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PERFORMANCE OF COTTON SEED TREATMENTS UNDER DIFFERENT DISEASE PRESSURES

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Abstract

A trial was conducted to compare cotton seedling survival and seed treatment efficacy in plots which were not inoculated and in plots in which disease pressure was increased by inoculation with *Rhizoctonia solani*, *Pythium*, or both fungi. The eighteen seed treatment entries in the 2001 Beltwide Cotton Seed Treatment were evaluated. Experimental Design was a Randomized Complete Block with Factorial arrangement of treatments. The first level was inoculation type and the second level was seed treatment. Seedling survival was determined at 2 and 4 weeks after planting. The percent final stands (4 weeks after planting) averaged 44.1 for the plots which were not inoculated, 29.6 for the plots inoculated with *Pythium*, 4.5 for the plots inoculated with *Rhizoctonia solani* and 5.4 for the plots inoculated with both fungi. In the final stand counts of the plots which were not inoculated, 13 of the 20 seed treatments had significantly higher seedling survival over the untreated control. Seven of the seed treatments in the plots inoculated with *Pythium* had significantly higher final seedling survival over the untreated control. Seven of the treatments in the plots inoculated with *Rhizoctonia solani* and 11 of the treatments inoculated with both fungi had significantly higher seedling survival over the untreated control. Even though there were significant differences between the seed treatments, none of the treatments gave an acceptable stand under the conditions of this trial when plots were inoculated with *Rhizoctonia solani* or both fungi.