

CONIOTHYRIUM STEM CANKER OF *EUCALYPTUS* SPECIES

Coniothyrium stem canker is caused by the Coelomycetous fungus, *Coniothyrium zuluense*. It was first reported from South Africa in the early 1990's (Wingfield et al. 1997). Since then it has been found in a number of other countries, including Thailand (Van Zyl et al. 2002), Ethiopia (Gezaghe et al. 2003), Mexico (Roux et al. 2002) and several South American countries.

Coniothyrium stem canker first becomes visible as distinct lesions (Fig. 1) on the young green tissue, in the canopies of susceptible trees. These lesions, often start as two parallel cracks, with a dead area between the cracks (Fig. 2). These lesions may result in the complete girdling of branches, resulting in die-back. Infection rapidly spreads to the main stem, also at first starting out as distinct spots. These spots may coalesce to form cracks (Fig. 3). In advanced stages of the disease, the entire stem of an infected tree will be covered by spots and cracks, resulting in malformation of the stem and a black/red color as a result of kino exudation from the cracks (Fig. 4). Infection may result in extensive damage to the wood as a result of kino pockets that penetrate into the heartwood (Fig. 5).

Losses occur as a result of several factors. Firstly the branch/tip die-back results in loss of growth. The kino pockets developing in the wood cause loss in quality and strength. Furthermore, the cracks and spots make it difficult to strip the bark from stems prior to pulping.

The only effective management strategy available against Coniothyrium canker is the selection and breeding of disease tolerant material. Great variation in susceptibility between hybrid clones has been found in South Africa. Great care should also be taken in preventing the introduction of this pathogen into areas where it is not currently present as it may result in large scale losses to susceptible material.

References

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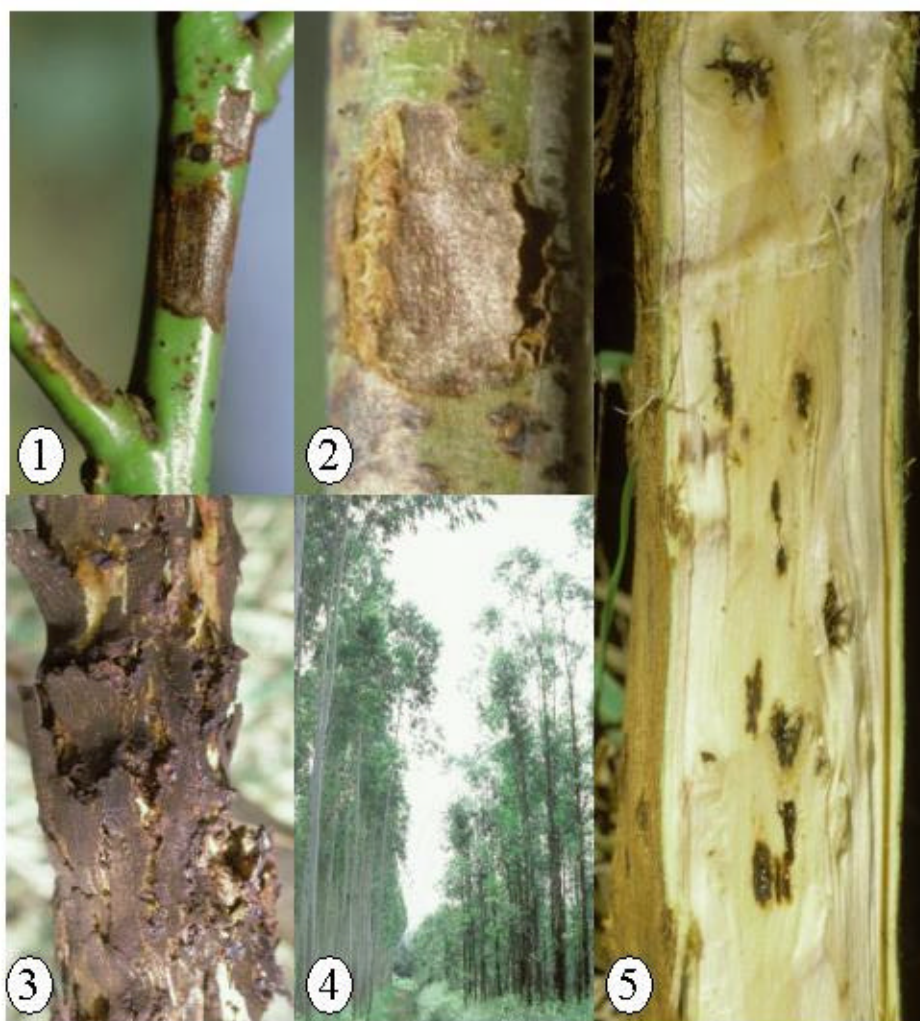


Figure 1: Developing lesions on young green shoot.

Figure 2: Canker with two parallel cracks and dead bark in center.

Figure 3: Severely infected stem, showing cracks and malformation of stem.

Figure 4: Black/red discolouration of stems of a susceptible clone (right) and healthy uninfected stems of tolerant clone (left).

Figure 5: Kino pockets in the wood of an infected tree.

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