

**Title** First report of fruit rot of loquat caused by an *Alternaria* sp. in Taiwan  
**Authors** Y. Ko, C. W. Liu, S. S. Chen, C. Y. Chen, K. S. Yao, S. Maruthasalam and C. H. Lin  
**Citation** Plant Disease 94 (4): 481. 2010.  
**Keywords** loquat; fruit rot

### Abstract

During March 2007, a fruit rot disease was observed in several loquat (*Eriobotrya japonica* (Thunberg) Lindley) fields located in Taichung, Nantou, and Miaoli counties. Loquat is a valuable fruit crop grown predominantly in central Taiwan, and hence, even a minor yield loss by this new disease is economically significant. Symptoms on fruits initially appeared as small lesions (<1 mm) that later developed into light-to-dark brown, circular, larger (7 mm), sunken lesions, indicating invasion of a pathogen into the fruit. Pieces of rotted fruit tissue (1 × 1 × 1 mm) were immersed for 1 min in 3% commercial bleach, followed by 70% ethanol, cultured on potato dextrose agar (PDA), and incubated under constant fluorescent light (185 ± 35 μE·m<sup>-2</sup>·s<sup>-1</sup>) at 24°C for 2 days. Three single conidial isolates (*AS1* to *AS3*) were selected and used in morphological and pathogenicity studies. All three isolates were identified as an *Alternaria* sp. (1–3) and formed abundant, dark brown mycelium when cultured on PDA with light at 24°C. Conidiophores were 60 to 89 × 3 to 5 μm, densely fasciculate, cylindrical, simple or branched, and had distinct conidial scars. Conidia were 12 to 74 × 6 to 14 μm, golden brown, straight or curved, obclavate with beaks measuring half the length of the conidium, and observed in chains of 10 or more spores with four to seven transverse septa and several longitudinal septa. Pathogenicity tests were conducted twice by inoculating eight surface-sterilized wounded or unwounded fruits with each of the three isolates in each experiment. Two cuts (1 × 1 × 1 mm) were made on each fruit 3 cm apart with a sterile scalpel, and a 300-μl spore suspension (2 × 10<sup>5</sup> conidia per ml) was placed on each wound. Similarly, a 300-μl spore suspension was placed on unwounded fruits and air dried for 5 min. Control fruits were similarly treated with sterile water. Inoculated fruits were enclosed in a plastic bag and kept at 24 ± 1°C. Symptoms of soft rot were observed on 60% (unwounded) and 100% (wounded) of inoculated fruits 5 days after inoculation, while control fruits did not develop disease symptoms. Reisolation from the symptomatic fruits consistently yielded an *Alternaria* sp. This fungus previously has been reported as the causal agent of fruit rot or black spot of papaya, mango, kiwifruit, pear, and carambola from Australia, India, Malaysia, South Africa, and the United States (1–3). To our knowledge, this is the first report of fruit

rot of loquat caused by an *Alternaria* sp. in Taiwan. To manage this disease, growers may resort to fungicidal sprays followed by bagging of fruits to reduce pre- and postharvest losses.