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Reduction of Verticillium Wilt Symptoms in Cotton Following Seed Treatment with *Trichoderma virens*

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Strains of *Trichoderma virens* that control damping-off of cotton seedlings caused by either *Pythium ultimum* or *Rhizoctonia solani* were tested for their ability to induce resistance to Verticillium wilt. Cotton seeds were treated with dried preparations of *T. virens* and planted in field soil. Plants with six true leaves were inoculated with *Verticillium dahliae* by stem puncture. After 10 d, plants were rated for Verticillium wilt symptoms and plant heights measured. Two strains of *T. virens* significantly reduced ($\alpha = 0.05$) the disease-severity ratings in *V. dahliae*-inoculated plants of two cotton cultivars, Rowden and Deltapine 50. This result indicated that *T. virens* may induce a systemic resistance response in cotton, but concentrations of terpenoid phytoalexins in stele extracts were not significantly different in *V. dahliae*-inoculated plants that had been treated with the *T. virens* when compared with plants treated with the carrier alone. In the absence of *Verticillium*, plants treated with the G-4 isolate of *T. virens* were significantly taller than control plants treated without *T. virens*. This result indicates that some strains of *T. virens* may have growth-promoting activity.