SAMPLE VARIABILITY IN PRINCIPAL COORDINATES ANALYSIS: AN APPLICATION TO CLASSIFYING GENOTYPES USING MOLECULAR MARKERS

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Principal Coordinates Analysis (PCoA) is used to produce graphical representations of dissimilarity or similarity among entries in germplasm banks using molecular data. In most of the published papers, the classification of genotypes using molecular markers has continued to use PCoA without assessing the sensitivity or variability of the solution, and it is not possible measuring the stability of the points in the PCoA configuration. This paper deals with sensitivity and validation techniques of PCoA in the context the classification of genotypes using molecular markers. Several types of resampling techniques (Jackknife and two bootstrap variations) are carried out and compared to assess the sample variability of the obtained configurations. Measures of the quality of the representation of individuals and groups are defined. We report the genetic diversity of Venezuelan sugarcane core collection using dominant DNA markers.