

## SNAPSHOT

# Avocado Farming for Sustainable Income

### Azimio farmers group receive increased incomes from avocado sales



Photo by Fintrac Inc.

Felister Sanga, a member of Azimio farmers group, in her plot of Hass avocado trees. The harvests have helped her to sustain her family.

**“I own a tricycle which I bought from sales of avocados which helps in taking the harvests to the market. I also have a savings account in the local financial institution which makes me a proud farmer.”**

- Ismael Mwalongo

In an effort to reduce poverty in their group, 25 members of the Azimio farmers group have begun growing Hass avocados under technical support from USAID-TAPP in Njombe.

The group has planted more than 4,400 avocado trees in Ujindile village in Njombe with each of the 50 members managing their own avocado trees. The group was seen as a laughing stock in the village, as avocados were not seen as an income generating crop in the area.

Felister Sanga, one of the members of Azimio, owns and manages 45 trees. In her second harvest, she was able to sell 50 buckets of 12 kilograms of avocados at a price of TZS 15,000 (\$9) a bucket. “I cannot compare the income generated in avocados with my previous harvests of maize and beans. I am far better with avocados and I now have enough income for the daily needs of my family,” she said.

Lomanus Lugome, chairman of the group, received an income of more than TZS 10 million (\$5,681) in the last harvest of avocados from his 420 trees. More than 900 buckets of fruit were sold in the towns of Njombe and Makete from his farm.

“My wife used to laugh at me when I told her to help me dig holes for the trees but now she is the one who leads the family in managing the trees,” said Lugome. “I have four children and the income from the avocados has allowed me to send all of them to school without government funds and loans,” he added.

Ismail Mwalongo earned more than TZS 3 million (\$1,704) from the harvests of his 152 avocado trees. His increased income has made it possible for him to send his two children to secondary school and buy additional land to expand his production.

“I own a tricycle which helps in taking the harvests to the market which I bought from the sales of avocado. I also have a savings account in the local financial institution which makes me a proud farmer,” said Luponelo Msigwa, another member of the Azimio group.

USAID-TAPP has been providing technical support to the farmers on seedling production, integrated pest management, and good agricultural practices which have enabled the Azimio farmers group to increase their incomes through avocado farming in Njombe, Kilimanjaro, and Mbeya.

## SNAPSHOT

# Creating Awareness on Health and Nutrition

**Rural families increase incomes and dietary diversity through health and nutrition training.**



*Photo by Fintrac Inc.*

Peter Lupenzi stands in front of the Idunda group's cabbage plot during one of the last weeks before harvest.

**“Hybrid seeds, integrated pest management, and advice from the technical team have made our group produce a lot of vegetables for family consumption.”**

*- Peter Lupenzi*

USAID-TAPP partnered with Njombe Agriculture and Development Organization (NADO) to improve nutrition for rural farmers, with a particular focus on those affected by HIV/AIDS and orphans and vulnerable children. This has been achieved through agronomic trainings on home garden production using demo plots, education programs related to household nutrition, and HIV/AIDS awareness, prevention, and control.

NADO has provided more than 4,000 vulnerable households with access to home/kitchen gardens. More than 7,000 individuals have been trained on HIV/AIDS prevention and interventions and 100 demo plots have been established to train farmers on good agricultural practices (GAPs) and integrated pest management in order to improve vegetable intake and increase household income through agriculture.

With assistance from USAID-TAPP, NADO has distributed more than 10,000 clean orange-fleshed sweet potato (OFSP) vines to smallholder farmers in Njombe. The training has enabled the farmer groups to earn an extra income from the surplus vegetables from their gardens. From the sale of vegetables, Maulwa group received TZS 2,006,100 (\$1,114), Chalutego group received TZS 1,526,100 (\$847), Mtitavu group received TZS 661,000 (\$367), and Joachim Mwinami received TZS 125,000 (\$69). All of the vegetables sold were grown on less than an acre of land.

Elias Mgaya from the Maulwa group said that the training they received enabled them to improve their families' health by increasing the availability of nutritious vegetables in a location close to their homes. “Our plot is next to a path which makes it seen by the villagers who use the path. Most of them ask us to teach them the good agricultural practices and they adopt them on their plots,” said Mgaya.

“Hybrid seeds, integrated pest management, and advice from the technical team has made our group produce a lot of vegetables for family consumption and due to proper management of the plot we get a lot of harvests which generates income to the members,” said Peter Lupenzi, a member from Idunda group. The group is grateful for the assistance from NADO which has reduced the cost of production as they've learned the proper use of fertilizers and seeds.

**“After receiving the training, we get more than 20 bags of maize compared to the five bags we used to get on the same acre of land.”**

*-Anna Danda*



*Photo by Fintrac Inc.*

Anna Danda displays crops from her garden while preparing *maandazi* from OFSP.

Anna Danda from Chalowe group also appreciates the training the group received from NADO which has led to the group’s increased production under GAPs. “After receiving the training, we get more than 20 bags of maize compared to the five bags we used to get on the same acre of land,” said Danda.

Igwachanya secondary school has received support from NADO in the establishment of a vegetable garden which has provided the school with access to nutritious vegetables for the students. “We have been lacking an alternative for the students who had problems with beans in their meals, but now the vegetables have eased the problem,” said Lutatus Mlomo, assistant head master of the school.

“I have learnt a lot from this plot. I never knew how to prepare seedlings, transplanting, and how to manage the plot but now I have entrepreneurial skills and can start my own plot of vegetables to earn money out of it,” said Simon Ngalatula, a student at the Igwachanya secondary school.

NADO has introduced trainees to the dietary properties of garden crops, with an emphasis on their nutritional (vitamin/mineral) content and their uses in maintaining a healthy body. Participants were also trained on the prevalence, transmission, prevention, and control of HIV/AIDS within their households, families, and communities.

USAID-TAPP has addressed chronic malnutrition through the provision of agronomic training to farmers in home garden production, household nutrition, and diet with assistance from NADO. Home gardens are an important component of Feed the Future’s nutritional strategy as they promote the production of healthy vegetables rich in micronutrients just outside the door of rural families.

## SNAPSHOT

# The Bicycle Man and His Drip Kits

### Technology adoption boosts profitable farming operations



Photo by Fintrac Inc.

Salum Baissa has taken profits from his two acre tomato field and put the money towards supplies for his bicycle shop and school fees for three of his children.

**“Using these new technologies have really brought in a lot of money for me and my group members.”**

- Salum Baissa

Despite juggling a busy schedule between his farm in Ruaha Mbuyuni, Iringa and his small bicycle spare part shop he manages with his wife in Kilombero, Morogoro, Salum Baissa is maintaining a profitable agricultural operation. As chairman of the Mapambano Kware Farmer Group, staying up to date on the latest technologies has been essential to expanding operations for him and his peers.

To save on resources, increase productivity, and lift bottom-line dollars, Baissa has been open to trying new cultivation methods. After several training visits from USAID-TAPP's agronomists in January 2012, he switched from growing tomatoes under furrow irrigation to incorporating drip irrigation, raised beds, and trellising. Since USAID-TAPP intervention, group members from the Mapambano Kware Farmer Group have experienced an increase in both their yields and total income. A little under a year ago, this group harvested 15,750 kgs of tomatoes on one acre using furrow irrigation, netting a total gross sales profit of Tsh 525,000 (\$334), but under good agricultural practices, they harvested 55,440 kgs of tomatoes on one acre under drip, a 252 percent yield increase, and celebrated a total gross sales profit of Tsh 7,392,000 (\$4,708) in July 2013.

Facing the competitive economics of high supply and low demand of tomatoes in the marketplace, the Mapambano Kware Farmer Group achieved higher tomato yields through the use of new technologies, improved seeds, and better soil and water management. This strategy has proved not only essential for achieving sustainable agriculture practices, but also for earning higher market prices. Proceeds from this harvest were used to expand their farm from one acre to two, and Baissa used his funds to purchase additional supplies for his shop and pay school fees for three of his children. When he is not at his shop, Baissa spends countless hours out in the field, not only tending to his current two acre tomato crop under drip, but advising neighboring farmers and other group members on improved irrigation practices.

Through his efforts, two new groups have been formed, resulting in 40 new farmers. Furthermore, one member from the Mapambano Kware Farmer Group has invested Tsh 1,600,000 (\$1,019) in one acre drip kits for his individual tomato plot. Baissa hopes to expand his land to eight acres, with drip kits installed on each raised bed, ultimately using the proceeds from this future hearty harvest to construct a two-story house for his family in Kilombero, Morogoro.

# SNAPSHOT

## Job Creation through Agriculture

**Agriculture is seen as a great potential driver of economic development and job creation in Africa**



*Photo by Fintrac Inc.*

Victor Mvanda (right) standing in a family photo outside his home, with wife Adeline and son Francis.

**“With USAID-TAPP’s new technologies, I can cultivate crops on smaller acreages, and still bring in higher yields.”**

*- Victor Mvanda*

Sitting behind his computer screen in a small room inside his four bedroom house, Mr. Victor Mvanda, a retired local government officer and father of eight, is not just running an ordinary family business, but one that is also creating employment within his community. Based deep in the Southern Highlands of Iringa, the Malulumo Farm, located at Tadamenda village, is registered as a private company and has three full-time employees working out in the fields. The company is run by Mr. Mvanda and four other members from the Mwanda Farmers Group, consisting of one neighbor and three family members, including his wife.

Before joining USAID-TAPP in July 2012, this former maize and sunflower grower had experimented with garlic production, after receiving a large order request of garlic seeds from a promising international buyer. With Tsh 2,400,000 (\$1,529) in cumulative profits earned from his previous maize and sunflower harvest in May 2012, Mr. Mvanda sowed 2,000 kgs of garlic on one acre. His luck was washed out with the onset of the heavy rains, and unfortunately missed out on significant potential earnings.

Despite the setback, Mr. Mvanda met up with a fellow farmer who introduced him to USAID-TAPP during one of the project agronomist’s routine visits to his farm. After several months of trainings and technology adoption under USAID-TAPP’s wings, Mr. Mvanda quickly went to work and transformed his former garlic plot into a red field of healthy tomatoes under drip irrigation. His optimism paid off with a gross profit of Tsh 7,000,000 (\$4,459) from 17,775 kgs of tomatoes harvested in July 2013.

Proceeds from this harvest have been re-invested in the construction of a greenhouse on his farm; USAID-TAPP has also supported the group with nylon and nets. Installing a greenhouse will allow Mr. Mvanda to improve pest control, humidity levels, and water distribution. With a good water supply from the stream nearby, he hopes to build on his success so far and increase production.

Seen as a good exemplary figure in his community, Mr. Mvanda’s office is overflowing with visiting farmers from around the neighborhood that are eager to learn from him and the skills acquired from USAID-TAPP. He has also taken a further step by conducting weekly trainings on the farm as well as inviting other farmers to attend USAID-TAPP’s routine technical assistance trainings.

## SNAPSHOT

# Improved Rainfed Production Increases Yields

### Increased income from tomato crop helps farmer better support his family



Photo by Fintrac Inc.

Vedasto Mlawa stands outside his home in Iringa. Thanks to higher profits from his tomato crops, he is now able to pay for his children's school fees and start building his dream home.

**“This technology is very different from our old traditional ways.”**

- Vedasto Mlawa

Vedasto Mlawa, 38 years old and a father of two, is a rural farmer in Irole, Iringa, who, in the past, could barely make ends meet relying on the profits he made from his tomato farm. Although his wife runs a small business selling local doughnuts, or *mandazis*, to supplement the family income, the combined husband and wife team effort was still not enough to overcome their financial hardship.

Mlawa's farm is located in an area of Iringa which faces extensive periods of water shortages. Many farmers in this region have to rely on the rainy season, between November and April in the Southern Highlands, in order to irrigate their crops. During the rainy season of 2011, Mlawa cultivated tomatoes on a 1 acre plot using traditional farming methods. Between March and April 2012, he harvested 9,000kg of tomatoes, earning him a profit of Tsh 1,500,000 (\$960).

The next year before the start of the rainy season, Mlawa was visited by USAID-TAPP's agronomist Fikirini Mkangwa, whose timing could not have been any better. In December 2012 under Mkangwa's guidance and extensive trainings on good agricultural practices, Mlawa invested Tsh 280,000 (\$180) as a startup cost and planted tomatoes using seedling trays, improved inputs, raised beds, and proper plant spacing. Between March and April 2013, he harvested 13,860kg of tomatoes, raking in a profit of Tsh 6,000,000 (\$3,820), nearly four times higher of a profit than the year before.

Rainfed agriculture accounts for more than 95 percent of farmed land in sub-Saharan Africa. In an area like Iringa where poor farmers rely primarily on rainfed agriculture to generate income, unpredictable weather patterns and water shortages present an array of hardship. USAID-TAPP introduces basic technologies and practices to mitigate the effects of some of these challenges, and Mlawa's story certainly illustrates the high impact these simple interventions can have. Both tomato crop cycles were planted under rainfed production; however, in his second harvest, Mlawa was able to produce healthier and more marketable tomatoes that netted him nearly quadruple the profit.

With increased income, Mlawa was able to pay school fees for his two children, invest in his wife's business, purchase two dairy cows for commercial purposes, and start constructing his dream home. USAID-TAPP has also been working in Mlawa's community to help construct a new well, which will allow Mlawa to move away from rainfed production and use drip irrigation in his next planting season.

## SNAPSHOT

# Greenhouse Technologies Reap Big Harvests

### Growing tomatoes for all seasons improves productivity and income



Photo: by Fintrac Inc.

Idd Seif holding clusters of tomatoes inside his greenhouse.

***“I’ve never experienced a greater harvest and highest income in my life from such a small greenhouse plot.”***

*Idd Seif*

**Telling Our Story**  
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“I’ve never experienced a greater harvest and highest income in my life from such a small greenhouse plot,” said 51 year-old Idd Seif, a smallholder farmer in Lukozi village, Lushoto district in Tanzania’s Tanga region. Idd started farming in 1997 in an open field using poor agricultural methods that led to poor harvests and limited income.

During the past several years, Idd has been growing broccoli, cabbage, lettuce, cauliflower, and tomato on a ½ acre open field lot and experiencing consistently disappointing yields. In 2011, the Tanzania Agriculture Productivity Program (TAPP) funded by the United States Agency for International Development (USAID) as part of Feed the Future, selected Idd as one of the smallholder farmers whose farm would host a demonstration plot for hybrid tomato greenhouse technology. Prior to the construction of the 28 by 11 meter greenhouse plot on his farm, Idd attended trainings on greenhouse technology.

There, USAID-TAPP trained Idd on good agricultural practices such as using a drip irrigation system to control water usage and practice fertigation, a method of applying soluble fertilizers through drip system to save labor and time. Additionally, Idd learned that he should plant on raised beds to facilitate the development of good root systems and allow for easy weeding. “The good thing about the greenhouse technology is that you can grow your crops throughout the year, and you can also plan your crop production so as to take advantage of growing a particular crop in off-season,” said Idd.

In November 2011, Idd transplanted 780 seedlings onto the raised beds, using proper spacing and a trellising system that permits a single plant to grow to the height of more than a meter. Idd’s trellising practice created 16 clusters for each plant, meaning he could harvest about 15 kilograms from a single plant from each season.

Idd started harvesting tomatoes in February 2012; as of April he had harvested a total of 4,840 kg valued at 4,840,000 Tanzanian Shillings (\$4,200). He sold much of the produce at nearby local market, while the rest was transported to other markets in the Dar es Salaam region. Idd expects to harvest an additional 6,500 kg of tomatoes during the remaining four months of the growing season, bringing his total sales to Tshs 11,293,000 (\$9,000).

After recouping his initial investment of Tshs 2,500,000 (\$2,200), Idd will have earned himself an impressive profit. “If I compare greenhouse technology with my first poor farming practices, it’s a big difference with an increase of 100%,” admitted Idd, adding that he plans to invest his profit into a second greenhouse and share his skills and technologies with his children.

## SUCCESS STORY

# School garden improves student nutrition, helps buy books

ARUSHA, Tanzania – Students at the Gilala Primary School in the Kilimatembo village of Karatu, Tanzania are learning a valuable lesson – how to feed themselves.

The school, which was already growing maize and beans with rainwater, was approached by USAID-TAPP field manager Flora Mrindoko, who suggested that the school expand their farm to grow vegetables to feed the students and earn a little extra to improve the school.

The program has since been teaching the sixth graders and their teachers how to grow vegetables with Good Agricultural Practices (GAPs) such as raised beds, mulching, and proper plant spacing. USAID-TAPP also installed a drip irrigation system. The students are growing amaranth, spinach, and kale.

“Thanks to USAID-TAPP we have improved the children’s diet ... even their parents come to the school to buy vegetables and learn how they grow,” said Mwanahamisi Abdallah, the school’s headmaster. “We have already made a profit of more than one million shillings from the first crop, and we have been able to buy stationery, chalk, pens, books and other supplies,” Abdallah said. The school even hired another teacher with the extra income.

Lucy Mushi is a teacher at Gilala and she said that the quality and yields of the crops have drastically improved since USAID-TAPP started helping the school. She said that water conservation was their biggest challenge, but the drip irrigation ensures that they use water more efficiently. The school is now saving money to buy more pipes for drip irrigation. They plan to start growing fruit trees soon, including guava, avocado, paw paw, and mango, and will train the incoming sixth grade class every year to care for the crops.

“They are learning agricultural skills that they will be able to use in their homes when they finish their primary education,” Abdallah said.

USAID-TAPP is a 5-year program designed to increase smallholder productivity, improve family nutrition and expand horticultural markets. In partnership with local organizations, USAID-TAPP aims to raise incomes and provide food security for a minimum of 25,000 rural families, with a particular emphasis on women and youth. Visit [www.Tanzania-Agric.org](http://www.Tanzania-Agric.org) for more information.



Photo by Fintrac Inc./Manfred Bitala

Sixth grade students at the Gilala Primary School are learning to grow vegetables for the school and the community.

**“Thanks to USAID-TAPP we have improved the children’s diet ... even their parents come to the school to buy vegetables and learn how they grow.”**

—Mwanahamisi Abdallah, Headmaster

## SUCCESS STORY

# Community banks create opportunities for women

Less than a year ago, 38-year-old Mgeni Jumapanda was struggling to feed her family with the vegetables she was growing on half a hectare. Drought struck her town in Mfenensini in western Zanzibar and yields were low. She sought help from a USAID-TAPP-funded village community bank, where she was able to access a small loan and training in loans and savings. She has since launched a thriving business and is a model for women in her village.

USAID-TAPP is helping more than 200 women learn how to save and borrow money as part of its plan to increase women's access to finance. The program is partnering with Volunteer Services Overseas (VSO) Tanzania, which is creating similar programs in 10 community groups in Zanzibar. The program encourages women to get involved in the community banks so they can access small loans and take advantage of trainings in business development and recordkeeping. Most women invest in farming and small businesses, which puts them in a better position to take advantage of USAID-TAPP assistance and trainings.

The women contribute a small amount monthly to community banks, which allows them to take out loans. USAID-TAPP funded an initial training for VSO, and now the organization has established community banks in five districts of Zanzibar with nine farmer groups. In less than six months the groups have generated savings of Tsh. 4 million and have processed loans for group members worth Tsh. 1.6 million. The initiative will next extend to Pemba Island, where it will help more than 400 women in the Gando farmer association.

"By pooling their resources together, women can improve their lives through investing in small businesses and farming," said VSO's Heshbon Gachogu.

For example, Jumapanda received an initial loan of Tsh. 1,000 and invested it into her farm. She started growing green peppers, okra and amaranth and selling snacks at the market every morning. Her good standing with the community bank allowed her to borrow an additional Tsh. 20,000 to invest in a business to sell fish, clothing and water and she hired an employee to help her run the business while she works on the farm.

"Thanks to community bank I can provide for my 5 children. They get good food and clothes and I can give them an education. Women should stop depending on their men and use the loans as an investment to get out of poverty through business and farming," Jumapanda said.



Fintrac Inc./Omar Mohamed

Women members of a community bank in Zanzibar lock up the group's money.



Mgeni Jumapanda improved her life by taking out loans from a community bank. She started a business and now she doesn't have to rely on her husband's income to support her five children.

Fintrac Inc./Christina Chacha

**"Women can improve their lives by pooling their resources together to invest in small businesses and farming"**

- Heshbon Gachogu, VSO

She has gained confidence with her success, and now women in the village look up to her. Many have approached her for advice on how they too can improve their lives, so Jumapanda started two collective farming groups, leasing plots of land where the women grow vegetables together. Next she plans to start a poultry project so she can get more cash to lease a bigger farm, and she is taking English and math classes so she can improve her business management skills.

The Tanzania Agriculture Productivity Program (TAPP) is a multi-year USAID effort designed to increase incomes for small farmers and rapidly expand Tanzania's agriculture sector.