

Title Mycoflora of tuber surface of white yam (*Dioscorea rotundata* Poir) and postharvest control of pathogens with *Bacillus subtilis*

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Abstract

Bacillus subtilis (Enrenberg) Cohn was investigated for its antagonistic properties against surface mycoflora of yam (*Dioscorea rotundata* Poir) tubers in storage. Yam tubers inoculated with a spore suspension of *B. subtilis* in potato dextrose broth using a knapsack sprayer showed a drastic reduction in the range and number of mycoflora, including pathogens of the tuber surface in contrast to the control tubers, during the five-month storage period in a traditional yam barn. However, *B. subtilis* maintained a high frequency of occurrence during the same period. *Botryodiplodia theobromae* Pat, *Fusarium moniliforme* Wollen and Reink., *Penicillium sclerotigenum* Yamamoto, and *Rhizoctonia* sp. were displaced completely on the treated tubers. The antagonism of *B. subtilis* was so effective that the normal tuber surface mycoflora was greatly reduced throughout the storage period of five months by a simple initial application of the antagonist.