



**GREEN
FLOWER**
FOUNDATION

Professional Training in Organic Farming



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1. Synopsis

| | |
|--------------------------------------|---|
| <i>Project</i> | Creation of a training course in organic (horticulture) agriculture for Ethiopian youth aged between 15 to 25 years old. Our <i>Organic-Farming</i> training is based on 3 pillars: (1) organic horticulture, (2) dual training (practical and theoretical), and (3) entrepreneurship. |
| <i>Context and significance</i> | 80% of the Ethiopian population are farmers. In order to overcome the employment challenges that many young people face, this dual training (theoretical and practical) programme aims to equip students with the skills required when entering the local labour market. |
| <i>Objectives</i> | To train and sensitize younger generations to the ecological importance and economic opportunities of organic agriculture, as well as to provide them with the opportunity to gain professional skills for the future. |
| <i>Indicators</i> | The number of students trained. The number of students with employment (employed or self-employed) at the end of the training. |
| <i>Achievements</i> | 53 students enrolled in the second year. 3'420m ² of vegetable garden. |
| <i>Length of the project</i> | 3-year pilot project (September 2018- September 2021). Thereafter, should the pilot project be successful, our objective is to replicate this model in other regions of Ethiopia and/or other countries. |
| <i>Green Flower Foundation (GFF)</i> | Established in September 2016, the Green Flower Foundation (GFF) is a Swiss non-profit foundation which aims to develop educational projects and promote new techniques linked with sustainable development. With teams in Geneva (Switzerland) and Bishoftu (Ethiopia), we are passionate about GFF's vision and determined to this project a reality. |

2. Project Overview

Ethiopia is a country rich in natural resources and enjoys an ideal climate for agriculture. Over the past ten years, the economy has benefited from strong growth and in particular in the agricultural sector. In 2018, the Green Flower Foundation (GFF) obtained authorization to develop a professional training program in Ethiopia specialized in organic horticulture ('Organic-Farming'). The Organic-Farming training is based on 3 pillars: (1) organic horticulture, (2) dual training (practical and theoretical), and (3) entrepreneurship.

We work in partnership with institutions, companies, communities, and individuals who share their passion for innovative education, entrepreneurship, and sustainable development. We are improving infrastructure, training teachers and developing the Organic-Farming training programme for an initial period of three years (2018-2021). At the end of the pilot project, and depending on the progress of the project, we will have the possibility to extend the project by one or two years.

a. The Main objective

The main objective is to offer Ethiopia's first specialized vocational training in organic agriculture. This professional training is composed of two prongs, namely (1) theoretical in-class learning, and (2) practical training in the school garden (set up especially for this project) as well as through internships in local companies. We believe that the practical courses are essential for the students to perfect their skills and be prepared to enter the professional world.

To ensure that future graduates have the necessary skills to successfully produce and sell their organic products, the training courses are enriched with English and entrepreneurship modules.

To reach this objective we are working with the Ethiopian government to develop the new curriculum, which will be available in all the TVET college (Technical and Vocational Education & Training) of the country.

The main objectives are to:

- Offer a concrete future to the students,
- Preserve the environment and the biodiversity,
- Improve the life standard and the health of the local communities.

b) Why Organic farming?

The impact of man on his environment is no longer to be proven, every day we reduce the planetary resources and thus the chance for future generations to live on a healthy earth.

Conventional agriculture accounts today for 90% of the world's water use, yet it is estimated that 30-60% of the water evaporates and therefore does not benefit the crops.

It is also responsible for the destruction of the environment, ecosystems, biodiversity, water pollution, and the production of 24% of greenhouse gases.

Dangers to our health, caused by the massive use of pesticides and chemical inputs, are also important; cancer, obesity, increase in chronic diseases, etc.

There are, however, alternatives which can considerably reduce these impacts, while ensuring an excellent return on investment.

This alternative is organic agriculture:

"Organic agriculture is a holistic production management system that promotes the health of the agrosystem, including biodiversity, biological cycles, and biological soil activities. It favours management practices over externally sourced production methods, recognizing that local systems must adapt to regional conditions. To this end, cultural, biological, and mechanical methods are used wherever possible in preference to synthetic products to fulfil all the specific functions of the system" (FAO/WHO Codex Food Commission, 1999).

In summary, organic agriculture makes it possible to:

- Reduce water use by 30%
- Preserving water quality
- Use environmentally friendly products
- Preserve the region's biodiversity and the environment

3. Beneficiaries

The main beneficiaries of the project are students between the ages of 15 and 25.

In November 2019, the number of direct beneficiaries is 53, i.e. the number of students enrolled (41 in the 1st year and 12 in the 2nd year). If we consider the program as a whole, i.e. 3 years, we can count on a total of 70 students. It noteworthy that approximately 70% of students are girls.

After the 3 years of development the training will continue and will be available in the entire country, therefore the total of students studying the subject will increase each year.

Indirect beneficiaries of this training course are the families of the students, consumers of the products, and potential future employees of the farms that will be created.

BPC will benefit from new infrastructure, know-how, specialized professional training in organic horticulture that is unique in the country, and an "income-generating unit".

4. Why and how?

a. Specific objectives – WHY

- Provide dual training by combining practice and theory to students;
- Train teachers to be specialists in organic horticulture;
- Develop, in collaboration with BPC professors and an expert group, a new specialized teaching curriculum in organic horticulture;
- Provide English courses for students;
- Establish and equip an organic farm with organic nurseries, gardens, orchards, greenhouses for fruits, vegetables, and aromatic herbs;
- Sell the produce harvested in order to ensure financial sustainability for the training; and

- Establish links between the school and the private sector (e.g. internships, clients, partnerships, etc.).

b. The activities – HOW

Capacity building for teachers in organic horticulture:

- Practical training and courses for teachers in Ethiopia and abroad; and
- Visits to organic farms and businesses.

Improvement of BCP teaching and learning facilities:

- Construction of greenhouses, orchards, nurseries, vegetable gardens, water pump, composting, etc.;
- Enrichment of the existing library with specific resources for organic horticulture;
- Integration of teaching materials (e.g. learning videos, books, online materials, etc.);
- Engagement of external English teachers providing student-friendly courses with optimal teaching materials; and
- Installation of solar panels to generate stable electricity for computers, light, water pump, etc.

Enrichment of the organic horticulture program:

- Revision of the existing curriculum;
- Preparation of teaching material; and
- Practical teaching.

Establishment of a network between BPC and external partners in the sector:

- Professional internships in agricultural companies;
- Development of a customer network and for the sale of products (hotels, private, etc.); and
- Implementation of a follow-up and accounting of sales.

Development of entrepreneurial capacities:

- Development of a business plan;
- Production of specific crops;
- Creation of a network of entrepreneurs to work on real projects; and
- Linkages with the professional market.

BPC contributes to the project by:

- Providing land for gardens and classrooms;
- Hiring teachers and staff to assist with the development of the gardens;
- Promoting the new training course to the population and students;
- Collaborating with GFF for the implementation and improvement of training; and
- Including and involving local communities.

5. Disengagement

As a result of the income generated by sale of organic products by the school, we expect the training course to be financially autonomous by the third year of operation. At the end of the

second year of training, we will carry out an impact study of the project in order to analyze the strengths and weaknesses of the training programme, and to advise the teaching staff as to the best way forward in the continuation of the programme. Should the pilot project be successful and is self-sustainable, GFF plans to gradually disengage after the end of the third year and to replicate the same model in other regions. Should the withdrawal appear to be taking place too early, GFF may extend its presence for one or two years.

6. Background information

Ethiopia is one of the largest countries in Africa, with a total area of 1.1 million square kilometres. It is also the second-most populous country on the continent with 102 million people, and this number is growing by 3% per year (ESA 2013, projection). Agriculture accounts for approximately 53% of the Gross Domestic Product (GDP), and employs more than 80% of the total population.

Approximately 70% of total export revenues come from the agricultural sector. Moreover, this sector is also the main supplier of food for a rapidly growing population. In recent years, Ethiopia has diversified its crops and is home to attractive agro-ecological features that, with its vast, fertile, and deep soils, offer the country great potential for agricultural development. Agro-ecological zones range from a cool temperate climate to a warm tropical climate. However, the state of the agricultural sector has long been characterized by traditional, subsistence peasant agricultural practices. Finally, although the agricultural industry is well established in the country, only 33% of the cultivable land is used. Together, these features demonstrate the potential to develop the lives and food security of Ethiopians.

Ethiopia offers a favourable context for the development of organic agriculture for several reasons, in particular:

- The large number of agricultural workers;
- Fertile soil, often still free of chemicals;
- A growing population that is attentive to the quality of the products it consumes; and
- National and international market opportunities, such as export to the Middle East and Europe.

According to the 2015 UNDP Human Development Report, Ethiopia has a Human Development Index (HDI) of 0.448, placing it at 174 in the category of "Low Human Development Countries and Territories". However, between 2000 and 2015, its value increased from 0.283 to 0.448, an increase of 58.2%, indicating constant evolution and demonstrating the potential for development. Between 1990 and 2015, Ethiopia's life expectancy at birth increased by 17.5 years; the average number of years of schooling increased by 1.1 years, and the expected number of years of schooling increased by 5.3 years. Ethiopia's GDP per capita increased by about 134.7%.

a. The lack of practical organic farming skills in vocational training

Ethiopia has developed a Technical and Vocational Training System (TVET) to train the necessary workforce to meet current and future labour market demands. The TVET requires that education be provided in a 70:30 ratio (i.e. 70% practical and 30% theoretical). In practice, practical teaching is rarely implemented. TVET and polytechnic colleges are mostly located in peri-urban areas, where

urban horticulture activities are conducted on both a small and large scales. In these regions, young men and women are often underemployed. Currently, TVET programmes and lessons are solely oriented towards conventional agriculture which uses chemical inputs, etc. Prior to the establishment of our project, no training had been set up to teach organic agriculture techniques.

b. Bishoftu, an area of opportunity for the development of organic agriculture

Bishoftu Polytechnic College (BPC) is located in the city of Bishoftu, 55 km southeast of Addis Ababa. Bishoftu itself is located at an altitude of 1920 m in the regional state of Oromia. The region, known for its horticultural sites and ornamental nurseries at a national and international level, is currently experiencing a boom in interest. Within this context, there has also been a growing demand for organic products, which encouraged GFF to work towards training the young population to cultivate this sustainable sector. In Addis Ababa, there has been an increase in the population (expatriates and middle class) and luxury hotels in search of organic and quality products. Moreover, the agricultural sector has long been well established in the region as a result of the fertile land that is suitable for growing fruits, vegetables, and aromatic herbs.

There are many advantages to cultivating organic agriculture, including:

- Use of environmentally friendly products;
- Preservation of water quality;
- Preservation of the region's biodiversity;
- Introduction of healthier products to the population; and
- Increased business opportunities for farms to sell organic products on local and international markets.

7. Who are we?

Based in Geneva, the Green Flower Foundation (GFF) is a Swiss non-profit foundation established in September 2016. Our foundation develops professional training projects in organic horticulture for local youth. To do this, we work in partnership with institutions, companies, communities, and individuals who share our passion for innovative education, entrepreneurship, and sustainable development.

Our team:

| | |
|--------------------------|--|
| <u>Foundation board:</u> | Elisabeth Assal-Bouchardy (President) Mathieu Assal (Secretary) Andreas Wigger (Treasurer) |
| <u>Advisory board:</u> | Anne Guimond-Kostecki Charles Millo Amanuel Abate Gabriel Beasrat Belew Ruth Avison Dang |
| <u>Geneva office:</u> | Julie Porchet (Projects & operations Coordinator) |

Ethiopia Office: Kassahun Lemi (Project manager & In-Country Representative)
Esrom Tesfaye Molla (Farm manager / agronomist)
Getachew Dejene (Accountant)
Zekarias Tesfay Woldegebrel (English teacher)

8. Our local partner

Bishoftu Polytechnic College (BPC) has been a well-established TVET centre for many years. This government college provides training in 34 programmes in sectors such as economic infrastructure, industry, hospitality and tourism, urban agriculture, among others. As part of the urban agriculture programme, the BPC offers training in crop and animal production.

The choice of BPC as our local partner was made on the basis of several criteria:

- Proximity to Addis Ababa, and thus the higher demand for organic vegetables;
- BPC's interest in hosting new specialized training, and to become a centre of excellence in organic horticulture in the region;
- Availability of land for the creation of a garden; and
- Preferable climate conditions for agriculture projects.

9. Our GFF office in Bishoftu

The GFF Ethiopia office is located within the BPC premises and reports directly to the GFF Geneva office. The local team coordinates the implementation of the project to ensure that it runs smoothly on a daily basis. The GFF Ethiopia office is the main contact with all relevant stakeholders, PCBs, local partners, companies, etc.

10. Risk analysis

| Assumptions | Risks | Solutions |
|--|--|--|
| Sufficient number of qualified candidates for training. | Not enough candidates interested in such training | <ul style="list-style-type: none"> • Increase the recruitment area; • Organize information days for potential candidates and their families; and advertise locally to raise awareness among families. |
| Most students complete the first year. | 30% of students will drop out of school (for reasons such as lack of competence and/or financial resources). | <ul style="list-style-type: none"> • Offer individual tutoring and coaching; • Ensure training is provided by motivated and qualified teachers, with good teaching materials; • Support students in the creation of their own business; • Adapt the training schedule to the needs of students so that they have time to work; and • Part-time employment in the income generation project. |
| TVET teachers are competent and motivated. | Employed teachers are not adequately competent or motivated. | <ul style="list-style-type: none"> • Periodically offer workshops and training for teachers by experts in areas where there have weaknesses; • Incentives within the limits of the capacities of the GFF and the BPC; • In discussion with BPC management, appropriate measures can be taken; and • Expand the network of experts. |
| The GFF farm (i.e. nurseries, gardens, and greenhouses) is established and maintained. | Delays in supply, deterioration in equipment, failure to operate and maintain premises, theft. | <ul style="list-style-type: none"> • Launch the procurement process in advance; • Provide initial and regular training on how to operate and maintain equipment; • Include repair and replacement costs in the budget; • Ensure that spare parts are in stock for immediate replacement and use; • Provide locked storage areas; and • Assign designated security guards. |
| Graduates will find employment or start their own businesses. | Graduates cannot acquire land or obtain employment. | <ul style="list-style-type: none"> • Provide career guidance to graduates on how to apply for vacant positions; • Assist graduates in the preparation of a business plan to help them create their own business or form a cooperative; • Invite young entrepreneurs to share their experience with students; and • Approach private companies and public institutions to discuss their needs. |

11. Project monitoring and evaluation; expected results

The GFF Ethiopia office, in partnership with BPC, will regularly monitor the progress of the project in order to take timely and appropriate action if necessary.

The GFF team in Ethiopia will be present at BPC to ensure the smooth running of the project. Annual evaluations are carried out to review the effectiveness and efficiency of the project and to identify areas for improvement.

By the end of the second year of the pilot project, a global evaluation will be conducted. Based on the results, the decision as to whether GFF will exit by the end of the third year will be made. At the end of three years, a final evaluation will be carried out to decide whether or not to replicate the project in other regions.

See the logical framework below for more information on indicators and expected results.

Key numbers 2019

- 41 students were enrolled at the start of the training
- 12 new students have registered for the 2019 academic year
- 3 greenhouses have been built
- 3'420m² of gardens have been created and are in use
- 100% of the produce was sold to support the training program

| Hierarchy of objectives and intervention strategy | Key indicators and measures of success | Verification methods | Expected results after 1 year |
|---|---|--|--|
| To develop vocational and technical training in sustainable organic agriculture in Ethiopia, and to contribute towards the empowerment and integration of young adults into the labour market (including a fair representation of women) by strengthening the organic horticulture training curriculum and entrepreneurship skills. | <ul style="list-style-type: none"> The first class of students will have completed the training. The program is well integrated into the TVET training programme. New students are enrolling for the 2nd year. | <ul style="list-style-type: none"> Number of students enrolled in subsequent years. A professional training curriculum in organic horticulture is developed in partnership with the Ethiopian government, and is effective for all regional TVETs. Partnership contract with BPC. | <ul style="list-style-type: none"> Youth from BPC and surrounding areas of Bishoftu are interested in this training programme. BPC takes ownership of the programme and participates in the smooth operation of the training (i.e. BPC hires staff to work on the farm, with a minimum of 2 guards and 2 farmers). |
| <p>Results after the first year:</p> <ul style="list-style-type: none"> 41 students were enrolled at the start of the training programme. 12 new students have registered for the 2019 academic year. The partnership with BPC is going well. BPC is invested in the project; they give us tools to develop and support the project. | | | |

| Specific objectives | Indicators | Verification methods | Expected results |
|--|---|--|---|
| <ul style="list-style-type: none"> • 30 students are enrolled in the first year of the organic horticulture program at BPC. • An organic farm is established and equipped within the BPC. The college will provide the land, while the necessary equipment and seeds/plants/trees are provided by GFF. • The teachers, employed by BPC, will teach students the best practices in organic horticulture. The teachers will be trained by GFF. • Organic products grown on the school's organic farm are sold through specialized stores. • Students increase their level of English language skills. | <ul style="list-style-type: none"> • Minimum of 1 internship or workshop for teachers. • Teachers present a course that they developed with the expert group. • Number of students who passed the first year, i.e. more than 60% of students. • The school farm produces its own vegetables and fruits, and students are in contact with customers. • More than 60% of students are satisfied with the training. • Areas made available by the school for organic farming. • Teacher satisfaction levels. • Number of kilos (of produce) produced per year. • Number of partners and customers buying farm products (minimum of 2). • Employment of an English teacher. | <ul style="list-style-type: none"> • Number of teachers participating in workshops. • Observation and review of equipment and horticulture fields. • Sales accounting of the school's organic farm. • Satisfaction questionnaire submitted by students and teachers at the end of the year. • The GFF farm is established and produces fruit and vegetables for sale. • Students' internship reports are written in English. | <ul style="list-style-type: none"> • Students learn well and are closely supervised. • Good teaching materials can be developed and information can be consulted online. • The school farm is established and functional. • Students are able to converse in English. |

| Activity 1 - Theoretical training Indicators | Indicators | Verification methods | Expected results |
|---|---|--|---|
| <ul style="list-style-type: none"> • Organization of internships and workshops for teachers. • Provide a good learning environment. • Improvement of electrical stability within the school compound. • Entrepreneurship, business development, and English language courses. | <ul style="list-style-type: none"> • Number of workshops for teachers (minimum of 1 week per year). • Number of teachers involved in training. • Number of students participating in the course. • Purchase of computers and Internet access. • Purchase of tables, chairs and teaching materials. • Well-equipped classrooms. • Installation of solar panels. • Collaboration with committed entrepreneurship experts. • Committed English teacher. • Teaching materials for English courses are used. | <ul style="list-style-type: none"> • Course registration. • Student internship reports. • Consistency of energy (KW) produced. • Interview of teachers. • Interview of trainees. • Advisory bodies of the partner network. • Annual Project Report. • Internship reports submitted in English and are satisfactory. • Students create a business plan and to partially present it in English. | <ul style="list-style-type: none"> • Teachers learn new organic techniques from their training. • Teachers are well trained. • Internet is accessible. • The panels are installed and functional. • The level of English is satisfactory and they have the ability to communicate effectively. |
| <p>Contribution:</p> <ul style="list-style-type: none"> • External experts • Infrastructure • Training • Financing | | | |

| Activity 2 - Practical training | Indicators | Verification methods | Expected results |
|--|---|--|--|
| <ul style="list-style-type: none"> • Organization of internships for students. • Practical training in organic horticulture on the farm. • Purchase of equipment. • Setting up the organic farm within the school. | <ul style="list-style-type: none"> • Purchase of seeds, plants, and trees. • Number of students who completed an internship (2 weeks per year). • Organic fruit and vegetable production in the school. • Well-maintained GFF farm. | <ul style="list-style-type: none"> • On-site visits. • Audit report. • Annual inventory. • Verification of organic sales accounts. • Students' internship reports. | <ul style="list-style-type: none"> • Students have first-hand professional experience. • The organic GFF farm is functional and the land has access to sufficient water supply and fertile soil. |
| <ul style="list-style-type: none"> • Access to an agro network and distributors. | <ul style="list-style-type: none"> • Number of students participating in practical courses. • Students acquire practical knowledge. • Number of certificates awarded. • Steady fruit and vegetable production. | <ul style="list-style-type: none"> • Annual project report. • Interviews with trainees. • Consultation of network organizations. • Revenues generated by production. • Students' internship reports and companies' reports. | <ul style="list-style-type: none"> • Students were able to gain work experience through internships. • Students are in contact with a network of professionals. |
| <p>Contribution:</p> <ul style="list-style-type: none"> • External experts • Land available for practice (i.e. farm) • Infrastructure • Training • Financing | | | |

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