

FRUIT IPM UPDATE #2

June 15, 2022

What's New?

- ✓ Double Dip.....1-2
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Double Dip

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Despite a late spring, apple trees have bloomed for everyone across the state. Recently I was in far northern Minnesota and apple trees and flowering crabs were still blooming. Evidence of active plum curculio and coddling moth in the state are present. It is time to actively treat for both pests at the same time if you haven't already done so.



Super bloom. Photo courtesy of Straight River Farm.

Plum curculio, *Conotrachelus nenuphar*, can impact apples, pear, plum, cherry and apricots. Native plants like wild plum, hawthorn, and native crabapples are all sources of infestation into cultivated tree orchards. Females overwinter in leaves in wooded areas or hedges. In early spring the females will emerge and seek the cultivated trees. Typically, this is while

trees are blooming, however potentially due to the cool spring their activity seemed to have been delayed.

As the fruit begin to develop, the females will lay eggs just below the skin. As a weevil the female will use her snout to push the eggs under the fruit skin. Egg laying period is usually 3 to 5 weeks after blooming. An oviposition scar will be present on the fruit because the female cuts a crescent around each egg. In apples, sometimes the growing fruit crushes the egg or kills the larvae; leaving the scar as the only damage. Other times the larvae continue to grow feeding on the developing seed, causing the fruit to drop and the larvae continue to feed.



Developing apple. Photo courtesy of Bridal Rock Orchard.

IPM practices include monitoring, focusing on the outer rows of an orchard, searching for fresh feeding or egg laying punctures. The attacks on apples begin when fruit reaches ¼-inch size. Non-chemical or biological control multiple applications of kaolin clay products, which is an organic option. However, reapplication is necessary after rain events. Chemical control

includes two or three sprays. Insecticides include carbamates (e.g. Sevin), use with caution as it can act as a thinner. Other insecticides include, but are not limited to, Diamides (e.g. Exirel), organophosphates (e.g. Imidan) or pyrethroids (e.g. Danitol, Mustang Max). This is where a double dip can come into play, seeking products that treat both plum curculio and codling moth (*Cydia pomonella*) can provide an effective and cost-effective effort to control both pests.

Apple Insect Pests: Weekly Trap Counts for 2022

County	Location	2022 Degree Days (Dates)*	Dates Traps were Out in Orchard	CM	DWB	LAW	OBLR	RBLR	STLM
Chisago	Shafer	487.0 (04-15 to 06-14)	06-08 to 06-14	11,21,16,5	3	1	1	0	5
Morrison	Little Falls	---	06-08 to 06-14	9	8	50	0	11	9
Rice	Faribault	565.3 (04-01 to 06-14)	06-07 to 06-14	1	1	0	0	0	0
Scott	Veseli	532.9 (05-05 to 06-15)	06-08 to 06-15	0	0	9	1	0	0
Wabasha	Lake City	560.0 (05-01 to 06-15)	06-08 to 06-15	0,5,1	21	9	1	---	---
Washington	Afton	421.0 (05-01 to 06-15)	06-08 to 06-15	18,11	10	16	1	3	6
Washington	Hastings #1	430.0 (05-01 to 06-14)	06-08 to 06-14	1,1,0,3	23	19	4	0	4
Washington	Hastings #2	651.7 (01-01 to 06-15)	06-08 to 06-15	5,3,2,2	1	13	0	1	7
Washington	Hugo	539.0 (05-01 to 06-08)	06-08 to 06-15	45	0	1	0	3	0
Wright	Delano	133.0 (06-01 to 06-14)	06-08 to 06-14	17	3	1	0	0	0

KEY: AM = apple maggot, CM = codling moth, DWB = dogwood borer, LAW = lesser apple worm, OBLR = obliquebanded leafroller, RBLR = redbanded leafroller, STLM = spotted tentiform leafminer, AM = apple maggot --- = no data provided.

* Degree days using Spec 7 Pro or Spec 8 Pro = cumulative or integral degree days (uses hourly temperatures), with calculation parameters of Base Temp = 50°F and Upper Limit = 86°F.

2022 Apple Scab Infections (Cornell Model)

Produced using Spec 7 Pro or Spec 8 Pro (Spectrum Technologies, Inc.)

(Parameters: Base temp. = 33 degrees F, Upper limit temp. = 78 degrees F, Wetness threshold = 6)

Orchard	# of Infection Periods	Infection Period Dates	Overall Hours of Wetness	2020 Dates
Faribault	2	06-12, 06-13	25.8	06-08 thru 06-14
Hastings #2	0	---	0	06-08 thru 06-15
Lake City	1	06-15	12	06-08 thru 06-15
Shafer	1	06-12 – 06-13	17	06-08 thru 06-14
Veseli	0	---	0	06-08 thru 06-15

DISCLAIMER

References to products in this Newsletter are not intended to be an endorsement to the exclusion of others which may have similar uses. Any person using products listed in this publication assumes full responsibility for their use in accordance with current manufacturer directions.

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