

Ambrosia Beetle

(Xyleborus dispar)

August, 2020

Hosts

Many native and ornamental deciduous trees and fruit trees (apple, cherry and prune), especially adjacent to forests; rarely conifers.

Identification

Larva - White, legless, slightly curved, up to 4 mm long.

Adult female- Dark reddish-brown beetle about 3 mm long.

Adult male - Wingless beetle about 1.5 mm long.



Ambrosia beetle beside tunnel excavated through heartwood of apple branch

Damage

Leaves - Sudden wilting and death; delayed emergence in spring.

Branches - 1.5 mm-wide tunnels through bark into heartwood (shothole borer does not tunnel into wood) in a circular or cork-screw pattern with the rings; wood shows purple stain extending from tunnels due to fungus released by the adult beetles. Severely infested branches can break easily due to gusty winds or fruit load.

Trunk - Tunneling into trunks of young trees can weaken trunks to the point they can break.

Life History

Ambrosia beetles overwinter as adults within galleries in the heartwood. Adults emerge in April and fly to new trees where the females bore tunnels in which to lay their eggs. Larvae feed on ambrosia fungus growing in the tunnels. There is one generation per year.

Monitoring

Look for small entry or exit holes (2mm). Sawdust at the entry of tunnels indicates recent attacks by adults. Sticky material on tree trunks may help detect adults. Use ethanol-baited funnel traps (2 to 4 traps/acre) to monitor adults in the spring. Control beetles if more than 20 beetles are caught /trap/season.

Control

Cultural - It is important to maintain optimum tree vigor as ambrosia beetles are attracted to trees weakened due to drought, flooding, transplanting, disease, winter and mechanical injury. In areas prone to sun or winter damage, paint trunks with a solution of equal parts of latex paint and water to prevent damage to trees. Do not store wood with bark near orchards as it can remain a source of ambrosia beetles for up to a year. Remove and promptly burn or chip beetle-infested trees or limbs. If the wood cannot be burned, chipped or otherwise destroyed, cover the wood with plastic to prevent beetles from attacking the wood or escaping if already infested. To intercept female beetles flying into an orchard (males do not fly), place bundles of three or four 1- to 2-metre long hardwood logs (harvested the previous year) at 10-20 metre intervals along borders adjacent to deciduous (hardwood) trees. Puncture the bark several times to improve release of odors attractive to the beetles. Destroy the trap logs before new adults appear.

Chemical - There are no registered products for controlling ambrosia beetle on apples. Good sanitation is the best management strategy.