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Squash Vine Borer

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The squash vine borer (*Melittia cucurbitae*) is an annual pest of pumpkins and squash. It is often not recognized as a potential pest and can be economically important 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 moreso than a moth. The forewings are greenish-brown while the hindwings are transparent with a fringe of reddish-brown hairs. Wingspan is 1¼-1½ 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.

Squash vine borer larva in vine

Squash vine borer adult

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 is when plants wilt 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 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.

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Life Cycle Squash vine borers overwinter as pupae in the soil. They emerge as moths in late July and July, when 1000 DD_{50} have been reached. This coincides with full bloom of the common roadside weed chicory. Female moths lay small, brown eggs at the base of plants. Once 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. There is one generation per year.

Control Pumpkin and squash plants should be monitored once $900DD_{50}$ have accumulated. Currently there are no treatment thresholds for the squash vine borer. Two to three insecticide treatments, 5-7 days apart during the three week egg-laying period around $1000DD_{50}$ 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 runners 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 so row covers must be removed to allow the bees access. For a list of pesticides that will control squash vine borers, refer to UWEX publication A3422 “Commercial Vegetable Production in Wisconsin”.

For pesticide recommendations: See UW-Extension Bulletin A3422 or contact your County Extension Agent.

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