

PSHB FUNGUS TESTED FOR PATHOGENICITY ON COMMERCIAL FOREST TREES

The Polyphagous Shot Hole Borer (PSHB) and its fungus (*Fusarium euwallaceae*) have been making headlines during the past year for killing trees in the cities of Johannesburg, Pietermaritzburg, George and Knysna. The beetle is also of concern to pecan, avocado and macadamia growers in the country. However, to date it has only been found in pecan orchards in the Northern Cape, while it was only found on backyard avocados in Johannesburg and Knysna, and a single macadamia tree in KwaZulu-Natal.



On commercial forestry crops, the beetle to date was found on a single *Eucalyptus camadulensis* roadside tree in Johannesburg, and a few roadside wattle (*Acacia mearnsii*) trees in the George-Knysna area. Although the *Fusarium* fungus was isolated from these trees, there was no indication that the fungus was having a significant impact on the trees. The beetle and fungus have not been found

on any pine trees in South Africa. Although detected on *Pinus densiflora* and *P. douglasiana* in California, it did not cause any disease symptoms on these species.

In some tree species, the fungus can have a slow, but eventually deadly effect. It is necessary



to establish what risk PSHB poses to wattles and eucalypts in South Africa. After some experimentation with different inoculation techniques, it was decided to use a technique that mimics the beetle boring into the tree. Prof Wilhelm de Beer and four FABI students, Shawn Fell, Seamus Morgan, Wilma Nel and Claire Randolph, inoculated *Eucalyptus grandis* (ZG14) and wattle trees with several isolates of the fungus on the

experimental farm of the University. A 2mm bit was used to drill 20mm deep holes in the stems, and then toothpicks inoculated with the fungus were inserted into the holes. The trees will be monitored over the next few months for lesion development and disease symptoms. We hope to report on early results at the annual meeting of the TPCP in May.