

SEED-PROTECTANT FUNGICIDES TO DECREASE THE INCIDENCE OF DAMPING-OFF CAUSED BY *RHIZOCTONIA SOLANI* IN COTTON SEEDLINGS

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With the cancelling of registration of the mercuric fungicides as seed protectants in Israel, a program has been initiated to seek alternative fungicides for seed treatments. Preliminary results in Israel indicated that soils in which cotton was grown were naturally infested with virulent isolates of *Rhizoctonia solani*. In addition, the fungus was frequently isolated from hypocotyl lesions in seedlings of either Acala SJ-2 or Pima S-5 cotton cultivars.

Under laboratory conditions (LD 8:16, 30°/20°C) the following fungicides were tested (per kg of seeds): 7.0 ml PCNB + etridiazole (Terracoat L-205), 6.0 g tolclofos-methyl + thiram (Rizolex-T), 5.0 g carboxin + thiram (Vitavax 200), 5.0 g carboxin + captan (Vitavax 300), 3.0 g pencycuron (Monceren) and 3.0 g captan (Marpan) + PCNB. They effected an increase in seedling emergence as well as a decrease in the degree of disease as compared with Caspan (ethoxymercuric chloride, a mercuric fungicide in use until last year) or untreated seeds. Oxine-copper (Quinolate 15 Plus) (4.0 g/kg seeds) and thiabendazole + 8-hydroxyquinoline (TOG) (3.0 ml/kg seeds) also decreased the disease index but were inferior to the above mentioned fungicides. These results were obtained with seeds planted in either naturally infested or artificially inoculated (0.1 g fungal propagules f. wt/kg soil) soils. These fungicides were also effective in inhibiting the development of seedborne *Rhizopus* spp., supposed to play an important role in decreasing seedling stands under adverse conditions.