fact sheet 7. Psyllids

What Are Leucaena Psyllids?

The psyllid, *Heteropsylla cubana*, is native to Cuba and is found only on Leucaena species and hybrids. Psyllid was first noted in Bowen Qld in 1986 and can now be found wherever Leucaena is grown across northern Australia.

Eggs of the leucaena psyllid are laid on or in unopened leaves. The adult psyllids are aphid-like, 2 mm in length, winged, and light green in colour. The infant pysllids or nymphs, are similar to adults, but smaller. All growth stages of the insect affect the plant by sucking the sap of terminal leaves, buds and flowers.

A black sooty mould may be seen where psyllid infestations are in large numbers. This mould grows on the psyllid's sugary excretions, preventing light from reaching the leaf surface and decreasing photosynthesis and plant growth.

Where is Leucaena Most at Risk of Psyllids?

Psyllids prefer high humidity and mild temperatures (20^{o}C to 35^{o}C) therefore Leucaena plantings in coastal areas are highly susceptible to psyllid infestation.

Psyllids are sensitive to changes in temperature and humidity so areas of less than 800 mm rainfall and lower humidity are not usually subject to psyllid infestations.

Yield loss in research trials in psyllid-prone areas averaged 28%, ranging from 8% to 49%, with losses as high as 75% in conditions ideal for psyllid activity.

What Varieties are Best to Plant in Psyllid Prone Areas?

'Redlands' is a psyllid tolerant leucaena variety, which is vigorous, high yielding and has excellent forage quality, longevity and tolerance to grazing.

'Redlands' was developed as a joint initiative of the Meat and Livestock Association (MLA) and the University of Queensland and was named after the research facility where it originated.

The variety is approximately 90% *Leucaena leucocephala subsp. glabrata* (the standard grazing leucaena) and 10% *Leucaena pallida*, which provides the psyllid tolerance.

What to do about psyllids in established paddocks?

It is difficult to provide a definitive answer due to the uncertainties of weather conditions, but there are a couple of options.

1. Assess psyllid numbers and damage first
2. Graze available leaf – this will maximise the utilisation of remaining leucaena while removing the food source for the psyllid. Cattle moving through the plants will also disturb feeding and encourage the psyllid to move to another location.
3. Assess whether spraying will be economical. Psyllids can be effectively controlled with diomethoate at 340ml/ha, and will provide about 3-4 weeks residual control. However it is commonly more economical to graze established paddocks unless conditions are such that prolonged psyllid attack occurs. Spraying establishing leucaena (<1.5m tall) with high psyllid pressure is recommended.
4. Do nothing. In inland districts weather conditions for psyllids activity is relatively uncommon as temperatures are high and humidity low. Also, by the time psyllids are noticed (defoliated an area of leucaena), the weather conditions could have changed. In locations closer to the coast where weather conditions conducive to psyllid activity are more common, or occur for longer, immediately grazing or spraying the paddock are more than likely better options.

How to Use the Psyllid Damage Rating Scale – What to Look For

Rating	Symptoms
1	No damage observed
2	Slight curling of leaves
3	Tips and leaves curling and yellow
4	Tips and leaves badly curled, yellowish and covered with sap
5	Loss of up to 25% young leaves
6	Loss of 25 – 50% young leaves
7	Loss of 50 – 75% young leaves
8	100% loss of leaves and blackening of lower leaves
9	Blackened stems with total leaf loss