

# INHIBITION OF *Phellinus noxius* CAUSING BROWN ROOT DISEASE OF RUBBER USING NEW FUNGICIDES

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Received: 08 March 2020

Accepted: 09 April 2020

Roy, C.B., Prem, E.E., Babu, B. and Joseph, L. (2020). Inhibition of *Phellinus noxius* causing brown root disease of rubber using new fungicides. *Rubber Science*, 33(1): 49-52.

Among the root diseases of rubber (*Hevea brasiliensis*), brown root disease is predominant in the traditional rubber growing regions of South India. *In vitro* sensitivity of fifteen new fungicides was evaluated using poisoned food technique, which identified five fungicides viz. Tebuconazole; Hexaconazole; Epoxyconazole+Pyraclostrobin; Tebuconazole+Trifloxystrobin and Metiram+Pyraclostrobin on par with the standard recommended fungicides Tridemorph and Propiconazole which are currently banned from the market. These fungicides are being taken for field testing in order to confirm their efficiency in the field.

**Key words:** Brown root disease, Fungicides, *Phellinus noxius*, *Hevea brasiliensis*

Rubber trees are affected by several root diseases causing severe damage in most countries (Wastie, 1975). Trees are affected by root diseases irrespective of their age ultimately leading to their death. Although root disease caused by different fungi have been reported in rubber (Nandris *et al.*, 1987), the major diseases reported are white root, red root and brown root diseases caused by *Rigidoporus lignosus*, *Ganoderma philippii* and *Phellinus noxius*, respectively. The intensity of root disease varies in different countries (Nandris *et al.*, 1987). In India, root disease occurrence is sporadic and is mostly observed in replanted areas. While brown root, purple root and *Poria* root diseases have been reported from India, the most damaging white root disease has not been reported. Brown root rot is the major root disease in rubber growing regions of India.

Root rot hinders absorption and translocation of water and nutrients in the affected plants. The common symptoms of the disease on rubber trees are yellowing of foliage, buckling of leaves, drying of canopy, total drying of trees, encrustation of soil on roots, presence of spongy fruiting body on root surface or near collar region, damage to tap root and also root decay. The affected trees start wilting and ultimately die (Rajalakshmy and Jayarathnam, 2000). Root diseases in general are difficult to manage once it takes its grasp on trees. Many plantations of rubber, tea, cocoa, coffee, oil palm and mahogany established on cleared forest sites have been devastated by *P. noxius*. Loss of up to 60 per cent of rubber trees in a plantation after 21 years from planting was reported (Nandris *et al.*, 1987). Further, *Hevea* clones resistant to *P. noxius* have not been