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Powdery mildew resistance in some Aegilops species

Švec M., Miklovičová M., Šudyová V., Hudcovicová M., Hauptvogel P., Kraic J.:

Plant Protect. Sci., 40 (2004): 87-93

[fulltext]

Resistance to powdery mildew (*Blumeria graminis* (DC.) E. O. Speer f.sp. *tritici* Em. Marchal) in *Aegilops crassa* Boiss., *Ae. ventricosa* Tausch, *Ae. biuncialis* Vis., *Ae. triuncialis* L. and *Ae. cylindrica* Host was tested at the stage of primary leaves in the years 2000 and 2001. All plants of *Ae. ventricosa*, *Ae. biuncialis* and sample No. 9 of *Ae. cylindrica* repeatedly showed a susceptible reaction after being inoculated by all powdery mildew isolates used. In contrast, plants of *Ae. crassa*, sample No. 8 of *Ae. cylindrica* and all samples (No. 13, 21, 22, 24 and 26) of *Ae. triuncialis* were resistant to all isolates. Samples No. 5, 6, 7, 19 and 23 of *Ae. cylindrica* contained resistant and susceptible plants in both years. Virulence to these samples ranged from 3% to 18%. Cluster analysis using DNA microsatellite markers showed that the accessions are arranged in groups based on taxonomic relationship but not on basis of resistance. Plants susceptible to powdery mildew at the juvenile stage showed satisfactory adult plant resistance.

Keywords:

Blumeria graminis DC f.sp. tritici; Aegilops spp.; disease resistance; virulence analysis; DNA polymorphism; genetic resources

[fulltext]

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