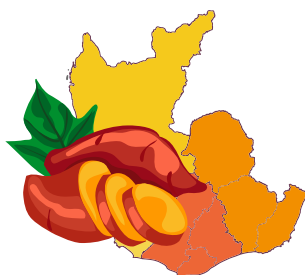




Membre de Groupe de Multiplication de liane dans leur champ a la commune de Tameantsoa, District de Betioky Atsimo (photo: H. Razafindrazaka)



**FANARENAGNE FANJAKA
HO AN'NY ATSIMO
BAGEDA MIATY LAORANJY:
FAHASALAMANA SY HARENA**

Sweet Recovery: Tackling Vitamin A Deficiency and Reviving Sweetpotato Production in Drought-Affected Southern Madagascar



As families in Southern Madagascar struggle with food shortages and malnutrition resulting from years of drought and the destruction of recent cyclones, CIP and partners are enabling 80,000 household to grow highly productive, nutritious, drought-tolerant sweetpotatoes and build seed systems to help take them to scale.

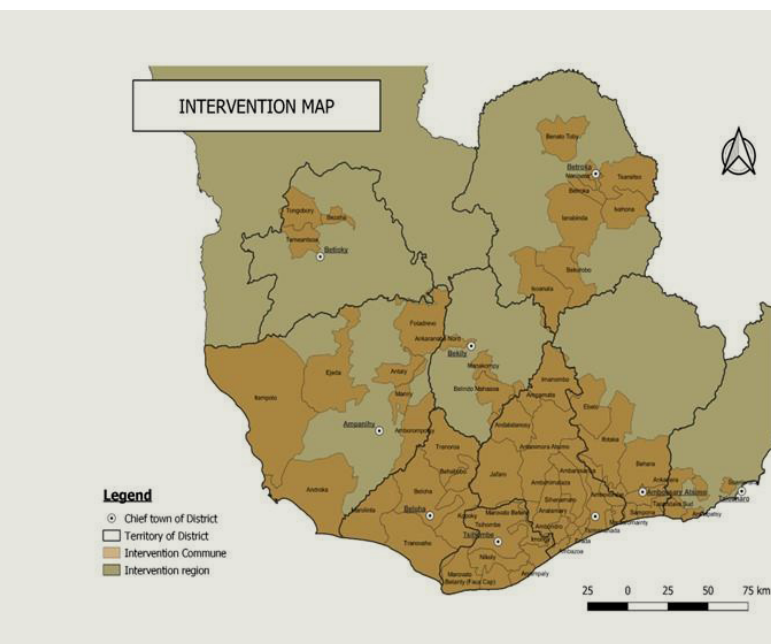


Figure 1. The map of the Sweet Recovery project and associated communes

Background

The three regions of Androy, Anosy, and Atsimo-Andrefana in Southern Madagascar often face periodic drought. Because sweetpotato is relatively drought-tolerant, it is not surprising this crop is the third most important in the area, after rice and cassava. However, all crops do need water to grow, and the severe drought that began in 2020 and

extended through 2021 led to a doubling of the number of people requiring emergency food assistance. Levels of undernutrition also increased dramatically among young children. Many households lost or consumed their seed for grain crops, and the vines used to propagate sweetpotato into the next season dried out in most districts. This situation demanded urgent calls for increased food aid support and assistance to restore livelihoods in the agricultural sector.

In addition, vitamin A deficiency is widespread throughout Madagascar, affecting 42% of children under five years old, due primarily to a lack of vitamin A rich foods in their diets. Vitamin A is essential for strong immune systems and good eyesight. Sweetpotatoes with orange flesh color carry high levels of beta-carotene, which the body converts into vitamin A. In fact, just one small orange-fleshed sweetpotato (OFSP) provides the daily required amount of vitamin A in a young child's diet. However, most of the varieties planted in Madagascar are white-fleshed, having no beta-carotene. Fortunately, the national research institute FIFAMANOR has released 12 OFSP varieties since 2009 with support from the International Potato Center (CIP), which has led to their introduction into the country. However, resource constraints continue to hamper the distribution of improved OFSP varieties to the southern regions of the country.

Approach and objectives

The Bureau of Humanitarian Assistance (BHA) of the United States Agency for International Development (USAID) is supporting CIP to address the chronic low intake of



Figure 2. An agent explains OFSP dissemination to a group in Tshihombe Commune in Tshihombe District (photo: F. Andrianisaina/CIP)

vitamin A rich foods by helping to rebuild sweetpotato production in nine districts in three regions of Southern Madagascar (Figure 1). The project is called “Sweet Recovery” and the goal of the 18 month endeavor is to create a more climate-resilient production system for drought-affected households by providing access to quality planting material of adapted vitamin-A rich OFSP varieties, supported

by trainings on how to store and prepare roots for consumption and future planting seasons. In short, Sweet Recovery will help these families build forward better.

There are three specific objectives:

1. **Recovery.** Restore and improve access to quality seed for improved, resilient, and nutritious OFSP varieties for at least 80,000 drought-affected households (at least 413,800 individuals) and increase smallholder farmer knowledge, especially among women (75% of training participants) on how to better grow and store the crop using a new low-cost sand-based method (Double S) to improve food security.
2. **Resilience.** establish resilient seed enterprises in each district (linked to pre-basic seed supplier FIFAMANOR and technical support) and enhance household conservation of planting material through the introduction and use of the root-based Triple S method to improve the longer-term availability of planting material during and beyond the recovery period.
3. **Recognition.** Improve the enabling environment by conducting public awareness campaigns and access to nutritional knowledge and OFSP food processing-related technologies through coordinated gender-responsive communication activities to reach rural and urban households.

Implementation approach

CIP will work with local authorities to select recipient communities (Fokontany). Seven CIP extension agents will be complemented by 26 trained pairs of Community Agents (CAs) at the Fokontany level. Each pair (one woman and one man) will be trained in sweetpotato seed system management and assist in organizing 12 groups of households (38 households each) in their communities over the course of a year to receive the vines and additional trainings. A CIP nutrition officer will oversee support of the cooking demonstrations to be held on selected field days.

Three OFSP varieties suitable for these regions—Irene, Donga, and Bôra—have been selected for dissemination with each beneficiary household receiving four kilograms of vines, which they can further multiply (Figure 2). A critical activity will be the identification



Figure 3: A trained Community Agent registers a beneficiary using her tablet. (photo: F. Andrianisaina/CIP)



Figure 4. Women show QR codes to receive OFSP vines in Tshihombe Commune (photo: F. Andrianisaina/CIP)

and establishment of a trained network of decentralized vine multipliers (DVMs) – at least four per district (either individuals or groups (cover photo)). The project will work with FIFAMANOR and local agricultural extension personnel to develop and implement a Quality Declared Seed Inspection system. Some DVMs will already have irrigation capacity and the project will build that capacity for others who do not have it. The project will establish communication channels between FIFAMANOR and the DVMs, and between the DVMs and the CAs, using Open Data Kit (ODK)-based digital tools and capacitating

personnel on how to use them (Figure 3). Each registered household receives a beneficiary card with a QR code (Figure 4) that they show to receive vines and attend different trainings. The goal is to establish the foundation of a quality seed system and ensure continued access to seed in target communities even after the project ends.

Finally, awareness campaigns will be conducted via radio and field days to inform the broader community about the nutritional value and cultivation of this resilient crop.

Contacts:

Benjamin Rakotoarisoa • CIP Country Manager
b.rakotoarisoa@cgiar.org

Patrick Rajaomilison • Project Coordinator
patrick.rajaomilison@cgiar.org

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