


[Home](#)
[Background
& Projects](#)
[Calendar](#)
[Directions](#)
[InfoVideos](#)
[Links](#)
[Extension
Expert Search](#)
[Publications](#)
[Staff](#)

Northern Michigan FruitNet 2003 Weekly Update

NW Michigan Horticultural Research Station

[Jim Nugent](#)

District Horticulturist

[Gary Thornton](#)

District Fruit IPM Agent

[Bill Klein](#)

Farm Mgr, NWMHRS

[Duke Elsner](#)

Agricultural Agent

[Jim Bardenhagen](#)

Leelanau Extension Director

April 15, 2003

Spring is springing! That means it's time for the NW Michigan Fruit Extension team to begin the FruitNet newsletter. We'll begin the season with reports every-other week in April, and then we'll publish weekly during the summer. The subscription is free (thanks to support from area horticultural organizations!) The FruitNet reports are available either via fax or e-mail. Past subscribers remain on our list for the version they selected last year. Please contact the NWMHRS at 946-1510 if you wish to drop your subscription or change from Fax to e-mail.

GROWING DEGREE DAY ACCUMULATIONS as of April 14, 2003 at the NWMHRS

Year	2003	2002	2001	2000	1999	13 yr. Av. (90-2002)
GDD42	94	68	66	176	146	92
GDD50	32	22	20	64	54	33

WEATHER

Two major cold events have affected fruit crops in NW Michigan. The first was a late winter cold event that occurred on the morning of March 3, when temperatures reached lows of -10° to -20° F. The event followed daily high temperatures in the upper 30's on Feb. 28 and March 1. At the NWMHRS, temperatures dropped from 39° F to -13° F in 37 hours. There was enough deacclimation to cold in the plants preceding the cold snap to result in much worse bud damage in sweet cherries and grapes than expected. The second event (though much less significant than the first) occurred on April 6, when low temperatures ranged from -1° F to 16° F in NW Michigan. This caused some additional flower bud damage.

COMMODITY REPORTS

By Gary Thornton & Jim Nugent

Pear psylla adults are already flying and laying eggs. Egg numbers are light at this time.

Apples: Growers should keep in mind how moist last fall was when they plan for this year's scab season. Fall wetness can lead to a scab build up on leaves, leading to high inoculum levels in spring. With high inoculum, it is especially important to have protectant sprays on in a timely manner.

Sweet cherries have suffered substantial flower bud damage and wood injury in young trees. Dark varieties have generally sustained more bud damage than light varieties. Emperor Francis looks the best of the major varieties grown. Because of the need to set a high portion of the remaining live flowers, be sure to have ample bees present in sweet cherry orchards (approximately two good hives per acre). In tart cherries, Montmorency looks good at this time. There is some bud injury in Balaton.

Grapes show extensive bud and wood injury.

BACTERIAL CANKER MANAGEMENT WITH COPPER

By Gary Thornton, George W. Sundin, Jim Nugent

Due to the unprecedented severity of bacterial canker on sweet cherry throughout Michigan in 2002, the potential exists for increased canker again this year. Keep in mind though, that the severity of this disease is greatly influenced by the weather (especially by the occurrence of frost damage during bloom) in any given year and wide swings in the severity of this disease should be expected. Protection of younger trees is especially important as girdling cankers can lead to significant limb loss and tree death.

Bacterial canker is a serious disease of sweet cherry in the Eastern United States caused by the bacteria *Pseudomonas syringae* pv. *syringae* and *Pseudomonas syringae* pv. *morsprunorum*. The bacteria overwinter at the margins of cankers, systemically in the vascular system of the tree or in buds. The bloom period is the time when the bacteria are most active; rapid multiplication and spreading is facilitated by cool, wet weather and rain. Bacterial infection

rapid multiplication and spreading is facilitated by cool, wet weather and rain. Bacterial infection occurs following the invasion of wounds or natural tissue openings such as nectaries of flowers or stomata. *The level of infection is greatly influenced by the occurrence of frost damage or extended periods of cool, rainy weather.* Since infections are so weather dependent, the severity of this disease varies greatly from year to year.

Copper has been widely proposed as offering some level of control of this disease, however, the use of copper on sweet cherries to aid in the control of bacterial canker is a controversial subject. Some growers swear that it helps and others don't bother applying it, as they see little value in it.

When using copper to help control bacterial canker, full rate applications of copper should be applied during the dormant to early bud swell periods only. Researchers in some regions have shown success with applications made in the fall at 75% leaf drop. Most applications in Michigan are applied in the spring prior to the bud burst stage. Rates are typically cut in half if the applications are made beyond the mid to late swollen bud stage. Once bud burst occurs and they begin to expose the tender, green tissue inside, then copper may cause serious phytotoxicity particularly if warmer temperatures prevail. However, if copper is applied between bud burst and bloom, follow labeled rates for blossom blight (generally 25-35% of the dormant rate). Again, it should be stressed that significant phytotoxicity may occur when copper is applied to green tissue on sweet cherries. *Copper applications later in the growing season are not recommended, as the bacteria do not thrive in the warmer weather.*

Sweet cherries on Gisela rootstocks have demonstrated an increased susceptibility to bacterial canker, so are good candidate orchards to receive copper treatment. One and two year old sweet cherry trees that have been partially debudded to aid in proper limb placement should be treated with copper immediately after debudding takes place – if debudded before bud opening. Also, consider treating orchards with a past history of canker problems.

The Spray Calendar indicates a multiple application program using Tri-Basic Copper Sulfate for Bacterial Canker control on tart cherries. This is not registered in the same way on sweets due to increased phytotoxicity problems on sweets. Note also that the program indicated will cause leaf defoliation even on tart cherries if applied during warm conditions.

Keep in mind that the weather does play an important role in the level of infections that take place and some of those infections can be avoided through the use of sound cultural practices. When training young sweet cherries use clothespins to spread the main scaffolds. Steep

crotch angles are more susceptible to winter injury and often leads to damaged tissue that can provide the bacteria a means to enter the tree. Pruning is best done prior to the cool, wet periods of the spring, when the trees are still fully dormant and temperatures are still generally below freezing. If you have to prune later, avoid pruning sweet cherry trees when cool, wet weather is in the near forecast. A few days of warm, dry weather can allow those pruning cuts to dry off and reduce their susceptibility to canker, although it won't prevent all infections from occurring.

In the long term, reducing bacterial canker problems should be addressed by doing all of the horticultural practices that keep trees healthy. This pathogen is an opportunist that causes increased problems when trees are stressed. Factors that increase the predisposition of trees to canker infection include such things as low soil pH, exposure to wind, and low (cold) pockets, but any stress factor may lead to increased problems.

MSU PESTNET FORECAST

By Gary Thornton

This year's PestNet forecast will be funded entirely by industry support. In appreciation of their efforts you will see the names of the sponsors listed on the reports. Please let them know how much you appreciate their support. As in past years, this network will supply growers with disease and insect models using the Michigan Ag Weather Network information. The disease reports will come out once per day this year whenever it rains. Fireblight reports will be issued daily during bloom. The insect assist charts, which are based on trap catch biofix dates, and the 21 day summary will be delivered to you twice per week.

Delivery options

Via email – This method is *free* of charge. If you did not subscribe last year, or if your email address has changed, please email your address to thornton@msue.msu.edu and indicate what station(s) you would like reports from (see list below).

Via Fax – A fax subscription is **\$25/year**. Subscribe by contacting the NWMHRS at 231/946-1510. If you subscribed last year, you will be sent reports until May 1st. Payment will be required at that time. If you haven't paid the subscription fee at that point, your faxes will discontinue. Make checks payable to **Michigan State University** and mail them to: NWMHRS, 6686 S. Center Hwy., Traverse City, MI 49684.

Via Phone – The cherry leaf spot and apple scab reports will not be available by phone this year.

Via Internet – All reports can be accessed on the internet at www.mifruit.com

To subscribe to the email or fax versions call 231/946-1510 or 888/749-3019, or e-mail at thornton@msue.msu.edu

Stations: Northport, East Leland, NWMHRS, Old Mission, Elk Rapids, Kewadin, Eastport, Benzonia or Manistee.

60 HOUR WEATHER FORECAST
By Jim Nugent and Gary Thornton

A few years ago a program was initiated to deliver weather forecasts daily for the Grand Traverse area during the growing season. The forecast is given in 3 hr. increments for a 60 hr. period. It is available by e-mail and fax. There is a \$30 subscription fee for the [fax version](#) and a \$20 subscription fee for the [e-mail version](#) per season. The Traverse City 60 hr. forecast is also available free on the web at:

<http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous14ktvc> The predictions are based on the Traverse City airport, so you will need to adjust temperature forecasts as appropriate to your site.

The computer program that generates these reports is run twice per day - based on 8:00 a.m. data that is available to us at about 2:45 p.m., and again based on 8:00 p.m. data and available to us about 2:45 a.m. Fax subscribers will receive the afternoon report only. E-mail subscribers will receive both reports; i.e. updated reports every 12 hours. We will begin the fax cycle by about 3:00 p.m. Reports will be sent daily from **mid April** through **mid October**.

This predictive information should complement the real-time (current) weather and pest scouting information that you are collecting to further improve your IPM implementation decisions!

To subscribe to the 60 Hour Weather Forecast (email or fax) contact Jackie Baase or Alison Heins at the NWMHRS by phone at 946-1510 or 888/749-3019, by fax 946-1404, or by e-mail at nwmihort@msue.msu.edu. Make checks payable to **Michigan State University** and mail to: NWMHRS, 6686 S. Center Highway, Traverse City, MI 49684.

CODE-A-PHONE MESSAGE
By Gary Thornton

Two years ago the Code-A-Phone system was updated to provide fruit growers from throughout the state with quicker access, improved information and a broader range of options. This system is known as a telephony system and works similarly to how you access bank information. You will need a touch-tone phone to access this system.

To access, call:

947-3063 (Local to Traverse City)
1-877-763-3300 (Toll free statewide)

Options this year include the following by pressing the corresponding number:

1. [Stone Fruit Information](#)
2. [Pome Fruit Information](#)
3. [Weather Conditions and Disease Forecasts](#) (including wetting events from 23 weather stations throughout Michigan with 9 of those in NW Michigan)
4. [Listing of Weather Station Numbers](#) (required for access to your local weather station info).

In order to access the code-a-phone for local weather station based disease predictions, growers will need the following access codes:

Northport West – #120
East Leland – #140
NWMHRS – #160
Benzonia – #180
Old Mission – #190
Elk Rapids – #200
Kewadin -- #210
Eastport – #100
Manistee-- #230

[ACTUAL AND PREDICTED DEGREE-DAY
ACCUMULATIONS SINCE MARCH 1, 2003](#)

Please send any comments or suggestions regarding this site to:

Bill Klein, kleinw@pilot.msu.edu
Last Revised: 4-15-03

[Home](#) | [Site Map](#) | [Contact](#) | [Indicia](#) | [Logos](#)
AgBioResearch • 109 Agriculture Hall • East Lansing, MI 48824 • Ph: 517-355-0123

© 2010 Michigan State University Board of Trustees


[Home](#)
[Background
& Projects](#)
[Calendar](#)
[Directions](#)
[InfoVideos](#)
[Links](#)
[Extension
Expert Search](#)
[Publications](#)
[Staff](#)

Northern Michigan FruitNet 2003 Weekly Update

NW Michigan Horticultural Research Station

[Jim Nugent](#)

District Horticulturist

[Gary Thornton](#)

District Fruit IPM Agent

[Bill Klein](#)

Farm Mgr, NWMHRS

[Duke Elsner](#)

Agricultural Agent

[Jim Bardenhagen](#)

Leelanau Extension Director

April 29, 2003

GROWING DEGREE DAY ACCUMULATIONS as of April 28, 2003 at the NWMHRS

Year	2003	2002	2001	2000	1999	13 yr. Av. (*90-2002)
GDD42	186	192	172	251	230	183
GDD50	77	103	70	93	84	77

WEATHER

Degree day accumulation at both base 42 and 50 is right at the past 13 year average.

GROWTH STAGES at NWMHRS

Apple: Red Delicious--1/4" green

Pear: Bartlett – swollen bud

Sweet Cherry: Napoleon – bud burst

Tart Cherry: Montmorency – swollen bud

Apricot – bud burst

Plum: European type – early swollen bud

Grapes: Chardonnay – scale crack

COMMODITY REPORTS

By Gary Thornton & Jim Nugent

Apples -- No infection periods for **apple scab** have occurred in the last week. All varieties in the warmer portions of the district have enough green tissue to warrant scab sprays at this time. Growers should try to use the protectant EBDC fungicides, such as Polyram or Dithane, in the early half of the scab season. Captan can be used, too, but be careful if you are using oil. You will want at least two weeks between an oil application and Captan – more if it doesn't rain. It appears that the strobilurin fungicides should be used on a protectant basis only. If used that way, they can be excellent fungicides. When the sterol inhibiting fungicides are used they should always be tank mixed with 3 lbs. of a protectant fungicide. **European red mite** eggs have had high winter mortality in many orchards, although the egg numbers are not particularly high this spring. **Green fruit worm** adults continue to fly and lay eggs. The flight is peaking at this time.

Pears – **Pear psylla** eggs are easy to find in pears at the base of the spurs.

Sweet Cherries – As spring progresses, winter injury in wood is becoming more visible. The extent of injury varies by variety, tree and site.

[ACTUAL AND PREDICTED DEGREE-DAY
ACCUMULATIONS SINCE MARCH 1, 2003](#)

Please send any comments or suggestions regarding this site to:

Bill Klein, kleinw@pilot.msu.edu

Last Revised: 4-29-03

[Home](#) | [Site Map](#) | [Contact](#) | [Indicia](#) | [Logos](#)

AgBioResearch • 109 Agriculture Hall • East Lansing, MI 48824 • Ph: 517-355-0123

© 2010 Michigan State University Board of Trustees