

Elm leaf beetle

FACT SHEET

The Elm Leaf Beetle (ELB) (*Pyrrhalta luteola*) is an introduced pest that is found in Elm trees. The beetle is native to Europe. It was first found in Australia in 1989 along the Mornington Peninsula, Victoria and was identified in the Orange City Council area in 2015. ELB is now well established throughout south eastern Australia.



DESCRIPTION AND LIFECYCLE

Elm Leaf Beetles are around 6mm long and are yellow and olive green in colour, with black stripes on their hard outer wings. The adult beetles hibernate over winter in sheltered places that include wood-heaps, sheds, houses and cars and emerge in spring (generally late October) to feed on the new leaves of Elm trees, on the warmer parts of the tree, high up in the canopy and the northern and eastern sides of the tree. The beetles lay tiny lemon-coloured eggs in clumps on the underside of leaves in November. Egg laying may continue into January. The eggs hatch into small black larvae which begin to feed immediately.

DAMAGE

As adults the Elm Leaf Beetle chews holes in the leaves, known as 'shot-hole damage'. The ELB larvae cause a different type of damage called 'skeletonisation', where everything is eaten except for the leaf veins. All that remains is the skeletonised leaves, which eventually turn brown and drop prematurely. Adults and larvae together can cause severe defoliation of Elm trees, which can weaken mature trees and reduce their aesthetic value. Damage to trees can be extensive due to the many generations of ELB occurring between October and March.

WILL THE ELM LEAF BEETLE KILL MY ELM TREE?

The Elm Leaf Beetle can completely defoliate an Elm tree. The tree will send out new leaves in the next season, however, the growth of the tree will be affected. The skeletonisation of leaves removes the energy produced through photosynthesis, which is naturally transferred by the trees to the roots system in autumn for over wintering. Successive defoliation over a number of years will weaken the tree.

Orange City Council staff have been treating the Elm Leaf Beetle problem in local street trees and park trees for a number of years, with good signs of success.

It's up to local residents to arrange treatment for trees growing on private land, by contacting private contractors and seeking professional advice.

SURVIVAL TIPS

An Elm tree is more likely to survive if it is kept watered in dry periods. It is important to fertilise in late winter with slow release fertiliser and encourage good soil conditions by covering the root zone with mulch rather than lawn.

CONTROL OPTIONS:

Professionally-applied treatments:

Trunk Injection - Trunk injection is carried out with Imidacloprid*. The insecticide is injected directly into the trunk of the tree before it then transports the chemical to the leaves where it kills the beetles and larvae.

The risk with this approach is that injections over successive years will weaken the trunk with each injection point creating a wound, that may also expose the tree to pathogens.

Soil injection - Soil injection with Imidacloprid* can be applied to trees of any diameter. Soil injection requires up to 100 L of water per tree and is not recommended when soil moisture is low. Soil injection is highly detrimental to soil flora and fauna, as non-target species may be affected including earthworms and mycorrhiza.

It is important to note that an arborist or pest control operator may be licensed and specially-trained to apply pesticides. Residents are encouraged to seek professional advice.

Other treatments:

Fertiliser / Insecticide Combination Tablets

Tablets are placed around the perimeter of the tree's dripline (outer edge of canopy) where feeding roots are located. Tablets need to be placed about 100mm in depth and spaced approximately 1 metre apart. The drip zone must be watered for the tablets to release their chemicals into the soil and for the tree's root system to take up the chemical. This approach may not be as effective during periods of dry weather.

Non-chemical control - Trunk Banding

A safe non-chemical control is to trap larvae that migrate down the trunk between December and early February. Adhesive tape can be wrapped around the trunk in a strip about 20cm wide, with the sticky side facing out. This breaks the beetles' lifecycle. This is most beneficial on young trees where the bark has not developed deep furrows.

*Imidacloprid is the active ingredient in a number of commercial products used in the treatment of Elm Leaf Beetles.