

# Northern Michigan FruitNet 2013 Northwest Michigan Horticultural Research Center

## Special Update

May 20, 2013

### **FIREBLIGHT RISK IS EXTREMELY HIGH ACROSS NW MICHIGAN** N.L. Rothwell, NWMHRS

With these very warm temperatures, the fireblight risk is higher than we typically see at bloom here in northwest Michigan. The MaryBlyt model on Enviroweather ([www.enviroweather.msu.edu](http://www.enviroweather.msu.edu)) shows the EIP to be 138 today for the NWMHRS weather station (Figure 1). The model also shows that rain is predicted for Monday, Tuesday, and Wednesday; therefore, growers should be covered on apple varieties with open blossoms. The fireblight bacteria thrive in hot weather and the populations can build quickly under these conditions. Any rain event can wash bacteria down into the flower and cause an infection.

Even if growers spray during this period, the model will read as if you should spray again that day or the next day; this situation is a result of the extremely warm temperatures and the rate in which the bacteria can reproduce under these hot conditions. We do not recommend that growers spray daily (unless you only have Micoshield as a control option as some growers do in pears in high risk areas), but spray every other day until we are out of the risk window. If a grower sprayed today (Monday), he or she will have to spray again on Wednesday—covering up new flowers that have just opened and knocking back the bacterial populations that grew quickly on open blossoms on Tuesday. However, growers should understand that the MaryBlyt model is correct, and the model will 'zero' out after a fireblight spray, but with the heat, the bacteria grow so fast that the EIP can be back up at or above 100 within one day. Sticking with the every other day, full cover spray approach should serve us well under these severe fireblight infection conditions. Below is a new article on the fireblight situation across the state from Dr. George Sundin.

Figure 1. MaryBlyt model output from the NWMHRS weather station on May 20, 2013 at 9:30am

2013		Temperature(F)			Rain		EIP for Biofix Date: (Bloom or spray date)													
Day	Date	Max	Min	Avg	in.	Chance of rain	5/14	5/15	5/16	5/17	5/18	5/19	5/20	5/21	5/22	5/23	5/24	5/25	5/26	5/27
Wednesday	5/15	72.4	51.9	62.1	0	--	16	16												
Thursday	5/16	65.2	47.1	56.1	0	--	16	16	0											
Friday	5/17	61.6	41.6	51.6	0	--	10	10	0	0										
Saturday	5/18	72.8	50.3	61.5	0	--	26	26	15	15	15									
Sunday	5/19	80.9	55.6	68.3	0	--	87	87	76	76	76	61								
Today's data:																				
Note: Last time reported by station is (8:55-9:00AM)																				
Monday	5/20	Forecast: 80	Actual (1:40-1:45AM): 55.3	67.65	0	75%	138	138	138	138	138	123	62							
Forecast Data																				
Tuesday	5/21	75	58	66.5	--	86%	180	160	160	160	160	160	98	37						
Wednesday	5/22	69	54	61.5	--	78%	172	172	172	172	172	172	111	49	12					
Thursday	5/23	63	48	55.5	--	52%	74	74	74	74	74	74	74	33	8	0				
Friday	5/24	64	38	51	--	2%	37	37	37	37	37	37	37	16	4	0	0			
Saturday	5/25	69	39	54	--	9%	29	29	29	29	29	29	29	16	12	12	12			
Sunday	5/26	70	46	58	--	31%	29	29	29	29	29	29	29	29	29	25	25	25	12	

## **SEVERE FIRE BLIGHT BLOSSOM BLIGHT RISK (May 20-23, 2013)**

**George Sundin, Department of Plant, Soil, and Microbial Sciences, MSU**

*The risk of blossom blight infection in Michigan orchards will be extremely high for the next three days. Orchard blocks of susceptible varieties should receive full covers of Kasumin (Section 18 counties) or streptomycin (other counties) at two-day intervals.*

As an update to the articles posted last week on blossom blight control, the EIP values predictive of infection potential **have gotten significantly higher** in response to the very warm temperatures we experienced through the weekend. EIP values are extremely high and as high as:

365 – Bainbridge/Watervliet

343 -- Sparta

334 -- Belding

238 -- Hart

188 -- Bear Lake

184 -- Elk Rapids

172 -- Leelanau area (NWMHRS)

337 -- Flint

These numbers predicting fire blight infection have not been this high since 2005, our last major fire blight year. Thunderstorms are predicted beginning this afternoon, through Wednesday. The first rain event that occurs will trigger a fire blight infection, as the water will enable the fire blight pathogen to migrate from flower stigmas to nectarthodes where it infects flowers. Rain will also facilitate spread of the pathogen among flowers and between trees. Any trauma associated with the storms will facilitate shoot infection.

Any orchard with open bloom will be under severe risk of fire blight infection. Orchards at petal fall will be at risk if the storms cause trauma injuries that facilitate infection.

### **Prior to today's rains:**

1. For growers in counties where we have documented streptomycin resistance (Leelanau, Antrim, and Grand Traverse counties) should be sure to apply a full cover of Kasumin (2 quarts / 100 gallons). For growers in counties without the Section 18 for Kasumin, they should apply a full cover of streptomycin. This is not the time to use an alternate row strategy.

### **Other considerations:**

1. With conditions as they are, a second application of either Kasumin (Section 18 counties) or streptomycin (other counties) should be applied within two days. Thus, if you sprayed Sunday, make the next application Tuesday or if you sprayed Monday, make the next application on Wednesday. The second application is needed because fire blight bacteria will continue to grow rapidly over these next several warm days and new flowers will be opening and will be unprotected from the last Kasumin/streptomycin application. Particularly as apples are just starting to bloom in northwest Michigan, new flowers will continue to open and will need to be protected. **SPRAY EVERY ROW!!**
2. Apogee should be or should have been applied at king bloom petal fall. It takes 10-14 days for the "Apogee effect" to take place and initiate tree growth inhibition and control of shoot blight infection.

## **WEBSITES OF INTEREST**

Insect and disease predictive information is available at:

<http://enviroweather.msu.edu/homeMap.php>

60 Hour Forecast

<http://www.agweather.geo.msu.edu/agwx/forecasts/fcst.asp?fileid=fous46ktvc>

Information on cherries is available at the new cherry website:

<http://www.cherries.msu.edu>

Fruit CAT Alert Reports have moved to MSU News

<http://news.msue.msu.edu>