

## Teak Leaf Rust

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### BRIEF BACKGROUND

A leaf rust disease of teak, caused by the fungus *Olivea tectonae*, was recently discovered in the rural area of Darwin. To our knowledge, it is the first time that this disease has been detected in Australia. Subsequent local surveys have shown that it is also present in the Douglas Daly region but not in Katherine. Further surveys in Queensland and Western Australia prompted by the discovery in Darwin, have detected the disease in both of those States as well.

Close to Darwin the disease occurs on the island of Java, and also in many other parts of South, East and South-East Asia. It is not known how the disease came to Australia but it is possible spores of the fungus were either blown over during monsoonal weather events or were inadvertently carried on clothing or belongings of people returning (or visiting) from Asia.

### HOST PLANTS

Teak (*Tectona grandis*) is native to India and Indo-China and has been grown in the NT on a small scale for 20 years. There are also other small areas planted in northern Queensland and Western Australia. It typically becomes dormant and loses its leaves during the dry season but when irrigated, trees tend to maintain foliage all year round. The disease was first detected in an irrigated commercial crop. However, most plantings currently in the NT are either for demonstration or assessment for commercial viability. Another species of teak (*Tectona hamiltoniana*), native to Burma, is also grown in the NT. However, disease has not been detected on this species yet.

### DISEASE

The main method of disease spread is via spore movement, either by wind or transport of infected material. The fungus penetrates through the lower surface of leaves which then become covered with bright orange spores within a short period of time. Brown to grey angular areas of dead tissue appear on the upper surface of leaves corresponding to spore masses on the lower surface.



## MANAGEMENT

Even though *O. tectonae* is exotic to Australia, it has not been considered for eradication. It is of minor concern to the small industry that exists in the NT and occurs over a wide area. Measures that could be taken to eradicate the disease, such as removal of all teak trees, are highly impractical and would cause more economic harm than the disease itself. Use of fungicides would be highly undesirable from an environmental and social perspective and they would be virtually impossible to apply effectively and economically. Even if the disease could be successfully eradicated a significant risk of re-introduction would remain.

For further advice, please contact Plant Pathology on 89 992 162.

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Department of Primary Industry, Fisheries and Mines

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ISSN 0157-8243

Serial No. 837

Agdex No. 346/637

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