

Northern Michigan FruitNet 2014

Northwest Michigan Horticultural Research Center

Special Update

June 20, 2014

ROSE CHAFERS ARE JUST STARTING TO SHOW UP IN NW REGION

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Rose chafers have just begun to show up across northwest Michigan. These insects are related to Japanese beetles, and both insects feed on many crops including, apples, cherries, and winegrapes, among a long list of other plants. Rose chafers are in the family Scarabaeidae, and their larvae resemble the characteristic C-shaped white grub. These larvae overwinter deep in the soil, and in spring, they move up to feed on grass roots just below the soil surface. Adults emerge from the soil in late May and into June, and male beetles are attracted to females and congregate on plants to mate and feed. Rose chafers are often more problematic in vineyards and orchards that are adjacent to grassy areas, particularly those with sandy soils.



Rose chafer adults are tan, long-legged beetles (left), and this life stage is the most damaging because they feed on tree fruit and grape vine foliage. This feeding can be particularly damaging in young trees and vines. The feeding damage is also the most obvious sign that rose chafers are present in the orchard and/or vineyard. The feeding damage is also similar to that of Japanese beetles where adult beetles feed on the leaf tissue between the large veins, a type of injury known as skeletonizing. However, if populations reach high enough levels, rose chafers can feed on developing fruits. The good news is that mating and egg-laying last only about two weeks, and the average life span of the adult is three weeks.

Rose chafers management can be questionable in orchard or vineyard systems both because the insects are only present for a short time and because they can re-infest an area quickly after an insecticide application. The feeding damage and/or population size of this pest may not warrant an insecticide, particularly on older trees or vines with ample leaves present at this time of the year. Many insecticides will knock down the beetle population effectively, but most are only rated as fair or good because of the beetles' mobility and potential to re-infest an orchard or vineyard. There are many options for control, but because these insects can reinfest so quickly, these insecticides are only rated fair to good against rose chafers. Imidan, and Sevin are all rated good while Lannate and Actara are fair against rose chafer.

DISEASE UPDATE

Emily Pochubay and Nikki Rothwell, Extension Educators

We had a few days with rain early this week that resulted in infections across the region. According to Enviro-weather, rain on Sunday 15 June resulted in infection periods of apple scab and cherry leaf spot throughout the region with exception of Bear Lake, which did not record infection periods for Sunday. Growers were surprised that such little rain resulted in infection periods. Very few apple scab spores (>5 spores per rod) were discharged during Sunday's rain and there was enough rain to trigger low/light cherry leaf spot infection.

Northwest Disease Report: Most recent wetting event (Report issued 6/19/2014 11:55)

Wetting periods start with rainfall (at least 0.01 inch) and continue until the start of at least eight hours without moisture (rainfall, leaf wetness, high relative humidity). Wetting periods are classified as "ongoing" until eight consecutive dry hours have passed. After that, the official end of the wetting period is recorded (the start of the 8 hour dry period).

Station	Start of wetting period	End of wetting period	Duration (Hrs.)	Avg temp (F)	Rainfall (In.)	Apple Scab (leaf)	Cherry Leaf Spot	Grape Leaf Black Rot	Time Period Assessed
Bear Lake	6/11 7-8AM	6/12 11AM-Noon	Wet: 28 Span: 29	61.6	0.21	Heavy (Symptoms appear: 6/21)	High	Yes	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Benzonia	6/15 6-7PM	6/16 8-9AM	Wet: 11 Span: 15	61.7	0.06	Light (Symptoms appear: 6/24)	Low	Yes	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
East Leland	6/15 6-7PM	6/16 8-9AM	Wet: 12 Span: 15	59.2	0.13	Light (Symptoms appear: 6/24)	Low	No risk until pre-bloom period	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Eastport	6/15 6-7PM	6/16 7-8AM	Wet: 9 Span: 14	62.6	0.07	Light (Symptoms appear: 6/24)	Low	Yes	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Elk Rapids	6/15 7-8PM	6/16 8-9AM	Wet: 13 Span: 14	64.5	0.08	Moderate (Symptoms appear: 6/24)	Moderate	Yes	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Kewadin	6/15 7-8PM	6/16 7-8AM	Wet: 10 Span: 13	63.9	0.09	Light (Symptoms appear: 6/24)	Low	Yes	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Northport	6/15 6-7PM	6/16 8-9AM	Wet: 15 Span: 15	58.7	0.15	Moderate (Symptoms appear: 6/25)	Moderate	No risk until pre-bloom period	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Old Mission	6/15 6-7PM	6/16 7-8AM	Wet: 11 Span: 14	61.8	0.05	Light (Symptoms appear: 6/24)	Low	No risk until pre-bloom period	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM
Traverse City (NWMHRS)	6/15 6-7PM	6/16 7-8AM	Wet: 9 Span: 14	63.8	0.07	Light (Symptoms appear: 6/24)	Low	Yes	Most recent period shown: 6/9 Midnight-1AM to 6/16/2014 10-11AM

Create CSV File From Regional Disease Report

Thunderstorms and rain showers early Tuesday morning also resulted in cherry leaf spot infection periods across the region. This rain event resulted in apple scab infection periods in most locations; the apple scab model on Enviro-weather did not record scab infection periods for Elk Rapids or NWMHRC. Apple scab spores are still discharging at our monitoring site; the number of discharging spores has declined dramatically in the last few weeks (12.5 spores/rod collected following Tuesday 17 June rain). If we receive the rain that is predicted over the weekend, we could see the end of primary next week. It is currently raining and we will count scab spores following today's rain to determine whether or not spores are being discharged. Primary apple scab is also ongoing in southeast Michigan.

Northwest Disease Report: Most recent wetting event (Report issued 6/19/2014 9:48)

Wetting periods start with rainfall (at least 0.01 inch) and continue until the start of at least eight hours without moisture (rainfall, leaf wetness, high relative humidity). Wetting periods are classified as "ongoing" until eight consecutive dry hours have passed. After that, the official end of the wetting period is recorded (the start of the 8 hour dry period).

Station	Start of wetting period	End of wetting period	Duration (Hrs.)	Avg temp (F)	Rainfall (in.)	Apple Scab (leaf)	Cherry Leaf Spot	Grape Leaf Black Rot	Time Period Assessed
Bear Lake	6/17 4-5AM	6/17 1-2PM	Wet: 10 Span: 10	64.2	1.2	Light (Symptoms appear: 6/28)	Low	Yes	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Benzonia	6/17 4-5AM	6/17 Noon-1PM	Wet: 9 Span: 9	64.7	0.53	Light (Symptoms appear: 6/28)	Low	Yes	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
East Leland	6/17 4-5AM	Ongoing. Last hour with moisture: 6/18 11PM - Midnight	Wet: 13 Span: 20	63.5	0.99	Moderate (Symptoms appear: 6/27)	Moderate	No risk until pre-bloom period	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Eastport	6/17 5-6AM	Ongoing. Last hour with moisture: 6/18 11PM - Midnight	Wet: 14 Span: 19	63.3	0.53	Moderate (Symptoms appear: 6/28)	Moderate	Yes	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Elk Rapids	6/17 5-6AM	6/17 11AM-Noon	Wet: 7 Span: 7	65.3	0.74	None	Low	None	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Kewadin	6/17 5-6AM	Ongoing. Last hour with moisture: 6/18 11PM - Midnight	Wet: 12 Span: 19	64.9	0.61	Moderate (Symptoms appear: 6/27)	Moderate	Yes	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Northport	6/17 5-6AM	Ongoing. Last hour with moisture: 6/18 11PM - Midnight	Wet: 14 Span: 19	61.4	0.92	Moderate (Symptoms appear: 6/28)	Moderate	No risk until pre-bloom period	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Old Mission	6/17 5-6AM	Ongoing. Last hour with moisture: 6/18 11PM - Midnight	Wet: 17 Span: 19	66.6	0.4	Moderate (Symptoms appear: 6/27)	Moderate	Yes	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM
Traverse City (NWMHRS)	6/17 5-6AM	6/17 Noon-1PM	Wet: 8 Span: 8	65.2	0.46	None	Low	None	Most recent period shown: 6/10 Midnight-1AM to 6/17/2014 10-11AM

Currently, it is raining and there is a chance of rain/thunderstorms predicted Sunday, Monday, and Tuesday. Max temperatures may be into the low- to mid- 70s°F over the weekend. However, temperature and rain predictions vary among weather service providers, which has been the case for most of this season. Growers need to continue to protect from possible cherry leaf spot and apple scab infections prior to rain.