



Michigan Blueberry IPM Newsletter

MICHIGAN STATE UNIVERSITY
EXTENSION

CONTENTS

Page

- 1 Blueberry news you can use...
Growing degree days
- 2 New EPA comment period on
Guthion phaseout for blueberry
- 2 Insect management
- 3 Disease management



Covert



West Olive

Van Buren County

Jersey in Covert is within 7 days of first harvest; in Grand Junction, Bluearay is between second and third picking and Bluecrop is in the middle of the third harvest.

Ottawa County

Blueray in Holland, and Rubel in West Olive are within 3 to 7 days of first harvest, and Bluecrop in West Olive is in the middle of first harvest.

BLUEBERRY NEWS YOU CAN USE...

Save the date! A town hall meeting will be held on September 24, 2009 from 9:00AM-12:00PM at the Trevor Nichols Research Complex in Fennville, MI to provide growers with information on the discovery of blueberry scorch and blueberry shock in Michigan. The most recent MDA/MSU press release (from July 27) on this issue can be viewed [here](#).

Take action: Additional EPA comment period on Guthion phaseout for blueberry is open until September 30. See page 2 for details.

Disease management:

Continue to look for Anthracnose and Alternaria fruit rots as fruit ripens, also since the fruit epidermis on most fallen mummy berries has dried down, now is a good time to scout for mummy berry "hot spots".

Insect management: Aphid numbers are still decreasing. Japanese beetle numbers are declining.

GROWING DEGREE DAYS

From March 1

	2009		Last Year	
	Base 42	Base 50	Base 42	Base 50
Grand Junction, MI				
7/20	2173	1373	2202	1444
7/27	2369	1513	2394	1579
Projected for 8/3	2559	1647	2617	1747
West Olive, MI				
7/20	1966	1202	1991	1259
7/27	2152	1333	2182	1395
Projected for 8/3	2344	1469	2393	1550

See [MSU Enviroweather website](#) for more information.

EPA announces 60-day comment period on Guthion phaseout for blueberry

Rufus Isaacs, Department of Entomology, Michigan State University

A proposal has been made to the US-Environmental Protection Agency (EPA) to slow down the speed of restrictions in the Guthion phaseout, so blueberry, apple, and cherry growers have more time to develop and adopt effective and economical alternative programs. Anyone with interest in this proposed change is encouraged to make their opinions known by commenting to EPA over the next two months.

The manufacturer of Guthion (MANA) made a formal request to the EPA to keep the maximum seasonal limit of Guthion 50 WP for blueberries at 2 pound per acre, and to extend aerial application through the end of 2012. This would change the current phaseout plan that has reduction to 1.5 pounds maximum for 2010-2012, and a ban on aerial Guthion after Sept 2009. This does not change the plan to

cancel all use of Guthion in blueberry after September 30, 2012.

In response to the request from MANA, the EPA has announced a comment period with a September 30, 2009 deadline. If you would like to make a comment on this proposal, details of the announcement and the instructions on how to comment can be found here: <http://www.epa.gov/fedrgstr/EPA-PEST/2009/July/Day-22/p17398.htm>. Comments can be submitted by mail, email, or through the www.regulations.gov website. All correspondence should include the docket ID number EPA-HQ-OPP-2009-0365.



INSECT MANAGEMENT

Rufus Isaacs & Keith Mason, Department of Entomology, Michigan State University

Aphid numbers continue to decline in response to recent insecticide applications and increased activity of natural enemies. Japanese beetles are out, and numbers have generally decreased compared to last week. Blueberry maggot flies were not captured at the farms we scouted, but there have been high catches at non-managed fields.

Cranberry fruitworm flight is essentially over at all sampled sites. Single moths were caught at the West Olive and Holland farms. Traps for this pest should be removed from fields in preparation for harvest with mechanical harvesters. Growers and scouts should be sure to keep records of any fruitworm activity "hotspots" to guide control plans for next season.

Aphids were found only at the West Olive farm. Parasitized aphids (mummies) are still increasing and were found 5 to 40% of new shoots with mummies at all of the farms we sampled. Continue to monitor blueberry aphids and mummies on new growth, especially in shoestring-infected fields, to help assess the effectiveness of aphid management programs.

Leafroller larvae and tussock moth larvae were not observed at any of the farms.

No blueberry maggot flies were caught at any of the sampled farms, but 18 flies were detected this week in a non-managed field in Allegan county. Growers should continue to monitor blueberry maggot flies throughout the harvest period. Be sure to replace traps and ammonium baits as needed. If a field is going to be picked with a mechanical harvester, blueberry maggot traps should be moved out of the field and replaced after harvesting. [For more on blueberry maggot, follow this link to a previous article in the Blueberry IPM Update.](#)

Low numbers of Japanese beetles were observed at the Holland farm. Low levels of beetle feeding damage can be seen on leaves and fruit in some fields where beetle were present. Growers and scouts should continue checking fields for Japanese beetles (JB) throughout the harvest period. [For more on Japanese beetle, click on this link to see an article from an earlier edition of the Blueberry IPM Update.](#)

Insect Scouting Results

Farm	Date	CFW moths per trap	CBFW moths per trap	BBA % infested shoots	BBM adults per trap	JB per 20 bushes
Van Buren County						
Covert	7/20	0	0	0%	0	13
	7/27	--	0	0%	0	0
Grand Junction	7/20	0	3	0%	0	5
	7/27	--	0	0%	0	0
Ottawa County						
Holland	7/20	0	2	5%	0	35
	7/27	--	1	0%	0	15
West Olive	7/20	0	1	10%	0	0
	7/27	--	1	5%	0	0

CFW=cherry fruitworm; CBFW=cranberry fruitworm; BBA=blueberry aphid; BBM=blueberry maggot; JB=Japanese beetle



DISEASE MANAGEMENT

Annemiek Schilder & Tim Miles, Department of Plant Pathology, Michigan State University

This week all scouted plots were continuing to ripen. Mummy berry symptoms of newly infected fruits maintained values similar values to last week with the highest average of 108.2 newly mummified fruits being detected at the Grand Junction site (Figure 1 and 2). Furthermore, fruits rots were seen for the first time in three out of four sites. Fruit rots generally increase with each harvest so now is an important to scout for fruit rots as they can occur in the field and post harvest.



Fig. 1

Fig 1. The fruit epidermis of newly infected mummy berries has mostly dried, making them easy to count this time of year; observed in Grand Junction on July 23.



Fig. 2

Fig 2. Newly infected mummy berries falling on the ground; observed in Grand Junction on July 23.

Anthracnose and Alternaria Fruit Rot. Last week, we discussed fruit rots and the different symptoms associated with them, specifically anthracnose (orange spore masses; caused by *Colletotrichum acutatum*) and Alternaria (dark-green spore masses; caused by *Alternaria* spp.) (Figure 3). Anthracnose in particular is favored by hot, humid weather. Fruit rots can cause significant pre- and post-harvest yield losses. Berries with high fruit rot levels also tend to have higher microbial counts. Healthy berries can get infected by *Colletotrichum* spores washing down from infected berries in clusters during rain events or overhead irrigation. Infections can even occur by infected berries or spores touching healthy berries on the harvester or sorting line. At this time, *Alternaria* spores are also everywhere in the air of blueberry fields. Pre-harvest *Alternaria* rot typically affects the calyx end of the blueberry, but post-harvest *Alternaria* infections occur mostly at the scar, which provides moisture for infection. Ripe berries are very susceptible to infection by both anthracnose and *Alternaria* fruit rot. Before harvest, fruit rots can be controlled by proper timing of fungicide treatments and reducing the frequency of overhead irrigation. While fungicides cannot cure already infected berries, spraying Abound, Cabrio, Switch or Pristine at this time (even between harvests) can reduce the number of secondary infections and the incidence of post-harvest rot. Scouting for fruit rots in the field at this time can give an indication whether fungicide sprays are needed.



Fig 3. A) Anthracnose fruit rot symptoms in the field. B) *Alternaria* fruit rot symptoms in the field with sporulation occurring in the calyx cup, which is typical of pre-harvest *Alternaria* rot.

Disease Scouting Results

Farm	Date	Avg number of newly-mummified fruits*	Avg number of infected anthracnose clusters per bush**	Avg number of infected <i>Alternaria</i> clusters per bush**
Van Buren County				
Covert	7/16	3.6	0.0	0.0
	7/23	2.9	0.0	0.1
Grand Junction	7/16	120.6	0.0	0.0
	7/23	108.2	0.0	0.2
Ottawa County				
Holland	7/16	5.8	0.0	0.0
	7/23	6.9	0.0	0.0
West Olive	7/16	39.0	0.0	0.0
	7/23	47.1	0.0	0.0

*Average based on scouting on and below 10 bushes.

**Average number based on 10 bushes.



Funding for this newsletter is provided by grants from the EPA and Project GREEN.

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Thomas G. Coon, Director, MSU Extension, East Lansing, MI 48824. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned.

