

# Vegetable Pest Alerts

April 12, 2024

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EXTENSION

Welcome back to pest alerts!

## What to be on the lookout for...

### ALLIUM LEAFMINER

Allium leafminers are active- spotted this week in chives at a farm in Wallingford. The first flight (overwintering population) has just begun in Connecticut, and will end in May. The second flight does not begin until September and typically extends into early October.

Allium crops, including leek, onion, shallot, chives, garlic, and green onion are susceptible to this pest. Some species of wild onion and ornamental alliums may be hosts as well, but the full host range is currently unknown.

Adults lay eggs in the top of an Allium leaf making punctures. Scout for characteristic oviposition marks, as displayed in the image on the right.

The larva mine the leaves, creating tunnels of damage as they eat. These tunnels provide good entryways for fungal and bacterial pathogens to cause more damage to the plant. Larva will move down to the bulb, where they pupate either in the plant or drop into the soil.



Allium leafminer typical oviposition marks on chives. Photo by Kirsten, Muddy Root Farms, Wallingford, CT

The removal of infected host plants and other allium residues from earlier harvested alliums is an important practice for reducing potential outbreaks in fall allium crops. Insect exclusion netting or other types of row covers can effectively exclude ALM flies if securely applied before flight begins. Foliar chemical applications have also been shown to be effective for reducing ALM damage. Entrust, Radiant, Assail, and Scorpion examples of some labeled pesticides for this pest.

### **CABBAGE ROOT MAGGOT**

Be on the lookout for cabbage root maggot. It is a pest of all types of brassicas, but is particularly damaging in cabbage, broccoli, Chinese cabbage, radish, turnips, and rutabaga.

Flies overwinter as pupae near roots of fall brassica crops and weeds. A good indicator of the first peak flight (50% emergence) is blooming of the yellow rocket (aka winter cress) which is at about 450 GDD (base 40°F). As of today, GDD accumulation is 198 in Storrs and 330 in Bridgeport.



Cabbage maggot eggs are white, elongated, just over 1 mm long, and are laid in soil at the base of plants (left); Cabbage maggot flies are the larger of the two pictured here (Photos: S. B. Scheufele, UMass Extension Vegetable Program)

Scout transplant trays before setting out plants in the field. A pencil is a good tool to gently stir the soil at the base of the plant and look for eggs. Yellow sticky cards placed near brassicas capture adult flies. In the field, finding an average of 1 egg per plant can indicate a damaging population. Damage includes wilting, leaf discoloration, and plant death in leafy and heading crops and tunneling in root crops.

Row covers will protect the crops from cabbage maggots, flea beetles, and many other pests as long as the pests are not emerging from the same location. So, crop rotation is important. Soil drenches of Coragen, Verimark, Radiant, or Entrust can control the cabbage root maggot if applied when eggs are first seen at the base of plants. Research done in Cornell University in 2022 found Verimark applied as a tray drench resulted in excellent control, but directed sprays at the base of the plant were the least effective. Verimark application as a soil drench also controls brassica flea beetles. Once larvae have been feeding in roots for several weeks, chemical control is difficult. See

<b>Table 1. Maggot Comparative Table</b>			
	<b>Seed Corn</b>	<b>Cabbage</b>	<b>Onion</b>
<b>Host</b>	40 different plants, large germinating seeds, seedlings (including allium and brassica!)	Brassicas	Alliums
<b>First peak flight</b>	360 GDD base 40°F	452 GDD base 40°F	735 GDD base 40°F
<b>Adult</b>	Small: ~ 3mm, 3 stripes on the thorax	Medium: ~5mm, 2 stripes on the thorax.	Large: ~6mm.
<b>Eggs</b>	Hatch in 2-4 days	Hatch in 7-10 days	Hatch in 2-5 days
<b>Larvae (maggot)</b>	Active for 3 wks	Active for 2-4 wks	Active for 2-3 wks
<b>Pupae</b>	In soil for 1-2 wks before next gen adults emerge (last generation pupae overwinter)	In soil for 2-3 wks before next gen adults emerge (last generation pupae overwinter)	In soil for 3-4 wks before next generation adults emerge (last generation pupae overwinter)
<b>Notes</b>	Short, 21-day lifecycle. 3 gen per year. Usually only spring generation is damaging.	Long, 60-day lifecycle. 4 gen per year. Spring and Fall generations most damaging.	Medium, 30-day lifecycle. 3 generations per year. Usually only spring generation is damaging.

[New England Vegetable Management Guide](#) for pesticide options and restrictions in the application.

***Thanks for reading, and happy planting!***

This report was prepared by Shuresh Ghimire and Maggie Ng, UConn Extension. All photos in this publication are credited to UConn Extension Vegetable IPM Program unless otherwise noted.

**Contact us!**

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# On-farm soil steaming demonstration for high tunnels



**TUESDAY  
APRIL 30, 2024  
1 - 3 PM**

Soil steaming is a technique that uses steam to prepare soil for planting in high tunnels, greenhouses, and open fields. It involves injecting steam through a perforated hose into the soil surface that is shielded by a plastic sheet. Soil steaming can help rid of pathogens, weed seeds, nematodes, and other harmful organisms. Why, how, costs and benefits associated with soil steaming will be discussed!

## Presenters

**Andre Cantelmo**

Heron Pond Farm, South Hampton, NH

**Paul Bucciaglia**

Fort Hill Farm, New Milford, CT

## Where?

**Fort Hill Farm**

18 Fort Hill Rd, New Milford, CT 06776

*Refreshments provided*

## Questions?

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## Register here!

[s.uconn.edu/soilsteaming](https://s.uconn.edu/soilsteaming)

Register by **April 26**. Free to attend, but please register for planning purposes

This Climate Smart Agriculture Grant is administered by the Connecticut Resource Conservation and Development Area, Inc. and funding for this project was paid for by the Climate Smart Farming: Agriculture and Forestry Grant. Funding awarded and administered by the Connecticut Department of Agriculture.

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