

EFEITO ANTAGÔNICO DE RIZOBACTÉRIAS SOBRE A PODRIDÃO
RADICULAR DE PEPINO CAUSADA POR Fusarium solani

ANTAGONISTIC EFFECT OF RHIZOBACTERIA ON Fusarium solani
ROOT ROT IN CUCUMBER

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Fusarium solani and F. oxysporum f.sp. cucumerinum cause root rot and wilt of cucumber. Both pathogens cause serious problems in glasshouse conditions in São Paulo State. Bacteria isolated from diseased and healthy cucumber root surface were tested for their antagonism toward F. solani and F. oxysporum in vitro. Zones of inhibition occurred within 7 days on dilution plates and the bacteria (within) in the zones were removed and streaked on NA plates and single colonies were transferred to NA. Zones were either large (i.e., 5 mm or greater in diameter) or small (i.e., less than 5 mm in diameter). In this test eight rhizobacteria were isolated and retested individually against the pathogens. In glasshouse conditions we included 3 rhizobacteria previously selected as potential agents against some pathogenic fungi and, in this case, the assay was carried out with F. solani. Cucumber cuttings were inoculated with antagonistic bacteria by dipping in a bacterial suspension, immediately before planting in soil artificially infested with F. solani. None of the bacterial strains isolated from cucumber reduced the severity of the pathogen. Other isolates, such as, CNPDA-OG (Bacillus sp. from bean root surface), CNPDA-SBAR and CNPDA-CAPN reduced significantly the amount of Fusarium root rot. Isolate CNPDA-OG presented a total control of the disease. Isolates SBAR, CAPN and PEP-5 (from cucumber) presented a control of 87,59%, 31,00%, and 44,2%, respectively, and increased the growth of cucumber plants. The isolate PEP-5 from cucumber, reduced shoot and root weights.

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