

THE EFFECT OF COMPOST ON THE FORMATION OF ROOT NODULE AND MYCORRHIZA AND THE GROWTH OF *Acacia auriculiformis* SEEDLING ON THE COAST SAND MEDIUM

By :
Sriyani ¹⁾

ABSTRACT

The coast area is one of those critical areas that necessary rehabilitated, in field of agriculture, horticulture, forestry, and sustainability nature. To reach the aim, one of effort that done to excel various of obstruction was election of plant variety that appropriated and modified the growth medium to improve the physical, chemical, and biological soil. The experiment aimed to evaluate the effect of compost on the formation of root nodule and mycorrhiza and the growth of *Acacia auriculiformis* seedling on the coast sand medium.

This experiment was conducted in nursery of Faculty of forestry Gadjah Mada University and was done during 9 months, using factorial experiment that arranged in a Randomized Complete Block Design (RCBD) with three treatments. First treatment was compost application that consist of two levels as compost application and without compost application. Second treatment was inoculation and without inoculation of *Rhizobium*. Third treatment was inoculation and without inoculation of *VAM*. Each treatment was replicated by 6 times and placed in 3 block, so this experiment using 144 seedlings as unit experiment. The parameter measured were height growth, diameter growth, sum of root nodule, percentage of infection of *VAM*, top dry weight, root dry weight and top root ratio. Data was analyzed by Analysis of Variance (ANOVA).

Treatment of compost application has not indicated the effect on the formation of root nodule and *VAM* yet, but affected all growth parameters except top root ratio. Eventhough, interaction between compost, *Rhizobium* and *VAM* has not indicated the effect on the all parameters measured yet.

Key words : Compost, *Rhizobium* and *VAM*

Explanation :

¹⁾ Student of Faculty of Forestry GMU, NIM 98/121786/KT/04107