

# **GROWTH PERFORMANCE OF *Eucalyptus pellita* TREATED WITH DIFFERENT RATES OF AGROBLEN AND DIFFERENT CELL TYPES AT NURSERY LEVEL**

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## **ABSTRACT**

The world is in need of forest products and services. Due to the rising in demand of forest products and services, one of the fast-growing tree species is introduced into the timber industries, which is *Eucalyptus pellita*. This study was conducted in order: a) to test different fertilizer rates in relation with different cell types that optimise the growth of *Eucalyptus pellita* seedlings; b) to determine the root:shoot ratio including the root development system based on different treatments; and c) to determine the most cost economic treatment of fertilizer rate in relation with cell type. The research was conducted for three months in the nursery of Acacia Forest Industries Sdn. Bhd (AFISB). The fertilizer that was used was Agroblen NPK 10:26:10 + 3MgO with four different fertilizer rates, which were 8 kg/m<sup>3</sup>, 12 kg/m<sup>3</sup>, 16 kg/m<sup>3</sup>, and 18 kg/m<sup>3</sup>. There were three different cells being used together with the planting trays, which were Air Cell (65 cc), Solid Cell (80 cc) and Poly Cell (90 cc). The planting media was 100% cocopeat. The germination rates, heights, root collar diameters, root plug and root to shoot ratio of the seedlings were observed within the twelve (12) weeks. Based on the results obtained, the treatment that performed the best in terms of growth and cost economic was combination of 8 kg/m<sup>3</sup> of Agroblen fertilizer together with Solid Cell (80 cc) with the average germination rate of 58.33%, final average height of 26 cm, final average root collar diameter of 2.72 mm, and root to shoot ratio of 1 : 1.5. As a conclusion, *Eucalyptus pellita* performed greatly at nursery level with the combination of 8 kg/m<sup>3</sup> of Agroblen fertilizer together with Solid Cell (80 cc).