**RESEARCH ARTICLE**

# IMPACT OF INTEGRATED NUTRIENT MANAGEMENT ON QUALITY SEEDLING PRODUCTION IN *FLEMINGIA SEMIALATA* ROXB

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**Abstract:** In this experiment thirteen treatments involving different organic, inorganic, bio-fertilizer and their combinations were assessed on seedling growth. Application of Arbuscular mycorrhiza (AM) (10 g) + Phosphate solubilising bacteria (PSB) (5 g) + NPK (Sampurna 19:19:19- 2g/seedling) (T13) to soil media containing red soil, sand and FYM in 2:1:1 ratio increased the plant growth attributes viz., plant height, collar diameter and number of branches and number of leaves by 41.62, 44.09, 44.23 and 39.17 per cent respectively after 150 days of transplanting compared to control. The extent of increase in seedling height due to treatment (T13) in *F. Semialata* was found to be 51.13, 68.14, 78.13, 83.79 and 87.26 per cent over initial plant height at 30, 60, 90, 120 and 150 days after transplanting respectively. The increase in collar diameter due to treatment (T13) in *F. Semialata* was found to be 58.47, 73.36, 80.63, 83.38 and 85.65 per cent over initial collar diameter at 30, 60, 90, 120 and 150 days after transplanting respectively. Higher number of number of leaves per plant noticed in treatment (T13) was 50.98, 60.38, 68.54, 69.40 and 69.62 per cent over initial number of leaves per plant at 30, 60, 90, 120 and 150 days after transplanting respectively. Significantly higher fresh weight and dry weight were obtained in *Flemingia semialata* by application of (T13) AM (10 g) + PSB (5 g) + NPK (Sampurna 19:19:19- 2g/seedling). Overall, the treatment (T13) constituting AM (10 g) + PSB (5 g) + NPK (19:19:19- 2 g/seedling) gave highest growth parameters as compared to other treatments. So it can be recommended as best treatment for integrated nutrient management for quality seedling production.

**Keywords:** Organic, Inorganic, Biofertilizer, Plant height, Weight

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