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Improved agronomic package for seed yam production by smallholder farmers in Nigeria and Ghana

Beatrice Aighewi

International Institute of Tropical Agriculture (IITA), Nigeria

Poor quality seed yam is prevalent in the yam zone of West Africa despite the importance of yam in the livelihood of millions of people in the region. The absence of dedicated seed production practices, coupled with poor management of planting materials and yam crop field contribute to low productivity. The major source of planting material is farmer-saved minitubers obtained from the previous harvest of a ware yam crop. This study was conducted to enhance the productivity of farmer-saved seed yam using an agronomic package that include the following tested practices: application of neem leaf powder (*Azadirachta indica*) to control nematodes, treatment of minisetts with fungicide and insecticide to prevent rots, planting on ridges to optimize plant population, and selection of good 'mother tubers'. This package was demonstrated in farmers' fields in four major yam growing communities each in Ghana and Nigeria. Results showed that in Nigeria and Ghana respectively, neem-treated minisetts (NTM) had mean yields of 6.7 t/ha and 7.1 t/ha, which were significantly better than the controls, which yielded 6.4 t/ha and 5.6 t/ha. The yield of seed yams was amazing to farmers who, before the project could not imagine that elements of the package could be used successfully in seed yam production. The NTM had better field establishment and plant vigor, resulting in healthier seed tubers than what farmers normally produce in systems where 250 – 500 g setts were planted to obtain yields of 11 t/ha, out of which about 3.3 tons was reserved to plant the next crop and the rest used for food. It was obvious that purposeful production of seed yam will improve quality and make more of the ware yam harvest to be available for food and income.

Biography

Beatrice Aighewi is an Agronomist. She is the Yam Seed System Specialist of the 'Yam Improvement for Income and Food Security in West Africa (YIIFSWA)' project of the International Institute of Tropical Agriculture (IITA). She coordinates the seed production activities of project partners in Nigeria and Ghana. She obtained a PhD (Agronomy) at the University of Ibadan, Ibadan, Nigeria, and an M. Sc. (Agronomy) and a B. Sc. (Agriculture) from Ahmadu Bello University, Zaria, Nigeria. Before joining IITA she taught Agronomy courses at the University of Dschang, Dschang, Cameroon, and University of Abuja, Abuja, Nigeria. Her research activities are on the propagation of tropical root and tuber crops with a focus on rapid multiplication techniques of yam.

B.Aighewi@cgiar.org

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