Forest Threats

Pantoea blight and dieback

Tree Protection Co-operative Programme

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Bacterial diseases

Pantoea blight and dieback

Pantoea ananatis , Xanthomonas axonopodis , Xanthomonas vasicola pv. vasculorum , Xanthomonas dyei pv. eucalypti

SYMPTOMS

Bacterial blight and dieback is a disease of young *Eucalyptus* trees, either in the nursery or in newly established plantations. Symptoms include water soaked, angular lesions and interveinal necrosis of the leaves which is often concentrated along the main vein or at the edges. Lesions often extend into the petiole and twigs leading to dieback of the young shoots. In the case of *Xae* in Brazil, severe defoliation was recorded when the conditions were favourable for disease development (Ferraz et al. 2018). Symptoms caused by the various bacterial species appear similar and it is thus impossible to identify the causal agent based solely on symptom expression. *Pantoea ananatis* and *Xvv* have been isolated together from the same infected plant (Coutinho et al. 2015).

BIOLOGY

In the case of *P. ananatis* and *Xvv*, younger leaves are more susceptible than older leaves. This is contrary to the case with *Xae* where older leaves were shown to a have a higher percentage of leaf area with lesions than younger leaves (Neves et al. 2014). Free water on the leaf surface is required for penetration of the bacteria. They enter through natural openings such as hydathodes and stomata, and wounds. The optimal temperature for the development of the disease caused by *Xae* is between 26°C and 30°C (Neves et al. 2014) and between 20°C and 25°C with high relative humidity in the case of *P. ananatis* (Coutinho et al. 2002).