



3 MANGO VALUE CHAIN DEVELOPMENT

THE MANGO VALUE CHAIN IS VULNERABLE TO DISEASE, PESTS AND THE EFFECTS OF CLIMATE CHANGE. HELPING FARMERS TO BUILD RESILIENCE TO THESE THREATS IMPROVES THE VOLUME AND QUALITY OF THEIR PRODUCE AND HELPS TRANSFORM THEIR LIVELIHOODS.

Ethiopia's South Nation Nationality Peoples' Region (SNNPR) is famous for its mango production. The region holds a 27% share of Addis Ababa's wholesale mango market and is the second largest mango producing region in the country. Gamo Zone is a prevalent mango producing zone in SNNPR. Although the region's climate is conducive to mango production, more than 4,000 smallholder mango producers there are being affected by the low quality and high wastage of the mangoes they grow.

Mangoes are grown by the majority of farmers living in Arba Minch Zuria, Mirab Abaya and Bonke woredas in Gamo Zone. In normal years these woredas are usually classified as food-deficient. At times of crisis they are usually hotspot woredas that require urgent humanitarian response.

Prior to the project starting in 2014, mango production was being undertaken on 2,485 hectares in Arba Minch and Mirab Abaya woredas, but was thwarted by a number of challenges. Climate change has caused newly emerging pests and diseases, such as fruit flies, which are causing an increasing number of mangoes to rot. There was a high degree of spoilage due to putrefaction and high wastage. The project's baseline assessment found widespread poor agronomic practices and weak pre- and post-harvest management. Farmers were relying on old and big unmanageable mango trees. Fruit and vegetable producers' cooperatives were weak and farmers had limited access to the mango market system. Women sold mangoes, but production and marketing were not perceived as a viable business. Yields and incomes from mango production were low.

CLIMATE-SMART AGRICULTURE

The five-year Improving Smallholder Livelihoods through Climate-Smart Agricultural Economic Development project aimed to alleviate poverty and build resilient, sustainable livelihoods in Ethiopia's SNNP and Oromia regions.

Funded by Irish Aid, a consortium of SOS Sahel Ethiopia, Self Help Africa, Vita and Farm Africa worked with more than 50,000 households, with a particular focus on poor farmers, women, children and landless youth. This booklet is one of a series of seven focusing on each of the project's key components:

1. Small-scale irrigation
2. Cooperative-based seed multiplication systems
3. Mango value chain development
4. Ecosystem-based adaptation to climate change
5. Engaging women in entrepreneurial farming businesses
6. Promoting CSA through revitalising Farmer Training Centres
7. Promoting fuel-saving stoves

 **FARM AFRICA**

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Building Sustainable Livelihoods



PROJECT ACTIVITIES

The Climate-Smart Agriculture project aimed to develop the mango value chain, boost the numbers of mangoes grown and improve the fruit's quality in Arba Minch and Mirab Abaya. A key component of the project was the establishment of post-harvesting facilities and development of farmers' links to markets.

This aspect was managed by Vita, and involved training mango producers in production, pest and disease control and post-harvest handling. The project spent five years working in collaboration with the government, primary cooperatives, unions, local communities and the private sector to identify the causes of mango wastage, inefficient production and marketing.

The local mango variety is not productive and is fibrous with a low sugar content, which has resulted in it being in lower demand in the market. The project helped mango producers improve the quality of their fruit by disseminating improved mango variety seedlings and top working old mango trees. In total, 1,036 farmers, 36 of whom are female, received 6,581 *Apple* and *Kent* variety seedlings.

The top working activity was undertaken by three groups of 35 young people. In Arba Minch Woreda, there are about 34,275 mango trees; the aim of the project is to undertake top working on about 10% of the trees by the end of 2019. To date about 1,718 mango trees belonging to 637 farmers (20 female) have been top worked.

KEY RESULTS

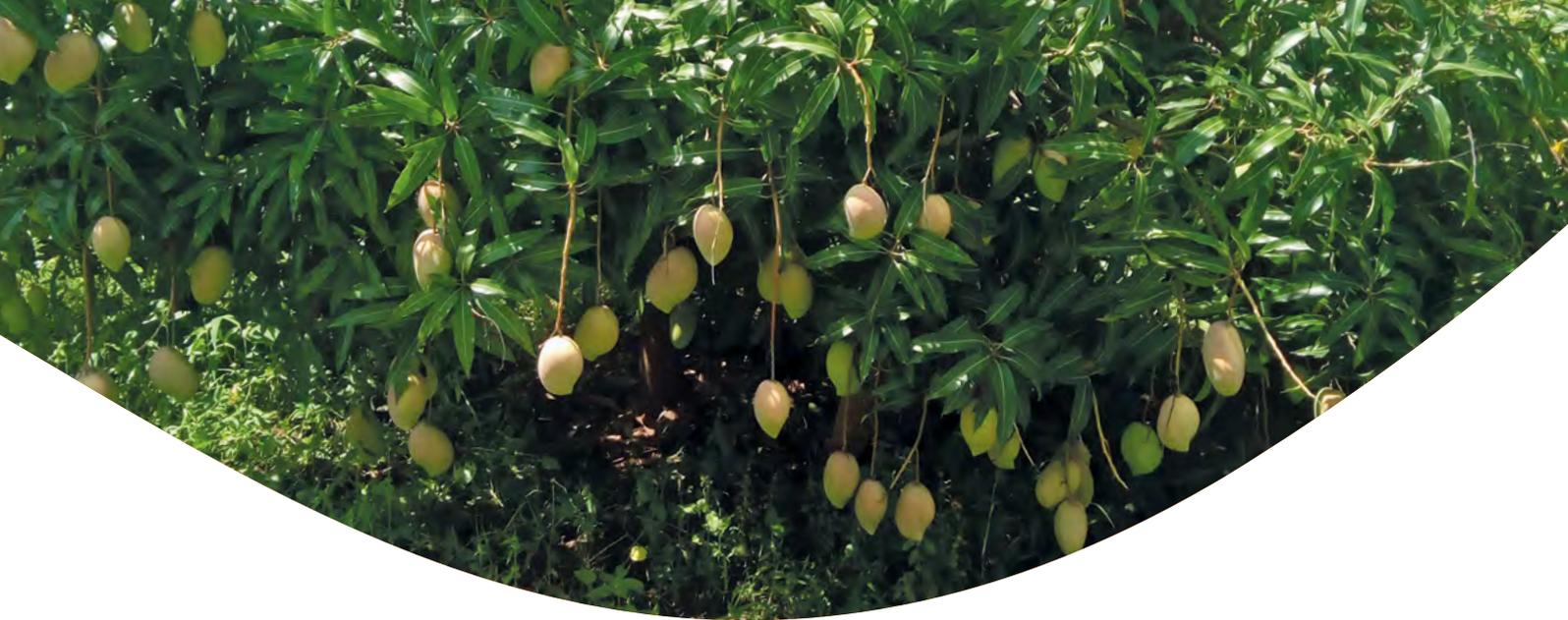
Mango is a fruit crop with the potential to make a significant contribution to the livelihoods of small-scale farmers and create business and employment opportunities for the many firms and commercial agents in the target areas. A total of 2,218 mango farmers took part in the project, of whom 438 were women. Vita worked to identify mango value chain actors and their respective functions, analyse the distribution of margins along the mango value chain and identify the factors affecting farmers' participation in the mango market and their decisions on outlet choices.

Vita established market links between primary cooperatives and African Juice PLC and Tibia Company that paved the way for linkages between mango producers and formal market outlets. Two other potential buyers look ready to come on board, and future links between producers and markets look highly promising. A government initiative to establish industrial fruit processing in Yirgalem and Arba Minch will also create a huge opportunity for mango farmers in the region in general and in Gamo area in particular. Hence, there is potential to scale up the good practice of the CSA project across all mango potential areas within the project areas and surrounding areas in Gamo Zone.

Job opportunities have been created for 136 (38 female) young people producing mango seedlings and grafting. Three nursery sites produced 3,800 grafted improved mango seedlings, which were distributed to farmers, with a survival rate of more than 95%.

The incomes of youth groups engaged in raising seedlings in the nurseries increased. The current price of one seedling is 40 Birr. The nurseries established with project support have the capacity to produce 5,000 seedlings, generating a total income of 200,000 Birr.

Mangoes have significant potential for domestic and export markets and industrial processing in Ethiopia. To capitalise on these opportunities, Vita organised and supported Gamo Gofa Vegetable and Fruit Marketing Cooperatives to establish a multi-fruit processing factory at Hawassa Industry Park.



KEY LEARNING

- It is possible to change the life of mango producers through climate-smart interventions.
- The project introduced new mango varieties and developed step by step approaches for grafting and top working.
- Facilitating agro-processing industry in the area will further develop the mango value chain in the future.
- Working in partnership, especially with relevant government offices, laid the foundation of the programme's sustainability. Zonal steering committees played a strong role in influencing zonal and woreda implementing teams to establish checkpoints and undertake other project activities.
- The introduction of improved varieties of mango strengthened the resilience of the sector. On top of this, the income generated from mango sales has increased households' resilience and assets.
- The project's success was built upon the active engagement of primary cooperatives, the Fruit and Vegetable Union and private companies who collaborated and partnered with local-level stakeholders, including communities, SARI and the government. This was further supported by the high demand for quality mango fruit, its price in the market and the area's high production.

NEXT STEPS TO SCALE UP

- As the demand for top working and improved varieties of mango is very high, support is needed for the youth trained and engaged in top working to meet this big demand under close supervision and with support from agricultural offices.
- Work is needed to strengthen farmers' market links including with wholesalers and mango juice processors.
- The Gamo Farmers Fruit and Vegetable Marketing Cooperatives need support to prepare a business plan.
- The mega mango orchard demonstration field and mango centre of excellence, which will be managed by the Gamo Farmers Fruit and Vegetable Marketing Cooperatives, needs to be finalised.
- The cooperative union and Arba Minch Industrial Park need support to engage in mango processing.
- Consortium partners need to continue to collaborate with other NGOs effectively to build the capacity of producers and unions, and work with donors to ensure that project work continues sustainably.