



**Farmer-to-Farmer East Africa
Volunteer Assignment Scope of Work**

Summary Information	
Assignment Code	ET-113
Country	Ethiopia
Country Project	Horticulture Production and Sector Support
Host Organization	Kombolcha Agricultural, Technical and Vocational Education and Training (ATVET) College
Assignment Title	Small scale postharvest handling practices of horticultural crops
Assignment preferred dates	Flexible
Objective assignment	<ul style="list-style-type: none"> • Increased shelf-life of horticultural crops through reduction in post-harvest losses • Develop simple post-harvest handling guidelines on horticultural crops
Desired volunteer skill/expertise	<ul style="list-style-type: none"> • Graduate knowledge/skills and experience in post-harvest handling, storage and management activities. Horticultural crops

A. BACKGROUND

The Farmer-to-Farmer (F2F) East Africa program leverages US volunteer’s expertise to assist smallholder farmers and small scale processors in East Africa to improve their business practices through volunteer assignments conducted with host organizations. Through F2F intervention, CRS will improve the livelihoods and nutritional status of significant numbers of low income households by: i) broadening their participation in established commodity value chains as producers and service providers; ii) strengthening community resilience to shocks such as droughts that adversely affect livelihoods; and iii) preserving/enhancing natural resources upon which most rural communities depend. CRS will also increase the American public’s understanding of international development programs and foster increased cross-cultural understanding between host countries and US volunteers.

Horticultural crops play a major role in developing country like Ethiopia, both in income and social spheres for improving income and nutrition status. In addition, it helps in maintaining ecological balance since horticultural crops species are so various and also it provides employment opportunities as their management being labour intensive. Ethiopia is a country with great variety of climate and soil types that can grow diversity of horticultural crops for home

consumption and foreign markets. Presently, the majority of the horticultural crops product comes from smallholder farms.

Ethiopia has got a vast potential to develop intensive horticulture on small scale as well as on commercial scale. Some of the main reasons that contribute to an overall investment include favourable and diverse climate (Agro-climatic suitability), rich water resources for diversified irrigated agriculture, rise of demand for horticultural crops; particularly in urban areas and export possibility of these horticultural crops are very encouraging. Regardless of an enormous potential and a favourable environmental and socio-economic advantage, the horticulture sector is under developed. The margin of the current achievements, in terms of area & output is a small development compared to the possible level that can be attained. Horticultural crops production in general is constrained by shortage of seeds/planting materials, diseases and insect pests, poor post-harvest handling and poor linkage to market and market information. Major horticultural crops in Ethiopia include garlic, shallot, carrot, tomatoes, cabbage, onion, cauliflower, potato (Irish potato), sweet potato, papaya, banana, orange, pineapple, Avocado, lemon, mangos etc.

Development Agents (DAs) are the major ones in supporting the large base (83%) of the smallholder farmers of the Ethiopian agriculture. Limited flows of the agricultural knowledge/skills and technologies in all aspects of agriculture including horticulture production sector on post-harvest handling and management techniques to the large domains of the farming communities are important. Therefore, increasing the volume and quality of the skilled man power of candidate DAs on post-harvest handling and management of horticultural crops, and improving the efficiency and quality of the learning and teaching environment in ATVET colleges such as the Kombolcha ATVET would be paramount.

Such intervention to improve the quality of the candidate DAs is tribute to the decision made by the government in establishing good number of Agricultural, Technical and Vocational Education and Training (ATVET) colleges in different parts of the country. In terms of teaching modality, most ATVET colleges pursue modular coursing system where subsequent courses are arranged one after the other in which next course will be open after completion of the former course; one course lasts after a period of 20-30 days.

Kombolcha ATVET College is one of the several ATVET colleges established in Ethiopia. The objective of the college is teaching agricultural students and producing technically equipped personnel. These agricultural students of the colleges are therefore, candidates DAs. The candidate DAs after graduation in Bachelor science degree level, will join their respective offices in the regional Bureaus of Agriculture of the Ministry of Agriculture, and will be assigned at kebele¹ levels to work for the grassroots' farming communities. DAs are also responsible to administer

¹*Kebele is the lowest administrative structure of Ethiopia, below district or woreda level.*

certain agricultural institutions in the kebeles such as Farmers Training Centers (FTCs) and extension support with regard to horticulture production and management.

B. ISSUE DESCRIPTION

Ethiopia has a comparative advantage in a number of horticultural commodities due to its favourable and diverse climate (Agro-climatic suitability), rich water resources for diversified irrigated agriculture, rise of demand for horticultural crops; particularly in urban areas and export possibility of these horticultural crops are very encouraging. Despite this huge resource, its contribution to the county's GDP remains low. This is because of low quality production, productivity and poor post-harvest handling of horticultural crops. The main reasons for low productivity include: shortage of high yielding and good quality varieties, seed/planting materials, diseases and insect pests, shortage of skilled personnel, inadequate capacity in research and extension, crop management (Irrigation, IPM, quality, food safety and weak market chain).

Post-harvest losses are a major source of food loss. Farmers growing horticultural crops are facing high economic losses, because there have been no methods of increasing the shelf life of these crops. Besides the country is not getting foreign exchange from horticultural crops due to the low levels of postharvest technology, which makes the product of inferior quality, with no chance of competing in the world market. The post-harvest losses of perishable (vegetable and fruits) food crops in Ethiopia is estimated at about 30 percent due to high moisture content, insect infestation and damage during handling (packaging, storage and transportation).

The Kombolcha ATVET College pursues three interrelated pillars education/training/community support services. Under the education and community service pillars, the college is requesting volunteer assistance in post-harvest handling and management of horticultural crops. The college identified limited skills and knowledge on post-harvest handling and management of horticultural crops with instructors, students and surrounding community. The host, therefore, requested F2F volunteer assistance to provide technical support on post-harvest handling and management of horticultural crops at small scale and back yard farming which is usually undertaken by farmers. The volunteer specialist will train the targeted staff and students and community, then the students after completion of their training, will train and give technical advice to the smallholder farmers in urban, peri-urban and rural areas with special emphasis on post-harvest handling and management.

C. OBJECTIVES OF THE ASSIGNMENT

The objective of this volunteer assignment is to train and/or technically assist the targeted beneficiaries on post-harvest technologies (handling and management) of horticultural crops for improved production. The assignment is scheduled to educate and/or transfer post-harvest handling technique and management knowledge and skills to college instructors, staff working in

farm and students in the department of plant sciences in Kombolcha ATVET College. The modality will be in the form of lecturing, advising, workshop, seminar or whatever modalities and sessions that the college and the volunteer feel better way of learning process. The volunteer jointly with the target students and lecturers can also plan to visit private or government intensive vegetable/fruit farms in nearby areas.

The beneficiaries or attendees of this assignment will be expected to be more than 70 plant science students, 15 department staff (plant science lecturers and assistant lecturers) and more than 10 staff working in the college farm. Anticipated training topics include but are not limited to the following:

- Postharvest biology and technology of Horticultural Crops: Principles and Practices for quality maintenance, food safety
- Physiology of Horticultural Crops
- Proper handling of horticultural crops; handling during harvest, sorting, cleaning and packaging
- Current technologies for storage, packaging and handling
- Storage structures; types and characteristics of simple storage structures suitable to local environment (at small scale) etc.
- Develop simple guidelines demonstrating principles and practices of effective post-harvest handling of vegetables/ fruits.

Host contribution – The Kombolcha ATVET College will select and determine the number of staff and students prior to lecturing hours, the college will provide the volunteer with the course topics and outlines where the volunteer will integrate into her/his prior prepared training and advising materials from overseas. The college will also ensure that the necessary class rooms and local training aids and other teaching materials are in place. The host will also provide the volunteer with guesthouse and facilitate the volunteer for meal services. The college will also assign a focal person who can guide and facilitate the volunteer specialist during the assignment period. The host will also provide office space and office furniture as well as vehicle if any travel is required during the assignment duration. Fuel and any other essential costs of this assignment incurred for the volunteer can be reimbursed against receipts and financial procedure of CRS.

D. ANTICIPATED RESULTS FROM THE ASSIGNMENT

It is anticipated that the volunteer will transfer up-to-dated technologies and overseas' experience to the plant science lecturers and students/candidate DAs and the community in a form of lecture, workshop, discussion, demonstration, seminars, and/or hands-on (fieldworks). Thus:

- Farmers able to maintain the good quality of the harvested produce for the market.
- Reduce the level of losses in weight and quality after harvest

The anticipated deliverables that can be accomplished by the volunteer includes:

- Initial presentation done (outlines of topics of the course, plan, approach, etc.),

- If time permits, reviewing of training modules or handouts prepared and submitted.
- Reports with recommendation submitted;
- Presentation to CRS staff and/or USAID;
- Outreach events conducted in the US.

E. SCHEDULE OF VOLUNTEER ACTIVITIES IN ETHIOPIA

Day	Activity
Day 1	Arrival in Addis. The volunteer will be met at Bole Airport by CRS's client hotel Churchill (churchillhotel@ethionet.et ; phone # 0111111212). The volunteer will locate the Churchill hotel kiosk and receive their pre-arranged transport.
Day 2	<ul style="list-style-type: none"> • Briefing meeting at CRS office with CRS F2F staff, briefing on logistics and itinerary of the trip and discuss anticipated outcomes and work plan; • Meet with Ministry of Agriculture (General Manager Office of the ATVET colleges) for introduction and expectations
Day 3	<ul style="list-style-type: none"> • Travel to Kombolcha (380 km to the North-East of Addis, 40 minute air flight) • Setup with guesthouse and other logistics and/or stay at CRS client hotel
Days 4	<ul style="list-style-type: none"> • First hand briefing on outlines of topics of the course, plan, approach, etc, and adjust the topics as required. • Work planning and discussion with the staff of the college • Acquainted with the existing curriculum and course topics of the department and the instructing modalities of the College through integrating volunteer prepared course and lesson plans. • Prepare course/training and plan with the local associate of the college to proceed with the assignment (lecturing, seminar, workshops, advising, etc.)
Day 5-7	Conduct the assignment according to an agreed schedules and modality of lecturing, advising, seminar, etc.
Day 8	Rest day
Days 9-14	Continue conducting the assignment (training/academic and practical)
Days 15	Rest day
Day16-17	Continue conducting the assignment (training/academic and practical)
Day18	<ul style="list-style-type: none"> • Wrap up sessions that emphasize key concepts of the assignment: the college evaluates the assignment and discusses final report recommendations with the volunteer. • Group presentation to the host in the presence of CRS F2F staff
Day 19	Travel back to Addis Ababa
Day 20	<ul style="list-style-type: none"> • Debriefing at CRS office with USAID Mission and CRS staffs. • Submit all reports, return logistic items and complete all required activities • Depart for USA (evening hours)
TBD	Conduct outreach activity when back in the US

F. DESIRABLE VOLUNTEERS SKILLS

- Specialist in post-harvest handling and storage of horticultural crops (fruits and vegetables)
- experience in in small scale production of vegetable and fruits at community level is desirable.
- Demonstrative experience in agricultural education/learning institutes and/or universities in the US and/or other African agricultural universities,
- Ability and preparedness to use relevant teaching aids and audiovisuals,
- Demonstrated experience in advisory, research and laboratory work, emphasizing horticulture production
- Good communicator and interpersonal skills

G. ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS

- Before travelling to the host at the assignment place, the volunteer will stay in Addis Ababa at one of the CRS's client hotels that will be booked and confirmed before the arrival date.
- In Addis Ababa, the hotel usually has rooms that include services such as airport pickup and drop-off, breakfast, wireless internet, etc.
- The hotel or CRS will arrange a vehicle for short travel from the hotel to CRS and vice versa while in Addis Ababa.
- All required materials will be prepared ahead of time and will be provided to the volunteer. CRS Ethiopia will provide the volunteer with a laptop computer, local internet dongle (modem/EVDO) and mobile phone with charged local SIM-card.
- Any other required logistics and facilities can also be requested by the volunteer during her/his stay in Addis Ababa.
- CRS will arrange transport service and accompany the volunteer to the place of assignment.
- During her/his assignment period, the volunteer will be stay in the guesthouse of the College, or nearby CRS's client hotel in Kombolcha town.
- CRS Ethiopia will cover the lodging bills against receipts.
- CRS HQ will provide the volunteer with a per-diem advance to cater meals.
- CRS Ethiopia will also reimburse the volunteer with laundry costs against receipts. Before departing from Ethiopia, the volunteer will also liquidate if s/he received any advances in Ethiopia.
- For more information, please refer to country information that will be provided.

H. RECOMMENDED ASSIGNMENT PREPARATIONS

- Although CRS F2F has developed such hinting SOW, the volunteer can fine-tune through her/his professional qualifications to successfully carry out this assignment.
- Generally, Ethiopia is under the tropical zone, where malaria may be a problem. Therefore, the volunteer is advised to take pills or vaccination for malaria and (maybe also for cholera) as per medical recommendations by her/his doctors/health professionals in US before departing from US.
- Prior to travel, the volunteer is advised to prepare necessary training and demonstration aids and written handouts. Electronic copies of the handouts and any other paper materials can be printed for immediate use at the CRS office in Addis Ababa on request by the volunteer.
- If the volunteer requires simple training aids like flip charts, markers or tape s/he should make the request and collect from the CRS office in Addis Ababa prior to travel to the assignment place.
- Translation of handouts to the local language can be done in the locality of the assignment, if required.
- Depending on the meeting places and availability of electric power and LCD projector, the volunteer may use a laptop and projector for power point presentations.

I. KEY CONTACTS

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