



# HARVESTING VANILLA

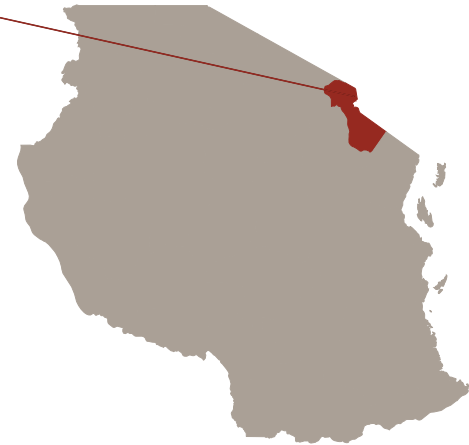


Improving the food security conditions and strengthening of the sustainable rural development for 1,200 farmers in the Kilimanjaro region, Tanzania

## ASSESSED NEEDS

In the Kilimanjaro region, for most farmers, the harvesting of their land is the primary or even the only source of family income. Due to the conditions of their plots (average area of 1.5 acres), small farmers have to increase their income as much as possible on the scarce land they own, so the selection of the most suitable crops for production is of vital importance.

Therefore, farmers started growing vanilla as an alternative to coffee. However, many abandoned their production due to a lack of technical and organisational capacities, difficulty in accessing the necessary infrastructure, inadequate knowledge of processing, and lack of necessary support. Although there are some experiences in the area with good results such as the Tanzania Agricultural Productivity Program (TAPP) funded by USAID in 2012, the consolidation of the crop has not been as expected by public and private organizations.



## INTERVENTION AIM

The aim of the programme was to support projects to help farmers in the Kilimanjaro region interested in being able to diversify production of this crop, which is generating significant demand internationally, and which has great potential for income-generation.



01/04/2017  
30/06/2018



Smallholders farmers:  
1.200 farmers



Technical Personal:  
20 Officers



Strengthening Economic Development by  
**Diversifying Livelihoods + Fostering a Sustainable Agricultural Development**

# DEVELOPMENT

## PHASE I

The first phase was implemented from and 1st January, 2015 to 31st March, 2016 and focuseu mainly on the vanilla crop production including:

- distribution of quality vanilla cuttings;
- installation of vanilla farmer's field school;
- capacity building by training farmers;
- create and register farmer's groups at village level;
- building vanilla collection center in 7 villages;
- write up the first edition of the "Vanilla Guideline: crop production for Kilimanjaro region".

## PHASE II

The second phase was implemented from 1st April to 31st May 2017 and aimed at,

- producing quality vanilla fruits;
- learning about vanilla processing techniques;
- constructing a processing center to cure vanilla;
- building a vanilla nursery to produce vanilla cuttings;
- building vanilla collection centers in 3 villages;
- creation and registration of the Vanilla Cooperative;
- the edition of the processing guideline for vanilla.

## PHASE III

It has been implemented from 1st April 2017 to 30th June 2018, this phase has been the result of the extension of PHASE II, due to dates of the vanilla harvest was not possible to achieve some indicators, and the project was extended to this new phase from April 2017 to June 2018. This PHASE includes results and activities regarding:

- Improving the technical capacities and skills of the farmers in the last phase of the development of vanilla fruits (pollinating and fruiting harvesting) as well as the whole plant development/care;
- support to improve organizational, management and transportation capacities of vanilla fruits from the farmers' plots to the vanilla processing center;
- enhance organizational and managerial skills of the vanilla cooperative board committee "UWAVAKI";
- obtention for the quality certificate from the Food Institution in Tanzania (TFDA) to authorise the use of the processing centre;
- organise the purchase of green vanilla and selling the first cured vanilla in the market to a South African company called Khoisan Tea limited.

2015



2016

2017

234 farmers have processed vanilla, generating an annual income increase of about \$100

5 new jobs created among beneficiaries

At least 15 members of the Association's committee skilled on managerial and organizational topics

54 kg of cured vanilla was obtained and commercialised

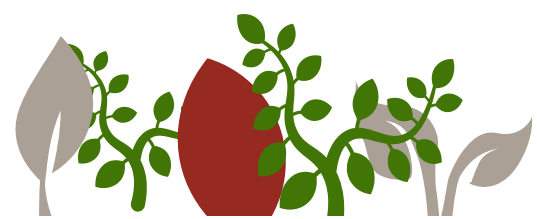
64.3% of the pollinate vanilla flowers are possessing fruits

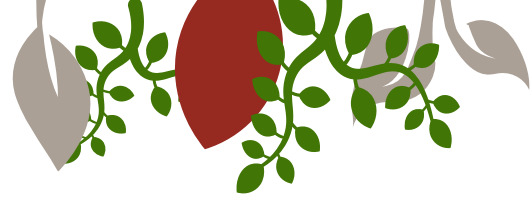
89% of the plants -available at the nursery- have been sold

At least 50% of the farmers are able to identify the characteristics and properties of mature fruits ready to be harvested

276.87 kg of green vanilla has been harvested

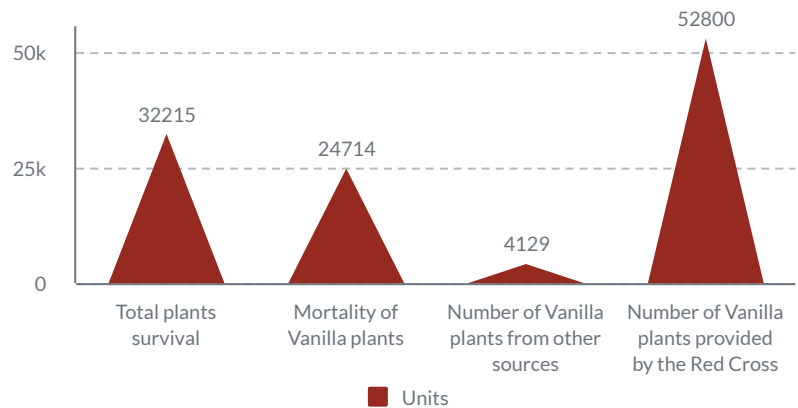
2018



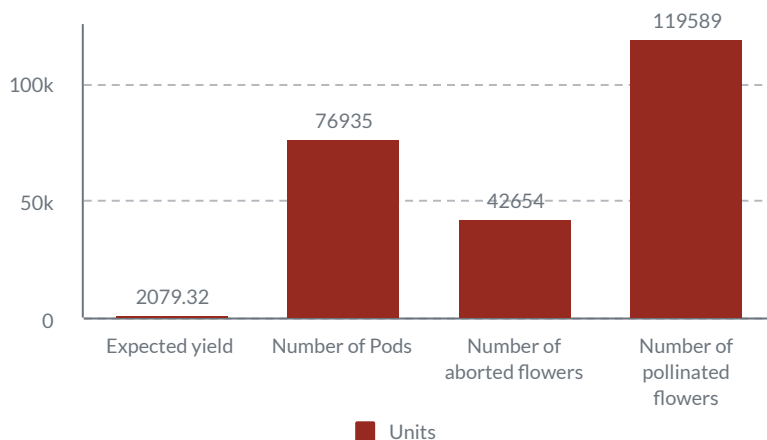


# ACHIEVEMENTS

- In vanilla production management, the cropping cycle training included:
  - Addition of organic manure and mulching
  - Irrigation Requirements
  - Looping of the plant vines
  - Pests and diseases control
  - Hand pollination techniques
  - Maturity Symptoms and Harvest optimum time
  - Maintenance of the harvested fruits
- Assist and skill beneficiaries at Farmer Field Schools and individual farmers plots by providing technical support and supervision following Good Agronomic Practices (GAP)
- Farmers have acquired 4,129 vanilla plants



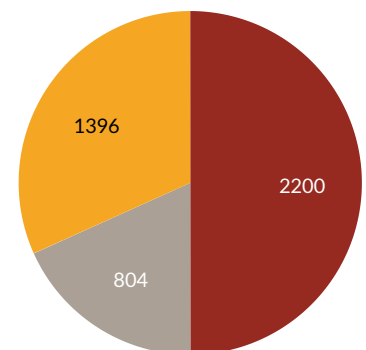
## HARVEST RESULTS



- The expected yield for this first harvest were 76,935 fruits or pods adding up to approximately 2 Tones (2,079.32 Kg) of green vanilla at an average of 37 pods per kg

## FARMER FIELD SCHOOL

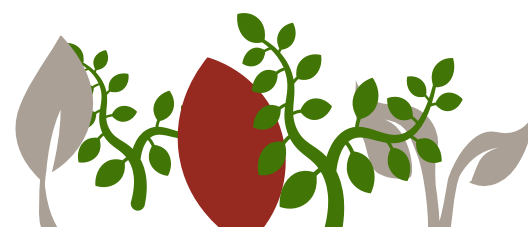
- 1,396 plants (63.45%) out of 2,200 still alive and distributed in Phase I
- 3,147 vanilla fruits/pods (62.11%) from the pollinated flowers produced 85,05 kg in July – September 2018



- Number of Vanilla plants provided by the Red Cross ...
- Mortality of Vanilla plants (18.27%)
- Surviving plants (31.73%)

## PROJECT'S BUDGET

**TSH 176.576.091,52**  
**EUR 83.685,35**



## CHALLENGES



Short-term rain during the vanilla pollination period affected the opening of flowers because the flowers require sunshine for opening



Frequent drought and scarcity of water for irrigation cause poor development of plants



In Kombo and Maringa, flower buds and young fruits were destroyed by snow rain storm



Lack of engagement of farmers with Farmers Field Schools

## CLIMATE CHANGE ADAPTATION STRATEGY

### DRY SEASON

Adding more mulch to ensure permanent soil moisture

Changing bottle-drip irrigation more often as the soil exposition to sun is higher (risk of evapotranspiration and infiltration)

Ensure shade by avoiding pruning or removing trees

Adding compost manure to avoid infertility more often

### WET SEASON

A greenhouse as a contingency measure to avoid flower exposition to rain

External light recommended for pollination during rainy days

A greenhouse keeps the temperature warm to protect the plantation

Reduction of soil erosion by avoiding terraces and afforestation

## TRAINING FARMERS

### 1 Stimulation and flowing:

- The meaning of stimulation in vanilla harvest
- Vanilla stimulation season
- Shade management
- Water management; before blooming
- Symptoms and blooming stages
- Vanilla flower components

### 3 Good vanilla fruits quality

- Timely compost manure and mulching application
- Preparation and application of liquid organic fertilizer
- Suitable type of irrigation and its schedule
- Shade management

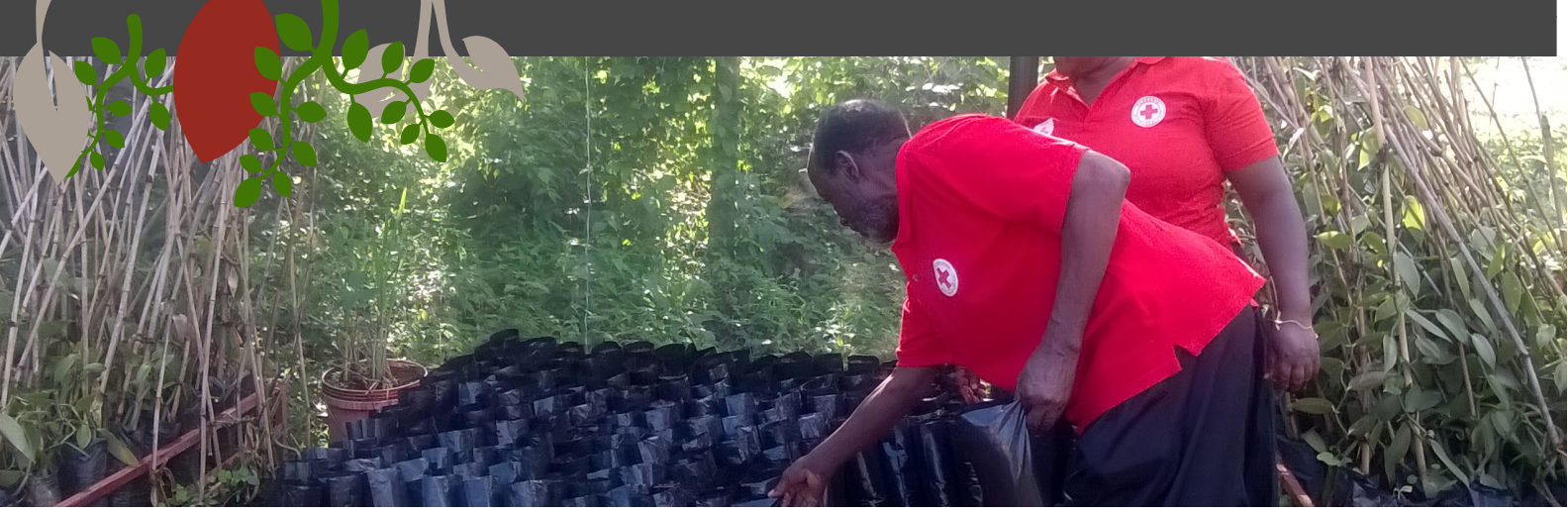
### 2 Pollination:

- Adequate weather/climate during pollination
- Recommended time for pollination and its relevancy
- Things to be considered before and during pollination
- Stages and procedures during pollination
- Successful pollination and flower abortion
- Fruit development; stimulation for blooming
- Identification of vanilla flower components and their function
- Successful pollination procedures
- Training practicing on actual plants
- Hand Pollination

### 4 Vermin and diseases as well as weeds control

- Training replication through demonstration to the farmers at Farmer Field Schools
- Training to the household during monitoring visits

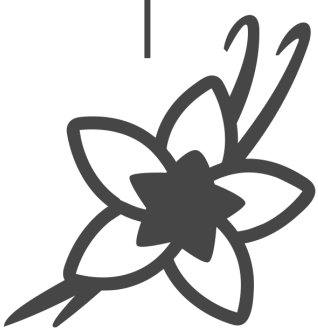




# PROJECT OUTCOME

Low monetary investment  
Creation and registration of the  
Vanilla Cooperative  
Perfect alignment with National  
Agricultural plans and policies.  
NSGRP + ASDS

Low environmental impact as vanilla  
farms were following the organic farms  
regulations.



Hand-over to Society of Vanilla  
cooperative in Moshi.

Engaged 275 women despite  
limited women participation in  
market decisions



 **Spanish Red Cross**