

**STUDY ON THE EFFECT OF DIFFERENT RATES OF AGROBLEN FERTILIZER ON
THE GROWTH PERFORMANCE OF RUBBER
(*Hevea brasiliensis*) SEEDLINGS AT NURSERY**

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ABSTRACT

Rubber (*Hevea brasiliensis*) is one of the fast growing species that had been chosen for Forest Plantation Programme in Malaysia. The growth rate of seedlings in the nursery level influenced by the quantity of fertilizer applied. Therefore, use the right quantity of fertilizer in the nursery is essential to produce high quality of rubber seedlings. The main objective of this study was to determine the growth rate of seedlings and root:shoot ratio based on the different quantities of fertilizers applied. In addition, this study also aims to determine the most cost economical of planting based on the growth performance. The study was conducted in FSSA Nursery for 10 weeks. There are 4 types of treatment used in this study which are R1 (no fertilizer), R2 (8kg/m³), R3 (12kg/m³) and R4 (16kg/m³). Experimental design used to conduct this study is Completely Randomised Design (CRD) with four replications. The average survival rate for all treatments was 100% except R2 which is 87.5%. Based on the findings, analysis of ANOVA found there are no significant differences ($p > 0.05$) for the quantity of fertilizer against the height, collar diameter and leaves surface area. But there are significant differences ($p < 0.05$) for the numbers of leaves. Where R3 recorded the highest average height and number of leaves which is 58.9 cm and 20. While in terms of collar diameter and root shoot ratio, R3 is the second highest with an average diameter of 4.12mm and root shoot ratio of 1: 5.46. Based on the correlation analysis, it shows there is a strong positive relationship between roots and shoots with $r = 0.774$. The cost of RM 6.34 required for the preparation of study for R3. Based on a high growth rate and the most cost economical for providing the study, an ideal medium for the growth of seedlings at the nursery level in this study is R3.