 

**Farmer to Farmer East Africa**

**Volunteer Assignment Scope of Work**

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| **Summary Information** | |
| Assignment code | ET 29 |
| Country | Ethiopia |
| Country Project | Grain Crops Production and Sector Support |
| Host Organization | Social and Development Coordinating Office of Meki (SDCOM) |
| Assignment Title | Harvesting and post-harvest management practices on grains (maize wheat and other grains) |
| Assignment preferred dates | December 2015 or January 2016 |
| Assignment objective | Improved harvesting, post-harvest handling and storage management practices |
| Desired volunteer skill/expertise | Specialist in post-harvest management including modern harvesting techniques, grain storage facilities/constructions, grain post-harvest handling and food safety |

1. **BACKGROUND**

The Farmer-to-Farmer (F2F) East Africa program is a program that leverages US volunteer’s expertise to assist small holder 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.

Grains are the most important food security crops in Ethiopia. Although Ethiopia is one of the largest grain producers in Africa, there are still large pockets of food insecurity mainly caused by high population pressure, low agricultural productivity, poor management of crop loses and uneven distribution of grain produces. Low use of agricultural technologies including post-harvest management techniques and farm mechanization technologies contribute to low productivity and loss of produce and quality. Most grains are cultivated under rain fed conditions. Most producers are smallholder farmers whose average land holding is less than a hectare per household[[1]](#footnote-1).

SDCOM is implementing a Food Security and Rural Development Project in five districts (Arsi Negele, Shashemene, Shalla, Siraro and Wondo-Genet) in West Arsi zone of the Oromia region. The Oromia region is one of the four Feed the Future (FtF) and Agricultural Growth Program (AGP) regions of Ethiopia.

1. **ISSUE DESCRIPTION**

Ethiopia incurs post-harvest grain losses of between 15 to 30 percent for maize[[2]](#footnote-2), primarily on-farm, but also in storage. This can largely be attributed to use of traditional and conventional methods as well as loss due to pest infestations. According to the Shashemene branch office of the SDCOM, farmers in its operation area are losing up to 25 percent of their grains due to poor harvesting, post-harvest handling and storage of grains. Grain harvesting by the majority of farmers in these districts takes place manually and involves hand mowing of crops using sickles. Then for several days crops remain piled either around homestead or in the fieldbefore threshing. Some threshing methods include letting a group of animals trampling upon the grains in their stalk.

Post-harvest loses in the assignment area includes on-farm losses, such as when grain is threshed, winnowed and dried, as well as losses along the chain during transportation, storage and marketing processes and also during processing. On-farm losses occur when the grain is being stored for home consumption or while the farmer awaits an opportunity to sell when prices are favorable. Further, the timing of harvesting is determined by farmers’ indigenous knowledge, where the crop is left too long in the field or is harvested too early. After threshing of grains, farmers use various methods and types of facilities for storage. The traditional grain stores in the assignment area includes *gotera* (grain pits), bags (made of polyethylene, sisal or goat skin), earthen pots and other similar methods which makes the grain very susceptible to storage pests and loss in quality. The major causes of post-harvest losses in storage by peasant households are weevils, rodents and the growth of molds. To overcome these problems, some farmers use chemical pesticides which are not only expensive, hazardous to health but also unfriendly to the environment. Untimely rain fall also causes damage on grains and stalks/straws.

The host has therefore requested assistance in addressing the post-harvest losses of grains during and after harvest. Improvement in harvesting, post-harvest management technologies on wheat, maize and other grains were chosen by the host organization as one of the most important value chain activities to contribute to food security and increased income earnings as a result of improving the knowledge and skills of smallholder farmers on improved harvesting, post-harvest grain handling, storage management and food safety.

The volunteer will transfer improved harvesting techniques, post-harvest handling, storage construction, grain storing practices and food safety issues on the selected grain crops (wheat, maize and pulses). The major modalities of such technology transfer are informal adult training and on-farm/site based practical demonstrations and advice to the subsistence smallholder farmers.

1. **OBJECTIVES OF THE ASSIGNMENT**

The objective of this assignment is to improve the harvesting, post-harvest handling and storage of grains. It will also address improper handling and management of stalks and straw during harvesting and storage. It is targeted to address 90 smallholder farmers and 7-10 key staff of the hosts and key stakeholders of the agricultural offices, research centres and others as a Training of Trainers (ToT). The TOT will continue training after the volunteer left. The specific objectives of this volunteer assignment, therefore, include:

* Improving harvesting and post-harvest technologies and introduction of any new overseas’ innovations on harvesting, threshing/shelling, handling, management of grains and stalks/straws, food safety, etc;
* Benefit 90 smallholder farmers and 7-10 keys staffs (as a TOT) of the host and key stakeholders;
* Develop and submit simple guidelines on post-harvest management of rain fed grains.

**Host contribution** – The Shashemene Branch Office of SDCOM will select 7-10 key staffs for TOT and the 90 smallholder farmers from its FSRD project beneficiaries. The host will also avail key personnel to work closely with the volunteer at all times to ensure translations to local languages, assist volunteer during training and demonstrations at Farmer Training Centers (FTCs), and join on-farm and household visits. The host will also select scheduled training forum for the volunteer to conduct training for the ToTs. The host will also provide the volunteer with office space. For field travel within the assignment area, the host will provide the volunteer with transport.

1. **ANTICIPATED RESULTS FROM THE ASSIGNMENT**

As a result of the volunteer technical assistance, it is anticipated that this assignment will result in improved harvesting and post-harvest technologies which include better ways of harvesting and threshing techniques, post-harvest grain and straw handling, grain storage management and food safety. It is also anticipated that 90 smallholders’ farmers and 10 ToTs benefit from the training and practical technical assistance. As a result, it is anticipated that farmers will incorporate lessons learnt to improve harvest, post-harvest handling and storage of grains to minimize grain losses and deterioration in quality. Specific outputs from this assignment include but not limited to the following:

* + Improved harvesting, post-harvest handling and storage methods,
  + Storage pests control and management
  + Introduction of small scale modern shelling, threshing equipment, storage construction/facilities, etc.
  + Simple guidelines on modern harvesting and post-harvest management techniques,
  + If possible, seasonal post-harvest management plan or calendar prepared and submitted.

The anticipated deliverables by the volunteer include:

* + Initial presentation
  + Training and direct assistance conducted,
  + Field report with recommendations
  + Presentation to CRS staff and USAID,
  + Outreach events conducted in the US.

1. **SCHEDULE OF VOLUNTEER ACTIVITIES IN ETHIOPIA**

**SCHEDULE MUST BE NO MORE THAN 20 DAYS DUE TO CURRENT VISA ISSUES.**

| **Day** | **Activity** |
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| Days 1 | Arrival into Ethiopia, Bole international Airport. The volunteer will be picked by Sor-Amba hotel with a placard bearing “**CRS logo and volunteer name”**. |
| Day 2 | Introduction with CRS higher officials and briefing meeting (security and general orientation) at CRS office where s/he will be fully briefed on security plan, logistics and itinerary of trip. Discuss anticipated outcomes and work plan, |
| Days 3 | Car travel to the assignment site Shashemene town which is 250 km to South of Addis Ababa. S/he will be introduced with the host and will be accommodated at Shashemene town. If time permits, general orientation with the host will be pursued. |
| Days 4 | First hand briefing on the main objectives and modality of the assignment and adjust the agenda for the coming days (work planning session). Briefing and debriefing with the field staffs. |
| Day 5 | * Quick field observation and assessment; * Planning to demonstrate with model staff and selected adoptive farmers, fields, equipment, etc. |
| Day 6 | * Further identify skill and training gaps; * Based on information gathered and gaps identified, enrich the prepared training materials incorporating hands-on practices |
| Day 7 | * Conduct training and presentation to staffs (CDWs, DAs and other key staffs of the host/government) * Assess and refine the quality of trainings and practical demonstrations through feedback and actual observations. |
| **Day 8** | **Rest day.** |
| Days 9-14 | * Trainings and technical assistance (demonstrations, on-farm and household visits) to grain farmers’ beneficiaries and cooperative leaders through formal and informal trainings, groups and individual contacts/discussions, and demonstrations. * Assess and refine the quality of trainings and practical demonstrations through feedback and actual observations. |
| **Day 15** | **Rest day** |
| Days 16-17 | Continuation of trainings and technical assistance of Days 9-14 continue |
| Day 18 | * Wrap up trainings and emphasize key concepts of assignment. * Participants evaluate the training and together with the volunteer discuss final report recommendations * Group presentation to the host in the presentation of CRS |
| Day 19 | Volunteer travels back to Addis Ababa |
| Day 20 | * Finalize reimbursement expenditures and liquidations (if any) with finance. Volunteer also finalizes his/her reporting and submit training M&E forms to CRS F2F staff. * Debriefing at CRS office with USAID Mission and CRS staff. * Complete any unaccomplished activities |
| Day 21 | Depart for USA |
| TBD | Outreach event when back in the US |

1. **DESIRABLE VOLUNTEER SKILLS**

The volunteer should have the following qualifications and competencies:

* Qualifications in postharvest technology in grain crops are desirable.
* Good knowledge on post-harvest handling of grains (maize wheat, and others) and storage techniques in tropical
* Wide experience in working with commercial grain farmers.
* Knowledge on the range of post-harvest handling technologies and grain pests.
* Good writing and analytical skills, interpersonal communication and presentation skills (adult education skills

1. **ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS**

Before travelling to the host partner at the assignment site at Shashemene, the volunteer will stay in Addis Ababa at Sor-Amba hotel ([www.sorambahoteladdis](http://www.sorambahoteladdis)) or other hotels that will be booked before arrival dates. In Addis Ababa, the hotel usually has rooms paid together with services such as airport pick and drop, breakfast, wireless internet, etc. The hotel or CRS will arrange a vehicle for short travel from the hotel to CRS and vice versa in Addis Ababa. All required materials will be prepared ahead of time and will be provided to the volunteer.

During the assignment period, the volunteer will stay in a hotel at Shashemene town. The accommodation details will be confirmed prior to the volunteer arrival in country. CRS Ethiopia will pay for hotel accommodations and CRS HQ will provide the volunteer with per diem advance to cater for meals and incidentals. The volunteer will liquidate all advances received in Ethiopia before departure.

1. **RECOMMENDED ASSIGNMENT PREPARATIONS**

* Although CRS F2F has developed this SOW, the volunteer can fine-tune through her/his professional qualification to successfully carry out this small scale based agricultural knowledge/skill transfer program. They should also familiarize themselves with the Ethiopia grains country project
* Prior to travel, the volunteer will be advised to prepare necessary training and demonstration aids and written handouts. Softcopies 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 use of simple training aids like flip charts, markers, masking tapes, etc, s/he should make the request and collect from the CRS office at Addis Ababa prior to travel to the assignment place;
* Translation of handouts to local languages 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.

1. **KEY CONTACTS**

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| **CRS Baltimore** | **CRS EARO** |
| **Maria Figueroa,** Volunteer Support Coordinator  EA Farmer-to-Farmer Program  228 W. Lexington Street  Baltimore, MD 21201  Email: [maria.figueroa@crs.org](mailto:maria.figueroa@crs.org)  Phone: 410-951-7366 | **Nyambura Theuri,** Deputy Project Director  EA Farmer-to-Farmer Program  P.O. Box 49675 – 00100  Nairobi, Kenya  St. Augustine Court Karuna Close Road  Email: [nyambura.theuri@crs.org](mailto:nyambura.theuri@crs.org) |
| **CRS Ethiopia:** | |
| Eshetayehu Tefera, F2F Director  CRS Ethiopia, P. O. Box 6592, Addis Ababa, Ethiopia  Email: [eshetayehu.tefera@crs.org](mailto:eshetayehu.tefera@crs.org)  Phone (landline): +251-112 788800;  Cellphone: +252-911-101381 | Art Kirby, Head of Programs (HoP)  CRS Ethiopia, P. O. Box 6592, Addis Ababa, Ethiopia  Email: [art.kirby@crs.org](mailto:art.kirby@crs.org)  Phone (landline): +251-112 788800  Cellphone: +252-911-507305 |
| **Host Organization:** | |
| Mr. Jimma Gobenna  Shashemene Project Area Coordinator, ECC-SDCOM  Shashemene, Ethiopia  Cell phone: +251-911-711881  Email: shashemcs@gmail.com | Solomon Kebede  Meki Catholic Secretariat (MCS)  P. O. Box 43, Meki, Ethiopia  Email: [mcsmeki@gmail.com](mailto:mcsmeki@gmail.com)  Cell phone: +251-913-728985 |

1. *Paul Dorosh and Shahidur. 2012. “Food and Agriculture in Ethiopia.” Progress and policy challenge*  [↑](#footnote-ref-1)
2. *Shahidur Rashid, Kindie Getnet and Solomon Lemma 2010, Maize Value Chain Potential in Ethiopia: Constraints and opportunities for enhancing the system. IFPRI* [↑](#footnote-ref-2)