

Northern Michigan FruitNet 2015

Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – July 2, 2015

CALENDAR OF EVENTS

2015

- 5/5 – 7/7** **Leelanau County IPM Updates**
Bardenhagen Farm
- 5/5 – 8/?** **Grand Traverse County IPM Updates**
Wunsch Farm
- 5/6 - 7/8** **Antrim County IPM Updates**
Jack White Farms
- 5/6 - 7/8** **Benzie County IPM Updates**
Blaine Christian Church

Northwest Michigan Report – July 2, 2015

Emily Pochubay, Nikki Rothwell, and Karen Powers NWMHRC

One **spotted wing drosophila** (SWD) female was detected in an Alpha lure baited trap yesterday (07/01/2015) in a sweet cherry orchard near the orchard edge in Antrim County, south of Elk Rapids. The orchard is a smaller block (~2 acres) surrounded by a wooded area on three sides. The alpha lure is one of five baits that the Michigan State University Fruit Team and the research station are testing for SWD trap effectiveness. The first SWD detected in the state was found in a Trece lure baited trap in a tart cherry block in Benzie County, and we have not found SWD in that orchard block since the first fly was found on June 11. Because we have not detected SWD consistently and in significant numbers yet this season, we recommend that growers wait until there are consistent trap catches of higher SWD numbers to begin SWD management programs. Both **cherry fruit fly** and **black cherry fruit fly** have been detected in low numbers (1 or 2 flies per trap) in the region at this time. Overall populations of **obliquebanded leafroller** have been low this season. However, there have been reports of high OBLR populations in some orchards (47 moths in a trap); 20 or more OBLR moths in a trap is an indication of a potentially high OBLR population in the orchard, and that management of the larvae will likely be needed to prevent shaking the larvae into tanks at harvest.

Last Tree Fruit IPM Updates in Leelanau, Antrim, and Benzie Counties Next Week

We had a blast at the cookouts that were held in all of the four counties where we host IPM Updates. Thanks to all who were able to attend and a special thank you to all of our generous hosts. It has been such a pleasure working with the wonderful fruit growing community in northwest Michigan.

The final IPM Updates of the season for Leelanau, Antrim, and Benzie Counties will be held next week at the same times and locations as the previous meetings. We realize that some folks will likely be harvesting, but we are looking forward to seeing everyone who can make it to the meetings. See you next week!

Leelanau: July 7, 12 PM – 2 PM, Jim and Jan Bardenhagen's
Please note that this is Industry Day of the Cherry Festival; there will be a special Industry Day program at the research station beginning at 1:30 PM on July 7th.

Antrim: July 8, 10 AM – 12PM, Jack White Farms

Benzie: July 8, 2 PM – 4 PM, Blaine Christian Church

ETHEPHON ON CHERRIES

N.L. Rothwell, District Horticulturist
J. Nugent, Retired District Horticulturist

Ethephon is a plant growth regulator, and results from its use with vary chemical concentration and time of application. This plant growth regulator has systemic properties where it penetrates the plant tissues and is decomposed to ethylene. In cherry systems, we use ethephon to promote fruit loosening to mechanically harvest the fruit. Ethephon, sold under the trade name Ethrel, has been used as a common management practice in both tart and sweet cherry harvest.

Ethephon releases ethylene, which penetrates plant cells and binds to receptors that affect expression of various genes. In the case of cherries, ethephon affects the gene that controls the synthesis/activation of cell wall loosening enzymes, thus dissolving the pectins between cells in the abscission layer. This chain-like reaction leads to cell separation in the developmentally-programmed abscission zone between pedicel and fruit or pedicel and spur. In short, ethephon loosens the cherries from the stem, which results in a gentler 'shaking' of the tree to remove the fruit.

In years past, we have observed ethephon-induced damage in hot and dry weather. Ethephon can have excessive activity under these hot and dry conditions, which can result in tree injury. The forecast for the next week is predicted to be in the high 70s to mid-80s and sunny, and this weather could be conducive for causing ethrel damage. We remind growers that we have observed ethephon damage under similar conditions in the past, especially in sweet cherries. Of sweet cherry varieties, Golds seem the most sensitive. Trees under stress are also more susceptible to ethephon damage, and we do have stress in trees as a result of the last two harsh winters. We also have many trees throughout the region that are losing lots of leaves as a result of virus and/or cherry leaf spot, and trees that defoliate early in

the season will likely be more stressed than trees with a full canopy. Lastly, we have some orchards that have had San Jose scale (SJS) infestations, and trees with populations of SJS will be more stressed than healthy trees; growers should reduce rates in orchards that have apparent SJS infestation and/or damage. Growers need to consider the predicted warm and dry weather and the levels of stress in their orchards before applying ethephon this season.

As mentioned above, both temperature and tree vigor are associated with the degree of response achieved. At higher temperatures during the 72 hours *following application*, the magnitude of response is increased. Trees low in vigor or under stress respond to a greater extent, and gumming and leaf abscission may result.

The following recommendations should be used when applying ethephon to cherries:

1. **Rate:** Vary the rate depending on anticipated temperatures for 72 hours after application, days before harvest, tree stress and past experience. Lower rates decrease the likelihood of tree injury. *If temperatures 72 hours after application are predicted to be in the 80s, growers should reduce the Ethrel rates this year.*
 - A. **Light sweets** -- When applied concentrate (80 gals. water/acre or less), 1 to 2 pt/acre applied 10-14 days before anticipated harvest should provide adequate loosening. Rates up to 2.5 pt/acre may be necessary for harvesting in less than 10 days. When applied dilute, use no more than $\frac{3}{4}$ pt/100 gals or 3 pt/acre. Reducing rates in light sweet cherries, particularly Golds to lessen ethephon-induced damage, is recommended if predicted temperatures are in the 80s after application.
 - B. **Dark sweets** -- When applied concentrate, use 1.5 to 2.5 pt/acre applied 10-14 days prior to anticipated harvest. Rates up to 3 pts/acre may be necessary for harvesting in less than 10 days. When applied dilute, use no more than 1 pt/100 gal or 4 pt/acre.
 - C. **Tart cherries** -- When applied concentrate, use 0.5 to 1 pt/acre applied 7 to 14 days prior to anticipated harvest. When applied dilute, apply no more than $\frac{1}{3}$ pt/100 gals or 1 pt/acre.
2. **Time of Application:** Apply approximately 7 to 14 days before anticipated harvest. Do not harvest within 7 days of application (Ethrel has a 7-day PHI).
3. **Temperature:** Avoid application when high temperatures are expected to exceed 80° F or remain below 60° F for the 72 hour period after application. Growers should use lower than normal rates when highs are expected in the 80's.
4. **Tree stress:** Do not spray trees that are low in vigor or under stress conditions.
5. **Do not** spray trees that had serious gumming the previous year.
6. **Crop load:** Heavy crop loads (i.e. low leaf to fruit ratio) are more difficult to loosen than lighter crops. In this situation, which is less likely this season, growers should use relatively higher rates or expect a longer time to achieve desired loosening. More commonly, many trees have a light crop, and reducing rates in those blocks is recommended; rate reductions in light blocks will still achieve adequate loosening this season.
7. **Concentrate spraying:** Applying ethephon with concentrate sprayers (i.e., 80 gallons of water/acre or less) achieves the same level of loosening at lower rates per acre than does dilute applications. Uniform coverage is important.
8. **Tree size:** Suggested rates/acre are based on full-sized trees. Adjust rates downward when treating blocks with smaller trees.

Growers should pay particular attention to the temperatures. As evident from past experiences, hot temperatures can do damage to cherry trees. Growers that have had problems in the past years should reduce rates, especially if the trees showed serious gumming and leaf loss.

Michigan Pomesters 2015 Membership Renewal

Membership Dues: \$25 per person (can pay at RidgeFest)

Benefits of Membership: Paying your dues today includes:

All tours and educational events held throughout the year are **free of charge** including:

- RidgeFest 2015
- IFTA Scholarship opportunities
- all other educational events that we host
- other events that we are partners in

If there are others at your organization that want to join or have been members in the past, feel free to include their contact info and we can get them on the mailing list.



Company Name (s): _____

Member Name (s): _____

Address _____

Email _____ Phone(s) _____

Checks payable to: Michigan Pomesters

Direct Questions & Comments to: mipomesters@gmail.com | Nick Rasch (616) 813-1064

Strategic Growth Initiative Grant Program Announced to Boost Michigan's Growing Food and Agriculture Industry

LANSING, Mich. – A grant opportunity designed to encourage growth in Michigan's food and agriculture industry was announced today by Michigan Department of Agriculture and Rural Development Director Jamie Clover Adams.

"This is a great chance for our food and agriculture businesses to find innovative ways to expand and grow. Food and agriculture in Michigan is a \$101 billion industry. This is one avenue to help spur job creation, support local communities and drive new economic development," said Clover Adams.

Applicants for grant funds will be asked to describe how the project potentially impacts and produces measurable outcomes for the food and agriculture industry and/or the public rather than a single organization, institution, or individual.

This initiative has been developed to focus on removing existing barriers and leveraging opportunities identified by food processors, agri-business, and those in agricultural production as critical to business development and growth. Priority will be given to projects that identify a scope of work that includes one or more of the following as it relates to the food and agriculture industry:

1. Talent/Workforce Development (i.e. training activities)
2. Infrastructure/Logistics (i.e. broadband access)
3. Feasibility Studies (i.e. enhancing value added capacity)

All application materials including the program overview and fillable application form are available on MDARD's website www.michigan.gov/mdardgrants. Applications are due to MDARD by 3pm EST on July 22, 2015.

IPM Update Cookout and Schedule Change

Emily Pochubay and Nikki Rothwell, NWMHRC

As many of you are already aware, please note the changes to upcoming IPM Update meeting dates. Due to a scheduling conflict, the IPM Update meetings for July 14th and 15th have been cancelled. We apologize for any inconvenience as a result of this cancellation, and to account for this change, additional IPM Updates have been or will be scheduled. Please see below for details on dates and times of these additional meetings. Thank you all for your continued support of the NWMHRC, MSU Extension, and Michigan's fruit industries!

***NEW IPM Update Schedule**

Leelanau County

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

Dates: June: 23 (cookout), June 30 **July: 7* Final meeting**

Time: 12PM – 2PM

Grand Traverse County

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

Dates: June: 23 (cookout), June 30 **August* Final meeting date TBD**

Time: 3PM – 5PM

Antrim County

Location: Jack White Farms, 10877 US-31, Williamsburg (is not correct in Google Maps) *North of Camelot Inn and South of Elk Rapids on the southeast side of US-31*

Dates: July: 1 (cookout), **8* Final meeting**

Time: 10AM – 12PM

Benzie County

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

Date: July: 1 (cookout), **8* Final meeting**

Time: 2PM – 4PM

MSU Extension programs and material are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual

orientation, marital status, family status, or veteran status. Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities.

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 is available at the new cherry website:

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

Information on apples:

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

Information on grapes:

<http://grapes.msu.edu>

Fruit CAT Alert Reports has moved to MSU News

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