

Integrating health and agriculture to maximize the nutritional impact of orange-fleshed sweetpotato: The Mama SASHA proof-of-concept project in Western Kenya



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Unexpectedly high rates of participation from pregnant women during the pilot phase suggest that the integration of orange-fleshed sweetpotato (OFSP), nutrition education and vine distribution into antenatal care is reaching target audiences. It promises to not only increase use and awareness of the benefits of OFSP among targeted populations but also attract more women into timely antenatal care services.



■ Mama SASHA beneficiary

❖ What is the problem?

Vitamin A deficiency (VAD) contributes to significant rates of blindness, disease, and premature death in Sub-Saharan Africa (SSA). Young children and pregnant or lactating women are particularly at risk of VAD. OFSP is an important source of energy and beta-carotene, which is converted into Vitamin A in the body. One medium-size sweetpotato provides enough to meet the recommended daily allowance of vitamin A for children and non-lactating women. Evaluations of food-based approaches promoting increased OFSP production and consumption have shown significant positive impacts on Vitamin A intake and status.

VAD can have multiple causes. It can result from inadequate intake due to a lack of vitamin A sources in the diet or from insufficient vitamin A absorption because of the presence of parasites or infectious diseases. Pregnancy should be a particularly

opportune time to reach women with nutritional and health interventions that can lower their risk of VAD, mitigate negative environmental and socio-economic factors, and enhance the survival and growth of their infants. However, the timely delivery of nutrition messages through antenatal services or community outreach is often lacking during a woman's pregnancy.

This project seeks to explicitly integrate agriculture and nutrition interventions into antenatal health care services to maximize the potential benefits of OFSP on the health status of mothers and children under 2 years of age. It is the first time such an intervention is being tested at the community-level in SSA – and the first one of its kind to focus explicitly on pregnant women.

❖ What do we want to achieve?

The aim of this 5-year project is to provide solid evidence for the effectiveness of this innovative approach to integrate OFSP promotion and production with public health care services. The expected impacts include significant increases in both the consumption of Vitamin A-rich foods and use of antenatal care services. The original target (already surpassed) was to reach 900 pregnant women and their households between 2010 and 2014.

❖ Where are we working?

The project is being implemented in selected health facilities across Busia and Bungoma districts of Western Province, Kenya. In these areas, sweetpotato is important for food security and regularly consumed by mothers and young

Partners include:

- The International Potato Center, leading from a field office based in Kakamega
- PATH, an international non-profit organization focused on health (PATH)
- Kenyan Agricultural Research Institute (KARI)
- Local government stakeholders, especially the Ministries of Health and Agriculture
- Community Research in Environment and Development Initiatives (CREADIS)
- Appropriate Rural Development Agriculture Programme (ARDAP)
- With scientific inputs from the University of Toronto and Emory University

children. But the majority of sweetpotato varieties are either white or yellow-fleshed, containing little beta-carotene. The challenge is to introduce the beta-carotene-rich OFSP varieties and promote their production, uptake, and consumption alongside overall improvement in child and household dietary practices.

❖ How are we going to make it happen?

The project is being implemented within the existing USAID/Kenya AIDS, Population and Health Integrated Assistance Program (APHIA II and APHIA Plus). That program works directly with communities and public health facilities throughout Western Province to strengthen a wide range of health services, including ante- and post-natal care.

The Mama SASHA intervention uses community health workers to encourage pregnant women to seek early and recommended ante- and postnatal care services. They also establish and run community-level pregnant women's clubs, with monthly dialogue sessions focused on nutrition and health topics. During each antenatal care visit, nurses provide improved nutrition counseling along with vouchers, which women can use to obtain OFSP planting vines. Women receive two vouchers per visit, which they can redeem for 100 cuttings each of Kabode and Vita varieties of OFSP.

The vine cuttings are obtained from secondary vine multipliers, located near the health clinics and specifically trained in OFSP multiplication and production. Extension workers follow up with agronomic advice and home visits to assess and discuss OFSP planting and crop management.

To evaluate the program's impact, an equal number of intervention and control sites have been randomly selected from among eight community health facilities. The four intervention sites receive the full range of nutrition, outreach, and health services described above, along with the vouchers. The four control group facilities offer the standard APHIA Plus training and sensitization on Infant and Young Child Nutrition services, but without the pregnant women's groups, vouchers, or support for the production of OFSP.

A pilot study was undertaken from May 2010 through February 2011, with the goal of validating and refining the intervention design as needed. Full implementation of the program began in April 2011.

❖ What have we achieved so far?

During the 10-month pilot program, 823 women participating in the intervention areas received vouchers – 75% of whom redeemed them for planting material. An operational assessment conducted in

November 2010 indicated that the intervention is both acceptable and feasible to project actors and beneficiaries. Women have an increased awareness of vitamin A-rich OFSP and value its benefits. However, although women are the primary sweetpotato producers in Kenya, engaging men, the family landholders, is critical.

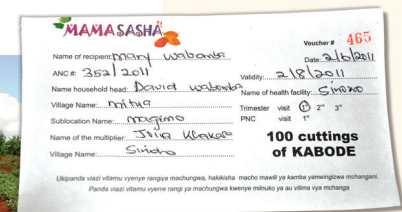
Findings from the operational research were used to refine the implementation design, including the modification of site selection criteria for vine multipliers and the re-design of job aids for nurses and community volunteers. A key lesson is that coordinating the supply of sweetpotato planting material with demand from pregnant women requires clear roles and responsibilities among multiple actors, such as health workers, vine multipliers and agriculture extension agents. There is a need for consistent training and frequent communication among these stakeholders to effectively reach beneficiaries.

❖ Where do we go from here?

The full implementation of the project began in April 2011 and by May 2011, 484 pregnant women had received vouchers. Half have already redeemed them for vines, fewer than anticipated due to the delay in the arrival of the rains. More, however, are expected to follow soon. To measure the effectiveness of the intervention, an extensive baseline survey was conducted to collect data on a wide range of indicators related to nutrition and health knowledge and behaviors, agriculture knowledge and practices, stunting and wasting in the 6-23 month old age group, mothers' body mass index, and the prevalence of vitamin A deficiency among children aged 6-23 months. The survey captured 968 pregnant women & 1,918 mother child pairs in intervention and control communities. These results will help measure impact of the intervention and understand what factors contributed to uptake of the intervention when compared to results from the planned end-point survey.



■ ARDAP extension agent consulting vine multiplier in her field



CONTACT

Hermann Ouedraogo (CIP)
h.ouedraogo@cgiar.org

Carol Levin (PATH)
clewin@path.org