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SCREENING UPLAND COTTON FOR RESISTANCE TO *RHIZOCTONIA SOLANI*: METHODOLOGY AND RESULTS

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Seedling disease is the most economically important disease of upland cotton and the fungus *Rhizoctonia solani* is one of the principal pathogens involved. Planting resistant cultivars is not currently a control strategy against seedling disease. This research developed a greenhouse-based assay to screen cotton germplasm for resistance to *R. solani*. Diverse germplasm consisting of 24 obsolete and modern cultivars was screened. Seeds were planted in Conetainer™ planting tubes and germinated at 27°C for 3 days. Established seedlings were inoculated with an aqueous suspension of *R. solani* mycelia, placed in an environmentally controlled greenhouse, night/day range of 16/32C, then scored after 5 days. A total of at least 60 plants of each genotype were scored. Differences in survival ranged from an average of 50% to 10% ($P<0.05$). The three most resistant cultivars (Stoneville 506, Lankart 57, and Lone Star) all share a common lineage, other members of which may also be sources of resistance to *R. solani.*