PROJECT TITLE: Phenotyping the Banana Biodiversity to Identify Climate Smart Varieties with Optimal Market Potential in Africa and Europe (CLISMABAN)

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In Kenya, banana farming occupies 1.7 percent of the total arable land making it the most important fruit crop. It is also ranked the third most important food after maize and rice and the fourth produced after sugarcane, maize, and potatoes. Ironically, despite bananas being widely grown, production falls way below the demand, making them expensive for consumers. Diseases and pests, transmitted through infected suckers, comprise the most important production constraint, which has far-reaching implications for most resource-poor banana producers, in particular women. Low productivity is due to limited access to improved, high-yielding varieties and diseases/pests. The Climate Smart Banana project (CLISMABAN) aimed at addressing these gaps through participatory, gender-responsive variety selection of high-yielding cooking banana hybrids (NARITAs) developed through a collaboration between the National Agricultural Research Organization (NARO) Uganda and the International Institute of Tropical Agriculture (IITA), hence the acronym (NARITA). The project objectives were to: improve the exploitation of the already existing and available genetic resources of bananas, including newly developed elite hybrids and men and women's favorite accessions; Bridge the gender gap in new improved cooking banana varieties; Strengthen and create partnerships between scientists and banana stakeholders (farmers, consumers, Policy-government). Gender-integrated stakeholders comprising of county administrators, Agricultural extension officers, farmers and traders were engaged throughout the project cycle. The project involved stakeholder net mapping and awareness creation through sensitization workshops, visits by various stakeholders to KU, gender training workshops, Farmer Field Days, and the establishment of demonstration farms (2 in each of the study Counties-Muranga, Embu and Kirinyaga). The team imported 25 accessions from the IITA International Transit Center, Ibadan- Nigeria and multiplied them through Tissue Culture. These accessions were tested for agronomic performance at KU research farms and demonstration farms in the study sites. The evaluation entailed an assessment of agronomic performance in the experimental farm at KU and demonstration farms in the counties over 2 production cycles. This was backed with participatory variety selection based on sensory qualities (taste, aroma, color, texture, etc.). This culminated in the pre-selection of 7 NARITA accessions (3,4, 6,7, 15,18, 23), all with a high potential for local adoption. Other outputs

included capacity building of stakeholders in gender integration, gender analysis and responsive adoption, good agronomic practices and identification and management of pests and diseases; establishment of a tissue culture laboratory at KU, and capacity building of 2 young technicians in TC technology. Gender training was deliberately incorporated into the project to avoid the observable backlash that often comes with new scientific innovations that are either gender, blind, or neutral. Observably, with a shift to commercial production in a previously perceived women's crop, studies have shown this opens the crop for men subsequently altering the intra-household resource- allocation (time, land, labor, inputs, etc.) as they struggle for space in a previously exclusive livelihood. A possible undesired outcome is a gender-based violence as women fight for peace within the patriarchal resource allocation dynamics in the household. Gender-responsive adoption, which addresses such dynamics, becomes inevitable. Our sustainability plan is to continue the multi-location trials, as well as gender training, collection of gender cisgender-blind aggregated data, analysis, and further gender monitoring. We also hope to register the selected accessions for wider production. In addition, there is potential to harness entrepreneurial opportunities in the banana value chain, including value addition, and waste recycling for industrial products: biofuels and biofertilizers. The aim is to create employment for men, women, and the youth while contributing to the growth of a circular economy in Kenya and beyond.