A Comparative Analysis of RAPD and ISSR Markers for Studying Genetic Diversity among Coriander (Coriandrum sativum L.) Varieties

Nisha Pareek, ML Jakhar* and CP Malik

School of Life Sciences, Jaipur National University, Jaipur, Rajasthan, India *Department of Plant Breeding and Genetics, S.K.N. College of Agriculture (S.K. Rajasthan Agricultural University), Johner

ABSTRACT

ISSR markers were used to evaluate the genetic variation among ten varieties of Coriander grown in Rajasthan. 10 ISSR primers produced 71 amplified bands of which 18 were polymorphic. The pair-wise Jaccard genetic similarity varied from 0.79-1 for ISSR data. The dendrogram was constructed using UPGMA method distinguishing 10 varieties in two clusters. In the present study, detected polymorphism level represents meager genetic distance at intra-species level and introduces RAPD and ISSR as efficient markers for genetic relatedness assessment in Coriander. Furthermore, our genetic diversity analysis could provide useful information for utilization of these materials, especially for genetic improvement.

Key words: Genetic variation, ISSR, RAPD, UPGMA

Author for correspondence: C.P. Malik, e-mail: cpm_malik@yahoo.com