

**THE EFFECTS OF DIFFERENT TYPES OF FERTILISER ON GROWTH PERFORMANCE  
OF SUNGKAI (*Peronema canescens*)**

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**ABSTRACT**

The study of the effect of different types of fertilizer on growth performance of Sungkai tree (*Peronema canescens*) was conducted on a hillside near the road to the Forestry Complex of Faculty of Science and Natural Resource (FSSA). This study involved three types of fertilizer which are chemical fertilizer, organic fertilizer and control treatment. The objectives of this study are to identify the effects of using different types of fertilizer on growth performances of Sungkai in term of number of leaf, diameter and height of tree, and to determine the types of fertilizer that suitable for the growth rate of Sungkai. A total of 90 Sungkai trees were studied. Randomized Completely Block Design (RCBD) were used by using 3 replication for each treatment. The fertilizer was apply once in duration time at the rate of 30 gram for organic fertilizer and 10 gram for chemical fertilizer. The collection of data was recorded every week to identify the increment of the growth performance. This study found that chemical fertilizer shown better result in term of mean height of the tree for every weeks which is 0.6 cm compared to organic fertilizer, 0.43 cm and control treatment 0.4 cm. For diameter growth rate, chemical fertilizer also shows highest increment with 0.17 mm compared to organic fertilizer, 0.16 mm and control treatment, 0.06 mm. In terms of the number of leaves, organic fertilizers shown better improvement as the average number of leaves increased from 9 to 11 while. Chemical fertilizer showed slower rate of leaf growth with the increment of number of leaf from 8 to 9. Control treatment do not show any improvement in growth rate of leaf. In conclusion, chemical fertilizer affects the rate of growth performances of Sungkai in term of height and diameter of tree while organic fertilizer influences the number of leaf of Sungkai. The differences in result obtained due to the study site are conducted at the field instead of polybag where the environmental factor influenced the growth performance.