

# First Report of *Myrothecium roridum* Causing *Myrothecium* Leaf Spot on *Begonia* in Brazil

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## DISEASE NOTES

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## ABSTRACT

*Begonia* (*Begonia elatior*) cultivars are among the most commercialized ornamental potted plants in Brazil. Since 2012, a high incidence of plants with leaf spots has been found in greenhouses of São Paulo State, for the first time in Jacareí Municipality (23°15'58.45" S; 46°2'32.24" W). The symptoms, initially small and circular, evolve into irregularly shaped spots with a light brown color. Dark sporodochia surrounded by white hyphal tufts develop in older lesions. Symptoms were consistent with those of *Myrothecium* leaf spot observed on other ornamental plants such as gardenia, gloxinias, impatiens, and begonias in North America (Daughtrey et al. 1995). Isolations from these lesions on potato dextrose agar (PDA) produced white, floccose, concentric-ringed colonies with irregular shapes of dark green-to-black sporodochia. Conidiophores presented 2 to 4 branches at each node while phialides were hyaline, cylindrical, in whorls of 3 to 5, and measured 13 to 16 × 2.0 μm. Conidia were hyaline, one-celled, rod-shaped with rounded ends, and measured 5 to 7.5 × 2.0 μm. These characteristics are consistent with the morphology of *Myrothecium roridum* Tode (Tulloch 1972).



Sequencing of the internal transcribed spacer regions ITS1, 5.8S rDNA, and ITS2 of one *Myrothecium* isolate was performed using ITS5 (5'-GGAAGTAAAAGTCGTAACAAGG-3') and ITS4 (5'-TCCTCCGCTTATTGATATGC-3') primers (White et al. 1990) and compared with sequences in the GenBank database. The resulting 563-bp amplicon (Accession No. KJ494661) was 99% identical to the other *M. roridum* sequences present on GenBank (JF343832 and KJ174523.1). The strain was deposited in the Mycological Reference Collection of the University of Brasília (Accession No. KJ4946612246). To confirm pathogenicity, 10 begonia plants were inoculated, placing mycelial plugs on begonia leaves, from which five were previously injured with a needle tip. Plants were maintained for 7 days at 28°C at relative humidity above 80%. Ten control plants received only PDA disks. Symptoms were observed on all inoculated plants after 7 days, while control plants remained symptomless. *M. roridum* was consistently reisolated from symptomatic tissues, fulfilling Koch's postulates. This is the first report of *Myrothecium* leaf spot caused by *M. roridum* on begonias in Brazil. This pathogen has been previously reported on begonias in North America (Daughtrey et al. 1995). Begonia represents a popular ornamental plant in Brazil and damage to the foliage reduces its marketability; therefore, early and correct diagnosis is necessary to take control measures and reduce production losses.

**References:** Section:

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