

## DISEASE NOTE

**FIRST RECORD OF DOWNY MILDEW  
CAUSED BY *PERONOSPORA* SP.  
ON BASIL IN MALTA****A. Porta-Puglia and D. Mifsud**

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Downy mildew was observed in Malta on sweet basil (*Ocimum basilicum* L.) in three locations (Mtarfa and Żabbar, September 2005; Mellieħa, November 2005). Leaves of infected plants showed chlorotic patches starting from the central veins and a grey mildew developed on the lower leaf surface. The pathogen morphology was in agreement with the description given by Garibaldi *et al.* (2005) for sporangiophores (conidiophores) and sporangia (conidia) of *Peronospora* sp. Conidia were able to germinate directly on water agar in darkness. Fifty seedlings of basil (from local farm-produced seeds, at the stage of 8-10 true leaves) and 6 ten-month-old sage plants (*Salvia officinalis* L., from cuttings having 1-3 branches with 60-100 leaves per plant) were artificially inoculated by spraying their leaves with a water suspension of conidia ( $5 \cdot 10^4$  ml<sup>-1</sup>). An equal number of plants, sprayed with water, were used as controls. The plants were grown in pots (diam. 12 cm, filled with a mixture of peat, soil and sand) each with either 10 plants of basil or one of sage. All plants were kept in a greenhouse (20-24°C) and, after inoculation, they were covered for three days with plastic bags, which were subsequently gradually opened and removed after six days. Symptoms and signs on basil leaves developed within 5-7 days on all the inoculated plants. Inoculated sage and control plants of the two species were free from symptoms at the end of the observations (30 days after inoculation). The experiment was repeated twice with the same results. This is the first record of downy mildew caused by *Peronospora* sp. on basil in Malta. These findings confirm that this pathogen differs, at least for its pathogenic behaviour, from *Peronospora lamii* reported by some Authors on basil (Garibaldi *et al.*, 2004). More studies are needed, including biomolecular investigations, to define whether the organism which attacks basil but not sage deserves a specific rank (A. Garibaldi, personal communication).

Garibaldi A., Minuto A., Gullino M.L., 2005. First report of downy mildew caused by *Peronospora* sp. on basil (*Ocimum basilicum*) in France. *Plant Disease* **89**: 683.

Garibaldi A., Minuto G., Bertetti D., Gullino M.L., 2004. Seed transmission of *Peronospora* sp. of basil. *Zeitschrift für Pflanzenkrankheit und Pflanzenschutz* **111**: 465-469.

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