

DISEASE NOTE

**FIRST REPORT OF *BOTRYTIS* spp.
AS A POSTHARVEST PATHOGEN OF
STRAWBERRY IN PAKISTAN**

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Strawberry is an emerging fruit crop in Pakistan. In February 2015, a survey was conducted in strawberry fields of Lahore region of Punjab Province. Ripe fruits were harvested and stored at 1°C for 9 days. After storage, small, firm, light brown lesions were observed on fruits; the lesions enlarged quickly and became covered with grey masses of spores and mycelium. Isolations from symptomatic fruits were carried out on PDA plates. Colonies from single-spore cultures were initially hyaline, over time, turned grey to brown. Conidia were unicellular and obovoid to broadly ellipsoid (5.4 to 10.3 × 4.1 to 6.5) µm. Conidiophores were erect, subhyaline, and 15 to 33 µm long. After 17 days, dark, scattered and irregular-shaped sclerotia were observed. The fungus was tentatively identified as *Botrytis cinerea* (Ortuno *et al.*, 2011). The ITS region of rDNA was amplified using primers ITS1/ITS4. Blast analysis (GenBank accession No. KX889115.1) showed 100% homology to the accession No. KF859918 of *B. cinerea*. For assessing pathogenicity, 30 mature strawberry fruits (cv. Chandler) were sprayed with a suspension of 10⁵ spores/ml and incubated at room temperature (22°C). Ten control fruits received sterile water only. After 2 days of incubation, typical grey mold symptoms were observed on inoculated fruit except controls and same fungus used for inoculation was recovered. To our knowledge, this is the first report on *B. cinerea* as a postharvest pathogen of strawberry in Punjab, Pakistan. The disease may result in considerable economic losses to the emerging strawberry industry of Punjab.

Ortuno F.D., Li X., Chai W., Schnabel G., 2011. First Report of Gray Mold of Strawberry Caused by *Botrytis cinerea* in South Carolina. *Plant Disease* **85**: 1482.

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**FIRST REPORT OF BOTRYTIS BLIGHT
CAUSED BY *BOTRYTIS CINEREA* ON
HELICHRYSUM BRACTEATUM IN ITALY**

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In the winter 2016, a leaf and stem blight was observed on 5-month-old plants of *Helichrysum bracteatum* growing in a farm located in Albenga (Savona province, northern Italy). Chlorosis and browning of leaves, stems and inflorescences were followed by necrosis and affected tissues wilted and desiccated. Most affected plants eventually died. The fungus isolated from affected stem tissues showed morphological characteristics typical of *Botrytis cinerea* (Ellis, 1971). Genomic DNA from pure culture was extracted using E.Z.N.A. Plant DNA Kit (Omega Bio-Tek). PCR reaction was carried out using primers ITS1/ITS4 (White *et al.*, 1990) to amplify the Internal Transcribed Spacer (ITS) region. PCR product was purified and sequenced (GenBank accession No. KX906371). A 460 bp sequence was analyzed and showed a 100% homology with *Botrytis cinerea*. Symptoms of the disease were reproduced on three healthy plants of *H. bracteatum* artificially inoculated with a conidial suspension of the pathogen sprayed on leaves (4 ml/plant). Inoculum was obtained from pure cultures of the fungus grown on PDA (Potato Dextrose Agar). Three control plants were sprayed with sterilised water. Successively, all the plants were kept in a humid chamber and maintained at the temperature of 19°C ± 1. About 11 days after the inoculation, only inoculated plants showed the first symptoms of the disease and *B. cinerea* was consistently reisolated. *B. cinerea* on *H. bracteatum* was previously reported in Denmark and in Japan (Izutsu *et al.*, 1997). This is the first report of *B. cinerea* on *H. bracteatum* in Italy.

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