



Maine Tree Fruit Newsletter

Monday, March 14, 2022 Vol 29:5

Maine Preseason Tree Fruit Webinars

Wednesdays at 7pm: March 16, March 30, 2022

Wed., March 16 Zoom link <https://maine.zoom.us/j/88397126798>

- 7:00pm **Status reports - Browntail moth, Winter moth, Brown marmorated stinkbug, Spotted lanternfly.**
Dr. Hillary Peterson, Maine Dept. Ag. Cons. & Forestry.
- 7:30pm **Maine Board of Pesticides Control Update.**
John Pietroski, Maine Dept. Ag. Cons. & Forestry.
- 8:00pm **Discussion, Q&A**
- 8:15pm **Adjourn**

Wed., March 23 Zoom link <https://maine.zoom.us/j/89853154768>

- 7:00pm **Old Rules, New Tools for Apple IPM.**
Glen Koehler, UMaine Cooperative Extension.
- 7:45pm **Discussion, Q&A with audience**
- 8:00pm **Adjourn**

The Maine webinars listed above do not qualify for pesticide applicator recertification credits, but the sessions with *** below each qualify for 1 credit with preregistration..

Remaining NE-NY Winter Tree Fruit Webinars

*** **March 22 - Northeast Cider Apple Project.** Pre-registration at <https://umass-amherst.zoom.us/meeting/register/tJlrfu2gqDojGN0ggQzv5NDTM99IMuAtgJSv>

*** **March 29 - Plum Curculio Research Update** Pre-registration at <https://umass-amherst.zoom.us/meeting/register/tJMrc2vpi0rHNevn7FZpRRetIs7cUUBB0Oq>

*** ~~March 15~~ **RESCHEDULED for March 29 - Herbicides: Materials, Timing and Rates.** Pre-registration at <https://umass-amherst.zoom.us/meeting/register/tJMscOyspiwgG93on4Mrz4Yi0AJ7H3ndgWGb>

Weather Resources

Maine is now a member of the NEWA weather station and decision support tool system managed by Cornell University and New York IPM. The first two years of Maine's membership is paid for by UMaine Extension. [NEWA](#) is a multi-state network of weather stations and pest management tools. Currently the only weather stations in the system are Bangor, Augusta, and Lewiston airports. Anyone in Maine can upload their station(s) if they are Onset or Rainwise (now KestralNet) [here](#) by clicking "Submit Request" in the upper right corner.

How to learn to use NEWA pest and crop models:

Every model has a "Quickstart Tutorial" link in the upper left corner. NEWA has a Help Desk that lists self-guided resources for every model at <https://newa.zendesk.com/hc/en-us>. A page with download links for all video Quickstart videos is at <https://newa.zendesk.com/hc/en-us/articles/4421237805719>

AgRadar. The weather data feed is running for 83 sites in Maine providing site-specific data at 1.5 mile resolution. I will have more to say about AgRadar site specific weather and apple pest and horticultural models running for Maine sites soon.

A completely revised weather outlook newsletter will be sent tomorrow.

Browntail Moth

Management regime: Monitor for presence of webs after leaf fall (face tree with sun at you back on a clear day for best visibility), remove winter webs within reach while the larvae are inactive (October to mid-April) and soak the clipped webs in soapy water for 3-5 days before discarding.

If BTM control is needed on bearing apple trees, application of an insecticide that is
1) labelled for use on bearing apples and
2) lists BTM or a related insect pest (e.g. green fruitworm, "gypsy moth", codling moth obliquebanded leafroller) as a target pest.

Insecticide modes of action vary such that the best timing varies:

Rimon (novaluron) and works best if residue is present before eggs are laid and just hatched larvae are exposed. Thus it is not likely to be effective on overwintered BTM larvae.

Intrepid (methoxyfenozide), **Bt** (*Bacillus thuringiensis* toxin), and **Esteem** (pyriproxyfen) are most effective on just hatched larvae and so should be applied as soon as the overwintered larvae resume activity in the spring, probably around the time of budbreak (Green tip) on apples.

Insecticides that affect the insect nervous system are effective against larvae at any stage but are also most effective on small larvae. In the case of BTM it is important to kill them before they reach their final two instars because this is when they produce the most toxic hairs.

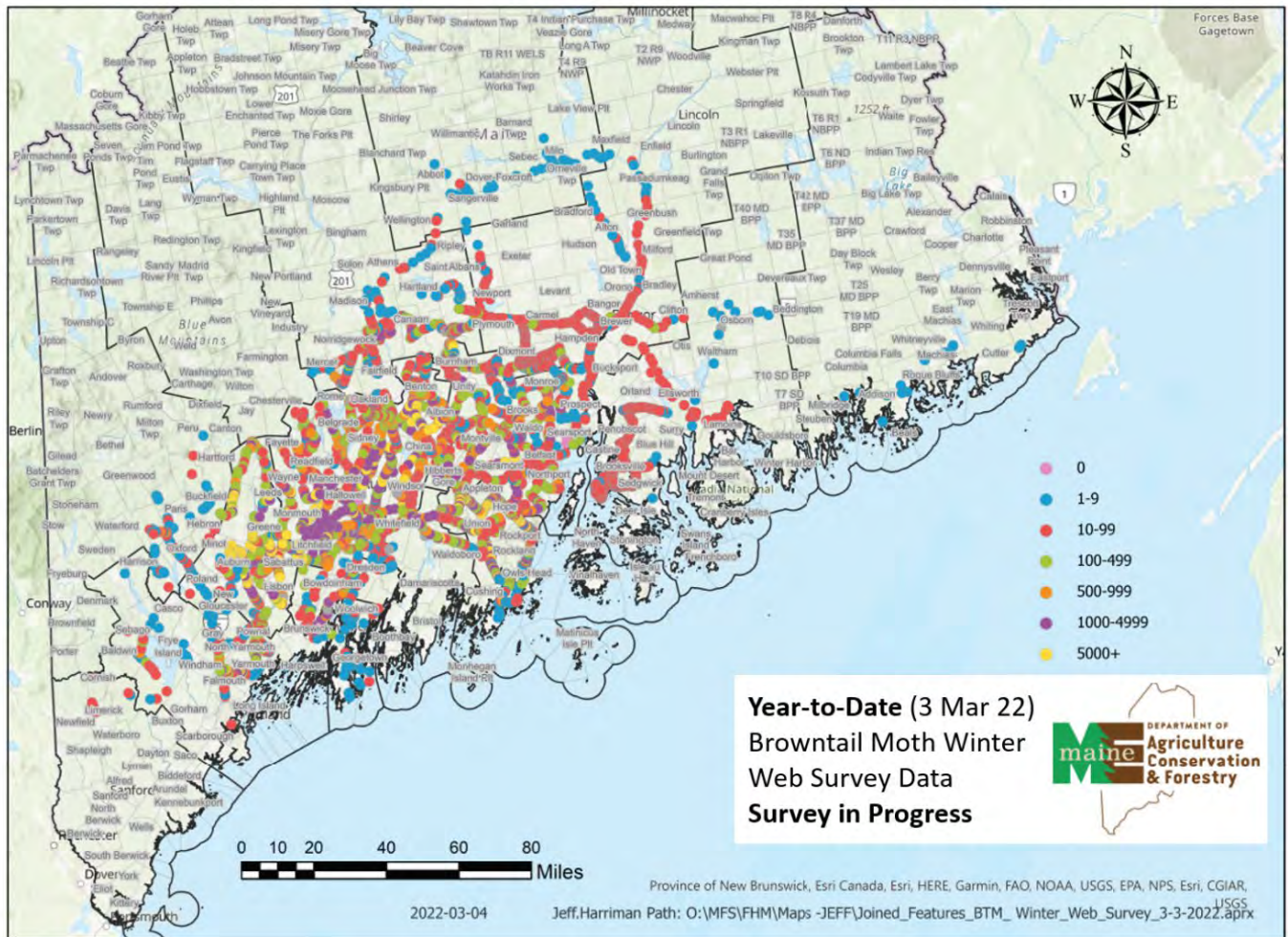
This includes most common insecticides such as pyrethroids (lambda cyhalothrin, permethrin, esfenvalerate,); neonicotinoids (Assail, acetamiprid; Actara, thiamethoxam), diamides (**Altacor**, chlorantraniliprole; **Exirel**, cyantraniliprole, **Verdepryn**, cyclaniliprole), **Avaunt**, **Imidan**, spinosads (Entrust, Spinosad; Delegate, spinetoram)

Larval development occurs during May 1-31. By June the larvae have already produced their toxic hairs and have begun to enter their pupation period. Avoid areas of known active infestation where irritating hairs are likely to be abundant.

Moth flight occurs during June and July. Keeping outdoor lights off during moth flight (June - July) can help reduce attraction to BTM. ‘Bug zapper’ raps are not effective and do not attract egg-laying females. Removing the white male BTM moths that gather on walls and fences during the July flight period is also ineffective.

The color scheme used on the map below is confusing, but the bottom line is that any dot that is yellow, purple, orange, light green or red has too many browntail moth webs.

Year-to-Date Browntail Moth Winter Web Survey Data March 3, 2022



Chill Requirement & Green Tip

Here is a third attempt at a list of chilling requirements for apple and stone fruit. There are some additions to this version and corrections to some errors in the previous version.

Cultivar	Chill Units	Dynamic model Chill portions
<u>Apples</u>		
Braeburn	800-1000+	---
Cripps Pink	1242	73
Delicious	1093*, 1234, 1279	---
Elstar	1027*, 1096	50, 66
Empire	1079*	---
Fuji	1077*, 800-1000+, 1307	77
Gala	1064*,	50-55
Galaxy Gala	1300	77
<u>Royal Gala</u>	<u>500-800</u>	<u>---</u>
Golden Delicious	1050*, 800-1000+	50
Granny Smith	1049*, <800, 1239	59, 59, 73
Gravenstein	1118*	---
Honeycrisp**	1242	73
Idared	1017*	---
Jerseymac	1120*	---
Jonamac	1133	76
Kalei (from Gala)	1275, 1307	---
Liberty	1053*	---
McIntosh	1086*, 1279	---
Milton	1160*	---
Northern Spy	1228*	---
Prima	1072*	---
Priscilla	1057*	---
Red Delicious (Hi Early)	---	77
Spartan	1117*	---
Starkrimson R. Del.	1200*	---
Vista Bella	968*	---
Wealthy	1169*	---
Wolf River	1217*	---
Pome Fruit in general	---	High >70, Medium 30-70, Low <30

* Chill units are from Utah Model (Richardson et al. 1974) unless marked with *.

* = chill units from the North Carolina model (Shaltout and Unrath, 1983)

** Honeycrisp chill requirement not cited directly, but said to be similar to Cripps Pink.

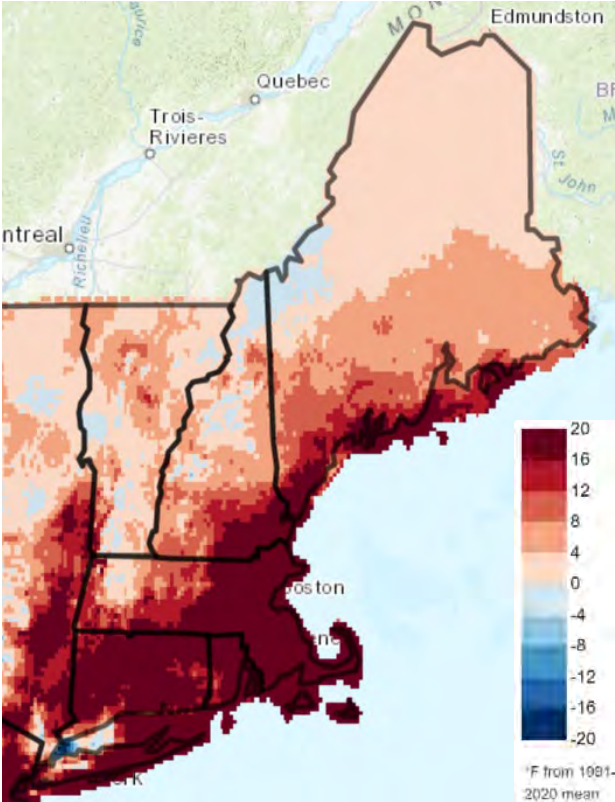
Sources: Delgado et al. 2021; El Yaacoubi et al. 2016; Fernandez et al. 2020; Glozer & Grant 2006; Glozer & Ingels 2007; Hauagge & Cummins 1991; Noorazar et al. 2021; Parkes et al. 2020; Pope 2015; Richardson et al. 1986; Sapkota et al. 2021; Shaltout & Unrath, 1983.

Cultivar	Chill Units from Utah model	Dynamic model Chill portions
Bartlett Pear	1210	56
<u>Peaches</u>		
Elberta	800	43
O’Henry	---	63
Red Haven	870	75
Stone fruit in general	---	High >30, Medium 12-30, Low <12
<u>Sweet cherry</u>		
Bing	880	49, 54
Brooks	---	37
Lapins	---	35
Rainier	---	45
Sam	---	70
Montmorency sour cherry	954	---
‘Italian’ prune	788	---
Tilton apricot	720	---

The stone fruit and apple chill requirements have been met for Maine locations. As degree hours above 40F continue accumulate, apple buds will progress toward Green tip. The average data at Highmoor Farm for Green Tip is around April 24, but the actual date varies by about +/- one week (with extreme variations such as 3 weeks early in 2012 possible).

So far, degree day accumulation in Maine since January 1 is running slightly ahead of the 1991-2020 average. Looking at the current temperature forecast, it looks like the 2022 Green Tip date at Highmoor Farm will be similar to last year when GT arrive April 14.

Map from ClimateToolbox.org



Sprayer Technology Survey

Dear Apple Grower,

We are conducting a survey to learn about your experiences in managing pests and diseases on apples and your willingness to adopt a new sprayer called the Intelligent Sprayer created by a team of USDA-ARS engineers in Wooster, Ohio, led by Dr. Heping Zhu. This study is evaluating the use of Intelligent Sprayer in the eastern half of the US for control of the full range of pests and diseases on apples. **You can participate in this survey even if you have not heard of or tried this new sprayer.**

Your participation in this survey is voluntary. Your responses are valuable to us and will contribute to improving smart sprayer innovations. The responses you provide will be kept completely confidential, and results will be reported in a summary form only. Please answer the questions by clicking on a response option or entering text in the box. You will have an opportunity to add comments at the end of the survey.



To participate in this survey, please go to <https://go.iastate.edu/4TRGKO>

Or use the QR Code →



For more information about the survey, please contact:

Dr. Mark Gleason, Professor of Plant Pathology, Iowa State University, mgleason@iastate.edu, 515-294-0579

Dr. Melanie Ivey, State Fruit Pathologist, the Ohio State University, ivey.14@osu.edu, 330-263-3849

Dr. Heping Zhu, Lead Scientist, USDA-Agricultural Research Service (ARS) Application Technology Research Unit, heping.zhu@usda.gov, 330-263-3871

Thank you in advance for your time and attention!

Hudson Valley Bulk Order Program

The Hudson Valley Farm Bulk Order is a cost-savings program in its second year, serving 62 farms with purchases of \$175,000 in supplies annually. In 2021 they distributed nearly \$40,000 in discounts, while retaining an additional \$9,000 within the Hudson Valley farming community. More Information is at www.hvfarmbulkorder.com.

The purpose of this free webinar is to introduce farm bulk order concept as a low-cost, high-return cooperative purchasing program. It will cover the following topics:

- * Starting a bulk order program: Key ingredients for success, resources needed, feasibility metrics, and lessons learned to support replication in other farm communities.
- * Running a bulk order program: Organizer's calendar, efficiency tips, and lessons learned
- * Organizing tools and templates

This webinar is hosted by Cornell Cooperative Extension and funded by Northeast Sustainable Research and Education (NESARE). Registration is at

<https://cornell.zoom.us/j/9121212121>

Closing Dogs



Stick a Turkey leg in a sneaker and let your dog patrol your yard.



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