

Project Title : Investigations on the Measurements Focused on Biological Control Against Fusarium Wilt of Cucumber (*Fusarium oxysporum* f.sp. *cucumerinum* J.H. Owen) in Greenhouse

Start /End Date : 2001-2004

Supporting Body : GDAR

Leader : Nedim ALTIN

Co-researchers : -

Summary : *Fusarium oxysporum* f.sp. *cucumerinum* is a soil- borne pathogen and can invade the host plant in all stages of developmental period. In the present study, an integration of the preventive measures based on nutritional competence, induced resistance, usage of resistant variety and combination of the fertilizers in which the pathogen appeared to be susceptible, was tried to be established. for protecting the cucumber plant from *F. oxysporum* f. sp. *cucumerinum*. Fluorescent pseudomonad isolates (161) were screened for their antagonistic activity *in vivo* and *in vitro*, simultaneously, against *F. oxysporum* f. sp. *cucumerinum*. The best five isolates among fluorescent pseudomonads tested, were selected at result of the final *in vivo* test. These selected isolates were tested on the most common cucumber varieties, and according to the result of dual combination tests, pot experiments were conducted for establishing the effect of fertilizer.

Pseudomonas putida strain 24/2 was showed antagonistic effect (55.+48%) via induced systemic resistance mechanism against Fusarium wilt.