NEW BANANA CULTIVARS CAN MORE THAN DOUBLE THE YIELDS FOR AFRICAN SMALLHOLDER FARMERS

M. Batte[1,*], R. Swennen[1], & A. Brown[2]

[1]P.O. Box 7878 Kampala, International Institute of Tropical Agriculture, Uganda, +256
[2]P.O. Box 344 Arusha, International Institute of Tropical Agriculture, Tanzania, +255

M.batte@cgiar.org, R.Swennen@cgiar.org , A.Brown@cgiar.org

ABSTRACT

Banana (*Musa* spp.) is an important staple food and cash crop for small holder farmers in Sub-Saharan Africa. The Great Lakes Region of East Africa produces more than half of the total bananas produced in Africa. Despite its importance, banana yield in the region is low due to biotic and abiotic factors. Breeding and delivery of resistant cultivars was identified as the most sustainable solution to bridge the yield gap. The International Institute of Tropical Agriculture (IITA) in collaboration with the National Agricultural Research Organization of Uganda (NARO) have a banana breeding program which generated new hybrids dubbed NARITAs. These were evaluated together with their parents and grandparents at the IITA station, Uganda. The aim was to compare the performance of NARITAs with that of their parents and grandparents (landraces).

The NARITAs were found to yield much higher than their parents and grandparents. NARITA 17 holds the record, with bunches on average 3.5 times heavier than Entukura, its female grandparent and 2.4 times heavier than its best parent (1438K-1).

Twenty-seven NARITAs were evaluated in five agroecological zones in East Africa, three sites in Tanzania and two sites in Uganda. Agronomic and sensory traits were evaluated, and four NARITAs were accepted for release in Tanzania in January 2021.

Since bananas are vegetatively propagated, the effect of heterosis is easily fixed in the hybrids and will not be lost over time after the release and further commercialization of these hybrids.

Keywords: Banana, Bunch weight, Heterosis, *Musa* spp., NARITA