

SCAFFOLDS Fruit Journal, Geneva, NY

Volume 26, No. 17

Update on Pest Management and Crop Development

July 17, 2017

COMING EVENTS

	43°F	50°F
Current DD* accumulations		
(Geneva 1/1-7/17):	1834.4	1118.1
(Geneva 1/1-7/17/2016):	1867.8	1230.3
(Geneva "Normal"):	1890.8	1249.3
(Geneva 1/1-7/24, predicted):	2043.9	1278.6
(Highland 1/1-7/17):	2268.0	1504.0

Upcoming Pest Events – Ranges (Normal +/- Std Dev):

American plum borer

2nd flight starts 1560-2140 1028-1434

Apple maggot

1st oviposition punctures 1605-2157 1144-1544

Codling moth 2nd flight starts.... 1775-2234 1028-1499

Codling moth 2nd flight peak 1948-2693 1298-1863

Comstock mealybug

1st flight subsides 1818-2132 1216-1418

Comstock mealybug

2nd gen crawlers increasing 2012-2638 1292-1811

Lesser appleworm

2nd flight starts	1429-2108	924-1405
Obliquebanded leafroller		
1st flight subsides	1622-2041	1054-1375
Oriental fruit moth		
2nd flight subsides.....	2024-2532	1346-1764
Spotted tentiform leafminer		
2nd gen flight subsides.....	2002-2361	1323-1630
*[all DDs Baskerville-Emin, B.E.]		

PEST FOCUS

Wayne Co: Apple Maggot 1st trap catches, 7/14.

Highland: Apple Maggot 1st trap catch, 7/12. At threshold in high-pressure block.

Codling Moth 2nd flight start today, 7/17.

MODEL BUILDING

Insect model predictions for Highland[H]/Geneva[G]

[Source: NEWA Apple Insect Models,

<http://newa.cornell.edu/index.php?page=apple-insects>]

Obliquebanded Leafroller 100% egg hatch @ 950 DD43 (currently @ 1279[H] / 935[G]).

TRAP CATCHES (Number/trap)

Geneva

	7/7	7/10	7/14	7/17
Redbanded Leafroller	53.0	28.5	16.0	6.0
Spotted Tent. Leafminer	282.0	184.0	144.0	158.0
Oriental Fruit Moth	43.5	25.5	48.5	5.5
Codling Moth	12.5	2.0	3.0	1.5
Lesser Peachtree Borer	-	10.5	2.5	4.0
Peachtree Borer	-	8.5	6.0	4.5
Dogwood Borer	4.0	5.0	7.0	1.5
Obliquebanded Leafroller	6.0	7.0	7.5	5.0
Apple Maggot	0.0	0.0	0.0	0.0

Highland (Peter Jentsch)

	6/26	7/3	7/10	7/17
Redbanded Leafroller	14.5	16.0	22.0	15.5
Spotted Tent. Leafminer	168.0	177.0	271.5	193.5
Oriental Fruit Moth	2.0	1.5	4.5	3.5
Lesser Appleworm	6.0	20.0	21.0	0.0
Obliquebanded Leafroller	18.5	9.5	16.5	4.5
Codling Moth	29.5	6.0	2.0	10.0*
San Jose Scale	0.0	0.0	0.5*	53.0
Sparganothis Fruitworm	1.0	0.0	1.5	0.0
Variiegated Leafroller	2.0	2.0	0.0	0.0
Tufted Apple Bud Moth	20.0	7.0	1.5	0.0
Dogwood Borer	1.5	4.0	3.5	0.5
Apple Maggot	0.0	0.0	0.0	4.3

* 1st catch

ORCHARD RADAR DIGEST

[H = Highland; G = Geneva]:

Roundheaded Appletree Borer

RAB peak hatch roughly: July 4-July 22 (H)/July 10-July 30 (G).

Dogwood Borer

Peak DWB egg hatch roughly: July 21 (H)/July 29 (G).

Codling Moth

Codling moth development as of July 17:

2nd generation adult emergence at 20% (H)/3% (G)
and 2nd generation egg hatch at 2% (H)/% (G) [1st
generation egg hatch at 99% (G)].

2nd generation 7% CM egg hatch = target date for first
spray where multiple sprays needed to control 2nd
generation CM: July 21 (H)/ July 31 (G).

Oriental Fruit Moth

2nd generation - second treatment date, if needed: July
18 (G).

Spotted Tentiform Leafminer

Second optimized sample date for 2nd generation
STLM sapfeeding mines, if needed: July 19 (G).

White Apple Leafhopper

2nd generation WALH found on apple foliage: July 27

(H)/ August 6 (G).

[Section: INSECTS]

BUGS IN CAMO

(Art Agnello, Entomology, Geneva; ama4@cornell.edu)

[Box Text: KNOWING WHERE TO LOOK]

The first generation of Comstock mealybugs likely came and went without much notice this year, since they tend not to cause very noticeable damage at that time of the season (late June), but for management efforts, we normally focus on the summer brood, which occurs sometime during the 3rd week of July in the Hudson Valley, and shortly thereafter in western N.Y. Now would be a good time to note the presence of any potentially problematic populations in your pears, peaches, or even apples, as applicable, in order to be prepared for any needed management decisions. The following information is taken from the Comstock Mealybug IPM Fact Sheet (<http://hdl.handle.net/1813/43087>):

There are two generations of Comstock mealybug in New York, each taking 60 to 90 days to complete, depending on seasonal temperatures. The egg is generally thought to be the primary overwintering stage, but some nymphs and

adult females from the second (summer) generation may also overwinter, with eggs being laid in the spring rather than the previous fall. Adult females and males emerge at the same time, from late June to mid-July for the first (overwintering) generation, and late August to mid-September for the second (summer) generation. Adult females are present for a total of 4–6 weeks, and oviposit for about one week after mating. Males survive for only a few days after emerging.

The elongate, orange-yellow eggs are laid in jumbled masses along with waxy filamentous secretions in protected places such as under bark crevices, near pruning cuts, and occasionally in the calyx of fruit. The summer-generation eggs are laid from mid-June through late July, and the overwintering eggs from mid-August into October. The early larval instars of the CMB are similar to adult females (wingless and elongate-oval in shape, with a many-segmented body) except that they are smaller, more oval-shaped, lack the long body filaments, and are orange-yellowish because they have less wax covering. Later instars are similar in appearance, but become progressively browner and redder.

The overwintered eggs hatch from mid-April through May and the nymphs (crawlers) migrate from the oviposition

sites to their feeding sites on terminal growth and leaf undersides of trees and shrubs. This hatch is completed by the petal fall stage of pears. Nymphs that hatch from these overwintered eggs are active from roughly early May to early July (i.e., as in the above-mentioned reports). As the nymphs approach the adult stage, they tend to congregate on older branches at a pruning scar, a node, or at a branch base, as well as inside the calyx of pears. Second- (summer) generation nymphs are present from about mid-July to mid-September.

The Comstock mealybug poses two major concerns for the pear processing industry of New York: First, the emergence of crawlers and adult females from the calyx of pears at the packinghouse creates a nuisance to workers. Second, pears to be made into puree typically are not peeled or cored by processors who buy New York fruit, so infestations can potentially result in unacceptable contamination of the product.

Another problem, of concern to apple growers in the 1930s and 1940s, and again in the Hudson and Champlain Valleys in the early 1980s, is that the honeydew secreted by the crawlers is a substrate for sooty molds growing on the fruit surface. This problem also occurs on peaches in Ontario, Canada. These molds result in a downgrading of

the fruit, and are therefore an additional cause of economic loss.

To date, the Comstock mealybug has been a problem to growers of processing pears because of the contamination and aesthetic reasons noted. An infestation generally requires one or more insecticide sprays during the growing season, directed against the migrating crawlers. Examine the terminal growth for crawler activity periodically throughout the summer. Crawler and adult female activity can be monitored best by wrapping white, double-sided carpet tape around low scaffold branches and inspecting for crawlers that have been caught on the tape. They can be recognized with a hand lens or, with some experience, by the unaided eye.

We expect summer crawlers to appear in problem blocks over the next 1–2 weeks, for which an application of a material such as Actara (pears only), Admire (pears only), Assail (apples & pears only), Centaur, Movento, or Portal would be advised to control this insect.

[Section: DISEASES]

**PRUNE CHERRIES AFTER HARVEST TO MANAGE
BACTERIAL CANKER**

(Julie Carroll, NYS IPM Program, Geneva;

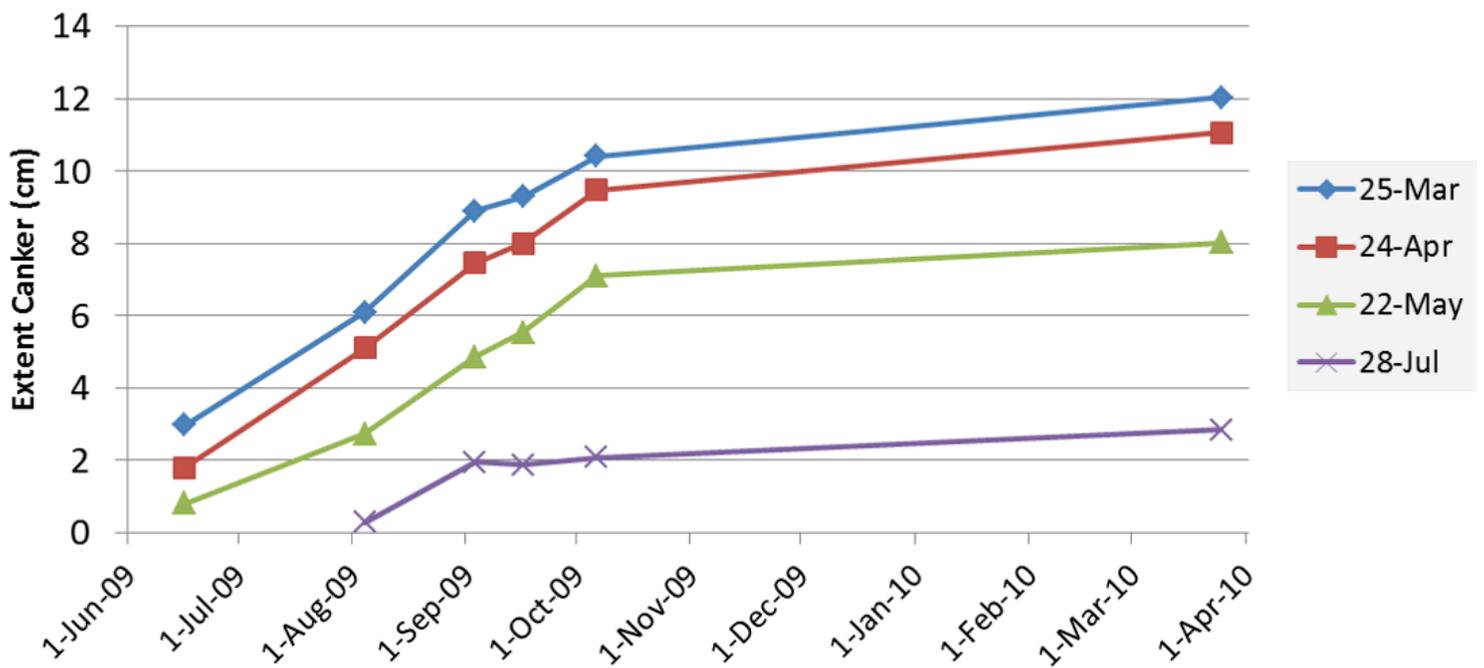
jec3@cornell.edu)

[Box text: SPRAYING DON'T PAY]

To manage bacterial canker infections in sweet cherry, the best time to prune is after harvest. Whenever you prune your trees, make sure the weather is dry and no rain is in the forecast.

Four years of research on the whether it's worth it to apply copper sprays before and after pruning sweet cherries found no benefit from applying copper, even when pruning cuts were inoculated with bacteria. We tested another material, as well, and got the same results – don't spray before or after pruning, it doesn't help. What does help is the timing of pruning. Prune after harvest is complete. Also, leave a pruning stub. Our research in New York in both Geneva and Highland gave comparable results. Canker progresses down pruning stubs the least when pruning is done after harvest (see figure). There is little further progression of canker down the stub during the fall and dormant seasons, as well.

Pruning Date & Canker Progression (Geneva, NY)



Bacteria gain entry into the tree through leaf scars during leaf fall in autumn. Copper sprays timed at 20% and 80% leaf drop protect the tree from some of this infection. Cool, wet weather is optimal for bacteria to grow on plant surfaces; therefore, a late dormant copper spray can also prove useful. Interestingly, the more severe bacterial canker pruning wound infections occurred on trees pruned in March, April, and May, when weather conditions are typically cool and wet.

Prune cherries after harvest, when weather is dry and don't spray those pruning cuts.

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