

DISEASE NOTE

FIRST REPORT OF *BOTRYTIS CINEREA* CAUSING GREY MOULD OF GLADIOLUS IN INDIA**G. Kaur and S. Chandel***Dr. Y S. Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh, India*

In December 2013 and January 2014, symptoms appeared in North India on gladiolus leaves as small, brown spots, that expanded over time to the whole plant, spikes included, which became covered with a layer of grayish mycelium and conidia. Forty isolates of a fungus recovered from diseased plants were grown on potato dextrose agar (PDA) and their morphological characteristics recorded after incubation for one week at 25°C. Conidia observed under a scanning electron microscope were single-celled, ovoid to ellipsoid, colorless, smooth and measured $9.99 \times 7.47 \mu\text{m}$. Conidiophores were slender and branched with enlarged apical cells bearing clusters of conidia. These cultural and morphological characteristics conform to those described by Ellis (1971) for *Botrytis cinerea*. To confirm the identity of the fungus, single-spore isolates were subjected to a species-specific PCR assay using the primers pairs C729+/- described by Rigotti *et al.* (2002) The amplified product (GenBank accession No. KP141797) was sequenced showing 99% sequence similarity with comparable sequences of *B. cinerea* from database. The pathogenicity of the fungal isolate was tested by inoculating gladiolus spikes with spore suspension ($2.5 \times 10^4 \text{ml}^{-1}$) from a 10-day-old culture grown on PDA. The plants were kept covered with moistened perforated polyethylene bags for 24 h. Typical disease symptoms appeared on the inoculated spikes on which the development of a grey mycelial growth was also observed. To the best of our knowledge, this is the first report of *Botrytis cinerea* of gladiolus in India.

Ellis M.B., 1971. Dematiaceous Hyphomycetes. Commonwealth Mycological Institute, Kew, UK.

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Corresponding Author: G. Kaur
E-mail: kaur.plantpatho@gmail.com

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FIRST REPORT OF BOTRYTIS BLIGHT CAUSED BY *BOTRYTIS CINEREA* ON FRUIT-SCENTED SAGE IN ITALY**A. Garibaldi, D. Bertetti, S. Franco Ortega and M.L. Gullino***Centre for the Innovation in the Agro-Environmental Sector (AGROINNOVA), University of Turin, Via Leonardo da Vinci 44, 10095 Grugliasco, Italy*

During the summer and autumn 2015, symptoms of an unknown leaf blight were observed on fruit-scented sage (*Salvia dorisiana*), Labiatae family, cultivated in a private garden located in the Biella province (northern Italy). Brown necrosis with irregular margins developed on both leaf surfaces, on the apexes and along the borders. Sometime, a soft, grey mycelium grew on affected tissues. Fungal colonies isolated from leaves on potato dextrose agar (PDA) were typical of *Botrytis cinerea* (Ellis, 1971) and produced branched conidiophores and unicellular, ovoid conidia, measuring $7.8-14.5 \times 6.4-9.0$ (average: 10.8×7.5) μm . The Internal Transcribed Spacer (ITS) region of rDNA extracted from a pure culture was amplified using the primers ITS1/ITS4 (White *et al.*, 1990), and sequenced (GenBank accession No. KU163301). BLAST analysis of the 456 bp amplicon had 100% homology with the sequence of *B. cinerea* (KR080287). To reproduce the field symptoms, one isolate was inoculated on healthy leaves of three *S. dorisiana* plants. Five leaves per plant were treated with mycelial disks obtained from a pure fungal culture, while three controls were exposed to sterile PDA. All plants were covered with plastic bags and maintained in a greenhouse at temperatures ranging from 15 to 23°C. Five days post inoculation, the first symptoms developed on inoculated leaves only. *B. cinerea* was reisolated from affected tissues, while controls remained healthy. This is the first report of *B. cinerea* on *S. dorisiana* in Italy, as well as in the world. The economic significance of this disease is limited at present, however its importance may expand due to the increasing use of *S. dorisiana* as a bedding plant.

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Corresponding author: M. L. Gullino
E-mail: marialodovica.gullino@unito.it

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