

Etiology of Apple Leaf Spot Caused by *Colletotrichum* spp. in China

WANG Wei FU Dan-Dan ZHANG Rong* and SUN Guang-Yu*

State Key Laboratory of Crop Stress Biology in Arid Areas / College of Plant Protection,
Northwest A&F University, Yangling, Shaanxi 712100, China

Glomerella leaf spot pathogens can infect apple leaves, causing extensive necrosis and premature defoliation, as well as necrotic spots on fruit. In recent years, the disease has been reported with increasing frequency in China, and appears to be spreading rapidly in some apple-producing areas. In this study, fungal isolates from diseased apples leaves collected in Henan and Shaanxi provinces were analyzed based on morphology, cultural characters, pathogenicity and molecular phylogenetics. It was found that *Glomerella* leaf spot of apple was caused by two pathogens, *Colletotrichum fructicola* and *C. aenigma*. Pathogenicity tests showed that *C. fructicola* and *C. aenigma* could infect apple leaves of cultivar Golden Delicious, as well as Gala, Qinguan, Pink Lady, Pacific Rose, Golden Century and Honeycrisp, all of which include Golden Delicious in their parentage. In wound inoculation experiments, *C. fructicola* and *C. aenigma* were pathogenic to fruit of Gala, Qinguan, Golden Delicious, Pacific Rose, Starkrimson and Fuji. With non-wounded fruit, *C. fructicola* was pathogenic to Gala and Golden Delicious, and *C. aenigma* was pathogenic to Gala. It is concluded that the two pathogens could be differentiated according to pathogenicity to leaves and fruits of different apple cultivars.

Keywords : *Colletotrichum fructicola*, *Colletotrichum aenigma*, bitter rot, *Colletotrichum gloeosporioides* complex