

Squash Vine Borer



Squash vine borer larva in vine



Squash vine borer adult

The squash vine borer (Melittia cucurbitae) is an annual pest of pumpkins and squash. Often, it is not recognized as a potential pest until too late and as a result, can produce a negative economic impact in some years. Winter squash is highly susceptible to attack.

Appearance

The adult squash vine borer is a day-flying clearwing moth that resembles a wasp more than a moth. Its forewings are greenish-brown while the hindwings are transparent with a fringe of red-dish-brown hairs. Wingspan is 1½–1½ inches. The body is rusty orange with black bands on the abdomen. Borers are wrinkled and white with brown head capsules. Larvae are 1½–2 inches long at maturity.

K. A. Delahaut

Symptoms and effects

The damage caused by squash vine borer larvae often goes undetected until the infested plants wilt and die in late July and August. The first symptom of feeding damage occurs when plants wilt at midday. As larvae tunnel through the vines they destroy the vessels that transport water. These wilt symptoms may be confused with those caused by bacterial wilt or *Fusarium* wilt.

Look for entrance holes near the base of wilting vines. If frass, or insect feces is present near the entrance holes, split the stem lengthwise to confirm the presence of larvae. Fields that have been damaged in the past are likely to be damaged again.

| When to scout for squash vine borer | | | | | |
|-------------------------------------|----------------|----------------|----------------|----------------|----------------|
| April | Мау | June | July | August | September |
| early mid late | early mid late | early mid late | early mid late | early mid late | early mid late |
| | | | | | |



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Life cycle

Squash vine borers overwinter as pupae in the soil. They emerge as moths in late June and July, when 1000 DD₅₀ (degree days) have been reached. (For an explanation of how to calculate degree days, see page 14 in Growing Pumpkins and Other Vine Crops in Wisconsin (A3688) at www.uwex.edu/ces/pubs). This coincides with full bloom of the common roadside weed chicory. Female moths lay small, brown eggs at the base of plants. When the eggs hatch 7-10 days later, the larvae immediately begin burrowing into the vines where they feed for 14-30 days. As the larvae feed, they leave behind the characteristic light brown frass that resembles sawdust. Fully grown larvae leave the plant to pupate. Squash vine borers produce one generation per year.

Control

Monitor pumpkin and squash plants when $900\mathrm{DD}_{50}$ have accumulated. Currently there are no treatment thresholds for the squash vine borer. Two to 3 insecticide treatments, 5–7 days apart during the 3-week egg-laying period around $1000\mathrm{DD}_{50}$ will control most of the larval borers before they become protected by the vines.

It is important to treat plants in which runners are less than 2 feet long. Larvae boring into the main stem will kill the entire plant while those boring into a runner will only kill the runner and not cause economic damage in larger plants.

Floating row covers may also be used during the flight period of the adults to prevent egg-laying on susceptible plants. Keep in mind that plants in bloom need bees to pollinate the flowers. Remove row covers to allow the bees access. For a list of pesticides that will control squash vine borers, refer to the University of Wisconsin–Extension publication Commercial Vegetable Production in Wisconsin (A3422).

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