

Northern Michigan FruitNet 2015

Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report 08/21/15

Calendar of Events

2015

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| 8/27 | 2015 Open House
Northwest Michigan Horticulture Research Center
Call and reserve dinner tickets at 231-313-8376 or email goodr100@msu.edu |
| 8/27 | Grand Traverse County Hazardous Waste Removal – Appointment Required |

Fall Foliar Nitrogen Applications are recommended for Stressed Tart Cherries

The 2015 season has been difficult for keeping leaves on tart cherry trees. First, the cool spring resulted in high levels of leaf drop due to virus. Some growers estimate they lost 30% of their leaves this spring due to virus. Secondly, cherry leaf spot (CLS) control was extremely difficult in May and June when we accumulated many hours of wetting. Despite growers' best efforts, CLS infection was evident in most orchards throughout the state. As a result of this season's wet weather and high levels of CLS, this disease has caused substantial defoliation too early in the season and winter hardiness is a concern for many growers. Additionally, orchards without irrigation are under some level of drought stress in northwest Michigan, and as a result, there is reduced photosynthesis and nutrient uptake in drought stressed trees. As we move into the winter months, if trees still have the majority of their leaves, we recommend fall foliar nitrogen applications in orchards that have had defoliation from disease and virus. Fall foliar nitrogen applications have been shown to increase winter hardiness as well as improve tree growth and fruiting in apples and cherries the following season.

Nitrogen (N) and carbohydrates are stored in tree tissues in fall and are vital for fruit tree growth and development in spring. Fruit trees accumulate carbohydrate and N reserves prior to leaf drop, and these reserves are stored through the winter until they are remobilized to growing points (flower buds, new shoots and expanding spur leaves) the following spring. Reserves provide trees with the necessary energy to break dormancy and begin growing when leaves are not yet present to generate carbohydrates via photosynthesis and roots have not yet begun taking up adequate amounts of N from the soil.

Dr. Greg [Lang](#) found that in sweet cherries stored carbohydrates are used for the development of

fruiting and non-fruiting spur leaves during the first few weeks after bud break, whereas new shoot leaves develop using carbohydrates from the current season's photosynthetic activities later in the spring and summer. Further work shows that spur leaf size and the total leaf area per spur increased with foliar urea applied the previous fall.

Spur leaves play an important role in sizing fruit, since larger leaf area close to the fruiting clusters equates to larger fruit. Spur leaves also play a role in development of Montmorency tart cherries. A study in Montmorency cherries conducted at the NWMHRC also showed that tree winter hardiness actually improved with fall foliar nitrogen applications. Therefore, if trees are heading into winter under substantial stress, fall foliar applications are likely to improve winter hardiness as well as promote strong early season growth in 2016.

The recommended rate for foliar sprays is a total of 40 pounds of urea split into two applications; growers should apply this spray to the leaves (not ground applied) and be sure the product is formulated for foliar applications (i.e. a low biuret urea). In research trials, we found optimum application timing was early September and followed by a second application one to two weeks later. However, good results were also found at Clarksville, Mich., and at Traverse City, Mich., for split applications in early October; timing of applications will depend on the numbers of leaves remaining on the tree. For instance, if trees are quickly defoliating at this time, applications should be made as soon as possible. However, if leaves are still green and the majority of the canopy remains, applications can be made at the end of September or the first of October.

Whether growers apply the foliar applications sooner or later, the initial applications should be followed with a second spray within two weeks if adequate leaves are still on the trees. Trees with substantial leaf loss or very few remaining will **not** benefit from these applications because the leaves need to absorb the material and translocate it down to the storage tissues in the buds, bark and roots.

Brown Marmorated Stink Bug Detected in Grand Traverse County on August 19, 2015

As part of a state-wide monitoring network, the NWMHRC has been monitoring for brown marmorated stink bug (BMSB), an invasive insect pest originally from Asia, this season. The first BMSB detected in the northwest was collected from a lure-baited trap located in a residential neighborhood in Grand Traverse County on August 19, 2015. This BMSB was a juvenile fifth instar nymph; there are five instars or juvenile stages before BMSB becomes an adult stink bug. BMSB were also found at this location inside of a residence in the 2014-15 winter and early spring. Thus far, we have not found BMSB in commercial orchards in northwest Michigan.



Brown marmorated stink bugs have five nymphal stages ranging in size from 2.4-12 millimeters in length. The first instar (not shown in the photo) is brightly colored, red-orange and black. Later instars (second through fifth shown from left to right in photo), like the adults (male and female shown in photo to the right of the nymphs), are dull in color, allowing them to blend in with tree bark. All second through fifth instars have the banding pattern on their antennae similar to the adults. Photo credit: W. Hershberger, www.stopbmsb.org

BMSB were found in more southerly areas of the state (Kent and Berrien Counties) almost two weeks ago. While traps in Kent Co. yielded only a few BMSB, there were over 90 BMSB found in a hot spot urban area of Berrien County. All orchard growers and consultants in Michigan should be monitoring for BMSB as well as suspected damage from this pest at this time. Placing traps along orchard edges and using beat nets or sweep netting are BMSB sampling strategies. Insects will fall from limbs that are jarred over a light colored canvas where they can be counted and identified. Using a sweep net to sweep vegetation along wood edges and adjacent to orchards will intercept any insects in the surrounding area; sweep netting will help to capture and detect BMSB before they enter the orchard as this pest typically moves into the orchard from the surrounding landscape.

We encourage all growers and consultants to bring any suspected BMSB specimens or BMSB damaged fruit to the research station for further examination and ID.

NORTHWEST MICHIGAN HORTICULTURAL RESEARCH CENTER ANNUAL OPEN HOUSE

The Northwest Michigan Horticultural Research Center's (NWMHRC) annual open house is scheduled for Thursday, August 27, 2015. This year's event will include an equipment show, wine tasting and dinner, and the Leelanau Horticulture Society's annual meeting. In addition, Greenstone Farm Credit Crop Insurance will be holding a discussion reviewing current fruit policies, as well as introducing the new Whole Farm Revenue Protection policy. This new policy is aimed toward specialty crop, and diverse growers. Discussion will include a short powerpoint outlining the basics, followed by a short Q and A.

The grounds to the exhibit area will open at 1:00 p.m., and equipment vendors will be on site. Free educational wagon tours of the NWMHRC featuring MSU specialists will take place from 3:00-4:45. The tour will include winegrape and tree fruit specialists that will speak on a variety of topics:

Dr. Ron Perry – Showing a video of “2015 Over The Row Tart Cherry Harvest with the Littau ORXL”

Dr. Doug Landis - Insectary Plants to Enhance Beneficial Insects. Doug Landis, Rufus Isaacs, Dan Gibson & Logan Rowe, MSU Entomology

Dr. Nikki Rothwell and Emily Pochubay - Cherry Leaf Spot Efficacy Update: Promising Fungicides on the Horizon Dr. Nikki Rothwell, Dr. George Sundin, and Emily Pochubay

Dr. George Bird - Roles of Cover Crops, Mulch, Compost and BioChar in Tart Cherry Orchard Establishment

Dr. Dennis Fulbright – Establishing Successful Chestnut Orchards in Michigan: A Demonstration Plot

Dr. Duke Elsner – Presentation on vine health and a variety of other topics

Presentation times are TBD.

Growers are encouraged to meet with equipment vendors during the social hour from 4:45 – 6:00. Dinner and the Leelanau Horticultural Society's annual meeting will follow at 6:00.

As in past years, the equipment show, social hour, and dinner is sponsored by the Leelanau Horticultural Society and Parallel 45 with the educational portion sponsored by AgBioResearch, MSU Extension, and the NW Michigan Horticultural Research Foundation. To reserve or purchase a dinner ticket, please call (231) 946-1510 or email Jenn at goodr100@msu.edu by August 20, 2013. The dinner will be catered by *Ethnic Garden Catering* and will feature locally produced food; cost for dinner tickets is \$10 per person.

For more information, contact the NW Michigan Horticultural Research Center at 231-946-1510. We hope to see many of you at this fun and educational event!

Antrim, Grand Traverse and Leelanau Counties Receives Approval to Implement the Emergency Conservation Program

United States Department of Agriculture

Traverse City, Michigan – August 21, 2015 – Kathy Kozlowski, County Executive Director for the Antrim and Grand Traverse Area Farm Service Agency (FSA) announced that Antrim, Grand Traverse and Leelanau counties, have been approved to implement the Emergency Conservation Program (ECP) for debris removal from farmland.

A high wind event has caused severe damage in Antrim, Grand Traverse and Leelanau Counties. Farms and ranches suffering severe damage may be eligible for assistance under the Emergency Conservation Program (ECP) administered by the Antrim and Grand Traverse Area Farm Service Agency (FSA) County Office if the damage:

- will be so costly to rehabilitate that Federal assistance is or will be needed to return the land to productive agricultural use
- is unusual and is not the type that would recur frequently in the same area
- affect the productive capacity of the farmland
- will impair or endanger the land.

A producer qualifying for ECP assistance may receive cost-share levels not to exceed 75% of the eligible cost of restoration measures. No producer is eligible for more than \$200,000 cost sharing per natural disaster occurrence. The following types of measures may be eligible:

- removing debris from farmland
- grading, shaping, or releveling severely damaged farmland
- restoring permanent fences
- restoring conservation structures and other similar installations.

Producers who have suffered a loss from a natural disaster may contact the local FSA County Office and request assistance from August 21, 2015 to October 19, 2015.

To be eligible for assistance, practices must not be started until all of the following are met:

- an application for cost-share assistance has been filed
 - the local FSA County Committee (COC) or its representative has conducted an onsite inspection of the damaged area
 - the Agency responsible for technical assistance, such as the Natural Resource Conservation Service (NRCS), has made a needs determination, which may include cubic yards of earthmoving, etc., required for rehabilitation.
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Grand Traverse County Household Hazardous Waste Collection - August 27th 1:00pm-6:45 pm and APPOINTMENTS ARE REQUIRED

GRAND TRAVERSE COUNTY RESOURCE RECOVERY DEPARTMENT (RecycleSmart) will conduct a Household Hazardous Waste (HHW) & Pesticide Collection on Thursday, August 27, 2015.

The online scheduling system is a convenient and the recommended tool to secure an appointment. An appointment is required and can be made at www.RecycleSmart.info or by calling the RecycleSmart Hotline at 941.5555.

This service is provided to Grand Traverse County residents at no cost, (up to 150 lbs., \$1.30 lb. thereafter). Accepted material includes cleaning products, pesticides, mercury, moth balls, motor oil, pool chemicals, paint, stains, mercury containing thermometers, antifreeze, contaminated gasoline, CFL bulbs and more...

Latex Paint and Motor Oil is accepted.

For more information visit www.RecycleSmart.info or call the RecycleSmart Hotline at 941.5555

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>