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DISEASE NOTE

First report of gray mold on sweet basil caused by *Botrytis cinerea* in Turkey

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Sweet basil (*Ocimum basilicum* L.) is an aromatic plant in the family Lamiaceae. In August 2016, a disease was observed in sweet basil fields of Bolu, after the first cutting harvest, characterized by masses of gray-brownish spores on leaves and stems of the plants. Infected plant tissues were cut into small pieces, placed on potato dextrose agar after surface sterilization and incubated at 22 °C for 3 to 4 days. The identification of pathogen was carried out according to Ellis and Waller (1974) and the fungus determined as *Botrytis cinerea* based on morphological characteristics of conidia, conidiophores and cultural specifications. The conidia were one-celled, ellipsoid to ovoid, colorless to pale-brown, and measured 5.93–10.02 × 6.38–15.36 μm (average 7.74 × 10.31 μm). To confirm identification, the internal transcribed spacer (ITS) region of rDNA, two nuclear genes encoding glyceraldehyde-3-phosphate dehydrogenase (*G3PDH*) and RNA polymerase subunit II (*RPB2*) (amplified by using ITS1/ITS4, G3PDHf/G3PDHr, and RPB2f/RPB2r primers) of a representative isolate were sequenced (White et al. 1990; Staats et al. 2004). The ITS, *G3PDH*, and *RPB2* sequences (KY950235, MG264521, and MG264522, respectively) were 99–100% identical to those of *B. cinerea* strains (SAS56, SAS405, B05.10, BC7, and MUCL87), used by Staats et al. (2004), in Genbank. To confirm pathogenicity, 6-week-old plants were sprayed with the suspension of conidia (10^7 conidia/ml). Four days after inoculation, typical symptoms appeared on leaves and stems of whole inoculated plants, except control plants. To our knowledge, this is the first report of gray mold on sweet basil in Turkey.

References

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