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The U.S. Government's Global Hunger & Food Security Initiative



VIABLE SWEETPOTATO TECHNOLOGIES IN AFRICA (VISTA-Mozambique)

Year 3, Quarter 4 Progress Report

1 July–30 September 2017



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Year 3, Quarter 4 Progress Report

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ACRONYMS

| | |
|-------|--|
| APE | Agente polivalente elementar |
| CBO | Community-based organizations |
| CHW | Community health worker |
| CIP | International Potato Center |
| DVM | Decentralized vine multiplier |
| HH | Household |
| M&E | Monitoring and evaluation |
| MIYCN | Maternal, infant, and young child nutrition |
| n.a. | Not applicable |
| OFSP | Orange-fleshed sweetpotatoes |
| SDAE | District Services of Economics Activities |
| USAID | United States Agency for International Development |
| USG | United States Government |
| VAD | Vitamin A deficiency |
| VISTA | Viable Sweetpotato Technologies in Africa |
| WASH | Water, sanitation, and hygiene |
| WVI | World Vision International |
| Y3Q3 | Third quarter of third VISTA project year |

SUMMARY

This report summarizes the Year 3, Quarter 4 (henceforth referred to as Y3Q4) technical progress of implementing the Feed the Future Mozambique: Viable Sweetpotato Technologies in Africa (VISTA–Mozambique) project, from 1 April to 30 June 2017. VISTA–Mozambique is a \$12,250,000, 7-year project (1 Oct. 2014–30 Sept. 2021) funded by the United States Agency for International Development (USAID). The project is led by the International Potato Center (CIP) and is implemented in collaboration with the following government partners: Mozambican Agrarian Research Institute, District Services of Economics Activities, and District Services of Health and Women and Social Action, as well as by nongovernmental organizations (NGOs), community-based organizations, and education and research institutions. Project activities are carried out in 11 districts of Nampula Province (Angoche, Larde, Malema, Meconta, Mecuburi, Mogovolas, Moma, Monapo, Murrupula, Nampula City, and Rapale) and 5 districts of Zambézia Province (Alto Molocue, Gilé, Gurué, Mocuba, and Nicoadala).

The report describes and discusses achievements against the Feed the Future indicator targets set for Y3Q4, as well as the project's interaction with USAID, our efforts to reach out to new partners, and other issues not reported directly under Feed the Future indicators.

Mr. Dean Pittman, the US ambassador to Mozambique, and Dr. Jennifer Adams, USAID Mission Director attended field activities at the Mocuba Rural Hospital, a center of the project's nutrition activities in Mocuba District. The guests witnessed a range of VISTA activities aimed at furthering the awareness for proper child feeding and the integration of orange-fleshed sweetpotato (OFSP) into diverse and healthy diets. A VISTA team accompanied Ms. Leonor Domingos, USAID's Activity Manager for VISTA, on her monitoring trip to the districts of Alto Molocue and Mocuba in Zambezia Province. There she inspected such VISTA activities as OFSP fields of several decentralized vine multipliers, health promoters training community health workers, and a bakery that substitutes wheat flour with sweetpotato puree in the making of bread.

VISTA has started new collaborative agreements with CLUSA International and World Vision International, two NGOs that are co-funded by USAID, and whose mission is complementary to VISTA's. Synergies with these new partners will be achieved by providing information, capacity building, and OFSP planting materials. In a similar vein, VISTA contributed to the National Root Crop Fair in Inhambane and to the National Food Security and Nutrition Mapping Exercise.

Considerable effort and project resources in terms of staff time and fieldwork were dedicated to monitoring and evaluation activities, in particular a comprehensive baseline survey and a nutrition monitoring exercise, which were completed in Y3Q4. Progress with digitizing survey data has been made, but this task will be concluded in the next quarter (Y4Q1).

Extensive training of the 10 field coordinators hired in August took place covering all aspects of VISTA's operation. Starting in mid-September, and after acquiring motorcycle-driving licenses and being introduced to relevant district authorities, field coordinators took up their posts to facilitate VISTA implementation in remote districts.

Despite staffing and other challenges described in previous reports for project year 3, VISTA is on track in terms of its delivery of project outputs. The yearly agricultural and nutrition targets have been met. There was also good progress with marketing activities, although a full account of achievements will be rendered in the annual technical report for year 3 (due 30 November 2017), when the monitoring data have been evaluated.

The report describes nutrition and child-feeding myths that abound in beneficiary communities, and present a challenge to be overcome through VISTA's nutrition education. Recognizing persistent misconceptions presents an opportunity to improve VISTA communication strategies and identify content that needs to be delivered with greater focus and emphasis.

The report concludes with an outlook on VISTA plans for the next and first quarter of the fourth project year.

1. PROJECT OVERVIEW

VISTA–Mozambique is a 7-year project (1 Oct. 2014–30 Sept. 2021) funded by the United States Agency for International Development (USAID). It is being executed by the International Potato Center (CIP), in collaboration with government partners including the Mozambican Agrarian Research Institute, the District Services of Economics Activities, and the District Services of Health and Women and Social Action, as well as by nongovernmental organizations (NGOs), community-based organizations (CBOs), and education and research institutions. Initially conceived for 3 years with activities in 6 districts, VISTA, after completing 2 project years, entered its current 5-year expansion phase in October 2016, in which VISTA has added 10 more districts to its intervention area.

The project is designed to expand the production and utilization of nutritious orange-fleshed sweetpotato (OFSP) in 11 districts of Nampula Province¹ and 5 districts of Zambézia Province.² VISTA is embedded within the Feed the Future program in Mozambique and contributes to key Feed the Future objectives in agriculture and nutrition, including increased and equitable growth in the agriculture sector, and improved consumption of vitamin A-rich foods by young children and pregnant and lactating women. VISTA monitors Feed the Future indicators for agricultural production, nutrition, incomes, and gender.

By the end of project Y2, VISTA had already reached 22,500 households (HH). A total of 80,000 HH will be added through the current project expansion, thus bringing the total number of direct beneficiary HH to at least 102,500 in 16 districts in Nampula and Zambezia provinces by 2021. In addition, 375,000 indirect beneficiary HH will access OFSP planting material, knowledge, and skills through farmer-to-farmer diffusion. Thus, project benefits will accrue to almost half a million HH, by both direct project intervention and spill-over effects.

VISTA has the following goals:

1. Increased production of OFSP among at least 102,500 direct and 375,000 indirect beneficiary HH through use of productive, locally adapted varieties, quality planting material, and sustainable agricultural practices. This will be achieved through (1) multiplication of planting materials of five improved OFSP varieties; (2) farmer-led varietal demonstrations; (3) marketing and distribution of quality planting materials of preferred varieties; (4) farmer training in sweetpotato agronomy and vine conservation technologies; and (5) operational studies to determine factors affecting production of OFSP among resource-poor HH.

2. Increased consumption of OFSP by children under 5 years of age and women in at least 102,500 beneficiary HH vulnerable to malnutrition. This will be achieved through (1) nutrition training of staff from government and NGOs, with a focus on micronutrient-rich foods; (2) nutrition education in at least 400 communities in target districts; (3) development and promotion of recipes for household-level OFSP utilization as a healthy food for all; and (4) broad education campaigns on nutrient-rich foods, including OFSP, through government health sector.

3. Increased agricultural incomes among at least 10,000 HH from sales of OFSP roots, vines, leaves, and processed products in local and urban markets and commercial processing. This will be achieved through (1) training farmers and traders for improved handling, packaging, and transport of fresh roots and leaves; (2)

¹ Angoche, Larde, Malema, Meconta, Mecuburi, Mogovolas, Moma, Monapo, Murrupula, Nampula city, and Rapale.

² Gilé, Alto Molocue, Gurué, Mocuba, and Nicoadala.

facilitation of OFSP market days (two per target districts) to increase visibility of OFSP and other nutritious foods grown locally; (3) production and promotion of OFSP puree for use in school and community demonstrations and educational activities; (4) technical and management support for use of OFSP puree in commercial food processing, specifically in local bakeries; and (5) demand creation and consumer awareness campaigns for healthier diets that include OFSP.

2. ACTIVITY PROGRESS AND RESULTS

2.1 Interaction with USAID

Apart from VISTA's regular interaction with the project's USAID focal point in Maputo, and the weekly sharing of news bulletins about current project developments, VISTA had two additional opportunities to update U.S. Government (USG) entities about project progress.

On 15 September during their mission to Zambezia Province, Mr. Pittman, the US ambassador to Mozambique, and Dr. Jennifer Adams, the recently appointed USAID Mission Director, visited the Mocuba Rural Hospital, a partner of VISTA and center of the project's nutrition activities in Mocuba District. The ambassador and the accompanying USAID delegation witnessed a session of maternal counseling provided by a nurse and a display of dishes recommended for children that incorporate OFSP and other locally available foodstuffs. A theatrical play performed by VISTA community health workers (CHWs) illustrated a technique used by the project to convey nutrition messages to mothers. The plot featured a couple seeking help from a traditional healer for an ailing child, but eventually getting relevant nutritional advice that helps the child to recover from malnutrition. Theatrical play is a communication tool frequently used by the project to target the largely illiterate beneficiaries, in particular to dispel widespread nutritional myths that put infants at risk by withholding from them nutritious food in the mistaken belief it is unsuitable or even can cause disease (see also section 3). The visitors could also see a net tunnel on the premises of the hospital, used to provide planting material to mothers after nutritional counseling (Fig. 1).

Also in September, a VISTA team accompanied Ms. Leonor Domingos, USAID's Activity Manager for VISTA, on her monitoring trip to the districts of Alto Molocue and Mocuba in Zambezia Province. Highlights of the trip included visits to the sweetpotato fields of several decentralized vine multipliers (DVMs), a group of health promoters that train CHWs, and a bakery that substitutes wheat flour with sweetpotato puree in the making of bread (30% of dough weight). We look forward to feedback from this monitoring mission.



Figure 1. VISTA project presentation to USAID visitors, Mocuba Hospital, 15 September 2017. Clockwise from upper left: Maternal counseling; Mr. Pittman, US ambassador to Mozambique, inspecting nutrition exhibit; theatrical play; and VISTA-affiliated Mocuba District CHWs.

2.2 Reaching Out and Seeking Synergies with Partners

2.2.1 Participation in National Root and Tuber Crops Fair

On 7 July, VISTA participated in the National Root and Tuber Crops Fair held in Quissico Village, Zavala District of Inhambane Province. The fair was inaugurated by the President of Republic, His Excellence Mr. Felipe Nyusi, and attended by high officials from the Ministries of Agriculture, Health and others, as well as by provincial agriculture directors. More than 2,000 people visited the VISTA booth and display of such OFSP products as roots, vines, juice, and a variety of bakery products (Fig. 2).



Figure 2. VISTA booth at National Root and Tuber Crops Fair exhibiting OFSP and derived processed products.

2.2.2 Participation in National Food Security and Nutrition Mapping Exercise

On 19 July, VISTA entertained extensive discussions with two representatives from Secretariado Técnico de Segurança Alimentar e Nutricional, Mr. Higino Andre (Nampula Province) and Mr. Raul Varela, a consultant on the National Food Security and Nutrition Mapping Exercise. The two men provided a briefing about the Mozambique Government National Strategy for Food Security and Nutrition. Mr. Temesgen Bocher, VISTA’s monitoring and evaluation (M&E) coordinator, explained the project’s objectives and implementation. In the ensuing discussion we explored the extent to which VISTA’s goals are aligned with the expected outputs of the national food security strategy. We concluded that the project contributes significantly to the strategy in three areas:

- By enhancing the production of nutritious OFSP and the dissemination of healthy planting material of improved varieties, VISTA contributes to food availability. Capacity building in postharvest management, storage practices, facilitation of marketing days, and OFSP puree processing as input into nutritious value-added products will contribute to year-round supply of OFSP.
- *Food access:* The marketing component of the project will result in increased purchasing power of the beneficiary HH and availability of nutritious OFSP products in the market for urban consumers.
- *Food utilization:* VISTA creates awareness for the nutritional value of OFSP and other locally available foods and thus promotes healthy feeding practices, cooking demonstrations, and hygiene.

2.2.3 New collaboration with CLUSA International

Funded by USAID, the NGO CLUSA recently introduced the “321 agriculture training system” in Mozambique. Hosted by Vodacom, this mobile technology allows farmers to access information on production best practices, health, nutrition, and crop-specific information. Although we at VISTA believe the information service will only be useful to farmers if offered for free, and if the on-demand information is targeted to the needs of the poor, we decided to join the “321” effort by contributing succinct and relevant information on

production and nutrition of OFSP. We understand that the information will soon be available by dialing *321# and going through a number of menu choices, or by calling 84321 and selecting hearing menu options. The information is now available in Portuguese, but CLUSA has plans to make it available in native languages as well. By partnering with CLUSA we expect a large number of indirect project beneficiaries to benefit from our agricultural and nutritional messages.

2.2.4 New collaboration with World Vision International

Recognizing a wide scope for project synergies and collaborative action, VISTA has agreed to assist the USAID-funded project “Projecto de Alimentação Escolar,” led by World Vision International (WVI). We will provide OFSP planting material and capacity building, particularly in the area of OFSP production, storage, and processing. Operating in the districts of Muecate and Nacaroa, WVI seeks to introduce domestically produced raw material into local school-feeding programs. Owing to their nutritious value and robustness, OFSP fit the bill for production of foodstuffs by the same communities where schools are located. VISTA and WVI identified concrete action over the next few months, including (1) agronomy training of 26 farmers representing 13 communities; (2) nutrition training to raise awareness of the value of OFSP; and (3) marketing linkages with VISTA farmers in Monapo District who can sell both vines and OFSP to WVI communities. As in the case of CLUSA, the collaboration with WVI enables VISTA to reach out to significant numbers of indirect beneficiaries beyond its affiliated communities while at the same time capitalizing on collective action structures facilitated by WVI.

2.3 VISTA Staff Capacity Building

To facilitate efficient project implementation in the remote districts and reach smallholder farmers with improved sweetpotato technologies, in August 10 VISTA hired district-based field coordinators in Nampula and Zambezia provinces (Fig. 3). They will coordinate all project-related activities in agriculture, nutrition, marketing, and M&E, in addition to liaising with local government, extension agents, health professionals, and seed multiplier farmers.

VISTA organized a 2-week in-house training of the field coordinators that prepared them to take up their posts in remote districts, where they will assist agronomists and nutritionists with the day-to-day implementation of VISTA project activities. The training sought to sensitize the field coordinators for the needs of beneficiaries and how to communicate with them appropriately and to respect codes of conduct of both USAID and CIP. Also, much time was spent to build capacity for data gathering to support VISTA’s M&E functions. Other training topics included:

- CIP’s organizational work procedures and rules
- Work place safety, security, and project asset management
- USAID financial procedures and compliance
- Sweetpotato technology, identification, and engagement of DVMs
- Vine conservation technologies
- Basics of nutrition and M&E techniques.

Some of the field coordinators needed to acquire a motorcycle driver's license before they could be released to take up their position in the districts. Official letters directed to the District Services of Economics Activities and the Serviço Distrital de Saúde, Mulher e Acção Social introduced the field coordinators to relevant district authorities.



Figure 3. New field coordinators hired to coordinate VISTA activities in remote districts of Nampula and Zambezia provinces (August 2017).

2.4 M&E

2.4.1 Baseline survey (2017)

A household baseline survey was conducted in Y3Q4 in 15 of the 16 project districts in Zambezia and Nampula provinces (VISTA has not yet been able to obtain approval for Nicoadala District). The baseline covered a number of different topics aimed at an improved understanding of current HH wealth status, the extent of sweetpotato production and seed system, nutrition and health care behavior, food security, dietary diversity, and consumption frequency of vitamin A-rich foods.

A total of 2,295 HH, corresponding to 96% of the target (2,400), were surveyed (1,567 in Nampula, 728 in Zambezia) (Table 1). Survey HH were selected using two-stage random sampling techniques. Intervention HH were selected by first randomly selecting DVMs for each district, and then by identifying HH from the beneficiary lists associated with a given DVM. Control HH were randomly selected from the control villages in consultation with the DVM and extension agents. Twenty beneficiaries per DVM and 8 corresponding control HH were randomly selected. In the “new” districts, where project activities are about to start, 80 beneficiaries associated with a DVM were selected. In the “old” districts, where the project has been operating since 2014, 70% of the surveyed HH were beneficiaries while the remaining 30% were controls. The survey was conducted by 23 trained enumerators (data collectors), who speak the predominant local language of the respective district.

Table 1. Distribution of baseline-surveyed HH by category over project districts

| Province | District | Intervention | Control HH | Total |
|----------|--------------|--------------|------------|--------------|
| Nampula | Angoche | 80 | 60 | 140 |
| | Larde | 80 | 60 | 140 |
| | Malema | 80 | 32 | 112 |
| | Meconta | 200 | 80 | 280 |
| | Mecuburi | 80 | 59 | 139 |
| | Mogovolas | 80 | 32 | 112 |
| | Moma | 80 | 60 | 140 |
| | Monapo | 120 | 48 | 168 |
| | Murupula | 80 | 32 | 112 |
| | Nampula City | 80 | 32 | 112 |
| | Rapale | 80 | 32 | 112 |
| Nampula | Subtotal | 1,040 | 527 | 1,567 |
| | Alto Molocue | 200 | 80 | 280 |
| | Gilé | 80 | 32 | 112 |
| | Gurué | 160 | 64 | 224 |
| | Mocuba | 80 | 32 | 112 |
| Zambezia | Subtotal | 520 | 208 | 728 |
| | Total | 1,560 | 735 | 2,295 |

The survey was conducted from the beginning of August to mid-September. The M&E team prepared an itinerary for each week detailing the villages and DVMs to be visited in coordination with district agricultural supervisors and extensionists. DVMs and HH were informed about the survey exercise, and only after expressing oral agreement, were interviewed by the enumerators.

Depending on vehicle availability and loading capacity, distance of the HH from the main road, and type of HH (intervention or control), one enumerator could interview 2–5 HH per day; 45 enumerators were necessary to complete the baseline survey.

The data entry process has started after the data were collected. Five data entry clerks trained in CSpro data entry application software have already digitized 1,200 (about 50%) of surveyed HH by the time this report is being written (end of October 2017).

2.4.2 Nutritional monitoring survey (2017)

The nutritional monitoring survey was conducted in order to understand the nutritional knowledge of women in beneficiary HH that have been targeted by VISTA’s nutrition awareness building through a training cascade. In this approach VISTA nutritionists train promoters and nurses, who in turn train CHWs, who ultimately teach the beneficiaries in the community. The survey’s purpose was to assess which nutritional messages are effectively conveyed through the cascade; emphasis was placed on childcare, feeding practices, and dietary diversity. Also, the survey will help to determine whether districts can be differentiated on the basis of training success and to provide pointers for improvement. The survey was conducted toward the end of Y3Q4, and data are yet to be evaluated. A total of 426 women with children under 5 years of age were interviewed in 10 districts (Table 2). Preliminary findings suggest that 26% of the women believe that giving the first breast-milk (colostrum) to the newborn is a bad practice, and 10% consider “eating eggs during pregnancy [to] cause child blindness.” Another 20% had never heard about vitamin A.

Table 2. Number and distribution of beneficiary women surveyed for nutrition knowledge and practices

| | District | Number of Women Interviewed |
|----|--------------|-----------------------------|
| 1 | Malema | 36 |
| 2 | Mogovolas | 49 |
| 3 | Meconta | 50 |
| 4 | Monapo | 47 |
| 5 | Rapale | 48 |
| 6 | Mucuba | 40 |
| 7 | Murupula | 36 |
| 8 | Gurué | 40 |
| 9 | Gile | 40 |
| 10 | Alto Molocue | 40 |
| | Total | 426 |

2.5 Agricultural Activities

Achievements under VISTA Objective 1: Increased production of OFSP among at least 102,500 direct and 375,000 indirect beneficiary HH through use of productive, locally adapted varieties, quality planting material, and sustainable agricultural practices.

Outputs relative to indicator **EG: 3-1**: Number of households benefitting directly from USG intervention.

No significant achievements can be reported under this indicator since yearly project targets had already been reached by the end of Y3Q3.

Outputs relative to indicator **EG: 3.2-1**: Number of individuals who have received USG supported short-term agricultural sector productivity or food security training.

Eight sweetpotato agronomy training courses were conducted in Y3Q4, each of which lasted a full 2 days. In response to the need of enhancing agricultural production skills and facilitating OFSP uptake, the courses were directed to 239 key VISTA stakeholders in the districts that can be expected to have the greatest potential for disseminating skills amongst beneficiaries. These included 94 DVMs, 92 elite OFSP producers, 39 district agricultural extensionists, and 14 district agricultural supervisors (of extensionists) (Table 3). Women accounted for 15% of the total number of participants, which reflects the low number of women amongst agricultural extension agents, supervisors, and heads of farming HH.

Taught by the three VISTA agronomists, the training covered land and ridge preparation, crop husbandry, planting and harvesting, and OFSP vine conservation technologies such as Triple-S and net tunnel. The content of the course has been designed for all VISTA districts, but the interactive teaching accommodated local peculiarities and focused on an improved understanding of how to avoid mistakes with crop management commonly seen in the field. Theory lessons were complemented with practical exercises held to demonstrate the net tunnel construction and Triple-S technologies.

Apart from the training aspect, the courses provided a good opportunity for trainees from different districts to exchange experiences and learn from each other. For example, some of the DVMs reported their success in producing OFSP planting material well beyond VISTA's assured demand, thus illustrating the potential of some DVMs or producers to become suppliers of OFSP planting material. Participants shared their concerns about the procurement of inputs for net tunnels, and solutions for such problems were pointed out to them. There were also lively discussions how to increase area productivity and profitability of vines and OFSP roots.

Table 3. Distribution of individuals trained in sweetpotato agronomy in Y3Q4

| District | Male | Female | DVMs | Extensionists | Supervisors | Producers | Total |
|-------------------|-------------------|------------------|-----------|---------------|-------------|-----------|------------|
| Zambezia Province | | | | | | | |
| Alto Molocue | 16 | 2 | 8 | 2 | 1 | 7 | 18 |
| Gile | 11 | 2 | 3 | 2 | 1 | 7 | 13 |
| Gurué | 11 | 3 | 8 | 2 | 1 | 3 | 14 |
| Mocuba | 10 | 3 | 3 | 2 | 1 | 7 | 13 |
| Nampula Province | | | | | | | |
| Angoche | 13 | 2 | 10 | 4 | 1 | 0 | 15 |
| Larde | 24 | 1 | 19 | 5 | 1 | 0 | 25 |
| Malema | 9 | 1 | 0 | 2 | 1 | 7 | 10 |
| Meconta | 11 | 4 | 4 | 2 | 0 | 9 | 15 |
| Mecuburi | 9 | 3 | 3 | 2 | 1 | 6 | 12 |
| Mogovolas | 14 | 1 | 10 | 4 | 1 | 0 | 15 |
| Moma | 16 | 0 | 10 | 5 | 1 | 0 | 16 |
| Monapo | 23 | 10 | 8 | 1 | 1 | 23 | 33 |
| Murrupula | 13 | 0 | 3 | 2 | 1 | 7 | 13 |
| Nampula City | 9 | 1 | 1 | 2 | 1 | 6 | 10 |
| Rapale | 13 | 4 | 4 | 2 | 1 | 10 | 17 |
| Total | 202 (~85%) | 37 (~15%) | 94 | 39 | 14 | 92 | 239 |

Outputs relative to indicator EG 3.2-18: Number of hectares of land under improved technologies or management practices.

No significant achievements can be reported under this indicator since yearly project targets had already been reached by the end of Y3Q3.

2.6 Nutrition Activities

Achievements under VISTA Objective 2: Increased consumption of OFSP by children under 5 years of age and women in at least 102,500 beneficiary HH vulnerable to vitamin A deficiency (VAD) and other forms of malnutrition.

Outputs relative to indicator HL.9-4 Number of individuals receiving nutrition-related professional training (RAA) through USG-supported programs.

Table 4 shows that 15 nurses and 36 promoters received nutrition-related professional training in six districts in Y3Q4. The topics covered during the nutrition training included (1) importance of mother and child-feeding during pregnancy; (2) postnatal and antenatal counseling; (3) the first 1,000 days of a child's life; and (4) balanced diet, complementary feeding, and dietary diversity.

Table 4. Number of nurses and promotors trained by VISTA nutritionists in Y3Q4, by district

| District | Nurses | Promoters |
|--------------|-----------|-----------|
| Alto Molocue | 0 | 9 |
| Gile | 0 | 6 |
| Gurué | 1 | 7 |
| Mocuba | 8 | 7 |
| Mogovolas | 0 | 7 |
| Nicoadala | 6 | 0 |
| Total | 15 | 36 |

Table 5 shows that in Y3Q4, project-trained promotors trained 1,073 CHWs (animators) in Zambezia and Nampula provinces (Table 4). Each CHW teaches 15–20 HH. Animators are volunteers and receive no pay from VISTA; however, the project provides modest incentives to motivate animators, such as VISTA-branded T-shirts, capulanas, and edible oil.

Table 5. Number of animators trained by VISTA promotors and nurses Y3Q4, by district

| Province | District | No. of Animators |
|-------------------------------|--------------|------------------|
| | Malema | 94 |
| | Meconta | 126 |
| | Mogovolas | 115 |
| | Monapo | 94 |
| | Murupula | 116 |
| | Rapale | 70 |
| Subtotal for Nampula Province | | 615 |
| | Alto Molocue | 123 |
| | Gilé | 102 |
| | Gurué | 118 |
| | Mocuba | 115 |
| Subtotal by Zambezia Province | | 458 |
| Total | | 1,073 |

Outputs relative to indicator HL.9-1 & HL.9-2: Number of children under five (0–59 months) and under two (0–23 months) reached by nutrition-specific interventions through USG supported programs, and lactating and pregnant women.

In Y3Q4, VISTA has reached children under 5 and under 2 years of age by promoting key evidence and messages. Messages covered topics on infants and young children-feeding practice; the “first 1,000 days”; dietary diversity; vitamin A-rich foods; cooking demonstration to integrate OFSP into local recipes; and water sanitation, and hygiene (WASH) at HH level in collaboration with CHWs and health promotors trained by the project. Most of the community-based nutrition training at HH level happened in Q4 after animators received training by promotors in the previous two quarters (2 and 3). In addition to the children, the nutrition program reached 3,568 women of reproductive age (15–49) with nutrition messaging; 1,417 were pregnant. There were no nutrition activities in the districts of Nicoadala and Nampula city due to administrative issues.

Table 6. Distribution of women aged 15–49 and children under 5 and under 2 years of age, by sex of the child, and women of reproductive age (15–49) by district reached by nutrition training

| Province | District | Women 15–49 Years | | Children under 5 | | Children under 2 | |
|--------------------|--------------|-------------------|-----------|------------------|-------|------------------|-------|
| | | Pregnant | Lactating | Female | Male | Female | Male |
| Nampula | Malema | 181 | 207 | 739 | 476 | 221 | 139 |
| | Murrupula | 193 | 328 | 833 | 598 | 194 | 191 |
| | Rapale | 205 | 338 | 613 | 614 | 128 | 143 |
| | Meconta | 128 | 285 | 859 | 740 | 247 | 182 |
| | Monapo | 162 | 260 | 686 | 560 | 239 | 194 |
| | Mogovolas | 341 | 193 | 592 | 454 | 193 | 175 |
| Subtotal | | 1,028 | 1,405 | 4,322 | 3,442 | 1,221 | 1,025 |
| Total Nampula | | 2,433 | | 7,764 | | 2,246 | |
| Zambezia | Alto Molocue | 139 | 326 | 661 | 564 | 193 | 139 |
| | Gilé | 110 | 213 | 781 | 589 | 187 | 74 |
| | Gurué | 140 | 207 | 656 | 515 | 128 | 164 |
| Subtotal | | 389 | 746 | 2,098 | 1,668 | 508 | 377 |
| Total Zambezia | | 1,135 | | 3,766 | | 884 | |
| Grand total | | 3,568 | | 11,530 | | 3,130 | |

2.7 Marketing Activities

Outputs relative to indicator EG.3.2-19: Value of smallholder incremental sales generated with USG assistance (thousands of USD).

Data collection to determine the value of smallholder sales from OFSP in project year 3 is in progress. We will present the values for this indicator in the annual report for year 3.

Outputs relative to EG.3.2-20: Number of for-profit private enterprises, producer organizations, water user associations, women’s groups, trade and business associations and community-based organizations (CBOs) that applied improved organization-level technologies or management practices with USG assistance.

In Y3Q4 15 individuals representing trading enterprises (9) and farmer organizations (6) were trained in postharvest and marketing skills. Trainees came from the 6 districts in which VISTA has been operating since 2014 (Alto Molocue, Gurué, Meconta, Monapo, Murrupula, and Rapale) and have superior potential for OFSP production and roadside markets. Course curriculum was designed to enable trainees to promote, store, and market OFSP more effectively. Topics covered included the nutritional benefits, uses, and transformation of OFSP into value-added convenience products; harvest and postharvest practices to prolong shelf life; marketing and packaging; and entrepreneurship.

3. CHALLENGES AND MITIGATION STRATEGIES

The persistence of nutrition and child-feeding myths

VISTA nutritionists face an uphill struggle to convince beneficiary women of the need to abandon erroneous and sometimes even hazardous nutrition and child-feeding practices. These are often handed down from parents and grandparents and re-enforced by traditional healers, who yield much influence on local opinions. Frequent misconceptions encountered during counseling and training sessions concern the consumption of eggs, fish, and a few other highly nutritious foods, which are believed to harm small children or pregnant women, when quite the opposite is true. Preliminary monitoring data suggest that the association of VISTA nutrition activities with local health centers occasionally leads to the mistaken perception that OFSP are good for ailing children but not particularly so for the healthy.

The ignorance about the value of the colostrum is alarming. According to the monitoring exercise (see section 2.4), about a quarter of all women who have been trained by VISTA CHWs (animators) still believe that the colostrum is bad for the child and should be discarded. Owing to its dark color the colostrum is thought to be dirty and unsuitable for newborns until a lighter-colored breast milk appears.

Understanding why such myths persist is key to improving our VISTA's nutrition capacity building. We will continue to monitor the prevalence of nutrition myths and re-enforce our messaging and delivery strategy accordingly. In particular, we will have to monitor the effectiveness of the animator-training sessions and at which point of the training cascade do important messages get lost or are not conveyed with sufficient emphasis and reasoning. This type of monitoring can only be done for sample beneficiary populations, but results are expected to shape VISTA's communication strategies.

4. SUCCESS STORIES

None for Y3Q4.

5. PLANNED ACTIVITIES FOR NEXT QUARTER (Y4Q1)

| Indicator/Issue | Activity | Location | Target Quarter |
|--|---|---|----------------|
| <i>Objective 1: Increased production of OFSP among at least 102,500 direct and 375,000 indirect beneficiary HH through use of productive, locally adapted varieties, quality planting material, and sustainable agricultural practices</i> | | | |
| EG.3-1: Number of households benefiting directly from USG intervention | Identifying, registering, and disseminating vine to direct beneficiary farmers | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 92 |
| EG.3.2-1: Number of individuals who have received USG supported short term agricultural sector productivity or food security training | Short-term training for beneficiary farmers on OFSP production by DVMs, field coordinators, and CIP agronomist | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 9,000 |
| EG.3.2-17: Number of farmers and others who have applied improved technologies or practices with USG assistance | DVMs implementing improved agricultural practices (Triple S and net tunnel) | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 45 |
| | Beneficiary farmers planting OFSP distributed by DVMs and CIP supported vine multipliers | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 92 |
| EG.3.2-18: Number of hectares of land under improved technologies or management practices with USG assistance | Sweetpotato area measurements on DVM plots | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 12 |
| EG.3.2-17: Number of farmers and others who have applied improved technologies or practices with USG assistance | Farmer-led varietal demonstrations (“Mother-Baby-Trial” methodology). | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 316 |
| <i>Objective 2: Increased consumption of OFSP by children under five years of age and women in at least 102,500 beneficiary HH vulnerable to VAD and other forms of malnutrition</i> | | | |
| HL.9-4: Number of individuals receiving nutrition-related professional training through USG-supported programs | Training nurses selected from health centers | Mecuburi, Larde, Moma, Angoche, and Nicoadala, and Nampula city | 25 |
| | Training agentes polivalente elemental (APEs) on the six modules of the nutrition component | Mecuburi, Larde, Moma, Angoche, and Nicoadala, and Nampula city | 25 |
| | Training of CHWs by APEs | Mecuburi, Larde, Moma, Angoche, and Nicoadala, and Nampula city | 300 |
| | Training of HH by CHWs | Mecuburi, Larde, Moma, Angoche, and Nicoadala, and Nampula city | 5,400 |
| HL.9-1: Number of children under five (0–59 months) reached by nutrition-specific interventions through USG-supported programs | Promote key evidence and messages—for example, maternal, infant, and young child nutrition (MIYCN), cooking demonstration, dietary diversification, and WASH—at community level on collaboration by APEs and CHWs | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 3,000 |
| HL.9-2: Number of children under two (0–23 months) reached with community-level nutrition interventions through USG-supported programs | Promote key evidence and messages (MIYCN, cooking demonstration, dietary diversification, and WASH) at community level on collaboration by APEs and CHWs | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 600 |

| Indicator/Issue | Activity | Location | Target Quarter |
|--|---|---|----------------|
| <i>Objective 3: Increased agricultural incomes among at least 10,000 HH from sales of OFSP roots in local and urban markets, including fresh root and leaf markets, institutional markets, and commercial processing</i> | | | |
| EG.3.2-20: Number of for-profit private enterprises, producer organizations, water user associations, women's groups, trade and business associations and community-based organizations (CBOs) that applied improved organization-level technologies or management practices with USG assistance | Identifying for profit-private enterprises and CBOs, train them on OFSP production techniques, and supply quality planting material | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 0 |
| | Train groups and other processors to add OFSP into their processed products and ensure that the product development cycle ensures that commercially viable products are developed | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Mecuburi, Larde, Moma, Angoche, Gurué, Alto Molocue, Mucuba, Gilé, and Nicoadala | 0 |
| EG.3-6: Farmer's gross margin per hectare, per animal per cage obtained with USG assistance | Conducting market study | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Gurué, Alto Molocue, and Mucuba, | \$460/ha |
| | Farmer training in harvesting and bulking strategies and techniques and postharvest handling | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Alto Molocue, and Mucuba, | \$132,251 |
| | Facilitation of supply chains for OFSP processing by private sector food processors | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Alto Molocue, and Mucuba | |
| | Support to marketing of OFSP planting materials by commercial multipliers and DVMs | Mogovolas, Nampula City, Rapale, Murrupula, Malema, Monapo, Mecanta, Alto Molocue, and Mucuba | |

6. FINANCIAL REPORT

A detailed financial report (most recent pipeline report) will be sent as a separate file.

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