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## Northern Michigan FruitNet 2005 Weekly Update

NW Michigan Horticultural Research Station

[Jim Nugent](#) [Nikki Rothwell](#) [Bill Klein](#)

District Horticulturist District Fruit IPM  
Agent Farm Mgr, NWMHRS

[Duke Elsner](#) [Jim](#)  
[Bardenhagen](#)  
Agricultural Agent  
Leelanau Extension Director

April 19, 2005

Welcome to the first FruitNet newsletter for the 2005 growing season. We will continue to send this newsletter to our past subscribers unless you tell us to remove you from the list. We also welcome new subscribers.

**GROWING DEGREE DAY ACCUMULATIONS as of April 18, 2005 at the NWMHRS**

Year	2005	2004	2003	2002	2001	15 yr. Avg
GDD42	213	128	119	173	72	111.5
GDD50	92	47	49	95	21	42.5

**GROWTH STAGES AT NWMHRS (4/19/05 – 1:30 p.m.)**

**Apple:** Tight cluster

**Pear:** Bartlett: Early tight cluster

**Sweet Cherry:** Hedelfingen & Gold: bud burst; Napoleon: early white bud

**Tart Cherry:** Montmorency: bud burst; Balaton: late bud burst

**Apricot:** 60% bloom

**Plum:** Green cluster

**Grapes:** Chardonay: late scale crack

### WEATHER

It's been many years since we've had an April as warm as 2005. We have calculated daily degree days since 1990 and this year's accumulation as of 4/18 is ahead of them all. I believe 1987 is the only year in the last 30 years with more early season heat. It could be interesting!

I hear many growers comment that we just need a rain and the trees will really "pop." Actually, while we could sure use the rain, the tree's biological clock is driven by heat accumulation, not moisture.

### CROP REPORT

The exceptional heat his month resulted in very abbreviated opportunities to apply dormant spray. By the time of this writing on the afternoon of 4/19, the apricots at the NWMHRS are blooming and a buzz with bee activity. Apples are generally in tight cluster. So far there has been no apple scab infection period. When the first wetting event does occur, we would expect a large spore discharge.

### SPRING IPM KICK-OFF!

Nikki Rothwell, District Fruit IPM Educator

To start our growing season off on the right foot, the Northwest Horticultural Station is hosting a spring IPM meeting on April 21st from 6:30-9pm. One pesticide recertification credit has been awarded for this program.

Evening's Agenda:

6:30-6:35 Welcome  
Nikki Rothwell

6:35-7:30 New pesticide chemistries:  
John Wise  
modes of action, application timing,  
resistance management

7:30-8:15 Update on control tactics for codling moth:  
new chemistries, application timings,  
Pete McGhee  
alternative control tactics

8:15-8:30 Fungicide resistance management  
Nikki Rothwell

8:30-9:00 PestNet ag weather review:  
Jim Laubach  
use of weather information for precise  
pesticide timing

If you are planning to attend, please call 946-1510 to register.

### **OOPS!!**

We made an electronic goof! We thought we sent the material for a regular (U.S. mail) newsletter to local MSU Extension offices last week. For some reason unknown, it made it to Leelanau and Grand Traverse counties, but not to Antrim or Benzie. Consequently, the information on the Spring IPM Kickoff at the NWMHRS may not reach growers in Antrim and Benzie in the traditional route. Sorry! So if you are in either of those counties and know of neighbors that might want to come, please let them know.

### **PestNet Agricultural Weather Update**

Nikki Rothwell, District Fruit IPM Educator

The PestNet Agriculture Weather system will be available on the web for the upcoming 2005 season. PestNet provides critical information to assist growers with precise timing of pesticides. The information system is based on weather data from the Michigan Agricultural Weather Network (MAWN) with stations throughout the state's fruit belt. Models and forecast tools are generated for apple scab, cherry leaf spot, fireblight, codling moth, and plum curculio. The site also provides a 21-day weather summary and a phenology model for Red Delicious. A spring frost event report is also available on the web.

Because growers and consultants have shown tremendous interest in seeing this program continue to serve the fruit industry needs, we submitted a proposal to upgrade the MAWN system this past fall. The proposed funds would have further automated the data acquisition process and included more pest models. Unfortunately, this proposal was not funded, which has resulted in the need to solicit growers and agri-businesses for money to continue the current weather system. The 2005 program will be comparable to 2004, as wetting event reports will be posted twice per day during rain events from green tip on apples till mid-June.

If you are interested in helping endorse the PestNet Program, please send a check payable to "Michigan State University" to the Northwest Michigan Horticultural Research Station, 6686 S. Center Hwy, Traverse City, MI 49684. Your support with this program is greatly appreciated!

### **SOURCES OF SEASONAL FRUIT INFORMATION FOR 2005**

1. FruitNet – Weekly email/fax newsletter for NW Michigan fruit growers written by area extension agents and sent out of NWMHRS. Funded by area horticultural organizations so subscription is free. Past subscribers will remain on the list. Contact the NWMHRS (231/946-1510) to be added to, or removed from, the subscription list.
2. NW Michigan Code-A-Phone Message – Information will be updated regularly (generally weekly, but more frequently if necessary). It requires a touch tone phone to access. Call 947-3063 or 1-877-722-3388 (toll free), then press 1 for stone

fruit information and/or 2 for pome fruit. New for 2005, beginning in early May, grape information can be accessed by pressing 3. Funded by area horticultural organizations.

3. MSU Fruit Crop Advisory Team (CAT) Alert – The MSU Fruit CAT Alert newsletter has valuable feature articles that we do not include in the FruitNet report. Sign up for the 2005 CAT Alert is underway with Fruit, Vegetable, Field and Landscape editions again available for \$35 by mail each edition or can be read for free on the internet at <http://www.ipm.msu.edu/ipm/aboutcat.htm>. For questions or to subscribe, contact Assistant Editor Rebecca Lamb at: 517/353-4703.

4. PestNet – Disease, insect and crop development prediction system based on the Michigan Agricultural Weather Network (MAWN). Updated twice/day during early season wetting events, once/day during late season wetting events, less frequently during non-wet periods. Information can be accessed via the internet at <http://www.mifruit.com> or received via email by calling the NWMHRS at 946-1510. This statewide net is run out of NW Michigan. Funding depends on contributions from agribusinesses and growers. See accompanying article.

5. 60 Hour Weather Forecast – Weather forecast for the Grand Traverse region predicted in 3 hour increments and updated twice per day. Available via internet at <http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous14ktvc> or [MIFruit.com](http://MIFruit.com) or subscribe to receive via email by contacting the NWMHRS at 946-1510. This has also been available via fax in the past, but our computer dedicated to the fax system is no longer functional, so as of this time, we do not expect to have a fax option available.

#### **POLLINATION**

Jim Nugent, District Horticulturist, MSUE

It takes a lot of bees to achieve good pollination of all fruit crops, except grapes, that we grow in Michigan. Wind plays very little role in pollinating self-fertile crops such as tart cherries, peaches, plums and strawberries and no role in pollinating self-incompatible crops such as apples and sweet cherries. Actually there are some self-fruitful sweet cherries now available, but nearly all commercially important sweets grown in Michigan are not self-fruitful.

If honey bees are not provided by the grower, then the grower is relying on a combination of native bees and other pollinating insects, plus the neighbor's honey bees. Furthermore, there are virtually no wild honeybees left in Michigan due to the introduction of two non-native mite species. Still, pollinating a self-fertile crop such as tart cherries can be successfully accomplished with fewer bees than is required for self-incompatible crops. Warm, dry conditions during bloom favor both pollen transfer (insect activity) and the process of fertilization (pollen dehiscence, germination, growth and fertilization). Under these conditions, nature may provide enough pollinators for a self-fruitful crop, but when conditions are less than ideal, it is very important to have an abundance of bees to transfer adequate levels of pollen transferred in a timely manner.

Recommended rate for honeybees (based on strong hives):

Apple – 1-3 hives/acre (use higher rates in high density plantings)  
Sweet cherry, and Balaton tart cherry – at least 2 hives/acre  
Tart cherry (except Balaton), peach, plum – 1 hive/acre  
Pear – 1-2 hives/acre  
Blueberry, cranberry – 3 hives/acre  
Strawberry, raspberry – 1 hive/acre  
Grape – 0 (wind pollinated)

Placement of honeybee hives:

- Place pallets with hives in locations that receive early morning sun.
- It is preferable to distribute pallets throughout the orchard area rather than placing all in one.
- Have bees in place prior to first bloom for all tree fruits. First bloom of cherry most readily set fruit and king bloom in apple produce the biggest fruit.
- Remove bees from area prior to applying pesticides toxic to bees.

#### **EMAIL ADDRESS CHANGES**

MSU Extension changed its email system. New addresses are:

Jim Bardenhagen – [bardenh3@msu.edu](mailto:bardenh3@msu.edu)

Duke Elsner - [elsner@msu.edu](mailto:elsner@msu.edu)

Steve Fouch – [fouch@msu.edu](mailto:fouch@msu.edu)

Stan Moore – [moorest@msu.edu](mailto:moorest@msu.edu)

Jim Nugent – [nugent@msu.edu](mailto:nugent@msu.edu)

Nikki Rothwell – [rothwel3@msu.edu](mailto:rothwel3@msu.edu)

NWMHRS – [nwmihort@msu.edu](mailto:nwmihort@msu.edu)

#### **HELP WANTED**

The NW Michigan Horticultural Research Station seeks a research technician from May-August. Must be able to work independently, think critically, communicate with cooperating fruit growers and researchers, compile and analyze data. College science background preferred. Call 946-1510, M-F, 8:00-5:00 for more details.

#### ACTUAL AND PREDICTED DEGREE-DAY ACCUMULATIONS SINCE MARCH 1, 2005

**Please send any comments or suggestions regarding this site to:**

Bill Klein, [kleinw@msu.edu](mailto:kleinw@msu.edu)

Last Revised: 4-19-05

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

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Agricultural Agent

[Jim Bardenhagen](#)

Leelanau Extension Director

April 26, 2005

GROWING DEGREE DAY ACCUMULATIONS as of April 25, 2005 at the NWMHRS						
Year	2005	2004	2003	2002	2001	15 yr. Avg.
GDD42	263	165	160	192	148	157.5
GDD50	115	76	65	103	60	63.7

GROWTH STAGES AT NWMHRS (4/25/05 – 9 a.m.)

**Apple:** Tight cluster

**Pear:** Bartlett: Open cluster

**Sweet Cherry:** Hedelfingen: late bud burst; **Gold:** early white bud; **Napoleon:** late white bud

**Tart Cherry:** Montmorency: bud burst; **Balaton:** late bud burst

**Apricot:** Early petal fall

**Plum:** Green cluster

**Grapes:** Chardonay: late scale crack

### WEATHER

Last week was a roller coaster! Exceptionally warm temperatures during most of the week advanced crops well beyond normal. The weekend then ushered in a blast of snow and cold. Temperatures remained below freezing for 31 hours with continuous strong wind. Fortunately, during this period temperatures remained mostly around 30° F, never getting below 29° F. By comparison, the 2002 wind event lasted 11 hours at 27-28° F, wiping out the tart cherry crop and badly damaging the sweet crop. A wetting event was reported for Monday, April 25th. The amount of precipitation varied around the northwest from, 0.02inches to ¼ inch at the NWMHRS.

### COMMODITY REPORTS

**Freeze damage in cherries:** The wind event over the weekend reminded us of 2002 with the following differences: 1) temperatures this year were 2 to 2.5 degrees F warmer, 2) the duration was nearly 3 times longer, and 3) the stage of bud development was a little more advanced this year. Cold temperatures on Monday have made assessment difficult at this time (Tuesday a.m.) We will have better assessments in a couple of days. Fortunately, preliminary evaluations are looking quite good. We have seen some damage in sweet cherries, but so far damage does not appear to be too bad. Preliminary evaluations of Montmorency tart cherries are showing damage ranging from some to none, depending on the orchard site. Early evaluation of other fruit crops looks good.

**Apples:** Although we had a wetting event, apple scab infection periods were none to borderline for our region.

### ALTERNATIVE POLLINATORS UP FOR GRABS!

Nikki Rothwell, District Fruit IPM Agent

The Northwest Michigan Horticultural Research Station has been given a generous donation of alternative pollinators, *Osmia cornifrons*, horn-faced bees. These bees show a preference for fruit tree flowers, are efficient pollinators, and are more apt than honeybees to fly at cooler temperatures and under cloudy conditions. We have studies ready to go that will test *O. cornifrons* pollination behavior and efficacy as well as studies to determine their nesting site preference. At the NW Station, we also will be comparing pollination efficiency between *O. cornifrons*, honeybees, and bumblebees.

Now the good news—we have extra bees available for growers interested in trying them in their orchards! However, in exchange for these bees, we would like to gather as much information about them as possible: we will swap bees for data. [Click here \(pdf file\) to get the](#)

information about them as possible, we will swap bees for data. [Submit Data](#) (pdf file) to get the data form and basic bee information. We are also suggesting a donation of \$5 per bucket to help cover our research costs. If you are interested in trying out *O. cornifrons*, please give us a call or stop by ASAP (they need to go out into the orchard 3-4 days prior to bloom). The bees will be available on a first come, first serve basis.

#### **HELP WANTED**

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[ACTUAL AND PREDICTED DEGREE-DAY  
ACCUMULATIONS SINCE MARCH 1, 2005](#)

**Please send any comments or suggestions regarding this site to:**

Bill Klein, [kleinw@msu.edu](mailto:kleinw@msu.edu)  
Last Revised: 4-26-05

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