

Genetic Diversity Analysis of different *Stemphylium vesicarium* [(Wallr.) E. Simmons], Isolates Causing Stemphylium Blight of Onion Collected from different Geographical Regions of Kashmir Valley

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Abstract—*Stemphylium blight* is the most serious and devastating disease of onion limiting the quality and quantity of both bulb and seed. Molecular analysis using 9 RAPD primers was done to assess the genetic diversity among the 36 *S. vesicarium* isolates from onion obtained from different geographical areas of Kashmir valley. All the 9 RAPD markers used during the present study revealed a moderate level of polymorphism in different isolates of *S. vesicarium*. In the present study maximum scored bands were 160 in SV-A04 marker with maximum polymorphic bands (10) showing 6.25 per cent polymorphism. The lowest scored bands were 7 in marker “SV-F02” with only two polymorphic bands showing 28.57 per cent polymorphism. In total, 579 bands were scored of which 54 were polymorphic, thereby showing 9.32 per cent polymorphism. Genetic dissimilarity of the isolates varied from 1.00 to 0.14. The present study provides insights into the extent of genetic diversity available in 36 *S. vesicarium* isolates from onion obtained from different geographical areas of Kashmir valley.

Keywords: *Stemphylium blight*, *S. vesicarium*, RAPD markers, Polymorphism, Genetic dissimilarity.