

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, Ph.D.
- b) Host Organization: Ethiopian Catholic Church – Social and Development Commission
Coordinating Office of Sodo (ECC-SDCO/S)-Wolayta Zone
- c) Assignment: Harvest and post-harvest management practices for grains (maize, wheat, common beans, other grains)
- d) Dates of Assignment: November 28 – Dec 13, 2014
- e) Number of days worked: 1 day orientation. 2 days travel, 9 days in field, 1 day debriefing, 1 day report writing and departure day.

1.2.1 Objective 1 in your SOW: Address grain harvest losses due to quality and quantity

- a) Progress with the objective: Delivered training on Best Harvest Practices for maize (to represent cereals) and *Phaseolus* (to represent pulses) in 7 kebeles. The main message was that insect damage begins in the field and that both insect damage and harvest losses are minimized when grains are harvested at physiological maturity. Methods to identify physiological maturity were presented for maize and *Phaseolus*.
- b) Expected impacts/results: Implementation of Best Practices will require management changes and increased labor for smallholder farmers. Payoff will be improved quantity and quality of grain for their families and the possibility of marketing higher quality grain. Farmers understood that this new knowledge gives them the opportunity to make management decisions to improve their condition. Significant adaptation of improved practices is expected because they appeared to understand value they may capture.
- c) Recommendations¹: Intense on-going follow-up/re-training with farmer participants in each kebele is necessary to keep best practices in front of farmers as harvest time approaches. Demonstrations, experiments and field days will remind farmers of best practices and show the value of integrating a complete harvest management scheme. Suggested demonstrations and field days include: Identification of maize harvest maturity using all indicators, experiment to quantify *Phaseolus* harvest loss and value of best harvest practice, measurement and demonstration of insect infestation at harvest maturity compared to current harvest practice, same with mold on maize, work with farmers in each kebele to adapt to current weather conditions and challenges to minimize harvest loss. Important to share adaptive techniques across kebeles.

1.2.2 Objective 2 in your SOW: Address post-harvest handling losses in quality and quantity

- a) Progress with the objective: Delivered training on best practices for drying, threshing and cleaning of maize (to represent cereals) and *Phaseolus* (to represent pulses) in 7 kebeles. Emphasized need to sort moldy maize from non-moldy maize before shelling to maintain

¹ **Note:** 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.

clean grain. Emphasized need to avoid beating and damaging grain. Emphasized dangers of aflatoxin to humans and farm animals.

- b) Expected impacts/results: Implementation of best practices will reduce maize insect losses by removing from field and stabilizing by drying as quickly as possible after physiological maturity; this will also reduce mold incidence. Field loss of pulses will decrease both by timely harvest and use of improved threshing methods. Application of improved threshing and cleaning methods will reduce grain damage and improve storage stability. Farmers are aware of the increased labor and management requirements but understand that they now have the knowledge to improve their grain quality and quantity. Many farmers were unaware of the risks of aflatoxin and expressed concern. Consumption and on-farm use of moldy grain is expected to decrease greatly.
- c) Recommendations: Intense on-going follow-up/re-training with farmer participants in each kebele is critical to keep best practices in front of farmers during the drying and threshing period. Demonstrations, experiments and field days will remind farmers of best practices and show the value of implementing a complete harvest management scheme. Suggested demonstrations and field days include: Demonstration of solar drying system for on-farm including depth of drying layer, stirring to promote uniform drying and methods to protect drying grain from rain and dew, demonstration of 'salt' method to determine safe grain storage moisture, mechanical threshers as an alternative to threshing with sticks to reduce grain damage and improve return on labor, optimize threshing table for pulses to reduce grain damage and scattering loss experienced by traditional methods, build and demonstrate threshing tables with appropriate mesh sizes for pulses and small grains.

1.2.3 Objective 3 in your SOW: Address storage losses in quality and quantity

- a) Progress with the objective: Delivered training on best practices for storing maize (to represent cereals) and *Phaseolus* (to represent pulses) in 7 kebeles. Emphasized the need to ensure grains are at safe storage moisture and stored properly to protect from mold, insects and rodents. Discussed storage in traditional gotera, improved gotera, open-weave poly bags, triple-ply bags and clean used barrels (including cleaning methodology). Trained on proper use of insecticidal dusts for maize grain and cobs including need to re-treat as recommended for prolonged storage.
- b) Expected impacts/results: Farmers have been experiencing tremendous storage losses to insects. There was a high level of interest from nearly all farmers in this part of the training. Many are expected to apply learning and will reduce losses to storage insects, termites, mold and rodents. This will result in more high quality grain for their families and, if the family food needs are secure, will result in more high quality grain to sell to improve their income. Expect many farmers to reduce incidence and use of moldy grain.
- c) Recommendations: Intense on-going and timely follow-up/re-training with farmer participants in each kebele is critical to keep best practices in front of farmers as they begin storing their grain. Demonstrations, experiments and field days will remind farmers of best practices for safe storage. Suggested demonstrations and field days include: Demonstrate proper use of grain storage insecticides especially in kebeles interested in this approach by conducting an experiment to show increased insect damage in untreated versus treated grain over time,



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assist in construction of improved gotera in most of the kebeles using provided plans, follow-up with farmers who procure used barrels to ensure that they are properly cleaned before storing grain and ensure that grain is dried correctly and that barrels are sealed and stored correctly, demonstrate/inspect use of triple-ply bags to ensure correct use and storage, compare effectiveness of open-weave poly bags to properly used triple-ply bags.

1.3 Number of people assisted

- Through formal training: 327
- Through direct technical assistance (Do not double count): 10
- Out of these above, number of host staffs: 9
- Training/assistance by field:

Kebele (PA) Name	Number of attendant Farmers			Attend Dr. Hans Kandel Training?		Kilometer from Sodo	Date of training	Time of training
	Male	Female	Total	Yes	No			
Hanaze	16	4	20	12	8	50	6-Dec-14	Afternoon
Manara	40	5	45	15	30	56	9-Dec-14	Afternoon
Zabato	28	11	39	7	32	53	9-Dec-14	Morning
Borkoshe	26	15	41	19	22	43	6-Dec-14	Morning
Galewargo	40	1	41	12	29	25	5-Dec-14	Morning
Serebaleka	52	1	53	8	45	33	5-Dec-14	Afternoon
Minowareza	24	14	38	0	38	35	8-Dec-14	Morning
PA Total	226	51	277	73	204			
ECC-SDCO/S staff	9	0	9	8	1			
Government Development agents	39	2	41	1	40	41		
Visited Farmers at Different PA's	5	5	10					
Grand Total	279	58	337	82	249			

1.4 Gender

- What gender roles did you recognize in your host community? Did these roles play a part in your assignment? How? Males dominate farming decisions in the field beginning with soil preparation through planting, harvest and storage. Where grain is stored underground, males continue to manage storage. Women have more influence on grain storage in the home and in structures on the farm. They also manage how grain is used as food and appear involved in marketing decisions included selling grain in the market. Because women were filling household roles more men attended the training than women. In many cases women were left at home to



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take care of chores so men could attend the training. As a result, the training reached many more men than women despite the host organization working to increase attendance by women. The gender roles were also unbalanced for the Training of Trainers: of the 50 trained, only 2 were women. This may be related to educational opportunities for women and to educational choices offered to women.

- b) How might CRS or the host organization improve opportunities for the women in this host or host community? The host organization might identify training times that enable more women to step away from household duties for the training period. One could experiment with timing training to precede mealtime and to provide food for those that attend. This might create a circus but it might greatly expand attendance as well as the number of women included in training. CRS needs to investigate cultural norms and receptiveness to extending harvest/post-harvest management training to women. I observed signs in the rural areas promoting gender equality so it appears as though the government is in support (I may be wrong?). However, if true, CRS should identify tactics used by the government and other NGOs to reach greater gender balance in education efforts.

1.6 Value of volunteer contribution in \$

- a. Hours volunteer spent preparing for assignment: 30 hours
- b. Estimated value of all material contributions volunteer contributed to host during assignment. \$90 US dollars.

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

- a) Meals \$20
- b) Transportation \$870
- c) Lodging \$50 (subsidized fees)
- d) Translation \$120
- e) Other (Specify) \$80 (Photocopies, office space, meeting halls, demonstration materials)

1.9 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 recommendations for updates or changes.

1.10 Recommendations for CRS: Training in improved agronomic, harvest and post-harvest management practices needs to be repeated 2 years after first training is delivered. Despite the delivery of training materials to trainers, retraining of trainers and updating training of farmers will help cement learning. Farmers will have difficulty breaking from imbedded cultural practices: this is a natural feature of cultural traditions. Regular renewal of training for trainers and farmers will help sustain focus and advance implementation or value of training will be limited.