



First report of *Aspergillus europaeus* causing postharvest bulb rot of garlic in Italy

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Received: 16 December 2019 / Accepted: 31 December 2019
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Keywords *Aspergillus europaeus* · *Allium sativum* · Calmodulin gene · Bulb rot

In 2019, landrace garlic bulbs (*Allium sativum* L.) showing brown, water-soaking lesions often covered by yellowish mould, were obtained from a storehouse of Foggia province, southern Italy. The symptoms were observed on 30% of stored bulbs. Surface-sterilized rotted portions were plated on PDA containing streptomycin and ampicillin (250 mg/L each), incubated at 24 ± 1 °C in the dark, and sub-cultured on MEA. After 7 day-incubation, colonies were 23–30 mm, plane, floccose, eventually with a raised centre; mycelium was yellowish-white to grey, and sporulation in the colony centre was strong yellow to light olive brown; a slightly pronounced light to vivid yellow soluble pigment was released in the medium. Vesicle was pyriform or globose, biseriate; metulae broadening toward the top, usually $6\text{--}25 \times 5\text{--}9$ µm, covering 3/4 to entire vesicle; phialides ampulliform, $6\text{--}11.5 \times 3\text{--}6$ µm; conidia were $3.5\text{--}5 \times 3\text{--}4.5$ µm, colourless, globose or subglobose, coarsely roughened and yellow–brown to brown at maturity. Those characteristics identified the fungus as *Aspergillus europaeus* (Hubka et al. 2016). For confirmation, DNA of a representative isolate was amplified using primers CMD5/CMD6 (Samson et al. 2014). The amplicon (GenBank accession No. MN792638) showed 100% identity with another *A. europaeus* sequence (LN909007). The strain FV3 was deposited in the fungal collection at CIHEAM Bari (Italy). For pathogenicity tests, surface-sterilized garlic cloves were pin-

prick-inoculated with 100 conidia of *A. europaeus*. Sterile distilled water was used as an uninoculated control. After 7 days at 25 ± 1 °C, typical symptoms developed only on inoculated bulbs. The re-isolated fungus corresponded to *A. europaeus*, fulfilling Koch's postulates. To the best of our knowledge *A. europaeus* have never been described on garlic, and thus this is the first report of *A. europaeus* causing postharvest rot of garlic bulbs obtained from storage in Italy. Effective control measures need to be adopted to prevent losses during storage and shelf-life

References

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