

**To express interest in this assignment please email priyanka.subba@crs.org**

**CRS Farmer to Farmer Program**

**Volunteer Assignment Scope of Work (SOW)**

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| **Summary Information** |
| **Assignment Code** | **NE241** |
| Country | Nepal |
| Country Project | Crops Country Project |
| Host Organization | Lumbini Hydroponics Pvt. Ltd. |
| Assignment Title | Disease Management in Hydroponic Vegetable Farm  |
| Assignment preferred dates | May 2020 onwards |
| Objectives of the assignment | Enhance staff capacity for disease management in Hydroponic Farm  |
| Desired volunteer skill/expertise | Working experiences in disease and pests management in hydroponic farms, hands on training skill |
| Type of Volunteer Assistance | Technology Transfer (T) |
| Type of Value Chain Activity | On Farm Production (F) |
| PERSUAP Classification[[1]](#footnote-1) | Type II |

1. **BACKGROUND**

Lumbini Hydroponic Pvt. Ltd. is privately owned farm company which produces varieties of vegetables both seasonal and off-seasonal such as: Tomato, Cucumber, Pumpkin, Sweet Peepers, Mint, Bitter Gourd, Bottle Gourd, Chilly, Cauliflower, Broccoli, Spinach, Beans, Capsicum and Green Onion through Hydroponic technology inside Green Houses at 0.2ha of land area. The company had registered with Small Cottage Industry, Butwal, Rupandehi District, Province 5 on November 2017 aiming to produce organic vegetables with following specific objectives;

* Year round seasonal and off seasonal vegetable production through High Tech Green Houses Technology
* Production of hybrid organic plant
* Encourage youths in agriculture sector
* Extend knowledge and skills to other farming community

The company’s annual sale was nearly US$57,000 in the year 2018. In 2019 Farmer to Farmer collaborate with the farm. The farm receives F2F technical support to enhance its capacity on nutrition management inside hydroponics. This support was very fruitful for the farm in reducing cost of production and expanding the business. With the newfound knowledge and after seeing the prospects, the farm has added three new greenhouses through a low-interest loan bringing their total farm investment to roughly $155,000. Local farmers have begun to ask Poudel for help in constructing hydroponics greenhouses, which has turned into a secondary source of income for him. Noting the potential that hydroponics has for Nepal, the government has also recognized Poudel’s entrepreneurial ideas and is supporting the farm with an additional $20,000.  Overall, Lumbini Hydroponics increased their sales by at least 5 percent in the year 2019, and Poudel believes he will continue to see this increase in 2020 with the production capacity of his new greenhouses.

The company is with five regular staff includes farm manager, technicians and support staffs. The company creates season employment to the surrounding people.

1. **ISSUE DESCRIPTION**

Farming through hydroponics technology in Nepal is recently introduced practices. Lumbini Hydroponic Pvt. Ltd. is the pioneer to adopt hydroponic technology in Nepal. Lumbini Hydroponics is receiving training from Farmer to Farmer and from Indian hydroponic experts. The advises from have work well for the farm. Farmer to Farmer previous assignment provides basic skills sets to design the farm and manage nutrition in the farm. With the new investment in the farm and expanding production, the farm is grappled with disease and pests’ infestation in the farm. The expertise available in Nepal and even advisory services received from Indian experts are not adequate in controlling the diseases and pests’ infestation. Currently the farm is facing larve of various insects, virus and fungus infestation: downy mildew, powdery mildew in its bitter gourd, bottle gourd, tomatoes, pepper, cucumber, chilly. This invasion of pest and insects are threatening the farm and the farm is facing challenge to save investment, regular and season jobs. It is also weakening quality vegetables supply in the market.

In this scenario, Lumbini Hydroponic Pvt. Ltd. is looking for disease and pests’ management technical expertise to enhance staffs and owner capacity

1. **OBJECTIVES OF THE ASSIGNMENT**

Enhance staffs’ capacity for disease and pests’ management in hydroponic farm

1. **HOST CONTRIBUTION**

Host will provide local logistic support and It will also provide tea cookies for trainees, training venue and other materials required for trainings.

1. **ANTICIPATED RESULTS (Outcome/impact) FROM THE ASSIGNMENT**

Following outcomes have been anticipated from the expert assignment

* Diagnosis of plant pests and disease management in hydroponic farm and methods to control pests and diseases
* Maintenance of hydroponics tunnels and suggestions for organic substances to sanitize the farm.
* Better management of the farm following locally available raw materials.
1. **DELIVERABLES**

The anticipated deliverables accomplished by the volunteer also include:

* + Simple Standard Disease and Pest Management Module for hydroponic farm
	+ Appropriate and relevant technologies on hydroponic farm will be transferred
	+ Host recommendations action plan developed
	+ Trip Report submitted before exit meeting
1. **SCHEDULE OF VOLUNTEER ACTIVITIES IN COUNTRY (DRAFT)**

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| **Day** | **Activity** |
| Days 1  | Arrival Nepal, Trivubhan international Airport. The volunteer will be picked by Hotel Kutumba card bearing “**CRS logo and volunteer name”**.  |
| Day 2 | Introduction and meeting with CRS management, and briefing meeting (security, general orientation, logistic, reporting formats, etc.) at CRS office. Discuss anticipated outcomes and work plan. |
| Day 3 | Travel to assignment site |
| Days 4 – 13 | Introduction and assignment briefing with host representatives, hands on training,  |
| Day 14-15 | Guideline preparation and presentation with host  |
| Day 16 | Travel back to Kathmandu from Butwal  |
| Day 17-18 | Report preparation and submission to CRS F2F program  |
| Day 19 | Debriefing including CRS country Office and USAID Local mission and fly back to USA |

1. **DESIRABLE VOLUNTEERS SKILLS**

The volunteer will have the following qualifications and competencies:

* Working experience in plant disease and pest management in hydroponic farm
* Hands on training skill in developing world
* Flexible to adapt with local situation
1. **ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS**
* Before travelling to the assignment place, the volunteer will stay in Kathmandu at one of the CRS’s client hotels, Hotel Kutumba <https://www.orbitz.com/Lalitpur-Hotels-Hotel-Kutumba.h33780567.Hotel-Information> or another hotel that will be booked and confirmed before the arrival date. In Kathmandu, 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 Kathmandu.
* All required materials will be prepared ahead of time and will be provided to the volunteer. CRS Nepal 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 Kathmandu. CRS will provide a vehicle and accompany the volunteer to the place of assignment.
* During the assignment period, the volunteer will be booked in a hotel at the project site, to be confirmed prior to volunteer arrival. CRS Nepal 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.
* Security information will be provided by CRS Nepal Security focal person at Kathmandu CRS Country office.
1. **RECOMMENDED ASSIGNMENT PREPARATIONS**
* Prior to travel, the volunteer is advised to prepare necessary training and demonstration aids and written handouts. Electronic copies of these handouts and any other printed materials can be printed for immediate use at the CRS office in Kathmandu on request by the volunteer.
* If the volunteer requires use of simple training aids like flip charts, markers or tape s/he should make the request and collect from the CRS office in Kathmandu prior to travel to the assignment place.
* Translation of handouts to the local language can be done at the assignment location if required.
* Depending on the meeting places and availability of electric power and LCD projector, the volunteer may use a laptop and projector for power point presentations.
* Weather Appropriate Clothing: https://www.accuweather.com/en/np/nepal-weather (will provide later)
1. **KEY CONTACTS**

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| **CRS Baltimore, US** | **CRS Nepal Country Program** |
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| **CRS Nepal Country Program** |
| **Prachanda Kattel**Project Coordinator, CRS F2F Nepal Country OfficeMaitri Marg - Bakhundole, Lalitpur Metropolitan City Ward No.1, Province 3, Nepal Cell: +977-98141205763, 9808028903 Email: prachanda.kattel@crs.org | **Chhan Bahadur Bhattachan**MEAL CoordinatorCRS F2F Nepal Country OfficeMaitri Marg - Bakhundole, Lalitpur Metropolitan City Ward No.1, Province 3, Nepal Cell: +977-9841390786 Email: chhan.bhattachan@crs.org |
| **Host Organization:** |  |
| **Ishowari Bahadur Chundali**ProprietorLumbini Hydroponic, Tillottama Municipality-03, Rupandehi District, Province #5 | **Ishwor Poudel** Technical staffLumbini Hydroponic, Tillottama Municipality-03, Rupandehi District, Province #5Cell: +977-9861890661Email: ishwor1984nepal@gmail.com |

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 related to curriculum review and designing, business plan development and strategies development and **Type IV** as assignments associated with other USAID projects and collaborators. [↑](#footnote-ref-1)