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DISEASE NOTE

First Report of Stemphylium Leaf Spot of Wheat Caused by *Stemphylium vesicarium* in Egypt

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Different lesions were frequently observed on leaves and petioles of wheat plants (*Triticum aestivum* L.) during 2020 growing season at Beni Suef governorate, Egypt. The lesions were brown to dark brown with a central white spot and a chlorotic halo (Fig. 1 A & B). The lesions were round to oval in shape and ranged in diameter from 5 to 14 mm on the leaves. Lesion scratched were cultured on potato dextrose agar (PDA) and incubated at 25°C for 7 days. The isolated fungus was identified according to its morphological and microscopic characteristics. Conidia of isolated fungi were muri form, mainly oblong to ovoid, but rarely almost globose, subhyaline to various colors of brown, mostly constricted at the median septum, and measured 1.74 - 2.86 × 12 - 14.8 µm (average 2.3 × 13.4 µm) (Fig. 1 C & D). Moreover, total DNA was isolated from mycelium removed from 7-day-old colonies of single-spore isolates grown on PDA using DNAzol reagent (Thermo Fisher Scientific, U.S.A.), and PCR amplification of the internal transcribed spacer (ITS) rDNA region was performed with primers ITS1/ITS4 (White *et al*., 1990), The obtained sequences were deposited in GenBank with accession number MZ944879. According to BLAST search in GenBank, the MZ944879 ITS sequence had 100% similarity to sequences MH628100, MH628101, MH628102, and MH628104, respectively, showed 100% identity of *Stemphylium vesicarium*. Pathogenicity test was confirmed by spraying a spore suspension (10^5 conidia ml^{-1}) produced on 7-day-old culture on healthy wheat plants (cv. Beni Suef 5), at the 5-true-leaf stage. An equal number of plants were sprayed with sterile distilled water as controls, under greenhouse conditions at Smart Agriculture Clinic Project, Beni Suef governorate, Egypt. Disease symptoms appeared on wheat, which resembled those observed under natural infection conditions. *S. vesicarium* was consistently re-isolated from artificially inoculated wheat tissues, thus verifying Koch's postulates. As the authors are far aware, this is the first report of Stemphylium leaf spot disease of wheat caused by *S. vesicarium* in Egypt.

Keywords: Wheat, *Triticum aestivum*, Stemphylium Leaf Spot, *Stemphylium vesicarium*.

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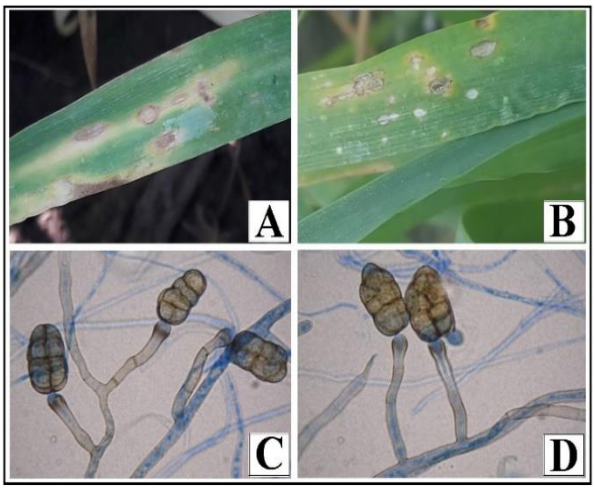

Fig. (1): Symptoms of Stemphylium leaf spot disease on wheat. Small brown spots on the infected leaves (A&B). Conidia of *Stemphylium vesicarium* (400×) in (C).

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