Project Title	:	Investigations on Identification of Bacterial Pathogens Causing Tomato Pith Necrosis by Using Molecular Methods, Seed Detection and Disease
Start /End Date	:	2004-2007
Supporting Body	:	GDAR
Leader	:	Prof. Dr. Hikmet SAYGILI
Co-researchers	:	Assoc. Prof. Dr. Yesim AYSAN, Prof. Dr. Fikrettin SAHİN, Dr. Nursen ÜSTÜN, Prof. Dr. Necip TOSUN, Dr. Hüseyin TÜRKÜSAY, Prof. Dr. İbrahim YOKAŞ, Dr. Raziye ÇETİNKAYA, Hakan ALTUNLU, Dr. Mustafa MİRİK
Summary	:	In the study carried out between 2004-2006 the causal agents of tomato pith necrosis in the greenhouses of Mediterranean and Aegean Region of Turkey were determined. Seven *Pseudomonas* species (*P. viridiflava*, *P. mediterranea, P. cichorii*, *P. fluorescens*, *P. corrugata* and two unidentified *Pseudomonas* sp) and two *Erwinia* species (*E. carotovora* subsp. *carotovora* and *E. chrysanthemi)* were proven to be the causal agents of the disease. The isolates were identified on the basis of morphological, biochemical, pathojenicity, serological, fatty acids profile, and classical PCR and BOX-PCR tests. Towards disease management two greenhouse experiments arranged on a greenhouse bench using a factorial randomized plot design (with 30 characters and 3 replications) were carried out between the years of 2004-2006 in Ortaca town of Muğla province of Aegean Region of Turkey. The influence of three potassium (100 ppm, 200 ppm and 400 ppm) and two calcium (60 ppm and 120 ppm) levels on pith necrosis caused by four different bacteria (*P.corrugata*, *P. cichorii*, *P.viridiflava* and *E. carotovora* subsp.*carotovora)* were determined. The yields of the plants and also some quality criteria were measured for each treatment. In both of the experiments differences in potassium and calcium levels influenced the severity of tomato pith necrosis and significant (P=0.05) differences between treatments were observed. Two years results showed that treatments comprising highest levels of potassium (400 ppm) and calcium (120 ppm) not only reduced disease index significantly for most of the bacteria, but also led to the highest yield and the best quality.