

Molecular and pathogenic characterization of Iranian isolates associated with leaf spot disease of potato

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References

Andersen B, Hansen ME, Smedsgaard J (2005) Automated and unbiased image analyses as tools in phenotypic classification of small-spored *Alternaria* spp. *Phytopathol* 95:1021–1029.

Droby S, Dinoor A, Prusky D, Barkai-Golan R (1984) Pathogenicity of *Alternaria alternata* on potato in Israel. *Phytopathol* 74:537–542.

Kakvan N, Zamanizadeh H, Morid B, Taheri H, Hajmansor S (2012) Study on pathogenic and genetic diversity of *Alternaria alternata* isolated from citrus hybrids of Iran, based on RAPD-PCR technique. *Eur J Exp Biol* 2(3):570–576.

Mahmodi F, Kadir JB, Puteh A, Pouredad SS, Nasehi A, Soleimani N (2014) Genetic Diversity and Differentiation of *Colletotrichum* spp. Isolates Associated with Leguminosae Using Multigene Loci, RAPD and ISSR. *Plant Pathol J* 30(1):10-24.

McDonald BA, Linde C (2002) Pathogen population genetics, evolutionary potential, and durable resistance. *Annu Rev Phytopathol* 40:349–379.

Meena RK, Sharma SS, Singh S (2015) Studies on variability in *Alternaria alternata* (Kessler) causing leaf blight of Isabgol (*Plantago ovata*). SAARC J Agric 12(2):63–70.

Morris PF, Connolly MS, St Clair DA (2000) Genetic diversity of *Alternaria alternata* isolated from tomato in California assessed using RAPDs. Mycol Res 104(03):286–292.

Nasehi A, Kadir JB, Nasr Esfahani M, Abed Ashtiani F, Wong MY, Rambe SK, Golkhandan E (2014) Analysis of genetic and virulence variability of *Stemphylium lycopersici* associated with leaf spot of vegetable crops. Eur J Plant Pathol 140(2):261–273.

Nasr Esfahani M, Ansari-pour B (2006) Identification of common leaf blight diseases of potato in Fereidan. Proceedings of the 17th Iranian Plant Protection Congress, Campus of College of Agriculture and Natural Resources, University of Tehran; Karaj, Iran, p. 213.

National Institution of Agriculture Botany (NIAB) (1985) Diseases assessment manual for crop variety trials. Cambridge, UK.

Pryor BM, Michailides TJ (2002) Morphological, pathogenic, and molecular characterization of *Alternaria* isolates associated with *Alternaria* late blight of pistachio. Phytopathol 92(4):406–416.

Rohlf EJ (1993) NTSYS-pc: Numerical taxonomy and multivariate analysis system, version 1.80. Applied Biostatistics Inc., Setauket, New York.

Rotem J (1994) The Genus *Alternaria*; Biology, Epidemiology, and Pathogenicity. American Phytopathological Society Press, Minnesota, USA, p. 326.

Talbot N (2001) Molecular and Cellular Biology of Filamentous Fungi. New York, USA, Oxford University Press.

Van der Waals JE, Denner FDN, Van Rij N, Korsten L (2003) Evaluation of Plant-plus, a decision support system for control of early blight on potatoes in south Africa. *Crop Prot* 22:821–828.

Van der Waals JE, Pitsi BE, Marais C, Wairuri CK (2011) First report of *Alternaria alternata* causing leaf blight of potatoes in South Africa. *Plant Dis* 95(3):363–363.

Weir TL, Huff DR, Christ BJ, Romaine CP (1998) RAPD-PCR analysis of genetic variation among isolates of *Alternaria solani* and *Alternaria alternata* from potato and tomato. *Mycol* 813–821.