



UMass
Extension

Vegetable Notes

For Vegetable Farmers in Massachusetts since 1975



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PEST ALERTS

Accumulated Growing Degree Days (F): 1/1/17 - 5/3/17	
Location	GDD (base 40°F)
Western, MA	
Ashfield	386.7
South Deerfield	448.9
Pittsfield	400.6
Central, MA	
Bolton	489.9
Northbridge	493.1
Phillipston	400.1
Eastern, MA	
Ipswich	467.2
Waltham	534.3
Seekonk	579.2
Hollis, NH	456.5
Burlington, VT	409.5
Newport, RI	504.3
Castleton, NY	576.4

[Seed corn maggot](#), the earliest of the maggot flies to emerge, was particularly abundant last year all across New England at this time. The adults flies have already emerged in most locations in MA (200 GDD and peak flight at 360 GDD base 40°F) so now is the time to be looking for larvae which feed on seeds and young seedlings of many large-seeded crops (corn, beans, beets, peas, spinach, onions, cole crops, etc.). Delay seeding into fields where the problems occurred last year if possible. Fields fertilized with seed meals (ie. soybean, peanut) are very attractive to this pest which, like other maggot flies, prefers to lay eggs in cool, wet soil high in organic matter. Eggs hatch within 2-4 days at soil temperatures of 50°F.

[Cabbage root maggot](#) (CRM) flight coincides with the blooming of the common roadside weed, yellow rocket (*Barbarea vulgaris*), which we are starting to see flowering now. The [NEWA model](#) also did a good job predicting peak flight of this pest which occurs at 452 GDD base 40°F. We are catching adult flies by the hundreds on yellow sticky cards placed in our experimental plots in Franklin Co., MA where we try to attract the pest by applying compost during adult flight. Expect egg hatch 7-10 days from peak flight. Larvae feed on roots of all brassicas, leading to wilting, discoloration and collapse of plants, or tunneling damage on root crops like turnips and radishes. Pre-plant and transplant treatment options are described in the [New England Vegetable Management Guide](#).

[Onion Maggot](#) has begun to emerge in most locations across MA according to the [NEWA model](#), though we have not yet reached peak emergence (735 GDD base 40°F). Larvae feed on young onions, leeks, and other allium seedlings.

Damping-off was observed in spinach and leafy greens direct-seeded into field soil. As mentioned in the article last issue, damping off usually affects plants that are not

growing vigorously or are wounded, so the cool, overcast weather we've been experiencing could be a major factor.

Asparagus is up and [Common Asparagus Beetle](#) were out the day spears came out of the ground in a field in Hampshire Co., MA where the ferns were left unmowed last year. The common asparagus beetle has a bluish-black body with cream-colored, square or rectangular spots. Eggs are dark brown, laid standing on end in rows along the spears, with 3-10 in each cluster. Larvae have 4 instars and are wrinkled, plump, hump-backed, and dull gray or brown with black head and legs. Randomly select and scout 25 plants throughout the field and use Table 1 for treatment thresholds.



Asparagus beetle adult and eggs. Photo by A. Radin.

Lifestage	Threshold
Adults	10% of plants infested
Eggs	2% of spears with eggs
Larvae	50-75% of plants infested
Defoliation	10% of plants defoliated

Treat spears now or after harvest is complete using materials listed in the [New England Vegetable Management Guide](#). In the fall, disk lightly or mow old ferns and clean areas around planting of debris to reduce overwintering populations.

Allium leafminer (ALM) is a new pest of onion that has been observed already this year in PA, NY, and NJ. Feeding damage was found in eastern NY last week on garlic, chives, overwintered low-tunnel leeks and volunteer onions. While the feeding damage does not look severe now, it is indication of potential for this pest to establish and cause significant damage later. Feeding on leaf tissue causes wounds that can be entry points for fungal and bacterial pathogens. The maggots then pupate inside stems or occasionally bulbs. ALM is not active during the summer months, but there is a second flight that will likely begin in mid-October and can be devastating to leek crops. Keep an eye out for this pest this season in MA and report to umassvegetable@umext.umass.edu if you see damage! Do not purchase transplants from infested regions such as NY, PA or NJ.



Allium leaf miner adult feeding damage on volunteer onion, Orange Co. NY.

Photo: E. Grundberg



Brassica flea beetle on yellow rocket about to bloom in Middlesex Co., MA. photo: D. Kamen

Brassica flea beetles are also out in full effect, with uncovered weeds and volunteers being hammered already. Scout uncovered brassicas now and treat if 10% of plants have damage or if there is an average of 1 flea beetle per plant.

Tomato spotted wilt (TSWV) was diagnosed by the UMass Plant Diagnostic Lab from small greenhouse tomatoes near Boston. The crop also had a large thrips population which is a vector of the disease. TSWV symptoms include a patchy leopard print on the leaves, dark necrotic tissue, particularly near the petiole end of the leaf and extending along leaf veins, leaf deformation, tip dieback, yellowing, mottling, ringspots, stunting, and wilting. TSWV is not known to be seed-borne. Do not grow tomato transplants in the same greenhouse with ornamentals as they may harbor viruses. Consider growing resistant varieties when they are available. For a full list of virus-resistant tomato varieties, see <http://vegetablemndonline.ppath.cornell.edu> and choose 'Resistant Varieties' from the menu. Good thrips management is crucial for managing TSWV. Check out this [orius guardian plant system with yellow marigold](#) from Robert Hadad at Cornell University as a biocontrol strategy for thrips.

Potato Aphid were abundant in Hampshire Co., MA in two high-tunnel tomato crops which are setting their first flowers and fruit now. These

aphids undergo facultative diapause, meaning that they do not need to overwinter on an alternate host such as roses or peaches like other aphids often do. Instead, if high tunnel environments are conducive, they will continue to undergo asexual reproduction and cause a continual problem all year long. In hot environments such as a summer tomato tunnel, the heat-loving parasitoid wasp *Aphelinus abdominalis* may be used as a biocontrol strategy.



Lady beetle feeding on potato aphid in a high-tunnel tomato crop, Hampshire Co. MA

Photo: G. Higgins

EVENTS

[NEIPM Webinar Series: The IPM Toolbox](#)

Got an IPM question? Need to know the latest IPM information? The Northeastern IPM Center has got the answers with our spring webinar series, "The IPM Toolbox." We've asked the experts to join us online for an hour of dialogue about an effective IPM practice, method, or effort.

Katie Campbell-Nelson (UMass Amherst) will discuss IPM planning and scouting for vegetable crops. **When:** Tuesday, May 9, 2017. 2:00 pm - 3:00 pm

Antonio DiTommaso (Cornell University), **Norris Muth** (Juniata College), and **Hilary Sandler** (UMass) will discuss

the most common weed control problems this time of year and how to address them using an IPM approach. **When:** Tuesday, May 16, 2017. 2:00 pm - 3:00 pm

For more details and links to join the webinars, visit: <http://neipmc.org/go/ipmtoolbox>

Water Management Twilight Meeting

When: Wednesday, June 28, 2017 from 4pm-6pm with dinner to follow!!

Where: Tangerini's Spring Street Farm, 139 Spring St, Millis, MA 02054

FSMA and drought got you down? Come to this Twilight Meeting at Tangerini Farm in Millis, MA. Tour the newly installed irrigation system for orchard and vegetable crops built with funding support from NRCS with the designer, Trevor Hardy of Brookdale Farm, Irrigation and Row Crop Supply. Find out water sampling protocols and lab requirements for FSMA from the UMass Food Safety Specialist Lisa McKeag and about grant opportunities for irrigation and food safety improvements. Other industry representatives will be available for consultation and **dinner will be provided** following the tour.

We will cover: irrigation water sources, sampling for FSMA requirements, ins-and-outs of drip irrigation, overhead irrigation in corn, strawberry and direct seeded crops, irrigation under FSMA, and orchard irrigation

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Vegetable Notes. Katie Campbell-Nelson, Lisa McKeag, Susan Scheufele, co-editors.

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