

Northern Michigan FruitNet 2013

Northwest Michigan Horticultural Research Center

Weekly Update

April 16, 2013

GROWING DEGREE DAY ACCUMULATIONS AS OF April 15 AT THE NWMHRC

Year	2013	2012	2011	2010	2009	2008	23yr. Avg.
GDD42	17	358	75	266	68	60	117.5
GDD50	1	190	23	117	16	17	45.7

NORTHWEST MICHIGAN REGIONAL REPORT

With continued cold temperatures, all remains quiet across the region

N.L. Rothwell, District Horticulturist, NWMHRC

Temperatures remain cold all across northwest Michigan. With last week's rainfall, we have seen significant snow melt, but orchard floors are still covered with snow in many places. As with most regions of the state, winter seems to be persistent this year. We have received rain each day from 4/8-4/15, with varying amounts daily, for a grand total of 2.26" of precipitation. For degree day accumulations, we are still behind our average, and so far this season, we have accumulated 17GDD base 42 and 1GDD base 50. Our averages for the past 22 years are 117.5GDD base 42 and 45.7GDD base 50. There is little to no movement in any fruit crop here in the north.

Growers are continuing to prune and where they are able to get into the orchards, they are removing brush. Growers are eager for some dry days to finish pruning, and most growers have been waiting for drier and warmer conditions to prune sweet cherries.

ANNUAL TREE FRUIT IPM KICK-OFF

This year's annual Tree Fruit Kickoff will be held **Monday, April 22, 6:00-8:00 p.m.**, at the NW Michigan Horticultural Research Center in Traverse City. As in previous years, we will review label and management changes for the 2013 season that affect apple and cherry growers. This meeting is *free* and no registration is required. Two Pesticide Recertification Credits and Certified Crop Advisor Credits have been awarded. For more information, call 231-946-1510.

Agenda

- 6:00-6:30 p.m. Update on 2013 fungicide labels for cherries and apples
- 6:30-7:00 Using Kasumin to control the streptomycin-resistant fireblight pathogen
- 7:00-7:45 Update on insect control and efficacy in cherry and apple
- 7:45-8:00 How to set up and use Twitter to get the most up-to-date pest management information from the NWMHRC

AN OVERVIEW OF FUNGICIDE PRE-MIXES FOR TREE FRUITS

Many tree fruit fungicide options are a pre-mixture of two fungicides, and growers need to be aware of the components to properly rotate these new materials.

N.L. Rothwell, District Horticulturist, NWMHRC

G.W. Sundin, Plant Pathology, MSU

Most of the new fungicides available for tree fruit growers are a mixture of more than one fungicide in the container—these new materials have been pre-mixed and are sold under one trade name. Growers need to be aware of the pre-mixed materials because, in most cases, one of the two materials in the product is not effective due to resistance issues in our common tree fruit pathogens. Growers also need to know the compounds in these products to effectively rotate fungicides to manage resistance, particularly as we have very few compounds available to manage the major tree fruit diseases. Additionally, some of the new products have similar names and may be difficult to decipher for the different crops.

Table 1 contains a summary of the currently available fungicide pre-mixes that can be used to control tree fruit diseases. The table includes the trade name of the product, the common names of both fungicides in that particular product, the mode of action, and the code of each of the fungicides in that product. The group codes were developed by the Fungicide Resistance Action Committee (FRAC) and can be used as a quick way to determine the make-up of each of the pre-mixed products. For example, if a cherry grower uses Merivon (SDHI + strobilurin: codes 7 + 11) for his/her first cover, another new product, Luna Sensation, is also made up of an SDHI + strobilurin (codes 7 + 11) and should not be used as a second cover spray as the grower will not be rotating fungicides--the two components of both materials are the same.

Growers should also be aware that all three of the new pre-mixed fungicides, Luna Sensation, Luna Tranquility, and Merivon, and the single mode of action fungicide Fontelis all have a succinate dehydrogenase inhibitor (SDHI) component. This SDHI mode of action has been used in tree fruits since 2004 in the older pre-mixed material Pristine. Data from the NWMHRS efficacy trials and from cherry leaf spot isolates (CLS) collected from northwest and west central Michigan show that many isolates of the CLS pathogen are less sensitive to the SDHI component of Pristine, and reduced sensitivity is the first stage of a pathogen shifting toward resistance. Fewer isolates have been documented to be resistant to the SDHI component of Pristine. Based on this information, we are not recommending growers use Pristine for leaf spot control this season, particularly as we have newer materials that are effective in controlling CLS. The good news from our efficacy trials show that the CLS pathogen is still highly sensitive to the SDHI components of the new materials, Luna Sensation and Merivon, but because these new fungicides share that SDHI component, they must be used with discretion in order to keep these materials for cherry leaf spot control into the future.

Product Name	Fungicide Common Name	Mode of Action	FRAC Code	Fruit Crop
Adament	tebuconazole + trifloxystrobin	SI + strobilurin	3 + 11	cherries, peaches, nectarines, grapes (not Concord)
CaptEvate	fenhexamid + captan	hydroxynilide + phthalimide	17 + M4	cherries
InspireSuper	difenoconazole + cyprodinil	SI + anilinopyrimidine	3 + 9	grapes, apples, pears
LunaExperience	fluopyram + tebuconazole	SDHI + SI	7 + 3	winegrapes
LunaSensation	fluopyram + trifloxystrobin	SDHI + strobilurin	7 + 11	apples, cherries
LunaTranquility	fluopyram + pyrimethanil	SDHI + anilinopyrimidine	7 + 9	apples
Merivon	fluxapyroxad + pyraclostrobin	SDHI + strobilurin	7 + 11	apples, cherries, pears, nectarines, peaches, plums

Pristine	boscalid + pyraclostrobin	SDHI + stroby	7 + 11	apples, cherries, pears, plums, peaches, nectarines, apricots
Fontelis	penthiopyrad	SDHI	7	apples, cherries, pears, peaches, plums, nectarines, strawberries

Table 1. Summary of pre-mix fungicides available in tree fruits and winegrapes.

MICHIGAN CASH FARMLAND LEASE

Attached is the new, **free** Michigan Cash Farmland Lease. **It is unique in that it is an interactive Microsoft Word document that can be used on a home computer.**

It is probably too late to use for this crop season, but now that it is available, I wanted to send it out. It will also be posted on the Farm Management web page <http://firm.msue.msu.edu/>

Why did we create this document?

Previously, MSUE did not have a land leasing template that is specific to MI law. Instead, we provided a template from Iowa State, Missouri, or other land grant universities.

The template provides the structural framework for a business agreement (lease) between a cropland landlord and a tenant. Some of the terms include:

- a. termination rights and responsibilities of each party
- b. insurance requirements
- c. environmental standards and nutrient management
- d. irrigation water use reporting
- e. an alternative method to settle disagreements other than litigation

It has protected cells, except where information is filled in and uses "save as" so a producer or landowner can use the template for more than one lease. It is very flexible so that each agreement can be tailor made for that situation. It is a Word 2003 document in case people do not have Word 2010. Previously, only Adobe pdf files were available, which were not computer fill-in documents.

With the rise in commodity prices, some landowners (lessors) have been cancelling verbal leases prior to their expiration in order to attain higher income. If the current tenant (lessee) has invested in crop inputs such as fertilizer and tillage for the next crop, without a written lease, he may lose that investment.

In parts of Michigan, lessees are willing to invest in permanent improvements such as irrigation wells, center pivot sprinklers, permanent crop plantings and long-lasting fertilizer investments. This template provides a timetable and method to reimburse a lessee for unrealized investment in case the lease terminates early, such as a sale of the farm.

Curtis Talley Jr.
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You can find farm management information on our new web site <http://firm.msue.msu.edu/>

SOURCING INFORMATION ON HIGH DENSITY SYSTEMS FOR APPLES

Online videos are available for fruit growers wanting current information on development and management of apple orchards.

Posted on **April 11, 2013** by **Ron Perry**, Michigan State University Extension, Department of Horticulture

Apple growers continue to order and plant trees on dwarfing rootstocks, which now dominate the apple industry scene throughout the country. In Michigan, over 75 percent of the trees being planted are on M.9 or equivalent dwarfing rootstocks and many are being established at spacings of 3 to 6 feet down the tree row. Growers are doing this to increase yields of high quality fruit earlier in the orchard life. Investors and loan officers like it, too, because they see return on their investment sooner. The only challenge to this approach is a spring season such as we experienced in Michigan in 2012 where we lost the majority of a crop.

Many growers are trying new, high density systems for the first time and are looking for guidance in development and management. The guidance and management protocols do exist now thanks to the Internet, at your finger-tips on your computer or smart phone keyboard.

A simple browser search on topics such as "tall spindle apples" or "vertical axe apples" can reveal a list of good sources of information quickly. At [Michigan State University](#), we have also made information available through [Michigan State University Extension News for Fruit & Nuts](#). Many of us campus Extension specialists who also teach courses provide a web site which makes it possible for students in associated topic classes to access. Our web sites can also be a great resource for growers. [My web site](#) has several articles and videos that I have archived under the "[Extension](#)" tab.

At this [web site](#), growers and students can access information on planting and orchard establishment; tree fruit rootstock selection; orchard and vineyard site selection and soils; training and pruning systems for orchards; and micro-irrigation for orchards and vineyards in Michigan. Many of the articles are in PDF format generated from past presentations and lectures on a topic and some are from articles prepared for print.

Additionally, I have included videos regarding pruning, training and planting fruit trees. I try to update these for our students and grower audience.

The two systems which currently dominate the apple growing landscape are the "tall spindle" and "vertical axe" systems. With the help of my MSU colleagues, we have prepared a couple videos on [pruning and training trees](#) in these systems. I prepared these videos because as I travel and visit orchards, I see a number of costly mistakes being made regarding how to develop and manage them properly. I have been in orchards where the basal portion of what is supposed to be a tall spindle tree is excessively large. The concept of recycling all branches from ground up is not understood and different from the vertical axe, where the lower portion of the canopy is allowed to invade the wider spacing. Tall spindle trees planted at 3 feet apart can't allow vigorous branches beyond 2 feet in length to stay in the canopy. [View these videos](#) to review the protocols and find how out to make your trees fit in this system.

Dr. Perry's work is funded in part by [MSU's AgBioResearch](#).

This article was published by [Michigan State University Extension](http://www.msue.msu.edu). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

SUCCESSFUL NUTRIENT MANAGEMENT BEGINS WITH SOIL SAMPLING

Soil analysis and fertilizer recommendations are only as good as the samples you submit.

Posted on **April 11, 2013** by **James DeDecker**, Michigan State University Extension

Now that spring is here, many growers will be heading to the field, probe and bucket in hand, to sample their soils. Soil testing is a vital first step toward successful nutrient management. Analysis results indicate the concentration of nutrients present in the soil, as well as any deficiencies that could potentially limit plant growth. Using this information to inform fertilizer application most often results in healthier, higher yielding crops. Soil testing also contributes to efficient fertilizer use that maximizes return on investment and protects the environment. That said, soil analysis and fertilizer recommendations are only as good as the samples submitted to the lab. The way that samples are collected can impact how accurately they represent the soil in question.

Sample uniform areas

Soil samples are small examples intended to reflect the nutrient status of a much larger management zone. In general, one composite sample of 20 cores mixed together can be used to represent 10 to 15 acres. However, differences in soil type, texture, drainage, topography and management occurring across a field should all be considered when delineating sampling areas. Building each composite sample with subsamples from a relatively uniform area increases the likelihood that the soil in your bucket accurately represents the rest of the management zone.

Soil survey maps are an excellent reference to the basic variability in a field. Field history records can provide additional information regarding crop rotation, fertilizer or manure application, and yield patterns. It is also important to note any atypical areas such as field edges near roadways or spots where lime or manure were once piled. Incorporating all of this information in a simple field map will make it much easier to identify uniform soil areas for sampling.

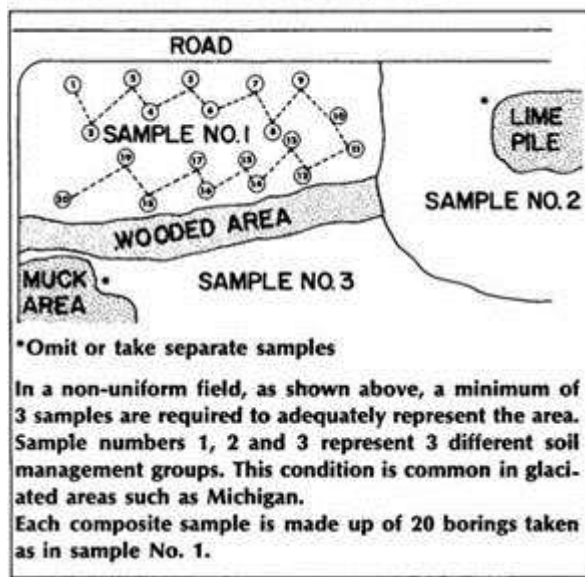
Sample collection

Soil samples can be taken using a probe, auger or spade. Probes and augers are handy because they extract a standard volume of soil, but a spade can do the same with a little extra effort. Subsamples should be collected and mixed in a clean, plastic pail. It is best to avoid metal containers due to their potential to contaminate samples.

Research has indicated that moving through each uniform sampling area in a zigzag pattern will generate the most representative sample. Select 20 evenly distributed sampling sites along the sampling pattern to visit (Figure 1). At each site, brush aside any crop residue, remove a core or slice of soil approximately 0.5 to 0.75 inches thick and add it to your bucket. Take each sample at a consistent depth to accurately reflect the vertical distribution of nutrients. In tilled fields, sample to the average depth of tillage. No-till or reduced tillage fields should be sampled to 8 inches.

Figure 1. Soil sampling.

Follow a Zig-Zag pattern when sampling.



Credit: Darryl Warncke, MSU

Once all 20 subsamples have been collected from a particular sampling area, thoroughly mix the cores into a uniform composite sample. If the soil is wet it may be necessary to dry it before mixing. After the sample is mixed, take a minute to sift through it and remove any foreign material. Finally, place approximately one pint of the soil into a sample box or bag for submission to the lab. Soil sample boxes and bags can be obtained from your local [Michigan State University Extension county office](#).

In most cropping systems, sampling the soil every two to three years will provide enough information for sound nutrient management. Sandy soils with low cation exchange capacities can rapidly lose nutrients to crop removal or leaching, and as a result should be sampled more frequently. Due to the unique nutrient needs of many vegetable crops, it is recommended that fields with vegetables in the rotation be sampled at least every other year.

Sample submission

The [Soil and Plant Nutrient Laboratory](#) at Michigan State University offers two basic soil analysis services. Homeowners and gardeners can purchase a [soil test self-mailer kit](#) from their [county Extension office](#) for \$25. This service includes a sample bag, postage paid envelope, complete lab analysis for pH, phosphorus (P), potassium (K), calcium (Ca), magnesium (Mg), organic matter, soil texture and sulfur, as well as custom fertilizer and lime recommendations.

Commercial producers can purchase a [soil sample box](#) for \$12. This service includes a basic soil analysis and report indicating nutrient concentrations and needs. The basic analysis package tests for pH, lime requirement, P, K, Ca and Mg, but a wide range of other analyses can be run at an additional cost. Fertilizer recommendations are not automatically generated for commercial producers, but can be obtained upon request from your local agriculture educator at no cost. Results from both the homeowner and commercial soil test services are usually returned within two weeks of sample submission.

Following the soil sampling procedures discussed above will help you collect a representative sample. Good samples improve the accuracy of analysis and fertilizer recommendations, providing a strong foundation for successful nutrient management.

For additional information on these sampling strategies, see MSU Extension Bulletin E-498, "[Sampling Soils for Fertilizer and Lime Recommendations](#)."

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

SPRING WINE GRAPE WEBINARS

Attached is a schedule of grape and wine webinars that will be held for April, May and June this year. These webinars are *free*, but you must register for them separately in advance. A web link and instructions will be sent to registrants prior to each event.

[Click here](#) to view the details

Wine Sensory Workshop on April 20-21, 2013

Instructor and sommelier Ruth Ryberg.

Go here to register: <http://store.chateauchantal.com/store/product/3226/MSU-Wine-Sensory-Workshop/>

Fee: \$150, for both days

Location: University Club of Michigan State University, 3435 Forest Road, Lansing, MI. The University Club is just south of the main campus. ****Please note change in location.**

Registration is limited to 30 people.

See attached flyer for full agenda, instructor bio, and how to register online through the Michigan Wine Foundation.

This program is a joint effort sponsored by VESTA, the MSU Institute of Agricultural Technology, and the Michigan Wine Foundation.

SASKATOONS: A SMALL FRUIT WITH BIG AMBITIONS

Michigan saskatoon growers are needed for a survey that will help the Saskatoon Berry Institute of North America achieve production and marketing goals.

Posted on **April 4, 2013** by **Duke Elsner**, Michigan State University Extension



If you have not heard of saskatoon berries, there is an energetic group of growers in northern Michigan that wants to fill you in, and fill you up, with this tasty crop. Saskatoon berries are small, dark blue to black fruits that are nutritious and have many uses. In addition to simply eating them as fresh fruit, saskatoons can be used in salads, baked goods and ice cream, or made into jams, jellies, sauces, syrups, juice and wine.

Saskatoons are a well-established and popular food crop in many provinces of Canada. Most commercial scale plantings of saskatoons in Michigan are only a few years old, but the early results

indicate that we have very favorable conditions for producing good quantities of high quality fruit. It is estimated that there are 50 commercial plantings in the state with about 100 acres planted as of 2012.

Michigan growers have shown leadership by forming the [Saskatoon Berry Institute of North America](#) to support all aspects of saskatoon production, marketing and utilization. This organization is currently in the process of defining its mission and initial goals, and two goals are already set: expanding the grower membership base and accurately assessing the current status of saskatoon acreage and production.

If you would like more information on the Saskatoon Berry Institute of North America and how to become a member, contact [Brenda Ricksgers](#) , or you can connect with the institute at their [Facebook page](#).

[Michigan State University Extension](#) will be assisting the institute with the second goal by conducting a survey of growers to determine the number of saskatoon acres in production, varieties being grown, expected yields and other details of their operations. One of the challenges in conducting this survey will simply be finding the growers as there is currently no complete list of growers or established route of communication. The process will have to rely on getting the word out through several media channels, social networking and connections with Extension educators in production areas. If you are a commercial grower of saskatoons, please provide your contact information to myself, Duke Elsner, at elsner@msu.edu so you may be included in the survey effort.

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

REMINDER FOR CANEBERRY GROWERS TO COMPLETE SPOTTED WING DROSOPHILA NATIONAL SURVEY BY APRIL 30

Spotted wing Drosophila national survey for raspberry and blackberry growers closes April 30. Results will be summarized and used to guide management recommendations.

Posted on **April 11, 2013** by **Diane Brown**, Michigan State University Extension

There is still time to add information about your experiences with [spotted wing Drosophila](#) (SWD) in commercial production of caneberries. As of April 11, 156 growers have taken the [SWD survey for caneberry growers](#), which takes an average of less than 10 minutes to complete.

By adding your information, you are helping to support requests to the [U.S. Environmental Protection Agency](#) (EPA) for expanded insecticide labeling to control SWD. This information will also be valuable to provide background information for grants supporting research to guide management recommendations. All information collected will be summarized; individual growers will not be identified, and individual information will remain confidential.

Please [complete the survey](#) only once. If you have questions or concerns, please contact MSU Extension's [Diane Brown](#) at 1-269-944-4126.

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

WEBSITES OF INTEREST

Insect and disease predictive information is available at:

<http://enviroweather.msu.edu/homeMap.php>

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/>

Fruit CAT Alert Reports have moved to MSU News

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