III INTERNATIONAL Chestnut Congress

Forte de S. Francisco Hotel
Chaves, October 20-23, 2004

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NOTE TO AUTHORS WHO HAVE NOTE SENT THEIR MANUSCRIPT

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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Programme

Wednesday, October 20th, 2004

08.00 - 10.00	Registration of participants and **POSTER DISPLAY (Sessions 1 - S1.01-S1.21 and 2 – S2.01-S2.23)**	
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11.00 - 11.30	Coffee break	
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PLENARY SESSION 1

General Reports: Chestnut Growing, Economy, Marketing, Harvest and Fruit Processing

Chairperson: Stephanos Diamandis

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CASTANEA SATIVA HIGH FOREST STANDS. BIOMETRICAL STUDY IN THE NORTH OF PORTUGAL

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Where site conditions are appropriate, *Castanea sativa* Mill, is a very suitable species for sub-mediterranical regions (Guerreiro, 1957). It is precisely in the north of Portugal, mainly in Trás-os-Montes and Beiras where *Castanea sativa* is more representative.

Over the last decade many new stands were installed under the European Community policies supporting forest investment. The main purpose for these young plantations is to produce high quality wood. Logs with medium and large dimensions can attain interesting profitability levels (125 €/m^3 over bark in trees with diameter at breast height (*d*) over 30 cm). Taking into account the economical value of *Castanea sativa* and its increasing area expansion, without neglecting environmental and social values, it becomes important to follow sound silvicultural prescriptions and management practices which depend, among others, on the accurate estimation of wood contents through volume determination.

In this study, regression analysis theory was used to obtain volume equations as a function of standing tree easily measured variables and also for modeling the relationship of tree total height (h) to diameter at breast height (d). A methodology was adopted to obtain models with the lowest possible bias in its volume estimates and, at the same time, with low correlation among regressors. Selected models, which are presented, can be used to construct volume tables, very useful tools for forest producers, namely small farmers in such a way that, as much as possible, avoid revenue losses. Comparisons were made with equations used by the Forest Services.

Key Words: *Castanea sativa* Mill; High Forest; Regression Analysis; Volume Equations; Diameter Height Curves.

References: Guerreiro, M.G., 1957. Castanheiros. Alguns estudos sobre a sua Ecologia e o seu Melhoramento Genético. Alcobaça.