

ITS-DGGE ANALYSIS: A USEFUL TOOL FOR AUTHENTICATION OF CUCUMIS MELO CULTIVARS AND ACCESSIONS

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Melon (*Cucumis melo L.*) is an ancient and traditional crop in the Campania region. Nevertheless, few studies were performed for assessing melon germplasm. In this study, we evaluate the genetic diversity of melon landraces collected from Campania region. ITS (internal transcribed spacer) profiles were used to characterize 27 melon cultivars and accessions. In this study ITS profiles were assessed for the first time in plants, via denaturing gradient gel electrophoresis (DGGE) in order to detect single nucleotide changes or small insertions or deletions in DNA based on sequence differences. Genotype specific SNPs in ITS1-5.8S-ITS2 region of rDNA (ribosomal DNA) were detected. Our results demonstrate that the ITS-DGGE is a feasibility, cost-effective and valid method for genotyping by SNPs.