

Growth Performance of Three Indigenous Tree Species (*Cratoxylum arborescens* Vahl, *Blume*, *Alstonia spathulata* Blume, and *Stemonurus scorpioides* Becc.) Planted at Burned Area in Klias Peat Swamp Forest, Beaufort, Sabah, Malaysia

ABSTRACT

The aim of the study was to evaluate the growth performance of three indigenous tree species planted under open area planting technique of burned area at Klias Peat Swamp Forest, Beaufort, Sabah. Three indigenous tree species was used in this study, namely are *Cratoxylum arborescens* (Vahl) Blume (Geronggang), *Alstonia spathulata* Blume (Pulai), and *Stemonurus scorpioides* Becc. (Katok). A total of 45 seedlings for each species were examined using Randomized Complete Block Design (RCBD) with spacing of 3m x 3m. Data collection for height, diameter, and survivality was recorded every two weeks within 10 weeks period from the seedlings was planted. Results from this study showed, the growth performance of Geronggang species was much better than the Pulai species, while all the Katok seedlings were died after week 6 in this experiment. The Geronggang species had the average mean height increment of 24.17 cm and average mean diameter increment of 2.76 mm, while Pulai species had average mean height increment of 9.36 cm and average mean diameter increment with 1.86 mm. For the survivality results, it showed that the Geronggang species had the highest survivality rate at 93.33% and Pulai species with 86.67%. There was a significant difference in term of relative height growth rate between Geronggang and Pulai species. However, there was no significant difference in term of relative diameter growth rate at significant level of $P \leq 0.05$. The findings indicates that Geronggang and Pulai are suitable to be planted at burned area in Klias peat swamp forest for the purpose of reforestation using open area planting technique, while the Katok species is not suitable due to environment consideration. The better growth performance of the Geronggang and Pulai species are because they can easily adapted with the open area planting at the study site.