Northern Michigan FruitNet 2010
Weekly Update
NW Michigan Horticultural Research Station

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September 7, 2010

GROWING DEGREE DAY ACCUMULATIONS through September 6th at the NWMHRS

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Weather Report

The end of August was extremely warm, and the first of September has cooled considerably off from last week’s high 80’s. Recent daytime temperatures have varied from high 50’s to low 70’s, and nighttime temperatures have been in the 40’s and 50’s. Overall, we have accumulated 3626 GDD base 42 and 2428 GDD base 50. We also had rainfall in the past week, which was spread out over a few days. On 1 September, we had 0.47” of rain here at the NWMHRS, which was followed by 0.13”, 0.33”, and 0.22” of rain for the next three days. The total rainfall for last week was 1.15”. High winds have been a concern for apple growers.

Crop Report

Apple harvest is beginning to move into full swing in the northwest. Growers are harvesting Gingergolds and early McIntosh. The new SweeTango apples are also available at the markets at this time. Many growers are waiting for cool night temperatures to color up varieties such as Gala and Honeycrisp, and both are nearing maturity. Recent high winds knocked off apples from the trees, particularly in windy sites. Rains have also made it hard to get into the orchards with the soft ground. Other than apples and grapes, all other fruit crops have been harvested in the region.

Pest Report

Apple. With the recent cool down in weather, trap counts for most insects are extremely low. Mite populations were building in apple, but the rains were helpful in reducing the numbers present on leaves. We caught no apple maggots in our trapline again for the second week.

Cherry. Cherry leaf spot is evident in most tart cherry orchards around the region with significant yellowing and leaf drop. All borer traps were empty this past week. Two-spotted spider mites are visible at the bases of the trees and are turning orange in color as they do prior to overwintering.

Grape. Winegrape growers are pleased with the warm season, and many growers are finding brix levels to be higher than usual for this time of the year. Powdery mildew is not as big of a problem this season, despite the heat. However, some growers missed a fungicide application at a critical timing and continue to fight this disease as we approach harvest. Downy mildew is also evident in many regional vineyards. Grape berry moth is more of a problem than usual this year, likely due to the heat.

PHASE- OUT OF ENDOSULFAN
Rufus Isaacs and John Wise, Entomology, MSU

The EPA is taking action to end the use of the pesticide endosulfan. A formal Memorandum of Agreement with manufacturers of the agricultural insecticide will result in cancellation and phase-out of all existing endosulfan uses in the United States. Endosulfan is an organochlorine insecticide that has been used on a wide range of fruits and vegetables in Michigan over the years, although on a small percentage of the acres grown. A phase-out plan has been developed to allow growers time to develop and test alternative pest management tactics for the pests that endosulfan currently controls. For fruit crops grown in Michigan and the Upper Midwest, the phase-out deadlines are listed below. By the end of this year, new labels for endosulfan-containing products (Thiodan, Thionex, etc.), will contain details of the phase-out schedule.

If this phase-out plan raises concerns about the availability of pest control products for the pest complex on your farm, we suggest you talk with your local extension educator regarding registered alternatives, and gain some experience with them on part of your farm before the deadline. There are also some new miticides and insecticides being developed for some of
the crops listed below and these may provide similar control. Additionally, the IR-4 program is working to support registration of new miticides and insecticides where grower organizations have supported petitions for an urgently-needed alternative to Thiodan before the phase-out deadline.

Read the complete information about endosulfan and the phase-out posted online, at the EPA website.

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TIPS ON GROWING FRUIT IN NORTHERN MICHIGAN

DATE: Saturday, September 11, 2010
LOCATION: Jacob’s Corn Maze and Barn Market
7100 West M-72, Traverse City (3.5 miles from West Grand Traverse Bay)
TIME: 8 – 11 am
COST: $10 per person, payable at the door, (for refreshments and materials)
SPONSORS: Michigan State University Extension-Benzie County and Jacob’s Farm.
The workshop will be taught by Stephen Fouch, Extension Educator, MSU Extension-Benzie County.

AGENDA:
8 am ......................... Coffee, Juice, Rolls, And Other Goodies
Selection Of Fruit For Your Location
Rootstocks For Your Soil
Site Modifications
Planting Tips
Pruning And Training
Applying Plant Nutrients
Pest And Disease Control
Organic Fruit Growing
Importance Of Thinning
Harvesting Quality Fruit
10 - 10:45 am ................... Tour Of Jacob’s Farm Fruit Plantings
10:45 - 11 am ................. Questions And Answers/Sharing

Cost is $10 per person, payable at the door.
There will be an opportunity to purchase potted apple, crabapple, and peach trees on site.

Please RSVP by calling MSU Extension-Benzie County at 231/882-0025 to reserve a spot. Checks paid at the door should be payable to: MSU Extension-Benzie County

FREE PROGRAMS FOR GROWERS

Renewable Energy for the Small Farm
Tuesday, September 7, 6:30 p.m.-9:30 p.m.
NW Michigan Horticultural Research Station, 6686 S. Center Hwy (Co. Rd 633)
Renewable energy technologies and efficiency can offer energy independence, bolster a farm’s bottom line, or create new revenue sources. Learn about small-scale wind and solar, farm-scale biodiesel, hosting a lucrative community wind project, and USDA funding.

Presenters: Jim Sluyter, MLUI; Tom Karas, Michigan Energy Alternatives Project; Jim Barnes, EcoBuilding Products; Alan Anderson, USDA Rural Development; William Koucky, NW Michigan Biodiesel LLC

Food Safety on the Farm
Wednesday, September 22, 6:30 p.m.-9:30 p.m.
Student Center, Baker College, 9600 East 13th Street, Cadillac, MI 49601
Food safety is a major concern for buyers and consumers. Explore ways to assure that your farm is producing clean, safe food and learn how new food safety legislation may affect your farm.

GAP Audit Field Trip
Thursday, September 23, 9 a.m.-11 a.m.
Bardenhagen Farms, 7881 E. Pertner Rd., Suttons Bay
More and more buyers use Good Agricultural Practice (GAP) Audits to confirm agri-food safety on the farm. See how a GAP audit is conducted and what the auditor will look for on this field trip. If you have a GAP manual, bring it along. Participation limited; please pre-register early!

Presenters for Food Safety and GAP: Phil Tocco, MSU Extension Educator; Dan Busby, Michigan Water Stewardship Program Coordinator, will also be on the Food Safety program agenda.

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alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to: USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD).

Accommodations for persons with disabilities may be requested by contacting Jim Sluyter at 231-941-6584 by September 1 to make arrangements. Requests received after this date will be fulfilled when possible.

Michigan Land Use Institute Get Farming! is part of the Michigan Land Use Institute’s Taste the Local Difference program and is produced in collaboration with USDA Risk Management Agency, USDA Rural Development, MSU Extension, and the NW Michigan Horticultural Research Station.

For more information or to pre-register, call Jim Sluyter at the Michigan Land Use Institute, 231-941-6584, ext. 15, or jimsluyter@mlui.org.

WEBSITES OF INTEREST
Apple Maturity Reports are available at:
http://www.maes.msu.edu/nwmihort/applemat.html

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

60 Hour Forecast
http://www.agweather.geo.msu.edu/agwxforecasts/fcst.asp?fileid=fous46ktvc

Information on cherries is available at the new cherry website:
http://www.cherries.msu.edu/

Fruit CAT Alert Reports
http://www.ipmnews.msu.edu/fruit/

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, 2010

Please send any comments or suggestions regarding this site to:
Bill Klein, kleinw@msu.edu

Last Revised: 9-7-10
Northern Michigan FruitNet 2010
Weekly Update
NW Michigan Horticultural Research Station

September 14, 2010

A LATE-SEASON FLIGHT OF GRAPE BERRY MOTH
Rufus Isaacs, Entomology, MSU

Monitoring traps for grape berry moth checked in the past few weeks across southwest Michigan have indicated an upswing in activity from grape berry moth at high pressure sites, with associated egg laying on berries. This pest pressure seems mainly in traditional hot spots, but growers are advised to check their vineyards (especially on wooded borders) to look and see whether they are getting new infestations developing at the vineyard edges. With the cooler nights and windy days this week, the suitability of the weather for berry moth mating and reproduction is not ideal. But, this pest has apparently been able to provide some late-season pest pressure by trying to fit in another generation.

If vineyards are being harvested this week or next they are unlikely to benefit from attempts to control berry moth, because larvae are either already inside berries, or the eggs laid in the next week will grow slowly under these cool temperatures, making them less likely to be detected. For those hot spots where additional activity is being seen in vineyards that are being harvested later in September or early October, growers will need to decide whether additional expense is worthwhile at this point in the season. This decision will obviously need to take into account the level of infestation, expenses to date in the vineyard, and the level of crop present.

Why are we seeing this late season berry moth activity? With the very warm 2010 season, we have accumulated sufficient degree days for a fourth generation of this pest, exceeding the 2,430 growing degree days from wild grape bloom that is required to start another generation. This is much more than usual, and the insects are responding to this heat. For comparison with last season, we had accumulated 2,660 grape berry moth degree days in Berrien Springs yesterday, September 8, whereas only about 2,100 had been accumulated at this time last year. In a typical season, as the days get shorter in August grape berry moth enters a resting state or “diapauses” so that larvae develop to pupae and then stop at the pupal stage to make it through the winter. With this season’s hot summer, they apparently could detect the signal from the environment that it might be worth trying another generation, and so the heat counterbalanced the usual effect of the shorter days. This resulted in a significant portion of the larvae developing through to adult moths that are now flying, mating and looking for egg-laying sites on clusters. As a result, we are now seeing some higher late-season activity from berry moth.

FINAL HOUSEHOLD HAZARDOUS WASTE COLLECTION OF 2010

GRAND TRaverse COUNTY RESOURCE RECOVERY DEPARTMENT (RecycleSmart) will conduct the final Household Hazardous Waste collection of 2010 on Thursday, September 30, from 1:00 to 7:00 pm. The online scheduling system is a convenient tool to secure an appointment. An appointment is required and can be made at www.RecycleSmart.info or by calling the RecycleSmart Hotline at 941.5555. Appointments do fill quickly.

This service is provided to Grand Traverse County households and businesses at no cost, (up to 150 lbs., $1.30 lb. thereafter) with the exception of televisions and other electronics, which will be charged .38¢ /lb. Accepted material includes oil based paints, automobile fluids, cleaning products, pesticides, mercury, moth balls, pool chemicals and more.

Businesses are required to complete the CESQG form (Conditionally Exempt Small Quantity Generator). A generator is CESQG in a calendar month if no more than 100 kilograms (about 220 pounds or 25 gallons) of hazardous waste is generated in that month.

Last collection for Leelanau County residents is September 18 in Peshawbestown. Call Leelanau County Planning at 231-256-9812 or toll free 866-256-9711 ext. 812 to sign up.

IRRIGATION WORKSHOP

Thursday, Sept. 23, 2010
Alpine Center, All Purpose Room (formerly Commissioner’s Room)
800 Livingston Blvd.
Gaylord, MI 49735

AGENDA
1:00 pm Welcome, introductions, housekeeping---Dow
1:15 Irrigation and farm risks demonstration---Dow
Irrigation risk assessment: Using Crop*A*Syst,
1:45 Irrigation scheduling, record keeping & water use reporting---Curell

Why & how to do uniformity testing (class room)? ---Curell & Anderson

Field irrigation evaluation will take place at:
Sklarczyk Seed Farms - 8714 E. M-32, Johannesburg, MI 49751
2:15 Drive to farm
2:45 Center pivot irrigation uniformity testing in the field-- Anderson & Curell
3:45 Irrigation program evaluation

SPEAKERS
Chris Anderson—Charlevoix Co. Conservation District, Water Stewardship Program Technician
Christina Curell—MSUE, Water Stewardship Program, District Educator
Roberta Dow—MSUE, Water Stewardship Program, District Educator

Thanks to Sklarczyk Seed Farms and Project GREEEN for helping make this day possible.

OBJECTIVES
Learn how to test and tweak your irrigation system for uniform watering.
Learn what you can do to protect your water quality.
Learn when & how to do water use reporting.
Learn what records you need to keep.

This program is designed for anyone interested in learning more about optimizing an irrigation system. Producers, chemical applicators, Water Technicians and MSU Educators will have a better understanding of irrigation uniformity testing, scheduling, and water use reporting.

CALL 231-922-4625 to register. There will be no charge.

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60 Hour Forecast
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Please send any comments or suggestions regarding this site to:
Bill Klein, kleinw@msu.edu

Last Revised: 9-14-10

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Northern Michigan FruitNet 2010
Weekly Update
NW Michigan Horticultural Research Station

September 21, 2010

GROWING DEGREE DAY ACCUMULATIONS through September 20th at the NWMHRS

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SEASON WRAP-UP REPORT

Weather

Like most regions of the state, northwest Michigan had an extremely warm, sunny summer. However, we had ample rainfall for the season and did not experience our more typical dry spells mid-season. Overall we accumulated 3848 GDD base 42 and 2542 GDD base 50, and these accumulations were much higher than our 20-year average, which was 3437GDD base 42 and 2241 base 50. With the heat this season, we were at least two weeks ahead of a 'typical' season, and we had the earliest bloom since 1945. In April, we had three days into the 80's and had already accumulated 484GDD base 42 and 234GDD base 50; we had 2.6” of rainfall that month. In May, we continued with the warming trend with high 70's and 80's, and three days that reached into the 90's. Rainfall was similar to April with 2.52” of rain. In June, 66% of our days were in the 70's and 80's, and we had ample rainfall this month with 5.6” of rain. July and August again followed the early season heat with 77% of days in the 80's or above in July. In these two months, we had 1.86” of rainfall in July and 3.65” in August. September has started off cooler, windier, and rainy: temperatures have been in the 50's and 60's, and we have had ~3” of rain.

The big weather events came early with the warm up with some substantial frost and frost damage. We had multiple typical inversion frosts and one wind freeze. All fruit crops were damaged, but the damage was variable between blocks and between trees within the same block.

Crops

As mentioned above, the spring frosts results in loss of yields in many crops throughout the region. However, the damage was not easy to quantify likely due to the inversion frost and wind freeze event. For instance, some sites that were located on the tops of the hills (high sites) had just as much damage, if not more, than some of the lower, more frost prone sites. Proximity to water was crucial, particularly on the east side of the north west region (Antrim County). Southern areas tended to fair slightly better than more northerly sites, but overall yields were down across the board. Sweet cherry crops were damaged, and most growers sustained ~40-50% damage, and fruit that remained had some frost scars. However, sweet cherries were valuable this season, likely due to the reduced crop. Some growers tried to harvest brine sweet cherries with stems and were successful. Canners that made it through the frost had some issues with cracking due to the rainfall in June. We harvested sweet cherries much earlier than in most years.

The tart cherry story was unique this year as the northwest region of the state was unregulated because of substantial loss to the crop. Other than 2002 when the whole Michigan tart cherry crop was lost, northwest Michigan has not been unregulated since the Federal Marketing Order has been put into place. Quality of tart cherries was also reduced by the heat of the season.

Apples were also hit by the frosts of the spring and earlier blooming varieties were harder hit than later varieties. There are frost scars appearing on fruit as harvest is now underway, and color was a concern for growers with the hot season. Apples are starting to color up nicely in the past week or so, and the size of fruit is good this year. With the ample rainfall, apple trees have tremendous growth as do cherry trees.

Lastly, winegrapes are the highlight of this summer’s warm temperatures. Despite some of the frosty situations in the spring, most vineyards fared well. Even vineyards that were hit with frost had somewhat of a thinning effect and left growers with enough fruit to produce quality clusters. The brix on the grapes is climbing as we move into the fall, and some early varieties have been or will be harvested in the coming week. The wines made from the 2010 season will likely be excellent because of the warm temperatures.

NWMHRS, PEST REPORT SUMMARY FOR 2010
**Apple**

*Fire blight* was less of a challenge this season with cool conditions during much of bloom which occurred during the first part of May. In fact, here at the station the fire blight model never predicted epidiphytic infection potentials (EIPs) over 100, indicative of a potential infection period. Around the region, bloom time and weather did fluctuate enough to warrant a streptomycin application in some orchards, although these applications were typically in high pressure sites with susceptible varieties and borderline EIP values. *Apple scab* season began early with green tissue appearing in early April just in time to coincide with a moderate scab infection period. The season had a total of 7 infection periods (2 light, 4 moderate, and 1 heavy) occurring during primary scab which ended in early to early June. Symptoms of scab did not become visible until late June in most area orchards.

*Codling moth* (CM) biofixed (sustained catch) on 20 May with steady trap catches for 1st generation extending until the end of June. Second generation flight did not appear until late July at the NWMMRS, although area growers reported a less distinct pattern between 1st and 2nd generation flight. Spotted *tentiform leafminer* (STLM) emerged in late April, and we continued to catch them through August, with peak flights on 4 May and 29 August with average trap counts of over 400. Overall STLM are down compared to last year when peak flight reached 1,150 per trap in 2009. *Oblique-banded leafroller* (OBLR) were first caught on 7 June in the station apple blocks with variable trap catches throughout the season and a high trap catch of 17 moths on 12 July. OBLR are continuing to be trapped as of 23 August. *Apple maggot* was detected in many orchards this season with variable trap catches, we only caught one on 20 July in the trap block by the NWMMRS. *European red and plum nursery mites* were also reported in significant levels, particularly toward the end of this season.

**Cherry**

We observed what has been confirmed as *green ring mottle virus* (GRMV) in some orchards, while in others we observed the expression of *cherry yellows virus*. The GRMV diagnosis was confirmed by laboratory testing at Washington State University. Refer to the CAT Alert Article “Appearance of a virus disease of tart cherry in northwest Michigan” for more information about GRMV. With significant leaf loss from virus early and intense leaf drop from cherry leaf spot infections, growers are concerned about winter hardness. *Cherry leaf spot* (CLS) infections were frequent this year, with the NWMMRS weather station predicting 24 CLS infection periods (13 low, 5 moderate, and 6 high) from 30 April-1 September. Untreated tarts were completely defoliated by mid-August at the NWMMRS. Cherry leaf spot is present at significant levels, and defoliation is significant in sites where infection was able to establish itself early on. Generally, a single well-timed chlorthalonil (Bravo) application slows the progression of leaf spot infection. Post-harvest applications also help delay defoliation to maintain adequate winter hardness and to minimize poor fruit quality in the following year. However, due to the early harvest, growers needed to protect trees from infection for a longer period of time after harvest this year. Minimally, the goal is to keep 50% leaf retention through September to reduce the risk of winter injury, this level of defoliation does not necessarily prevent adverse effects on fruit quality etc.

Considering the amount of fruit cracking, frost scaring, and wind whip that occurred in cherries this season, *American brown rot* (ABR) was well managed in most blocks. It looked like problems might occur as infections began showing up just prior to harvest, but the weather cooperated and most growers were able to get the fruit off of the tree before problems occurred. Here at the NWMMRS, we recorded 50% infection in untreated Ulssters by late July. Low ABR incidence was a welcome change from last year when much of the region suffered from epidemic levels of this disease. *Bacterial canker* was present this season, although not particularly intense despite cool conditions in early spring.

*American plum borer* were first caught in late April, with peak flight occurring in mid-August. *Lesser peach tree borer* has been emerging since May 17 (almost 3 weeks earlier than last year), with adult trap catches peaking between May 24 and July 12. *Greater peach tree borer* emergence began June 14 and continued through August 9, with peak flight recorded July 12. *Plum curculio* activity was underway in mid-May this season with the majority of egg laying occurring before mid-June. On June 21, 4th instar (mature) larvae began dropping from the fruit to soil. Adult plum curculio activity was observed well after harvest. Oblique-banded leafroller (OBLR) adult emergence began on June 1 with steady emergence season-long and peak flight occurring in early July. We saw a significant number of OBLR larvae in cherry tanks this year, many of which were larger, mature larvae that were difficult to control with pre-harvest insecticides. The use of organophosphate and pyrethroids appears to be ineffective against OBLR. We caught our first *cherry fruit fly* (CFF) on June 21, and the population peaked shortly after on July 12 with the end of flight recorded on July 26. Some area orchards recorded exceptionally high levels of cherry fruit fly, and some growers applied post-season insecticide applications to bring down the populations. High levels of *two-spotted spider* and *European red mites* have also been reported and observed in area cherry orchards. It is important to keep in mind that thresholds for mites increase as the season goes on and growers should quantify the population to determine if management is warranted. *Lecanium scale* was also an issue on young cherry trees this season. The rule of thumb is that vigorous and healthy trees and plants can tolerate some scale infestation, but if high populations of Lecanium scale are found, control programs should be considered. Natural enemies usually regulate scale populations and prevent outbreaks of these pests, but growers with high populations this season utilized chemical control options. Lastly, *sap beetle* (adults and larvae) was an issue at cherry harvest, particularly in isolated areas of intensive fruit production.

**Grape**

Surprisingly, *downy mildew* was more prevalent this season, *powdery mildew* was also a concern this year but neither disease has caused significant issues in well-covered vineyards. *Botrytis* has been a sporadic issue particularly in vineyards affected by *grape berry moth*. Grape berry moth numbers were significant in some of our scouted vineyards, with traps continuing to fail in catching adults but larvae being highly visible in clusters. The early season saw major infestations of *forest tent caterpillar*. It appears that the caterpillars crawled or were blown in from neighboring woodlots but didn’t appear to do any significant damage to the newly emerging leaves and shoots at most sites. Management for this pest was not recommended or commonly reported. *Forest tent caterpillar* follow a boom-bust cycle of population density and the 2009-10 seasons have seen extremely high populations around northwest Michigan. Forest tent caterpillars are a native species with indigenous natural enemies, diseases, and resource limitations are expected to naturally control populations in the coming seasons. Overall *phylloxera* numbers were lower than anticipated with the many early season rains, with many area growers reporting no need for management. *Lecanium scale* nymphs were spotted blowing into vineyards from surrounding windbreaks—likely a result of the extremely high populations in non-crop tree species. *Rose chafer* arrived in late June and some vineyards experienced intense pressure and warranted control. *Japanese beetle* (JB) arrived in low numbers in late July and all throughout August, but we heard no reports of control measures against JB. *Phylloxera, snailcase bagworms, grape plume moth, and fall webworm* were also observed in low numbers this season.
End of Season Pest Trapline Table from NW Michigan

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http://www.enviroweather.msu.edu/home.asp
60 Hour Forecast
http://www.agweather.geo.msu.edu/agwxforecasts/fcast.asp?fileid=fous46ktvc
Information on cherries is available at the new cherry website:
http://www.cherries.msu.edu/
Fruit CAT Alert Reports
http://www.ipmnews.msu.edu/fruit/
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, 2010

Please send any comments or suggestions regarding this site to:
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Last Revised: 9-21-10