

DISEASE NOTE

**FIRST REPORT OF A LEAF SPOT
OF SWEET BASIL (*OCIMUM BASILICUM*)
CAUSED BY *ALTERNARIA ALTERNATA*
IN ITALY**

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Sweet basil (*Ocimum basilicum* L.) is a popular crop in Italy. During summer-fall 2010, extensive necroses were observed on the leaves of plants grown both in soilless systems and soil in Piedmont (northern Italy). The disease affected 10% of 60-day-old soilless-grown plants and 40% of 5-month-old soil-grown plants. Brown-black lesions often surrounded by a yellow halo developed from the margins and tips of the upper side of older leaves, leading to progressive defoliation of the plants, rarely followed by plant death. A fungus, consistently isolated on PDA from symptomatic leaves, formed conidia singly or in short chains (2-8 elements), dark brown, with 3-7 transverse and 0-4 longitudinal septa, 23.7-73.4×8.8-15.1 µm in size, and with a conical or cylindrical beak 3.5-19.4 µm long. The pathogen was identified as *Alternaria* sp. based on morphology (Simmons, 2007). The ITS region of rDNA was amplified using ITS1/ITS4 primers and sequenced. BLAST analysis of a 523 bp segment confirmed that the sequence corresponded to *A. alternata* (GenBank accession No. HQ540552). Two pathogenicity tests were performed in greenhouse at temperatures between 23 and 26°C by spraying leaves of healthy 40-day-old sweet basil plants cv. Genovese gigante with a 10⁵ CFU/ml spore suspension. Plants sprayed only with water served as controls. Lesions resembling those observed in the field developed on the leaves 7 days post inoculation, whereas control plants remained healthy. *A. alternata* was consistently re-isolated from artificially inoculated plants. *A. alternata* has been reported on basil from Japan (Taba *et al.*, 2009). This is the first report from Italy and, to the best of our knowledge, also from Europe.

Simmons E.G., 2007. *Alternaria*. An Identification Manual. 1st Ed. CBS Biodiversity Series. Utrecht, The Netherlands.

Taba S., Takara A., Nasu K., Miyahira N., Takushi T., Moromizato Z., 2009. *Alternaria* leaf spot of basil caused by *Alternaria alternata* in Japan. *Journal of General Plant Pathology* 75: 160.

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DISEASE NOTE

**FIRST REPORT OF ROOT ROT
OF FABA BEAN CAUSED BY
RHIZOCTONIA ZEA IN TURKEY**

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Faba bean (*Vicia faba* L.) is one of the oldest crops grown in Turkey, where it ranks fourth among Fabaceae. In August 2010, during a survey for pathogenic fungi of this crop, necrotic lesions were seen on the hypocotyl and roots at Erzurum (Turkey). Small pieces of infected tissues were surface-sterilized in 1% sodium hypochlorite plated on potato dextrose agar (PDA) and kept at 22°C with a 12 h photoperiod. A fungus with orange colonies turning darker with age was consistently recovered, that produced sclerotia on the agar surface or submerged in the medium. Superficial sclerotia were more uniform and nearly spherical, mostly 0.2 to 0.5 mm in diameter, first orange then brown. Hyphae were multiseptate and multinucleate. Based on these morphological traits, the fungus was identified as *Rhizoctonia zeae* (Sneh *et al.*, 1991). Pathogenicity was assayed on *V. faba* cv. Lara seedlings grown at 25°C. in 10 cm diameter pots containing a sterile soil mixture of coarse sandy loam and sand (1:1, vol/vol). Seedlings at the first true-leaf stage were inoculated by gently removing the soil from one side of the stem, placing a colonized PDA plug 8 mm in diameter in direct contact with the base of the stem, and covering the inoculum with soil. Plugs of sterile PDA were used for controls. After 6 weeks, the plants were washed with tap water and evaluated for the presence of symptoms. Brownish lesions were observed in the crown area of infected seedlings, from which *R. zeae* was reisolated. Stems and roots of control seedlings remained unaffected. In Turkey, *R. zeae* had already been found infecting Johnsongrass (Demirci and Eken, 1999), corn kernels (Demirci and Kordali, 1999), French bean and soybean (Erper *et al.*, 2005). This is therefore the first record of this fungus from faba bean in the country.

Demirci E., Eken C., 1999. First report of *Rhizoctonia zeae* in Turkey. *Plant Disease* 83: 200.

Demirci E., Kordali S., 1999. *Rhizoctonia* species and anastomosis groups from corn kernels in Turkey. *Plant Disease* 83: 879.

Erper I., Karaca G., Özkoç I., 2005. First report of root rot of bean and soybean caused by *Rhizoctonia zeae* in Turkey. *Plant Disease* 89: 203.

Sneh B., Burpee L., Ogoshi A., 1991. Identification of *Rhizoctonia* Species. APS Press, St. Paul, MN, USA.

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