

Pest and Diseases of 16 Local and Exotic Sweet-Potato Varieties in Benin and Their Agronomic Characteristics

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Abstract

Morphological characteristics and agronomic parameters were studied on 16 sweet-potato varieties (5 East Africa, 9 Benin, 1 China and 1 Bolivia) in April to August 2011 in southern Benin. Varietal variability was observed for length of internodes, leaf petiole, stem and leaf number. Positive significant correlations existed between stem length, number of leaves and number of tubers and tuber yield. In the same trial, incidence and severity of pests and diseases and effects on yield were observed. Six pests, *Ptyelus* sp., *Aspidomorpha* sp., *B. tabaci*, *Blosyrus* sp., *C. puncticollis* and *P. grossipes* and one disease, anthracnose were observed. The density of pests was low (less than 0,2 insect by plant on the average). Incidence of leaf-eating pests such as *Ptyelus* sp., *Aspidomorpha* sp., *Blosyrus* sp. reached 100% from the 7th week, while severity evolved linearly reaching over 50% for all varieties 17 weeks after planting. Anthracnose was identified at the end of the growing season on all exotic varieties and on some local varieties (Manouga, Fornonwinka and Gboadobodouaho). Anthracnose increased on 400166 (25%); 440029 (35%); Carrot-c (10%) and Manouga (9%). Yield was not affected by the pests and diseases. Damage from termites, *C. puncticollis*, rodents, nematodes and *Alternaria* sp. were observed on less than 15 tubers. Highest yield was observed for 440029, Vobodouaho, Kolidokpon and Manouga. There was no effect of pests on yield; we suggest that this study is repeated in all the agro-ecological zones of Bénin.

Key words: Pest, diseases, exotic sweet potatoes, agronomic characteristics