



First report of *Neopestalotiopsis clavispora* causing crown rot in strawberry in Italy

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In October 2018, in Sele Valley (Italy), transplanted strawberry plants (*Fragaria* × *ananassa*) cv. Sabrina showed stunted starting growth. Then, a sample of 50 refrigerated plants, randomly collected from the stock, was analysed. They were externally disinfected, cut lengthwise and brown roots and crown reddish internal tissues from six plants were plated onto PDA; after two week-incubation, white and cottony fungal colonies, pale yellow on reverse side, developed, showing undulate margins and producing black acervuli, sometimes in yellow drops. Conidia were clavate ($21.3 \times 7.1 \mu\text{m}$, on average), composed by one pale yellow basal cell with two appendages ($13 \mu\text{m}$, on average), three central brown cells and a yaline apical cell with one appendage ($5.6 \mu\text{m}$, on average); the cells were separated by transverse septa. Based on the morphology, the fungus was identified as *Neopestalotiopsis* sp. (Maharachchikumbura et al. 2014).

Identification was performed by amplifying and sequencing of two genetic regions ITS (ITS1, ITS4) (White et al. 1990) (GenBank accession No. MN149348) region and actin gene fragments (Triact 1, Triact 2) from two isolates. BLAST analysis showed 100% identity with *Neopestalotiopsis clavispora* in NCBI GenBank.

Each isolate was tested for pathogenicity on five strawberry plants by injecting five millilitres of a conidial suspension (1×10^6 spores mL^{-1}) in a wound on the crown and incubated

in growth chamber, at 25 °C and 85% humidity. After two months, reddish tissues were observed inside the collar, which resembled those on the naturally diseased plants while no symptoms were detected on water controls. The pathogen was re-isolated satisfying Koch's postulate, demonstrating that *N. clavispora* was responsible of reddish collar in strawberry as reported for the first time in Spain (Chamorro et al. 2016). To the best of our knowledge, this is the first report of *N. clavispora* causing disease on strawberry in Italy.

References

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