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**First report of Fruit rot in pear caused by *Botryosphaeria dothidea* (Moug. : Fr.) Ces. & De Not. in Italy.**

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1 **First Report of Postharvest Fruit Rot in Pear Caused by *Botryosphaeria dothidea* (moug. Ex**  
2 **Fr.) Ces. & De Not in Italy.** A. Garibaldi, D. Bertetti, A. Poli, and M. L. Gullino, Centre of  
3 Competence for the Innovation in the Agro-Environmental Sector (AGROINNOVA) Via  
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6 Pear (*Pyrus communis* L.) is widely grown in Italy, the leading producer in Europe. In summer  
7 2011, a previously unknown rot was observed on fruit of an old variety “Spadoncina” in a garden  
8 in Torino Province (northern Italy). The decayed area of fruit was soft, brown, slightly sunken,  
9 surrounded by a margin irregular and circular. The internal decayed area appeared rotten and  
10 brown. Rotted fruit eventually fell down. Fragments (approximately 2 mm) were taken from the  
11 margin of the internal diseased tissues, cultured on potato dextrose agar (PDA) and incubated at  
12 temperatures between 20-28°C, under alternating light and darkness. Colonies of the fungus  
13 initially appeared whitish, then turning to dark gray and produced a dark pigment into the  
14 medium. After 25 days of growth, unicellular fusiform to elliptical hyaline conidia were  
15 produced. Conidia had a slightly obtuse apex and a truncated base and measured 16-24 x 5-7  
16 (average 20.1 x 5.7) µm (length to width ratios were 2.8 to 4.6 with average of 3.5). The  
17 morphological characteristics are similar to that of the fungus *Botryosphaeria dothidea* (4). The  
18 Internal Transcribed Spacer (ITS) region of rDNA was amplified using the primers ITS1/ITS4,  
19 and sequenced. BLAST analysis (1) of the 473 bp segment showed a 100% similarity with the  
20 sequence of *B. dothidea* (GeneBank accession FM955378). The nucleotide sequence has been  
21 assigned the GenBank Accession JQ418493. Pathogenicity tests were performed by inoculating  
22 six pear fruits of the same cultivar after surface-disinfesting in 1% sodium hypochlorite and  
23 wounding. Mycelial disks (8 mm diameter), obtained from PDA cultures of one strain, were

1 placed on wounds. Six control fruits were inoculated with plain PDA. Fruits were incubated at  
2  $25\pm 1^{\circ}\text{C}$ . The first symptoms developed 2 days after the artificial inoculation. After 5 days, the  
3 rot was very evident and *B. dothidea* was consistently reisolated. Non-inoculated fruit remained  
4 healthy. The pathogenicity test was performed twice. *B. dothidea* was identified on *P. communis*  
5 in the US (2), South Africa, New Zealand and Japan (3). To our knowledge, this is the first report  
6 of the presence of *B. dothidea* on pear in Italy, as well as in Europe. In Italy, the economic  
7 importance of the disease on pear fruit is at present limited, although the pathogen could  
8 represent a risk for this crop.

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