

## **Growth conditions of Teak (*Tectona grandis* L.) Plantation in Mullaitivu District**

T.Satheesan<sup>1\*</sup>, T.Sivanathawerl<sup>2</sup>, S.Sivachandran<sup>1</sup> and  
D.K.N.G.Phuspakumara<sup>2</sup>

<sup>1</sup> Department of Agronomy, Faculty of Agriculture, University of Jaffna, Sri Lanka

<sup>2</sup> Department of Crop Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka

\* tsatheesan89@gmail.com

Teak is an important timber plant widely used in Sri Lanka. Teak plantation was established in Northern part of Sri Lanka since 1960's. Among the districts of the Northern region, Mullaitivu is a potential district for teak plantation. There were no scientific studies done regarding teak plantation and its distribution pattern in Northern region. Therefore, a study was carried out to assess the distribution patterns and estimate the above ground biomass in Mullaitivu district during the period of February to May, 2015. Plant height, diameter, crown height and canopy diameter were measured from selected teak plants in four locations such as Mulliyawalai, Mankulam, Karripattammuripu and Theravil. The measurements were taken with square plot size of 15 m × 15 m and found that the Mulliyawalai and Theravil sites had same aged plantation of 22 years. The highest average height and dbh value had observed in Theravil site as 19.80±0.28 m and 20.10±0.24 cm, respectively. The highest aboveground biomass of 410.37 t/ha and tree volume of 579.58 m<sup>3</sup>/ha was found in Mulliyawalai. Among the four locations, the highest average above ground biomass (1,301.49 t/ha) and tree volume (2,043.77 m<sup>3</sup>/ha) were observed in Karripattammuripu plantation. From this study Theravil site was selected as the best site for planting of teak. To confirm these findings, detail studies needs to be carried out on different parameters.

**Keywords:** Aboveground biomass, Diameter-height-volume, Distribution, Plantation forest, Mullaitivu.