

## B-05 Screening of cacao cultivars for resistance to *Phytophthora palmivora* (Butl.) infection

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Seedlings of 8 Cacao (*Theobroma cacao* L.) cultivars were screened for resistance to *Phytophthora palmivora* infection. Three month old seedlings were inoculated with *P. palmivora* (fragments of pod culture or with spore suspensions).

The inoculation was done in 4 ways; (i) wounded bark inoculation (with fragments of pod culture), (ii) unwounded bark inoculation (with fragments of pod culture), (iii) leaves - foliar spray (spore suspension) and (iv) roots - soil drench (spore suspension). The inoculated plants were maintained under fully saturated air with water within individual polyethylene bags. Leaf inoculated plants were evaluated periodically and others were uprooted 60 days after the inoculation.

The rate of spread of lesions caused by either inoculation of the wounded bark or foliar spray were found to be significantly different in various cultivars. The seedlings inoculated on unwounded bark of stem did not show any infection by *P. palmivora*. This implies that all the cultivars are capable of resisting invasion of *P. palmivora* through natural bark. There was no significant difference of root rot or the general appearance (healthiness) of the foliage among cultivars of root inoculation.

It is clear that different cultivars show varying reactions for different types of screening procedures. However, this study reveals that from the 8 cultivars tested, comparatively Amelanado, A9 and A10 are the most resistant cultivars while W6/457 and NA32xICS1 are the most susceptible cultivars to *P. palmivora* infection of cocoa seedlings. Inoculation of leaf and wounded bark seems to be the best methods for evaluation of Cacao cultivars.