 

**Farmer to Farmer East Africa**

**Volunteer Assignment Scope of Work**

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| **Summary Information** |
| Assignment code  | ET85 |
| Country | Ethiopia  |
| Country Project | Grain Crops Production and Sector Support |
| Host Organization | Hawassa University  |
| Assignment Title | Lecturing and technical advice on molecular biology for students and staffs |
| Assignment preferred dates | Nov 2017 - June 2018  |
| Objective assignment | * To provide lecture to MSc students on molecular biology and Bioinformatics
* To share technical experiences for instructors and lecturers related to the field
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| Desired volunteer skill/expertise | Ph.D / Professor in crop genetics/breeding relevant to molecular biology and long instructing experience in universities  |

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.

Although Ethiopia is one of the largest grain producers in Africa, there are still large pockets of food insecurity mainly caused by low productivity due to insufficient use of modern agricultural technologies, drought, fragmented land, dependence on rain fed agriculture among others. Low productivity is also attributed to limited utilization of molecular science in generating technologies for grain crops and other agricultural value chains in the country. Modernization of agriculture through molecular science and genetic engineering is largely at infant stage in Ethiopia.

Ethiopian public universities are contributing their part in availing the required agricultural professionals in diversified field of studies. Hawassa University (HU) is one of these universities which was established in April 2000. Since 1976 the different colleges of HU had been operational starting with the college of Agriculture. HU is a comprehensive university engaged in the provision of all-round education, research, training, & community service through its diversified areas of academic units. However, the department of bio-technology is new and lacks experienced professionals. Therefore Collage of Agriculture, Hawassa University being as one of the hosts of F2F program requested for a volunteer assistance to train graduate students on molecular biology and bio-informatics.

1. **ISSUE DESCRIPTION**

Despite its many years as a college and university, Hawassa University still lack experienced lecturers and advisors in areas of molecular biology and bio-informatics. The graduate program in plant breeding has started its operation recently and the existing staffs to provide such courses are not in a position to fulfill the expected demand. This molecular biology and bio-informatics course mainly includes the basic concept of molecular biology, molecular marker, tissue culture, and phyto-genetics as subtopics.

The course delivery will be through lectures and seminars believing that it will directly contribute to equipping the graduate students with relevant skills and knowledge in molecular biology to a level which the students will be academically and professionally competent in this area. The skilled manpower produced from the University will be assigned in different parts of the country to work on crop improvement either in grains or other crops sub-sectors to contribute into the agricultural development and food security efforts in the country.

The modular course system (a course per month) of the University and the possibility of assigning the volunteer as an instructor for block-courses (20-40 days) were mentioned to match and appeared a good opportunity to fit within the system/approach of F2F program, which generally schedule for a period of 2-3 weeks per assignment. Sharing research models and practical farming experiences to the two groups of beneficiaries (agricultural students and graduated/junior researchers will also be relevant approach and strategy.

1. **OBJECTIVES OF THE ASSIGNMENT**

The objectiveof this particular volunteer assignment is to instruct graduate students and staffs on the major sub topics of molecular biology listed below

* Molecular Genetics
* Bioinformatics
* Molecular Marker
* Tissue culture
* Phyto Genetics

Additionally, the volunteer will conduct a seminar to other university staff that includes junior researchers and lecturers, who will act as training the trainer. The volunteer will also develop a training module for this course, so that the university lecturers can continue conducting this class long after the volunteer is gone.

**Host contribution** – The agricultural college of the Hawassa University (HU) will facilitate the volunteer in lecturing to the graduate students through scheduling appropriate course hours in the month of May-first weeks of June 2016. A session will be arranged for researchers who are working in similar areas to get advice from the volunteer. Prior to the lecturing of the course, HU will provide the volunteer with the course outlines and necessary local materials where the volunteer will integrate into her/his prior prepared lecturing and advising materials. HU will assign an associate to the volunteer to guide her/him in the University including laboratory and on-station field experiments.

1. **ANTICIPATED RESULTS FROM THE ASSIGNMENT**
* Graduate students undertake a course on Molecular Biology
* Researchers who are working on related area will get a technical advice
* Module will be provided that enhance the future course delivery process

The anticipated deliverables include:

* Initial presentation done (outlines/list of activities, plan, approach, etc),
* Training module for this course prepared and discussed with the university fraternity for review and adoption as a training curriculum for this course
* Field Report with recommendation submitted to CRS, Presentation to CRS staff and USAID;
* Completed trip reports
* Outreach events conducted in the US.
1. **SCHEDULE OF VOLUNTEER ACTIVITIES IN ETHIOPIA**

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| Day | Activity |
| Day 1  | Arrival to Ethiopia. The volunteer will be met at Bole Airport by CRS’s client hotel Churchill (churchillhotel@ethionet.et / info@churchillhoteladdis; phone # 0111111212) or another client hotel with a placard bearing “CRS logo and volunteer name”.  |
| Day 2 | Briefing meeting at CRS office with CRS F2F staff and become fully briefed on logistics and itinerary of trip. Discuss anticipated outcomes and work plan,  |
| Day 3 | * Travel to Hawassa University- Hawassa
* First hand briefing on the main objectives and modality of the assignment and adjust the agenda for the coming days. Briefing and debriefing with the staff of Hawassa University will continue
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| Days 4-5 | Acquainted with the existing curriculum and course system of the University through integrating volunteer prepared course and lesson. Prepare course specially for the first and few succeeding days and plan with the agriculture college dean and plant science head of the University to start lecturing  |
| Day 6 | **Rest day**  |
| Days 7-12 | Conduct lectures/practical as appropriate |
| Day 13 | **Rest day** |
| Days 14-19 | Conduct lectures/practical as appropriate  |
| Day 20 | **Rest day** |
| Day 21 | * Finalize training course in accordance with academic procedures of the University such as examining students, grading and submission of student marks to registration office. Provide a module for future course delivery
* Final presentation to staffs at the University by the volunteer, and flight back to Addis Ababa
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| Day 22 | Debriefing at CRS office with USAID Mission and CRS staffs.Volunteer will finalize his/her reporting at CRS office and fill out all necessary |
| Day 23 |  Depart for USA |
| TBD | Outreach event when back in the US could include: presentation with a local group/organization, press release, media event and/or speaking tour. |

1. **DESIRABLE VOLUNTEER SKILLS**
* Ph.D and/or professor level in Crop Genetics and Crop Breeding relevant or Molecular Agriculture/Biology or related
* Demonstrated experience in course training through lecturing, advisory, research and laboratory work experiences on practical aspects of molecular biology.
* Previous experience working in agricultural universities in the US and/or other African agricultural universities where the language media of instruction is English language,
* Experience or exposure to farming practices preferably as small scale farmers’ level with good knowledge and skills in modern farming technologies and adult training skills.
* Good communicator and interpersonal communication skills
1. **ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS**
* Before travelling to the host at the assignment place (Hawassa), the volunteer will stay in Addis Ababa at one of the CRS’s client hotels Churchill (churchillhotel@ethionet.et/ info@churchillhoteladdis; phone # 0111111212) or another client hotel that will be communicated prior to volunteer. 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 (if s/he needs), 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 provide a vehicle and accompany the volunteer to the place of assignment (Hawassa).
* During her/his assignment period, the volunteer will be booked in a hotel in Hawassa town. And CRS Ethiopia will arrange hotel accommodation and cover the lodging bills against receipts.
* CRS HQ will provide the volunteer with a per-diem advance to cater meals and incidences.
* CRS Ethiopia will also reimburse the volunteer with laundry costs against receipts.
* Before departing to US, the volunteer will also liquidate advances (if any) at CRS Ethiopia.
* For more information, please refer to country information that will be provided.
1. **RECOMMENDED ASSIGNMENT PREPARATIONS**
* Although CRS F2F has developed such hinting SOW, the volunteer can fine-tune through her/his professional qualification to successfully carry out this assignment. Prior to travelling to Ethiopia, s/he will be expected to collect relevant lecturing aids, reference books/literatures and required technological information. CRS F2F relies on the volunteer to design appropriate methodologies to successfully complete the assignment.
* Prior to travel, CRS F2F also strongly suggests that the volunteer prepare necessary training and demonstrating aids and written handouts. Softcopies of the handouts and any other paper materials can be printed for immediate use in Ethiopia CRS office at Addis Ababa. If the volunteer will require use of any aids and media to instruct, advise laboratory work etc. S/he should prepare in advance or make a request for the materials and collect from the CRS and the University prior to the assignment. If required and more feasible, the volunteer sometimes can use a laptop and projector for power point presentations.

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| **CRS Baltimore** | **CRS East Africa Regional Office** |
| **Maria Figueroa**Recruitment Manager EA Farmer to Farmer Program228 W. Lexington StreetBaltimore, MD 21201; 410-951-7366Email: maria.figueroa@crs.org  | **Nyambura Theuri**Deputy Project DirectorEA Farmer to Farmer ProgramP.O. Box 49675 – 00100Nairobi, KenyaSt. Augustine Court Karuna Close RoadEmail: nyambura.theuri@crs.org |
| **CRS Ethiopia:** |
| **Biruk Tesfaye,** F2F program manager CRS Ethiopia Office, P. O. Box 6592; Addis Ababa, EthiopiaPhone: +251-112-788800, Mobile: +251-911-718450Email: biruk,tesfaye@crs.org  | **Zemede Zewdie,** Head of Programs (HoP)CRS Ethiopia Office, P. O. Box 6592 Addis Ababa, Ethiopia Phone: +251-112-788800, Mobile: +251-911-507305Email: zemede.zewdie@crs.org |
| **Host Organization:** |
| **Gashaw Meteke (PhD)****School of plant science head** Hawassa University P.O.box 05Hawassa Ethiopia Email: gashtorino@gmail.com+2510462206696 |  |

1. **Key Contacts**