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DISEASE NOTE

First report of bud rot caused by *Cryptosporiopsis tarraconensis* on *Corylus avellana* in Italy

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During seasons 2018 and 2019, an intense monitoring activity was carried out on ten fields of common hazel (*Corylus avellana* L.), for a total of approximately 25.000 plants, located in the growing areas of Tuscia, the northern territory of Lazio region (Italy). Desiccation of minor branches and its associated leaves, and, occasionally, dry rot of buds, leading to their abortion, were observed on about 30% of mature common hazel trees during the field surveys, in particular on cv. Nocchione; the symptoms were less evident on cv. Tonda Gentile Romana and cv. Tonda Giffoni. Fungal isolation from symptomatic branches and buds was performed: small portions of symptomatic samples were surface disinfected in 2% sodium hypoclorite for 60 s, rinsed in sterile distilled water and transferred on potato dextrose agar (PDA). After 2 weeks of incubation at 25 °C ± 2 °C, a whitish to light brown mycelium, more raised in the center, was observed; after about 20 days of incubation, dark brown globular bodies also developed. Under the light microscope, acervuli (150–165 X 90–105 μm) appeared to contain aseptate, hyaline and elongate to cylindrical small conidia (7.5–16 X 4–6 μm), characterized by an evident basal scar. All the macroscopic and microscopic morphological traits so far described suggested to be in the presence of the fungus *Cryptosporiopsis tarraconensis* Gené & Guarro (Gené et al. 1990). Genomic DNA from pure mycelium of a reference isolate of the pathogen was extracted by using a commercial kit and it was used as template to amplify and sequence the Internal Transcribed Spacer (ITS) region by ITS1 and ITS4 primers. The obtained sequence (GenBank accession No. MT012300) showed 99% query and 100% identity to *C. tarraconensis* ITS region sequence deposited into NCBI database (EU707431.1). Pathogenicity test was carried out depositing a PDA disk, obtained from a pure culture of mycelium of the reference isolate numbered 2.7 preserved in the laboratory collection, on scalpel-wounded young branches of 2-years-old hazelnut cv. Nocchione: within 20 days, desiccation symptoms pretty much similar to those observed in the field appeared on all inoculated plants, but not on the control plants inoculated with a sterile PDA disk. *C. tarraconensis* was re-isolated from all the symptomatic plants according to the protocol described above. This fungal pathogen was firstly recognized as agent of bud rot or "borró sec" on hazelnut in Spain (Gené et al. 1990). More recently, it has been also indicated as responsible for foliar brown spots on hazelnut (Roohvarzi et al. 2013). To our knowledge, this is the first time that the presence of *C. tarraconensis* is reported in Italy.

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