First report of stem rot diseases of *Coix lacryma-jobi* caused by *Fusarium incarnatum* in China

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In June 2019, a stem-rot was observed on 50% of 224 *Coix lacryma-jobi* L. plants of 3 cultivation farms in Pucheng county, Nanping City, Fujian Province, China. Initially, plants exhibited dark brown spots on the stem, then the whole stem base became light to dark brown including the inner tissues. Rot rapidly expanded upward until the whole plant died. Diseased tissues were surface-disinfected with 75% ethanol twice for 30 s, rinsed with sterile water, and placed on potato dextrose agar (PDA). Colonies after 7 days at 28 °C were round and flocculent, produced dense aerial hyphae, which were at first white, and then gradually turned orange. Macroconidia were slightly curved with 3–5 septa, 22.68 to 39.23 µm × 3.06 to 5.47 µm (n = 20). Spindle-shaped mesoconidia with 3–4 septa were abundant, 17.22 to 24.07 µm × 2.78 to 4.01 µm (n = 20). Chlamydospores were absent. The fungus was initially identified as *Fusarium incarnatum* (Leslie and Summerell 2006). The ITS, LSU, TUB2, EF1 and H3 gene sequences of the representative isolate PCFI-01 were amplified using primers ITS1/ITS4, NL1/NL4, TUB2a/TUB2b, EF1/EF2 and H31a/H31b, respectively, and sequenced (GenBank accession Nos. ITS: MZ489433, LSU: MZ496923, TUB2: MZ497522, EF1: MZ497521, H3: MZ497523) (White et al. 1990; Vaghefi et al. 2021). BLAST analyses showed 99% identity with *F. incarnatum* sequences in GenBank (KX965656 for ITS, MH872348 for LSU, MT895843 for TUB2, JF715935 for EF1, MH979696 for H3). Phylogenetic analysis grouped PCFI-01 with the *F. incarnatum*

reference strains. Pathogenicity tests were conducted on 5 healthy plants, wound-inoculated by spraying with a 10⁶ conidia/ml suspension of PCFI-01. Control plants were sprayed with sterile water. After 9 days, stem rot symptoms described above were observed only on inoculated plants. The fungus isolated from those plants was identified as *F. incarnatum*. To our knowledge, this is the first report of stem rot in *C. lacryma-jobi* caused by *F. incarnatum*.

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Declarations

Conflicts of interest The authors declare that they have no conflict of interest.

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