

## Cercospora leaf spot on *Impatiens* spp. in Argentina

S. M. Wolcan<sup>ab\*</sup>, G. M. Dal Bello<sup>b</sup> and M. Sisterna<sup>ab</sup>

<sup>a</sup>CIDEFI, Facultad de Ciencias Agrarias y Forestales, UNLP, 60 y 119 (1900) La Plata, Buenos Aires; and <sup>b</sup>Comisión de Investigaciones Científicas de la Provincia de Buenos Aires, Argentina

*Impatiens balsamina* (balsam) and *Impatiens × hawkerii* (New Guinea impatiens) are cultivated worldwide because of their ornamental value. They are used in bedding, borders and as pot plants. Since 2001, plants growing in gardens and in commercial nurseries of La Plata (Buenos Aires Province) were found to be heavily affected by amphigenous leaf spots. As the disease progressed, the appearance of lesions varied among hosts. Lesions on balsam plants were brown, with circular (up to 10 mm diameter) to irregular in shape. In most cases they coalesced and necrotic tissues dropped out of the leaves. On this cultivar, disease occurred during late summer and autumn. New Guinea red leaf cultivars had circular (up to 15 mm) and zonate spots of alternating light brown and dark brown areas with light ochre centres, distributed mainly near the leaf margins. New Guinea green leaf cultivars had circular (up to 7 mm) or irregular greyish spots with defined dark reddish-brown borders, randomly distributed on the leaf. Autumn to late spring were favourable seasons for disease development in these two cultivars. Heavily infected leaves wilted and died. Leaf spots contained scattered black, undistinguishable stromata with conidiophores that were similar on all hosts. Conidiophores were mostly straight, geniculate and unbranched. Conidia were hyaline, straight to slightly curved, with apices rounded and visible scars on the basal cells. Conidia, indistinctly multiseptate, measured 33–115 × 3–3.75 µm. The pathogen was determined to belong to the genus *Cercospora*. The fungus was easily recovered on potato dextrose agar either by transferring

mature conidia or by routine isolation. The pathogen was identified as *Cercospora apii sensu lato* (incl. *C. fukushiana*) by Dr U. Braun, Martin-Luther University Institute of Geobotany and Botanical Garden Herbarium, Halle (Saale), Germany. The pathogen was previously reported on *I. balsamina* and *Impatiens noli-tangere* (Chupp, 1954; Guo & Jiang, 2000).

Pathogenicity tests were conducted in the glasshouse by spraying 3-month-old plants of the three different hosts with an aqueous suspension of conidia ( $1 \times 10^4$  mL<sup>-1</sup>). Control plants were treated with distilled water. They were incubated in a moist chamber for 48 h, then maintained at 17–22°C. After 40 days, leaf symptoms developed into lesions similar to those produced on naturally infected leaves and the pathogen was again isolated. No symptoms appeared on control plants.

This is the first report of *C. apii s. lat.* (*C. fukushiana*) on *I. balsamina* in Argentina, and the first record of this fungus on *Impatiens × hawkerii* in the world.

### References

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\*E-mail: swolcan@speedy.com.ar. Accepted 23 September 2005 at [www.bspp.org.uk/ndr](http://www.bspp.org.uk/ndr) where figures relating to this paper can be viewed.

## First report of *Verticillium dahliae* causing verticillium wilt of *Solanum aethiopicum* in Italy

I. Camele<sup>a\*</sup>, C. Marcone<sup>a</sup>, A. Caponero<sup>b</sup>, A. Ambrico<sup>b</sup>, C. Nigro<sup>c</sup> and G. L. Rana<sup>c</sup>

<sup>a</sup>Università degli Studi della Basilicata, Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali, Viale Ateneo Lucano, 10-85100 Potenza; <sup>b</sup>Agenzia Lucana per lo Sviluppo e l'Innovazione in Agricoltura (ALSIA), Azienda Agricola Sperimentale Dimostrativa 'Pantanello', S.S. Jonica 106, 75010 Metaponto; and <sup>c</sup>ALSIA, Azienda Agricola Sperimentale Dimostrativa 'Bosco Galdo', Via Grumentina 119, 85050 Villa d'Agri (PZ), Italy

*Solanum aethiopicum* (African eggplant) is a very important vegetable throughout tropical Africa, especially in the less humid regions. It is also cultivated in some areas of southern Italy. In summer 2004, a wilt disease of African eggplant was observed at one location in the Basilicata region (southern Italy). The most characteristic symptoms included yellowing, stunting, gradual wilting and brownish discoloration of vascular tissues. To elucidate the aetiology of the disease, detection and identification of the causal agent(s) using both traditional and PCR-based methods were attempted.

*Verticillium dahliae* was consistently identified on the basis of its morphological features according to the description of Smith (1965), when cultured on potato dextrose agar from small pieces of petiole and stem tissues taken from diseased plants. With PCR assays, using the primer pair ITS5/ITS4 (White *et al.*, 1990), which are directed to fungal nuclear ribosomal DNA (rDNA) repeat sequences, an amplification product of c. 560 bp was obtained using total DNA extracted from wilt-affected African eggplant tissues, as well as from fresh mycelium of the corresponding pure culture-maintained isolate.

No PCR products were obtained with total DNA from symptomless African eggplants. Sequence analysis of the ITS5/ITS4 amplicons revealed that *V. dahliae*-infected African eggplant isolate (GenBank accession no. AJ970308) is identical to a Greek strain of *V. dahliae* (GenBank accession no. AF104926).

To fulfil Koch's postulates, 10 healthy African eggplant seedlings were experimentally inoculated by dipping their trimmed roots in a single-conidial suspension containing  $1.5 \times 10^6$  cfu mL<sup>-1</sup> obtained from 10-day-old colonies of the *V. dahliae*-infected African eggplant pure culture-maintained isolate. All inoculated plants showed symptoms identical to those of naturally infected plants. *Verticillium dahliae* was consistently reisolated from inoculated plants. This appears to be the first report of African eggplant infection by *V. dahliae*.

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### References

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\*E-mail: camele@unibas.it. Accepted 19 September 2005 at [www.bspp.org.uk/ndr](http://www.bspp.org.uk/ndr) where figures relating to this paper can be viewed.