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Identification of *Fusarium oxysporum sf tracheiphilum* strains responsible of cowpea wilt in Far-north region of Cameroon

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ABSTRACT

Objective: The goal of the present study is to identify *Fusarium oxysporum sf tracheiphilum* strains causing cowpea wilt in the Far-north region of Cameroon and also to determine the more virulent strain.

Methodology and results: Isolation was performed by using the diseased plant tissues. Characterization of pathogens' strains was done by comparing cultural characteristics and microscopic features to previous studies. Pathogenicity test was done in a greenhouse on susceptible and resistant varieties in completely randomized design replicated thrice. Results showed the variability of mycelium's colours on PDA culture media. Conidia were produced on JOFF and MGA media while no sporulation was observed on PDA. All types of spores that characterized *Fusarium oxysporum* were observed. The reproduction of field symptoms was observed during the pathogenicity test. Strain 7 was identified as the more virulent.

Conclusion and application of findings: *Fusarium* cowpea wilt caused by *Fusarium oxysporum sf tracheiphilum* (FOT) is the main cause wilting and loss of cowpea on the field. This study findings can solve cowpea producers of the far-north region of Cameroon on their lack of knowledge on the aetiology of that disease though it is present in almost all farms. Strain 7 identified as the more virulent in the current work could be used by plant breeders for varietal screening for the resistance against the pathogen. In addition, further study is needed to determine the race of that strain.

Keywords: *Fusarium* wilt, sporulation, pathogenicity, cowpea, virulent