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**Farmer to Farmer
Volunteer Assignment Scope of Work**

Summary Information	
Assignment Code	UG237
Country	Uganda
Country Project	Livestock Country Project
Host Organization	Namwendwa Dairy Farmers' Saving and Credit Cooperative Society Ltd
Type of Volunteer Assistance	Technology Transfer (T)
Type of Value Chain Activity	On Farm Production (F)
Assignment Title	Pasture establishment and zero grazing production system
Assignment preferred dates	February - March, 2020
Objectives of the assignment	<ul style="list-style-type: none"> • Train farmers the basics of pasture establishment and associated benefits for improved milk productivity • Train farmers about stages and proper harvest of pastures • Train farmers simple fodder preservation techniques for dry season feeding. Focus on the basics of hay/silage making procedure under small scale through practical demonstration • Train dairy farmers the basics of zero grazing system and compare benefits with the open grazing system.
Desired volunteer skill/expertise	Specialized expertise in dairy management/nutrition/production systems <ul style="list-style-type: none"> • Formal qualifications in dairy production/management or livestock production/management • Wide experience with small holder dairy production systems in developing countries • Other skills may include hands-on experience in training, extension and tropical dairy farming.
PERSUAP classification	Type III

A. BACKGROUND

CRS Farmer -to-Farmer program (F2F) is a USAID funded program that will be implemented for five years (2019- 2023) with a primary goal of reducing hunger, malnutrition, and poverty across six countries: Benin, East Timor, Ethiopia, Nepal, Rwanda and Uganda. The program aims at achieving this goal through advancing inclusive and sustainable agriculture led growth aimed at generating sustainable, broad-based economic growth in the agricultural sector. The program's secondary goal is to increase US public understanding of international development issues and programs and share the knowledge back in the US. To achieve its goals, F2F program provides volunteer technical assistance to farmers and farmer groups (associations and cooperatives), private agribusinesses, agriculture education institutions in developing countries like Uganda to address host identified technical needs in selected agricultural value chains. F2F volunteers are pooled from a broad range of US agricultural expertise, from private farmers with varied experience, University professors, bankers/certified accountants, animal health and nutrition specialists, soil scientists, agronomists who support local host organisations. F2F program introduces innovation and develops local organisations capacity for more productive, profitable, sustainable and equitable agricultural and livestock systems while providing an opportunity for people- to-people interactions within the agricultural sector. In Uganda, F2F program focuses its technical interventions in the livestock and agribusiness value chains

Namwendwa dairy cooperative started in 1997 as a farmer group and transitioned into a cooperative in 2003. It has a growing membership that is currently at 559; categorized as 354 males and 205 females. The cooperative has a vision "to achieve sustainable and improved livelihoods" and a mission statement of "bringing farmers together and change attitude of farming using local breeds to improved breeds through crossbreeding for increased milk production". Namwendwa has the following objectives:

- To promote food security
- To promote home hygiene and sanitation
- To fight malnutrition through good nutrition
- To improve household income

The cooperative offers the following services to members:

1. Milk outlet for members through collection and sale
2. Agro-vet supplies
3. Pass-on-scheme
4. Yoghurt processing
5. Lobby extension services for members from both the government and other development partners

Livestock rearing is one of the main economic activities for this cooperative with cattle taking the biggest percentage. The production system is characterized majorly by open grazing, some paddocking and some zero grazing units. Cattle are kept for dairying with at least 1 dairy cow per household on small farms averaging 1.5-3 acres grazing on unimproved naturally growing pastures. Fodder crops are rarely grown. The host is currently dealing in collective bulking and chilling of members milk and collective marketing but on very small scale due to

lack of cooling facilities. The host owns a small refrigerator but hopes to acquire a cooling facility of approximately 3000 liters to be used to chill members milk before collection by the buyer.

B. ISSUE DESCRIPTION

Broadly, there are two livestock production systems, namely the traditional system and the improved systems. The traditional system, characterized by minimal inputs and correspondingly small outputs, depends on natural grazing and local breeds. Improved systems, on the other hand, involve some investment such as fencing, pasture and grassland improvement, provision of water and breed upgrading. Livestock production systems and management practices are dictated by the degree of dependence of the household on livestock products for income, cultural values, food supply, and crop agriculture practiced in association with livestock under traditional and non-traditional practices.

Forage resources in Uganda range from the traditional system, where extensive natural grasslands support semi-nomadic pastoralist and unfenced communal grazing, to the improved system, where the farm perimeter is fenced with paddocks of natural or planted grasses. This fencing helps to control tick-borne diseases while also enabling better pasture management. Commercial ranching is based on extensive grazing and is so far the cheapest system of beef production. There is also a growing interest in intensive and semi-intensive beef and dairy cattle production, in which improved breeds (i.e. exotic and cross breeds) are mostly kept under intensive management on small and medium sized farms under zero grazing. Additionally, it is now common to combine crop and livestock production whereby the two enterprises complement each other. In fact, mixed farming is the most common smallholder dairy system in the southwest, central and southeastern regions.

Despite the noticeable progress in the development of the livestock sector and dairy sub sector, they are still faced with several limitations. These setbacks include, among others: increasing degradation of grazing areas due to poor grazing practices (like over-grazing); inadequate production of improved pastures and short supply of good livestock feeds; inadequate knowledge on improved livestock/dairy herd management practices to prevent high morbidity and mortality levels within the individual herd; inadequate feeding due to shortage of quality and quantity of forage and fodder particularly during the dry season; lack of access to high quality seed and vegetative planting material and the high cost of production in the intensive systems resulting in low returns. These limitations are exacerbated by the widespread low literacy levels among most livestock farmers which hinder the adoption of improved technology. The sector is further constrained by the poor market outlets for milk (due to a poor rural road network and near absence of rural electrification). The increasing population against fixed land area is affecting the land available for free range grazing system. There is also a feeling among the dairy farmers that one can have a few animals on small area that produce more or less than someone with a large herd size on a big area.

In addition to the above, Busoga region where Namwendwa dairy farmers cooperative is located has its own peculiar challenges related to sugar cane production. Livestock production has been hit by the sugar industry. According to Peter Balinaie, coordinator of Kamuli district farmers' association, noted, "Sugar

cane is enslaving farmers on their own land.” Over the years, farmers in the region planted field after field of sugar cane in swampy, fertile soil in hopes of making a decent living. But overproduction, coupled with government inaction and total control over the pricing by the five regional sugar processing plants, has left prices so low that farmers are struggling to feed their families.

The overall effect of sugar cane is the reduction of land available for other agricultural activities such as livestock farming. This has therefore necessitated that farmers devise ways of utilizing the available land maximally.

Namwendwa dairy Farmers’ Cooperative Society Ltd faces challenges of poor /inadequate dairy feeding caused by factors such as:

- Decreasing land availability
- Lack of training for farm workers on proper fodder preparation and the types of pastures to grow to cater for animals’ nutrition needs
- Small holder dairy farmers with low levels of milk production and high production costs
- Inadequate and less nutritive pastures on farms
- Inadequate water for animals
- Dairying is not being done as a business
- Inadequate extension service provision hinders improvement in productivity

The increasing population and competition from sugar cane growing coupled with the fact that under good management practices, a dairy farmer with a few animals on small area can produce much more milk than someone with a large herd size on a big area. This has insinuated dairy cooperative members into exploring such opportunities. It is against this background that Namwendwa Dairy Farmers’ Cooperative Society Ltd is interested in establishing how to maximally utilize available under systems like zero grazing amidst the decreasing land availability. It is against this background, that Namwendwa Dairy Cooperative limited is requesting for a volunteer consultant with extensive experience in dairy cow nutrition. In the cattle herd aspect, the consultant’s emphasis during visit shall be on pasture establishment, pasture preservation and zero grazing management system.

C. OBJECTIVES OF THE ASSIGNMENT

The main objective of the assignment is to evaluate zero grazing against free-range grazing system in the face of decreasing land availability and pave way for increasing milk production.

Specific objectives:

1. Train farmers the basics of pasture establishment
2. Train farmers about stages and proper harvest of pastures
3. Train dairy farmers simple basis of hay/silage making procedure under small scale
4. Train dairy farmers the basics of zero grazing system
5. Develop a simple manual for setting up zero grazing system and with recommended affordable forage species, supplement and concentrate feeding

The volunteer will provide training at two levels:

At least 150 dairy farmers will be trained in topics 1- 4 to help them understand pastures and zero grazing system. The farmers will be divided into manageable groups to allow easy learning and interaction.

The management will be trained in topics 1-4. Also, Training of Trainers (TOT). Dynamic individuals from the teams already trained who can continue with the training to reach out to group members not reached by the volunteer.

D. HOST CONTRIBUTION

Namwendwa dairy cooperative will mobilize target dairy farmers to the trainings to be conducted by the volunteer. The dairy cooperative will also avail key personnel to work closely with the volunteer, during the preparations and actual trainings, to ensure that key staff are trained to backstop TOTs who will continue training other members even after the assignment is completed.

E. ANTICIPATED RESULTS FROM THE ASSIGNMENT DELIVERABLES

The anticipated assignment deliverables will include:

- Trainings conducted and people trained
- Zero grazing 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

F. SCHEDULE OF VOLUNTEER ACTIVITIES IN COUNTRY (DRAFT)

Day	Activity
Day 1	Travel from home to US international airport
Day 2	Arrival at Uganda Entebbe Airport, the volunteer will be picked by Fairway hotel shuttle to Kampala and check in at Hotel.
Day 3	At 9.00 am, the volunteer is greeted at the hotel by CRS staff and thereafter go to CRS office for introductions and briefings including host brief, logistics and expectations and anticipated outcomes. Any materials for printing will be prepared at CRS offices. Travel to Kamuli to commence the assignment
Day 4	In the morning, CRS introduces the volunteer to the Namwendwa dairy cooperative management team. Together with CRS and the management, the volunteer will review and finalise the work-plan. The action plan should include group presentations to be done after the assignment. Familiarise with cooperative operations particularly milk handling and farm operations– understand current practices and challenges to inform interventions in grazing practices. Visit selected farmers’ diary farms to conduct a needs assessment

	to inform present challenges and how this can be addressed through the volunteer technical assistance.
Day 5-7	Design a pasture establishment program and feeding regime. Develop a training program for demonstration of zero grazing and feeding techniques.
Day 8-10	Design zero grazing program and feeding regime. Develop a training program for demonstration of zero grazing and feeding techniques.
Day 10-12	Undertake a practical training session for farmers. Develop a comprehensive code of good practice for zero grazing and feeding regimes for different herd categories.
Day 13-14	Develop silage/hay program including requirements for making good hay, preservation and construction of hay barn suitable to tropical conditions. Discuss various models of making hay barn under local conditions.
Day 15	Wrap up trainings and emphasize key concepts of zero grazing and feeding regime assignment. Participants evaluate the training and together with the volunteer discuss final report recommendations.
Day 16	Volunteer travels back to Kampala
Day 17	Debriefing at CRS office with USAID Mission and CRS staff. Volunteer will finalize his/her reporting at CRS office and fill out all necessary M&E forms as well finalize advances and expenditures with finance.
Day 18	Depart for USA
TBD	Outreach event in the US
Note: This is a draft schedule that will be finalized based on volunteer actual dates of availability, Sundays are typical rest days and working on Saturday is, per the host's request	

G. ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS

The volunteer will stay at Fairway hotel, www.fairwayhotel.co.ug. For the first one or two days on arrival. While in Kamuli, the volunteer will reside at the volunteer will stay at Century Hotels Ltd which is in located within Kamuli town.

The volunteer will be provided with a modem from the CRS field office for internet access and a mobile phone to facilitate in country communications.

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

H. RECOMMENDED ASSIGNMENT PREPARATIONS

i) Before leaving U.S.:

- 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
- Learn about different grazing options in tropical climates

- Review relevant literature on pastures, zero grazing, techniques and infrastructural requirements needed at local farm level in Uganda
- CRS strongly recommends that the volunteer become familiar with CRS programs in Uganda, especially the livestock country project description and other information in the briefing pack before arrival to Uganda

ii) In-country activities/tasks

- Assess current production levels, management procedures and feeding regimes practiced at the farm and examine available grass species.
- Together with management, undertake practical demonstrations and training on zero grazing using
- 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.

I. KEY CONTACTS

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