

1 **First Report of Leaf Spot of *Salvia elegans* Caused by *Alternaria alternata* in Italy.**

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5 *Salvia elegans*, common name pineapple sage, is a perennial plant belonging to the Lamiaceae
6 family, producing fruit-scented leaves and red inflorescences and used for mix borders in parks and
7 gardens. During the summer of 2017, chlorosis and irregular brown necrosis were observed on the
8 leaf margins and on the leaf surfaces of 6-8-month-old plants growing in a private garden located in
9 Biella province (northern Italy). Affected leaves dropped prematurely. A fungus producing green
10 colonies showing light and dark concentric rings was isolated from affected tissues on potato
11 dextrose agar (PDA). The isolates, grown on Potato Carrot Agar (PCA) (Simmons 2007), at
12 light/dark (14h/10h), produced olivaceous, roughened, ovoid to obclavate conidia measuring 9-31 ×
13 6-13 (average: 17 × 8) µm. Conidia were multicellular, with 1-5 transverse and 0-2 longitudinal
14 septa. The beak was 2-5 (average: 3) µm long or absent. On the basis of these morphological
15 characteristics the fungus was identified as *Alternaria* sp. (Simmons 2007). DNA was extracted
16 from one isolate by using the E.Z.N.A. Fungal DNA Mini Kit (Omega Bio-Tek, Darmstadt,
17 Germany). A PCR reaction was performed using primers ITS1/ITS4 (White et al. 1990) to amplify
18 the internal transcribed spacer (ITS) region of rDNA. The PCR product was purified and sent for
19 sequencing to BMR Genomics (Padova, Italy). The obtained ITS sequence was not able to
20 differentiate the species of *Alternaria*. Therefore, the portion of the histone 3 gene was amplified
21 with the primers H31a (5'-ACTAAGCAGACCGCCCGCAGG-3') and H31b (5'-
22 GCGGGCGAGCTGGATGTCCTT-3') (Glass and Donaldson 1995) and sequenced. A BLASTn
23 search of the 423-bp sequence (GenBank accession number MG213850) showed 100% similarity
24 with *A. alternata* (KF280540). Pathogenicity tests were performed by inoculating leaves of three
25 healthy plants of *S. elegans* with a pure culture of the fungus grown on PDA. Controls were treated
26 with PDA without the inoculum. Successively, all plants were kept in a plastic bag for 7 days. First
27 symptoms of necrosis developed about 10 days after the inoculation only on inoculated leaves.
28 From these one was reisolated *A. alternata* whereas control plants remained healthy. *A. alternata*
29 has been reported on *S. officinalis* and *S. guaranitica* (Kameniecki et al. 2013) in Argentina, on *S.*
30 *officinalis*, *S. nemorosa* and *S. farinacea* in Poland and in Japan. To our knowledge, this is, the first
31 report of *A. alternata* on *S. elegans* in Italy. Although the importance of this disease is, at present,
32 limited, it can increase for the expanding use of *S. elegans* for landscaping.

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34 *References*

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