P 17

Genetic divergence among progenies of Pinus elliotii Engelm. var. elliottii in a subtropical region from Brazil

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Despite of a lower volume production compared to other pine species, the *P. elliottii* shows characteristics of extreme importance for the forestry sector, as its physical and mechanical wood quality properties widely used in packaging, building, wood working as well in resin production. Breeding programs has been established to identify genotypes with high yield potential for use in commercial plantations and development of interspecific hybrids. The aim of this study was to estimate the genetic divergence among progenies of *P. elliottii* from silvicultural traits (DBH, height, and volume) evaluated from the first to the fourth age. A trial established in Ponta Grossa, Paraná, Brazil, in 2009. This experiment was carried out in a randomized complete block experimental design with 25 treatments (progenies) 32 blocks, and one plant per plot at a spacing of 3.0 x 3.0 meters. The divergence between progenies was performed by distance matrix of Mahalanobis. Based on these values, progenies were grouped into clusters using Tocher's method. Estimative of genetic divergence, using a multivariate analysis, showed a pattern of nine groups. The majority of progenies was grouped in the first one (I) (54.17%) followed by groups II, III, IV (8.33%) and V, VI, VII, VIII, IX (4.17%). The most productive individuals of genetically divergent groups they can be used to controlled crossings to produce highly productive individuals.