

Food Security

utilization

Food utilization

Sweetpotato as a health

benefit

Potatoes for health



Food Sweetpotato as a health benefit

Each year the Consultative Group on International Agricultural Research (CGIAR) organizes a series of awards to recognize the top innovations and achievements among the Centers. The 2008 CGIAR Award for Outstanding Scientific Article was received by CIP's Dr. Jan Low, for ground-breaking research she led* during a 2-year project that used orange-fleshed sweetpotato to boost nutrition in Mozambique children. Vitamin A deficiency affects an estimated 71 percent of

Mozambique's children under the age of five. The orange-fleshed sweetpotato contains high quantities of vitamin A. Introducing these beta-carotene-rich sweetpotatoes into the diet of young children increased vitamin A intake and reduced the frequency of low retinol in their blood, an indicator of vitamin A deficiency. The work showed conclusively that food-based approaches can be used to curb nutritional deficiencies. The work took place in rural Mozambique and is the first food-based community-level study in Africa that has followed the same intervention and control households and children throughout the initial adoption period.

As such, the results of this research give clear support to CIP's proposed Sweetpotato for Health and Profit Initiative, which seeks to reposition sweetpotatoes in African food economies, particularly in expanding urban markets, to reduce child malnutrition and improve smallholder incomes. About 50 million African children under 6 years of age are currently at risk from diseases associated with vitamin A deficiency. Over the next 10 years the Initiative is expected to generate significant health and economic benefits within African food systems. Estimates suggest that the work will mean additional production of \$241 million a year in 17 African countries distributed across about 11 million

*Low, J., Arimond, M., Osman, N., Cunguara, B., Zano, F. and Tschirley, D. (2007) A food-based approach introducing orange-fleshed sweetpotatoes increased vitamin A intake and serum retinol concentrations in young children in Rural Mozambique. *Journal of Nutrition (USA)*, 137(5): 1320-1327.



LEFT: Most children prefer the sweeter taste of OFSP

RIGHT: Farmers sort sweetpotato roots for marketing, Tanzania

PHOTO BY S. TUMWEGAMIRE

beneficiaries. The vast majority would be non-commercially oriented producers, of which over three quarters would be women.

Sweetpotato production is expanding faster than any other major food crop in southern Africa. Sweetpotato generates large amounts of food per unit area over time during relatively short rainy periods, tolerates occasional dry spells and produces yields even on less fertile soils. Eleven countries in Sub-Saharan Africa are now members of CIP's highly successful Vitamin A for Africa platform that is promoting the breeding, consumption and sale of the locally adapted, conventionally bred beta-carotene-rich orange varieties and gradually replacing the traditional white-fleshed varieties. The varieties already cover at least 15 percent of the total planted area in

Kenya, Tanzania and Uganda.

OFSP varieties have proved to be very popular with consumers and a number of new products have been developed using the bright orange flesh. CIP's work in Mozambique with sweetpotato has already developed the market for and supplied over 1 million people with orange-fleshed sweetpotato varieties. Kenya and other Sub-Saharan Africa countries have already been reaping the benefits of the crop for many years, thanks to the efforts of the Vitamin A for Africa initiative. Adding 100 g of orange-fleshed sweetpotato to the daily diet provides enough vitamin A for children and dramatically reduces the maternal mortality rate. Pioneered and led by CIP, the initiative is promoting the increased production and use of the orange varieties to combat vitamin A deficiency in Sub-Saharan Africa.