

**Farmer to Farmer**

**Volunteer Assignment Scope of Work (SOW)**

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| **Summary Information** |
| **Assignment Code** | **ET208** |
| Country | Ethiopia |
| Country Project | Livestock |
| Host Organization | Kombolcha Poultry Resource Development Enterprise (KPRDE) |
| Assignment Title | Poultry Feed Formulation |
| Assignment preferred dates | Flexible  |
| Objectives of the assignment | Train and technically assist staff of the enterprise on:* Poultry feed formulation process
* Least cost poultry feed formulation
* Feed analysis (nutrients & minerals) sources and functions
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| Desired volunteer skill/expertise | * Experience in poultry science, poultry farm management, and poultry feed formulation
* Experience in year-round feeding techniques based on locally available materials
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| Type of Volunteer Assistance | Technology Transfer (T) |
| Type of Value Chain Activity | Information and Input Support Services (S) |
| PERSUAP Classification | Type II |

1. **BACKGROUND**

CRS Farmer-to-Farmer (F2F) Program is a USAID funded 5-year program (July 2018 – June 2023) that will provide technical assistance from United States (U.S) volunteers to farmers, farmer groups (cooperatives and associations), agribusinesses and other agriculture sector institutions. The program objectives are to facilitate economic growth within targeted agriculture sub-sectors, enhance sub-sector inclusiveness to expand participation to a broader range of individuals and communities and to increase the American public’s understanding of international development issues and US international development programs. Volunteers, recruited from all States and the District of Columbia, are individuals who have domestic careers, farms and agribusinesses, or are retirees who want to participate in development efforts. F2F program will assist in agriculture development, commodity value chain competitiveness and firm upgrading by providing technical assistance to introduce new technologies, innovations and development of local capacity for more productive, profitable, sustainable and equitable agriculture systems.

Livestock is vital for the food security of millions of people in Ethiopia, as still the demand of animal source foods for its human population is not met. As a result, a large segment of children suffers from malnutrition leading to stunting. To alleviate the problem, the government of Ethiopia is focusing on expanding chicken meat and egg production. Poultry in Ethiopia is increasingly identified as a value chain with potential to deliver high growth, employment, social inclusiveness, and nutritional benefits. Nonetheless, significant barriers are present along the value chain that must be addressed to capitalize on this potential. Differences in breeds and feeding methods are critical variables that account for productivity.

Kombolcha Poultry Resource Development Enterprise (KPRDE) is located in the town of Kombolcha, Amhara regional state (376km Northeast of Addis Ababa). KPRDE was established in 1985 and is one of 10 poultry farm centers in Ethiopia. KPRDE has three objectives: to improve the performance of government, cooperatives and private poultry multiplication center which are in operation and/or to be established in future; to serve as a model and center of competency to similar institutions being efficient in its management; to provide technological inputs and counseling service to private investors by processing poultry products and supply widely same to domestic/local and foreign markets The enterprise is owned and supported by the Amhara regional government.

The poultry farm is 10 ha wide currently has 26 functional poultry houses which are used for rearing of grower chickens and for raising of parent stocks. In addition to its 26 poultry houses, KPRDE has 7 incubators, 7 hatcheries, 1 nutrition lab, and 1 poultry disease diagnosis lab. The farm holds improved chicken parent stock from Europe that are of the egg layer species and these are mainly Bovan Brown. The farm has flock sizes ranging from 2180 - 4190 per rearing house and 2000- 3000 per raising (parent stocks) houses and serves as a multiplication center; it distributes day-old chicks to nearby farmers who care for the chicks and then resell the chicks to local farmers after 45 days. The day-old chick package includes transportation, vaccinations, and feed. Annually, the facility supports approximately 50,000-60,000 rearing chickens and up to1 million chicks.

In the past two years, KPRDE has expanded its facilities. This includes the addition of 2 big poultry houses, 2 big poultry houses for cage-system, a library, and administrative buildings. The leadership wants to scale up production and rearing quality and increase overall sales. There is a high need for chickens in the surrounding areas and KPRDE wants to meet those needs.

1. **ISSUE DESCRIPTION**

Feed shortage in both quality and quantity is a major constraint affecting poultry production and limiting the productivity of the livestock sub-sector in general in Ethiopia. Feed formulation requires in-depth knowledge of animal nutrition, particularly the nutrient requirements and the nutrient composition of the ingredients. It also requires nutritionists to know whether using certain proportions of some ingredients will impact on issues such as feed flow through the mill, pellet quality of the diet, response of the diet to feed additives, or gut health of the animal.

KPRDE has lack of in depth skill so that expressed a need to improve poultry feed formulation. Annually, the poultry enterprise feeds 50,000-60,000 rearing chickens and produces 1 million chicks per year. One kilogram of feed goes with day-old chicks for 45 days until they are sold to local farmers. KPRDE has a feed miller and mixer to make poultry feed. The enterprise also sale processed feed to other poultry farms. Currently, KPRDE uses different types of raw materials to prepare poultry feed. The raw materials (ingredients) include: maize, soybean cake, nug cake, meat and bone meal, wheat middling and bran, salt limestone, lysine, and methionine. The feed provides the following nutrients: protein, carbohydrates, fats, minerals, and essential amino acids to the chicken. The resources come from Bahir Dar (502km from Kombolcha), Addis Ababa area (376km from Kombolcha), and Ziway (529km from Kombolcha). Materials are located far from the poultry enterprise and create issues of high cost. The cost of feed is getting very expensive and there is a need for a low-cost and best-quality feed.

The leadership at KPRDE have stated that feed formulation is too technical, and one mistake can have a high impact on poultry production. When one does not formulate the feed correctly, it can impact poultry health, egg production, and hatchability rate. There is a need for staff to be trained on how to formulate high quality rations with available resources. Occasionally raw materials are in shortage and this poses as a major problem for KPRDE; they do not know how to adjust when certain raw materials are not available. They need technical assistance on adjusting feed with available resources that is still high in nutritional value. KPRDE wants to be a flexible organization and understand new feed formulation techniques that can help keep their costs down. Therefore, to address the employees’ skill and knowledge gap on poultry feed formulation, the host requested CRS, F2F volunteer’s training and assistance.

1. **OBJECTIVES OF THE ASSIGNMENT**

The general objective of this volunteer assignment is to improve poultry feed formulation with locally available resources. And train participants about theoretical and practical aspects of feed formulation, production and quality control for different species.

The specific objective of the assignment is to provide training and technically assist on:

* The art of poultry feed formulation (type and composition of a feedstuff, ration formulation)
* Feed analysis (the amounts of each ingredient that need to be included in the diet)
* Nutrient requirements of the class of poultry (egg layers, meat chickens, or breeders)
* Year-round poultry feed formulation from locally available materials
* Formulating low-cost high quality clean feed
* Biosecurity during the feed preparation process (mycotoxins)
* Feed management/storage, regulations and proper feeding techniques

Therefore, the Enterprise requested CRS for F2F volunteer assistance on poultry feed formulation techniques to their feed manager, feed expert, and laborers. If time permits, the volunteer will provide field level support to small scale and household poultry farm as well as provide seminar to Kombolcha ATVET College staff and students which is neighbor to the KPRDE.

1. **HOST CONTRIBUTION**

The host, Kombolcha Poultry Resource Development Enterprise, will select and mobilize staff to be trained. It will also avail key personnel to work closely with the volunteer at all times to ensure translation to the local language (Amharic) and to assist the volunteer during trainings. The host will arrange transportation and venue as required. CRS F2F Ethiopia will organize the volunteer’s hotel arrangements (lodging) and ensure all required facilities are appropriate. CRS will cover lodging costs against receipts and provide per-diem advances for meals.

1. **ANTICIPATED RESULTS FROM THE ASSIGNMENT**

The volunteer training will lead the Enterprise staff into understanding improved feed formulation. And also, advice small scale and household poultry farmers. The volunteer will contribute to the following:

* One feed manager, 1 feed expert, and 8 laborers trained on improved feed formulation.
* One feed manager, 1 feed expert, and 8 laborers are aware of local available resources to prepare different feeds based on availability.
* A variety of feed formulations are used year-round to adjust to the availability of local materials.
* Parent stock and chicks improve nutritional status.
* Hatchery rate, egg production and income increases as a result of improved poultry nutrition.
1. **DELIVERABLES**
* Initial presentation is completed (outlines, activities, plans, approach, etc.)
* Volunteer final report having feasible recommendations due before departure
* Group presentation with local stakeholders at the end of the assignment.
* Presentation to CRS staff and/or USAID
* Outreach activity press release or a media event upon return to the US
1. **SCHEDULE OF VOLUNTEER ACTIVITIES IN ETHIOPIA (DRAFT)**

| **Day** | **Activity** |
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| Day 1 | Arrival in Addis at Bole Airport. The volunteer will be met by CRS’s client hotel Saro Maria Hotel (mail: reservation@saromariahotel.com; [Phone](https://www.google.com/search?rlz=1C1GGRV_enET751ET751&q=saro-maria+hotel+phone&sa=X&ved=0ahUKEwie4JH0gNfWAhXFOBoKHS8rB1sQ6BMIwwEwEA): +251 11 667 2167).The volunteer will locate the hotel kiosk and use pre-arranged shuttle |
| **Day 2** | **Rest Day (Sunday)** |
| Day 3 | * Take CRS cars or pre-arranged taxi to come to CRS office (CRS working days are Monday to Friday from 8:00AM to 5:00 PM East Africa Time)
* Welcoming by CRS, and briefing meeting on security, general orientation, MEAL (attendance sheet, reporting and PPT templates), and logistic.
* Discuss anticipated outcomes and work plan
* Travel (local flight) to the assignment site Kombolcha, Amhara region and accommodated at CRS client hotel
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| Day 4 | * S/he will be introduced with the host. And general orientation will be pursued.
* Further assess skill and training gaps through visiting and discussing with staff
* Based on information gathered and gaps identified, enrich the prepared training materials
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| Day 5-8 | Provide training and advice staff |
| **Day 9** | **Rest Day (Sunday)** |
| Day 10-13 | * Continue provision of trainings and technical assistances to staff
* Advise farmers
* Provide seminar to Kombolcha ATVET College students and staff (if time permit)
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| Day 14 | * Briefing / exit meeting with the host in the presence of CRS staff
* Volunteer travels back to Addis Ababa (in the afternoon flight)
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| Day 15 | * Debriefing with CRS staff and/or USAID Mission
* Finalize reimbursement expenditures and liquidations (if any) with finance.
* Submit attendance sheet, assignment report, PPT presentation and any reference materials to CRS F2F team.
* Depart for USA
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| TBD | Outreach event when back in the USA |

1. **DESIRABLE VOLUNTEERS SKILLS**

The volunteer will have the following qualifications and competencies:

* Advanced education and experience in poultry science, poultry farm management, and poultry feed formulation.
* Experience in year-round feeding techniques based on locally available materials
* Experience in providing training to adults, community development workers or members of a community-based organization
* Good communication and interpersonal skills
* Willing to work under Ethiopian context
1. **ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS**
* Up on arrival, the volunteer will stay in Addis Ababa at Saro-Maria hotels (mail: reservation@saromariahotel.com; [Phone](https://www.google.com/search?rlz=1C1GGRV_enET751ET751&q=saro-maria+hotel+phone&sa=X&ved=0ahUKEwie4JH0gNfWAhXFOBoKHS8rB1sQ6BMIwwEwEA): +251 11 667 2167), or another CRS client hotel that will be booked and confirmed in advance. The hotel usually has rooms that include services such as airport pickup and drop-off, breakfast, 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. For any inconvenience, please call at 0911-718450, Biruk - F2F program manager.
* While in the field, the volunteer will stay at Kombolcha Sunny Side hotel (the hotel has breakfast and wireless internet). CRS Ethiopia will arrange hotel accommodations and cover the lodging bills against receipts.
* CRS HQ will provide the volunteer with a per-diem advance to cater meals and incidences.
* Before departing from Ethiopia, the volunteer will liquidate any advances received in Ethiopia (if any).
* For more information, please refer to country information that will be provided
1. **RECOMMENDED ASSIGNMENT PREPARATIONS**
* The main target trainees are staff of the poultry enterprise who hold mid-level diploma and first degree. Although CRS F2F together with the host has developed such hinting SOW, the volunteer can fine-tune through her/his professional qualifications to successfully carryout the assignment.
* Prior to travel, the volunteer is advised to prepare necessary training materials/handouts and demonstration aids, power point presentation. Electronic copies of the handouts and any other paper materials can be printed for immediate use at the CRS office in Addis Ababa. Translation of handouts to local languages can be done in the locality of the assignment, if needed.
* If required, simple training aids like flip charts, markers or tapes can be collected from the CRS office in Addis Ababa prior to travel to the assignment place. The volunteer can use a laptop and projector for power point presentations.
* F2F program recommends that the volunteer may read about poultry production and feed system in Ethiopia
* The training will be conducted at the Enterprise compound and the practical training at the feed mills
* 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. The afternoon temperature of Kombolcha is warm year-round.
1. **KEY CONTACTS**

To express interest in this assignment, please email the CRS Baltimore contact listed below. To find out additional information about the host, issue description or field conditions, please email the country contact provided below, copying the CRS Baltimore contact.

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