

Morphological characterization of selected papaya (*Carica papaya* L.) inbreds and hybrids

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ABSTRACT

Morphological analysis was undertaken to assess the degree of genetic relatedness and to characterize selected papaya (*Carica papaya* L.) inbreds and hybrids. Transmission of phenotypic traits from inbred parents to hybrid progeny followed the Mendelian pattern (complete dominance). The clustering mechanism separated the papaya genotypes into two groups. It was also revealed that some inbred lines presumably of very diverse origins exhibited similar morphological characteristics, raising the possibility that they have phylogenetic affinities and/or common origins. Screening for morphological traits with a high degree of polymorphism and with invariable expressions of the phenotypes would help in the identification of markers for hybrid identification and also in the accurate estimation of genetic relatedness among these hybrids and their parents.

Keywords: *Carica papaya*, morphological characterization, cluster analysis