

## Phytophthora Dieback

*Phytophthora* (pronounced fy-TOFF-thora) is a devastating plant killer causing Phytophthora Dieback disease and infection is permanent.

Phytophthora is a soil borne water mould which spreads naturally in water or roots. It is spread much faster and further by humans moving even small amounts of contaminated soil or plant material.

It was once thought to be native to New South Wales or introduced such a long time ago that indigenous plants had developed resistance to it but this is now known not to be the case. It is true that Phytophthora Dieback presents itself differently in different vegetation types than it does in other states of Australia, but it is no less of a threat to the natural ecosystems of New South Wales.



## Armillaria Root Rot

*Armillaria luteobubalina* is a soilborne fungus that causes root rot and wood decay of a wide variety of plants, including many Australian native and introduced ornamental plants. The fungus *Armillaria luteobubalina* is native to Australia and causes losses in natural ecosystems, forest plantations, fruit crops and ornamental or amenity plants. The host range of the fungus is very large and poorly defined with little information on the presence of resistant or tolerant species.

Symptoms include slow decline, yellowing leaves and reduced growth often followed by death. There are no chemical controls available to cure infected trees.



## Ganoderma

Ganoderma Butt Rot is caused by *Ganoderma applanatum* (formerly *Fomes applanatus*). The fungus *Ganoderma applanatum* is an important decomposer of logs and stumps but it also colonises wounds, and can cause decay of sapwood and heartwood in roots, butts and trunks of trees. It affects native tree species such as acacias, eucalypts, figs and beech, as well as many introduced species such as oaks, elms, ash and some conifers.

Symptoms: *Ganoderma applanatum* produces very distinctive, shelf-like fruiting structures or brackets. They are most commonly found on stumps or near the base of living trees, often at the site of an old wound. The brackets of *Ganoderma applanatum* are some of the largest produced by any fungus. They are hard and woody and grow perennially for 5 to 10 years, reaching as much as 50 cm or more across and 10 cm thick.

