Sweetpotato Action for Security and Health in Africa

Integrating health and agriculture to maximize the nutritional impact of orange-fleshed sweetpotato

A proof-of concept action research project in Western Kenya

What is the problem?

Forty-three million children under age 5 years in Sub-Saharan Africa (SSA) are at risk of Vitamin A deficiency (VAD). VAD contributes to significant rates of blindness, disease, and premature death, particularly among young children and pregnant or lactating women. The best opportunity for addressing malnutrition is during the period ranging from pre-conception through the child's second birthday.

SSA also continues to be the region most affected by the deadly HIV/AIDS pandemic: 68% of adults and 90% of children infected with HIV are in SSA. HIV/AIDS and malnutrition have long been known to co-exist, and adequate food intake is recognized as being critical for successful anti-retroviral treatment. Energy requirements increase with HIV infection (approximately 10%) and further with active AIDS (20-30%). Similarly, individuals infected with HIV need additional intakes of Vitamin A because their absorption levels are impaired.

Orange-fleshed sweetpotato (OFSP) is an important source of energy and beta-carotene which is converted into Vitamin A in the body. Only 125 grams of most OFSP varieties supply the recommended daily allowance of Vitamin A for children and non-lactating women.

Evaluations of food-based approaches using OFSP have shown significant impacts on Vitamin A intake and status. This raises a new question: Can linking an agricultural-nutrition intervention more explicitly to health services increase impact on VAD status even more? The idea has not yet been tested at the community level in SSA. Moreover, no intervention to date has focused explicitly on pregnant women, a group at high risk of VAD.

What do we want to achieve?

We want to provide solid evidence that it is possible to improve the health and nutrition of pregnant women and children up to age 2 years by integrating OFSP and health service delivery serving pregnant women. The target is to reach 900

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The Sweetpotato Action for Security and Health in Africa (SASHA) is a five-year initiative designed to improve the food security and livelihoods of poor families in Sub-Saharan Africa by exploiting the untapped potential of sweetpotato. It will develop the essential capacities, products, and methods to reposition sweetpotato in food economies of Sub-Saharan African countries to alleviate poverty and under-nutrition.

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pregnant women and their households during the intervention period of three and a half years. Two major expected impacts are significant increases in consumption frequency of Vitamin A-rich foods and utilization of mother-child health care services.

Where are we going to work?

This project will work in HIV/AIDS affected communities in two districts (Bungoma and Busia) in the Western Province of Kenya. In these areas, sweetpotato is important for food security and consumed regularly by young children and their mothers. But the majority of sweetpotato varieties are either white or yellow-fleshed, so the agricultural challenge is to introduce the beta-carotene–rich orange-fleshed varieties.

How are we going to make it happen?

The project will be tagged onto the existing USAID/Kenya AIDS Population and Health Integrated Assistance Program (APHIA II). APHIA II is working with existing facility and community-based structures throughout Western Province to enhance and expand comprehensive, integrated HIV/AIDS, tuberculosis, malaria, maternal and child health, and reproductive health services, and to promote the adoption of healthier behaviors targeted to increase the use of these health services.

The intervention will include two intensity levels. The high-intensity intervention will use community health workers in conjunction with standing health facilities. It also will include community-based peer support through pregnant mother's clubs. The low-intensity intervention will take place only at pre-natal programs in standing health facilities. It will provide pregnant women with nutritional information on Vitamin A rich foods and young child feeding within existing programs and access to OFSP vines. Almost all countries have pre-natal programs, many of which provide nutritional advice to mothers. The low-intensity intervention constitutes a "minimum package" that most SSA countries could adopt and expand to-scale should it prove effective.

Women will receive both improved nutrition education and a voucher for 10 kg of OFSP vines to be redeemed with vine multipliers in their community. They will receive additional vouchers for each repeat attendance to facilitate continuous consumption of OFSP.

Who are we going will we work with?

Partners will include the Program for Appropriate Technology in Health (PATH), the Kenyan Agricultural Research Institute (KARI), local government stakeholders, and two NGO partners, Community Research in Environment and Development Initiatives (CREADIS), and Appropriate Rural Development Agriculture Programme (ARDAP).

What's next?

If successful, we envisage significant expansion of this approach in phase two of the Sweetpotato for Profit and Health Initiative.

Mother receiving OFSP vines

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