



Breeding Crops
for Better Nutrition

SWEETPOTATO—A SOLUTION TO VITAMIN A DEFICIENCY IN AFRICA?

What is vitamin A deficiency and how many are affected?

Vitamin A is a micronutrient that is essential for the functioning of the human immune system. It also helps increase resistance to disease and protect against blindness. Vitamin A deficiency plagues more than 140 million children under 5 worldwide and is the leading cause of preventable blindness in children. Globally, approximately 4.4 million preschool-age children have visible eye damage due to vitamin A deficiency. Annually, between 250,000 and 500,000 preschool children go blind and about two-thirds die within months of going blind. Close to 20 million pregnant women in developing countries are also vitamin A deficient, of which, about one-third are clinically night blind.

How widespread is vitamin A deficiency in Africa?

An estimated 100 million people in Sub-Saharan Africa are at higher risk of going blind due to Vitamin A deficiency. In Uganda and Mozambique, it is estimated that between 38 and 68% of all children, respectively, are affected.

How can sweetpotato reduce vitamin A deficiency in Africa?

Nowhere in the developing world, is sweetpotato more important as a food crop, than in Africa. In fact, in the densely populated semiarid plains of eastern Africa, sweet potato is called *cilera abana*, "protector of the children," in reference to its role in combating rural hunger.

In Africa, white or yellow fleshed varieties that are low in beta-carotene are preferred. With HarvestPlus support, the International Potato Center has crossed these with orange-fleshed varieties—that are naturally very rich in beta carotene—to produce new orange-fleshed varieties that are better suited to African tastes and also resistant to disease and environmental stress.

A controlled feeding trial among South Africa school children found that children's Vitamin A status improved significantly when they were fed orange-fleshed sweetpotato. Other research has shown that including even small amounts of new orange-fleshed sweetpotato varieties in diets, can eliminate Vitamin A deficiencies. In response to this, HarvestPlus is disseminating biofortified orange flesh sweetpotato in selected areas of Mozambique and Uganda in collaboration with a host of other organizations working in agriculture and health. Best practices, garnered from these dissemination activities, will be applied to future efforts to introduce orange-fleshed sweetpotato into the diets of undernourished communities.



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SWEETPOTATO – A SOLUTION TO VITAMIN A DEFICIENCY IN AFRICA? -continued

References for more information

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HarvestPlus is a global alliance of research institutions and implementing agencies that have come together to breed and disseminate biofortified crops for better nutrition. HarvestPlus is coordinated by the International Center for Tropical Agriculture (CIAT) and the International Food Policy Research Institute (IFPRI). HarvestPlus is an initiative of the Consultative Group on International Agricultural Research (CGIAR).

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