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DISEASE NOTE

First report of *Olpidium bornovanus* and *O. virulentus* on watermelon in Sardinia, Italy

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In recent years the cultivation of watermelon (*Citrullus lanatus* L.), an economic important resource in Sardinia (Italy), has been subjected to significant losses in yield and quality due to the spread of symptoms represented by root rot and vine decline. *Olpidium* spp. and *Monosporascus cannonballus* Pollak and Uecker have recently been associated with similar symptoms on melon in Central Italy (Aleandri et al. 2017). During summer 2018, in the producing area of Valledoria(~ 80 ha), northern Sardinia, 10 symptomatic plants were sampled in a field of 6 ha, where 80% of the plant showed symptoms of collapse. From symptomatic roots no *M. cannonballus* was isolated. *Olpidium* spp. was baited by growing watermelon (cultivar Melania) plants in two different soils collected adjacent to roots of symptomatic plants. Plants grown in sterilized soil were used as a negative control. Plants grown in infested soil showed after 40 days root browning, foliage chlorosis followed by plant wilt. Twelve plants were used in each thesis. Baited roots were analysed for the presence of *Olpidium* spp. by morphological methods as described by Aleandri et al. (2017). Stellate resting spores referred to as *O. virulentus* (Sahtiyanci) Karling and *O. bornovanus* (Sahtiyanci) Karling smooth-walled resting spores with a honeycomb-like pattern were observed in diseased roots. Neither disease symptoms nor *Olpidium* spores were observed from the plants grown in sterilized soil. For molecular analysis, DNA was extracted from watermelon roots, following the protocol described by Aljanabi and Martinez (1997) and tested by multiplex PCR to confirm *Olpidium* spp. identification as described by Herrera-Vásquez et al. (2009). Amplified PCR products, corresponding to *O. bornovanus* (977 bp fragment size) and *O. virulentus* (579 bp fragment size) were detected. *O. bornovanus* and *O. virulentus* are root-infecting plant pathogens of melon (Aleandri et al. 2017), and previously detected in watermelon roots in Spain (Herrera-Vásquez et al. 2009). To our knowledge, this is the first report of *O. virulentus* and *O. bornovanus* occurrence on watermelon in Italy.

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