

Abstract

The objectives of the research were to analyze the effects of mycorrhizae and rhizobium on sengon seedling growth through the height, and number of leave increments, diameter growth, and dry weight of roots. Factors applied were mycorrhizae and rhizobium. Mycorrhiza factor consisted of without mycorrhizae, 15 gram/polybag, and 30 gram/polybag. Rhizobium factor consisted of without rhizobium, 15 milligram/polybag, and 30 milligram/polybag. The method used was a factorial experiment in a completely randomized design. The number of treatment combinations was 9 combinations. Replications were three times, and the number of wildlings of each treatment was four wildlings. The total number of wildlings observed was 108 seedlings. The results showed that the mycorrhiza factor provided significant effects on the height increments, and dry weight of roots of seedlings; while the rhizobium factor provided significant effects on the number of leave increments, and dry weight of roots of seedlings. There was no interaction effect between the mycorrhizae and rhizobium. The sengon seedlings that had the highest height increment (9.51 cm) were the seedlings provided 15 gram/polybag of mycorrhizae, while that had the highest dry weight of roots (2.20 gram) were the ones provided mycorrhizae of 15 gram/polybag. The sengon seedlings that had the highest number of leaf increments (11.66 leaves) were the seedlings provided 15 milligram/polybag of rhizobium, while that had the highest dry weight of roots (2.05 gram) were the seedlings provided 30 milligram/polybag of rhizobium.

Keywords: sengon seedling growth, mycorrhizae, rhizobium.