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Progress in enhancing yam productivity in West Africa through sustainable availability of high quality seed

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Yam (*Dioscorea spp*) is important for household food security and income generation for at least 60 million people in West Africa, a region that produces more than 93% of world yam in 47 million hectares. However, average yield of 12 t/ha is much lower than the potential of 26 t/ha. Among the major constraints in yam production are the shortage of quality seed due to low multiplication ratio and high prevalence of diseases and pests in field and storage. The BMGF (Bill & Melinda Gates Foundation) funded “Yam Improvement for Income and Food Security in West Africa (YIIFSWA)” project was set up with a five-year goal to increase yam productivity by 40% for 200,000 small-holder yam farmers in Ghana and Nigeria, as well as deliver technologies to improve the productivity and livelihoods of these farmers. A participatory approach integrating training, demonstrations and study visits is used to encourage smallholder yam farmers to improve the quality of their saved seed. So far, 323 demonstration plots (300 m²) have been established and 54,872 farmers directly trained in production of quality seed. A formal seed yam system was initiated with novel methods of rapidly multiplying yams using the temporary immersion bioreactor and aeroponics systems, developed to produce high quality pre-basic and basic seed. Production of micro-tubers using vine cuttings is being promoted. Sensitive virus indexing tools, procedures to generate virus-free yams and a seed yam quality management protocol were developed to produce quality planting material. This integrated approach will ensure sustainable availability of high quality seed yams.

Biography

B Aighewi is an Agronomist and Yam Seed Systems Specialist in the “Yam Improvement for Income and Food Security in West Africa” project of the International Institute of Tropical Agriculture, Ibadan, Nigeria. She completed her PhD in 1998 from the University of Ibadan, Nigeria after an MSc from Ahmadu Bello University, Zaria, Nigeria. She has lectured on different aspects of Agronomy at the University of Dschang, Cameroon and University of Abuja, Nigeria. Her research activities and publications are focused on propagation of tropical root and tuber crops.

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