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## 1137 Use of chemical and visual cues for plantation pest surveillance and monitoring

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Introduction: Pest surveillance is essential in plantation-based forestry. Early detection has become vital in the last years due to the increase of insect invasions associated with global trade and travel. Insects rely on different stimuli when searching for host plants, particularly optical and chemical cues. Visual cues are not affected by air movements and can be detected at longer distances, but they are generally less attractive and specific than chemical cues. Both, alone or combined, have been extensively utilised to improve early detection of pests in surveillance and monitoring. We discuss 2 cases from Uruguay, the national yellow trap network and the monitoring scheme for bark and ambrosia beetles.

Methods: In 2008, a network of yellow traps was installed in Uruguay to assess the dispersal of the bronze bug *Thaumastocoris peregrinus*. We tested different setups on

*Eucalyptus* plantations to optimise the network design. In 2013, we started using the network to survey psyllids (Psylloidea). Monitoring of bark beetles started in 2009 by using log-baited interception traps. In 2015, this system was substituted by Lindgren traps lured with ethanol and turpentine.

Results/Conclusion: Yellow cards proved a reliable tool for surveillance. A baseline for monitoring of *T. peregrinus* has been set and basic data on psyllid phenology and diversity has been obtained. The substitution of interception traps to Lindgren traps resulted in more species captured and allowed more companies to join the system, increasing the national coverage. Research efforts on biology, ecology, and logistics are still required to fully implement pest surveillance and monitoring in tree plantations.

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