FIRST REPORT OF CYTOSpora PUNICAE ISOLATED FROM POMEGRANATE PLANTS WITH SYMPTOM OF COLLAR ROT IN NORTHERN GREECE

S.C. Palavouzis¹, S. Tzamos¹, E. Paplomatas¹ and T. Thomidis²

¹Laboratory of Plant Pathology, Agricultural University of Athens, 75 Iera Odos street, 11855 Athens, Greece
²Alexander Technological Education Institute of Thessaloniki, Department of Crop Production, 57400, Sindos Macedonia, Greece

Pomegranate (Punica granatum L.) is an important crop in Greece. In spring 2011, plants of cv. Wonderful with symptoms of apoplexy were observed in Vrodou Katerinis, (northern Greece) which, at close examination revealed the presence of collar rot. Isolations from the lower margins of necrotic areaa in acidified PDA (2.5 ml 85% lactic acid per litre of medium to obtain a pH of 3.5 after autoclaving) yielded colonies with a white mycelium that turned green to dark brown and produced dark coloured pycnidia 300 to 500μm in diameter after 15 days. Hyphae were septate, conidia were hyaline, allantoid to ellipsoid (average 4-6×4.5-5.5 μm). The pathogen was identified as Cytospora punicae Sacc. based on morphometric traits and MEGABLAST comparison of the 600 bp long sequence amplified with ITS4/5 primer pair with those from database (GenBank accession No. KJ621688). Pathogenicity tests consisted in carving with a cork borer a 6 mm hole in 1-year-old shoots of pomegranate cv Wonderful, in which an agar plug excised from 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 mm, 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-ml droplets of a conidial suspension (10⁶ 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.

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Corresponding author: T. Thomidis
Fax: +302310013178
E-mail: thomidis@cp.teithe.gr; thomi-l@otenet.gr
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FIRST REPORT OF TOMATO ANTHRACNOSE CAUSED BY COLLETOTRICHUM BONINENSE IN MALAYSIA

T.S. Rashid¹, K. Sijam¹, J. Kadir¹, H.M. Saud², H.K. Awla¹ and E.M. Hata¹

¹Department of Plant Protection, Faculty of Agriculture, University Putra Malaysia, UPM, Serdang, Selangor Darul Ehsan 43400, Malaysia
²Department of Agriculture Technology, Faculty of Agriculture, University Putra Malaysia, UPM, Serdang, Selangor Darul Ehsan 43400, Malaysia

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 mm, 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-ml droplets of a conidial suspension (10⁶ 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.


Corresponding author: T.S. Rashid
E-mail: tavga2020@yahoo.com
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