

results indicate that *D. bryoniae* isolates from Korea contain three additional subgroups as well as two subgroups reported previously. We also analyzed sequences of internal transcribed spacer (ITS) region for isolates of each group.

A-11 Regional distribution of two species of *Sclerotium* causing white rot of *Allium* crops and comparison of the pathogenicity between the two pathogens. Yong-Ki Kim, Mi-Kyung Kwon, Tack-Soo Kim, Hong-Sik Shim, Wan-Hae Yeh, Weon-Dae Cho, Seong-Chan Lee¹, Yong-Hwan Lee², Suk-Ju Koh² and Chan-Jung Lee³ Plant Pathology Div., National Institute of Agricultural Science and Technology, Suwon 441-707, Korea, ¹Agricultural Environment Div., National Institute of Subtropical Agriculture, jeju 690-850, Korea, ²Jeonnam Agricultural Research & Extension Services, Naju 520-715, Korea, ³Onion Experimental Station, Kyungnam Agricultural Research and Extension Services, Changryung 635-800, Korea

White rot of *Allium* crops has known to be caused by two species of *Sclerotium* in Korea. In the past time white rot of *Allium* crops was caused by only one species, an unidentified *Sclerotium* sp. forming a little larger sclerotia than those of *Sclerotium cepivorum*. However, in recent date *Sclerotium cepivorum* have isolated frequently from the diseased *Allium* crops. In this study we compared DNA profiles between the two species, and between native isolates of *Sclerotium cepivorum* isolated from Korea and a standard isolate originated from the Netherlands. It was confirmed that *Sclerotium cepivorum* isolated newly in Korea belonged to group b based on DNA profile using UP PCR described by Tyson et al in 2002. Disease survey was conducted to confirm regional distribution of two species of *Sclerotium* in main garlic cultivation areas, Chungnam, Gyungbuk, Gyungnam, Jeonnam, and Jeju provinces. The survey showed that isolation frequency of *Sclerotium cepivorum* new-isolated recently was higher in garlic cultivation regions in which garlic seeds had been exchanged frequently among garlic farmers and garlic cultivation regions. With a simple pathogenicity method using the sliced clove, the pathogenicity of the two species of *Sclerotium* isolated from garlic, onion, welsh onion and wild rocambole was compared on garlic, onion, welsh onion and wild rocambole. The same *Sclerotium* species showed similar pathogenicity regardless the kinds of *Allium* crops as isolation origins of white rot pathogens. The pathogenicity of *Sclerotium cepivorum* was much higher than that of *Sclerotium* sp. In addition the sclerotia were formed earlier on *Allium* crops infected with *Sclerotium cepivorum* than those with a native pathogen, an unidentified *Sclerotium* sp. And the

same isolates showed similar required period for sclerotia formation regardless the kinds of *Allium* crops as isolation origins of white rot pathogens.

A-12 Characterization of new *Penicillium* isolates associated with *Penicillium* decays on citrus in Jeju Island. Jae-Wook Hyun, Seung-Beom Hong¹, Dong-Hwan Kim, Hyeog-Mo Kwon, and Han-Cheol Lim. Subtropical Environment Division, National Institute of Subtropical Agriculture, R.D.A. Jeju, Korea, 699-803; ¹Genetic Resource Division, National Institute of Agricultural Biotechnology, R.D.A. Suwon, Korea

Penicillium decays caused by *Penicillium* spp. is the most important postharvest disease of citrus in Jeju Island. Some isolates having different symptom compared to blue and green mold were isolated from rotten citrus, and it was assessed the growth rate, sensitivity to fungicide and pathogenicity in the typical 2 isolates (strain 902-H-1 and Blue) of them. The pathogenicity was less than *P. digitatum* and *P. italicum* caused green and blue mold respectively, and the mycelial growth on PDA was lower than. The isolates were resistant to iminoctadine *in vitro* test. The strain 902-H-1 and Blue were identified to *P. sclerotiorum* and *P. solitum* by identification based on morphological characteristics and analysis of sequence of betatubulin gene respectively.