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Northern Michigan FruitNet 2007 Weekly Update NW Michigan Horticultural Research Station

[Nikki Rothwell](#)

District Horticulturist

District Fruit IPM Agent

[Bill Klein](#)

Farm Mgr, NWMHRS

[Duke Elsner](#)

Agricultural & Regional Viticulture Agent

Leelanau Extension Director

June 5, 2007

GROWING DEGREE DAY ACCUMULATIONS THROUGH JUNE 4th AT THE NWMHRS:

Year	2007	2006	2005	2004	2003	2002	17yr. Avg.
GDD42	874	883	743	604	640	514	686.8
GDD50	482	475	374	275	298	259	349.5

Growth Stages at NWMHRS (6/4/07—8:00am)

Apple: 15 mm fruit

Pear: Bartlett: 14 mm fruit

Sweet Cherry: Hedelfingen, Gold, and Napoleon: 12 - 13 mm fruit

Tart Cherry: Montmorency and Balaton: 12 - 13 mm fruit

Apricot: 32 mm fruit

Plum: 13 mm fruit

Grapes: Chardonnay: 10" – 16" Shoots

Weather

Last week, we had very hot, dry weather, especially for May. The weekend brought rain into the area, but it seemed to be extremely spotty. For instance, the NWMHRS recorded 0.43" of rain while Jim Nugent's farm on Revold Road (< 3miles away) only received 0.07" of rain. Another example of drastically different rainfall were the three day totals for Benzonia, which recorded over 2 inches of rain while the NWMHRS and Old Mission recorded less than a ½ inch of rain; in a nutshell, there are large differences in the amount of rainfall throughout the region. The weather will be cool for a few days, mid-50's to mid-60's, and then will warm up again. Overall, temperatures will fluctuate considerably in the next week.

CROP REPORT

The proposed tart cherry crop estimate for southwest Michigan is 9-12 million pounds, which is approximately 40% of their potential crop. West Central reported their crop to be in the 60 million pound range. In the northwest, we have reports that suggest the tart cherry crop does not look like it is the 'bumper crop' we initially expected it to be; more information will be forthcoming in the upcoming weeks. There were reports of hail in the Ridge area, but Extension educators are not sure of damage at this time.

PEST Report

Apple: The weekend rains have resulted in **apple scab** infection periods at all weather stations throughout the area, despite the spotty actual rainfall. All infection periods are considered to have a high level of infection, especially with the duration of wetting events lasting 50-70+ hours. Based on the apple scab model, spores are at 100% maturity and are ~90%+ discharged. We predict that these rains will discharge the last of the mature spores, and we hope to call an end to primary scab in the near future. **Powdery mildew** is starting to show up in apples. **Fire blight** is also present in some susceptible varieties in the region.

Spotted tentiform leaf miner traps only caught an average of 39 miners/trap. **Codling moth** trap counts were up at the NWMHRS this week: 14 moths/trap. We captured our first **obliquebanded leaf roller** (OBLR) adult this week, and we are still catching **Oriental fruit moth**.

Cherry: As mentioned above, the weekend rains have extended into Monday, which have resulted in a high **cherry leaf spot** infection. CLS control is crucial at this time with these prolonged wetting periods and rapid leaf growth. We have observed **European brown rot** in Balaton at the NWMHRS as well as some other blocks in the area. We have not seen this disease in Montmorency so far this season. However, we did find some **American brown rot** on Montmorency tarts in an isolated incidence. **Powdery mildew** is just starting to be visible on cherry leaves in a few orchards.

We captured a few more **obliquebanded leaf roller** in cherry than in apple: 4 moths/trap. **Lesser peachtree borers** are flying in higher numbers this week (~13 moths/trap) while **American plum borers** are on the decline. We are still catching **plum curculio** in our traps, and we have observed oviposition damage in both tart and sweet cherries. With these cool temperatures, plum curculio will slow down but will resume with increase in temperature.

Grapes: Potato leafhoppers have arrived full force to the northwest. We are seeing adults, as well as some leaf cupping and yellowing of leaves. Because of the dry weather, we have noticed some deficiencies showing up but we have not clearly identified them as of yet. **Powdery mildew** has also been noticed in a few vineyards in the area.

Prunus Necrotic Ringspot Virus

Nikki Rothwell, District Horticulturist, MSUE

Prunus necrotic ringspot virus (PNRSV) has been showing up in young bearing trees around the area. This disease occurs in sweet and tart cherry as well as in peach, nectarine, plum, and prune, but we have noticed it only in tart cherry thus far. Although this disease is seed-born and can be transmitted during grafting, much of the movement of PNRSV comes into an established orchard through contaminated pollen. Therefore, new orchards (that came in from the nursery clean) do not develop PNRSV until they begin to bloom. Once the virus is present in a block, it can be spread by contaminated pollen from tree to tree.

PNRSV symptoms are much more severe in years when a period of exceptionally warm temperatures occur during the time from bud swell to early leaf development. Trees that are in the early bearing years, i.e., in the 6th to 8th leaf, are hit the hardest by this virus as these trees have not built up immunity to PNRSV. Symptoms that occur after this initial infection are most severe, and we refer to this stage as 'shock' symptoms. Often this shock symptom begins with a delayed bud break and death of leaf and flower buds. Symptoms related to buds are sometimes called 'red bud' because of the death of the flower bud and the reddish cast the empty bud has on the tree. Leaves that have PNRSV are often small with chlorotic or necrotic rings that usually fall out. The leaves look tattered when infected with PNRSV, and there is usually a mirror-type effect on the leaves as if both sides of the main vein have similar rings and necrosis. Symptoms are most commonly seen about two weeks after petal fall, and new leaves that develop later in the season are free of these symptoms. Often infected trees will look 'normal' in a year or two, but overall vigor and size of the tree may be reduced. There are no control options for growers to apply in the field to minimize PNRSV.

Powdery Mildew—Not Our Fuzzy White Friend

Nikki Rothwell, District Horticulturist, MSUE

We have seen some powdery mildew signs beginning to show up in wine grape, tart cherry, and apple, which has not come as a surprise considering the warm and dry weather we have had recently. Powdery mildew is a unique fungus in that it is an obligate parasite; these types of organisms can only grow on their specific hosts. The powdery mildews of apple, wine grape, and cherry are all different species, and they will only infect the hosts of their choice.

Overwintering ascospores of powdery mildew are released during periods of rain. However, the conidia that cause secondary infections that spread the disease during the summer can also overwinter and cause primary infection the following season. Probably the most disconcerting thing about powdery mildew is that conidia can germinate readily in the absence of rain with high humidity (not precipitation) and warm temperatures. The weather we have been having, warm and dry, is a perfect environment for powdery mildew, unlike other fungal pathogens that like it either moist and warm or moist and cool. Heavy rains, like we saw in many areas of the region, are actually good for reducing powdery mildew spores on the leaves as the rain washes off the conidia before they cause infection.

Potato Leaf Hoppers are Here!

Nikki Rothwell, District Horticulturist, MSUE

Potato leafhoppers (PLH) have arrived in full force to the northwest. Most likely, these pests blew up during the Memorial Day winds. At this time, most of the PLH we have observed are adults. However, these adult PLH will locate forage crops (they love grapes and apples) and will mate and lay eggs. With warm temperatures, we predict we will see PLH nymphs within a week.

Adult PLH are about 1/8-inch long and are elongated with short, bristle-like antennae. They are lime green with translucent, greenish wings which are held at a roof-like angle over the body. Adults often fly when disturbed. Females lay one to six eggs daily, and the nymphs will hatch in ~10 days, depending on temperature. The nymphs resemble the adults, but are wingless and smaller (approximately 1/32-inch long). The nymphs run sideways when disturbed—the sideways movement on the leaf will distinguish PLH from other leafhoppers.

Potato leaf hoppers feed by injecting a toxin into the leaf; leaves turn yellow around the edges, then cup upward. Eventually leaves with extensive PLH damage will look almost scorched. The feeding damage from these pests is especially problematic on young trees or vines, and they can stunt these plants' future growth.

Obliquebanded Leafroller—An Apple and Cherry Pest

Nikki Rothwell, District Horticulturist, MSUE

This past week we first started to see adult obliquebanded leafroller (OBLR) in the northwest. The first OBLR flight typically begins in mid-June and lasts about 6 weeks. The second flight takes place from early August to mid-September. OBLR flight can be tracked through the season using pheromone-baited traps. Moth captures in pheromone traps also are used to initiate an OBLR degree-day model, base 42°F. First sustained moth catch (catch on two successive dates) in pheromone traps is used as a biofix. Key events in the life history of OBLR can subsequently be predicted using the degree-day model. For example, egg hatch begins around 400 degree-days after biofix.

Although moth captures in pheromone traps provide valuable information to the scout and grower, they are not a reliable indicator of leafroller abundance or potential damage. OBLR traps have a large active space. In other words, they potentially catch moths that originate from within the trapped orchard, neighboring or more distant orchards, and native habitats. Thus, high moth catches may or may not indicate that the orchard being monitored has a leafroller problem. Very low catches of less than five per week strongly hint that OBLR is not a problem, but assessing larval activity is highly recommended to confirm trap catches.

To get the information needed to make a sound management decision, a scout must look for leafroller larvae, or at least signs of their presence. Larvae are green with brown to black head capsules and are about 25 mm long when fully grown. Often, a scout will detect signs of leafroller activity rather than the actual larva. The name leafroller comes from the larva's habit of rolling leaves to form a shelter. These feeding sites are most often found at the tips of growing shoots. Larvae also will use silk webbing to attach two leaves or a leaf and fruit together to form a shelter. The presence of webbing is a good clue that leafrollers are around.

Finding young OBLR larvae in the early spring is difficult, thus most growers take preventative measures at this time. If they were

successful, fruit damage will be avoided and few larvae will survive and move to the shoot tips to feed. Scouting orchards for surviving OBLR larvae in growing terminals is the best way to judge whether intervention in the summer is likely to be needed as well. Orchards in which less than 2% of the terminals were infested should be monitored in the summer, but controls may not be warranted. Higher levels of shoot infestation are cause for concern and control measures are likely needed to prevent fruit injury. This investment of time could result in saving several sprays.

DD° Base 42 (Post Biofix)	Event	Action
Tight cluster	Majority of larvae have emerged from shelters	Examine fruit buds for larval activity
0 DD° = biofix (~900 DD° after Jan 1)	1 st sustained moth captures	Set DD° = 0
220-250 DD°	Peak moth flight - overwintering generation	
400-450 DD°	Start of egg hatch	Timing for scouting-based treatment
1000 DD°	End of egg hatch	
2300 DD°	Peak moth flight - 2 nd generation	
2750 DD°	Start of 2 nd generation egg hatch	Timing for scouting-based treatment

Degree-day models are essential tools to be used in timing insecticide sprays. Optimal timing for summer sprays varies according to the life stage or stages that are targeted by the product of choice. For conventional insecticides, like organophosphates (OPs), pyrethroids, and carbamates, the first sprays should be targeted between 400 and 450 GDD after biofix to control hatching larvae before they can damage fruit. Obliquebanded leafrollers are resistant to OPs in most apple growing regions of the state (and maybe cherry) and are generally not the best option for control. Bt's are most effective when applied during warm weather conditions (daily highs in the 70's F). If Bt products are used, the latter timing (450 GDD) may be the better choice because they have a short residual, which must be present to control the larvae at the time and location they are actively feeding. If the first application is applied too early, it may take four or more sprays to keep active ingredient on the foliage throughout the long period of larval activity. Bt products are generally more effective with a lower tank pH. SpinTor has a similarly short residual (seven to ten days), but provides some contact efficacy, which will help kill larvae as they move to the actively growing terminals. SpinTor is also a good choice for leafroller control in cherry blocks where control with OPs and pyrethroids is failing to provide adequate protection. Proclaim, a new material (Avermectin class) has also shown very good activity against OBLR, and requires ingestion by larvae.

In contrast, if Intrepid is used early it should be targeted to cover OBLR egg masses around 350 GDD post-biofix, so that larvae will consume the chemical as they eat their eggshells upon emergence. Intrepid can also be used later to protect fruit against damage from older larval instars. Upon application, Intrepid has a long residual effect, but should be reapplied where necessary on a 14-day interval to insure coverage of new terminal growth. Good, thorough coverage is key to leafroller control with materials requiring ingestion to be effective. The addition of an agricultural adjuvant to Intrepid 2-F is recommended to improve spray deposition.

Rimon acts by suppressing development within the egg, as well as larvae that consume it. Hatching of eggs laid by treated adults will also be inhibited. Eggs are particularly susceptible to these products when laid on top of sprayed residue, thus sprays should target 100-200 GDD after OBLR biofix.

As with many of our key apple pests, OBLR has a track record of developing resistance to insecticides. Currently there are some good options for control of this pest. Practicing good resistance management should help conserve their efficacy. We encourage you to rotate materials with different modes of action. For example, if Rimon was the material of choice for control of overwintering larvae, opt for Proclaim, SpinTor or Intrepid if a summer treatment is warranted. During periods of warm weather, Bt is an excellent option and a good resistance management strategy.

Block specific monitoring of codling moth is key to decision-making

David Epstein, MSU IPM Program

Larry Gut, MSU Entomology

John Wise, MSU Trevor Nichols Research Complex

Another cool wet spring in Michigan has pointed out the difficulties inherent in timing early season codling moth controls and moreover, in deciding whether or not an early season spray application targeting codling moth is warranted. Our goal here is to address some of the confusion that exists over what constitutes codling moth biofix, and to discuss the use of treatment thresholds based on moth captures in traps, in conjunction with growing degree-days (GDD) for codling moth, to optimize the timing of insecticide applications.

Management guidelines developed by MSU entomologists over the past decade, have advised growers that the best way to understand how to manage codling moth on your own farm is to have pheromone-baited traps in each of the blocks on that farm. The 2007 season has provided us with a good lesson in how variable codling moth catches can be from one farm to another, and from one block to another on the same farm. This is not surprising considering that the extent of early season codling moth activity in an orchard is typically associated with how well the pest was controlled in the previous season, and we suspect that control was not the same in all blocks in 2006. Traps for monitoring codling moth adult flight should be set before bloom in Red Delicious with two objectives: to help establish codling moth biofix, the start of adult activity, and as a measure of codling moth activity to assist with determining if and when insecticides need to be applied. Regional information is a part of understanding codling moth activity, but the use of monitoring traps in every block of your orchards is the only accurate way to know what is happening on your farm.

The accumulation of growing degree-days from the establishment of biofix is used to determine the relative proportion of each codling moth life stage developing over the course of a generation. For example, 250 DD predicts that 3 percent of the egg hatch has taken place. Keep in mind that this is a proportion; the actual numbers of eggs hatching depends on how big the population is in a particular

block. If few moths have been captured, therefore, it is likely that 3 percent egg hatch is a very small number and applying a spray would not provide much bang for the buck.

As was discussed earlier this season in the May 8 *Fruit CAT Alert* article, there are control materials targeting the adult, egg and larval life stages of codling moth. By combining the establishment of biofix with the use of the growing degree-day model, these varying life stages can be accurately predicted to properly time spray applications. What has consistently been omitted from the decision-making process on many farms is weekly monitoring information on population numbers and whether treatments are necessary at that particular time.

MSU treatment thresholds for codling moth advise that a cumulative catch of five to seven moths in any one trap over time, may indicate the need for a treatment (Table 1). This value is for orchards not deploying codling moth mating disruption. In pheromone-treated orchards, a more conservative threshold should be used. A supplement insecticide treatment is probably warranted following a cumulative catch of only two to three moths per trap.

Table 1. Example of determining cumulative moth capture in traps

Number of moths trapped				
	Week 1	Week 2	Week 3	Week 4
Trap 1	0	2	2 (2 cumulative)	2 (6 cumulative)
Trap 2	1	1 (2 cumulative)	1 (3 cumulative)	2 (5 cumulative)

Over the past few seasons, early season codling moth activity in Michigan has been impacted by cool wet weather. This weather pattern has led to low codling moth activity in many orchards for the first few weeks after the establishment of biofix, making it difficult to decide if a treatment should be made when the GDD model indicates a timing window is current. The situation in southwest Michigan in 2007, provides a good example of how considering a treatment threshold can help in making this decision. Biofix for several Southwest counties was set on May 9, but moth captures in traps on five out of seven farms being intensively monitored as part of a codling moth area wide project in the region, have indicated no need for treatment in any of the blocks on these farms. So, even though the growing degree-day model tells us that enough degree-days have been accumulated to time a treatment, that treatment should not be automatically triggered. Growers need to weigh the evidence of moth activity measured by monitoring traps to decide if treatment is justified in terms of cost and time.

Another consideration to be factored in for Michigan growers, is the spike in late first generation codling moth activity that has been seen over recent years. Delaying early first generation controls, when monitoring shows that treatment thresholds have not been reached, can leave more resources available to target late first generation codling moth, preventing populations from building up as the season progresses.

Based on the above discussion, what advice can be provided to growers that will help them make good decisions over the next few weeks? Catches in pheromone traps appear to fall into two general patterns; a typical start to biofix a few weeks ago and continued activity above threshold since, or no to low catches throughout the past few weeks following biofix. Under the first scenario, a treatment is warranted and growers should time their sprays as outlined in the *Fruit CAT Alert* article on May 8. The second pattern of codling moth activity is the one that leads to a less than clear-cut process for deciding whether and when to apply first generation control treatments. Using a treatment threshold based on block-specific moth captures really helps in this situation. In some cases, the threshold will eventually be reached, although after the suggested optimum DD timing for a particular material. For example, 300 DD have passed and the grower planned to use a larvacide that typically is applied at 250 DD. Under this scenario, the grower should apply the larvacide as soon as the threshold is reached. Some growers may be fortunate enough to not reach the threshold throughout the first generation flight. Suggested options if this is the case are: to not treat if the grower is willing to take a risk, or treat at a delayed timing of 350-450 DD after the first moths were captured. This timing would be targeting the predicted peak of activity.

The use of biofix and the GDD model for codling moth are key tools for helping growers properly time control measures to manage this pest, but it is only when combined with site-specific monitoring information to help determine when damaging levels of codling moth are present, that growers can best manage scarce resources to achieve the best results.

Pesticide Note: There have been some questions about Rimon's activity on first generation obliquebanded leaf roller (OBLR). John Wise's data from last season show that this material takes two weeks before its best performance is noted. Proclaim, another good material for OBLR, showed maximum efficacy after one week in the trial, whereas Rimon was the best performer in the trial after two weeks. Rimon residue lasts for 18 days.

SWEET CHERRY CROP INSURANCE CHANGES

Jim Nugent, District Horticulturist Emeritus, MSUE

Growers in Leelanau and Grand Traverse counties have had the opportunity for the past few years to participate in a pilot sweet cherry crop insurance program. Response to the program was quite positive in Michigan, but it did not meet with a favorable response in western states. Consequently, this program is not going to be continued in future years. USDA's Risk Management division has begun the process to design a replacement crop insurance program for sweet cherries. We learned last fall that the proposed replacement program would be only for fresh market sweet cherries. After spending several months this past winter collecting information on the west coast industry, it was decided by USDA in late April to also ask for data input from Michigan, but the report had to be ready in a couple of weeks. Nikki Rothwell, Phil Korson, and I wrote the report which pointed out the dominance of the processing industry in Michigan. We stressed that a program limited to fresh market fruit would leave most of Michigan industry without available crop insurance.

We recently received word that, based on strength of the information in our report, **Risk Management has changed its position and is now moving forward to design a new sweet cherry crop insurance program that will be available to growers of fruit destined for either fresh or processing markets.**

Since the current pilot program has been in place in NW Michigan, we have experienced some exceptionally small crops. The 2002 crop was the smallest crop in at least a half century. This was followed in 2003 by a larger crop than 2002, but it was smaller than any

other crop except 2002, since 1963. It does not help that crop insurance actuaries could be based on recent years which include the two smallest crops in over 40 years. We are hearing at this time that we made a strong enough case for 2002 to be a statistical outlier, ie., 1 in a 100 year event, that it will not be used to calculate crop variability in Michigan.

At this time we do not know when a new sweet cherry insurance program might be available or what it will look like, but we have been told that at least our industry will be included in the new program.

SIGN-UP FOR THE FIRE BLIGHT TREE ASSISTANCE PROGRAM ENDS JUNE 29, 2007

State Executive Director for the Farm Service Agency, Nancy Dietz, announced today that sign-up for the Tree Assistance Program (TAP), which provides financial relief to owners of eligible trees damaged by fire blight, ends June 29, 2007.

For several years there has been a tree replacement program specifically for Michigan producers who suffered tree losses because of fire blight from January 1, 2000, through the 2007 crop year, which ends September 30th. Michigan producers who suffered a qualifying loss due to fire blight may apply for the TAP until June 29, 2007. Due to this special authorization, all eligible applicants with qualifying tree losses will have to submit evidence of the required replanting by August 31, 2007. This is Michigan's fourth sign-up under this authorization.

To qualify for payments, eligible owners must have suffered losses of 15% or greater for an individual stand, adjusted for normal mortality (1% for Michigan Fire Blight TAP). Payments are in the form of 75% cost sharing to replace the eligible trees within 12 months from the date the TAP application is approved.

For more information, or to apply for TAP assistance, tree owners should contact their local Farm Service Agency (FSA) office. Additional TAP information is available on FSA's Web site at: www.fsa.usda.gov.

For local information, please call Greg Shy at 941-0951

Insect and disease predictive information is available at:
<http://www.envioweather.msu.edu/home.asp>

This issue and past issues of the weekly FruitNet report are posted on our website at:
<http://www.maes.msu.edu/nwmihort/faxnet.htm>

[ACTUAL AND PREDICTED DEGREE-DAY
ACCUMULATIONS SINCE MARCH 1, 2007](#)

Please send any comments or suggestions regarding this site to:

Bill Klein, kleinw@msu.edu

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Northern Michigan FruitNet 2007

Weekly Update

NW Michigan Horticultural Research Station

Nikki Rothwell
District Horticulturist

Bill Klein
District Fruit IPM Agent

Bill Klein
Farm Mgr, NWMHRS

Duke Elsner
Agricultural & Regional Viticulture Agent

Leelanau Extension Director

June 12, 2007

GROWING DEGREE DAY ACCUMULATIONS THROUGH JUNE 11th AT THE NWMHRS:

Year	2007	2006	2005	2004	2003	2002	17yr. Avg.
GDD42	1028	1014	967	774	761	671	839.7
GDD50	584	553	543	389	363	362	448.1

Growth Stages at NWMHRS (6/11/07—8:00am)

Apple: 20 mm fruit

Pear: Bartlett: 17 mm fruit

Sweet Cherry: Hedelfingen, Gold, and Napoleon: 14 mm fruit

Tart Cherry: Montmorency and Balaton: 13 - 14 mm fruit

Apricot: 33 mm fruit

Plum: 19 mm fruit

Grapes: Chardonnay: 25" Shoots

WEATHER

Degree day accumulation to date is very close to the accumulation on this date last year. This is the 5th year since 1990 that has exceeded 1000 GDD base 42 by this date. Most areas in NW MI have received little to no rain during this past week. Soil moisture varies in the region, but conditions are generally dry.

CROP REPORT

USDA cherry crop estimate will be announced on **June 21** at 8:30 a.m. The USDA no longer conducts an objective yield survey for tarts. Instead, the estimate is compiled based on a grower survey. Because of this change, the estimate is no longer compiled by region

on a greater scale). Because of this change, the estimate is no longer compiled by region within MI (SW, WC, and NW), but they do announce an aggregate estimate for the state.

PEST Report

Apples have generally sized beyond the ideal thinning window. Codling Moth (CM) trap catches are way down this week. Obliquebanded leaf roller larval populations have dropped to very low levels while adult trap catches are up substantially. Rosy apple aphid (RAA) populations have increased in some area orchards; if RAA populations warrant treatment consider selection of a material that is effective for both CM and RAA. Potato leafhoppers are often present where no control has been applied. Rose chafers are now emerging and can become important in a few sites where populations are high.

Cherry: Degree days would indicate that fruit maturity is the same as last year. However, keep in mind that orchards with heavy crops take longer to mature the fruit than orchards with light crops. This delayed maturity is most pronounced in tarts when the leaf to fruit ratio drops below two leaves per fruit. Plum curculio (PC) egg laying continues where PC are present. PC egg laying in tarts at this point in the season will result in larvae present in the fruit at harvest. This first adult cherry fruit fly (CFF) was trapped at the NWMHRS on 6/11 in a high population site. CFF traps should be placed in orchards at this time. Greater peach tree borer adult emergence began this week at the NWMHRS, while lesser peach tree borer trap catches dropped and American plum borer first generation flight is likely complete. Obliquebanded leaf roller trap catch rose sharply this week. Powdery mildew is becoming more common. Cherry leafspot lesions, where present, are generally found only on the oldest leaves.

Peach: Rose chafer has begun to emerge, so be sure to monitor peach orchards for this important pest.

Grapes: Rapid shoot growth and leaf development has created dense canopies in many vineyards. **Powdery mildew** is the greatest disease concern as we continue to experience warm and dry weather. **Potato leafhoppers** are easy to find, with nymphs now present as well. The first rose chafers have arrived in vineyards. Growers should keep an eye out for populations of rose chafers on young vines where there numbers can be quite significant. See the NW MI Grape Scouting reports for more information.

Seasonal Evaporation & Precipitation				
Beginning May 1, 2007, at NWMHRS				
<u>Date</u>	<u>Evap/week (in.)</u>	<u>75% of Evap/week</u>	<u>Rainfall/wk at NWMHRS (in.)</u>	<u>Rainfall minus 75% of Evaporation</u>
5/2	0.89	0.67	0.92	0.25
5/9	1.52	1.14	0.02	-1.12

5/16	1.5	1.13	1.14	0.01
5/23	1.21	0.91	0.12	-0.79
6/6	1.35	1.01	0.49	-0.52
Totals	6.47	4.86	2.69	-2.17

Sweet Cherry Variety Showcase

International Plant Management, Inc., in cooperation with MSU Cooperative Extension, is sponsoring a Sweet Cherry Variety Showcase on **Thursday July 12, at 4:30** in the afternoon. The showcase will be held at the International Plant Management sweet cherry test block at **Fruit Acres Farms in Coloma, MI.**

The IPM cherry test block has more that 85 different sweet cherry varieties planted with most of them fruiting this year. There is a large group of the NY test varieties from New York State Agricultural Experiment Station in Geneva, NY and more than 10 varieties from the University of Bologna, Bologna, Italy. Also planted are varieties from the Washington State University, Michigan State University, the Summerland, BC program in Canada and many of the industry standard varieties. This block also features trees on 8 different standard and dwarfing rootstocks.

Wally Heuser of International Plant Management remarks, "I believe this block closely resembles a typical grower's production block. We've made mistakes and fixed them, tried training systems that didn't work and forgotten to do things that should have been taken care of. Currently the entire block is trained in our version of a central leader with modifications. We hope that our experiences and mistakes will help growers avoid and solve problems with their own dwarfing sweet cherry blocks.

Growers are invited to come and sample everything in the block. We have some numbered selections from New York and Italy that we are very excited about. Especially interesting are some very early selections from both programs."

On display will be cherry samples from research stations and growers throughout Michigan and New York. Featured guests and speakers include Dr. Susan Brown, stone fruit and apple breeder from Cornell, Dr. Greg Lang and Dr. Bill Shane of MSU, Wallace Heuser of International Plant Management, Inc, and many other university and extension professionals.

All growers, extension and university personnel and their employees are invited to attend. Refreshments will be provided. Fruit Acres Farms is located in Coloma, MI, 1 mile south of I-94 exit 39, on Friday Road. The test block is ¼ mile east of Fruit Acres Farms on Carmody Road. Registration is not required. For more information call International Plant Management at 800.424.2765

management at 800-424-2700.

IFP / IPM DISTRICT EXTENSION EDUCATOR CANDIDATE SEMINARS

All public and interested parties are welcome to attend the candidate seminars for the Integrated Fruit Practices and IPM District Educator position. All seminars will be presented on **June 25, 2007** at the **NW MI Horticultural Research Station**.

1:15 p.m. - ERIN LIZOTTE

2:00 p.m. - JESSICA METZGER

2:45 p.m. - DAVID MOTA-SANCHEZ

Each presentation will include: 5 minutes on "My experiential and educational background and how it has prepared me for the IFP/IPM role," 20 minutes on "My vision to enhance integrated fruit and pest management practices in Michigan," and 10 minutes of questions and answers.

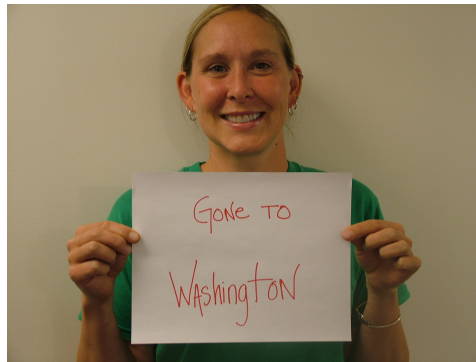
Cherry Tunnel Field Day

At Haygrove's request, there will be a Cherry Tunnel Field Day at **2:30 PM** on **Tuesday, June 26, 2007** at the **Clarksville Horticulture Experiment Station**.

Topics on the agenda at this point are: a simple program in the orchard to talk about the tunnels, what we've learned, what challenges remain, the Extenday, climatic comparisons in and out, etc. Cherry variety samples will be available, but the focus will be on the Rainier's which should be ripe by then. We will meet rain or shine.

Dr. Rothwell out of town

Our fearless leader is away in Washington on the IFTA "Short Tour". She will return to Northern Michigan on Thursday, *June 14*.



Insect and disease predictive information is available at:

<http://www.enviroweather.msu.edu/home.asp>

This issue and past issues of the weekly FruitNet report are posted on our website at:

<http://www.maes.msu.edu/nwmihort/faxnet.htm>

**ACTUAL AND PREDICTED DEGREE-DAY
ACCUMULATIONS SINCE MARCH 1, 2007**

Please send any comments or suggestions regarding this site to:

Bill Klein, kleinw@msu.edu

Last Revised: 6-12-07



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Northern Michigan FruitNet 2007

Weekly Update

NW Michigan Horticultural Research Station

Nikki Rothwell
District Horticulturist

Bill Klein
District Fruit IPM Agent

Bill Klein
Farm Mgr, NWMHRS

Duke Elsner
Agricultural & Regional Viticulture Agent

Leelanau Extension Director

June 19, 2007

GROWING DEGREE DAY ACCUMULATIONS THROUGH JUNE 18th AT THE NWMHRS:

Year	2007	2006	2005	2004	2003	2002	17yr. Avg.
GDD42	1259	1196	1139	939	926	781	1008.1
GDD50	759	680	659	498	472	417	561.3

Growth Stages at NWMHRS (6/18/07—8:00am)

Apple: 28 mm fruit

Pear: Bartlett: 21 mm fruit

Sweet Cherry: Hedelfingen, Gold, and Napoleon: 18 mm fruit

Tart Cherry: Montmorency and Balaton: 14 mm fruit

Apricot: 36 mm fruit

Plum: 22 mm fruit

Grapes: Chardonnay: Bloom

Weather

There is not a lot new to report with the weather, except that it has been hot and very dry in the northwest for another week. However, rain finally fell last night, 18 June, and the area's rainfall totals ranged from 0.4" in Benzonia up to 1.36" in Eastport. Prior to this last rain, the NWMHRS received less than 1.5" of rain in May and so far in June, we have reported less than a half inch of rain. In a nutshell, the conditions here in the north are extremely dry, and we were happy to receive last night's rain. Our GDD have really moved along this past week, and we are at 1259 base 42 and 759 base 50; these accumulations show that this year is the hottest on record since 1991.

Crop Report

Many of the trees in the region are now showing symptoms of drought stress; we expect

last night's rainfall will relieve some of these drought signs. We have also observed cherries moving along quickly under these warm temperatures, and some of our early test varieties are already edible. Strawberry harvest has been underway for a little less than a week, and these cooler temperatures will prolong the harvest.

Pest Report

Apple: With these warm and dry temperatures, we have not had an **apple scab** wetting event since the last of May until last night. This 18 June wetting event is still ongoing and will result in an apple scab infection. The model also indicates that although our spores are 100% mature, we still have between 5-10% of the spores yet to be discharged. Hopefully, with one final rain, we can call an end to primary scab. We have observed **powdery mildew** in some apple blocks. In apple, we are seeing our insect numbers stay pretty level compared with the last few weeks. Average trap counts are as follows: **spotted tentiform leaf miner**—10/trap, **codling moth**—5/trap, **obliquebanded leaf roller** (OBLR)—20/trap, and **oriental fruit moth**—10/trap. We are setting the biofix for OBLR on May 28.

Cherry: Again, with these warm and dry temperatures, we do not have much to report in the way of **cherry leaf spot** (CLS) infection. We have not had a wetting event that would result in a CLS infection since May 27th. We have observed a few CLS lesions on a few blocks, mostly on the small bract leaves. Growers should be especially diligent about preventing CLS this year as so many trees are experiencing drought stress. Lots of **powdery mildew** is showing up in tart cherry as this disease loves hot and dry conditions compared with our other pathogenic fungi. **Obliquebanded leaf roller** numbers are high in our NWMHRS cherry blocks with a trap average of over 28. **Lesser peach tree borer** numbers average 10 trap while **American plum borers** have dropped to less than one moth per trap. **Greater peach tree borers** are flying, and we caught a few per trap this week. As mentioned last week, we caught our first **cherry fruit fly**, and this week we have captured a total of 18 flies in our unsprayed entomology block. We are still seeing some new **plum curculio** stings in our entomology block at the NWMHRS. Mark Whalon predicts that we have 25% of plum curculio egg-laying capacity left to go for first generation. **Two-spotted spider mites** are showing up in cherry, especially as the ground cover is drying up so early in the season.

Grape: Most grapes in the northwest are in a various stages of bloom, depending on variety. As with tree fruit, last night's rain helped the grape crop, particularly those vineyards that are not under irrigation. **Rose chafers** are abundant in the region. **Potato leaf hoppers** are also still causing headaches in the vineyard. We have hunted high and low for **powdery mildew** in grapes in both commercial and research vineyards, but our search has been futile—we have not found any mildew in wine grapes. However, growers should be wary of this disease with the hot and dry weather conditions as we have seen a lot of it in tart cherry.

Cherry Fruit Fly—She's Here...

Nikki Rothwell, District Horticulturist, MSUE

We trapped our first fruit fly at the NWMHRS last week. However, growers should know that we have a huge population here in our unsprayed entomology block, and based on some recent work at MSU, we know that this population differs genetically from others around the state. This population is so strange that the NWMHRS is the first place to catch CFF in the state! Hopefully, most growers are trapping for CFF at their farms and will know the status of their populations. However, if growers are not trapping, then we have a bit of guesswork to do to know when to put on a CFF spray.

First, most growers do not have the weird population like we have at the research station, so growers should be timing their spray applications around catches on commercial farms.

We have not trapped a CFF at any commercial farm that we currently monitor. Second, last night's rain will aid in CFF emergence with that extra moisture. Therefore, if growers do not have yellow sticky boards up yet, they should do so ASAP.

Get Out Your Hand Lens—We've got Two-Spotted Spider Mites

Nikki Rothwell District Horticulturist MSUE

Two-spotted spider mites can be a complex problem on cherry in hot, dry years. Apple and mites, on the other hand, seem to be easier to control as we can see populations develop over a longer period of time; in an apple system, we also seem to be able to better monitor predator mite populations. To add to the complexity of the mite on cherry issue, most miticides have an extended pre-harvest interval (PHI's). Therefore, if a grower intends to apply a miticide, he/she needs to make that decision in the very near future, and the current mite counts may not conclude that a miticide is warranted. So, to put this problem into perspective, we can sum it up in this way: 1) we currently have seen mites move up into cherry early this season, 2) the weather forecast predicts more high temperatures with little rainfall, which is indicative of rapid increases in mite populations, 3) miticides have a longer PHI, which is already too late for many sweet cherry varieties and on the edge for some tart cherry growers in more southerly areas, and to add fuel to the fire, 4) miticide sprays are expensive.

First, two-spotted spider mites can produce multiple generations per season, and the warmer the seasonal temperatures, the more generations they can produce during that season. Adult females overwinter in bark scales on the cherry tree or in leaf litter on the ground. In spring, females emerge and begin to look for food sources, which are often weeds and grasses found under the tree canopy. As temperatures warm and the ground cover under the tree dries out, female mites move up into the tree and lay eggs in the inner tree. These eggs hatch within eight days. The offspring molts three times, and the entire life cycle may be completed in three weeks. If temperatures are warm, mites can undergo 5-7 generations per season. Droughty conditions cause mites to migrate up into the trees faster than under wet conditions. Once populations establish in a tree, mite numbers can increase dramatically and cause serious damage, especially in hot years.

There has been no research on mite thresholds in cherry, but observational evidence suggests that a threshold of 20 mites/leaf in a normal year is acceptable. However, under droughty conditions, this threshold decreases to ~10 mites/leaf. To determine a mite threshold, inspect the older, inside spur leaves for mites, as the females move to those locations first. If the mite numbers are above 10/leaf, a miticide should be considered, unless predator populations in the orchard are high. High numbers of predators are often associated with lots of weeds and grasses under the trees; orchards with regular herbicide applications are less likely to have high predator populations.

The labeled miticides for cherry are Apollo (21-day PHI), Savey (28-day PHI), Vendex (14-day PHI), and Envidor (7-day PHI). Acramite has just received a label on bearing cherries, and this product has a PHI of only 3 days. Close attention should be paid to the pre-harvest intervals before making a miticide application.

Brown Rot on Our Beautiful Ripening Sweet Cherries?

Although an American brown rot (*Monillinia fruticola*) epidemic in sweet cherries seems a bit hard to believe with these previous hot, dry weather conditions, we should not forget that this disease can come in and take over—especially since we just had a big rain! Brown rot rears its ugly head under warm, wet and/or humid conditions, and sweet cherries are particularly susceptible. Once the fruit begins ripening and changing color, it becomes more susceptible. This pathogen can gain easy access to fruit when any type of injury (insect damage, hail injury, bird pecks, bruised and/or cracked fruit, etc.) is present. Once the pathogen becomes established, soft brown spots appear on the fruit. These spots rapidly expand into lesions covered with powdery masses of creamy-tan colored conidia. Under

favorable conditions, the entire fruit may rot within 48 hours. Eventually fruit that remains on the tree dries out; these fruits are often referred to as "mummies", and they become source for future infections.

There are several good fungicides that provide adequate control for brown rot. Protectants (captan, wettable sulfur) may be an adequate option in low-pressure situations. Materials from this group must be applied prior to the expected wetting event. Sterol-inhibitors (Elite, Indar, Orbit) will provide excellent control of fruit brown rot, but these materials should be used judiciously as resistance has been reported with these products in cherry leaf spot

used judiciously as resistance has been reported with these products in cherry leaf spot disease. SI products are best applied before the onset of the infection, but some of these fungicides have a limited back action of 24-36 hrs (Indar, Orbit). SI's are again best applied in a tank mix with a protectant, such as captan. Strobilurins (Flint, Pristine) adequately control brown rot, and they are currently an option for fungicide resistance management. If we do enter a wet period prior to harvest, we should rotate the SI's with strobys, again as a resistance management strategy. Strobys must be applied prior to the wetting event since there are no available data as to their kick-back action. Rovral and Bravo, other options available for brown rot blossom blight control, **cannot** be used for summer control.

Resistance is of particular concern as we rely heavily on the SI's to control this disease around harvest time. Recent preliminary work from MSU Plant Pathology has shown there is a lot of variability in sensitivity of the brown rot pathogen to SI fungicides. At this time, we cannot conclude that we have resistance in the state, but we know that these variable populations often suggest reduced sensitivity of the pathogen to SI's. In other words, growers must make sure to rotate fungicides and other resistance management tactics that would minimize the probability of developing SI-resistant brown rot isolates.

In a New York study, control failures were reported when growers were using Indar to control brown rot in peaches. Dr. Wolfram Koller found that 1/5 of the sites showed decreased sensitivity to Indar. Their hypotheses suggest that this type of resistance has not developed from consecutive sprays for managing fruit rot, but rather using SI's for blossom blight control. Their conclusions also suggest that the SI's could be at risk for resistance in brown rot as do our results from Michigan. As we have mentioned in the past, we should be trying to save the SI's for when we really need them—now (if we have rain!), and we should be avoiding their use at or around bloom and petal fall time.

Ethrel—the Time is Near

Nikki Rothwell, District Horticulturist, MSUE

Ethephon (Ethrel) applications will be going on soon in the northwest. However, before any grower sprays ethephon this season, we want to convey that we have observed **a lot** (!) of ethephon damage this spring, especially in sweet cherries and of those varieties, Golds seem the most sensitive. This damage occurred last season when ethephon was applied during hot and dry weather conditions during 2006 and in many blocks in 2005. Trees under stress, particularly drought stress, become more susceptible to ethephon damage. Damaged trees exhibit excessive gumming, and branches lose their leaves. We have also noticed areas within a block may show considerably more ethephon damage than other areas. Most likely the trees that show the most damage were more stressed in some way at the time of application, and soils in a particular area can help showcase this ethephon damage.

According to Jim Nugent, the timing of application is an important factor. A lower rate of ethephon will provide adequate loosening if given adequate time for action (10 to 14 days), while higher rates will loosen fruit to the same degree more quickly. Therefore, it is possible to substitute time for rate and obtain the same effect. Second, it is important that the chemical not be applied too early in the season. The fruit should be in Stage III of growth, that is, enlarging rapidly and the grass-green color beginning to yellow or take on a tinge of red. If ethephon is applied earlier, the fruit may fail to enlarge further and drop from the tree with the stems attached.

Temperature and tree vigor are associated with the degree of response achieved. At higher temperatures during the 72 hours following application the magnitude of response is increased, and at lower temperatures it is decreased. Trees low in vigor or under stress respond to a greater extent, and gumming and leaf abscission may result. Do not treat such trees! Repeat, do not treat such trees!

Again, the Nuge recommends the following points before applying ethephon to cherries:

1. Rate:

Vary the rate depending on anticipated temperatures for 72 hours after application, days before harvest, tree stress and past experience. *Lower rates decrease the likelihood of tree injury.*

likelihood of tree injury.

A. Light sweets

-- When applied concentrate (80 gals. water/acre or less), 1 to 2 pts/acre applied 10-14 days before anticipated harvest should provide adequate loosening. Rates up to 2.5 pts/acre may be necessary for harvesting in less than 10 days. When applied dilute, use no more than $\frac{3}{4}$ pt/100 gals or 3 pts/acre.

B. Dark sweets

-- When applied concentrate, use 1.5 to 2.5 pts/acre applied 10-14 days prior to anticipated harvest. Rates up to 3 pts/acre may be necessary for harvesting in less than 10 days. When applied dilute, use no more than 1 pt/100 gals. or 4 pts/acre.

C. Tart cherries

-- When applied concentrate, use 0.5 to 1 pt/acre applied 7 to 14 days prior to anticipated harvest. When applied dilute, apply no more than $\frac{1}{3}$ pt/100 gals or 1 pt/acre.

2. Time of Application:

Apply approximately 7 to 14 days before anticipated harvest. Do not harvest within 7 days of application (7 day PHI).

3. Temperature:

Avoid application when high temperatures are expected to exceed 85° F or remain below 60° F for the 72 hour period after application. Use relatively high rates when high temperatures are expected to be in the 60's ° F and lower than normal rates when highs are expected in the lower 80's.

4. Tree stress:

Do not spray trees that are low in vigor or under stress conditions.

5. Do not

spray trees that had serious gumming the previous year.

6. Crop load:

Heavy crop load, ie, low leaf to fruit ratio, is more difficult to loosen so use relatively higher rates or expect a longer time to achieve desired loosening.

7. Concentrate spraying:

Applying ethephon with concentrate sprayers (i.e., 80 gallons of water/acre or less) achieves the same level of loosening at lower rates per acre than does dilute applications. Uniform coverage is important.

8. Tree size:

Suggested rates/acre are based on full-sized trees. Adjust rates downward when treating blocks with smaller trees.

Growers should pay particular attention to the temperatures. As evident from the last two seasons, hot temperatures can really do damage to cherry trees. Growers that have had problems in the past year or two should avoid ethephon, especially if the trees showed serious gumming and leaf loss. We should also be aware that trees are stressed due to lack of moisture, so be wary when applying ethephon to trees in this situation.

Another Reminder about the IFP/IPM Seminars

We invite all growers and the general public to attend the candidate seminars for the Integrated Fruit Practices and IPM District Educator position (Nikki Rothwell's old job!). Seminars will be presented on **June 25, 2007** at the **NW MI Horticultural Research Station**:

1:15 p.m. - ERIN LIZOTTE

2:00 p.m. - JESSICA METZGER

2:45 p.m. - DAVID MOTA-SANCHEZ

Each presentation will include 5 minutes on "My experiential and educational background and how it has prepared me for the IFP/IPM role." 20 minutes on "My vision to enhance

and now it has prepared me for the NWMHRS, 20 minutes of my lecture on integrated fruit and pest management practices in Michigan," and 10 minutes of questions and answers. We know this time of year is very busy, but we would welcome all input in choosing our next IFP/IPM Educator at the research station!

Cherry Industry Administrative Board (CIAB) Notes

The CIAB meetings will be held on **June 21, 2007 at 8:30 am** at the Amway Grand Plaza in Grand Rapids to discuss the Optimum Supply Formula and to set restriction percentages, if any. The processor estimate will be held at the Amway on June 20th.

The CIAB will also hold grower meetings to discuss the outcomes with growers and the prospects for this harvest. The meetings will be at the following locations and times:

Friday, June 22 4:30-6:30 Southwest MI Research Station 1791 Hillandale Benton Harbor, MI

Monday, June 25 8:30-10:00 pm Oceana Intermediate School District 844 Griswold Street Hart, MI

Tuesday, June 26 9:00-11:00 am Peninsula Fire Station #2 8150 Center Road Traverse City, MI 49684

Tuesday, June 26 1:00-3:00 pm Milton Township Hall Kewadin, MI

Tuesday, June 26 7:00-9:00 pm Northwest MI Hort. Research Station 6686 S. Center Hwy Traverse City, MI

If you have questions, please call Perry Hedin at 888-639-2422.

Seasonal Evaporation & Precipitation				
Beginning May 1, 2007, at NWMHRS				
<u>Date</u>	<u>Evap/week</u> <u>(in.)</u>	<u>75% of</u> <u>Evap/week</u>	<u>Rainfall/wk at</u> <u>NWMHRS</u> <u>(in.)</u>	<u>Rainfall minus</u> <u>75% of</u> <u>Evaporation</u>
5/2	0.89	0.67	0.92	0.25
5/9	1.52	1.14	0.02	-1.12
5/16	1.5	1.13	1.14	0.01
5/23	1.21	0.91	0.12	-0.79
6/6	1.35	1.01	0.49	-0.52

6/13	2.00	1.50	0.03	-1.47
6/19	2.01	1.51	0.78	-0.73
Totals	10.48	7.86	3.50	-4.36

Insect and disease predictive information is available at:

<http://www.enviroweather.msu.edu/home.asp>

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**ACTUAL AND PREDICTED DEGREE-DAY
ACCUMULATIONS SINCE MARCH 1, 2007**

Please send any comments or suggestions regarding this site to:

Bill Klein, kleinw@msu.edu

Last Revised: 6-19-07



NASS

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UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D.C.

Cherry Production

Released June 21, 2007, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, U.S. Department of Agriculture. For information on *Cherry Production* call Faye Propsom at (202) 720-4288, office hours 7:00 a.m. to 4:00 p.m. ET.

Tart Cherry Production Up 11 Percent

U.S. tart cherry production is forecast at 294 million pounds, 11 percent above the 2006 production and 9 percent above production in 2005.

Michigan, the largest producing State, expects a crop of 230 million pounds, up 21 percent from the 2006 crop and 11 percent above 2005. A severe freeze on April 7 - 8 destroyed the majority of the tart cherry flower buds in the southwest portion of the State, while there was less damage in west central Michigan. Conditions in the northwest were excellent during bloom and pollination, leading to high yield potential.

Washington expects to produce 18.0 million pounds of tart cherries in 2007, down 19 percent from 2006 but 9 percent higher than 2005. Cool spring weather and damaging frosts caused problems during bloom and pollination.

Utah production is forecast at 16.0 million pounds, 43 percent below both 2006 and 2005 production. The decrease in production is the result of poor fruit set, with approximately two-thirds of the flowers reportedly failing to set.

New York is expected to produce 13.0 million pounds of tart cherries, 25 percent higher than the 2006 crop and 73 percent above 2005. Growers across the State reported average to above average crop conditions.

Wisconsin production is forecast at 11.7 million pounds, 160 percent above 2006 and 56 percent above the 2005 production. There was very little winter damage reported and growers indicated it was a very good bloom and pollination season.

Pennsylvania expects to produce 4.30 million pounds of tart cherries, 17 percent below 2006 but up 65 percent from 2005. Although the State experienced freezing temperatures in early April, overall production is expected to be good.

Oregon's production is forecast at 0.80 million pounds, down 76 percent from 2006 but 167 percent above the production in 2005. A light set is expected due to rain and cold weather during bloom.

**Tart Cherries: Total Production by State and United States,
2005-06 and Forecasted 2007**

State	Total Production		
	2005	2006	2007
	<i>Million Pounds</i>	<i>Million Pounds</i>	<i>Million Pounds</i>
MI	208.0	190.0	230.0
NY	7.5	10.4	13.0
OR	0.3	3.4	0.8
PA	2.6	5.2	4.3
UT	28.0	28.0	16.0
WA	16.5	22.3	18.0
WI	7.5	4.5	11.7
US	270.4	263.8	293.8

Sweet Cherry Production Up 8 Percent

U.S. sweet cherry production is forecast at 317 thousand tons, up 8 percent from 2006 and 27 percent above 2005. If realized, this will be the highest production on record.

The Washington crop forecast of 155 thousand tons is unchanged from the June *Crop Production* report. The forecast is 9 percent below 2006 but 13 percent above the production in 2005. If realized, this will be the second highest sweet cherry production on record. Eastern Washington experienced some damaging frosts in early spring, but growing conditions during June have been good. Fruit size and quality are expected to be very good.

Production in California is forecast at 92.0 thousand tons, 119 percent higher than 2006 and 75 percent above 2005. The California forecast is carried forward from the June 1 forecast. Favorable spring weather with no extended rain was ideal for pollination. Acreage increases and good-sized fruit have increased California's sweet cherry production potential.

Oregon production is forecast at 40.0 thousand tons, unchanged from the June *Crop Production* report. The forecast is 20 percent below 2006 but 40 percent above the production in 2005. Many growers along the Columbia River and in the Willamette Valley experienced a damaging late frost.

The Michigan crop is forecast at 26.0 thousand tons, 21 percent above the 2006 production but 4 percent lower than the 2005 crop. Michigan growers reported that sweet cherry crop potential is very good.

Idaho is expecting a sweet cherry crop of 2.00 thousand tons, down 47 percent from last year but 18 percent higher than 2005. Idaho sweet cherry growers experienced several freezes during the bloom period, reducing the crop's yield potential.

Utah production is expected to total 1.40 thousand tons, down 22 percent from both 2006 and 2005. Cool temperatures were reported during bloom which hampered pollination and decreased production potential.

New York production is forecast at 970 tons, 1 percent above the 2006 crop and 21 percent higher than 2005. Some growers in the Lake Ontario region reported spotty frost damage, but overall, growers across New York are optimistic about this year's sweet cherry crop.

**Sweet Cherries: Total Production by State and United States,
2005-06 and Forecasted 2007**

State	Total Production		
	2005	2006	2007
	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
CA ¹	52,700	42,100	92,000
ID	1,700	3,800	2,000
MI	27,000	21,500	26,000
MT ²	1,230	2,400	
NY	800	960	970
OR	28,600	50,000	40,000
UT	1,800	1,800	1,400
WA	137,000	171,000	155,000
US	250,830	293,560	317,370

¹ Forecast carried forward from "Crop Production" released June 9, 2007.

² The first estimate for 2007 sweet cherries in MT will be published in the January 2008 *Noncitrus Fruits and Nuts 2007 Preliminary Summary*.

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Northern Michigan FruitNet 2007

Weekly Update

NW Michigan Horticultural Research Station

Nikki Rothwell
District Horticulturist

Bill Klein
District Fruit IPM Agent

Bill Klein
Farm Mgr, NWMHRS

Duke Elsner
Agricultural & Regional Viticulture Agent

Leelanau Extension Director

June 26, 2007

GROWING DEGREE DAY ACCUMULATIONS THROUGH JUNE 25th AT THE NWMHRS:

Year	2007	2006	2005	2004	2003	2002	17yr. Avg.
GDD42	1434	1354	1347	1055	1114	994	1185.7
GDD50	878	782	811	560	605	574	684.1

Growth Stages at NWMHRS (6/26/07—8:00am)

Apple: 34 mm fruit

Pear: Bartlett: 31 mm fruit

Sweet Cherry: Hedelfingen, Gold, and Napoleon: 20 - 21 mm fruit

Tart Cherry: Montmorency and Balaton: 16 mm fruit

Apricot: 38 mm fruit

Plum: 23 mm fruit

Grapes: Chardonnay: Early Buckshot

Weather

The weather continues to be warm and dry in northwest Michigan. We had rain on June 20th, but nothing more recently. The weather is predicted to cool down in the coming days.

Crop Report

Growers are reporting a lot of cherry drop in the past few weeks. Many growers are concerned about the fruit on the ground, but we still have lots of cherries on the trees. The USDA estimate for tart cherries is around 230 million pounds for Michigan, and the US prediction is estimated at 293 million pounds. The breakdown for Michigan from the CIAB is 160 million pounds in NW, West Central 59 million, and the southwest part of the state is

predicted to be 11 million pounds. Cherries are ripening quickly, and many growers are starting to apply ethephon.

PEST REPORT

Apple: No wetting events to cause disease infection, and we have not observed **scab** lesions from past infections. **Spotted tentiform leaf miner** numbers are climbing, but **codling moth** trap catches are down to less than 1 moth/trap. **Obliquebanded leaf roller** numbers are also down this week.

Cherry: Again, no diseases to report in cherry. Insect numbers have remained constant, except for **obliquebanded leaf rollers**, which have declined from last week. We are still catching **cherry fruit flies** in the unsprayed entomology block, approximately 15/trap.

NASS Rotational Survey Information Available for Cherry

The updated 2006 rotational survey for cherry acreage in Michigan is now available at the following website:

http://www.nass.usda.gov/Statistics_by_State/Michigan/Publications/Michigan_Rotational_Surveys/mi_fruit07/fruit.html

2007 Restriction Estimates Out

As many of you have already heard, the CIAB Board has released the estimates for the effective restricted percent for this year's crop. This percentage is based on the estimated crop for Michigan, and the current estimates stand at 160 million pounds for NW Michigan, 59-60 million from West Central, and 10-10.5 for the southwest part of the state; the average for the state will be 230 million pounds. New York will produce around 12 million pounds, Oregon will have about one million, Pennsylvania 4 million, Utah 16 million, Washington 18 million, and Wisconsin 12 million. The overall crop estimate for 2007 will be 294 million pounds. To achieve this percentage, the 2004, 2005, and 2006 free sales tonnage are averaged to provide a 3-year average of 175 million pounds. This average is placed into the optimum supply formula along with the estimate crop production to determine the effective restriction percentage, and the percentage for this season is 45%.

Seasonal Evaporation & Precipitation				
Beginning May 1, 2007, at NWMHRS				
<u>Date</u>	<u>Evap/week</u> <u>(in.)</u>	<u>75% of</u> <u>Evap/week</u>	<u>Rainfall/wk at</u> <u>NWMHRS</u> <u>(in.)</u>	<u>Rainfall minus</u> <u>75% of</u> <u>Evaporation</u>
5/2	0.89	0.67	0.92	0.25
5/9	1.52	1.14	0.02	-1.12
5/16	1.5	1.13	1.14	0.01

5/23	1.21	0.91	0.12	-0.79
6/6	1.35	1.01	0.49	-0.52
6/13	2.00	1.50	0.03	-1.47
6/19	2.01	1.51	0.78	-0.73
6/26	1.72	1.29	0.24	-1.05
Totals	12.20	9.16	3.74	-5.42

Insect and disease predictive information is available at:

<http://www.enviroweather.msu.edu/home.asp>

This issue and past issues of the weekly FruitNet report are posted on our website at:

<http://www.maes.msu.edu/nwmihort/faxnet.htm>

**ACTUAL AND PREDICTED DEGREE-DAY
ACCUMULATIONS SINCE MARCH 1, 2007**

Please send any comments or suggestions regarding this site to:

Bill Klein, kleinw@msu.edu

Last Revised: 6-26-07