activity against bacterial grain rot which generate major diseases of rice. It is found that antagonist BAC03-1 having an advantage to impede the growth of *Burkholderia glumae*. Yet such an outcome derives from *B. subtilis* BAC03-1 producing antibiotics to the great extent when was grown in dextrose+1% potato broth medium. MIC and MBC of the *B. subtilis* BAC03-1 culture filtrate against *B. glumae* were 1 : 8 and 1 : 4, respectively. Results from the greenhouse trial using the three varieties showed very low rice blast severity with the inducer concentration of 108 cfu level. Highest protection against the rice grain rot pathogen when applied at the time of heading. B. subtilis BAC03-1 produced antibiotic substances as a water-soluble material, discharging in culture medium. Maximum inhibition apparently demonstrated following the growth of culture in PDB medium for 5 days. Keywords: Antibiotic effect, *Bacillus subtilis* strain BAC03-1, rice, *Burkholderia glumae*

D-44 *Bacillus subtilis* Strain BAC03-1 as an Antibiotic Effect on Bacterial wilt of *Capsicum annum, Ralstonia solanacearum.* Yeon Kyu Hong[1], Young Ki Lee[2], Bong Choon Lee[1], Seok Bo Song[1], and1 Sung Tae Park[1] [1]Yeongnam Agricultural Research Institute of NICS, RDA, Milyang 627-803, Korea [2]National Institute of Agricultural Science and Technology, RDA, 441-707, Korea

Bacillus subtilis Strain BAC03-1 was used for demonstration on antagonistic activity against bacterial wilt of which generate major diseases of *Capsicum annum*. On the growth control of *Ralstonia solanacearum* causing bacterial wilt in red pepper was conducted, using the antagonist *B. subtilis* strain BAC03-1. It is found that antagonist BAC03-1 having an advantage to impede the growth of *Ralstonia solanacearum*. The strain BAC03-1 gave the best relative protection (62%) against root and stem infections, when applied prior to and after inoculation with the pathogen. The highest shoot protection level (95%) was obtained when the bacterial antagonist was applied as a suspension from lyophilized cells. Yet such an outcome derives from *B. subtilis* BAC03-1 producing antibiotics to the great extent when was grown in dextrose+1% potato broth medium. Results from the greenhouse trial using the three varieties showed very low bacterial wilt severity with the inducer concentration of 108 cfu level. Keywords: Antibiotic effect, <>strain BAC03-1, *Capsicum annum, Ralstonia solanacearum*