

Northern Michigan FruitNet 2016

Northwest Michigan Horticultural Research Center

Weekly Update

FruitNet Report – September 1, 2016

CALENDAR OF EVENTS

- | | |
|------|---|
| 9/14 | Michigan Managed Pollinator Protection Plan listening sessions
<i>NWMHRC, 10AM – Noon</i> |
| 9/20 | Whole Farm Revenue Protection Insurance Workshop (more information below).
<i>NWMHRC, 9AM</i> |

What's New?

- Michigan spotted wing Drosophila report for Aug. 26, 2016
- Michigan brown marmorated stink bug report for Aug. 26, 2016
- Growing Degree Day Accumulations – Aug. 29, 2016
- Whole Farm Revenue Protection Insurance Workshops
- Orchard and plant tour promoted institutional purchases of dried and frozen Michigan cherries

GROWING DEGREE DAY ACCUMULATIONS AS OF August 29, 2016 AT THE NWMHRC

Year	2016	2015	2014	2013	2012	2011	26 Yr. Avg.
GDD42	3172	2931	2750	2956	3557	2008	2944.5
GDD50	2140	1977	1774	1985	2414	2015	1958.7

2016 Growth Stages – NW MI Hort Research Center – 8/29/16

Bartlett Pear – 56 mm fruit

Potomac Pear – 51 mm fruit

Mac – 63 mm fruit

Gala – 65 mm fruit

Red Delicious – 72 mm fruit

HoneyCrisp – 69 mm fruit

Riesling – Green fruit

Wine Grapes

Duke Elsner, MSU Extension

Across the region the onset of veraison and pace of ripening appears to be ahead of normal. There is a very good crop load in many vineyards. Powdery mildew on clusters has become an issue on some of the more susceptible varieties, especially Pinot Gris. I have seen a bit of sun scald on berries that were exposed to the sun by leaf removal during very hot and sunny weather in past weeks.

Michigan spotted wing Drosophila report for Aug. 26, 2016

High risk of infestation of fruit continues to be expected. Susceptible crops must be protected. This is the final SWD report of 2016.

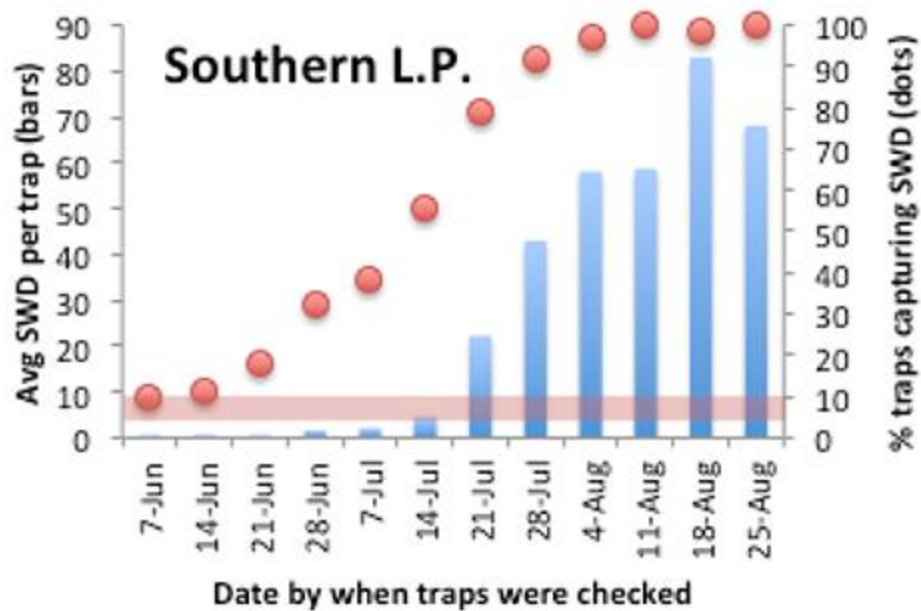
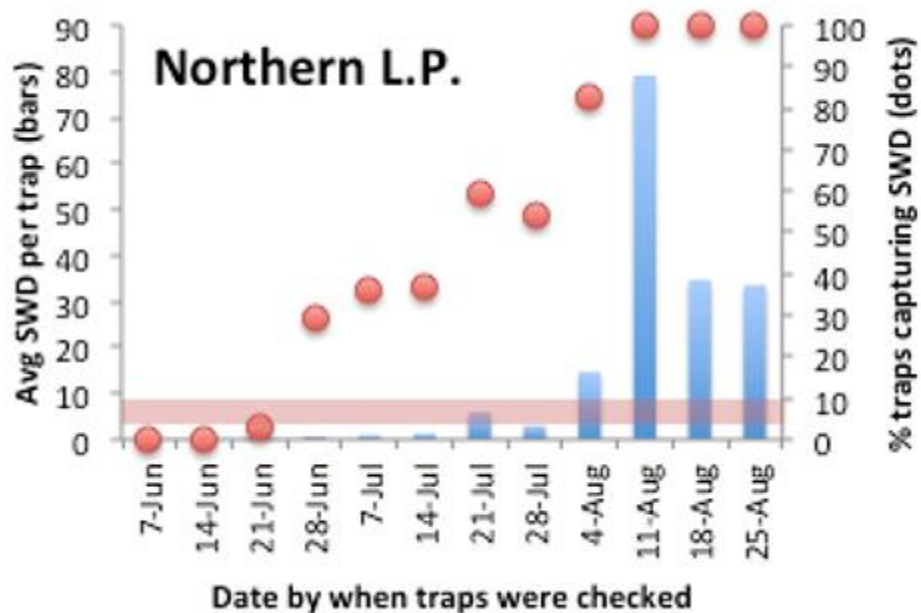
Posted by [Julianna Wilson](#), Rufus Isaacs, and Larry Gut, Michigan State University Extension, Department of Entomology, MSUE News

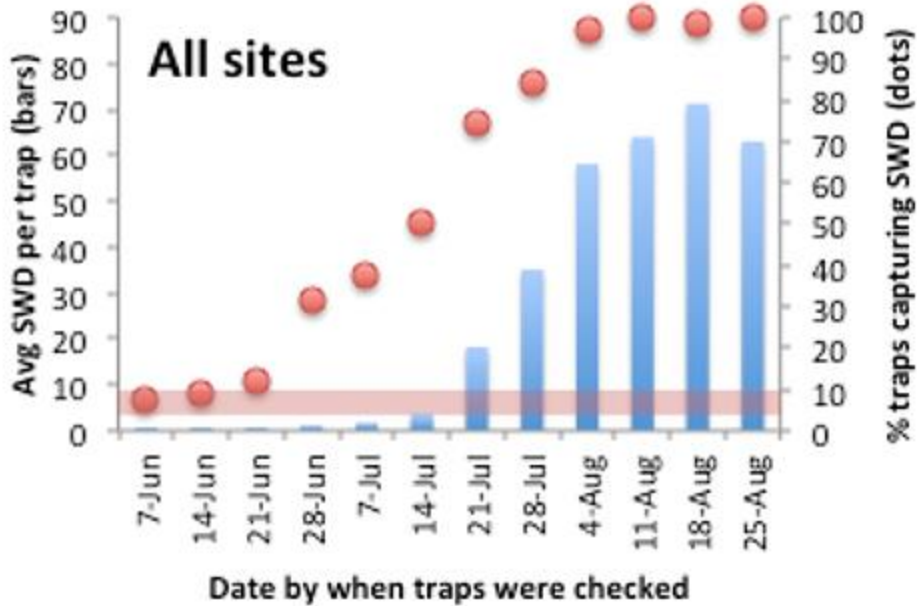
This is the final report of the [Michigan State University Extension spotted wing *Drosophila* \(SWD\)](#) Statewide Monitoring Network for 2016. Out of the 48 traps collected during the week prior to Aug. 25, we captured a total of 1,595 female and 1,432 male SWD for a total of 3,027 SWD flies. We found an average of more than 60 SWD flies per trap and captured them in all traps being monitored this week. Ripening fruit throughout the state must be protected or risk infestation, including late season blueberry, grape, peach and raspberry.

Through the end of the growing season, we expect SWD populations to continue to grow and the potential for damage to be very high in remaining susceptible crops – especially given cooler nights and less extreme daytime heat. The conditions are highly conducive to its development, and we expect shorter generation times and greater survival of flies with the moist conditions and more moderate temperatures.

The regions that are being monitored for SWD in 2016, how each region is defined (by the counties listed), the number of sites in each region that were monitored this week, the cumulative total of SWD flies caught in traps by region, and the average number of SWD flies caught per trap.				
Region	Counties covered in the SWD monitoring network	No. sites this week	Cumulative SWD Total	Avg. SWD flies per trap for the week ending Aug. 25
SE	Genesee, Ingham, Lenawee, Livingston, Macomb, Monroe, Oakland	14	5,324	62.6
SW	Allegan, Berrien, Kalamazoo, Ottawa, Van Buren	21	17,774	84.5
Ridge	Ionia, Kent, Muskegon	5	992	23.6
WC	Mecosta, Oceana	1	225	23
NW	Antrim, Benzie, Grand Traverse, Leelanau, Manistee	7	3,124	33.6
Grand Total:		48	27,439	63.1

Some growers have had a hard time controlling SWD this season. Short application intervals and reapplication after rain events – being sure to check product labels for reapplication restrictions and season maximums – are critical to managing this pest. Check with local Extension staff or crop consultants, and refer to the MSU Fruit Pest Management Guide for recommendations for your crop(s).





Bars represent the average number of SWD flies caught in monitoring network traps each week. Dots represent the percent traps that captured SWD that week. The shaded bar across each graph represents the proposed threshold for triggering management of the pest in susceptible crops. Northern L.P. encompasses all network traps in counties north of and including Clare in the Lower Peninsula (n = 7 traps this week). Southern L.P. encompasses all network traps in counties south of Clare in the Lower Peninsula (n = 41 traps this week).

Traps in the network are baited with commercially available lures and placed in susceptible crop fields or orchards – or in a location adjacent to susceptible crops – in areas where SWD infestation has been recorded in the past. Commercial plantings included strawberry, blueberry, raspberry, grape, tart and sweet cherry, peach and plum. Counties included in the 2016 trapping network are Allegan, Antrim, Benzie, Berrien, Genesee, Grand Traverse, Ingham, Ionia, Kalamazoo, Kent, Leelanau, Lenawee, Livingston, Macomb, Manistee, Mecosta, Monroe, Muskegon, Oakland, Oceana, Ottawa and Van Buren.

For the most current recommendations for monitoring this pest, please refer to [“Monitoring traps for catching spotted wing *Drosophila*.”](#) You can find out more about how to identify and manage this pest in fruit crops by visiting [MSU’s Spotted Wing *Drosophila*](#) website.

Whole Farm Revenue Protection Insurance Workshops

In partnership with Michigan Farm Bureau Insurance, Michigan State University Extension is providing six whole farm revenue protection (WFRP) insurance workshops. These workshops will feature guest speaker Dave Paul, former USDA Risk Management Agency Director of the Pacific Northwest and longtime advocate for WFRP. Dave has 17 years' experience with whole farm insurance and had a strong influence in the writing of the WFRP policy prior to retiring from RMA.

All workshops will include a tailored presentation and examples of the specialty crops in your area. Workshops held in areas of larger fruit and vegetable production will include Dr. Adam J. Kantrovich of Michigan State University Extension providing a short educational briefing on the Noninsured Crop Disaster Assistance Program also known as NAP and the available web-based decision tool.

All workshops will last about three hours and will include a question and answer portion.

Join us at one of the MSU Extension meetings to learn more about whole farm revenue protection insurance and what it could mean for your business. The workshops will be held in locations throughout Michigan during September and October 2016.

The meetings are free but pre-registration is required.

Workshop Dates and Locations		
Date & Time	Location	Region Served
September 19 10:00 a.m. (lunch provided)	AgroLiquid 3055 M-21 St. Johns, MI 48879	<u>Central</u> - Includes Branch, Calhoun, Clinton, Eaton, Gratiot, Hillsdale, Ingham, Ionia, Isabella, Jackson, Lenawee, Mecosta, Montcalm and Shiawassee counties
September 20 9:00 a.m. (lunch provided)	Northwest Michigan Horticultural Research Center 6686 S. Center Highway Traverse City MI 49684	<u>Northern</u> - Includes Alcona, Alger, Alpena, Antrim, Arenac, Baraga, Benzie, Charlevoix, Cheboygan, Chippewa, Clare, Crawford, Dickinson, Emmet, Gladwin, Gogebic, Grand Traverse, Houghton, Iosco, Iron, Kalkaska, Keweenaw, Leelenau, Luce, Mackinac, Manistee, Marquette, Menominee, Missaukee, Montmorency, Ogemaw, Ontonagon, Osceola, Oscoda, Otsego, Presque Isle and Roscommon counties
September 21 6:00 p.m. (dinner provided)	Mayfield Township Hall 1900 N. Saginaw Road Lapeer, MI 48446	<u>Bay Thumb</u> - Includes Bay, Genesee, Huron, Lapeer, Midland, Saginaw, Sanilac, St. Clair, and Tuscola counties
October 12 6:00 p.m. (dinner)	Southwest Michigan Research and Extension	<u>Southwest</u> - Includes Allegan, Barry, Berrien, Cass, Kalamazoo, St. Joseph and

<i>provided)</i>	<i>Center 1791 Hillandale Road Benton Harbor, MI 49022</i>	<i>Van Buren counties</i>
<i>October 13 6:00 p.m. (dinner provided)</i>	<i>Hart United Methodist Church 308 S. State Street Hart, MI 49420</i>	<u>West</u> - Includes Kent, Lake, Mason, Muskegon, Newaygo, Oceana, and Ottawa counties
<i>October 14 12:00 p.m. (lunch provided)</i>	<i>Gust Brothers Pumpkin Farm, LLC 13639 Mulberry Road Ottawa Lake, MI 49267</i>	<u>Southeast</u> - Includes Livingston, Macomb, Monroe, Oakland, Washtenaw, and Wayne counties

Online registration for WFRP Workshop - Participant Registration is **open**.

Register here:

<http://events.anr.msu.edu/register.cfm?eventID=3B75E81DDA8DF619®isProcessID=112E95686DB4C7A5>

The last date for online registration is October 13, 2016.

Online registration closes at 11:59 p.m. on the Registration End Date.

For information contact Adam Kantrovich at akantrov@anr.msu.edu or 616-994-4580.

Michigan brown marmorated stink bug report for Aug. 26, 2016

Fruit and vegetable growers in the southern Lower Peninsula should be scouting for brown marmorated stink bugs this season.

Posted by [Julianna Wilson](#), Michigan State University Extension, Department of Entomology, MSUE News



The Rescue style trap must be attached to a post or tree trunk so that the “fins” touch the post/trunk – this is to make it possible for nymphs to crawl up into the trap. Traps must be baited with a lure. Photo: Michael Haas, MSU.

This is the fifth weekly report of the [Michigan State University Extension brown marmorated stink bug](#) = monitoring network. Traps were checked at more than 80 sites for brown marmorated stink bug nymphs and adults using pyramid or Rescue style traps baited with commercial lures. We have now caught a total of 106 brown marmorated stink bugs in traps this season. This week, 32 nymphs but no adult brown marmorated stink bugs were captured from traps at four sites: an apple orchard in Ottawa County, an apple orchard in Kent County, and two vineyards in Berrien County.

The table below is an estimate of life stages expected at different points during the season based on using a 13.5 hour day as the biofix for brown marmorated stink bugs emerging from overwintering, 75 degree-days (DD base 14 degrees Celsius) until egg laying begins, and then another 538 DD (base 14 C) for those eggs to develop into adults.

Based on this model of brown marmorated stink bug development, we are in the midst of the transition from fifth instar nymphs into the adults that will seek shelter and overwinter. Because nymphs and adults can cause damage when they feed on fruit, growers in the southern part of the Lower Peninsula are strongly encouraged to scout for brown marmorated stink bugs – if they haven’t in the past – based on where we know it to be well-established as a nuisance pest in homes.

Traps are easy to deploy and check, but the area of influence for a single baited trap appears to be relatively small, so it is important to place them near the crop and to combine trapping with other sampling methods such as limb-jarring of fruit tree branches over beating trays or sweep-netting in orchard edges close to woodlots or riparian areas. Visual inspection of orchard edges for the presence of fruit injury, or for the insects themselves, is recommended, especially in Berrien, Van Buren, Kent, Ottawa and Genesee counties where we have known populations or where damage to fruit in commercial peach and apple orchards was reported last season.

Estimated brown marmorated stink bug life stages throughout the season				
Event ->	First overwintered adults expected	Egg laying begins	Various nymph stages present from beginning of June through August	New (summer) generation adults expected
Environmental cue ->	13.5 hr day	75 DD* (base 14 °C)		613 DD*(base 14 °C)
Benton Harbor	27-Apr	27-May		28-Jul
Romeo	26-Apr	27-May		3-Aug
Fennville	26-Apr	27-May		7-Aug
Sparta	25-Apr	27-May		13-Aug
Hart	25-Apr	28-May		13-Aug
Traverse City	23-Apr	29-May		13-Aug

*Degree-days were calculated by selecting individual [Enviro-weather](#) stations and creating custom reports using the Baskerville-Emin method starting with the date when day length reaches 13.5 hours in a given area.

Damage to fruit from brown marmorated stink bug feeding can be confused with several disease or nutrient deficiencies, depending on the particular fruit that is affected, so it is important to involve your local [MSU Extension fruit educator](#) to help determine what caused the damage or send samples to [MSU Diagnostic Services](#).

Counties being monitored for BMSB in 2016 are: Allegan, Antrim, Benzie, Berrien, Clare, Genesee, Grand Traverse, Ingham, Ionia, Kalamazoo, Kent, Lapeer, Leelanau, Lenawee, Livingston, Macomb, Monroe, Oakland, Oceana, Ottawa and Van Buren. Traps are set up near apple, stone fruits (peach, plum, sweet and tart cherry), blueberry, grape, strawberry, a variety of vegetable crops and at several urban locations considered to be hot spots.

For more information about management strategies in fruit should populations reach levels that would require control, please refer to the MSU Extension Bulletin E0154,

[“2016 Michigan Fruit Management Guide.”](#) To learn more about how to monitor for brown marmorated stink bugs, distinguish it from other similar-looking stink bugs and what plants it favors, visit [MSU’s Brown Marmorated Stink Bug website](#).

Michigan Managed Pollinator Protection Plan listening sessions

Beekeepers, growers and others interested in the health of honey bees are invited to listening sessions to discuss pesticide use and bees.

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



Honey bees on a frame removed from a hive during a health inspection. All photos: Sarah B. Scott, MSU.

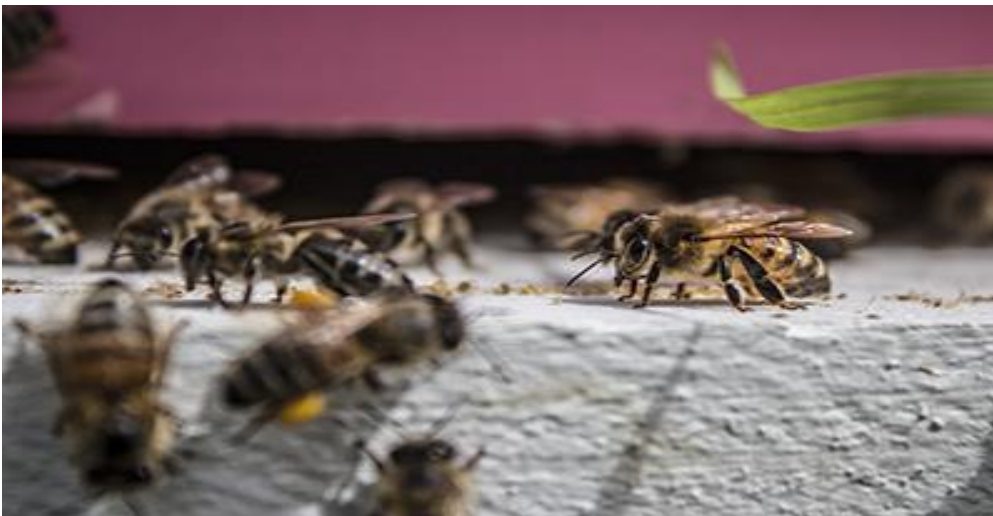
[Michigan State University](#) will host [six listening sessions](#) around the state for stakeholders concerned about the health of managed bees in Michigan. These listening sessions will be held from late August to early October and will each be two hours. A short presentation will be followed by time for input. We invite local beekeepers, growers and others with interest in the long-term health of honey bees and other managed bees to attend one of these sessions to provide input.

These meetings and the input we receive will be an important step towards developing a [Managed Pollinator Protection Plan](#) that is underway currently. An inaugural meeting

was held in February 2016 to bring together commodity partners and stakeholders to start discussing and developing a plan for managed pollinator protection and stewardship. These six listening sessions are the next step in the process that will culminate in producing a plan to help minimize risk of pesticides to our state's managed bees and to ensure their long-term health.

The three main objectives of this process are to:

1. Build relationships between interested parties in Michigan, representing beekeeper groups, growers, government and research to share existing work and to open pathways for future collaboration.
2. Develop a managed pollinator protection plan that is consistent with the National EPA Pollinator Protection Plan that allows for adequate protection of managed and wild pollinator populations, while simultaneously maintaining the ability for agricultural producers to produce their crop.
3. Develop a method and strategy of communication with the public and a wider group of stakeholders.



Honey bees at the entrance of a hive. A bee in the foreground can be seen with pollen baskets she is bringing back to the hive from a foraging trip.

The goal of the Managed Pollinator Protection Plan is to provide guidance to improve and protect the health of managed pollinators. It is designed to be flexible and is non-regulatory. With a high level of input from stakeholders, and with an open dialogue that promotes amendments and adjustments, the Michigan Managed Pollinator Protection Plan will be improved as we get more information.

Pollinator-related issues differ across states, so it is crucial to tailor Michigan's Managed Pollinator Protection Plan to fit individual situations and encourage proper best management practices (BMPs) that apply best to our particular situation. Many other states have developed Managed Pollinator Protection Plans, and there is a list of these posted at the [Pollinator Stewardship Network](#) website. [Guidelines for Managed](#)

[Pollinator Protection Plans](#) are found at the [National Association of State Departments of Agriculture](#) website.

Given the importance of beekeeping, crop production and wildlife habitat management in Michigan, we are inviting representatives from all of these sectors to the discussion. We expect this managed pollinator plan will highlight the many ways Michigan stakeholders can work together to ensure crop production and beekeeping remain strong in our state into the future. In order to tailor the plan to meet as many needs as possible, we are looking for input from stakeholders to move forward in developing a plan that will be productive, successful and beneficial.



Honey bee foraging on *Asclepias*, commonly known as milkweed.

Learn more about the Michigan Managed Pollinator Protection Plan, what the state of Michigan is doing to protect pollinators, and give us your feedback on developing the Managed Pollinator Protection Plan by attending one of the [Managed Pollinator Protection Plan listening sessions](#) listed below.

Scheduled listening sessions

- [Aug. 30](#), 10 a.m.-12 p.m., Michigan State University Pavilion, 4301 Farm Lane, East Lansing, MI 48823, Room C/D
- [Sept. 7](#), 10 a.m. -12 p.m., Saginaw Valley Research and Extension Center, 3775 S. Reese Road Frankenmuth, MI 48734
- [Sept. 13](#), 2-4 p.m., Upper Peninsula Research and Extension Center, E3774 University Dr. Chatham, MI 49816
- [Sept. 14](#), 10 a.m. -12 p.m., Northwest Michigan Horticulture Research Center, 6686 S. Center Highway Traverse City, MI 49684
- [Oct. 4](#), 10 a.m. -12 p.m., Trevor Nichols Research Center, 6237 124th Avenue Fennville, MI 49408

- [Oct. 6](#), 10 a.m. -12 p.m., Central Michigan University, 1200 S. Franklin St., Mount Pleasant, MI 48859
- [Oct. 12](#), 10 a.m. -12 p.m., Tollgate Research Center, 28115 Meadowbrook Road, Novi, MI 48377

To register for any of these meetings so we can gauge attendance, **please register at: [Managed Pollinator Protection Plan Meetings](#)**. If you have any questions or concerns prior to the meetings, please let us know by emailing mmp3@msu.edu.

Find more information about the plan on our [Managed Pollinator Protection Plan](#) website. You can find updates and current information on listening sessions and other topics related to the Managed Pollinator Protection Plan on [MSU Extension's Pollinators and Pollination](#) page.

Orchard and plant tour promoted institutional purchases of dried and frozen Michigan cherries

Institutional stakeholders were given a first-hand glimpse at the Michigan cherry supply chain

Posted by [Mariel Borgman](#), Michigan State University Extension, MSUE News

The Michigan Farm to Institution Network and its institutional purchasing campaign Cultivate Michigan recently held a tour in northern Michigan to learn about dried and frozen cherries, which will soon debut as the 2016 [featured food](#) for winter. Though they can be purchased year-round in their dried and frozen forms, all cherries in Michigan are harvested in July and August. Cherries fall into two general categories: tart and sweet. Michigan is the top state for tart cherry growing, with nearly 75 percent of the entire country's production. Nearly all (98 percent) of the tart cherries grown in the U.S. are one variety, Montmorency, and they are primarily processed by drying, freezing, or canning. Michigan also produces sweet cherries, which are generally consumed fresh, though some are frozen or canned as well. One of the most surprising things that participants learned on the tour was that maraschino cherries are made with Yellow Gold cherries, which are a light sweet yellow variety that is dyed red or green and preserved in syrup.



The tour was held in July so that participants could observe the harvest first-hand. The tour was sponsored by the [Cherry Marketing Institute](#) and lunch was sponsored by the [MSU Product Center](#). Seven farm to institution stakeholders attended the tour to learn more about the supply chain and purchasing options for Michigan dried and frozen cherries. They were joined by three Michigan State University Extension Educators and Phil Korson, President of the Cherry Marketing Institute.

The first stop on the tour was Cherry Bay Orchards in Suttons Bay to meet with Don Gregory, who has been growing cherries there since the early 1970s. While enjoying samples of tart cherry juice and cookies made with dried tart cherries, participants learned how cherry farming is a long term commitment and investment for growers. Don shared that cherry trees are not harvested until five years after they are planted, and that it takes about four years after the first harvest to pay off the operating cost of that tree. After a brief introduction to the farm and its food safety practices, Don led the group into the orchard to watch the harvesting equipment in operation. He explained how quickly the cherry season progresses: only 60 days from bloom to harvest.



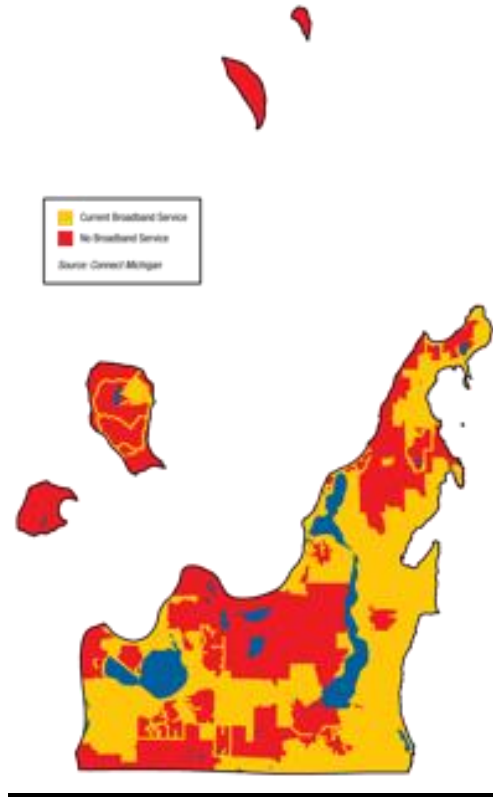
Cherries are harvested into water to protect the fruit. Machines vigorously, yet gently, shake the trees to loosen the cherries. Rather than simply back and forth, the machines shake the cherry trees in the shape of a star to ensure that they impact all of the stems at just the right angle to release the fruit. The cherries land on an angled canvas tarp and drop into large tanks that hold 1,000 pounds of cherries and 1,000 pounds of water. After harvest, the fruit remains in the tanks for several hours while the water is constantly being flushed out and exchanged for cool water. This process removes the field heat from the cherries.

After departing the orchard, participants traveled to the [Northwest Michigan Horticultural Research Station](#) in Traverse City to have lunch, meet with industry representatives, and learn about the latest research on growing cherries. The research station is owned by a collective of cherry growers in the region and is operated [MSU AgBioResearch](#). Participants took a wagon ride around the facility with Farm Manager Bill Klein, who spoke to the group about current studies looking at cover crops for orchards, plants that attract native cherry pollinators, new varieties of cherries, new and emerging pest issues and diseases.



The day concluded with a tour of the [Shoreline Fruit](#) processing facility in Williamsburg to learn about the process for making dried cherries. Shoreline Fruit is a grower-owned processing and marketing company. Cherry marketing looks much different today than it did in the past. Anticipating changes in the consumer market, the cherry industry intentionally transitioned its tart cherry marketing efforts away from dessert products and into the health food market with products such as dried cherries and tart cherry juice. At the processing plant, the fruit gets washed, sorted and pitted. Then it is either frozen for use as a frozen or dried cherry product, or canned. Many participants were surprised to learn that dried cherries are made from frozen cherries, which are then thawed, infused with syrup and finally processed in a drier. Before departing for the day, participants had the opportunity to get a guided behind-the-scenes tour of the processing plant.

[Cultivate Michigan](#) is co-coordinated by [Michigan State University Center for Regional Food Systems](#) and the Ecology Center and is supported by [Michigan State University Extension](#).



Leelanau Peninsula Economic Foundation Technology Committee Seeks Community Input!

High-speed Internet and broadband capabilities can no longer be considered a “luxury.” Indeed, Internet is considered a utility and a critical necessity for schools, families, libraries, business owners, and emergency services personnel.

The Leelanau Peninsula Economic Foundation (LPEF) Technology Committee has partnered with *Connect Michigan* to survey Leelanau County residents and stakeholders to identify needs and priorities. The survey will be helpful to efforts designed to identify areas lacking broadband access and for developing mechanisms to promote expansion of services via attracting additional providers.

Connect Michigan has worked with providers to identify Internet needs throughout Michigan. In the image below, the areas shaded in red represent un-served, or inadequately served Leelanau residents. Areas shaded in yellow, according to Connect Michigan, have at least some level of broadband availability. As depicted, significant portions of Leelanau County are without adequate service.

The Technology Committee’s Chair, Commissioner Patricia Soutas-Little, says, “Broadband is vital for so many businesses and residents. Leelanau County has such a diverse landscape, knowing current accessibility and resident needs, will help us plan for the future.”

The Committee is striving to have survey result tabulated in early September. Survey results will be used to develop action plans and work with potential providers to address gaps and improved service goals. The Survey is open until September 3 and only takes ten minutes to complete. You can take the survey as a resident, business owner, or as a designated representative of another organization. The survey is available online at <http://www.connectmycommunity.org/leelanau-peninsula/> or a paper copy can be obtained from any library or by calling the Leelanau Peninsula Chamber of Commerce at (231) 994-2202. For additional information about this effort, contact Patricia Soutas-Little at (231) 218-8496.

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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>

