

**Project Title** : Improvement of Turkish Cotton Varieties Using Molecular Techniques

**Start /End Date** : 2004-2007

**Supporting Body** : GDAR

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**Summary** : In a study of pathotype diversity in *Verticillium dahliae* in Turkey, a collection of 302 isolates recovered from cotton at 17 provinces in 2004, was examined. Two pathotypes were found and identified as defoliating and non-defoliating by using international reference strains. Of the defoliating isolates, 93% were recovered from the Aegean region of Turkey and 77% of the non-defoliating isolates were recovered from the Çukurova and Southeast Anatolia region of Turkey. Differences in virulence of the pathotypes were determined with pathogenicity tests. Most of the isolates in non-defoliating pathotype induced weak to moderate symptoms on cotton and were similar to the previously described cotton non-defoliating pathotype. In contrast, all cotton isolates in defoliating caused severe foliar symptoms, stunting and often death. Results in this study furthermore showed that isolates of Aegean region belong to both pathotypes were more virulent than the other region isolates. This is the first report of regional variation in virulence among the same pathotype group isolates in Turkey.