



## Effects of Soil Amendments with Bio-inoculants on Biomass Production of *Flemingia semialata* Seedlings

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**Abstract:** Multi-location trials of containerised seedlings with of *Flemingia semialata* Roxb. developed in the nurseries of Department of forestry, Mizoram University and College of Forestry, OUAT to study the effect of *bio-inoculants* on root and shoot fresh biomass at various stages. Both the locations recorded similar trend, thus pooled together. At one month age though bio-inoculation had no remarkable response to root fresh biomass but had response to shoot fresh biomass, the latter acquired maximum value (0.185 g) in Rhizobium + Mycorrhizae with low fertilisation (125 mg N<sub>2</sub>, 125 mg P<sub>2</sub>O<sub>5</sub> and 125 mg K<sub>2</sub>O per polypot). At 2, 4 and 6 months both the parameters had significant response to bio-inoculation. At 2 months *Rhizobium* + Mycorrhizae with medium fertilisation (250 mg N<sub>2</sub>, 250 mg P<sub>2</sub>O<sub>5</sub> and 125 mg K<sub>2</sub>O per pot) recorded maximum root fresh biomass (0.214 g) and shoot fresh biomass (0.421 g) accumulation. Of course, at 4 months highest fresh root biomass (2.388 g) was with Rhizobium + Mycorrhizae with high fertilisation (375 mg N<sub>2</sub>, 250 mg P<sub>2</sub>O<sub>5</sub> and 250 mg K<sub>2</sub>O per polypot) the treatment Rhizobium + Mycorrhizae with low fertilisation gave highest fresh biomass accumulation of root at 6 months (6.452 g) and of shoot at both 4 months (7.583 g) and 6 months (27.325 g).

**Keywords:** *Flemingia semialata*, *Rhizobium*, *Endomycorrhizae*, Biomass

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