

GROWTH STAGES AT NWMHRS (7/4/05)

Apple: Red Delicious: 37 mm fruit; Mac: 38 mm fruit
Pear: 33 mm fruit
Sweet Cherry: Hedelfingen: 19 mm fruit; Gold: 18 mm fruit
Tart Cherry: 18 mm fruit
Apricot: 33 mm fruit
Plum: 25 mm fruit
Grapes: Chardonnay: early buckshot berry

WEATHER

We finally got some very needed rain in NW Michigan with amounts ranging from about 0.4 to 1.0 inches. This will help reduce current tree stress and help size fruit, but is far short of meeting crop demands for more than few days. Note from the accompanying table that evaporation last week averaged a whopping 0.3 inches/day. This evaporation rate means that tree fruit should be receiving a bout 0.23"/day for optimum growth.

CROP REPORT

Apples: We finally received rain in northwest Michigan! The cool temperatures on Monday kept disease at bay. However, some light **apple scab** infection was reported in the Bear Lake area. The primary scab season is finished in northwest Michigan. **Codling moth** catches remain steady, while **oriental fruit moth** catches have declined to 4 moths/trap. **Spotted tentiform leaf miners** catches are still high this week with an average of 379 miners/trap. **Obliquebanded leafroller** (OBLR) trap catches have half the moths we caught last week: 12.3 moths/trap.

Cherry: The 4th of July holiday brought much needed rain to the area. This wetting event resulted **in cherry leaf spot** infection in the region. **Powdery mildew** has been reported in most scouted cherry blocks. **American plum borer** and **lesser peachtree borer** numbers are still low this week. We still have very low catches of **greater peach tree borer**, as well. **Two spotted spider mites** have been found on older inner spur leaves in relatively high quantities. **Cherry fruit fiv**

(CFF) numbers are still high in the Entomology block (unsprayed area), with an average of 59 flies per trap. We did capture two CFF adults on sticky boards in a commercial block in the East Leland area. Fruit size is small in both sweets and tarts.

MISCELLANEOUS

Ethephon on Cherries

Jim Nugent, District Horticulturist, MSUE

Heat, drought stress, lack of uniform maturity, and small fruit – what's a person to do with Ethrel? This has become a big question in 2005. Fortunately, rain on July 4 and cooler temperatures have brought some relief and made current decisions a little easier.

Included in this report is an article written a couple weeks ago on ethephon that we used as a handout at IPM updates in the area, but I failed to include in FruitNet.

Try to avoid using ethephon when trees are under severe drought stress. If avoidance isn't possible, then significantly reduce the rate. Be particularly careful with young trees, as they are more prone to drought stress and more likely to be overdosed with ethephon due to limited tree canopy.

So far, it appears that fruit removal force on sweet cherries is lower than normal at this stage of maturity, likely due to drought stress. However, heavily loaded trees are slower to mature and it's more difficult to remove the fruit from the tree.

As ethephon action kicks in and the abscission layer develops between cherry and stem, the fruit will not continue to size as normal. However, to continue normal sizing, rainfall (or irrigation) will be required.

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, 2005

Please send any comments or suggestions regarding this site to:

Bill Klein, <u>kleinw@msu.edu</u> Last Revised: 7-5-05





Search

```
Researcher Resources
```



NEWS & STORIES

AFFILIATED PROGRAMS

PROJECTS

Home

Background & Projects

Northern Michigan FruitNet 2005 Weekly Update

NW Michigan Horticultural Research Station Nikki Rothwell **Bill Klein** Jim Nugent Dist

Directions

InfoVideos

Calendar

Links

Extension **Expert Search**

Publications

Staff

Ly 12 2005		
Duke Elsner Agricultural Agent	<u>Jim Barde</u> Le	enhagen elanau Extension Director
District Horticulturist	District Fruit IPM Agent	Farm Mgr, NWMHRS
	Builden	

Α July 12, 2

GROWING DEGREE DAY ACCUMULATIONS as of July 11, 2005 at the NWMHRS						
Year	2005	2004	2003	2002	2001	15 yr. Avg.
GDD42	1826	1396	1539	1501	1663	1581.1
GDD50	1162	774	901	953	1009	958.6

GROWTH STAGES AT NWMHRS (7/11/05)

Apple: Red Delicious: 42 mm fruit; Mac: 43 mm fruit Pear: 36 mm fruit Sweet Cherry: Hedelfingen:22 mm fruit; Gold: 18 mm fruit Tart Cherry: 18 mm fruit Apricot: 35 mm fruit Plum: 25 mm fruit Grapes: Chardonnay: berry touch

Weather:

Some very needed rainfall fell in NW Michigan on July 4, with amounts ranging from 0.4 to 1.0" However, the soil moisture was extremely low prior to the July 4 rain so plant needs have generally used the available moisture and plants are again showing drought stress symptoms.

Crop Report:

Apple: With no rain in the past week, we have had no disease incidence in apples. Codling moth trap (CM) catches are down, with only 4.5 moths/trap. At the NWMHRS, we are approximately 900 GDD past biofix for CM; we predict second generation CM egg hatch at 1,200 GDD. We captured 13.3 oriental fruit moths/trap. Spotted tentiform leaf miner catches are still elevated, with an average of 548 miners/trap.

Cherry: Fruit is not sizing well. Hot conditions have made it difficult at times to find conditions safe for ethephon application. Ethephon is very active in hot weather. Some tree damage is evident caused by ethephon application during a period of high heat. Sweet cherries seem to be particularly hard hit by the drought as they are carrying an exceptionally heaw crop load.

With the continuing dry weather, we have seen no cherry leaf spot infection. With dry preharvest weather, American brown rot has been spotted in a few isolated locales. We have reported brown rot in organic blocks and areas where the fruit is extremely heavy and spray was not able to penetrate the clusters. However, this disease has also been detected in orchards where we had inoculum presence from a wetter period earlier in the season. If brown rot inoculum is present in the orchard, consider slowing the sprayer for better fungicide coverage. We are still seeing powdery mildew in tart cherries. American plum borers are at 17 borers/trap. Lesser peachtree borer numbers are very low this week, but greater peach tree borers have increased tremendously to 17.6 borers/trap. Two-spotted spider mites are increasing in untreated cherry blocks, and some numbers suggest an eight fold rise from the previous week. Cherry fruit fly (CFF) seems to be a more complex pest than normal this season due to its unpredictable behavior. We have captured many flies here at the NWMHRS in the unsprayed entomology block, but we have only seen a handful of flies in commercial settings. Reports of CFF catches increased slightly after the 4th of July rain, and only in high pressure blocks. With little or no rain predicted in the coming week, we expect few CFF to emerge under these droughty conditions. We are recommending that growers in high pressure areas remain protected for the weeks leading up to harvest. Blocks that have

traditionally had little CFF activity may not need to be as diligent as usual. However, if a grower is not trapping at his/her orchard, preventative applications are needed.

Seasonal E	vaporation & Preci	ipitation			
Beginning N	May 1, 2005, at NV	VMHRS			
<u>Date</u>	<u>Evap/week (in.)</u>	<u>75% of</u> <u>Evap/week</u>	Rainfall/wk at NWMHRS (in.)	Rainfall minus 75% of Evaporation	
5/2	0.31	0.23	0.01	-0.22	
5/9	1.08	0.81	0.07	-0.74	
5/16	0.76	0.57	0.53	-0.04	
5/23	1.00	0.75	0.87	0.12	
5/30	1.32	0.99	0.07	-0.92	
6/6	1.60	1.20	0.05	-1.15	
6/13	1.90	1.43	0.12	-1.31	
6/20	1.15	0.86	0.30	-0.56	
6/27	2.02	1.52	0.03	-1.49	
7/4	2.15	1.61	0.45	-1.16	
7/11	1.82	1.37	0.02	-1.35	
Totals	15.11	11.33	2.52	-8.81	

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, 2005

Please send any comments or suggestions regarding this site to:

Bill Klein, <u>kleinw@msu.edu</u> Last Revised: 7-12-05

> Home | Site Map | Contact | Indicia | Logos AgBioResearch • 109 Agriculture Hall • East Lansing, MI 48824 • Ph: 517-355-0123

© 2010 Michigan State University Board of Trustees



Year	2005	2004	2003	2002	2001	15 yr. Avg.
GDD42	2084	1592	1717	1727	1864	1777.3
GDD50	1364	913	1024	1123	1154	1098.7

WEATHER

There has been a few spotty showers in the area this week, but nothing that brought substantial amounts and some areas received none. The NWMHRS was under a small rain cell on Sunday afternoon and consequently received 0.34" for the past week bringing the total since June 1 to 1.31". 2005 will be remembered for the severity of the drought.

CROP REPORT

Apples: A bit of **apple scab** has been reported in the Benzie County area, but most incidences are spotty at best. **Fire blight** strikes are evident around apple orchards in northwest Michigan. **Codling moth** trap (CM) catches remain steady compared with last week: 5 moths/trap. At the NWMHRS, we are a little over 1000 GDD past biofix for CM; we predict second generation CM egg hatch at 1,200 GDD. We captured 7 **oriental fruit moths**/trap this week, and **spotted tentiform leaf miner** catches are at a trap average of 300. **Obliquebanded leaf roller** traps captured 4.5 moths/trap this week. We captured no **apple maggot** on the yellow boards this week, but the red sticky spheres were placed into the orchard this Monday.

Cherry: Cherry leaf spot infections are very low. **American brown rot** is still popping up in sweet cherries that have yet to be harvested. We are still seeing **powdery mildew** in tart cherries, especially on the inner leaves. **American plum borers** are at 17 moths/trap. **Lesser peachtree borer** numbers are still low this week, but **greater peach tree borers** remain high at 21 moths/trap. We have placed **dogwood borer** traps. **Two-spotted spider mite** numbers are still high in cherry orchards; we are monitoring the numbers throughout the season to have a better understanding of mite population under hot, dry conditions. **Cherry fruit flies** are still showing up in the entomology block at the NWMHRS, but we have still seen low numbers in commercial blocks.

The combination of hot and very dry conditions has resulted in substantial injury due to Ethephon application. Symptoms include leaf yellowing and drop, and exudation of a clear gummosis. If the drought continues to worsen, the potential for injury

from Ethephon will increase. If trees are under severe drought stress, I believe the wisest course of action is to not apply Ethephon. Substantial defoliation at this time of year causes the tree to be very susceptible to limb or tree death this winter. The cost of leaving some fruit on the tree could quickly be eclipsed by the cost associated with tree decline or death.

Seasonal F				
Beginning				
Date	Evap/week (in.)	<u>75% of</u> Evap/week	Rainfall/wk at NWMHRS (in.)	Rainfall minus 75% of Evaporation
5/2	0.31	0.23	0.01	-0.22
5/9	1.08	0.81	0.07	-0.74
5/16	0.76	0.57	0.53	-0.04
5/23	1.00	0.75	0.87	0.12
5/30	1.32	0.99	0.07	-0.92
6/6	1.60	1.20	0.05	-1.15
6/13	1.90	1.43	0.12	-1.31
6/20	1.15	0.86	0.30	-0.56
6/27	2.02	1.52	0.03	-1.49
7/4	2.15	1.61	0.45	-1.16
7/11	1.82	1.37	0.02	-1.35
7/19	1.62	1.22	0.34	-0.88
Totals	16.73	12.55	2.86	-9.69

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, 2005

Please send any comments or suggestions regarding this site to:

Bill Klein, <u>kleinw@msu.edu</u> Last Revised: 7-19-05



Year	2005	2004	2003	2002	2001	15 yr. Avg.
GDD42	2308	1775	1893	1934	2109	1969.1
GDD50	1532	1041	1144	1274	1343	1234.9

WEATHER

Some welcome relief arrived in the past few days from the severe drought that has gripped NW Michigan. Rainfall totals in the past 3 days have ranged from about 1" to over 2", depending on site in NW Michigan. Fruit trees, without irrigation, have developed varying levels of drought stress symptoms. Above normal heat has accentuated the drought problems.

GROWTH STAGES AT NWMHRS (7/26/05)

Apple: Red Delicious: 53 mm fruit; Mac: 50 mm fruit

Pear: 45 mm fruit

Sweet Cherry: Hedelfingen: harvest; Gold: harvest

Tart Cherry: harvest

Apricot: harvest

Plum: 28 mm fruit

Grapes: Chardonnay: green fruit

CROP REPORT

Apple: We finally received rain in northwest Michigan! The **apple scab** model predicts secondary infection in leaves and some minor incidence in fruit. **Codling moth** trap (CM) catches increased to 10.6 moths/trap. In areas of northwest Michigan where CM trap catches have not fallen to zero, we recommend growers use the 1,250 GDD days for second generation egg hatch rather than setting a second biofix for this upcoming generation. We captured 12 **oriental fruit moths**/trap this past week at the NWMHRS. **Spotted tentiform leaf miner** catches have declined to 171 moths/trap. **Obliquebanded leafroller moth** catches are at 6.3/trap, and **dogwood borer** catches are up to 14.3/trap. Here at the NWMHRS, we have

not captured **apple maggot** (AM) as of yet, but there are reports of isolated captures of AM in the area. We expect this rain to enhance emergence this week.

Cherry: Light sweet cherry harvest is complete and dark sweets are nearing completion. With no rain size was an issue

while cracking was not. Size was particularly problematic because the crop load was extremely heavy. The heavy crop also accentuated the drought stress on trees. This stress combined with excessive heat resulted in many problems with ethephon injury. **Ethephon injury** was first expressed as yellowing leaves and is now exhibiting clear gummosis from limbs.

Tart cherry harvest is currently at its peak. Fruit size is generally small (particularly where crops are heavy), but overall quality is excellent. Fruit firmness has been excellent, Brix levels have been high, color good, and wind damage below normal. As with sweets, ethephon induced leaf yellowing and gummosis is common.

The much needed rain in the past few days resulted in light to moderate **cherry leaf spot** infection in the northwest area. **American brown rot** may also be on the rise with the increased moisture in the orchard, especially in dark sweets that have yet to be harvested. **American plum borers** are at 11 moths/trap. No **lesser peachtree borers** were captured this week, and **greater peach tree borers** are still at 17.6 moths/trap. **Two-spotted spider mites** are still high and increasing in many cherry blocks, but these rains may wash off a percentage of them. The rain, if we receive enough to reduce drought-like conditions, will increase mite thresholds with greater moisture in the orchard. Firing has been reported in all areas of the northwest; this symptom results directly from the increased temperatures and droughty conditions, most often in combination with high mite populations. **Cherry fruit fly** catches are decreasing in the entomology block, but we have captured an average of 16.5 flies/sticky board in three non-insecticide treated blocks at NWMHRS.

Grape: Grape berries are enlarging rapidly, with some varieties near berry-touch. Clusters will soon "close up" and greatly reduce pesticide penetration to the inner area of the berries. **Sphinx moth larvae** are now getting very large but few in numbers at most sites. These caterpillars should be watched for closely in young vineyards where they can completely defoliate small vines. **Powdery mildew** remains the main disease threat at this time, but very little of it has been reported thus far.

POST-HARVEST CONTROL OF TWO-SPOTTED SPIDER MITES IN CHERRY

Nikki Rothwell, District Fruit IPM Educator John Wise, Trevor Nichols Research Complex Dave Epstein, MSU IPM Program

Two-spotted spider mites (TSSM) can be a complex problem on cherry in hot, dry years. Cherry growers are often faced with the crucial decision of applying a miticide before or after harvest. If growers intend to spray for mites before cherry harvest, the pre-harvest intervals (PHI's) of most miticides are 14 days or longer, which is an important factor in the decision making process. Another confounding factor of pre-harvest mite control is that often the mite count is low early in the season, and the numbers may not warrant a miticide at that time. Because of these issues, many cherry growers apply a miticide after harvest when the mite numbers are higher and when PHI's are no longer a concern.

Life Cycle. Two-spotted spider mites are pests of many plants, but in Michigan, they attack commercial fruit crops such as apple, cherry, peach, pear, nectarine, plum, and apricot. Orange colored adult females and some immature mites overwinter under bark scales on the trunks of the trees or in protected areas on the ground. In spring, the mites move down from the tree and begin to feed on weeds and grasses. The first eggs are laid on the groundcover vegetation around the time of cherry bloom. Under warm conditions, the eggs hatch in five to eight days. One mite generation is completed in approximately three weeks. Depending on summer conditions, mites can complete five to nine generations each season.

Under typical droughty summer conditions, the groundcover vegetation becomes a poor food source for the mites, and they move up into the cherry trees in mid- to late-summer. In a hot, dry year such as this one, the mites move up into the tree sooner than in a year under normal moisture conditions. Older, inner spur leaves are often first infested as the females move to those locations first. However, with warm dry weather, mite populations can increase dramatically in a short time, and the mites will move off these older leaves to all parts of the tree canopy.

Identification. Although TSSM are very small, they can be seen with a 10X hand lens. Females are larger than males, and they reach 0.42mm in length when they are full grown. Adult female TSSM range in color from light yellow to brown to green with two distinct black spots; irregular dark splotches may appear after feeding. Male TSSM are more variable in color than

females, and they have a distinctly pointed abdomen. When comparing TSSM to European red mite (ERM), ERM tends to be rounded and not quite as long as TSSM. TSSM also have fewer "bristles" than ERM and obvious black spots. ERM are often red, but color differences are not always as dramatic as both species can have greenish colored stages. TSSM infestations are often accompanied by silk webbing on the leaf surface.

Damage and Injury. Bronzing of leaves is a visual sign of damage caused by high populations of TSSM; this phenomenon can cause a reduction in photosynthesis and fruit bud initiation. Leaf bronzing caused by TSSM is often more gray in color

than bronzing by ERM. Although bronzing presents an obvious challenge, one of the biggest threats of mites in cherry in a hot, dry year is 'firing.' Firing results directly from increased temperatures and droughty conditions, most often in combination with high mite populations. Firing results in a collapse of a portion of the tree; this malformed segment can be a branch, a terminal, or a whole section of the tree. The leaves of a fired part of a tree turn brown very quickly, with no prior wilting, and the overall effect is similar to fireblight in apple. Although firing may occur with low mite populations, it is found most commonly where mite numbers are high. At one time, firing was reported only to occur with plum nursery mite infestations, but more recent observations suggest TSSM play the major role in firing.

Monitoring and Thresholds. Scouting for mites can begin as early as mid-May and continue through August. In orchards with high mite populations the previous summer, an early start to mite monitoring can alert growers to population increases requiring pre-harvest treatment with enough time to avoid conflicts with a miticide's PHI. In a droughty year, a good practice is to begin monitoring earlier than usual. One method of monitoring TSSM motile populations consists of sampling 25 leaves at each of 3-5 sites within a block, using 50% spur leaves and 50% shoot leaves.

Treatment for TSSM should be based on the following thresholds (double the treatment thresholds for TSSM in tart cherry):

- ° 2-3 mites/leaf from mid-May to mid-June
- 5-7 mites/leaf from mid-June through July
- 10-15 mites/leaf in August

Presence of predaceous mites (>1/leaf) may justify delaying a treatment and repeating the cycle the following week.

Biological control. Conservation of predator mites in a cherry system is critical to control plant parasitic TSSM. The three predaceous mites commonly found in Michigan are *Amblyseius fallacis* (Phytoseiidae), *Agistemus fleschneri* (Stigmaeidae), and *Zetzellia mali* (Stigmaeidae). Predaceous mites are even smaller than TSSM, but these predators can be detected with a hand lens. Predaceous mites also move very quickly across the leaf surface. All three mite predators are sensitive to the lethal toxicity of carbamate and pyrethroid insecticides. These chemistries should be avoided if an orchard has an elevated TSSM population. Phytoseiid mites (*A.fallacis*) respond more quickly (reproductively) to increasing populations of TSSM, but stigmaeid mites (*Z. mali*) can survive and are more effective predators at lower TSSM population densities. Herbicide sprays also affect the number of predator mites within a cherry orchard. Clean, weed-free areas under the trees in fall and early spring eliminate optimal overwintering habitat for predaceous mites, and when predator mites are not present early in the season, TSSM populations can grow unchecked if conditions are favorable.

Chemical control. Two-spotted spider mite infestations may be controlled with a post-harvest miticide. When using chemical control, good coverage of all tree surfaces is critical. Some miticides are active on eggs (ovicides) and should be applied before egg-hatch; Apollo and Savey are miticides with ovicidal properties. Savey also works on mite larvae. An early application of superior oil does not work well for TSSM as it does with ERM populations because first generation TSSM eggs are laid in the ground vegetation rather than in the tree. Other miticides are only active on motiles (adulticides) and should be applied after populations start to build: Nexter, Omite-CR (post-harvest only), and Vendex. Field evidence suggests Nexter is not as effective on TSSM as it is on ERM. Envidor is newly registered for mite control in cherries and is active by contact to all life stages. The active ingredient, spirodiclofen, controls mites by inhibiting lipid synthesis, and is active by contact to all life stages. Envidor has a novel mode of action and is not known to have risk of cross-resistance with other currently registered miticides. Envidor 2SC has a rate range of 16 – 18 fluid oz per acre, 7-day pre-harvest interval for pome and stone fruits (14 days in grapes) and is restricted to one application per acre per season for all labeled fruit crops. With so many control materials from which to choose, and because of concerns with the development of mite resistance to miticides, no miticide should be applied more than once per year (the one exception is superior oil). We are currently testing the effectiveness of a summer oil for control of TSSM in tart cherries; however, at this time, the repercussions of oil use are not yet known. Please see the table below for more information on miticides.

Compound Trade Name	Life-stage Activity	Mite Species Controlled**	Residual Activity
Savey	egg/larvae	TSSM, ERM	8-12 weeks
Apollo	egg	TSSM, ERM	8-12 weeks
Nexter	motiles*	TSSM, ERM, PNM	6-8 weeks

Omite-CR	motiles*	TSSM, ERM	6-8 weeks
Vendex	motiles*	TSSM, ERM	6-8 weeks
Envidor	eggs, larvae, adults	TSSM, ERM, PNM	8-12 weeks

* Motile forms include mite larvae, nymph and adult stages.

** TSSM - two spotted spider mite, ERM - European red mite, PNM - plum nursery mite.

POST HARVEST PRUNING IN CHERRIES

By Jim Nugent, MSU Extension and Jim Flore, Horticulture

For over a decade the cherry industry has been doing more and more pruning of bearing trees between cherry and apple harvest. This is a time of year when we have labor available and don't have to fight the inefficiencies inherent with dormant pruning in the snow and cold.

To date we have observed no negative impact on winter hardiness of trees, nor any effect on spring flower bud hardiness. However, because of the concern for potential increased susceptibility to winter injury, and possible influence on next season's growth, we suggest the following precautions:

- Do not prune after mid September.
- Avoid exceptionally heavy pruning, particularly of sweet cherries, at this time.
- Do not prune young tart or sweet cherries that have not filled their space in late summer.

Having said that extra heavy pruning should be avoided in late summer, we want to comment that many sweet and tart orchards need exactly that! Too many orchards are getting too tall for the spacings at which they are planted. The result is excessive shading in the lower canopy which results in loss of lower fruiting wood, trees too tall to get adequate spray coverage for controlling cherry leaf spot and brown rot, and a large drop for cherries onto the harvester, which will increase fruit bruising and softening.

In 2004, we conducted a preliminary study to evaluate the effect of drop height on soft fruit problems in tarts. While this preliminary study was very limited in scope, the data show a strong trend towards increased damage as the drop height increases. For all of these reasons, it is very important that tree height be limited!

Some suggestions for tree height to optimize light reception:

- For triangular shaped trees, the height of the bearing area of the tree should be no more than three times the clear alleyway width. The clear alleyway is the distance between the branches of the trees from row to row, not the plant distances between rows. For example, a six-foot clear alleyway would imply the tree height could be up to 3 X 6 ft., or 18 feet plus about four feet from the ground to the base of the desired fruiting area, for a total height of about 22 feet.
- For a rectangular shaped tree, the height of the bearing surface should be twice the drive alleyway distance. For example, again assuming a six foot clear alley- way implies a height of 2 X 6 ft., or 12 feet plus four feet from the ground to the desired base of the fruiting area, for a total height of 16 ft.

These formulas address light only. You need also to consider the capability of your sprayer to adequately cover tops of trees and possibly the propensity of the block to have soft fruit problems.

NW MICHIGAN HORTICULTURAL RESEARCH STATION OPEN HOUSE AND EQUIPMENT SHOW

The Northwest Michigan Horticultural Research Station Open House and Equipment Show will take place on Thursday,

August 25, 2005, starting at 1:00 p.m. Save the date! Details to follow soon.

The CIAB Weekly Raw Product Report for Week 4 can be found on the web at: http://www.cherryboard.org/Week42005.pdf

5				
Date	Evap/week (in.)	75% of Evap/week	Rainfall/wk at NWMHRS (in.)	Rainfall minus 75% of Evaporation
5/2	0.31	0.23	0.01	-0.22
5/9	1.08	0.81	0.07	-0.74
5/16	0.76	0.57	0.53	-0.04
5/23	1.00	0.75	0.87	0.12
5/30	1.32	0.99	0.07	-0.92
6/6	1.60	1.20	0.05	-1.15
6/13	1.90	1.43	0.12	-1.31
6/20	1.15	0.86	0.30	-0.56
6/27	2.02	1.52	0.03	-1.49
7/4	2.15	1.61	0.45	-1.16
7/11	1.82	1.37	0.02	-1.35
7/19	1.62	1.22	0.34	-0.88
7/26	1.86	1.40	1.17	-0.23
Totals	18.59	13.94	4.03	-9.91

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, 2005

Please send any comments or suggestions regarding this site to:

Bill Klein, <u>kleinw@msu.edu</u> Last Revised: 7-26-05