



Agricultural Leaders of Tomorrow (ALOFT) Farmer-to-Farmer Program for Southeast Asia Volunteer Scope of Work - Philippines

Assignment Summary Information			
Host ID:	PH_012		
Country:	Philippines		
Host Organization:	Sugar Industry Foundation, Inc (SIFI)		
Assignment Title:	Assessment of prototype farm implement for regenerative sugarcane production		
Assignment Dates:	Preferred starting in January 2025		
Type of Assignment	In-person		
Area of Technical Assistance:	Climate-smart agriculture		
Associated Area of Technical Assistance	Extension and advisory services		
Target Value Chain:	Sugarcane		
Objectives of the assignment:	<ul style="list-style-type: none"> ● To assess the prototype farm implement developed by CPSU and SIFI for regenerative sugarcane farming. ● To recommend improvements for the existing farm implement for regenerative sugarcane farming. ● To identify and develop designs for other farm implements needed by sugarcane farmers assisted by SIFI. 		
Desired volunteer skill/expertise	<ul style="list-style-type: none"> ● University degree or equivalent experience in biosystems engineering, mechanical engineering, small systems machinery, or a related field ● Expertise in innovative development of small farm tools and implements ● Experience with regenerative agriculture practices, specifically conservation tillage and green manure (cover cropping) 		
PERSUAP Classification ^{1[1]}	III		
Anticipated number of people to be trained	Men	Women	Youth (aged 15-29)
	30	20	20
Will the assignment address gender gaps? (Yes/No) If yes, please describe in assignment background & rationale	Yes		
Will the assignment address climate change? (Yes/No)	Yes		

^{1[1]} USAID precisely classifies PERSUAP in four categories; **PERSUAP Type I** assignments directly related to pesticides recommendations, **Type II** as assignments with indirectly related with pesticides, **Type III** assignments are not expected to be involved in pesticide issues. and **Type IV** as assignments associated with other USAID projects and collaborators.



If yes, please describe in assignment background & rationale

A. Project Overview

Country Strategy Overview

The University of Tennessee’s (UT) “Agricultural Leaders of Tomorrow” (ALOFT) regional Farmer-to-Farmer (F2F) program for Southeast Asia supports youth-led and youth-serving institutions to build more resilient and inclusive food systems. Through F2F, U.S. specialists spend two to three weeks on specific technical assignments, working directly with counterparts in the region to address local needs. ALOFT’s demand-driven voluntary technical assistance will be delivered in four primary areas: 1) climate-smart agriculture; 2) agricultural entrepreneurship and agribusinesses; 3) agricultural education; and 4) extension and advisory services. Locally appropriate technical assistance will be provided to a range of host-organizations, including farmer cooperatives, vocational training centers, extension services, and agribusinesses. The University of Tennessee, country ALOFT teams, and established host-organizations will provide the necessary logistical, technical, and material assistance to position volunteers to successfully carry out the exchange of knowledge with communities.

Through demand-driven technical assistance, the ALOFT Philippines project seeks to strengthen the fruit, vegetables, small livestock, and aquaculture value chains and agrotourism sector. ALOFT Philippines will collaborate closely with Central Philippine State University (CPSU) to deliver impactful and locally appropriate voluntary technical assistance to a range of host-organizations, including farmer cooperatives, vocational training centers, extension services, and agribusinesses. Technical assistance will promote the adoption of climate-smart agriculture (CSA) by smallholders, strengthen extension services and agricultural education, expand access to financial services, particularly youth and women, and support agricultural entrepreneurship and small-business growth.

Host Organization Background

The Sugar Industry Foundation, Inc. was established in 1971 with a mission to be a “professionally run, apolitical, progressive social development umbrella foundation capable of initiating, developing, promoting and funding projects for sugar workers of SIFI members organization, their families and the communities they are part of.” They have four pillars of development which they work across: education, health, livelihood, and advocacy. SIFI partners with 28 sugar mills in the Philippines, 12 of which are in the Negros Occidental/Negros Oriental regions. Additionally, they work with 3 sugar federations and 63 planters’ associations, 14 of which are in the Negros Occidental/Negros Oriental regions.



Since 2021, SIFI and 3 of its partner-mills, namely: 1) Hawaiian- Philippine Co.; 2) Victorias Milling Co.; and, 3) Lopez Sugar Corp. have been working in partnership with medium-to-big sugar planters to increase productivity through sustainable and responsible sugar farming. Their main objective is to promote regenerative agriculture farming practices and contribute to the reduction of GHG emissions in sugarcane production areas.

Current interventions focus on (1) restoring soil health/fertility (organic matter and soil pH), (2) enhancing biodiversity and improving water retention capacity, (3) increasing farmers' knowledge on new/updated farming techniques through technology transfer and capacity building, and (4) promoting worker's safety and protection.

In April 17, 2024 SIFI and Central Philippine State University (CPSU) had signed a Memorandum of Agreement (MOA) and committed to a mutual partnership and collaboration in the conduct of research, development and innovation of farm tools and implements for regenerative agriculture for sugarcane production. The Terms of Reference were established for study, development and trial use of innovative farm implementations for minimum tillage and green manuring.

Assignment Background and Rationale

For the past several years sugarcane farming has faced constraints and limitations. Production and output declined due to high cost of labor and inputs (fertilizers and pesticides). Furthermore, sugarcane planters observed that soil pH and organic matter decreased even with continuous fertilizer application. Sugarcane planters are looking for alternative practices to restore soil fertility and increase pH, organic matter, water holding capacity, and biodiversity. Sugarcane planters need updated and new knowledge of innovative farming implements through technology transfer and capacity building. Interventions on soil and innovative customized farm implements (mechanization) to address the dwindling labor force will support necessary regenerative agriculture farming practices. These innovative technologies should promote worker's safety and protection while accounting for gender differences in uses. Gender-sensitive implements assure both men and women are able to effectively use machinery.

As described above, SIFI and CPSU entered into a Memorandum of Agreement to jointly innovate, develop, and trial farm tools and equipment for regenerative sugarcane farming. The initial activities of the partnership focus on developing prototype farm implements for sugarcane during land preparation, planting, and care and maintenance. Therefore, SIFI is requesting a volunteer to determine the efficiency and effectiveness of the prototypes as well as recommend improvements. The volunteer will also help SIFI and CPSU in identifying other necessary farm tools and implements for regenerative sugarcane farming.



B. Desired Qualifications of Volunteer

- University degree or equivalent experience in biosystems engineering, mechanical engineering, small systems machinery, or a related field
- Expertise in innovative development of small farm tools and implements
- Experience with regenerative agriculture practices, specifically conservation tillage and green manure (cover cropping)
- Working knowledge and experience in cropping systems, crop rotation, mulching and crop residue management and recycling
- Working knowledge of the sugarcane industry is a plus
- Strong communication and interpersonal skills

C. Objectives and Expected Results

Objectives of the Assignment

- To assess the prototype farm implement(s) developed by CPSU and SIFI for regenerative sugarcane farming.
- To recommend improvements for the prototype farm implement(s) for regenerative sugarcane farming.
- To identify and develop designs for other farm implements needed by sugarcane farmers assisted by SIFI

Anticipated Results

- SIFI will have detailed assessment results determining the efficiency and effectiveness as well as areas for improvement of the prototype farm-implement(s) for regenerative sugarcane farming.
- SIFI will have a feasible technical adjustment/modification plan to optimize and refine its implement performance, ensuring durability and sustainability of the farm implement.
- Volunteer will identify other needed farm implements and tools that will strengthen the adoption of regenerative sugarcane production systems.

Expected Deliverables

The major deliverables of this assignment include, but not limited to:

- Technical adjustment/modification plan to improve the prototype farm implement(s) developed by SIFI and CPSU for regenerative sugarcane farming.



- List of recommended types and designs of additional farm implements and tools for regenerative sugarcane farming.
- Volunteer end-of-assignment report with recommendations to the host institutions
- Final debriefing with the host organization (plus key stakeholders) and the Smith Center
- Conduct in-country outreach events in the Philippines (print, radio, TV presentations, social media, etc.)

D. Materials and Translation

CPSU and SIFI are developing a prototype farm implement for the sugarcane regenerative farming system. It will be finalized in September and fabricated by October or November, just in time for the volunteer to arrive in January 2025 to conduct the assessment during the trial operation period.

- All training materials will need to be translated prior to arrival (PowerPoint, handouts, etc)
- Some training materials will need to be translated (describe below)
- No translation of materials needed.

E. Resources to be Contributed by Host and Local Partners

CPSU and SIFI will be committed to mobilizing its key staff to work with the volunteer. The host will also assign a focal person to work closely with the volunteer to coordinate engagement with potential host organizations and other volunteer activities. CPSU will provide an office space with access to Wi-Fi for the volunteer to use during the assignment. A venue and classroom and seminar room will be made available for volunteer to use in conducting training workshops and demonstrations. The focal person at CPSU is Dr. Angelie Lumba , Director, Research and Development Services. She will coordinate the activities with Dr. Manny Palada, Country Director, F2F ALOFT Philippines. The focal person at SIFI is Judy Gonzaga, Technical Consultant.

F. Assignment Logistics and Itinerary*

Accommodations and Logistics

Volunteers should review the country orientation manual and video series for extensive logistics information including pre-departure planning, expense reimbursements, health management, safety & security, and emergency protocols.



Key Points:

- Hotels and airfare will be booked by ALOFT Smith Center and reservation details will be provided to the volunteer before arrival in the Philippines. Hotels will offer air-conditioning, wireless internet, and proximity to local food options.
- ALOFT Smith Center will reimburse all assignment-related travel expenses
- The ALOFT Philippine staff and/or the host organization will provide transport to assignment site
- All assignment sites will have access to local restaurants and rickshaw/taxi transportation
- Any logistic concerns can be addressed to ALOFT Smith Center using the contact information located in Section F.

Recommended Preparation

- Complete volunteer orientation series
- Review volunteer orientation manual
- Complete volunteer pre-departure checklist
- Bring any videos, posters, PowerPoints, or other materials that are important to your training and activities. If they are in English, please send them to the field staff at least 2 weeks before your assignment to be translated. We recommend you bring these materials on both a USB flash drive and hardcopy.
- Please bring any specialized tools/equipment with you as there may be limited options for acquiring them at the assignment site.
- The ALOFT country office has laptops, Microsoft Office, a projector, flash drives, and other materials that can be used for training and workshops.
- Download [country specific] messenger app to maintain contact with volunteer partner

General Itinerary - In development (will need volunteer input)

*subject to change based on the needs of the host.

Day(s)	Activity	Location
1-2	Travel to Bacolod	
3	Meet ALOFT Philippines Team and SIFI representative for in-country orientation and to review assignment itinerary	SIFI Office
4,5,	Field observation on the actual use of farm	Assisted farmers' farms and



	implement and conduct interviews with farm machine operator and farmers	visit to RU Foundry
6-7	Weekend rest	
8, 9, 10	Assessment sessions: further discussions of field observations results, determining the strengths and weaknesses of the farm implement and preparation of recommended improvements.	SIFI conference room
11-12	Identification and designing of other farm tools and implements of regenerative sugarcane farming.	SIFI training facility
13-14	Weekend rest	
15-16	Preparation of final report and exit meeting with the Host and CPSU.	SIFI/Office
17-18	Domestic and international travel	

G. USAID Classification of Volunteer Assistance and Activities

Primary classification for volunteer assistance (select one)

- X Technology Transfer
- Organizational Development
- Business/Enterprise Development
- Financial Services
- Environmental Conservation
- Administrative

The primary classification of the type of value chain activity (select one)

- Information and Input Support Services (extension services, input supplies, veterinary services, etc.)
- X On-Farm Production
- Processing (primary and final product transformation, storage, transportation, etc.)
- Marketing (branding, advertising, promotion, distribution, sales, etc.)