

B-114: Infectivity, effectivity and persistence of selected *Rhizobia* on *Pericopsis mooniana* checked using marked strains

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Isolation, characterization and selection of effective strains of *Rhizobia* from *Pericopsis mooniana* (valuable indigenous timber spp) were reported earlier. The present study examines the infectivity, effectivity and persistence of 2 strains of selected bradyrhizobia using antibiotic marked strains.

A pot experiment was conducted in a complete randomized block design with 6 replicates per treatment using a mixed inoculum of the 2 strains, in unsterile soil under different N-levels (30 & 60 kg/ha) with and without inoculation. Marked strains KUL-GP^{strep} and IFS-BM3^{Rif} which have developed resistance up 200 µg of relevant antibiotic (streptomycin or rifampicin) per ml of medium were used.

The nitrogenase activity increased with the incubation time and there were significant differences of the activities among the treatments. The highest activity was observed with inoculation under a low dose of nitrogen (30 kg/ha). The same trend was observed with the N-yield. Plant height, number of leaves, girth at 10 cm height increased with inoculation.

Nodule occupancy by both KUL-GP^{strep} and IFS-BM3^{Rif} strain varied with the treatments. More KUL-GP^{strep} occupancy was observed in mix inoculum in normal soil. Under 30 kg/ha nitrogen, both strains showed similar nodule occupancy, whereas under 60 kg/h, IFS-BM3^{Rif} had a higher percentage of nodule occupancy. Persistency tests conducted 4 months after inoculation showed that both strains had similar survival ability.