

**Pengaruh Kompos terhadap Pembentukan Mikoriza dan Bintil Akar
serta Pertumbuhan *Paraserianthes falcataria* (L.) Nielsen
dalam Media Pasir Pantai**

INTISARI

Rehabilitasi lahan pantai perlu penanganan secara cepat dan bijak mengingat semakin berkurangnya lahan produktif yang dapat dimanfaatkan oleh manusia. Pemanfaatan mikroorganisme sebagai agen simbiotik (*Rhizobium* dan *Vesicular Arbuscular Mycorrhiza*) untuk meningkatkan pertumbuhan tanaman dan produktivitas lahan kiranya cukup efektif untuk mengatasi masalah lahan pantai. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh kompos, inokulasi *VAM* dan *Rhizobium* terhadap pertumbuhan semai *P. falcataria* dalam media pasir pantai.

Penelitian dilaksanakan selama 7 bulan. Rancangan percobaannya adalah percobaan faktorial dan ditempatkan dalam Rancangan Acak Lengkap Berblok. Faktor pertama adalah penambahan kompos (penambahan kompos, tanpa penambahan kompos). Faktor kedua adalah inokulasi *VAM* (inokulasi *VAM*, tanpa inokulasi *VAM*). Faktor ketiga adalah inokulasi *Rhizobium* (inokulasi *Rhizobium*, tanpa inokulasi *Rhizobium*). Jumlah semai yang diuji sebanyak 240 semai. Parameter yang diamati adalah persen infeksi *VAM*, jumlah bintil akar, persen hidup semai dan indikator pertumbuhan semai. Hasil pengamatan dianalisis dengan analisis varians dengan taraf ketelitian 5 %.

Hasil penelitian menunjukkan adanya pengaruh penambahan kompos terhadap persen hidup semai, persen infeksi *VAM*, dan kualitas pertumbuhan semai. Persen hidup semai sebesar 100 % pada perlakuan R_0M_1 , R_1M_0 dan R_1M_1 dengan penambahan kompos. Persen infeksi *VAM* sebesar 100 % pada perlakuan R_1M_1 dengan penambahan kompos. Hal tersebut menunjukkan bahwa inokulasi *VAM* mampu menunjukkan pengaruhnya terhadap perbaikan media tanam.

Kata kunci : Rehabilitasi, *Rhizobium*, *VAM*, Pertumbuhan Semai.

The Effect of Compost on Mycorrhiza Formation and Nodulation in the Growth of *Paraserianthes falcataria* (L.) Nielsen on Sandy Soil Medium

ABSTRACT

Sandy soil rehabilitation needs to be handled immediately and wisely as productive land which is being used by humans is decreasing rapidly. Using microorganism as an agent of growth acceleration with the use of *Rhizobium* bacteria and *Vasicular Arbuscular Mycorrhiza* (*VAM*) is aimed to face critical land problems effectively at the beach. This is showed in the result of products, the plantation grows well, and is economically cheap because it uses simple technology.

The purpose of this research was to invastigate the effect of compost, inoculation of *VAM* and *Rhizobium* on *P. falcataria* seed growth on sandy soil medium. This reseach had been done for 7 months. The trial method used was the Factorial Experimental Design and placed under a Completely Randomize Block Design with three variables. The first variable was the present of compost (without compost present; with the addition compost). The second variable was inoculation of *VAM* (non inoculation of *VAM*; inoculation of *VAM*). The third variable was inoculation of *Rhizobium* (non inoculation of *Rhizobium*; inoculation of *Rhizobium*). The number of seedlings tested as much as 240 seedlings. The observed parameters were percentage of *VAM* infection, nodulation and seedling growth quality. The result of this observation had been analysed with ANOVA with a 5 % accuracy.

The result of the research showed that there was on effect of the addition of compost towards live percentage of seedlings, infection percentage of *VAM* and the quality of seedling growth. Percentage of live seedling showed at 100 % from treatment of R_0M_1 , R_1M_0 and R_1M_1 with the addition compost. Infection percentage of *VAM* showed a well outcome average at 100 % from treatment R_1M_1 also with the addition compost. Therefore proof that inoculation of *VAM* was able to show significant effects of the quality increment at medium.

Keywords : Rehabilitation, *Rhizobium*, *VAM*, seedling growth