

# **THE GROWTH PERFORMANCE OF *Hevea brasiliensis* BY USING DIFFERENT TYPE OF GROWTH MEDIUM**

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**PROGRAMME: FOREST PLANTATION AND AGROFORESTRY**

**2017**

## **ABSTRACT**

*Hevea brasiliensis* are the commodity plant that planted commercially and become one of the Malaysia's economy resources. The good growth performance of plants influenced by the type of medium such as coco peat as the chemical and physical characteristic of coco peat is high quality. Coco peat also used widely in nurseries as the medium of seedlings. The objectives of this research are to study the growth performance of rubber seedlings and to determine which medium is the most suitable for planting of rubber seedlings. Plus, this research is to determine the ration rate growth of root and shoot rubber seedlings. There are six (6) types growth medium are used in this research such as top soil, coco peat 50% coarse : 50% soft, coco peat 70% coarse : 30% soft, coco peat 70% soft : 30% coarse, compost 50% : saw dust 50% (Binuang) and Jiffy 7. Four (4) parameter such as the high of seedling, collar diameter, number of leaves and area of leaves taken along 60 days of research. As the result, the usage of top soil growth medium and coco peat 50% coarse: 50% soft showed the highest reading 100% rate of growth. The Tukey (HSD) analysis of height of rubber seedling of coco peat 50% coarse: 50% soft shows the significant of growth ( $p < 0.05$ ) with the other medium. Meanwhile, the Tukey (HSD) analysis of collar diameter coco peat 50% coarse: 50% soft is significant to other medium. Growth medium Jiffy 7 shows the significant of number of leaves reading ( $p < 0.05$ ) with coco peat 50% coarse: 50% soft and top soil. Other than that, all growth medium shows insignificant ( $p > 0.05$ ) to each other for the leaves area reading. The score density of roots and shoots shows score 4 (the highest amount of roots) for the top soil, coco peat 50% coarse dan 50% soft, coco peat 70% coarse and 30% soft, coco peat 30% coarse and 70% soft, compost 50% and 50% Binuang saw dust. Jiffy 7 medium shows the lowest score density of the roots that is 1 (the lowest amount of roots). Meanwhile the correlation of Jiffy 7 shows positive moderate relation between the ratio of roots and shoots with the correlation value  $r = 0.573$ .