

First report of tomato anthracnose caused by *Colletotrichum boninense* in Malaysia

ABSTRACT

In May, 2013, severe anthracnose symptoms were observed on the leaves of tomato plants grown in the Cameron Highlands (Pahang, Malaysia). The disease incidence reached 40% on mature leaves. Typical symptoms included circular, immersed lesions with orange spore masses in a dark centre. When grown on potato dextrose agar at 25°C with a 12 h photoperiod, colonies of a fungus isolated from symptomatic leaves were cream-to-orange coloured. These morphological characteristics are consistent with the description of *Colletotrichum boninense* (Moriwaki et al., 2003). Conidia measured 12.5-15.5×4.6-5.1 µm, were generally cylindrical, had obtuse ends and a hilum-like low protrusion at the base. Conidial length/width ratio was 2.8 to 3.0. The internal transcribed spacer RNA region was sequenced (GenBank accession No. KM039057.1) and proved 99% similar to that of *C. boninense* accession no. KJ619456.1. Tomato plants were inoculated with 40-µl droplets of a conidial suspension (10⁵ conidia/ml) onto the surface of wounded and non-wounded leaves, using a sterilized hypodermic needle and were then kept in a moist chamber for seven days at 25°C with a 12-h photoperiod. Sterile distilled water was used for inoculating the leaves of control plants. Leaves inoculated with the pathogen showed symptoms similar to those observed in the field within 3-6 days, while no symptoms were present on controls. To the best of our knowledge, this is the first report of *C. boninense* infecting tomato in Malaysia.

Keyword: Anthracnose; Tomato; Boninense; Conidial

