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Light and soil nutrients play a major role in the development of tree seedlings in tropical rain forests. Hence a knowledge of how these factors affect seedling growth and mycorrhizal infection is critical for understanding the regeneration establishment of tree species in these forests. In this Study we examined the seedling growth and mycorrhizal infection of four related tree species in the family Myrtaceae under different light and soil nutrient environments.

In order to observe these factors six shelters, each with a different quality or duration of light were constructed. Seedlings grown in each light treatment were fertilized with phosphorus, potassium and / or magnesium. One set of seedlings without addition of nutrients was used as a control. Seedlings of *Syzygium firmum*, *S. makul, S. operculatum*, grown in the respective shelters for one and half years, after which they were harvested and for ach of them their shoot and tap root lengths, leaf number and dry mass of roots, stem and leaves were recorded. Fine root samples were fixed in FAA for subsequent analysis of endomycorrhizal infection.

Analysis of variance (ANOVA) was performed on each measure using Statistica Version 5. Analysis tested for differences and interactions among species, light and nutrient treatments. Seedling growth showed significant differences among the light and nutrient treatments and among species. In all species the shoot length attained maxima in the shelter simulating large forest openings (400 m^{2}) , root length and dry mass gain was highest in the full sun treatment (2000 µmol m^{-2} S^{-1}), leaf number was greatest in both out side edge (800 µmol m^{-2} S^{-1}) and full sun light treatments. Further in all species phosphorus enhanced growth, endomycorrhizal infection increased with increasing irradiance and with addition of nutrients.