

Characterization of Kenyan Isolates of *Fusarium udum* from Pigeonpea [*Cajanus cajan* (L.) Millsp.] by Cultural Characteristics, Aggressiveness and AFLP Analysis

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Abstract:

Isolates of *Fusarium udum* from pigeonpea (*Cajanus cajan*) plants with wilt symptoms were collected from various districts in Kenya and were characterized using cultural characteristics, aggressiveness and amplified fragment length polymorphism (AFLP). The 56 isolates of *F. udum* showed a high level of variability in aerial mycelia growth, pigmentation and radial mycelia growth (colony diameter) on potato dextrose agar. The aggressiveness of 17 isolates of *F. udum* on seven pigeonpea varieties varied and five aggressive groups were observed in the present study. There were no relationships among cultural characteristics and aggressiveness. AFLP analysis of the 56 isolates was tested for genetic variability using seven primer combinations. A total of 326 fragments was generated of which 121 were polymorphic. Ten AFLP groups were identified among the Kenyan isolates and, although they were not genetically distinct, six AFLP subgroups were genetically distinct. AFLP had no relationship with cultural characteristics, aggressiveness and geographical origin of the isolates. This is the first report on the study of genetic variability of *F. udum* using DNA analysis.