First report of *Verticillium dahliae* causing verticillium wilt on *Stevia rebaudiana* in Europe

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Stevia rebaudiana Bertoni (Asteraceae) is an herbaceous perennial plant from Paraguay, mainly cultivated for its no-calorie sweetening compounds (steviol glycosides). The increasing market demand for steviol glycosides provides a strong incentive to cultivate this species beyond the traditional production zones (Angelini et al. 2017).

In May 2017, several *S. rebaudiana* plants cultivated in a field at the Experimental Centre of DAFE (Pisa, Italy; 43°40' N; 10°19' E) showed symptoms of a vascular disease, *i.e.* a rapid branch dieback which, eventually, led to plant death.

Stems of symptomatic plants were cut in small pieces, surface sterilized, placed on PDA with streptomycin sulfate (100 ppm) and grown at 25 °C (12-h light period). Colonies, developed from pieces, appeared concentric, slow growing, becoming dark with age on PDA. Microscopic observations revealed the presence of verticillate shaped conidiophores, of hyaline, smooth walled, non (rarely 1) septate, cylindrical with rounded apices to oval (3.0–) 5.5 (–9.2) × (2.2–) 3.2 (–4.0) µm length × width conidia and of 50–150 µm diameter microsclerotia.

To confirm morphological identification, total gDNA was extracted from a monoconidial colony (NU1A) and the ITS was amplified by PCR using primers ITS5/ITS4 (White et al. 1990). The resulting amplicon was sequenced using the same primers. The sequence was blasted, thus resulting 100% identical to the ITS sequence of the holotype *Verticillium dahliae* strain

PD322 (Accession No. HQ206718.1; Inderbitzin et al. 2011) and deposited in GenBank (Accession No. MG851988).

Koch's postulates were verified on *S. rebaudiana* plants by inoculating roots with a conidial suspension (10⁶ conidia ml⁻¹) obtained from NU1A. Water inoculated plants were used as control. After ten days of incubation at 25 °C, symptoms of tracheomycosis were registered, resulting identical to those observed in field. Fungal colonies re-isolated from the lesions appeared morphologically identical to the original isolate.

This is the first report of *V. dahliae* wilt on *S. rebaudiana* in Europe. As far as we know, the presence of this pathogen on *S. rebaudiana* was only reported in North America.

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