

Charles Omondi, a farmer under Animal Draft Power Programme (ADPP), packs cleaned sweet potatoes at Obuya Bulking Centre in Homa Bay County. The centre improves postharvest handling and access to markets for the smallholders.

Photo: USAID/Mwangi Kirubi



High-yield sweet potato increase farmers' incomes threefold

Kenya's potential to produce sweet potato for the export market is high due to favourable soil and vine quality plus water availability in production areas. The soil types and texture, (sandy at the Coast to silt with a lot of organic matter in the Nyanza region) with a pH range of 6-7, are suitable for sweet potato production. In addition efforts towards farmer awareness on clean vine multiplication coupled with the need for good storage have been well adapted. There have been releases of new varieties with diverse characteristics for virus tolerance. Despite the presence of virus, vectors like white flies

these varieties assures increased production. The greatest challenge remains availability of reliable water throughout the season as most production is rain-fed. Other constraints include pest and diseases management, fertilization, and overall crop management.

The Sweet potato tuber production plays a three prong role of nutrition, income and food security at household level. USAID-KHCP is currently working with over 30,000 farmers in the sweet potato value chain in 13 counties. Although sweet potato was once traditionally viewed as a low value crop, clean planting material has catalyzed improved yields and farm incomes for smallholders, particularly in the major sweet potato growing areas of Homa Bay, Migori, Bungoma, and Busia counties.

The technical collaboration between the Ministry of Agriculture extension services, USAID-KHCP, KARI, and KEPHIS is delivering a solid platform of best practice technical trials and "farming as a business" recommendations for specialized vine multiplication to growers.

This collaboration has led to the availability of a wider range of new varieties, including white, orange, and yellow flesh types. These varieties are now disseminated through 28 active vine

multiplication sites which provide regular and reliable quantities of planting material on-demand.

Farmers of sweet potatoes in Homa Bay County are supported with drip irrigation systems from USAID-KHCP partners



like ADPP and C-MAD to ensure sustainability of their enterprises.

ADPP introduced Orange-Fleshed Sweet Potato (OFSP) in Homa Bay, giving farmers an opportunity to improve their incomes and nutrition. 84 demonstration plots were founded from which farmers learnt commercialized farming, crop management, pre and post-harvest handling and marketing. ADPP also assisted local farmers in setting up 200 OFSP seed multiplication sites to improve access to clean planting materials.

Maren Obuya, a widow residing in Kakumu village in Kabondo, Homa Bay County, relies on local variety sweet potato to feed her family of 12 children. Since 2006 she has been struggling to provide for the dependents left to her after the death of her three sons. Through annual planting of sweet potatoes on a 1 1/4 acre of land and hiring another 1 acre, she educates the children of whom two are in secondary school with 10 at primary level.

Owing to USAID-KHCP and Kabondo Sweet Potato Cooperative partnership, in 2012 Maren harvested

6,765Kgs of sweet potato, earning KES 61,500 (\$ 723.53) that year; up from Ksh 30, 750 (\$ 361.76) she was previously making annually. She had a yearly harvest of 41 bags at KES 1,500 per bag; a 50% increase her earnings.

The project assisted her in increasing planting capacity from 6,000 vines per acre to 12,000 vines per acre. This was a cumulative impact of the 18,000 vines she got for planting from the cooperative and project lessons on adopting new farming technology such as planting on mounds versus her old way of planting in ridges. Her major challenge: moles (fuoko) was addressed by Syngenta, another USAID-KHCP partner who showed her how to use pesticide in holes and setting traps.

She also expanded the area under Orange Freshed Sweet Potato (OFSP) to one acre from a half acre in 2012. Through aiding Maren access high quality seeds such as Kabode and Vita from KARI Kakamega; the project has assisted her improve yeilds. Additionally, turning the surplus sweet potatoes into flour, not only improves her family's nutrition, it also eliminates wastage of the crop.

KHCP has refocused the promotion of orange flesh varieties as a key processed ingredient in an expanded range of fortified foods. Market reality has shown that the orange flesh varieties remain a small part of the wholesale market sector, still accounting for less than 10% of total sales. Although consumers are appreciative of the nutritional advantages

from these new varieties, other factors of cooking time, taste, and traditional preferences help maintain the dominant fresh market share for the white and yellow flesh varieties.

Insufficiency of funds from basket making forced 28-member Kiburunga Women Group in Migori founded in 2007 to turn to sweet potato farming. Thanks to Farm Concern International's (FCI) capacity building activities, the has adopted commercialized farming, group savings, and recordkeeping to sustain progress, which now involve plans to expand their farming to cover more than four acres.

The group began planting yellow fleshed sweet potatoes on a two-acre group plot. Also used

kitchen gardens on individual farms totaling one acre, where they planted vegetables and Orange Fleshed Sweet Potato (OFSP) to supplement their diet and sell excess produce to local markets. Today, Kiburunga records an average of Ksh 10,000 (\$116) weekly from vegetable sales.

Value addition training on low-cost technologies use has also enabled the group to make OFSP and butternut products for sale in local markets. Late in 2013, they sold value-added products worth Ksh 8,000 (\$93) in just two days. Through these activities Kiburunga now manages their own savings scheme. So far this group has saved Ksh 25,000 (\$290), after paying third-term fees for four high school students.



Farmers in Kabondo in Homa Bay County displaying their sweet potatoes for sale along the main road.

Photo: USAID/Aminah Jasho

Source: USAID-KHCP