

**B-106 : SEEDLING RESPONSE OF *Shorea spp.* TO PHOSPHORUS  
AND MAGNESIUM FERTILIZER**

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Although *Shorea sp* dominate the rain forests of Sri Lanka and provide plywood and medium hardwood, their growth within the forests is relatively slow. This study examines whether Phosphorus and Magnesium could enhance their growth. The response of eight *Shorea sp.* to three levels of Phosphorus (250 ppm, 350 ppm, 500 ppm) and Magnesium (500 ppm, 1000 ppm, 2000 ppm), in combination were tested in a pot experiment under shade using Pine soil. The total amount of nutrients was added in three equal instalments during the period of the experiment.

All species increased in height in all the treatments compared to that in the control. Among treatments, those with high Magnesium and low Phosphorus did less well than those with low Magnesium and high Phosphorus. In each treatment *S. affinis*, *S. trapezifolia* and *S. disticha* performed better than the remaining species.

Seedlings monitored after fertilizer application showed *S. congestiflora* to have the highest percent mortality, compared to that of other species. The least affected was *S. trapezifolia*. Among treatments, highest mortality occurred in the treatment with medium Phosphorus and high Magnesium.

These results suggest that *Shorea* seedling performance could be greatly affected by Magnesium and Phosphorus. Individual species respond to different levels of Magnesium and Phosphorus suggesting specific nutrient requirements, although these eight study species are taxonomically closely related.

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