Linking Orange-Fleshed Sweetpotato with Healthcare in Kenya Benefits Women and Children

Thousands of pregnant women, mothers, and young children in Western Kenya are healthier thanks to an innovative, CIP-led initiative that links agriculture, health provision and nutrition education to get mothers to grow, eat, and feed their children nutritious orange-fleshed sweetpotatoes: a vital source of vitamin A.

Vitamin A-deficiency (VAD) is a major health problem in Africa and Asia, where it primarily affects young children and pregnant or lactating women. According to the World Health Organization, VAD is the leading cause of preventable blindness in children, with an estimated 250,000 to 500,000 vitamin A-deficient children going blind each year, half of whom die within a year of losing their sight. VAD also causes night blindness in pregnant women and increases the risk of maternal mortality.

In response to this scourge, CIP promotes the cultivation and consumption of orange-fleshed sweetpotato (OFSP): an important source of beta-carotene, which is converted to vitamin A in the body. One medium-size OFSP provides enough beta-carotene to meet the recommended daily allowance of vitamin A for a child or non-lactating woman. OFSP is a

CIP priority in Sub-Saharan Africa (SSA), where CIP scientists help local institutions develop more resilient, bio-fortified OFSP varieties, and work with partners to distribute clean OFSP planting material, promote good agricultural practices, strengthen value chains, and educate people about the crop's health benefits.

A major focus is to reach pregnant women and young children, since eating OFSP and other vitamin-rich foods during the first 1000 days of life is crucial to preventing blindness and other malnutrition-linked ailments. While CIP has traditionally worked with institutions dedicated to agriculture, the quest to achieve OFSP's full potential for improving health has involved a wider range of partners and approaches.

As part of CIP's research on nutrition interventions and scaling methods, one innovative strategy has been to integrate agricultural extension with nutrition education and healthcare provision. CIP and partners are using this approach within the framework of Scaling up Sweetpotato Through Agriculture and Nutrition (SUSTAIN), a five-year initiative (2013-2018) coordinated by CIP and financed by the UK Department for International Development, which targets households with children under five in Kenya, Malawi, Mozambique, and Rwanda. In Kenya's Nyanza Province, women who visit rural health centers for antenatal care are now given nutrition education and vouchers for planting material of improved OFSP varieties, as part of an effort to get them to grow OFSP, eat it, and feed it to their children.

The approach was developed under a previous intervention in Kenya called MamaSASHA, a component of CIP's Sweetpotato Action for Security and Health in Africa (SASHA) project that ran from 2010 through 2014, for which CIP partnered with the international health nonprofit PATH. While nurses at antenatal care centers taught patients about OFSP and distributed vouchers for planting material, community health workers followed up through pregnant women's clubs. Agricultural extension agents distributed OFSP vines for planting and taught women how to grow the crop and multiply

vines for sale to other farmers. The project also included events where women learned how to prepare a variety of OFSP dishes.

The effectiveness of this approach in improving nutrition and health was confirmed by a longitudinal cohort study undertaken with 505 women from mid-pregnancy through nine months postpartum. By the end of that study, dietary vitamin A intake among both mothers and infants in the MamaSASHA intervention area was nearly twice that of controls. VAD among mothers had also decreased compared to those in control areas.

VAD remains a major public health problem in Kenya, affecting more than 80% of pre-school aged children and 17% of pregnant women, which is why CIP has continued this approach under SUSTAIN. In Nyanza Province, CIP is cooperating with PATH and Kenya's Ministry of Agriculture and Ministry of Public Health. Though SUSTAIN is only in its third year, health providers at participating facilities have reported that more pregnant women are seeking ante-natal care early and more children are completing post-natal care, which is in part due to SUSTAIN's nutrition education efforts. Project personnel have counseled mothers on feeding infants and young children, showed them how to make OFSP baby food, and shared recipes that integrate OFSP into popular local dishes.

The effectiveness of this approach for improving infant health is reflected in the words of one of the beneficiaries, who said: "From the mother support club meetings, I have gained confidence to exclusively breastfeed my child, and at six months, to introduce him to OFSP baby food. He does not fall ill often like my other children."