

THE EFFECT OF SENGON STAND AND ROCK PHOSPHATE FERTILIZER  
TO THE GROWTH OF *Shorea johorensis* Foxw SEEDLING  
AND FREQUENCY OF ECTOMYCORRHYZA

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**ABSTRACT**

The purpose of this research is to observe the effect of Sengon Stand (*Paraserianthes falcataria*) and rock phosphate fertilizer on *Shorea johorensis* Foxw seedlings to the growth of seedlings and percentage of ectomycorrhiza colony. Beside that, it was also studied the effect of area condition without Sengon Stand and rock phosphate fertilizer to the growth and frequency of ectomycorrhiza.

This research used split plot design with 6 replications as retreatments. On each replication consisted of 2 main plot and every main plot consisted of 3 sub plot is as 3 level fertilizings used random ways.

The result showed an insignificant difference between the influence of combination treatments used with rock phosphate and seedling planted location with simultaneously experimented, but the effect of the overall planting area had real significant result. The planting area effected to the growth respons and ectomycorrhiza frequency after duration 8 months were high of seedling in Sengon Area was 76,18 cm; high of seedling in open area was 3,64 cm; diameter of seedling in Sengon area was 9,46 mm; diameter of seedling in open area was 3,77 mm; percentage of ectomycorrhiza in Sengon area was 40,39 %; and percentage of ectomycorrhiza in open area was 18,75 %.

The result showed, there was no significant effect on treatment combinations of rock phosphate fertilizing with condition area. On the whole result showed that the dominant effect in the difference of the growth and frequency of ectomycorrhiza was only effected by the difference on planting area condition.

PENGARUH TEGAKAN SENGON DAN PEMUPUKAN FOSFAT ALAM  
TERHADAP PERTUMBUHAN SEMAI *Shorea johorensis* Foxw  
DAN FREKUENSI EKTOMIKORISA

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**INTISARI**

Tujuan penelitian ini adalah untuk mengetahui pengaruh Tegakan Sengon (*Paraserianthes falcataria*) dan pemupukan fosfat alam pada semai *Shorea johorensis* Foxw terhadap pertumbuhan semai dan persentase koloni ektomikorisa. Disamping itu juga untuk mengetahui pengaruh kondisi areal tanpa Tegakan Sengon dan pemupukan fosfat alam terhadap pertumbuhan dan frekuensi ektomikorisa.

Penelitian ini menggunakan rancangan Split Plot dengan 6 replikasi sebagai ulangan. Setiap replikasi terdiri dari 2 main plot dan setiap main plot terdiri atas 3 sub plot yaitu 3 level pemupukan yang ditempatkan secara random.

Hasil penelitian ini menunjukkan bahwa pengaruh kombinasi perlakuan pemupukan fosfat alam dan lokasi penanaman semai yang diamati secara simultan tidak berbeda secara nyata, namun pengaruh areal penanaman secara keseluruhan memberikan pengaruh nyata. Pengaruh lahan penanaman terhadap respon pertumbuhan semai dan frekuensi ektomikorisa setelah berumur 8 bulan adalah tinggi semai di lahan Sengon 76,18 cm; di lahan terbuka 33,64 cm; diameter semai di lahan Sengon 9,46 mm; di lahan terbuka 3,77 mm; frekuensi ektomikorisa di lahan Sengon 40,39 %; dan frekuensi ektomikorisa di lahan terbuka 18,75 %.

Kesimpulan yang diperoleh adalah tidak ada pengaruh secara nyata kombinasi perlakuan pemupukan fosfat alam dengan kondisi areal penanaman. Secara keseluruhan perbedaan pertumbuhan dan frekuensi ektomikorisa yang berperan secara dominan hanyalah karena dipengaruhi perbedaan kondisi areal penanaman.