

# Fight dieback with mulch

Identified decades ago, *Phytophthora cinnamomi*, more commonly known as dieback, is a soil-borne, microscopic water mould that has become one of the greatest environmental threats of our time, causing destruction to both ecosystems and agriculture around the globe.

While this disease, imported to Australia on plants arriving with the earliest European settlers, has spread across the continent, its major impact has been felt in WA's South-West forests.

The dieback mould thrives in temperatures of between 15 and 30 degrees when annual rainfall exceeds 400mm. In the State's South-West more than a million hectares of forest and some 40 per cent of plant species are said to be affected. Dieback is adapting at an alarming rate and infecting an ever-increasing cohort of plants including native species such as jarrah, banksia, tuarts, grasstrees, peppermint and grevilleas, and non-native species such as avocado, azaleas, camellias and shortleaf pines.

Infected plants often lose their ability to develop new shoots, flowers, fruit and seeds and can completely exhaust a species' seed bank, leading to local extinctions. In the Stirling Ranges less than 14 percent of the critically endangered montane heath and thicket ecological community retains a representative suite of once-common plant species because of dieback.

And the flow-on effect from diseased areas can be equally critical for local wildlife. Permanent loss of habitat through dieback means native animals, such as dibblers, western ground parrots and honey possums are deprived of their natural diet. At least fourteen nationally threatened animal species, mostly endemic to South-West Western Australia, are thought to be on the verge of extinction because of phytophthora.

The Commonwealth Government has recognised the threat from phytophthora dieback and in conjunction with the States has developed a management plan that provides guidance for managing the risk of introducing or spreading dieback. In WA,



Eclipse mulches guard against dieback

the Department of Biodiversity, Conservation and Attractions runs two courses on the management plan to its own staff and contractors to the Forest Products Commission.

To now, public education has focused on one message "Arrive clean and leave clean." However, restricting access to disease

free areas and spreading the message of dieback hygiene for people, machinery and imported building materials has failed to stem the inexorable march of the disease.

There is no known cure for *Phytophthora* dieback. Phosphite (a biodegradable fungicide) is the only available treatment for infected species and small communities but not suitable for large scale use. Many scientists believe that the only long-term solution is to introduce genetic engineering to local species to make them dieback resistant.

It is possible, however, to mitigate the prospects of dieback infestation in private and public gardens by using good mulches. Mulching as a means of reducing soil borne diseases such as *Phytophthora*, is now recognised as a useful management tool.

Eclipse Soils general manager Sean Bennett explains: "Eclipse Soils mulches combat phytophthora in a number of ways. Firstly, the mulches are pasteurised to ensure no dieback is present within the mulch itself. Unpasteurised mulches can be a vector for the spread of dieback.

"Secondly, a good quality mulch promotes beneficial microorganism which outcompete and suppress dieback within the soil. And thirdly, mulches improve plant health which increases the survival rate of trees infected with dieback."

Mr Bennett said Eclipse Soils Aquamor Mulch was the ideal product for countering dieback: "A good mulch should be chunky with minimal fines, allowing water to pass through into the soil and roots below. Eclipse Soils Aquamor Mulch and Boutique Mulch have the optimum characteristics to suppress dieback, as well as being long lasting to minimise the need for topping up or respreading of mulch."

For more information on Eclipse Soils mulches go to the website: [eclipsesoils.com.au](http://eclipsesoils.com.au)