



VOLUNTEER REPORT FORMAT

To be submitted to CRS at the end of volunteer assignment and shared with the Host

1.1 Assignment information

- a) Volunteer Name: Dr. George O. Kegode
- b) Assignment: Pesticide Issues and Safety Assessment for Ethiopia F2F Country Projects
- c) Dates of Assignment: September 14 – 30, 2015
- d) Number of days worked: 17

1.2.1 Objective 1 in your SOW – Conduct an assessment of pesticide safety along pesticide life cycle, i.e. policy, purchase, transport, use, and disposal.

- a) Progress with objective 1:
 - Visited eight (8) F2F project cooperatives in Hosanna, Soddo, Dilla, Shashemene, Kofele, Meki, Dodota, and Modjo and **interviewed the following 38 individuals:**
 - i. **Twelve Ministry/Office of Agriculture officials** at the woreda and kebele levels
 1. Shimelis Hassen, Pesticide Management and Safety Expert, Ministry of Agriculture, Addis Ababa
 2. Abule Bilate, Office of Agriculture, Hadiya Zone Crop Protection Expert
 3. Engida Legesse, Office of Agriculture, Hadiya Zone Agronomist
 4. Asarat Toma, Agronomist, Soddo Zuria Agricultural Office
 5. Rawda Keredin, Agronomist, Waraza Lasho Kebele, Soddo
 6. Desiye Alemansch, Extension Agronomist, Ministry of Agriculture, Dilla
 7. Gerusin Edesso, Crop Protection Expert, Ministry of Agriculture, Dilla
 8. Kemal Worjo, Agronomist, Office of Agriculture, Kofele
 9. Mohaammed Tolola, Deputy Head, Office of Agriculture, Kofele
 10. Jemal Mura, Head, Office of Agriculture, Dodota
 11. Nura Hussen, Vice Head, Office of Agriculture, Dodota
 12. Kasim Kedir, Extension Leader, Office of Agriculture, Dodota
 - ii. **One Ministry of Cooperative official** at the woreda level
 1. Amanuel Alemu, Head, Dodota Woreda Cooperative Promotion Office
 - iii. **Eight Farmers' Cooperative Union representatives**, including their pesticide storekeepers
 1. Beyene, Cashier/Treasurer, Guangua Multi-Purpose Cooperative Union, Dilla
 2. Hussen Hamu, Manager, Uta Wayu Multipurpose Farmers' Cooperative Union, Shashemene
 3. Worku Wodaje, Store Keeper, Uta Wayu Multipurpose Farmers' Cooperative Union, Shashemene
 4. Nigussie Menkin, Planning and Monitoring, Multipurpose Farmers' Cooperative Union, Kofalee
 5. Kasseye Cheru, Manager, Lume Adama Farmers' Cooperative Union, Modjo



6. Zenebe Ketema, Vice Manager, Farmers' Cooperative Union, Meki
 7. Degu Bekele, Agronomist, Farmers' Cooperative Union, Meki
 8. Minalush Timkete, Storekeeper, Farmers' Cooperative Union, Meki
- iv. **Three Agro Dealers** who sell pesticides and pesticide application equipment
1. Two Agro-dealers (unnamed), Shashemene
 2. Luke Desta, Agro Dealer, Kofalee
- v. **Five Farmers** who use pesticides
1. Belachew Haile, Farmer, Hosanna
 2. Melaku Dola, Farmer, Soddo
 3. Aschelew Regagu, Farmer, Dodota
 4. Gobena Hola, Farmer, Meki
 5. Unnamed, Farmer, Shashemene
- vi. **Nine CRS staff members/affiliates** who oversee F2F projects
1. Mutuneh Tesfaye, Ethiopian Catholic Church Executive Development Coordinator, Hosanna
 2. Teklu Tesfaye, Ethiopian Catholic Church PME Coordinator, Hosanna
 3. Moges Chulo, Acting Program Coordinator, Catholic Social & Development Coordinating Office, Soddo
 4. Zerishun Wendinno, Ethiopian Wetland Natural Resources Agency (EWNRA) Community Development Worker (CDW), Dilla
 5. Tessema Berbere, EWNRA CDW, Dilla
 6. Jima Gobena, Meki Catholic Secretariat (MCS) Shashemane Branch Program Manager, Area Catholic Diocese
 7. Tesfaye Fetene, MCS Shashemene Branch Project Manager
 8. Hastamu Gizaw Tola, Development Coordinator (RCS), Kofalee
 9. Abu Osman, Natural Resources Management Expert, Meki Catholic Secretariat, Dera Branch
- Gained an understanding of:
 - i. The policies (proclamations) that govern pesticide use in Ethiopia and determined whether the individuals interviewed were familiar with them.
 - ii. How farmers purchase the pesticides they used, where dealers received their supplies from, and how pesticides are imported into the country or whether they are manufactured locally.
 - iii. How pesticides are transported along the general route that begins with importers/manufacturers to agro-input dealers/farmers' cooperatives to the farmer.
 - iv. How pesticides are used and disposed by the Ethiopian farmer, and how containers are handled after pesticides have been used.
 - v. How pesticides are stored by the dealer, Farmers' Cooperative Union stores, and individual farmer.



1.2.2 Objective 2 in your SOW – Identify and document the major constraints to safe use of pesticides in selected F2F country projects.

a) Progress with Objective 2:

- From the interview of the 38 individuals outlined in objective 1, the major constraints to the safe use of pesticides include:
 - i. **Lack of awareness** – In general, farmers do not know or understand the dangers posed by pesticides to human health or the environment. Therefore, farmers tend to do the following:
 1. They **generally do not use personal protective equipment (PPE)** which is complicated by the fact that PPE is often unavailable for purchase in agro input stores, or that the purchase price is unaffordable. Furthermore, pesticide labels tend not to provide sufficient information to encourage farmer use of PPE.
 2. They usually **use public transportation to get the pesticides to their farms**, often with humans, livestock, food, feed, and other commodities.
 3. They **store pesticides wherever possible and often within their homes** which poses a danger to all members of the household.
 4. They **dispose chemicals where they clean their equipment**, which is often the water source they use for mixing their pesticides and may be the source of drinking water for some.
 5. They often **re-use (re-purpose) empty pesticide containers**, sometimes for food and water, or sold for a similar purpose.
 - ii. **Poorly written pesticide labels** – The pesticide label available to farmers is simplified to make it possible and appreciably easier for the farmer to apply the pesticide. However, due to the simplification much of the narrative on the harmful effects posed by the pesticides is not included. The Ethiopian Government requires importers of pesticide to specify in detail the specifics of each pesticide as it relates to safety. However, this information is not presented on the labels.
 - iii. **Lack of quality personal protective equipment (PPE)** – largely due to the lack of awareness of the potential hazards of pesticides. Additional contributing factors include:
 1. **Unavailability of PPE** at the local agro input dealer or Farmers' Cooperative Union agro input stores – some dealers/Union stores do not stock PPE.
 2. **Poor quality of PPE** – where dealers stocked PPE, the quality of the material was often poor, especially ventilators and eye goggles.
 3. **Sharing PPE** – some farmers share PPE without realizing that the equipment has an expiry date when they no longer can get adequate protection. This was more evident with ventilators with farmers being able to smell the pesticide while they were spraying.



- iv. **Improper application of pesticide** – There is a sense among government agricultural officers that pesticides are being misapplied by farmers and therefore not controlling targeted pest(s) or causing some damage to the environment. For example, pesticide misapplications are widely believed to be causing the decline in honeybee populations. Specifically:
1. **Calibration** – Farmers typically get their guidance for what pesticide to use from development agents with some assistance from the Ministry of Agriculture extension officers. However, when it comes to the actual calibration, they rely on the information on the label that is usually generally prescribed, i.e. not specific for the problem pest that the farmer is targeting.
 2. **Mixing** – Farmers will use the water at their disposal to mix their chemicals which often tends to be from lakes, ponds, rivers, streams, or canals. They do not know how water source impacts pesticide effectiveness. They also may mix two or more pesticides together without any knowledge of antagonistic or synergistic effects.
 3. **Application timing** – Farmers make their pesticide applications when they determine they have a problem or on advice of their development/extension agent. Thus, when they make the pesticide application it is often mistimed thereby compromising efficacy.
 4. **Lack of training** – Development and extension agents seemed to have only basic training in pesticide calibration, mixing, and application. Without additional and routine refresher training, their advice to farmers may not be current thereby contributing to the problem(s).
- v. **Low adoption of Integrated Pest Management (IPM) techniques** – Many farmers are aware of IPM techniques but may not use them effectively to mitigate pests in the belief that pesticides are the best options ('silver bullet'). Where there was some knowledge regarding IPM, it was incomplete or misleading. For example, one farmer said that he used ashes instead of pesticide to control stem borer in maize and to him that was IPM. Lack of information on IPM at the farmer level is partly due to:
1. **Lack of information from government sources** to the farmer in written or other form that could improve the farmer's knowledge of how to incorporate IPM techniques into a production system.
 2. **Low level of knowledge among development and extension agents** regarding IPM techniques which reduces their capacity to train farmers.

1.2.3 Objective 3 in your SOW – Make recommendations of possible solutions to the constraints identified

- a) **Lack of awareness** – this can be addressed through short-term training(s) that is targeted towards:
- **Ministry of Agriculture (MOA) personnel at the woreda and kebele levels.** These individuals are regarded as the experts by farmers and as such command respect. Training of this group ideally needs to be continuous (e.g. once every 2 – 3 years) and



should cover all aspects of pesticides, their use, safety, storage, disposal, and include IPM. Such trainings ideally need to be administered by the Ethiopian government since they need to be continuous.

- **Development agents at the kebele level.** They are the closest to the farmer and the ones that typically provide the advice to them on choice of pesticide. Ideally, the training should be given by the MOA personnel but there are opportunities for short-term assignments by a F2F volunteer, who could also teach farmers.
- **Farmers** can be trained by MOA personnel and development agents. Because there are well-established Farmers' Cooperatives and Unions, there is great potential for F2F volunteers to fulfil this capacity need. Preferably, the emphasis should be on IPM techniques that can be adopted for the circumstances surrounding the pest and crop. Within the context of IPM, specific time should be devoted to pesticide use, safety, disposal, transportation, and storage.
- **Dealers** also need to be trained so that they may be conversant with pesticide use and safety in order that they acquire the necessary PPE to avail to farmers. Dealer ideally should be mandated by law to undergo some training in order that they are licensed to sell pesticides. Therefore, this should be a local, regional, or national government responsibility. Similar to MOA personnel, training of dealers needs to be continuous so as to ensure they remain current with the changes to the list of registered pesticides in Ethiopia.
- **Specific Recommendations:**
 - i. **Short-term:** placement of Farmer-to-Farmer volunteers to increase the capacity of farmers in conjunction with Cooperative Unions. This short-term training can also be open to local government agricultural officers at the woreda and kebele levels, and agro input dealers.
 - ii. **Long-term:** Urge the Government of Ethiopia to include pesticide safety awareness training at government-run agricultural institutions (education and research). For example, part of the agricultural curriculum for an undergraduate degree within agriculture, horticulture, natural resource management, etc. should include coursework in agricultural pesticides and their safe use.
 1. A system to certify dealers through training would ensure that they are well-equipped to serve farmers with the appropriate information and PPE for the safe use of the pesticides they sell.

b) **Poorly written pesticide labels** – this needs to be addressed by the government and private sectors, with some additional trainings given by F2F volunteers when building capacities among farmers.

- **Specific Recommendations:**
 - i. **Short-term: F2F volunteers** should include explanation of the label in their capacity building trainings especially that has an IPM focus (pesticide use being one of the control options in an IPM approach).
 - ii. **Long-term:** the **Ethiopian government** should require that, (a) there is sufficient information on safety included on pesticide labels; and (b) the **private sector** be encouraged (or required) to provide more technical support for the products they sell to farmers. At the moment, there is no evidence of such support.



- c) **Lack of quality personal protective equipment (PPE)** – this primarily needs to be addressed with awareness training and at the point of sale of pesticide, i.e., with the agro-input dealer or Farmers’ Cooperative Union agro input store.
- **Specific Recommendation:**
 - i. **Short-term:** build awareness during IPM trainings that can be delivered by Farmer-to-Farmer volunteers. This training should focus on information with respect of individual safety when applying pesticide. Once aware the farmers are likely to increase demand for PPE from their local agro input dealer or cooperative union.
 - ii. **Long-term:** to ensure that farmers use PPE on their farms will likely require them to have access to financing at low interest rates.
- d) **Improper application of pesticide** – This aspect can be addressed through trainings that specifically address mixing, calibration, and application timing. This can be accomplished as follows:
- **MOA personnel** – Training provided by the government and equipping the trainees with written materials and equipment (e.g., knapsack sprayer) so that they can likewise train development agents. Development agents need also to be equipped with written materials and spraying equipment so as to enable them to train farmers.
 - **F2F volunteers** – Should include aspects of proper pesticide application as part of the training within an IPM approach.
 - **Private sector** – Need to be encouraged to provide at the least, written instructions on how to calibrate pesticides they manufacture. Furthermore, information on compatibility with other pesticides and/or fertilizers needs to be provided. Issues with water source need to be given to enable the farmer to make an informed decision. Ideally this information should be on the pesticide.
 - **Specific recommendations:**
 - i. **Short-term:** Trainings delivered by Farmer-to-Farmer volunteer that focus on pesticide calibration, mixing, and application timing with respect to the targeted pest.
 - ii. **Long-term:** the Ethiopian government should include mandatory pesticide application training for agricultural officers at the woreda and kebele levels. Furthermore, the agricultural officers should be required to be continually trained, e.g. once every three years, so that they may stay current. Additionally, written materials that provide information on pesticide application and made available to farmers (in Amharic) would help build awareness and promote the safe use of pesticides.
- e) **Low adoption of Integrated Pest Management (IPM) techniques** – Whereas there is an abundance of cultural and preventative pest management techniques used by Ethiopian farmers, there seems to be a tendency of abandoning the techniques and adopting pesticides wholeheartedly (the ‘silver bullet’). The principles of a good IPM program need to be addressed and can be done by F2F volunteers in addition to government trainings. Here, there will be a need to demonstrate techniques especially at the kebele level using the Farmer Training Centers where demonstration plots can be established. Use of model farmers is an option that can be utilized to successfully show some of the techniques.



- **Specific Recommendations:**

- i. **Short-term:** Trainings delivered by Farmer-to-Farmer volunteers that emphasize the principles of IPM and example of techniques that include the use of all methods of pest control, including pesticides.
- ii. **Long-term:** the Ethiopian government, NGOs, and the private sector can work towards, (a) providing training for government agricultural officers who are the immediate contacts for farmers seeking pest control information, and (b) making IPM-related literature available for all.

1.2.4 Objective 4 in your SOW – Update country specific list of approved active ingredients (AIs) for selected country projects

a) Progress with Objective 4:

- Have recently gained access to the June 2015 list of registered pesticides in Ethiopia and currently updating the country specific list of approved AIs for selected country projects.

1.2.5 Objective 5 in your SOW – Upgrade and/or document recommended Integrated Pest Management practices in F2F project areas in Ethiopia.

a) Progress with Objective 5:

- In general, the focus on future trainings that have a focus on pesticides need to be within the context of an Integrated Pest Management approach. It is vital that there is training to ensure that pesticides are not considered as the best option for pest problems as it appears to be the case presently.

1.3 Action Plan

Recommendation	Specific Action	Responsible person	By when
1.			
2.			
3.			
4.			
5.			
6.			

1.4 Number of people Assisted

- a) Through formal training
- b) Through direct technical assistance (Do not double count)
- c) Out of these above, number of host staffs
- d) Training/assistance by field

Category	Total	Males	Females
Members/ owners			
Employees			
Clients/ Suppliers			



Family Members			
Total			

1.5 Gender

- a) What gender roles did you recognize in your host community? Did these roles play a part in your assignment? How?
- b) How might CRS or the host organization improve opportunities for the women in this host or host community?

1.6 Value of volunteer contribution in \$

- a. Hours volunteer spent preparing for assignment – 60 hours
- b. Estimated value of all material contributions volunteer contributed to host during assignment

1.7 Value of hosts’ contribution in \$ (Please consult the host as well)

- a) Meals
- b) Transportation
- c) Lodging
- d) Translation
- e) Other (Specify)

1.8 Host Profile Data:

Did you obtain any data that supplements or corrects the data in the existing host information as detailed in the SOW? Please list it.

1.9 Recommendations for CRS:

1.10 Press Release

FOR IMMEDIATE RELEASE

VOLUNTEER CONTACT: [Name]

[Title]
[Phone]
[E-mail]

[US City] Area Volunteer Travels to [Country] to Share Skills with Local Farmers

Farmer to Farmer program promotes economic growth and agricultural development in East Africa

FOR IMMEDIATE RELEASE



CONTACT: [Name]
[Title]
[Phone]
[E-mail]

[City] Area Volunteer Travels to [Country] to Share Skills with Local Farmers

Farmer to Farmer program promotes economic growth and Agricultural development in East Africa

[Name], a [title] from [city, state] travelled to [country] for [x] weeks to share his/her technical skills and expertise with local farmers. [Name]'s assignment is part of Catholic Relief Services' Farmer-to-Farmer (FTF) program that promotes economic growth, food security, and agricultural development in East Africa.

“[Volunteer quote],” said [name].

Funded by the U.S. Agency for International Development (USAID), the five-year program matches the technical assistance of U.S. farmers, agribusinesses, cooperatives, and universities to help farmers in developing countries improve agricultural productivity, access new markets, and increase their incomes.

In [country], [name] worked with [Host] in [value chain] training and giving technical assistance to [type of beneficiaries] to enable them to [Goal of the assignment]. Up to [Number of beneficiaries] beneficiaries were reached. [Other details are optional]

[Name]'s volunteer assignment is one of nearly 500 assignments that focus on agriculture, food security and nutrition in Ethiopia, Tanzania, Kenya and Uganda. This is the first time CRS has been involved in the 28-year-old Farmer-to-Farmer Program funded by the U.S. government.

CRS is partnering with five U.S. institutions to tap into the rich diversity of the U.S. agriculture community: the National Catholic Rural Life Conference, Foods Resource Bank, National Association of Agricultural Educators, American Agri-Women, and the University of Illinois' College of Agricultural, Consumer and Environmental Sciences.

The U.S. volunteers will travel to East Africa for anywhere from one to six weeks, their expenses covered by USAID.

“One thing we are certain of is that this program will be beneficial not just to the farmers in East Africa, but also to the volunteers from America,” said Bruce White, CRS' director for the program. “It's going to make the world a little bit smaller for everyone involved.”



For more information, visit farmertofarmer.crs.org

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Catholic Relief Services is the official international humanitarian agency of the Catholic community in the United States. The agency alleviates suffering and provides assistance to people in need in nearly 100 countries, without regard to race, religion or nationality. For more information, please visit crs.org or crsespanol.org.