

4-14. Species identification and pathogenicity study of *Colletotrichum* isolates isolated from red-pepper and Chinese matrimony vine

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This study reports the identification of species of *Colletotrichum* strains originating from red-pepper and Chinese matrimony vine in Cheongyang. Nineteen isolates of red-pepper and 26 *Colletotrichum* isolates of Chinese matrimony vine were compared with 5 isolates of strawberry representing *C. gloeosporioides*, by use of morphological and cultural criteria. Twenty three isolates among 26 isolates from Chinese matrimony vine were identified as *C. acutatum*, characterized by the low growth rates and the low sensitivity to carbendazim and diethofencarb. Also, all the isolates of red-pepper were identified as *C. acutatum*, showing the same characteristics as those of Chinese matrimony vine. Three and five isolates from Chinese matrimony vine and strawberry, respectively, were identified as *C. gloeosporioides*, characterized by the high growth rates and the high sensitivity to carbendazim and diethofencarb. There were differences in colony color and pathogenicity between Chinese matrimony vine isolates and red-pepper isolates of *C. acutatum*. The isolates of *C. acutatum* from Chinese matrimony vine producing orange colored colonies with abundant spores showed the strong pathogenicity to Chinese matrimony vine, although they could not infect fruits of red-pepper by the wound inoculation. However, red-pepper isolates of *C. acutatum* producing gray colonies showed the strong pathogenicity to Chinese matrimony vine as well as red-pepper. Furthermore, comparative study on PCR amplification of ITS regions of rDNA was carried out using a number of *Colletotrichum* isolates. A species-specific primer could be used for the identification of *C. acutatum* from red-pepper and Chinese matrimony vine.

4-15. First report of white rot on a wild garlic(*Allium monanthum*) caused by *Sclerotium cepivorum* and *Sclerotium* sp.

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White rot on garlic caused by *Sclerotium cepivorum* firstly occurred at Goheoung, Jeonnam in 1998. Thereafter, the disease rapidly spread throughout the country except Gangwon and became a major limiting factor for the cultivation of various *Allium* species such as garlic, onion, and welsh onion. The disease that has not been reported on a wild garlic(*Allium monanthum*) previously occurred severely at Seosan, Choongnam in 2003. Among cultivation areas in the region, 10.7% were infected by the disease and the ratio of diseased plant reached up to 55.0% in some heavily infected fields. Two species of *Sclerotium* were consistently isolated from infected samples and identified as *S. cepivorum* or another *Sclerotium* sp. Averaged size of sclerotium of the former was 455.0×562.2 μm , while the later was 374.4×347.2 μm . Patogenicity to *Allium* species and mycological characteristics

such as sclerotium size, growth temperature, and microconidia of the fungi were similar to those reported on other *Allium* species previously. Consequently, the wild garlic is a newly reported host of the two pathogenic fungi in Korea.

4-16. Identification of *Phoma* sp. Detected on Rice Seeds

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A *Phoma* sp. was detected on rice seeds and was identified as *Phoma sorghina* (Sacc.) Boerema, Dorenbosch & Van Kesteren based on their morphological and cultural characteristics. On oatmeal agar, pycnidia were abundant, solitary, scattered or gregarious, subglobose to flask-shaped, usually with a distinct neck and ostiole, glabrous, blackish-brown, 55~185 x 40~170 μm in size. Conidiogenous cells were monophialidic, hyaline, subglobose to ampulliform, 3-5 μm in diameter. Conidia were ovoid to ellipsoidal, hyaline, unicellular and measured 3.5~6.0 x 1.5 ~ 3.0 μm (usually 4.0~5.0 x 2.0~2.5 μm) in size. Chylamydospores were variable, uni- or multicellular, intercalary or terminal, solitary or in chains, dictyosporous or botryoid. NaOH spot test was positive on malt extract agar. This is the first report of *P. sorghina* identified on rice seeds in Korea.

4-17. Anthracnose of Rapsberry(*Rubus coreanus*) Caused by *Colletotrichum coccodes* in Korea

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Anthracnose occurred on rapsberry grown in Gochang areas of Korea in 2003. The disease incidence was ranged from 1.1 to 2.6%. Anthracnose of rapsberry appeared as dark brown circular spots on naturally infected stems. The symptoms of infected stems were small brown to dark brown spots and gradually enlarged larger cylindrical dark brown lesions. The causal fungus of anthracnose isolated from the diseased plants was identified as *Colletotrichum coccodes* based on the morphological and cultural characteristics. All isolates of *C. coccodes* were produced similar symptoms on the host leaves by artificial inoculation.

4-18. Leaf Blight of Kudzu (*Pueraria lobata*) caused by *Fusarium solani*

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Leaf blight of kudzu (*Pueraria lobata*) was found in Jeonbuk province in 2002. The main symptoms appeared as leaf blight and showed yellowing and wilting. The causal pathogen of the leaf blight was isolated from symptomed kudzu leaf and produced white to cream, usually floccose