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DISEASE NOTE

First report of powdery mildew caused by *Podosphaera xanthii* on *Cucumis melo* in Pakistan

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Powdery mildew is a devastating disease of cucurbit crops worldwide. Symptoms of powdery mildew were observed during May, 2022 in melon (*Cucumis melo*) fields (5–8 acres) located at (33.4528532°N, 73.0284304°E) district Taxila, Punjab, Pakistan. Leaves and stems of melon varieties, i.e., honey dew, musk melon local were covered with characteristic white powdery mass. 27% of disease incidence was recorded. Five isolates were recovered and maintained on healthy melon plants. The microscopic analysis showed ovoid conidia with bifurcating germ tubes. Fibrosin bodies were confirmed by mounting conidia in 3% aqueous KOH (Takikawa et al. 2015). Conidia were produced in chains measuring upto 30.5–31.6 µm × 15.5–16.3 µm. Conidiophores were erect and singly formed with long conidial chains. The length and width of conidiophores varied from 42.5–74 × 11–16.5 µm. Sexual fruiting structures, i.e. chasmothecia were not found during the season. The morphological characters suggested that this fungus was likely to be *Podosphaera* species (Braun 2012; Miazzi et al. 2011). For confirmation up to species level, the fungal DNA was extracted and amplified ITS regions using primers S1 (5′-GGATCATTACTG AGCGCGAGGCCCCG-3′)/ S2 (5′-CGCCGCCCTGGCGCGAGATACA -3′) (Chen et al. 2008). The sequence was submitted to GenBank (OQ551186). BLAST analysis of this amplicon revealed 100% sequence identity with a *P. xanthii* strain (MK530412.1) from *C. melo*. Pathogenicity was determined by inoculating five healthy musk melon local potted plants with conidial suspension (10^5 conidia ml^{-1}). Five uninoculated plants served as control. The inoculated and uninoculated plants were placed in separate growth chamber at 25–28 °C (> 80% humidity). Symptoms on inoculated plants appeared 5–7 days after inoculation and were similar to those observed on naturally infected plants. The control plants however, remained healthy. To our knowledge, this is the first report on the occurrence of *P. xanthii* on melon plants in Taxila District (Punjab, Pakistan).

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Data availability The data regarding the current study is available from the corresponding author on reasonable request.

Declarations

Ethics approval Research involving human participants and/or animals. This article does not contain studies with human participants or animals.

Consent for publication The manuscript is new and not being considered elsewhere. All authors have approved the submission of this manuscript.

Conflict of interest The authors declare no competing interests.

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