

Resurgence of *Gonipterus platensis* in Eucalyptus plantations in South and Southeast regions of Brazil

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The Eucalyptus snout beetle (ESB) *Gonipterus platensis* (Coleoptera: Curculionidae) is one of the most widespread eucalypt pest in the world. In Brazil this pest was detected in 1955 in South Brazil and has been spread to Southeast in last 50 years. The ESB has been considered under control due the parasitism by its egg parasitoid *Anaphes nitens* (Hymenoptera: Mymaridae) in five Brazilian States. In December 2012 a new outbreak was recorded in South region of Sao Paulo State, causing intense defoliation in clonal plantations. Early evaluations have demonstrated a reduced parasitism rate in this region (30-60%). Nowadays, ESB has spread for new areas in Sao Paulo State and in Parana State, affecting more than 20,000 ha of Eucalyptus plantations in 2016 and reducing the MAI in 10.2 to 42.8 m³/ha/year, according *Eucalyptus* clone and age. Ongoing studies have showed the reduced *A. nitens* effectiveness may be related with the occurrence of some endosymbionts (*Rickettsia*, *Serratia* and *Yersinia*) in the parasitoid, affecting parasitoid reproduction. Other possible cause is the occurrence of a parasite mite in egg clusters (genus *Pyemotes*), affecting viability of *G. platensis* eggs, including parasitized eggs. New management strategies have been proposed, including introduction of new *Anaphes* species (*A. tasmaniae* and *A. inexpectatus*) for eggs, bioinsecticides application, with *Beauveria bassiana*, *Metarhizium anisopliae* and *Bt* var. *tenebrionis* for larvae, use of entomopathogenic nematodes to control pupae in soil and predatory bugs (*Podisus nigrispinus*) to control adults

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