

Influence of Biofertilizers (*A-Mycorrhiza* and *Rhizobium*) and Inorganic Fertilizers (NPK) on Growth and Development of *Dalbergia sissoo*

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ABSTRACT

A factorial randomized design experiment was conducted to assess the interaction between various doses of NPK X *Rhizobium*, NPK X AM, AM X *Rhizobium* in *Dalbergia sissoo* at SFRI, Jabalpur. The maximum interaction (in terms of total biomass) was observed between *Rhizobium*₃ (R₃ -20 g culture/pl of 10⁷ population per gm) with NPK₃ (250 kg N, 30 kg P₂₀S and 150 kg K/ha). Similarly, the response of mycorrhiza was maximum with NPK₁ (500 kg N, 75 kg P₂₀S and 350 kg K/ha) with AM₃ (V₃ -200 chlamydospores with 5 gm AM infected roots). There was maximum response between *Rhizobium*₃ and AM₂ in producing total biomass. The three way interaction produced excellent results in growth enhancement and biomass production in *D. sissoo*. The light doses of NPK, AM and *Rhizobium* (NPK₃ AM₃ and *Rhizobium*₃) rendered maximum growth and maximum biomass in comparison to other treatments.

Key words : A-Mycorrhiza, Biofertilizers, *Growth*, *Dalbergia sissoo* and *Rhizobium*,