

Regeneration in multi-species stands in serra da Lousã

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ABSTRACT

Stand regeneration is one of the most important aspects of silviculture as it ensures stand and production perpetuity. Regeneration occurs after one or several disturbances releasing growing space, usually after the elimination of some adult trees. In Northern and Central Portugal many maritime pine old growth stands have natural regeneration of several broadleaved species, in particular sweet chestnut and English oak. In multi-species stands regeneration and recruitment analysis should consider both density and diversity measures. A series of permanent plots established in Serra da Lousã made it possible to characterise the existing natural regeneration and its evolution with two successive measurements in 2001 and 2009. All individuals with a diameter at breast height equal or less than 5 cm were considered as regeneration. Their recruitment was evaluated in 2009 and analysed as a function of absolute stand density measures and seven diversity indices. The results revealed that recruitment rate was high and that there was a trend towards a balance in terms of species and their proportions, while maintaining a tendency towards clustering and segregation according to the Clark and Evans and the Pielou indices, respectively.