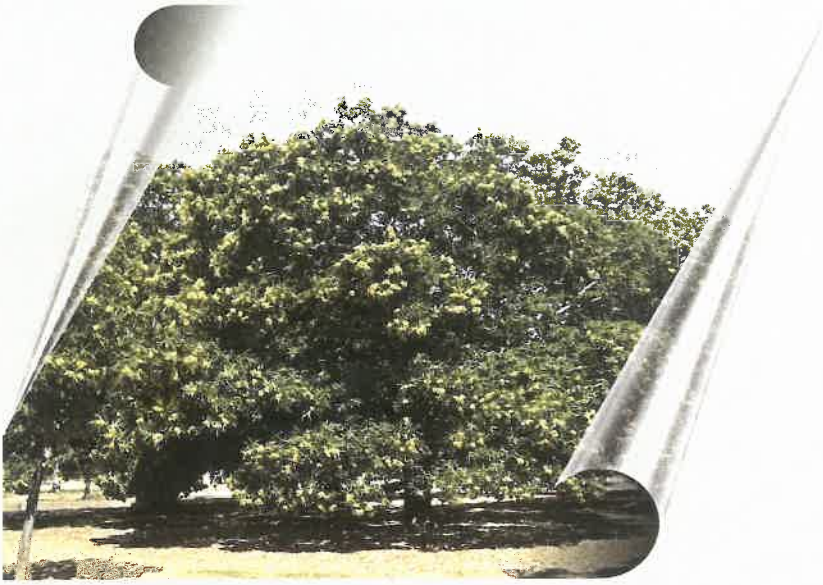
III INTERNATIONAL Chestnut Congress



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i) The Proceedings will be published as a peer-reviewed issue of *Acta Horticulturae*. The manuscripts are subject to acceptance by the referees, editors and the journal. Please follow the ISHS Guidelines (www.ishs.org/acta/index.htm). Manuscripts should be as concise as possible in order to reduce to a minimum the number of pages. The total length of texts should not exceed 8 pages. Any text, which does not comply, will be sent back to the author;

ii) Please be advised, the texts (electronic format together with a printed copy) should be sent to the 3rd International Chestnut Congress Secretariat (alfredoa@utad.pt, Alfredo Aires, UTAD, Departamento de Fitotecnia, 5000-911 Vila Real, Portugal) before 1st December 2004.

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BIOMASS COMPONENT EQUATIONS FOR *CASTANEA SATIVA* MILL HIGH FOREST IN THE NORTHWEST OF PORTUGAL

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There is considerable interest today in estimating the biomass of trees and forests for practical forestry issues, sustainable management, carbon and nutrient flux and others scientific purposes. For this reasons aboveground biomass were studied in *Castanea sativa* Mill high forest stands in the Northwest of Portugal.

The most widely procedure for stand biomass evaluation is the regression estimation method with the stand biomass predicted through the sum of individual tree biomass estimation. In this study 34 sweet chestnuts old trees located in three stands were felled and measured for aboveground biomass by components.

For each component several linear and nonlinear equations were fitted by the least squares methods to select a model that predict total-tree aboveground biomass as well as bole-wood, bole-bark, branches, leaf and flowers components biomass as a function of dbh and total heigh. The model with the best quality of fit was selected for each component.

Key Words: Sweet chestnut, Aboveground biomass, allometric models