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CHARACTERISATION OF JUDIA GENOTYPES (*CASTANEA SATIVA* MILL.) FROM SEVERAL TRÁS-OS-MONTES REGIONS

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Abstract:

Portugal is one of the most important chestnut world producers with more than 30,000 ton, being Trás-os-Montes the main Portuguese region where almost 85% is produced. Here, Judia is one of the most popular varieties due to its fruit quality concerning taste and size. Typically, Judia's fruits present a calibre less than 60 fruits/kg, but some heterogeneity between genotypes is known. On the other side, some questions must be solved, such as polispermy and at the end, the aim of this study is to select a good clone of Judia, among several genotypes there are spread around the region. For that, almost 130 trees of cv. Judia were firstly selected in seven different edaphoclimatic areas. The study began in October 2006 and the first year results showed a range in the fruit calibre (good chestnuts) between 157 to 62 fruits/kg. These results suggest a significant altitude orchard effect, contrarily to the results of 2007 where no significant difference was observed. Fruits have a generalized increase in their size, ranging between 65 and 46 fruits/kg including an increase in starch content of about 30%. A close relation between temperature amount and fruit characteristics is presented, suggesting that optimal conditions for Judia grow are observed in locals with range of temperature amount 2000-2200°C, which is closely related to Trás-os-Montes locals with 800-900 m altitude. Genotypes heterogeneity was also supported by fruit shape index variation (length/height), between 0.993 and 1.11 for the most elongated fruits. The phenology and chemical composition of the fruit are other parameters that show the heterogeneity.