B 051

The effect of four antagonists *Fursarium oxysporum* causing Fusarium rot of cucumber

Individual and combined effects of *Baillus macerans* (Bm), *Flavobacterium sp*.(F1), *Pantoea agglomerans* (Pa) and *Candida lusitaniae* (CL) on growth inhibition of *Fusarium oxysporum* were determined. Both live cells in phosphate buffer (LC), and cell free spent culture medium of nutrient broth (CFCM) were evaluated separately. The CFCMs were obtained by Millipore filtration of nutrient broth in which each antagonist was incubated (24 h). In conidial germination assays, qual volumes (50µl) of conidial suspension (10^5 CFU/mL) of pathogen in 1% sucrose and LC of antagonist/s (10^8 CFU/mL) in phosphate buffer, or in CFCM or in nutrient broth were mixed separately. Germinated conidia (n=2,600) were counted at 8, 16 and 24 h.

On cucumbers (n=200), three wounds per fruit were made. A conidial suspension ((10^5 CFU/mL) in distilled water was inoculated 24 h after inoculating antagonist/s in LC in buffer, or CFCM only or nutrient broth only. Lesion sizes were noted on 8th 10th and 12th days.

All treatment significantly (p+0.05) reduced % germination of conidia and lesion expansion. The buffer had an inhibitory effect thus hindering interpretation of results of LC. Bm showed the highest inhibition in conidial germination. Of the individual effects on lesion expansions a significant effect was observed Bm, F1 and Cl. Of the combined effects a significant reduction was observed with Bm + Pa, Fl + Cl and Pa+Cl.