



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. Michael J Lauer
- b) Host Organization: Ethiopian Catholic Church Social and Development Coordinating Office of Meki (ECC - SDCOM): Shashemene
- c) Assignment: Harvest and post-harvest management practices on grains (maize, wheat and other grains)
- d) Dates of Assignment: 26 November – 11 December 2015
- e) Number of days worked: 13 days

1.2.1 Objective 1 in your SOW:

Improve harvesting and post-harvest technologies and introduction of any new overseas' innovations on harvesting, threshing/shelling, handling, management of grains and stalks/straws, food safety, etc.

- a) Progress with the objective: Provided instruction on Principles and Best Practices on the seven fundamental topics of: 1) Grain standards and Grades, 2) Harvest timing and methods, 3) Transport to home, 4) Threshing and cleaning, 5) Drying, 6) Storage and 7) Pest management. Emphasized an integrated approach to minimize loss from physiological maturity of the grain through all steps including storage to maximize capture and preservation of high quality harvest. Some discussion topics included: identification of grain maturity, timing and progression of insect damage, methods to ameliorate insect and rodent damage to grain, grain harvest and drying methods, improved gotera design and construction, benefit and proper use of triple-ply (PICS) bags for effective, safe, chemical-free, long-term storage of grain, hazards and risks to family of Aluminum Phosphide fumigant tablets, proper use of insecticidal powders for grain protection and retreatment requirements. Demonstrated: use of hand-held shellers as an alternative to threshing with sticks; grain quality (levels of mold, insect damage, rodent damage) of both new harvest and 13-month storage grain by using samples collected from area farmers; proper inspection and use of PICS bags; and use of moisture meter to determine grain moisture content. Trainers received additional demonstrations on use of a rapid soil test to determine soil pH, N, P and K; experience with sorting grain and identifying grading factors; impact of aged grain samples and evaluation of severity of storage insect pests; information on maize weevil, the Lesser Grain Borer and Larger Grain Borer – all pests that cause significant grain damage in storage.

- b) Expected impacts/results: Application of Best Practices will reduce losses due to insects, molds, birds, rodents and theft beginning at crop maturity. Proper harvest, handling, threshing, drying, and storage will minimize pest



damage providing more high quality grain for home consumption, and possibly marketing. Marketing high quality grain may occur at the farmer's discretion and be of such a quality as to serve more developed grain markets that reward quality grain with a higher price thus enhancing smallholder income. Exposure of smallholder farmers and their families to toxic fumigants will be reduced. Trainers from ECC-SDCOM will receive a soft copy of all training and supplementary materials including plans and designs for constructing improved goteras and hand-held maize shellers, 2 Rapid Soil Test Kits (donated by CRS), 1 Dickey-John grain moisture meter (donated by CRS), 1 hand-held maize sheller, 4 PICS bags, 5 text books (donated by volunteer) including 1) Statistical Methods by Snedecor and Cochran, 2) Plant Pathology by Agrios, 3) Nature and Property of Soils by Brady, 4) Mineral Nutrition of Higher Plants by Marshner, and 5) Teach Yourself Statistics by Graham. ECC – SDCOM trainers will share soft copies of training and supplemental materials with local Government Development Agents. The training and materials will allow trainers to reinforce smallholder training and extend training to additional farmers.

c) Recommendations¹:

Trainers must regularly reinforce the volunteer provided training to the trained smallholder farmers and extend the training to others. Training should be provided before and during harvest and post-harvest activities to enhance opportunity for adoption. Additional specific recommendations include: 1) relentlessly educate smallholders on the human hazards and ineffectiveness of improper use of Aluminum Phosphide for storage insect control; 2) demonstrate proper use of PICS bags, and 3) support development of a local supply of PICS bags

1.2.2 Objective 2 in your SOW:

Benefit 90 smallholder farmers and 7-10 keys staffs (as a TOT) of the host and key stakeholders

a) Progress with the objective:

Training of 23 trainers was conducted at Shashemene Catholic Church meeting hall. Six trainers were employees of ECC – SDCOM and 17 were Government Development Agents. One of the trainers was female, 22 were male. 287 smallholder farmers were trained in 4 kebeles in 2 Woredas plus on-farm training. The training occurred

¹**Note:** Only make not more than 6 recommendations. The most useful recommendations for hosts are ones that they can implement themselves with minimal expense. For example, a cooperative might change its financial reporting procedures or hold more regular meetings of its board. Broad recommendations on tax or credit reform, changes in government policy, or investment in large-scale equipment, are usually not within the host organization's reach.



in KeloDuro, DuroHuiuko, RopiSinta and AlentenaSirbo. Female: 87, Male: 201.

b) Expected impacts/results: Trainers are enabled to continue the training of smallholders. They understand the concerns with Aluminum Phosphide and the opportunity offered by PICS bags. Smallholders will adopt some of the principles and practices offered but experience suggests there may also be reluctance to move from traditional practices. They need strong and frequent reinforcement on the hazards of Aluminum Phosphide tablets, repeated training on PICS bags and access to PICS bags. It is expected that they will adopt the PICS technology.

c) Recommendations: Trainers should work with farmers in each kebele to demonstrate effectiveness of improved methods. They should be on-site at time of maize maturity to help identify and reinforce best harvest timing and practices, to provide demonstration of proper drying methods, to re-demonstrate inspection and use of PICS bags as alternative to hazardous Aluminum Phosphide tablets. Trainers should select farmers in several kebeles and set up a demonstration of PICS bags technologies side-by-side with poly bags to show the efficacy of the improved storage technology. Demonstration outline provided in supplemental materials.

1.2.3 Objective 3 in your SOW: Develop and submit simple guidelines on post-harvest management of rain fed grains.

a) Progress with the objective: Guidelines developed and provided with the training and supplemental training materials and given in soft-copy to ECC-SDCOM-Shashemene. In addition, transferred soft copies of all training and background materials to for use by ECC-SDCOM trainers and to be shared with Government Development Agents.

b) Expected impacts/results: Trainers will refer to training and supplemental materials to continue to extend support of new technologies and Best Practices to farmers. With strong reinforcement and additional training farmers will increasingly apply Best Practices and improved technologies to enhance their food security, improve their grain marketing opportunities and economic standing.

c) Recommendations: ECC-SDCOM must enable trainers time, logistical support and opportunity to provide extension and ongoing training to smallholders in all kebeles. ECC-SDCOM must ensure training and supplemental materials are transferred to Government Development Agents throughout area of influence and to see that Government Development Agents that did not attend training understand training material content and become capable of using the materials to train smallholders in their areas of influence.

1.3 Action Plan:

Recommendation	Specific Action	Responsible person	By when
1. Ensure all Trainers including GDAs receive copies of all training and supplemental materials.	Actively extend volunteer provided softcopy to all trainers	Jima	December 18, 2015
2. Provide all ECC-SDCOM trainers ample opportunity including logistical support to meet with small-holders to train and re-train with provided materials on Best Practices for harvest and post-harvest grain management	Follow-up activities with trained smallholders 2 times per year with invitation extend to additional farmers that were unable to attend previous sessions. Share plans for improved gotera, and hand-held maize sheller designs. Critical that ECC-SDCOM trainers are provided with necessary logistical support to carry training forward	Jima, ECC-SDCOM trainers	December 1, 2016
3. Establish strong, ongoing effort to educate smallholders in groups and individually on the hazards of Aluminum Phosphide tablets and the alternative storage option offered by PICS bags	Provide local training at the kebele level 2-3 times per year until all farmers have been reached and all farmers clearly understand the hazards of phosphine gas and the effectiveness of PICS bags as an alternative storage system for protecting grain from insect damage	ECC-SDCOM Trainers	December 1, 2016: December 1, 2017: Ongoing as needed
4. Provide specific training to small-holders on the proper use of PICS bags including demonstrations	Use the PICS bags provided by volunteer or procure additional bags to demonstrate correct use as outlined in the provided materials. 2-3 sessions. Establish on-farm comparison of PICS versus poly bags with farmers in 3-5 kebeles following demonstration outline provided with soft-copy materials. Use results of demonstrations to reinforce farmer education and use of PICS bags and extend learnings to additional farmers	ECC-SDCOM Trainers	December 1, 2016: Ongoing as needed
5. Develop local distributor of PICS bags	Work with CRS to establish local supplies of PICS bags so farmers have ready access to the technology at the most reasonable cost	Jima	February 1, 2016
6. Develop and conduct training session for operators of mechanical shellers	Identify and work with the manufacturer of the small blue portable mechanical threshers that are locally used to conduct training sessions for ECC-SDCOM trainers and mechanical thresher operators so equipment is properly maintained and operated to minimize grain damage and loss in threshing. Conduct minimum of two sessions	ECC-SDCOM Trainers	October 31, 2016

1.4 Number of people Assisted

	Total	Male	Female
a) Through formal training	299	212	87
b) Through direct technical assistance (Do not double count)	11	10	1
c) Out of these above, number of host staffs	6	6	0
d) Training/assistance by field			

Venue	Date	Total	Males	Females
Training of Trainers Shashemene Catholic Church Meeting Hall	2 Dec	23	22	1
KeloDuro Cooperative Meeting Hall	3 Dec	80	49	31
RopiSinta Cooperative Meeting Hall	4 Dec	52	38	14
AlentenaSirbo Cooperative Meeting Hall	7 Dec	112	82	30
DuroHuiuko Cooperative Meeting Hall	8 Dec	32	21	11
On farm training: highland area and Siraro area (NOT COUNTING FARMERS THAT ATTENDED TRAINING SESSIONS)	30 Nov- 1 Dec	11	10	1
Total		310	222	88



1.5 Gender

- a) What gender roles did you recognize in your host community? Did these roles play a part in your assignment? How? *Male heads of household make most of the decisions regarding farming activities. They were more likely to attend training. Female family members are more responsible for managing the household and feeding the family. Household activities and cultural influences may have prevented some women from attending training. Female family members are likely to have substantial influence on adoption of best harvest and post-harvest grain management when given exposure to the training.*
- b) How might CRS or the host organization improve opportunities for the women in this host or host community? *The host organization did improve opportunities for women to attend training by outreach, scheduling the training to encompass the noon hour and providing a light lunch to attendees. This relieved the women of the need to prepare food and likely enabled attendance by some. The host organization should ensure that women are specifically included in all farm training activities so all farm families come to expect women as well as men to attend. Continue to provide a light lunch to relieve women of some of the household workload when training is offered. CRS should financially support the host organization so that light lunches can continue to be provided at training sessions.*

1.6 Value of volunteer contribution in \$: 16 days (with travel) @ 8 hour/day @ \$100/hour = \$14,800

- a. Hours volunteer spent preparing for assignment: 25 hours: Value \$2,500
- b. Estimated value of all material contributions volunteer contributed to host during assignment: \$800 in textbooks, PICS bags and hand-held maize sheller.

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

- a) Meals \$0.00
- b) Transportation \$400.00
- c) Lodging \$0.00
- d) Translation \$160.00
- e) Other (Specify) \$0.00

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. *No corrections.*

1.9 Recommendations for CRS:

- Provide ongoing education to trainers and smallholders two years after initial training to reinforce and leverage initial training session. This requires allocation of a second volunteer to refresh/update subject matter to each host organization. Ongoing education is critical to ingrain training in the trainers and smallholders. This will renew and invigorate trainers and encourage adoption of still more advanced practices and technologies by smallholders
- Provide annual training on soil erosion control practices. Soil erosion is severe and soil conservation is crucial to sustainable crop production. Droughts offer particular challenges requiring active and ongoing soil conservation/management training to sustain progress through these challenges
- Encourage host organizations to include women in all farm training activities so this becomes automatic and expected. Provide financial support for a light lunch at training to relieve



household burden and encourage female attendance. Link financial support to some level (e.g. 40%, 50%) of female attendance so outreach goals are met

1.10 Press Release

FOR IMMEDIATE RELEASE

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Des Moines Area Volunteer Travels to Ethiopia to Share Skills with Local Farmers

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

Michael Lauer, a Senior Research Scientist with DuPont Pioneer from Des Moines, Iowa travelled to Ethiopia for 2 weeks to share his technical skills and expertise with local farmers. Lauer'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.

“My assignment was to help reduce harvest and post-harvest losses of grains. Average grain losses are 25% in Ethiopia. In the region I served, grain losses could reach 50-80% for some smallholders. This is grain that could be preserved as food for families or marketed to improve livelihoods. I provided training on ‘best practices’ to reduce harvest, post-harvest and storage losses of grains. For many farmers, application of some of these practices can have a direct impact on their ability to feed their families until the next harvest. It is gratifying to use some of the knowledge I’ve been given to positively impact people’s lives,” said Lauer.

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 Ethiopia, Lauer worked with the Ethiopian Catholic Church Social and Development Coordinating Office of Meki: Shashemene City in harvest and post-harvest management of grains providing training and technical assistance to staff of the Development office, Government Development Agents and smallholder farmers to enable them to reduce insect, mold and rodent deterioration of grain in the field and at home. Training also included best practices for threshing and drying of the crop as well as instruction on effective, non-chemical storage methods to ensure preservation of grain quality. Up to 310 beneficiaries were reached. “Many farmers, educators and business professionals have deep knowledge of advanced agricultural methods and technologies. They may not even be aware of how



much they know. Transfer of this information can directly benefit smallholder farmers and their families improve access to food and enhance their income. The impact we can have on human lives is direct, immediate and tangible. I encourage others to volunteer for these service opportunities,” Lauer said.

Lauer’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.