DISEASE NOTE

FIRST REPORT IN MEXICO OF PENCILLIUM BREVICOMPACTUM CAUSING CORM ROT OF GLADIUS GRANDIFLORUS IN STORAGE

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A disease causing corm rot of gladiolus in storage was studied in San Martin Texmelucan, Puebla (Mexico) in 2011. Stored corms with rot symptoms were collected and disinfected superficially with 1.5% sodium hypochlorite for 3 min, rinsed three times in sterile water and placed in potato carrot agar plates at 21°C for eight days under continuous black light (40W). The fungus commonly isolated from dis eased gladiolus corms differed from those currently known to occur in this crop in Mexico (González-Pérez et al., 2009) and was identified as Penicillium brevicompactum Dierckx according to Frisvad and Samson (2004). Successful isolation was obtained from 25% of 640 analyzed corms. Experiments for fulfilling Koch’s postulates were carried out under aseptic conditions using disinfested healthy corms. The corms (wounded or not) were inoculated with a conidial suspension of 11.6 × 108 conidia ml−1. Controls were inoculated with only distilled sterile water. Corm rot symptoms were evaluated 30 days post inoculation. P. brevicompactum caused moderate rot in inoculated corms, whereas the controls remained healthy. P. brevicompactum was re-isolated from the margins of lesions developed on inoculated corms. The morphological identification was confirmed by DNA sequence data of the β-tubulin gene (GenBank accession No. KF776389). This finding represents the first record of this pathogenic species associated with corm rot of gladiolus in Mexico.


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OUTBREAK OF DOWNY MILDEW CAUSED BY PERONOSPORA DIGITALIDIS ON COMMON FOXGLOVE (DIGITALIS PURPUREA) IN ITALY

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Digitalis purpurea (family Scrophulariaceae), is a bie nial species used in low maintenance gardens. In summer and autumn 2011 and 2012, in a private garden near Biella (northern Italy), a downy mildew was observed on the leaves of D. purpurea plants. Vein-delimited chlorotic areas 4-20 mm2 in size coalesced and turned necrotic. Sporulation occurred primarily on the abaxial leaf surface. Conidiophores measuring 294-453 × 7-10 μm (average: 372 × 8 μm), branched dichotomously at the first branch and were followed by branches measuring 149-192 (average: 167) μm. Curved tips measured 10-18 μm (average: 14 μm). Conidia, ellipsoid to ovoid, measured 18-29 ×17-21 μm (average: 25 × 19 μm). The fungus was identified as Peronospora digitalidis (Hall, 1994). The DNA region encoding the large ribosomal subunit (LSU rDNA) was amplified using primers NL1/NL4 (Maier et al., 2003) and sequenced (GenBank accession No. KC461924). Symptoms were reproduced on five healthy D. purpurea plants inoculated with conidia from affected plants and maintained at high RH and temperatures from 18 to 25°C. P. digitalidis infections to D. purpurea have been recorded in Italy (Tjosvold and Koike, 2002), New Zealand and many European countries (Hall, 1994). This is the first report in Italy.


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