

RESEARCH ARTICLE

# A new detached coconut leaf let technique for bioassay of fungicides against *Phytophthora palmivora* – the incitant of coconut bud rot

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ABSTRACT

Bud rot, a fatal disease of coconut caused by *Phytophthora palmivora* (Butl.) Butl. is increasing year after year in the high rainfall areas of coconut growing regions in India. An attempt has been made to evaluate some fungicides in inhibiting the growth of *P.palmivora* under *in vitro* condition by poisoned food technique as well as in inhibiting *P.palmivora* infection and lesion development on detached tender coconut leaflets by a new *in planta* assay technique. Out of 11 fungicides evaluated, Mixol (metalaxyl 8% + mancozeb 64%), Ridomil gold (metalaxyl M 4.0 % + mancozeb 64%), Sectin (fenamidone 10% + mancozeb 50%), Acrobat (dimethomorph 50%) and Curzate (cymoxanil 8% + mancozeb 64%) each at 250 ppm, Companion (carbendazim 12% + mancozeb 63%) at 500 ppm and Alliette (fosetyl-AI 80%) at 3000 ppm completely inhibited the growth of *P.palmivora* under *in vitro* condition as well as its infection on detached leaves. Among the fungicides tested on coconut leaves, Contaf (hexaconazole 5%) at 4000 ppm was the least effective in inhibiting *P.palmivora* infection. The new simple technique of *in planta* assay was thus found to be very promising in selecting the fungicides for field evaluation trials. Being a simple and very less expensive technique, it can also be used for large scale screening of germplasm collection against diseases as well as to test comparative virulence of different species/strains of the pathogen.

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