

Pathogen of apple ring rot in China

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Apple ring rot occurs through out the apple growing areas of China. The disease is characterized by ring rot on fruit and the wart symptom on bark. In Chinese literature, the causal pathogen was listed as *Botryosphaeria beregeriana* f. sp. *piricola*. The *Botryosphaeria* canker, which usually cause fruit rot and branch or shoot blight on infected trees without the symptom of wart, also occur in apple orchards in China. The pathogen of this disease was referred as *Botryosphaeria ribis* or *Botryosphaeria dothidea* in different reference. Moreover, ring rot and *Botryosphaeria* canker also occurs on pear. However, the relationships between the pathogen of these diseases in China are not clear. In this study, the pathogens of these diseases were investigated on the morphology, pathogenicity and the sequence of rDNA in the ITS region, and genes of beta-tubulin and Actine. Thirty isolates collected from the tissue with symptom of above diseases respectively were used. The morphological characters of these isolates are similar and closely resemble to *B. dothidea*. Phylogenetic trees from these three genes are similar. All the isolates were clustered together with *B. dothidea* but separated from *B. ribis* and other close related species in this genus. When these isolates were inoculated on apple branches without wounding *in vivo*, wart symptom formed after 50 days. Results of this study suggest that *B. dothidea* is the pathogen of apple ring rot in China, and this pathogen can also cause the pear ring rot and *Botryosphaeria* canker of apple and pear in China