

simultaneous inoculation of root pathogen resulted in resistance to infection by root pathogenic fungus *F. oxysporum* as compared with control seedlings. The survival rate of the seedlings inoculated with *F. oxysporum*, and subsequently with ECM fungi was averaged by 52%, but pre- or simultaneous inoculation of ECM fungi completely protected *P. densiflora* seedlings against root infection by *F. oxysporum*. Disease suppression by ECM fungi in *P. densiflora* is, therefore, associated with an increase of fungitoxic or fungistatic metabolites excreted by symbiotic ECM fungi to the rhizosphere of seedlings.

D-40 Selection of effective nutrient sources for mass culture of the biocontrol bacteria *Bacillus amyloliquefaciens* A-2. Han Woo Kim, Ok Ju Chun, Kwang Youll Lee, Hyun Ki Kong, Soon Je Jung, Seon Woo Lee and Byung Ju Moon. Dong-A University, 840 Hadan2-dong, Saha-gu, Busan, Korea

Bacillus amyloliquefaciens A-2 strain exhibited the remarkable disease control value against the tomato leaf mold disease caused by *Fulvia fulva*. The optimal temperature of the bacterial growth was 30~35°C when cultured in nutrient broth. For the mass production of the biocontrol bacteria A-2, various carbon sources were amended and tested in a basal medium. It appeared that supplement of rice oil in a fermentation medium produced the highest cell density. Therefore, basal medium with 3% of rice oil (named as rice oil medium) was finally selected as a optimal medium for the mass production of biocontrol strain *B. amyloliquefaciens* A-2.

D-41 Screening and Characterization of Plant Growth Promoting *Pseudomonas* spp. for Biological Control of Damping off of Pepper caused by *R. solani*. M. Rajkumar¹, H. M. Kim¹, K. J. Lee¹, W. H. Lee¹, J. H. Kim² and B. T. Oh³. ¹Division of Biological Resources Science, Chonbuk National University, Jeonju 561-756, Korea ²Jeollabuk-do Agricultural Research and Extension Services, Iksan 570-704, Korea ³Department of Environmental System Engineering, Hallym University, Chuncheon 200-702, Korea

Fluorescent pseudomonads isolated from the rhizosphere of red pepper were screened for their ability to control the damping off of pepper caused by *R. solani*. Among a collection of pseudomonads, 13 isolates showed an inhibition of mycelial growth of *R. solani* in *in vitro* duel culture assay and some isolates increasing the growth of pepper in roll towel assay. Further, these 13 isolates were screened for the