this interest, Michigan State University Extension will be holding a one-day workshop to introduce attendees to the opportunities and challenges of commercial chestnut production. The workshop will include: an introduction to the history of the industry in Michigan; an economic analysis of production; orchard establishment and design; pest management; and harvesting, marketing, and storage.

The Chestnut Orchard Establishment Workshop will be held on April 20th from 10:00 am-4:00 pm at the Clarksville Horticultural Experiment Station, in Clarksville Michigan. The cost of the event is $50 and includes lunch and support materials. To register, visit https://events.anr.msu.edu/chestnutworkshop2017/

Those attending are encouraged to visit www.chestnuts.msu.edu before the event for a primer on chestnut production. The 'Production considerations' section may be particularly helpful.

Pruning Workshop: *for Home Gardeners*

LEARN THE SCIENCE AND ART OF PRUNING:

Pruning is an important cultural practice for maintaining the health, vigor and appearance of woody plants. It involves both art and science - art, in shaping plants to enhance the landscape; and science in knowing how, when, where and why to prune for maximum benefit.

MSU Extension will host a pruning workshop on **Friday, April 28, 2017 from 8:30 a.m. - 12:30 p.m.** at the **NW Michigan Horticultural Research Center** (just north of Traverse City, near Bingham in Leelanau County). This workshop is geared towards homeowners and gardeners, and will help you master the science (and a bit of art) of pruning. **MSU Extension Sr. Educator, Rebecca Finneran**, will lead this workshop. Participants will spend time in the classroom learning best pruning practices and the best equipment for each job, and then move outdoors to apply the learning with hands-on pruning. Participants should bring their own hand-held pruning shears if available, and wear weather- appropriate clothing to be both indoors and outdoors; rain or shine.

The cost is **$35 per person,** and includes education, instruction and light refreshments. Spaces are limited and preregistration is required.

HOW TO REGISTER:

Register online at: https://events.anr.msu.edu/pruningworkshop

CONTACT:

For more information, contact **Annette Kleinschmit** at 231-256-9888 or kleinsc7@msu.edu .

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