



**Northern Michigan FruitNet 2004**  
**Weekly Update**  
**NW Michigan Horticultural Research Station**

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District Horticulturist

Position Vacant  
District Fruit IPM Agent

[Bill Klein](#)  
Farm Mgr, NWMHRS

[Duke Elsner](#)  
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Leelanau Extension Director

**July 6, 2004**

**GROWING DEGREE DAY ACCUMULATIONS as of July 6, 2004 at the NWMHRS**

Year	2004	2003	2002	2001	2000	14 yr. Avg.
<b>GDD42</b>	1293	1421	1348	1520	1562	1466.9
<b>GDD50</b>	711	823	840	906	897	884.4

**WEATHER:**

Temperatures remained below normal this week. A long wetting event occurred on 7/4-7/5. The degree days base 42 are 6-7 days behind last year at the NWMHRS.

**GROWTH STAGES at NWMHRS (7/5/04)**

**Apple:** Red Delicious – 33 mm

**Sweet Cherry:** Napoleon – 15 mm

**Tart Cherry:** Montmorency – 16 mm

**Apricot:** 29 mm

**Plum:** European type – 22 mm

**Grapes:** Chardonnay – bloom

**CROP REPORT:**

**Cherries:** Harvest has not yet started. As cherry harvest approaches, the fruit becomes more susceptible to **brown rot (BR)**. Be particularly vigilant in sweet cherry blocks where BR blossom infection was present. Good spray coverage of fruit is essential to adequately control BR, but the combination of maturing fruit and a heavy crop load in sweets makes good coverage particularly challenging to achieve. You may want to consider slowing the travel speed of the sprayer during the pre-harvest period to enhance canopy penetration and improve uniformity of deposition. If travel speed is decreased, then decrease the rate per tank by the equivalent amount to achieve the desired rate per acre. **Bacterial canker (BC)** is still active in some sweet cherry fruit. This is unusually late in the season for BC, but weather has remained cool enough for this to occur. The wetting event on 7/4 and 7/5 was predicted to be a heavy infection period for **cherry leaf spot (CLS)** throughout NW MI. **Powdery mildew** remains low.

**Plum curculio** adults are still being caught in traps, but it appears that egg laying is over for the season. **Cherry fruit fly** adult emergence is low but expected to increase during the next three weeks or so. **Mite** populations are below average. Always consider pre-harvest intervals of pesticides and select materials appropriately. Remember that Guthion is now limited to a total of 3 lbs. of product per acre per season on sweet and tart cherries.

to a total of 0.100 lb of product per acre per season on effect and tart cherries.

**Apples:** **Mite** and **aphid** populations remain low. **Codling moth** trap catches are way down. **Spotted tentiform leaf miner** trap catches are generally increasing.

**All fruit:** **Rose chafer** populations have generally been low this year but are now becoming more prevalent in some orchards and vineyards. Keep checking for this pest.

**Grapes:** **Powdery mildew** and other foliar fungus diseases should become more of a problem now that canopies are filling in. Conditions were favorable for **Botrytis** infections of blooming clusters (a long, continuous fog/drizzle) for some varieties. Look for small areas of decay amongst flowers. The first larvae of **sphinx moths** have been seen at the NWMHRS.

[ACTUAL AND PREDICTED DEGREE-DAY  
ACCUMULATIONS SINCE MARCH 1, 2004](#)

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

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July 13, 2004

GROWING DEGREE DAY ACCUMULATIONS as of July 12, 2004 at the NWMHRS

Year	2004	2003	2002	2001	2000	14 yr. Avg.
GDD42	1430	1562	1527	1686	1724	1619.1
GDD50	799	917	971	1024	1011	988.6

### WEATHER:

The past two weeks has generally been cool and wet. At the NWMHRS, precipitation was recorded on six of the past 14 days, though the total precipitation was slightly below one inch. Degree day accumulations, base 42, are now over one week behind normal.

### GROWTH STAGES at NWMHRS (7/13/04)

Apple: Red Delicious – 36 mm  
Sweet Cherry: Napoleon – 16 mm  
Tart Cherry: Montmorency – 20 mm  
Apricot: 31 mm  
Plum: European type – 24 mm  
Grapes: Chardonnay – post bloom – buckshot

### CROP REPORT:

#### Strawberries:

Strawberry harvest is still underway and is expected to wrap up this week. It's been a very good year for quality and yield.

#### Cherries:

Sweet cherry harvest is just beginning in NW Michigan but more growers will be harvesting by week's end with harvest in full swing next week. **Cherry leaf spot** remains a challenge in may tart and sweet cherry blocks. **Brown rot (BR)** infection is present in some sweet blocks, either from blossom infection and/or can be found in the "June drop" fruit that became infected and never dropped. These blocks and blocks that sustain cracking will be most prone to BR infection. **Powdery mildew** is present, but pressure is low. **Cherry fruit fly** is becoming more plentiful, with trap catches becoming more common this week in commercial orchards. Remember that Guthion use on cherries is limited to a total use per season of 3 lbs. **Mite** populations remain low. **Plum curculio** egg laying has ceased. **Rose chafer** remain active.

#### Apples:

Apple pest pressure is generally quite low this season, at least where **apple scab** was controlled during the primary infection period. **Mites** and **aphids** populations are generally low. **Apple maggot** traps should be placed in orchards (if they are not already there). **Codling moth** trap catches generally remain low, with second generation expected later than normal.

#### Grapes:

**Potato leafhopper** injury is increasing rapidly in the unsprayed row at the NWMHRS, but the impact of this pest has been minor in most treated vineyards. **Rose chafer** adults continue to feed on leaves, but they should be on the way out very soon. The large **sphinx moth** caterpillars should become more numerous within the next two weeks; although their defoliation of shoots can be dramatic, they are rarely numerous enough to cause any real concern in bearing vineyards. They can be devastating to very young vines, so be on the watch for them in new plantings. B.t. pesticides should work well if the larvae are treated before they exceed one inch in length. **Powdery mildew** should be more active now that we have experienced some heat and humidity.

#### Announcement:

For the past 14 years, Erwin "Duke" Elsner, Ph.D, has been assisting the wine and viticulture industry through his role as Grand Traverse County and Kalkaska County Agricultural Agent. Commencing August 1, 2004 Duke Elsner will no longer be providing agricultural coverage for Kalkaska County. His new

assignment will be 25% in support of the viticulture and wine industry for NW Michigan and 75% general agricultural coverage for Grand Traverse County.

**CIAB Weekly Raw Product Report, July 13, 2004:**

[http://www.cherryboard.org/week2\\_2004.htm](http://www.cherryboard.org/week2_2004.htm)

[ACTUAL AND PREDICTED DEGREE-DAY  
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July 20, 2004

### GROWING DEGREE DAY ACCUMULATIONS as of July 19, 2004 at the NWMHRS

Year	2004	2003	2002	2001	2000	14 yr. Avg.
GDD42	1619	1742	1754	1897	1902	1818.6
GDD50	933	1040	1142	1179	1133	1132.1

### WEATHER:

Temperatures this past week finally warmed to more normal July levels. Scattered, light rainfall on 7/16 of 0 to 0.1 inches resulted in scab and leaf spot infections in some localities in NW Michigan.

### GROWTH STAGES at NWMHRS (7/19/04)

**Apple:** Red Delicious – 40 mm

**Sweet Cherry:** Napoleon – 18 mm

**Tart Cherry:** Montmorency – 21 mm

**Apricot:** 34 mm

**Plum:** European type – 25 mm

**Grapes:** Chardonnay – buckshot

### CROP REPORT

#### Cherries:

Tart and sweet cherry harvest is getting underway. Tart and sweet maturity is overlapped more than normal. This overlap is due at least in part to a generally heavy sweet crop and generally light tart crop. Heavy crops of either sweets or tarts take longer to mature than normal, while light crops mature slightly quicker than normal. It is also possible that tarts have a slightly lower temperature developmental threshold than sweets, but we have no data to confirm this. **Brown rot** is a major concern at this time on sweet cherries. **Alternaria rot** is present in some of the cracked sweet cherries. If it is necessary to control Alternaria rot, suggest using the strobilurin plus boscalid fungicide, Pristine. We have not collected data on this disease in Michigan, but Pristine is registered for Alternaria on stone fruits. If Pristine is unavailable, then suggest another strobilurin fungicide (Flint or Cabrio) as this class of fungicides are generally quite effective on diseases caused by Alternaria sp. on other crops. Unfortunately both Flint and Cabrio are weak on fruit brown rot, which is generally much more of a threat to the crop than is Alternaria. The SI fungicides have never provided Alternaria control.

**Cherry leaf spot** continues to spread in some area orchards. This has been a challenging year for control of this disease. All

Cherry leaf spot continues to spread in some area orchards. This has been a challenging year for control of this disease. All cherry orchards with any inoculum present will want to be treated with Bravo after harvest. **Powdery mildew** is becoming prevalent.

**Cherry Fruit Fly (CFF)** numbers seem to be remaining fairly low this year. Likely, the one good thing to have come out of the 2002 total crop disaster is the CFF populations crashed in NW Michigan and are taking some time to recover. This is not to say they aren't present, but their numbers are lower than we were seeing by this time of the season in years prior to the 2002 disaster. In 2002, not only were commercial cherry crops wiped out, but so were much of their alternate hosts (particularly the forest black cherry). **Mites** remain very low. Yesterday I observed a young block of cherry that was badly infested with **greater peach tree borer (GPTB)**. This pest does most of its damage below ground on the tree collar, so it can easily go undetected. GPTB will attack uninjured trees. High populations will cause tree death by girdling. It is currently either in the pupal or adult stages. At this time, look for their cast pupal case sticking out of the soil at the base of the tree. Eggs are laid at the base of the trees and newly hatched larvae find their way to the trunk generally below ground. Control should ideally go on for this pest shortly before or after the beginning of adult emergence (about 3 weeks ago). If the problem is found at this time, a pesticide applied to the base of the tree as soon as possible should still provide fairly good control.

#### **Apples:**

**Apple maggot** has been trapped in NW Michigan. **Codling moth** adult trap catches remain low in most sites as second generation has not yet begun emergence. **Oblique banded leafroller** adult trap catches are rising. **White apple leafhopper** populations are generally low; **potato leafhopper** are more plentiful than normal. **Rosy apple aphids** are pretty much done with apples for the season. **Green apple aphid** populations have generally been low.

**Apple scab** in unsprayed blocks is causing significant defoliation from this season's severe scab infection. **Fireblight** shoot strikes are appearing in some susceptible varieties, particularly in areas that retained moisture for longer periods. Suggest making sure that potato leafhopper populations are kept low in blocks with fireblight shoot strikes.

#### **Grapes:**

Berry set looks to be quite variable thanks to some cool and damp weather during the peak of bloom. Gewurztraminer appears the worst of the varieties I have checked. Overall, cluster numbers look pretty good, and some vineyards will need to cluster thin to achieve desired crop loads. **Potato leafhopper** adults and nymphs are getting numerous in the unsprayed row at the Hort Station vineyard. Larvae of **sphinx moths** and the **eight-spotted forester moth** are appearing in low numbers at the station vineyard. I have not had reports of them in commercial vineyards as of yet. Foliage condition still is generally great, with little **powdery mildew** and almost no **black rot** on the station's unsprayed vines. Remember that warm and humid weather encourages powdery mildew, as does dense leaf canopies—we are just getting into these conditions.

#### **Announcements:**

##### **2004 CA Clinic To Be Held.**

The 2004 CA Clinic will be held this year at the Clarksville Horticulture Experiment Station in Clarksville, MI, Friday, August 13, 2004. Registration will start at 8:00 a.m. and the day's program will conclude at 4:45 p.m. The registration fee for the clinic is \$75, before August 6 and \$85 AFTER August 6. For additional information or a registration form, call Sandy Allen at 517/355-5191 ext.1339.

#### **Found**

A key to a Kubota tractor was found in Suttons Bay on July 19. The key has a tag attached that says "Ginop Sales, Inc." If it belongs to you, it can be picked up at the NWMHRS.

#### **CIAB Weekly Raw Product Report, July 20, 2004:**

[http://www.cherryboard.org/week3\\_2004.htm](http://www.cherryboard.org/week3_2004.htm)

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July 27, 2004

### WEATHER:

Generally dry conditions prevailed the past two weeks in NW Michigan. Precipitation during the past two weeks at the NWMHRS totaled 0.18 inches. July rainfall has totaled 1.25 inches. Degree day accumulations for the season are well behind normal. As of 7/26, the base 42 accumulation is the third lowest of the past 15 seasons (1992 and '96 were lower), while base 50 is the second lowest during the same period (only 1992 was lower.)

### GROWING DEGREE DAY ACCUMULATIONS as of July 26, 2004 at the NWMHRS

Year	2004	2003	2002	2001	2000	14 yr. Avg.
GDD42	1798	1921	1966	2135	2062	2011.1
GDD50	1056	1163	1278	1361	1237	1267.3

### GROWTH STAGES at NWMHRS (7/26/04)

**Apple:** Red Delicious – 45 mm

**Sweet Cherry:** Napoleon – 19 mm

**Tart Cherry:** Montmorency – 21 mm

**Apricot:** 36 mm

**Plum:** European type – 25 mm

**Grapes:** Chardonnay – buckshot

### CROP REPORT

**Cherries:** Mostly dry conditions over the past two weeks have greatly benefited the **sweet cherry** crop. Early season **brown rot (BR)** infections were present in many blocks. In many blocks it was the combination of fungicides and dry weather that kept the BR from exploding into a disaster. **Cherry leaf spot (CLS)** has also been a very serious problem this year. Defoliation is nearly complete at this time on the untreated tart cherries in the fungicide trials at the NWMHRS, leaving only immature fruit hanging on the trees. While CLS is currently present in many orchards, growers in NW MI overall have done a good job containing the disease from excessive defoliation. Unfortunately, though, the price tag for fungicides in 2004 is already at record levels, and we still have post-harvest treatments to apply. (see accompanying article on post-harvest CLS management). **Powdery mildew** is common, but at lower levels than during recent years. **Cherry fruit fly (CFF)** adult numbers are increasing but continue to be at lower levels than experienced prior to 2002. The one good result of the 2002 crop wipe out was a huge reduction in the overall CFF population. Still, populations are increasing from 2003. **Greater peach tree borer (GPTB)** are causing serious damage in a few sites. This is a good time to check the bases of trees for the presence of the pupal cases that are left behind when the adult emerges. GPTB will infest all types of stone fruits.



presence of the paper cages that are left behind when the adult emerges. CLS will infect all types of stone fruits.

**Apples: Codling moth** has not yet reached second generation. **Apple maggot (AM)** emergence is underway, but is still at generally low levels. Expect AM activity to increase during the next four weeks or so. **Apple scab** in unsprayed blocks is causing significant defoliation from this season's severe scab infection. **Fireblight** shoot strikes are appearing in some susceptible varieties, particularly in areas that retained moisture for longer periods. Suggest making sure that **potato leafhopper** populations are kept low in blocks with fireblight shoot strikes.

**Grapes:** As leaf canopies get denser, powdery mildew will become a much greater threat.

## MISCELLANEOUS

**Irrigation systems** should be operational at this time in apple and peach orchards.

### Cherry Leaf Spot – Post Harvest

By Jim Nugent

This has been an extremely difficult year to control cherry leaf spot (CLS). Most cherry orchards in Michigan (both tart and sweet) have some level of infection. This is a year when post-harvest treatment of both sweets and tarts for CLS is essential, particularly in blocks where any infection is present.

The material of choice is chlorothalonil (Bravo). This is a time of the season when we need a good protectant and Bravo has been the best since the industry lost Difolatan in the late 1980's. Bravo does not have the resistance concerns that we have with sterol inhibitors (Elite, Nova, Orbit, Indar, Rubigan), strobilurins (Pristine, Flint, Cabrio) or dodine (Syllit). Because Bravo can only be used through shuck split and then post-harvest, our best resistance management strategy is to use Bravo when the label allows. This reduces the resistance selection pressure on the alternatives that must be used after shuck split and before harvest. Use of SI's, strobilurins or dodine after harvest hastens the development of CLS resistance to whichever chemical is used.

Captan, like Bravo, does not have resistance concerns, but the maximum labeled rate on cherries of 4 lbs. per acre of 50W is too low to depend on achieving adequate control by itself. Captan at the labeled rate is a good tank mix partner with resistance susceptible fungicides such as SI's to help delay the onset of resistance to the materials tank mixed with the captan. (Captan is a good pre-harvest tank mix partner to help delay brown rot resistance as well as CLS). Adding sulfur to a tank mix does not help delay CLS resistance because sulfur is not effective against CLS. It may help delay resistance development in powdery mildew and brown rot.

So, for post-harvest leaf spot control, Bravo is currently the only good choice. In blocks where CLS pressure is high, I suggest using higher rates. If August is a wet month, a second post-harvest spray may be required this season.

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