

RAPD Analysis of Genetic Diversity of Castor Bean

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Abstract : The aim of this work was to detect genetic variability among the set of 40 castor genotypes using 8 RAPD markers. Amplification of genomic DNA of 40 genotypes, using RAPD analysis, yielded in 66 fragments, with an average of 8.25 polymorphic fragments per primer. Number of amplified fragments ranged from 3 to 13, with the size of amplicons ranging from 100 to 1200 bp. Values of the polymorphic information content (PIC) value ranged from 0.556 to 0.895 with an average of 0.784 and diversity index (DI) value ranged from 0.621 to 0.896 with an average of 0.798. The dendrogram based on hierarchical cluster analysis using UPGMA algorithm was prepared and analyzed genotypes were grouped into two main clusters and only two genotypes could not be distinguished. Knowledge on the genetic diversity of castor can be used for future breeding programs for increased oil production for industrial uses.

Keywords : dendrogram, polymorphism, RAPD technique, *Ricinus communis* L.

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