

III INTERNATIONAL Chestnut Congress



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MANAGEMENT MODELS EVALUATION OF A *CASTANEA SATIVA* COPPICE IN THE NORTHEAST OF PORTUGAL

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In a chestnut high forest converted in coppice, 4 permanent plots were installed in 1994. These plots are being managed according to the silvicultural models proposed by Bourgeois (1992) and adapted by us to our conditions. The treatments are: T1 = Model 1 (Small dimensions); T2 = Model 2 (Medium dimensions); T3 = Model 3 (Large dimensions); Control = (without intervention). Last year (2003), a 2nd thinning was applied in order to select the more straight and cylindrical shoots without defects.

The principal dendrometrical parameters, such as: number of stumps per hectare; number of shoots per hectare; mean total height of the shoots; dominant height of the shoots; mean diameter of the shoots; dominant diameter of the shoots; basal area of the shoots per hectare and basal area of the shoots, were measured, before and after the thinning.

The results show that plot 4 (T3) presents greater vigour and the highest dominant height. Concerning dominant height, plot 1 (T1) overpasses plot 2 (T2) due to the last one higher number of shoots and consequently high level of competition for available site resources. We believe that by a heavy thinning in plot 2 (about 75% reduction in the number of shoots), probably, this plot (T2), will again recover its dominant height leadership in relation to plot 1 (T1). The plot 3 (control), follows the other plots dominant height growth pattern, although presents after thinning, half a mean basal area in comparison to the other treatments.

Key Words: *Castanea sativa* Mill; Coppice; Silvicultural models; Management.

References:

Bourgeois, C., 1992. Le Chataignier un arbre, un bois. I.D.F., 331p., Paris.