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Variation in infection rates of blue-stain, mould and white rot tropical fungi on mixed light Malaysian woods

by

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Abstract

The modified 3-week FRIM laboratory method for screening of anti-sapstain formulations against three representative tropical fungi causing blue-stain (*Botryodiplodia theobromae*), mould (*Paecilomyces variotii*) and white rot (*Schizophyllum commune*) infection of sapwood species was used to examine the relative resistance of the sapwood of eight mixed light Malaysian woods, Scots pine (*Pinus sylvestris*), medium density fibreboard produced from Rubberwood (*Hevea brasiliensis*) and the heartwood of Sentang (*Azadirachta excelsa*), to infection by these organisms. After 21 days it was found that Ramin (*Gonystylus* spp.), Rubberwood, Mersawa (*Anisoptera* sp.), Ludai (*Sapium* spp.), Yellow meranti (*Shorea* spp.), Scots pine and Jelutong (*Dyera costulata*) were highly susceptible to the pooled combinations of blue-stain, mould or white rot infection often sustaining >50% overall mean fungal coverage or when at least one of the infection types has reached maximum mean coverage (75.5%) of the wood samples. However, the Rubberwood-based fibreboard, and particularly Sentang, and the softwood *Agathis* spp. from Kelantan (trade name: Damar minyak) and Sarawak (trade name: Bindang), were relatively moderately susceptible to infection, sustaining between 9 and 47% overall mean fungal coverage after 21 days, or even considerably less susceptible (5 – 20% overall coverage) after 14 days. There was absence of both blue-stain and white rot fungal growth on all samples dipped in a low (0.03%/0.03%) fungicide concentration of a MBT/TCMTB anti-sapstain formulation. Such laboratory test results could have significant implications to field or industrial sapstain control of sapwood timbers concerning the lag time between tree felling and anti-sapstain treatment and seasoning.

Key words: Blue-stain, Mould, White rot, Malaysian timbers, Laboratory screening test, FRIM

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[1] *This paper expresses the personal opinions of the authors, and has not been refereed, edited, nor itscontents endorsed by IRG. Mention of active ingredient(s) of a proprietary formulation does not imply endorsement by FRIM of proprietary formulations bearing the same active ingredients*