



Leaf stripping assists in the recovery of the Pandanus



Adult Pandanus Planthopper (sometimes referred to as Pandanus Leafhoppers)



Infested Pandanus Leaves (juvenile nymphs visible)

Pandanus Dieback

Pandanus Dieback is a disease found in Pandanus trees (*Pandanus tectorius*) largely caused by an infestation of Pandanus Planthopper insects (*Jamella australiae*)

The Cause

When a *Jamella* outbreak occurs in the absence of the parasitoid wasp (*Aphanomerus nr. pusillus*), the Planthoppers breed to very high infestation levels and spread rapidly. They live between the tightly packed Pandanus leaves, sucking the sap, and laying indicative oval shaped egg rafts. The new larvae emerge and feed on a sugary "honey dew" solution produced by the adults. This sticky residue encourages build up of heavy infestations of fungus and moulds. This whole process caused by the Planthopper results in the overall dieback of the Pandanus trees.

Origin of Planthopper insects (*Jamella australiae*)

The *Jamella* Planthopper originates from northern Queensland, a native insect to that area. The *Jamella* insect is believed to have been brought to the area by Pandanus trees from northern Queensland. A predatory (egg parasitoid) wasp playing a crucial role in controlling Planthoppers in northern Queensland has been released across southern Queensland outbreaks, yet requires assistance to remain active due to a short lifecycle.

Distribution of *Jamella* within Livingstone Shire

Currently the *Jamella* insect has been found between Joskeleigh and Byfield with the most predominate area of infestation being around Zilzie and Emu Park with noticeable die back of the Pandanus trees in this area. A second inland species of Pandanus, found growing besides creek and waterways, is also susceptible to Planthopper infestations and dieback.

Options to assist Pandanus recovery

Pandanus dieback can be managed in the long term by monitoring Pandanus populations, ensuring the the presence of the parasitoid wasp.

The use of leaf stripping is being incorporated to assist with Pandanus recovery, which involves the removal of the old deceased leaves from the trees to remove the insect and decaying material from the Pandanus tree, preventing crown rot and allowing recovery of the tree.

Other options for the short term (when plant health is compromised) are treating the Pandanus trees infected with an imidacloprid-based insecticide via stem injection or foliar methods.

Further enquiries

If you have Pandanus trees on your own estate and wish to obtain further information on control techniques for the *Jamella* insect, please contact Council on 1300 790 919.

