



To express interest in this assignment please email [priyanka.subba@crs.org](mailto:priyanka.subba@crs.org)

**CRS Farmer to Farmer Program  
Volunteer Assignment Scope of Work**

Summary Information	
Assignment Code	NEP212
Country	Nepal
Country Project	Crops Country Project
Host Organization	Small Farmer Agriculture Cooperative Limited (SFACL)- Bajrabarahi, Thaha Municipality-6, Tistung, Makawanpur
Assignment Title	Club root disease management in cauliflower and cabbage
Assignment preferred dates	August, 2019
Objectives of the assignment	Introduce feasible techniques to manage the club root disease in cauliflower and cabbage vegetable production
Desired volunteer skill/expertise	Plant Pathologist experience on Cole crops ( <i>Brassica oleracea</i> ) disease management
Type of Volunteer Assistance	Technology Transfer = T
Type of Value Chain Activity	On Farm Production = F
PERSUAP Classification	PERSUAP Type I

#### A. BACKGROUND

Small Farmer Agriculture Cooperative (SFACL), is located on Thaha Municipality Ward No:6 Bajrabarahi, Makawanpur. It is also known as Tistung. It is connected across the Tribhuvan highway connecting Nepal to India. Cooperative was established on 2005 A.D covering previous Bajrabarahi Village development committee (VDC). Now cooperative have 173 groups and 1307 active members (Male 508 and Female 754). The main goal of cooperative is reducing the poverty by increasing agriculture production and productivity. In addition, there is micro finance facility for members. The livelihoods of cooperatives members are interlinked with vegetable production, small livestock and dairy production. Bajrabarahi is famous for its off-season vegetable that are sold in major markets all over the country. Now, Government Project called Prime Minister Modernization Project (PMMP) declared it as vegetable pocket zone. The farmers are growing vegetable likes potatoes, cauliflower, cabbage, leafy vegetables, chilies, garlic, tomatoes, onions, pepper etc. Bajrabarahi exports its agricultural products to Kathmandu, Hetauda, Pokhara, Narayanghat, Butwal, Birjung and Bhaktapur.

The horticulture crops contributed alone 31% of total AGDP (MOAC/ABPSD). The share of green vegetables is approximately 7% in AGDP. Communities are producing vegetables or putting their foot on vegetables production. They are motivated to produce vegetables one for their own consumption and next to sell to market to bring more income for their livelihoods. All these works are performed with limited skills. Growing vegetables has been of great attraction. However, communities encountered so many challenges on right kind of knowledge for disease and pest management.

#### B. ISSUE DESCRIPTION

Bajrabarahi is one of the major vegetables pocket areas of Nepal. 90% of farmers living in the Bajrabarahi grow vegetables such as Cauliflower, Cabbage, Potato, Peeper, Capsicum and Chilly to supply in major markets Kathmandu, Chitwan, Pokhara and Hetauda. The share of vegetable production is almost 70% of their total annual income. Cole crops are popular within the group members. This vegetable pocket is almost four hours away from Kathmandu.

This source areas' cole crops are infested by club root disease. Cauliflowers and cabbages get yellowing, wilting, stunting and galls on the roots. This disease starts from few years back and is rampantly spreading in the field. The crop loss is increasing every year. The loss accounts from 40-100%. In value, farmers are losing \$1000-\$3000 per farm. Understanding the huge loss farmers consulted with National Agriculture Research Center to curb the disease. So far, the consultation, research and attempts to curb this disease from various agencies have remained ineffective.

Farmers also have witnessed change in behavior of disease within same farm. Some of the crops remained unaffected when most of the crops gets destroyed or damaged by club root. There is a curiosity in farmers to understand this complex nature of disease performance. New methods of managing farms to curb the disease is a need to persuade farmers who are driving away farmers from Cole crops production.

This disease has entered the vegetable pockets after farmers plant saplings from another vegetable pocket areas. Farmers were not aware of infestation of club root in the vegetable pocket area from where they bought saplings.



*Figure 1: Club Root Infested in Cauliflower: Photo by Phaindra Pandey, CRS/F2F Staff*

### C. OBJECTIVES OF THE ASSIGNMENT

The specific objective of this volunteer assignment is to support farmers on identifying best prevention and management methods for club root disease in cauliflower and cabbage.

The volunteer expert will spend significant time with the Small holder's vegetable farmers and directly assisting and equipping them with skills on the following;

- On field demonstration and Introduce feasible techniques to control the club root disease in cauliflower and cabbage

### D. HOST CONTRIBUTION

Small Farmer Agriculture Cooperative Limited (SFACL) will facilitate the volunteers to reach the targeted vegetable growers and ensure successful assignment completion. The host will also arrange training and field visit with targeted communities. Host will also provide the volunteer with office space, training hall and daily tea/snacks for participants.

### E. ANTICIPATED RESULTS (Outcome/impact) FROM THE ASSIGNMENT

It is anticipated that this volunteer assignment will contribute to figured out prevention and control methods for club root disease in cauliflower and cabbage, which will directly contribute to the following;

- Increased incomes by reducing disease incidences in cauliflower and cabbage
- Adopting new knowledge and technologies

### F. DELIVERABLES

The anticipated deliverables accomplished by the volunteer also include:

- Prevention and control methods for club root will be shared
- Handbook on club root prevention and control will be shared
- Host recommendations action plan developed
- Trip Report will be developed and shared with F2F team on the final day
- Outreach Activity

### G. SCHEDULE OF VOLUNTEER ACTIVITIES IN COUNTRY (DRAFT)

Day	Activity
Days 1	Arrival Nepal, Tribhuvan international Airport. The volunteer will be picked by Greenwich Hotel with a placard bearing " <b>CRS logo and volunteer name</b> ".
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. Introduction and assignment briefing with host representatives
Days 4 – 14	Complete assignment related activities at the host location
Day 15-16	Activity close out, host action plan preparation for implementing recommendations
Day 17	Debriefing including CRS country Office and Local mission
Day 18	Submit report and Departure to US

### H. DESIRABLE VOLUNTEERS SKILLS

The volunteer will have the following qualifications and competencies:

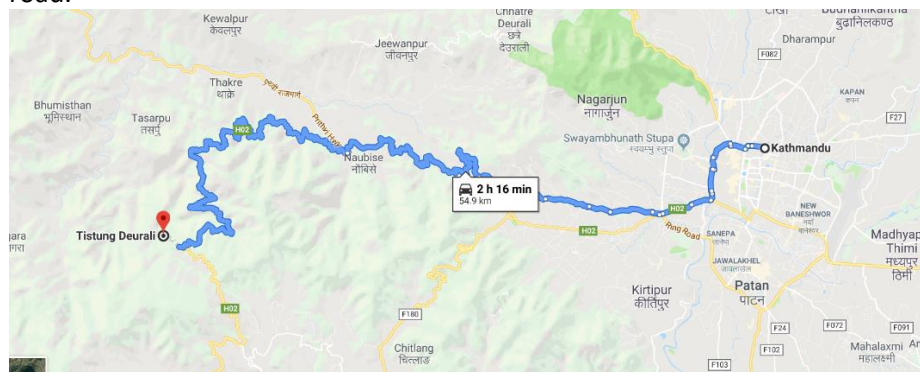
- Plant Pathologist experience on Cole crops (*Brassica oleracea*) disease management
- Communication and training skills for traders and adult audience

## I. 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.

## J. 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.
- **Roads and transportation:** Thaha Municipality is easily accessible by motorable road from neighboring areas via the Tribhuvan Highway, which was Nepal's first highway (built in the 1950s). This highway passes through 22km of the municipality. Other major roads include the i.e Palung–Bajrabarahi road, Shikharkot–Kitne Rupse– Furke–Kulekhani road, Bajrabarahi–Saraswati bazaar–Budhichaur road and Okhar bazaar–Indrenimai road.



- **Weather and climate:** Thaha Municipality climate is classified as warm and temperate. The summers here have a good deal of rainfall, while the winters have very little. The average annual temperature in Thaha municipality is 14.8 °C. The rainfall here averages 2263 mm. The least amount of rainfall occurs in December.

Most of the precipitation here falls in July, averaging 606 mm. The temperatures are highest on average in July, at around 19.6 °C. January is the coldest month, with temperatures averaging 7.3 °C. The variation in the precipitation between the driest and wettest months is 600 mm. Throughout the year, temperatures vary by 12.3 °C.

**Table: 1 Weather by month**

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	7.3	8.8	12.7	16.8	18.6	19.4	19.6	19.4	18.4	16.4	11.8	8.5
Min. Temperature (°C)	1.1	2.5	6.2	10.9	13.3	15.3	16.1	15.6	14.6	11.4	5.5	2
Max. Temperature (°C)	13.6	15.2	19.3	22.8	23.9	23.6	23.1	23.2	22.3	21.5	18.2	15
Avg. Temperature (°F)	45.1	47.8	54.9	62.2	65.5	66.9	67.3	66.9	65.1	61.5	53.2	47.3
Min. Temperature (°F)	34.0	36.5	43.2	51.6	55.9	59.5	61.0	60.1	58.3	52.5	41.9	35.6
Max. Temperature (°F)	56.5	59.4	66.7	73.0	75.0	74.5	73.6	73.8	72.1	70.7	64.8	59.0
Precipitation / Rainfall (mm)	13	13	39	72	149	382	606	550	352	74	7	6

#### K. KEY CONTACTS

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