

## **Aboveground Biomass of Selected Provenances of *Acacia Mangium* and *Acacia Aulacocarpa* Multiple-leadered Trees**

### **ABSTRACT**

*Acacia mangium* Willd. and *Acacia aulacocarpa* A. Cunn Ex. Benth are two important Acacias for biomass production. Being multiple-leader (ML) and fast growing species, both species are the best bet for carbon sequestration and bio-energy supplementary. The main objective of this study was to assess the aboveground biomass and to derive aboveground biomass equations of these species and provenances. Destructive sampling was carried out with 36 samples per species and diameter at breast height (Dbh) and categorized into three classes namely small (11-15 cm), medium (16-20 cm) and big (21-25 cm) for *A. mangium* and 6-10 cm, 11-15 cm and 16-20 cm for *A. aulacocarpa* respectively. *A. mangium* from SW of Boset WP (PNG) produced 380.83 t/ha of aboveground biomass, Captain Billy Road (QLD), Bansbach WP (PNG) (224.44 t/ha) and Russel and Gap CK (QLD) (49.63 t/ha) while for *A. aulacocarpa*; provenance from Arufi E Morehead WP (PNG) (171.88 t/ha), W. Morehead (PNG) (150.90 t/ha), Samford (QLD) (63.87 t/ha) and 3K S Mt. Larcom (QLD) (25.32 t/ha) respectively.

**Keyword:** *Acacia mangium*, *Acacia aulacocarpa*, Multiple-leader, Aboveground Biomass, Provenance