

VARIABILITY IN THE SORGHUM ANTHRACNOSE FUNGUS COLLETOTRICHUM GRAMINICOLA IN BRAZIL AND USA

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Phenotypic diversity, as detected for 10 RAPD (Random Amplified Polymorphic DNA) and virulence on 8 sorghum differential cultivars were compared for 29 monoconidial isolates from four different sorghum areas of Brazil (Minas Geraiz, Goias, Pernambuco, and Rio Grande do Sul) and 9 monoconidial isolates from the United States (Texas and Georgia). RAPD reactions were conducted using one cycle of 3 minutes at 94C, followed by 40 cycles of 1 minute at 94C, 1 minute at 36C, and 2 minutes at 72C. Virulence tests were carried out under greenhouse conditions, using the sorghum genotypes TX378, SC326-6, SC283, TX623, Brandes, TX398, TX2536, and SC748-5 as differentials.

Greater diversity was found for RAPD markers than for virulence indicating that this type of markers may be a powerful tool in the study of plant pathogen variability. No relationship between geographic and phenotypic distance was found. Respectively 8 and 5 phenotypic clusters, based on RAPD and virulence data were detected under cluster analysis.