



RESEARCH PAPER

AFLP analysis of genetic relationships and diversity of some oriental pickling melon (*Cucumis melo* var. *conomon*) genotypes in Karnataka

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Abstract : Genetic diversity of indigenous plant population is the prerequisite for any research on plant breeding and improvement, making genetic diversity conservation of critical importance. The present study was conducted to assess the amplified fragment length polymorphism (AFLP) marker based diversity in 15 oriental pickling melon (*Cucumis melo* var. *conomon*) genotypes during 2009 at University of Agricultural Sciences (UAS), Bangalore. Thirteen primer combinations generated a total of 443 amplicons, of which 342 were polymorphic (76%) with an average of 26.31 bands. The primer combination E-CTT/M-GTG was found to amplify 45 scorable bands, with 91.11 per cent polymorphic bands. Cluster analysis based on Jaccard similarity index and UPGMA algorithm showed a high variation within the studied genotypes and a mean similarity index of 0.79 for AFLP markers. The genotypes CMC GKVK 1 and CMC GKVK 6 expressed the least similarity (0.627) and may serve as very good source in melon breeding programme. Genotypes CMC GKVK1, CMC GKVK8, CMC GKVK15, CMC GKVK11 and CMC GKVK6 fell into solitary clusters and these accessions could be used in future genetic, physiological and morphological studies.

Key Words : Oriental pickling melon, AFLP, Genetic diversity

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