Disease Note

ALTERNARIA ALTERNATA CAUSING FRUIT ROT AND LEAF SPOT ON LOQUAT IN IRAN

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A fruit rot and leaf spot disease of loquat (*Eriobotrya japonica*) was observed in May 2013 in the Sari city of Mazandaran province (Iran) on nearly 40% of the trees planted for arboretum. Tissue fragments from surface-sterilized (75% ethanol for 1 min, and 1% sodium hypochlorite for 3 min) fruits and leaves were excised and transferred to potato dextrose agar (PDA). White fungal colonies were obtained which turned grayish-black due to abundant sporulation. Pale to light brown obpyriform conidia with a beak, showing one to seven transverse and up to three longitudinal septa, measuring 10-45×7-22.5 µm, were produced in long chains. Conidiophores were straight, septate, and measured 35-100×2-5 µm. These morphological traits conform to those of *Alternaria alternata* (Simmons, 2007). Leaves and fruits of 12 healthy loquat plants were inoculated by spraying to runoff a spore suspension (10^5 conidia/ml sterilized water) from three fungal isolates, while an equal number of control plants were atomized with sterile water. After one week, characteristic symptoms resembling those observed in the field developed on all inoculated plants; control plants were symptomless. The pathogen was re-isolated from all inoculated plants. Genomic DNA from a single-spored isolate was extracted and the major allergen of *A. alternata* (Alt a 1) regions was amplified and sequenced using primers Alt-for and Alt-rev (Hong *et al.,* 2005). BLASTn analysis of a 478 bp sequence (GenBank accession No. KJ396786) showed 100% homology with *A. alternata* (AF288160). *A. alternata* is reported to infect over 48 different plants in Iran (Ershad, 2009), to which loquat can now be added.

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Disease Note

FIRST REPORT OF *BEAN YELLOW MOSAIC VIRUS* IN *ALPINIA GALANGA* IN INDIA

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Alpinia galanga (family Zingiberaceae), commonly called greater galangal or blue ginger, is a rhizomatous herb distributed in various parts of India and throughout Southeast Asia. In a garden of the Indian Agricultural Research Institute (New Delhi), 90% of the plants exhibited spindle-shaped yellow or light green streaks in the interveinal tissues and midribs. Based on symptoms and leaf dip preparations that revealed flexuous filamentous particle of *ca.* 750×12 nm, infection by the potyvirus *Banana bract mosaic virus* (BBrMV) was suspected. Antigen-coated plate (ACP)-ELISA with a general potyvirus antiserum (DSMZ, Germany) reacted positively, whereas there was no reaction with an antiserum to BBrMV raised at ICAR-National Research Centre for Banana (Tiruchirappalli). Total RNA extracted from symptomatic and healthy leaf tissues using a RNeasy plant mini kit (Qiagen, USA) was tested by RT-PCR, using Chen *et al.* (2001) degenerate potyvirus-specific primers that amplify a *ca.*1.7 kb fragment from the 3' genome end (FP: 5' GGNAAYAAYAGYGGNCARCC 3; RP: 5' GTTTTCCCAGTCACGAC$(T)_{15}$ 3'). A product of 1.649 kb was amplified from symptomatic but not from healthy plants, which was cloned and sequenced (GenBank accession No. KM198742), revealing 87-94% and 91-94% identity at the nucleotide and amino acid level, respectively, with *Bean yellow mosaic virus* (BYMV) isolates from various crops. In ACP-ELISA using a polyclonal antiserum to BYMV (NBPGR, New Delhi), 10 infected leaf samples tested positive, whereas healthy samples were negative. Thus, the symptoms observed in *A. galanga*, which resemble those elicited by BBrMV in *A. purpurata* in Hawaii (Wang *et al*., 2010) are caused by BYMV. To the best of our knowledge this is the first report of the natural occurrence of BYMV in *A. galanga* in India.

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