

Study of Genetic Diversity in Onion using RAPD Markers and PDI under Field Conditions

Priyadarshani P Mohapatra¹, T. Aslam¹, T. K. Maity¹, and J. Tarafdar²

¹Department of Vegetable Crops, BCKV, Mohanpur,

²Department of Plant Pathology, BCKV, Mohanpur,

E-mail: *lipi.pragati@gmail.com

Abstract—*The experiment was conducted in the Directorate Research lab at Bidhan Chandra Krishi Viswavidyalaya, Kalyani. Sixteen (*Allium cepa* L.) varieties were examined by using randomly amplified polymorphic DNA (RAPD) markers. Nine of the twenty primers screened produced clear, reproducible polymorphic banding profile. A total of 457 fragments were produced by 9 primers, of which 45 were polymorphic among the varieties. All 16 varieties could be distinguished by the combinations of polymorphic bands generated by various primers. In the field screening the highest Percent disease index (PDI) was recorded in the variety Light Red (37 %) followed by Agri Found Rose (23.5%). The varieties viz., N-53, Arka Niketan, Red Diamond, Kohinoor-09 and Indam Gulab had shown tolerance to Purple blotch disease in the field condition.*

Keywords: PDI, disease, RAPD, diversity.