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Differential Rate of Dry Rot in *Dioscorea rotundata* (White Yam) along the Tuber Length Due to Rot Causing Fungi

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Author(s)

Apovughaye Taiga

ABSTRACT

The susceptibility of different regions in *Dioscorea rotundata* (white yam) tuber to rot infecting fungi was investigated. Isolation was made from the periphery of the rotted tuber tissues, followed by a pathogenicity test and identification of isolates. Three fungi associated with *D. rotundata* (white yam) were isolated; they include *Penicillium oxalicum*, *Aspergillus niger* and *Rhizopus stolonifer*. Each of the isolates from pure cultures were inoculated on the head, middle and tail regions of healthy yam tubers. The three fungi were found to be pathogenic at different rates at the head, middle and tail ends of the yam tuber respectively. The head region was less susceptible to the three fungi with the following rot depths (*P. oxalicum* 25 mm^a, *A. niger* 18.2 mm^a and *R. stolonifer* 12.7 mm^b). Rot depth in the middle region was (*P. oxalicum* 15 mm^a, *A. niger* 10.6 mm^a and *R. stolonifer* 8.8 mm^b). While the tail region of the yam tuber recorded rot depth of (*P. oxalicum* 32.0 mm^a, *A. niger* 26.4 mm^a and *R. stolonifer* 20.8 mm^b) respectively. Generally, the tail region of *D. rotundata* was more susceptible to fungal attack and the rot recorded in the tail region was significantly different from rot at the middle and the head. It was recommended that yam tubers should be stacked with their head on the ground to reduce incidence of rotting in stock-piled yam tubers.

KEYWORDS

Dioscorea rotundata; Tuber; Fungal Dry Rot; Head; Middle; Tail

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