

Microclimatic modification of three timber species stands on ex-tin mining land

ABSTRACT

Establishment of a forest plantation could modify the micro-climate of the area. The main objective of this study was to investigate the effect of three different stands of plantation species on the micro-environment of ex-tin mining land. The study was conducted at Kampung Pasir, Semenyih, Selangor. Three-year-old stand planted were *Acacia mangium*, *Ceiba pentandra* and *Casuarina equisetifolia*, All the stands were planted with *Calopogonium mucunoides* as cover crop. Environmental parameters such as air temperature, soil temperature, and relative humidity were monitored hourly during the six month study. The results showed that, among the stands *Acacia mangium* recorded the lowest value for air temperature (24.7°C), soil temperature at 10 cm depth (25.6°C) and 20 cm depth (25.8 °C) but recorded highest value for relative humidity (99%). Open space recorded the highest value of soil temperature (34.7 °C at 10 cm depth; 31.3°C at 20 cm depth) and air temperature (39.5 °C) but showed the lowest value for relative humidity (49%). The results indicated that different stands modified the microclimate differently.

Keyword: Temperature; Timber species; Microclimate