

What is tree borer?

Tree borer (family Cerambycidae) is a long-horned beetle (Figure 1) which feeds on the wood of various species. Severe damage may lead to death of the tree. In Afghanistan, the tree borer affects mulberry, fig, and most forest trees, including poplar and pine. It is believed to be imported from Pakistan in poplar wood, and is particularly prevalent in the eastern provinces. It is also found in Pakistan, Jordan, and India and may also affect other species, including mango, avocado, apple, stone fruits, grapevines, willow, mahoganies, and cypresses.

Impact

Adult tree borers lay eggs under the bark near the base of the trunk in May to June. About 2 weeks later the larvae (Figure 2) hatch and begin feeding into the wood, forming tunnels. The larvae leave excrement behind them in the tunnel (Figure 3). Development takes about 3 years, after which the adult beetle emerges in July to August. Adults feed on bark and fruit of trees.

Management

Destruction of Larvae

Larvae tunnels are easily located by their dust (Figure 3). Kill larvae by inserting a flexible wire with a hooked end or pouring paraffin wax into the tunnel. Insecticide may also be used by fitting a thin tube to the spray nozzle to help direct the spray into the insect hole, or by inserting a cotton ball dipped in the fumigant into the hole. Cap the hole with clay to prolong the life of the spray.

Destruction of Adult

Farmers generally recognize tree borer larvae. However, many farmers are unfamiliar with the adult insect. Promote familiarity of the adult insect to help farmers break the life cycle of this pest. Adult insects may be manually destroyed. If damage is widespread, paint all tree trunks (including uninfested ones) with a mixture of diluted latex paint and carbaryl insecticide in late April. Repeat this process twice more at 6-week intervals. Always follow safety and manufacturers instruction when applying agrochemicals. Spray insecticide is not advised because only broad-spectrum spray is readily available in Afghanistan, which will negatively impact beneficial insects as well.

Mechanical Protection

Egg deposition can be prevented by loosely enclosing the base of the tree with fine-meshed netting. The netting should be put in place by April and may be removed in autumn. The netting forms a physical barrier and should rest at least 1-2 inches from the bark. This approach may not be economical at large scale.

Cultural Prevention

Single-stemmed trees suffer fewer infestations and can more easily be enclosed by netting. Keep the base of the tree clear of weeds, since weeds can provide shelter to the egg-laying female or prevent the orchard worker from noticing damage.



Figure 1: Adult tree borers are about 3.5cm (1.3 inches) long.



Figure 2: Larvae pupate just under the bark after 33 months of burrowing through the wood.



Figure 3: Larvae tunneling into wood push out wood dust behind them.