

PATHOGENIC FUNGAL DIVERSITY IN ONIONS (*Allium cepa*) FROM DIFFERENT GROWING REGIONS OF KENYA

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Abstract

Onions in storage are affected by different species of fungal pathogens causing rots leading to huge monetary losses. In addition, the fungal pathogens are a health risk to onion consumers. We seek to study the diversity and abundance of post-harvest fungal pathogens affecting different varieties of onions in Kenyan markets. Samples of “red” and “white” bulb onions were obtained from three markets, i.e., Bungoma, Naivasha and Nyeri, and brought into the laboratory for fungal pathogen analyses. In the lab, samples were crashed in a pestle and mortar, inoculated in Potato dextrose agar and incubated in an oven set at 28°C for seven days for growth of fungal pathogens. Thereafter, the pathogens were identified using colour and morphological characteristics. Fungal species diversity and abundance were subjected to descriptive and inferential methods of statistical analysis. Seven fungal species were isolated from both red and white onions across the three markets. *Aspergillus niger* and *Fusarium sp.* were isolated from both onion cultivars. *Candida tropicalis* and *Saccharomyces cerevisiae* were isolated from red onions but not white onion, while *R. stolonifera* and *Scopulariopsis brevicaulis* were isolated from white but not red onions. We discuss these results on post-harvest fungal pathogens in onions, and propose management measures in this document.