

IPM Fact Sheet Series

UMass Extension Fruit Team
Fact Sheet #AI-003

Apple – European Apple Sawfly (*Holocampa testudinea*)

Overview

EAS larvae feed under apple skin producing a heavily russetted, winding scar often seen on mature fruit at harvest.

ID/Life Cycle: The European apple sawfly (EAS) adult is small and looks similar to a small, orange-brown wasp with transparent wings. Oval translucent eggs are inserted into the receptacle of the flower. The larva is cream colored with a black head and seven pairs of prolegs.

This pest overwinters as mature larvae. Larvae pupate in the spring and adults emerge during pink. The female begins egg laying just after the king flower opens. After the egg hatches, the larva begins tunneling just under the surface of the fruit. Later in its development, the larva may exit the fruit and migrate to adjacent fruit, where they burrow to the core. Infested fruit fall to the ground where larvae exit the fruit and enter the soil. There is one generation per year.

Damage: Early larval feeding results in brown spiral scars on the skin of the fruit. Later feeding results in larval tunneling in the fruit and exit holes with reddish-brown frass and a strong odor. Larvae will feed on multiple fruit in a cluster.



Figure 1) Adult European apple sawfly.
Photo credit: Photo NY Ag Experiment Station.



Figure 2) Developing fruitlet damaged by EAS larvae. **Photo credit:** E. Garofalo, UMass Extension.



Figure 3) Characteristic EAS scar on ripe fruit. **Photo credit:** E. Garofalo, UMass Extension.

Management Strategies

Monitoring:

- Place sticky white rectangle traps at head height, on the south side of the tree, within 18" of the tree dripline. Place traps near a large group of blossoms but remove blossoms within 12" of trap.
- Place a minimum of 5 traps/block. The action threshold for this pest is an average cumulative capture of 5/trap by petal fall in blocks receiving no pre-bloom insecticide, or average cumulative capture of 9/trap by petal fall in blocks with pre-bloom insecticide.
- EAS damage occurs more frequently when bloom time is extended and petal fall insecticide applications are delayed.



European sawflies captured in white sticky cards. Photo credit: Jaime Piñero, UMass

Cultural/Biological

- Eliminate wild or untended trees in the vicinity of the orchard to reduce the pest population.
- Hand thin to break up apple clusters and prevent larvae from moving from one apple to the next.

Chemical

- Refer to the [New England Tree Fruit Management Guide](#) for specific materials and rates recommended for managing European Apple Sawfly.
- Apply recommended insecticides when trap catches reach action thresholds.
- Rotate insecticides from different IRAC groups to reduce the chance of resistance development in the pest.

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