



Malays. Appl. Biol. (2015) 44(3): 109-112

DEVELOPMENT OF ALLOMETRIC EQUATION FOR BIOMASS OF RUBBER TREE (*Hevea brasiliensis*) SAPLINGS

ENGKU AZLIN RAHAYU, E. A.^{1*}, MOHD NAZIP, S.¹ and SHAMSIAH, A.²

¹Faculty of Applied Sciences, Universiti Teknologi MARA, 40450 Shah Alam, Malaysia.

²Faculty of Plantation and Agrotechnology Universiti Teknologi MARA, 40450 Shah Alam, Malaysia.

*E-mail: engkuazlin_87@yahoo.com

ABSTRACT

Carbon is sequestered by plant through photosynthesis and stored as biomass in different parts of the tree including stems, branches, leaves and roots. The objective of this study is to determine the biomass in five different growth stages of rubber tree saplings and to develop the allometric equation for biomass estimation. Biomass of rubber tree saplings was measured for the growth stages of 45, 90, 135, 180 and 225 days with total number of samples used was 650 saplings. Biomass was determined by weighing the constant dry weight of the samples. Four candidate models were selected and evaluated and Model 4 appeared to be the best allometric equations for biomass of rubber tree saplings in the form of $\log_{10} W = 0.184 + 0.007 \log_{10} D + 0.705 \log_{10}$

HT

+ 0.002 \log_{10}

AG

, ($R^2=0.96$). The allometric equation developed in this study is useful for the estimations of biomass in rubber tree saplings.

Key words: Biomass, *Hevea brasiliensis*, destructive sampling, allometric equation