

EMERGING INSECT PESTS OF CORYMBIA

S.A. Lawson and J. McDonald,

Department of Primary Industry and Fisheries, Horticulture and Forestry Science, Brisbane, Queensland

INTRODUCTION

Ramularia shoot blight, caused by the fungus *Quambalaria pitereka*, was the major pest or disease to cause significant losses to spotted and lemon scented gums (CCV and CCC) and other *Corymbia* spp. in SEQ in early plantings. In recent years several new pests such as the eriophyoid mite *Rhombacus* sp., the leaf beetle *Paropsis atomaria* and the bronzing bug *Thaumastocoris* sp. have emerged as important or potential pests of spotted gum and other *Corymbia* spp. Longicorn beetles are also potentially important threats to plantation productivity. The commercialisation of *Corymbia* hybrids and their imminent planting in large scale monocultures is likely to continue this trend of new pests emerging over time.

MAJOR PESTS & CURRENT RESEARCH

Erinose mite

This mite was first detected in 1999/2000 near Somerset Dam and outbreaks have been observed each year in an increasing proportion of the plantation estate. The mite also occurs on spotted gums in northern NSW, but until recently had not been recorded causing significant damage. Growth can be severely affected, with losses of up to 55 per cent height growth and 35 per cent diameter growth recorded over 18 months depending on site and climatic factors. Loss of stem form is also potentially associated with infestations of the mite. Significant differences in susceptibility to the mite have been found between provenances of spotted gum and other *Corymbia* species. Some N-NSW CCV provenances, *C. torelliana*, *C. henryi* and the CCV x CT hybrid all show high levels of tolerance to the mite compared to Woondum CCV, which is highly susceptible. A large scale quarterly survey of the incidence and severity of mite damage has been carried out in all DPIF plantations over the past 12 months and the data is currently being spatially analysed for trends in the epidemiology of this mite. A preliminary survey of a smaller number of plantations in May 2004 showed that: (a) damage was widespread over all regions where spotted gum is planted in SEQ, (b) western and southern plantings had a higher proportion of severe and moderate damage than other regions, and (c) severe damage was recorded only in two- and three-year old plantings.

Paropsis atomaria

This beetle has a very wide geographical distribution extending from central Queensland along the east coast to southern Victoria and west to South Australia, and broad host range of around 20 eucalypt species. From 1997 to 2002 it was mostly observed defoliating plantations of *E. cloeziana* (and to a lesser extent *E. pilularis*, *E. dunnii* and *E. grandis*), but in 2003 caused significant defoliation for the first time to a number of CCV plantations. It has also recently been recorded causing severe defoliation to *E. grandis* x *E. camaldulensis* hybrid eucalypt plantations in the Miriam Vale area. With its wide host range and distribution it seems to have the ability to switch to whatever is the most widely available resource in a particular area, and is therefore a threat to spotted gums and other *Corymbia* spp plantations. Current research on this beetle is focussing on (a) refining a population model to assist in defining risk and evaluating management methods and (b) investigating methods of enhancing natural control mechanisms in plantations.

Winter Bronzing Bug

Thaumastocoris sp. bugs were first recorded damaging a spotted gum planting in the Burnett in May 2004. These bugs are capable of causing significant defoliation (foliage “bronzing”) to trees, and have been outbreaking on a number of eucalypts in the Sydney region in recent years, including on some *Corymbia* spp. Little is known about the biology of this insect or its host range. Plots were set up in August 2004 at the most severely affected site to monitor effects of the bug on growth and will be reassessed over the next month. Susceptibility of other *Corymbia* taxa is yet unknown.

Stem Borers

CCV and CCC in trials and plantations established since 1997 have shown very good resistance to stem borers. *Corymbia* is generally not considered to be a host for the giant wood moth (*Endoxyla cinerea*) but can be attacked by longicorn beetles, especially if trees are highly stressed. In assessments of nine trial plantings over a wide range of sites mean incidence of attack on 2.5 to 3 y.o. CCV by the two-hole borer, *Phoracantha solida*, averaged only 0.6% with a maximum of 9.5% at a particularly harsh site. Trials of the *Corymbia* hybrids have yet to be intensively assessed for borer damage but anecdotal evidence suggests they may be more susceptible to borers than is CCV. Although not yet observed in plantations, another longicorn, *P. mastersi*, has been recorded doing extensive damage to *Corymbia* in native forests.

Red-shouldered leaf beetle (RLB) *Monolepta australis*

Although not recorded as a significant pest in plantations of CCV in SEQ, *C. torelliana* is known to be highly susceptible to damage by RLB and is often planted in orchards as a windbreak and trap tree for RLB. In a trial planting of CCV, CCC, *C. torelliana* and hybrids established at Walkamin in 2000, only *C. torelliana* was severely attacked by RLB – the hybrids were not attacked at all, even in plots adjacent to *C. torelliana*. However, it is possible that different crosses/families of the hybrid may differ in their susceptibility of this insect, so monitoring of trials and future operational plantings will be required.

Mistletoe

These parasitic plants have been flagged as a potential health issue in plantations and Dr Angus Carnegie will address this pest in detail elsewhere in this workshop. In monitoring plots set up for bronzing bug in a four-year old plantation (see above) 11/80 trees (14%) had mistletoe associated with them.