

G-77 Induction of disease resistance by the plant activator, acibenzolar-S-methyl(ASM), against Gray mold(*Botrytis cinerea*) in tomato plants. J.S.Lee¹, N.J.Kang², S.T.Seo¹, J.H.Park¹, K.S.Han¹, H.I.Jang¹ ¹National Horticultural Research Institute, Suwon 440-706, Korea ²Protected Horticulture Experiment Station, Pusan 618-800, Korea

The plant defence activator acibenzolar-S-methyl(benzo[1,2,3] thiadiazole -7-carbothioic acid-S-methyl ester, ASM;Bion 50 WG) was assayed on tomato seedlings for its ability to induce resistance against *Botrytis cinerea*, the causal agent of gray mold in tomato. Pre-treatment of plants with ASM reduced the severity of the disease as well as the growth of the mycelium in planta. In ASM treated plants, reduction in disease severity(up to 55%) was correlated with suppression of mycelia growth(up to 46.5%) during the time course of infection. In plants treated with ASM, activities of peroxidase(POX) were determined as markers of resistance. Applications of ASM induced a progressive and significant increase of the enzymes in locally treated tissues. Such responses were expressed earlier and with a much higher magnitude when ASM-treated seedlings were challenged with the pathogen, thus providing support to the concept that a signal produced by the pathogen is essential for triggering enhanced synthesis and accumulation of the enzymes. No such activities were observed in water-treated control plants. Therefore, the slower symptom development and reduction in mycelium growth in ASM treated plants might be due to the increase in activity of oxidative and antioxidative protection systems in planta.

G-78 Management of Strawberry Powdery Mildew by Controlling Micro-climatic Conditions in Plastic Greenhouse Cultivation. Kyoung-Yul Ryu¹, Hyeong-Jin Jee¹, Jong-Ho Park¹, Du-Hei Choi¹, Byung-Mo Lee¹, and Sek-Ki Mun² ¹ Organic Farming Div. National Institute of Agricultural Science and Technology, Rural Development Administration, Suwon 441-707, Korea. ² Icheon-si Agricultural Technology Center, Icheon, Gyeonggi, 467-801, Korea.

Powdery mildew of strawberry caused by *Spaerotheca aphanis* is one of the most serious diseases in the plastic greenhouse cultivation. Because of the disease epidemics depend largely on environmental conditions, manipulation of the microclimates play an important role in suppression of the disease. Effects of a light fan namely 'Baramdori' on control of climatic factors and the disease were investigated in this study. When the fan was installed in a green house CO² concentration around the