Squash Vine Borer Control in the Home Garden HANDOUT

The adult is a "clear-winged" moth with metallic greenish-black scales on the front wings. The hind wings are transparent like those of a wasp. The moth has a wing span of approximately 1 to 1.5 inches. The abdomen is ringed with orange and black. These moths fly swiftly and noisily about plants during the daytime. Female moths lay their small, oval, somewhat flattened, brownish eggs on stems in May or early June. Young borers hatch in about a week, tunnel into stems, feed and are full grown (approximately 1 inch long) in about four weeks. They have a brownish head, six short slender legs on the thorax (body) and five pairs of short prolegs on the abdomen. Each proleg bears two transverse rows of crochets (curved spines). When full grown, larvae leave their burrows within the plant stem and make a cocoon in the soil. Two or three weeks later, adults emerge, giving rise to a second generation of larvae in Arkansas during early August. The insect overwinters an inch or two below the soil surface inside a tough, dirt-covered, silk-lined, black cocoon about 3/4 inch long, in either the larval or pupal stage.

Management

The key to squash vine borer management is controlling the borers before they enter the stem. Once inside the vine, insecticidal control is ineffective. Poor timing of sprays is the usual cause of inadequate control. Adult emergence occurs in the early summer, usually around mid June. At this time, begin monitoring plants weekly for initial signs of the borer's frass at entrance holes in the stems. Very early signs of larval feeding indicate that other eggs will be hatching soon. Use two insecticide applications 7 days apart to control newly hatching larvae and continue to monitor for additional activity. Sprays need to penetrate the canopy to cover the vines to be effective. The following insecticides are examples of materials that are available to homeowners and will provide adequate control of squash vine borers if applied properly: acetamiprid, (Ortho Max Flower, Fruit & Vegetable Insect Killer 0.006%), bifenthrin, (Ortho Bug-B-Gon MAX Lawn & Garden Insect Killer Concentrate 0.3%), spinosad (Ferti-lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray 0.5%, Monterey Garden Insect Spray 0.5%), and permethrin (Eight Insect Control 2.5%, Bonide Total Pest Control Concentrate 13.3%).

Home gardeners may have some success with deworming the vines. At the first signs of the sawdust like frass, vines are sliced lengthwise near where the damage is found and the borers removed. The stems should be immediately covered with earth. Sanitation is also important. After harvest is complete, vines should be removed from the garden and composted to prevent the remaining borers from completing larval development. Burying a few nodes along each vine will encourage rooting at these nodes. This will lessen the impact if squash vine borers girdle the base of the vine.

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