



European Pine Sawfly

The European pine sawfly is the most common sawfly found infesting pines in landscapes, ornamental nurseries and Christmas tree plantations. Sawfly larvae look like caterpillars but they are the larvae of primitive wasp-like insects. They are common from southwestern Ontario through New England and west to Iowa. This pest was accidentally introduced from Europe.

Plants Attacked

In the landscape, this pest prefers Mugho and table top pines. However it readily attacks Scotch, red, Jack, and Japanese pines. It will rarely feed on white, Austrian, Ponderosa, shortleaf and pitch pines, especially if these are intermixed with the preferred hosts.



Damage

The first instar larvae (the ones hatching from the egg) can only eat the needle surface which causes the needles to turn brown and wilt, appearing straw-like. As the larvae grow, they remain together and feed from the tip of a needle to the base. The larvae feed on older foliage and move from branch to branch as they strip the needles. Trees which are entirely defoliated are severely stunted but since the new growth is rarely attacked, the trees will survive. Larvae will often migrate to new trees if the needles on their current host have been devoured. Heavily infested trees end up with a "bottle brush" effect. That is, all the old needles are missing and only the current year's needles are present.

Description and Life Cycle

Usually only one generation occurs and the winter is spent as an egg inserted into slits along the edge of needles. The eggs hatched in April through mid-May and the larvae may feed until mid-June. The caterpillar-like larvae are grayish-green and have a light stripe down the back, a light stripe along each side followed by a dark green stripe. Full grown larvae are about one inch long. The larvae feed in groups or colonies, often with three or four feeding together on a single needle. Distributed larvae raise their heads and tails in a threatening manner. Mature larvae drop to the ground and spin tough, brown cocoons in the duff. A few larvae may pupate on the tree. The adults emerge in late August through September to mate and lay eggs. Each female lays six to eight eggs in a single needle and 10 to 12 needles are used. These eggs can be located after a hard frost turns the egg laying scar yellow.

Control Hints

Best control is obtained when the larvae are still small, so look for the straw-like needles left behind by the young larvae. Inspections should be made in late April and early May. The egg laying scars can also be seen by inspecting the needles in late winter.

Strategy 1: Natural Controls - Several parasites have been introduced to control this pest and native birds feed on the larvae. Rodents often eat the pupae in the soil. These agents are usually not adequate in urban settings.



Strategy 2: Cultural Mechanical Control- Egg Removal- If the needles containing over wintered eggs can be found before they hatch, they can be pulled off the plants and destroyed. Do not simply throw on the ground since the eggs can still hatch.

Strategy 3: Cultural/Mechanical Control - Larval

Destruction - Colonies of larvae can be easily removed by clipping off the infested branch. Place these branches in a plastic bag and destroy. Colonies can also be knocked off by sharply striking the infested branch. Crush the larvae or knock into a pail of soapy water. If few colonies are present, they can be controlled using these methods but large infestations are better controlled by general spraying.

Strategy 4: Chemical Control - Spot Sprays of Insecticides - Many aerosol or hose end sprayable insecticides are available for spraying of colonies. This is usually adequate for most home landscapes.

Strategy 5: Chemical Control - General Insecticide Spraying - This sawfly rarely infests large acreages unless controls have not been used for several seasons. General sprays may be warranted if more than 25% of the trees are infested.

Information obtained through the Ohio State Extension Factsheet HYG-2055-95



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