

**Farmer to Farmer East Africa**

**Volunteer Assignment Scope of Work**

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| **Summary Information** |
| Assignment Code  | UG77 |
| Country | Uganda |
| Country Project | Grains (maize) country project |
| Host Organization | Nkoma Area Cooperative Enterprise (ACE) |
| Type of Volunteer Assistance: | **Technology Transfer (T)**  |
| Type of Value Chain Activity: | **Processing (P)** |
| Assignment Title | Grain post-harvest handling and storage |
| Assignment preferred dates | March, 2016 |
| Assignment objective | Build the capacity of Nkoma ACE in post-harvest handling and grain storage practices  |
| Desired volunteer skills/ expertise | Qualifications in postharvest technology in grain crops, oil seeds and storage techniques in tropical developing countries |

1. **Background**

Nkoma Area Cooperative Enterprise was formed in 2006 with the overall objective of improving smallholder farmers’ incomes and livelihoods through improving their productivity and access to competitive markets. The ACE is a legally registered cooperative involved in production and marketing activities along the maize value chain. In addition, Nkoma ACE members are farmers, whose main source of livelihood is derived from cultivation of other crops such as beans, sorghum and groundnuts. Farming is done on small land parcels and yields are low, averaging between 1.0 to 1.8 tons per acre. The cooperative has a total membership of 1,810 members, 1,024 females and 786 male organized into Rural Producer Organizations (RPOs) which form the ACE’s constituents. There are seven (7) Rural Producer Organisations (RPOs).

The ACE is comprised of farmers as members of the organization, representatives from these farmer groups form the AGM which is the apex body of the organization. From the AGM a board is democratically elected with a chairman leading and working closely with the rest of the members, a supervisory committee of three members is elected to oversee organization activities on behalf of the board. These supervise the management and report back to the board, the management is only comprised of a manager who executes day to day activities of the cooperative. The farmer members are engaged in two major enterprises; maize and beans but coffee is an upcoming enterprise that the coop is encouraging its members to engage in.

The services offered to the members include: farmer trainings, input supply to farmers at subsidized rates, bulking, marketing of farmers’ produce and setting up demonstration plots.

There are several constraints identified in the maize value chain, which limit the productivity and hence the ability of smallholder farmers to earn incomes from maize farming. The constraints include lack of producer knowledge on farming as a business, poor agronomic practices, and poor natural resource management with little or no emphasis on control of soil erosion, inappropriate post-harvest handling practices, weak leadership and little regard for gender mainstreaming. Nkoma received prior volunteer assistance in farm records keeping, land management practices as well as leadership and management skills. This technical assistance will focus on grain post-harvest handling.

1. **Issue Description**

Nkoma smallholder farmers face challenges of high grain losses and low grain quality. The losses are estimated to be 20-30 percent every season. The most common traditional practice of drying involves leaving cobs to dry on the mother plant in the field; stacking harvested crop in the field, spreading the crop on bare ground, stabilized ground plastered with cow dung, mats, roof tops or rocks and road sides. Drying is solely dependent on sunshine, and hence limited to only daytime and non-rainy periods. The grain for consumption or storage is prepared by shelling. Traditionally shelling is done by prying the grain off the cob with thumbs, rubbing two cobs together or beating the cobs in a sack with a stick. These methods are labor intensive, time consuming and wasteful. Also the beating breaks the grain and reduces seed viability. KADIFO members reported incidents when their maize has been rejected in the market due to poor grain quality. This is a loss of potential earnings for the farmers, who have already incurred production related costs.

Majority of the farmers do not understand that both grain quality and quality losses begin in the field. Considerable reduction in grain losses can be obtained by improving the techniques and technologies used during pre-harvest, harvest and post- harvest stages, including storage. However, farmers do not have such skills and information and therefore grain losses have remained a challenge to many smallholder maize growers. It is therefore upon this background that the management of Nkoma ACE has requested for a volunteer assignment to address the challenge of grain loss and poor quality.

1. **Assignment Objectives**

This assignment is intended to provide a road map for Nkoma ACE to address postharvest challenges and improve farmers’ knowledge in preventing on farm maize losses and improve on quality through hands-on training in best postharvest practices. The volunteer will provide technical support in the areas of:

1. Post-harvest processes such as maturity indices, drying, storage, quality control and assurance, control of storage pests;
2. Recommendation on simple, cost effective storage facilities such as drums, bins and other storage facilities that have proved to work for other grain producers in other developing countries;
3. Basic understanding of how field infestations of insects and molds contribute to storage losses; aflatoxin development in the field and in storage, and how this can be minimized;
4. Alternative uses of severely infested maize grains;
5. Relationship between grain quality and food quality.

The volunteer will provide training on the above mentioned topics to farmer trainers personnel of each of the 7 Rural Producer Organizations (RPOs); these will act as ToTs to carry on with the training after volunteer assignment. The training will also include representative farmers from each of the RPOs, a total of 20-30 farmers per training day. It is anticipated that this activity will take about 2 days at each RPO. The volunteer is expected to train at least 80 people. The farmer selection criteria will be based on their ability to train others.

The majority of training participants are illiterate or semi-illiterate, the volunteer is advised prepare training materials with this in mind. Focus will be on practical demonstrations, pictorials, illustrations and less theory. Training venues are usually in a local church or under the tree/shade or in the garden.

**Host contribution** – Nkoma ACE has committed to mobilize the village agents and farmers to the trainings to be conducted by the volunteers. Nkoma ACE will also avail key personnel to work closely with the volunteer, during the preparations and actual trainings, to ensure that key staff are trained and will continue training other farmers even after the assignment is completed.

1. **Anticipated Results from the Assignment**

 It is anticipated that the volunteer’s technical assistance to Nkoma ACE in postharvest handling will provide a road map for Nkoma ACE to address challenges of postharvest handling and improve food security and income level of farmers and their entire households. Farmers will be in position to plan harvesting and post-harvest handling at various stages for better quality and quantity. Farmers will also be in position to understand the relationship between quality and nutrition for improved health.

Improvement in post-harvest handling techniques and facilities at the household level that are cost-effective will contribute to increased volumes of production for food and market. Improved storage will allow a continuous supply of food throughout the year, either for domestic consumption or trade; this will also increase farmers’ resilience to climatic shocks. A reserve for contingencies such as droughts will be made possible and farmers will be allowed an opportunity to sell at a time when the price will be favorable. In addition, the technical assistance will help farmers’ market high quality produce that fetch higher market prices. Finally the simple training manual developed will subsequently help in building the capacity of Nkoma ACE to carry on training to entire current and future membership but also help other organizations to address postharvest challenges.

It is anticipated that once farmers start approaching postharvest handling farming from quality and quantity point, their nutrition and incomes will improve. This will enhance the living standards of the rural farmers in terms of housing, food security and meeting basic household needs while contributing to the larger goal of making a transition from subsistence to a health and cash economy, or the creation of wealth.

The anticipated deliverables include:

* Trainings conducted and people trained
* Training guidelines/manual developed
* Debriefing with USAID and in country group presentations after assignment
* Field trip report and expense report
* Outreach activity, press release or a media event back in US
1. **Schedule of Volunteer Activities in Uganda**

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| Day | Activity |
| Day 1:  | Travel from home to US international airport |
| Day 2  | Arrival at Uganda Entebbe Airport, picked by hotel shuttle to Kampala and check in at Fairway Hotel. |
| Day 3 | At 9.00 am the volunteer is greeted at the hotel by CRS staff and thereafter taken to CRS office for briefing and finalise with logistics. Any necessary training material will be prepared at CRS offices before travel to the field.  |
| Day 4 | Travel to Kamwenge district to commence the assignment.  |
| Day 5 | In the morning CRS introduces the volunteer to the Nkoma ACE management team and board members.Together with CRS and the management, the volunteer will review the SOW and develop the action plan. The host will give an update on previous volunteer assignments and farmer adoption of best practices. In the afternoon, Visit some of the RPOs from Nkoma ACE. |
| Days 6 | Rest day for volunteer |
| Days 78- 10- | Training 1st RPO representatives on topics 1-6 above  |
| Days 9-10 | Training2nd RPO representatives on topics 1-6  |
| Days 11-12 | Training 3rd RPO representatives on topics 1-6 |
| Days 13-14 | Train 4th  RPO representatives on topics 1-6 |
| Days 15- 16 | Training5th RPO representatives on topics 1-6 |
| Day 17 -18 | Training 6th RPO representatives |
| Days 19-20 | Train TOTS and management of the ACE and develop a training guide/ manual together with them for future trainings |
| Day 21 | Wrap up meetings, whilst emphasizing key concepts of the assignment. Participants evaluate the training and together with the volunteer discuss final report recommendations. End of assignment presentation. |
| Day 22 | Travel back to Kampala  |
| Day 23 | Debriefing at CRS office with USAID Mission and CRS staff.Volunteer finalizes his/her reporting at CRS office and fill out all necessary M&E forms as well as finalise liquidations with finance. |
| Day 24 | Depart for the US |
| TBD | Outreach event in the US |

1. **Desirable Volunteer Skills**

The volunteer will have the following qualifications and competencies:

* Formal qualifications in postharvest technology with bias in cereals and oilseed crops are desirable.
* Good knowledge on post-harvest handling of grains and storage techniques in tropical developing countries
* Wide experience in working with commercial grain farmers and knowledge on farming in developing countries.
* Good writing and analytical skills, including good interpersonal communication
* Other required expertise may include wide knowledge on the range of post-harvest
1. **Accommodation And Other In-Country Logistics**

In Kampala, the volunteer will stay at Fairway Hotel & Spa ([www.fairwayhotel.co.ug](http://www.fairwayhotel.co.ug)).In Kamwenge; the volunteer will stay at Club Afreka Hotel.

CRS will pay for hotel accommodation, and provide volunteer with per diems to cater for meals and other incidentals. The volunteer may get an advance which has to be cleared before departing Uganda. For more information, please refer to country information that will be provided.

1. **Recommended Assignment Preparations**

CRS-F2F designs assignments with the assumption of some pre-departure preparation by the volunteer. Actual preparation time will vary based on the experience of the volunteer, as well as informational or training resources the volunteer has readily available. CRS relies on the volunteer to assess the tasks outlined in this SOW and to make his or her own judgment about how much and what kind of preparation is needed prior to arriving in Uganda

* The volunteer should prepare materials for hand out which can be printed at CRS office in Kampala before commencement of the assignment. Flip charts, markers, masking tapes can be obtained at CRS offices.
* CRS strongly recommends that the volunteer become familiar with CRS programs in Uganda, especially the maize country project description and other information in the briefing pack before arrival to Uganda
1. **Key Contacts**

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