

## August 2006 Regional Fruit Grower Newsletter

### CALENDAR OF EVENTS

- 8/24 NW Station Annual Open House
- 8/25 Value-Added Farm Tour / Nematode Suppression Field Day  
Antrim County
- 8/31 Wine & Grape Research Program  
NWMHRS
- 9/26 [Trevor Nichols Field Day](#)  
Fennville, 1-4 p.m.
- 9/30 Fruit & Vegetable Scholarship Deadlines
- 12/5-7 [Great Lakes Fruit Vegetable & Farm Market EXPO](#)  
Grand Rapids

### 2007

- 1/16-17 NW Michigan Orchard & Vineyard Show  
Grand Traverse Resort

### NW MICHIGAN HORTICULTURAL RESEARCH STATION OPEN HOUSE

We invite everyone to join us at the **NW Michigan Horticultural Research Station Open House**. The event will take place on **Thursday, August 24, 2006**. There will be no equipment show this year. The program of events is as follows:

- |           |                                       |
|-----------|---------------------------------------|
| 3:00 p.m. | Open                                  |
| 3:30-5:00 | Educational program                   |
| 5:00-6:00 | Social time with local wine and juice |
| 6:00 - ?  | Dinner and evening program            |

The social time, dinner, and evening program will be organized by the Leelanau Horticultural Society.

The educational program will begin at 3:30 with results from tests of a new Australian designed weed steamer. The program will then split into two concurrent sessions: tree fruits and wine grapes. The **tree fruit session** will discuss pathology, entomology, and horticulture results from 2006 studies. A recent re-screening of cherry leaf spot resistance to dodine was performed this winter, and the conclusions from those experiments will be discussed at the open house. We will also feature current research on cherry fruit fly as this season we have investigated emergence timing, host specificity, and trap placement. The horticulturists will be on hand to discuss cherry and apple rootstock performance and recommendations for northwest Michigan. During the **grape session**, we will take a quick walk through the experimental vineyard area to see the latest developments in several projects: *Vinifera* cultivar trials, hybrid cultivar trials, Riesling spacing trial, Riesling crop load experiment, canopy hedging, grape crown gall project, and Marquis table grapes.

We hope you will be able to join us for all, or some of this year's Open House. Tickets for the dinner and the social hour will be available at the door, but the Leelanau Horticultural Society would appreciate advance ticket purchases or an indication of attendance. Please contact the Leelanau Extension office at 231/256-9888 to provide this information as soon as possible.

*Open House sponsors include the Michigan Agricultural Experiment Station, MSU Extension, the NW Michigan Horticultural Research Foundation, and the Leelanau Horticultural Society.*



**Dinner Tickets Form – NW Michigan Hort Research Station Open House**

Name \_\_\_\_\_ Phone \_\_\_\_\_

No. of Tickets \_\_\_\_\_ x \$15 = \_\_\_\_\_

Please make check payable to **Leelanau Horticultural Society**  
and mail to: P.O. Box 987, Leland, MI 49654

**NEMATODE SUPPRESSION FIELD DAY**

Stan Moore, Antrim Co. CED

NW Michigan Fruit Growers are invited to attend a “Nematode Suppression Field Day” at **Interwater Farms** (Host: Dave White) just south of Elk Rapids on **August 25<sup>th</sup>, 2006**. The site is one of three farms that has cooperated with local NRCS and MSU Extension to examine the use of Oriental mustard and oilseed radish as natural biofumigants. These natural biofumigants are currently under review as alternatives to traditional chemical soil fumigation to control herbivorous nematodes.

The field day will run from 1:30 - 2:30 and will feature Dr. George Bird, Professor Emeritus, MSU. This field day is also part of a [Value Added Farm Tour](#) conducted by the Soil and Water Conservation Service (see attached program brochure). Producers can attend just the Nematode Suppression Field Day (no need to register), or register for the entire tour using the registration form.

**GRAPE & WINE RESEARCH PROGRAM**

Duke Elsner, Agriculture Educator, MSU Extension

A program titled ‘**Ideas and Philosophy of Grape and Wine Research: 1969-2006**’ will be given by Dr. Stan Howell, MSU Department of Horticulture on **Thursday, August 31 at 7:00 p.m.** at the NW Michigan Horticultural Research Station.

Dr. Howell is retiring this year after a long career in grape and wine research. He has world-wide experience in viticulture and wine production as well as close ties to many of our northwest Michigan grape and wine producers. Although his presentation will focus on grape and wine issues, Stan has worked with many other fruit crops and has valuable insight on the processes and philosophy of fruit crop production and research. Ample time will be provided for a question and answer session, and the program will be followed by a tasting of local wines. This event is sponsored by Parallel 45 Vines & Wines, Inc.

**JAPANESE BEETLES IN NORTHWEST MICHIGAN**

Nikki Rothwell, District Fruit IPM Educator

Japanese beetle (*Popillia japonica*) (JB) has long been a pest of vineyards and tree fruit in southwest Michigan, and here in the northwest we have been fortunate that these pests have not yet plagued our crops. However, in 2005, MDA began trapping in a Leelanau County area known to have a localized population of JB. Last year, we captured 1000’s of beetles along Bodus Road in Centerville Township, but there was little beetle activity beyond that area.

To determine if this population was spreading beyond this local region in Leelanau County, we set up JB traps in concentric rings from the epicenter of the infestation. The traps extended approximately 1-2 miles in all four directions, and the traps have been monitored weekly since mid-July. Although the traps are densest around Bodus Road, we have captured approximately 10,000 beetles per week in the past four weeks. The traps furthest from the infestation catch 20-30 beetles/week. In fact, we

have moved our traps even further from the epicenter in order to determine how far this population has spread in the past year. However, as we hear more from fruit tree and vineyard growers in the area, we know that this population has expanded their limits beyond even our most remote traps.

This season growers and scouts have observed JB infesting grapes in the centralized region as well as apple and cherry trees. They have seen both damage and the adult beetles. The damage from adult feeding is easily recognizable; the leaves look as though they have been 'skelentonized' or eaten around the leaf veins (Figure 1).

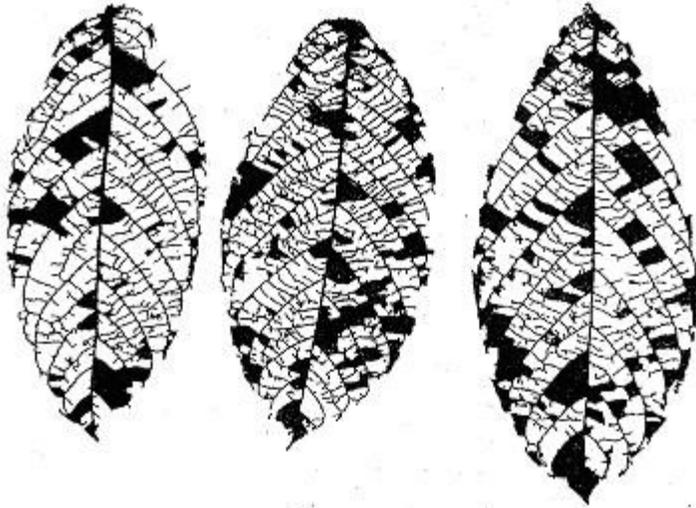


Figure 1. Skeletonized Leaves

Adult beetles are actually quite striking; they are about 3/8 of an inch long and are metallic green with hard, copper-brown elytra (wing covers) (Figure 2). The beetles have five small white tufts of 'hair' that project from under the wing covers on each side, which help to distinguish them from similar metallic green or coppery colored beetles. Often these beetles are found in clusters or at least more than one beetle feeding on a leaf.

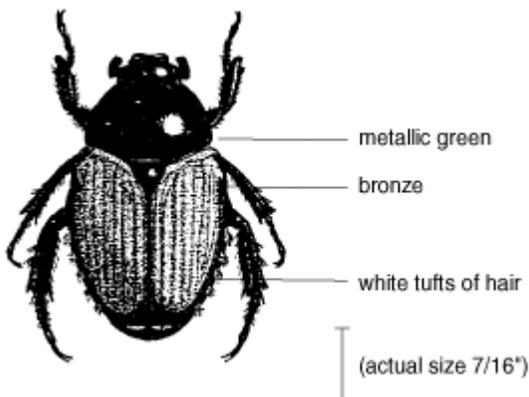


Figure 2. Adult Japanese beetle

Adult beetles are especially problematic for fruit growers, homeowners, and gardeners. Adults emerge from the ground late June to July, and they can feed on about 300 species of plants, ranging from roses to poison ivy to grapes. Odor and location in direct sun seem to be very important factors in plant selection. The beetles usually feed in groups, starting at the top of a plant and working downward. While a single beetle does not eat much, group feeding causes severe damage.

Japanese beetles can fly as far as five miles but one to two miles is more likely. Usually, they make only short flights as they move about to feed. Local infestations spread as beetles move to favored food and egg-laying sites. The adults feed primarily on plant foliage, and some of their favorites are apples, cherries, plums, sweet corn, Norway and Japanese maples, roses, and lindens. They

particularly like wild and cultivated grape. The larvae of JB prefer to feed on grass roots, and they are found most readily feeding in irrigated turf, such as highly maintained lawns and golf courses. JB populations are suspected to be the biggest problem where both the adults and the larvae have access to their preferred hosts.

Growers should be aware of this potential problem as this pest may drastically change our future insecticide strategies, especially in the wine grape industry. Growers should not, however, trap for JB. These traps are highly effective, and placing them into vineyards or orchards will only encourage the beetles to come to a particular area. If a grower suspects JB feeding or sees adult beetles, please give Nikki a call at the NWMHRS (946-1510).

## **POST HARVEST CONTROL IN CHERRY**

Nikki Rothwell, District Fruit IPM Educator

Jim Nugent, District Horticulturist

George Sundin, MSU Plant Pathology

**Cherry Leaf Spot.** Cherry leaf spot (CLS) symptoms are variable around the state with some areas showing very few lesions while other regions have sustained significant defoliation as a result of the disease. Due to this variability, post harvest sprays will most likely be applied on an orchard by orchard basis. However, we have written some guidelines to help growers decide if a post harvest spray is warranted:

1. If an orchard has been clean for the majority of the season, with very few lesions and no defoliation, there is likely little need for a post harvest spray in this situation. This recommendation can be strengthened if a grower applied a fungicide application with his/her ethrel spray and because this block has made it through the majority of the season with little infection. A wet August, which is rare, will obviously increase the disease potential; a clean orchard now is less likely to have significant CLS infection even under wet conditions. However, as we have completed harvest much earlier this year than in years past, we have a longer post harvest interval. Growers should monitor the weather and alter the no post harvest spray decision as the weather dictates.
2. If an orchard had leaf spot symptoms during the season, even if the leaves look clean now, a post harvest spray should be applied. Lesions often lie dormant until fungicides are removed, and then have the potential to increase with low amounts of moisture in August—even a low amount of leaf spot in August will increase with fungicides removed from the system.
3. If an orchard has had any kind of defoliation, then a post harvest fungicide spray is mandatory.

Bravo is the best post harvest option, but a reminder that this product is a protectant and must be applied before a rain event. There is no back action activity with Bravo.

**Mites.** Mites are another pest of concern post harvest, and in cherry two spotted spider mites (TSSM) can become particularly problematic under droughty summer conditions. As the groundcover vegetation becomes a poor food source for TSSM, they move up into the cherry trees in mid- to late-summer. 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.

Scouting for mites can begin earlier, but now is a good time to be monitoring orchards for TSSM. 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):

- 1) 2-3 mites/leaf from mid-May to mid-June

2) 5-7 mites/leaf from mid-June through July

3) 10-15 mites/leaf in August

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

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 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, spiroadiclofen, 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.

### **PREDICTED PEAK HARVEST DATES 2006**

Philip Schwallier, District Horticulture Agent

Apple maturity for 2006 is expected to be near normal in the southern part of the state to 1 week ahead of normal in the northern part of the state. Most of the state experienced an early end of a mild winter and periods of alternating hot and cold temperatures. As a result, bud growth developed simultaneous from the south to the north. Bloom developed concurrently and was compressed from the south to the north, perhaps one of the most compressed bloom ever.

Early bloom and cool/hot alternating weather give us predicted harvest dates near normal to as much as 10 days ahead of normal (Table 1). These predicted harvest dates are for the center or peak harvest of these varieties for CA storage. This year the 2006 predicted harvest dates are compared to the rough normal harvest dates and last year's predicted harvest dates. This year the state will harvest apples roughly the same as last year to one week ahead of last year (Table 2).

Hot temperatures during July and August will hasten the maturity of some varieties. Gala is notorious for ripening early when late summer temperatures are above normal. Other varieties are less prone to hot temperatures advancing fall maturity. Still other varieties ripen when cold temperatures occur at near harvest time.

The normal harvest dates for other varieties are listed in Table 3 for the Grand Rapids area. This year's 2006 predicted dates are a rough estimate based on the McIntosh, Jonathan and Red Delicious predicted dates. Other areas of the state should adjust non-predicted varieties based on their own history.

**Table 1. 2006 predicted peak harvest dates.**

Full bloom date				Predicted harvest date			
Station	McIntosh	Jons	Reds	McIntosh	Jons	Reds	Observer
SWMREC	4-29	5-1	5-3	9-4	9-20	9-29	Shane
Deerfield	4-29	5-2	5-4	9-1	9-20	9-27	Tritten
Flint	5-1	5-4	5-5	9-3	9-23	9-29	Tritten
Peach Ridge	5-2	5-3	5-4	9-6	9-23	9-30	Schwallier
Ludington	5-10	5-11	5-11	9-13	10-4	10-10	Danilovich
NWMHRS	5-8	5-12	5-12	9-10	10-2	10-8	Nugent

**Table 2. 2006 predicted peak harvest dates compared to normal and last year.**

Station	Days ahead of normal			Days ahead of last year		
	McIntosh	Jons	Reds	McIntosh	Jons	Reds
SWMREC	6	1	1	0	0	-3
Deerfield	7	1	4	7	7	7
Flint	7	2	3	6	5	7
Peach Ridge	6	5	6	2	2	3
Ludington	3	1	2	3	-5	-2
NWMHRS	10	7	7	6	7	7

**Table 3. Normal peak harvest dates for varieties for the Grand Rapids area.**

Variety	Normal date	2006 predicted date
Paulared	8-24	8-18
Gingergold	9-2	8-26
Gala	9-10	9-3
McIntosh	9-15	9-6
Honeycrisp	9-18	9-12
Empire	9-20	9-14
Jonathan	9-28	9-23
Jonagold	9-28	9-23
Golden Delicious	10-2	9-25
Red Delicious	10-5	9-30
Idared	10-10	10-2
Rome	10-15	10-9
Fuji	10-25	10-20
Braeburn	10-25	10-20
Goldrush	11-1	10-26

## MSU ORGANIC FARMING CERTIFICATE PROGRAM

This new MSU certificate program may be of interest to current and potential organic farmers, young people interested in farming, career changers, food activists and Extension educators. The certificate program is administered through MSU's Horticulture Dept and Agriculture Technology Institute. This program will begin in January 2007 and continue for one year on-campus with an on-farm or community garden based internship. The program will prepare participants for a career in organic farming, food security projects, farm to school, organic agriculture education, community garden projects, the Peace Corps, and more!

For more information or application, contact Corie Pierce at [piercee@msu.edu](mailto:piercee@msu.edu) or call 517/355-5191, then dial 1 and ext. 411.

## FRUIT & VEGETABLE INDUSTRY SCHOLARSHIPS

The Michigan State Horticulture Society and The Michigan Vegetable Council are once again offering scholarships for students that intend to pursue careers in the Midwest fruit or vegetable industries. The target amount per scholarship is \$1,000 but may vary at the discretion of the selection committee. The award is not based on need or academic achievement; however, the committee may use these criteria to decide between two or more qualified applicants. The recipients will be selected in the fall, and the awards presented during the Great Lakes Fruit Vegetable and Farm Market EXPO, December 5-7, 2006.

For more information or an application, contact:

**Fruit scholarships:** Michigan State Hort Society, 269/424-3990 or email [MIHortSociety@aol.com](mailto:MIHortSociety@aol.com).

An application is also posted on the MSHS web-site at [www.mihortsociety.org](http://www.mihortsociety.org).

**Vegetable scholarships:** Michigan Vegetable Council, 734/848-8899 or email [mivegcouncil@charter.net](mailto:mivegcouncil@charter.net)

Application deadline is **September 30, 2006**

## COLLECTING PLANT TISSUE SAMPLES FOR NUTRIENT ANALYSIS

Eric Hanson, Dept of Horticulture, MSU

James E. Nugent, District Horticulturist, MSUE

Tissue analysis is the best method to assess tree, vine, or bush nutrient needs. The window for collecting nutrient samples in NW Michigan is from mid-July to mid-August. We strongly encourage growers to conduct nutrient analysis at least every two to three years. Tissue analysis is best when combined with soil samples taken from the same blocks. This combination allows for thorough analysis of nutrient and lime needs.

Plant tissue analysis is effective for monitoring the nutrient status of a crop as well as trouble-shooting poor growth of a crop. The following points and sampling guides will help insure proper collection of a good diagnostic plant tissue sample:

- Collect sample from a minimum of 20 plants representative of the field, orchard, or vineyard.
- Do not collect leaves damaged by disease or insects.
- If diagnosing a problem, collect separate samples from poor and good areas aid in the diagnosis.
- Rinse the sampled tissue in clean water to remove dust, soil or spray residue.
- Dry samples before sending to the lab by laying samples out in the air (do not oven dry).
- Send samples in paper bags (not plastic) to the MSU Soil and Plant Nutrient Laboratory or another tissue testing laboratory. Be sure to include the proper, completed information sheet. [Tissue sample forms](#) for the MSU lab are available through your county Extension office or NW Michigan Horticultural Research Station.

**Tree fruits** – Collect 100 leaves from the middle of the current season's growth.

**Vineyards** – Collect a total of 100 leaf petioles (stems) from the most recently matured leaves near the center of the shoot. Undersides of mature leaves are generally darker than those of young leaves. Do not use leaves adjacent to fruit clusters.

**Blueberries** – Collect a total of 100 leaves from the middle of the current season's growth. Do not use leaves close to fruit clusters or on one year old canes.

If you have any questions on how to collect tissue samples, call your local county Extension office or District Horticultural Agent. If sending samples to MSU, the cost per sample is \$27 again this year. Include a check payable to **Michigan State University** with sample(s) to avoid an MSU billing fee.