



**USAID**  
FROM THE AMERICAN PEOPLE

**FARMER TO FARMER**  
The USAID John Ogonowski and Doug Bereuter Farmer-to-Farmer Program



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				
<b>Assignment SOW Code</b>	<b>NE302</b>			
Country:	Nepal			
Country Project:	Agribusiness Development			
Host Organization:	National Center for Fruit Development (NCFD), Government of Nepal			
Partner:	Department of Agriculture (DoA)			
<b>Assignment Title:</b>	Training on citrus decline disease management under a changing climate			
Objectives of the assignment:	<ol style="list-style-type: none"> <li>1) To assess citrus greening disease and recommend strategies for its management under the changing climate.</li> <li>2) To suggest potential genetic gains and biosecurity concerns associated with the importation of disease-tolerant varieties from international sources.</li> </ol>			
Assignment preferred dates:	June			
Desired volunteer expertise:	<ol style="list-style-type: none"> <li>1. Knowledge of and practical experience in citrus disease management using agronomic methods and disease-tolerant genotypes.</li> <li>2. Experience and skills in leading trainings and developing comprehensive training manuals.</li> </ol>			
Type of Volunteer Assistance:	Building Capacity of Support Services (S)			
Type of CSA Activity	P Productivity			
PERSUAP Classification <sup>1</sup> :	Type II			
Approx. Number of people to be trained:	Men	Women	Male Youth	Female Youth
	28	12	5	5

Host Information	
Date of completion of baseline & Capacity development plan data collection:	4 <sup>th</sup> April 2024
Date of host agreement signing:	16 <sup>th</sup> April 2024
No. of previous assignments: <sup>2</sup>	None
Recommendations given (Total):	None

<sup>1</sup> 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.

<sup>2</sup> Discuss new hosts with Program Director.

Recommendations applied (Total):	None
Name of ToT trainee (if already identified)	<ol style="list-style-type: none"> <li>1. Surya Baral, Sr. Horticulturist</li> <li>2. Shree Krishna Neupane, Plant Protection Officer</li> </ol>

## A. BACKGROUND

The CRS Farmer-to-Farmer program (F2F) is a five-year (2023-2028) USAID-funded program that provides technical assistance to farmers, farm groups, agribusinesses, and other agriculture sector institutions in developing and transitional countries to promote sustainable improvements in food security and agricultural processing, production, and marketing. The main goal of the program is to generate sustainable, broad-based economic growth in the agricultural sector through voluntary technical assistance. A secondary goal is to increase the U.S. public’s understanding of international development issues and programs and international understanding of the U.S. and U.S. development programs.

F2F volunteers are pooled from a broad range of US agricultural expertise including private farmers, university professors, bankers/certified accountants, animal health and nutrition specialists, soil scientists and agronomists who can provide technical assistance to the local host organizations. The program introduces new innovations and skills to develop local organizations’ capacity to participate in more productive, profitable, sustainable, and equitable agricultural systems while providing an opportunity for people-to-people exchange within the agricultural sector.

When the COVID-19 global pandemic broke out, CRS F2F introduced a paired remote volunteer (PRV) model whereby a US volunteer who does not travel provides remote support to a local/national volunteer who carries out the assignment in-person. This model is still used for up to 10% of assignments.

For the 2023-2028 round of F2F, CRS is taking a gender-sensitive approach to programming, which includes conducting a gender assessment of each host prior to initiating assignments. CRS is also asking each host to identify at least one person to be a key trainee (under a Training of Trainer [ToT] model) for each assignment in the hope that this person will be able to replicate the training in the future. This isn’t a deal-breaker but we are strongly encouraging it. Therefore, the volunteer report format will ask you to name the trainee (if there was one) and comment on their level of engagement. The CRS F2F program in Nepal has identified Agribusiness Development and Climate-Smart Agriculture (CSA) as the topics of its assignments. These are known within F2F as ‘Country F2F Projects.’ The agribusiness development project involves activities such as vegetable and fruit cultivation, dairy and goat farming, honeybee management, mushroom cultivation, as well as agro-processing, storage, packaging, branding, and marketing. The CSA project includes diversification and crop management, improved water management, and soil conservation. CRS F2F’s working geographic zones are Sudur Paschim, Karnali, Lumbini, Bagmati, and Madhesh provinces. Requests from other locations and outside-country projects are sometimes considered but are seen as exceptions.

Established in 2023, the National Center for Fruit Development (NCFD) operates under the Ministry of Agriculture and Livestock Development (MoALD). Its primary mandate is to promote the growth and progress of various fruit crops across the country. NCFD operates by providing policy directives, national standards, and technical support for the commercialization of the fruit crop. As the principal national authority for the promotion of the fruit sub-sector, NCFD plays a pivotal role in steering initiatives toward sustainable commercialization in this sector. NCFD oversees the management and supervision of five key agricultural centers. These centers operate under the direct administrative and technical guidance of NCFD, serving as focal points for research, training, and development activities.

The overarching mission of NCFD is to contribute to both import substitution and export promotion in fruits particularly citrus, apple, banana, mango, pear etc. Central to its mandate is the commercialization of targeted commodities, achieved through the development and dissemination of cutting-edge technologies, the establishment of national protocols and standards, and the facilitation of access to quality inputs.

Embracing the federal structure mandated by the country's constitution, NCFD actively collaborates with provincial and local-level governments. By fostering partnerships and synergies, NCFD endeavors to maximize its impact and effectively address the evolving challenges and opportunities within the fruit sector landscape. NCFD and five horticulture development centers currently have a total staff of 113 personnel with 30% female staff and are providing technical support and advisory services to the sub-national governments across the country.

## **B. ISSUE DESCRIPTION**

On April 12, 2024, the Government of Nepal (GoU) designated the orange as the national fruit, recognizing its status as a native crop of the country. This proclamation primarily aimed to assert Nepal's geographical indication (GI) rights over oranges, recognizing them as a vital aspect of the nation's heritage and agricultural landscape. According to the Ministry of Agriculture, orange farming covered 27,982 hectares of land in Nepal in the fiscal year 2022/23. The total production stood at 185,346 metric tons. The annual report of NCFD indicates that orange farming in Nepal provides direct employment to 700,000 people every year. Furthermore, commercial farming of oranges generates an annual turnover of Rs 30.614 million including exports to Bangladesh, Bhutan, India, Japan, and other countries.

Despite the economic, cultural, and environmental significance of oranges, over the past decade, both orange trees and the orchards have experienced rapid weakening and decline, resulting in reduced yield and income losses of up to 50 percent. In the past six years, citrus productivity has declined from 11.2 tons per hectare to 8.82 tons per hectare. If the spread of disease continues, citrus orchards in Nepal are likely to face a severe crisis in the future. The primary cause of this decline is the prevalence of citrus greening disease in the orchards, which represents the most serious threat to citrus producers in Nepal and globally. The disease is transmitted by an insect vector known as the Asian citrus psyllid, which has been established in Nepal for a long time. According to a survey conducted by MoALD, over 60% of the trees were found to be carrying citrus greening bacteria. Significant numbers of citrus psylla have been found in the orchards. Farmers are using insecticides to control the vector, but the vector population is rebounding rapidly even after regular pesticide applications, leading to significant economic losses and environmental pollution.

Based on discussions with government technical staff, farmers, and literature reviews, it has been highlighted that several factors have contributed to the significant decline in citrus production and productivity in recent years. These factors include a lack of proper cultivation practices, the absence of disease-tolerant genotypes, and the challenges presented by a changing climate. It has become evident that addressing the citrus decline issue requires the transfer of science-based knowledge and skills. Without such knowledge and skill transfer, effectively controlling this problem remains challenging.

In addition to the issue of citrus greening, citrus orchards in Nepal face additional challenges due to their susceptibility to high temperatures and drought. These harsh climate conditions adversely affect citrus growth and production in the region. The escalating temperatures and water stress associated with climate change, particularly during critical phenological stages of citrus growth, have led to various detrimental effects. These include reduced fruit set, diminished fruit growth and size, heightened fruit acidity, decreased tree yield, thinner fruit peel, and increased pre-harvest fruit drop. Furthermore, the elevated temperatures and drought conditions exacerbate the prevalence of pests and diseases in citrus orchards, posing additional threats to production.

Consequently, this assignment aims to equip participants with trainings in innovative agricultural practices tailored to managing citrus diseases amidst shifting climatic conditions.

NCFD has approached F2F for technical assistance aimed at training extension and research staff, as well as leading farmers to tackle the issues mentioned above. NCFD emphasizes that upgrading the knowledge and skills of extension staff is an urgent priority to effectively tackle the citrus decline issue. This trainings will enable the successful dissemination of advanced technology to citrus farmers across the country.

### **C. OBJECTIVES OF THE ASSIGNMENT**

The main objective of the assignment is to assess the spread of citrus greening disease and recommend strategies for its control. The following are the specific objectives:

1. Provide practical training to research and extension staff and lead farmers on methods and techniques for the sustainable management of diseases.
2. Educate and train participants in disease management practices under the changing climate.
3. Develop actionable recommendations for NCFD to develop suitable extension programs aimed at supporting citrus grower farmers across the country.

### **D. HOST CONTRIBUTION**

NCFD will mobilize commercial orange farmers as well as government research and extension staff, and surrounding communities to attend in the assignment. The organization will also assign at least one key personnel to work closely with the volunteer during training preparation and implementation to ensure that key staff members can train other organization members once the assignment has been completed.

Furthermore, the host will provide the following contributions:

- Provision of training venue and necessary experimental materials for the training sessions.
- Adherence to Government of Nepal (GoN) policies regarding payment of per diem, stationery, and transportation for participants, and other associated training facility costs.

### **E. ANTICIPATED RESULTS FROM THE ASSIGNMENT**

1. Enhancement of NCFD's technical capacities and programs.
2. Increased knowledge and skills of extension and research staff on citrus greening management.
3. Increased production, yield, and quality of citrus fruits.

### **F. DELIVERABLES**

The anticipated deliverables accomplished by the volunteer include:

1. Volunteer end-of-assignment report with recommendations for the host organization's action plan and recommendations for CRS (due before departure from Nepal).
2. Group presentation with local stakeholders at the end of the assignment in-country
3. Final debrief meeting (PowerPoint presentation) with the host organization (plus key stakeholders) and CRS/USAID.
4. A minimum of 3 volunteer outreach activities in the US and in-country using appropriate media (print, radio, TV, group presentations, social media etc.)

### **G. DRAFT SCHEDULE OF VOLUNTEER ACTIVITIES IN THE COUNTRY**

Day	Activity
Days 1	<ul style="list-style-type: none"> <li>• Arrival at Tribhuvan International Airport (TIA); pick-up by hotel Kutumba driver</li> <li>• Check-in at Hotel Kutumba, Kupondole, Lalitpur, Nepal.</li> </ul> <p>NB: In case you encounter any difficulty, please request assistance from Airport Staff to call Suprava Acharya (on WhatsApp or phone) at +977 9840937902 or Nirmal Gadal at +977 9851073671.</p>
Day 2	Rest day in Hotel Kutumba, Kupondole, Lalitpur, Nepal.
Day 3	<ul style="list-style-type: none"> <li>• At 10:00 am, the volunteer will be picked up at the hotel by a CRS driver and taken to the office for introductions and briefings.</li> <li>• The volunteer will be briefed by the F2F team about the host and then discusses with the team the related logistics and anticipated outcomes.</li> <li>• The volunteer may also prepare study materials while at the CRS Office.</li> <li>• After the briefing, the volunteer will travel to the NCFD office for introductions and commence the assignment in the company of F2F team members.</li> </ul>
Days 4 – 11	Conduct assignment-related activities at the host location.
Day 12-13	Activity close-out.
Day 14	<ul style="list-style-type: none"> <li>• Facilitate an in-country/virtual debrief with CRS staff and/or USAID Mission.</li> <li>• Finalize reimbursement of expenditures and liquidations (if any) with the finance department, as required.</li> <li>• Submit volunteer reports, training attendance sheets, assignment reports, PPT presentations, and any reference materials to the CRS F2F team</li> </ul>
Day 15	Depart for the USA

#### H. DESIRABLE VOLUNTEER SKILLS

1. Knowledge of and practical experience in citrus disease management using agronomic methods and disease-tolerant genotypes.
2. Experience and skills in leading trainings and developing comprehensive training manuals.

#### I. ACCOMMODATION AND OTHER IN-COUNTRY LOGISTICS

- For the duration of the assignment, the volunteer will be booked at Hotel Kutumba ([www.hotelkutumba.com](http://www.hotelkutumba.com)) and confirmation will be sent prior to the volunteer's arrival. The hotel includes services such as airport pickup and drop-off, breakfast, wireless internet, etc.
- CRS Nepal will cover the costs of lodging. CRS HQ will provide the volunteer with a per-diem advance to cover meals and incidentals.
- Security information will be provided by the CRS Nepal security focal person at the CRS office.
- CRS Nepal will provide the volunteer with a laptop computer (if s/he needs one), a local internet dongle (modem/EVDO), and a mobile phone with a charged local SIM card and top-up. Any other required logistics and facilities can also be requested by the volunteer during her/his stay. CRS Nepal will provide a vehicle and accompany the volunteer to the place of the assignment.

#### J. ASSIGNMENT PREPARATION RECOMMENDATIONS

**Training Materials:**

- Before travel, the volunteer is advised to prepare all necessary training and demonstration aids and written handouts. Electronic copies of these handouts and any other materials can be printed for immediate use at the CRS office in Kathmandu at the volunteer's request.

**Training Participants demographics:**

- The training participants will include citrus farmers, government research and extension staff. Training participants will be mixed in nature in terms of education, age, and gender. Women and youth participants will be encouraged to attend.
- The volunteer will be given opportunities to understand the socio-technical and cultural contexts including government sectoral policies and priorities before the start of the actual training.
- A Participatory Training Needs Assessment (P-TNA) will be conducted on the first day of the training and the training curriculum will be updated addressing the diverse needs of men, women, and youth participants.

**Roads and transportation:**

- This assignment will be implemented in Kathmandu which has good road connectivity. However, traffic can sometimes be heavy, especially during mornings (8:30 to 10:30 am) and evenings (5:00 to 6:30 pm).
- During the assignment period, the volunteer has to travel outside the Kathmandu Valley to visit the government beekeeping centers and private commercial farms. In this case, we can expect part of the section of the road to be rough, due to poor maintenance.

**Communication and Security**

- While there are no major security issues nationwide, we advise volunteers to remain vigilant and aware of their surroundings. Avoiding travel during early mornings and late afternoons is recommended. Try to schedule activities between 8:00 am and 5:00 pm.
- Nearby hospitals and clinics are available. In case of need, volunteers are encouraged to refer to the CRS F2F guide for accessing medical care during their assignment.
- In Kathmandu, services such as electricity, internet, and cellphone signals are generally reliable and stable. However, during field visits to rural areas, occasional electricity outages and weak internet and cellphone signals may be encountered.

**Working environment and Culture**

- Nepalese people are known for their friendliness and may actively seek to establish meaningful connections with visitors. It is advisable to accept invitations to informal gatherings such as lunches, wedding parties, and cultural ceremonies to nurture personal relationships with host staff and training participants.
- Nepalese culture often exhibits flexibility regarding schedules and deadlines. When collaborating with locals, it is advantageous to underscore the significance of adhering to mutually agreed-upon deadlines and to communicate how any delays might affect the overall assignment.

### Weather-appropriate clothing

- June is the hottest month in Kathmandu with an average temperature of 23°C (73°F) and the wettest month is July with an average of 325.3mm of rain. About 2812 mm (110.7 inches) of precipitation falls annually in Kathmandu. Please visit <https://www.accuweather.com/en/np/nepal-weather> to check the weather forecast closer to your travel dates for any unexpected changes and to pack accordingly.
- It is best to pack a variety of clothing to accommodate different conditions: Lightweight and breathable clothing, such as cotton shirts, shorts, and dresses, are suitable for the warmer months (e.g., June). A waterproof or water-resistant jacket or raincoat is advisable, especially for the wetter months (e.g., July) when there's a higher chance of rainfall.
- Comfortable walking shoes or hiking boots are recommended for exploring the terrain and navigating uneven surfaces, especially if you plan to venture into rural areas or hike in the surrounding hills.

### K. KEY CONTACTS

To express interest in this assignment, please email the CRS Baltimore contact listed below. For additional information about the host, issue description or field conditions, please email the country contact provided below, copying the CRS Baltimore contact.

<b>CRS Baltimore</b>	
<p><b>Priyanka Subba</b>          F2F Operations Manager          Farmer-to-Farmer Program          228 W. Lexington Street          Baltimore, MD 21201          Email: <a href="mailto:priyanka.subba@crs.org">priyanka.subba@crs.org</a>          Contact number: 410-955-7194</p>	
<b>CRS Country Program</b>	
<p><b>Nirmal Gadai</b>          Country Director, Farmer-to-Farmer Program          CRS Nepal Country Office          Maitri Marg - Bakhundole, Lalitpur Metropolitan          City Ward No.1, Bagmati Province, Nepal          Email: <a href="mailto:nirmal.gadal@crs.org">nirmal.gadal@crs.org</a>          Cell: +977-9851073671</p>	<p><b>Suprava Acharya</b>          Project Coordinator, Farmer-to-Farmer Program          Nepal Country Office          Maitri Marg - Bakhundole, Lalitpur Metropolitan          City Ward No.1, Province 3, Nepal          Email: <a href="mailto:suprava.acharya@crs.org">suprava.acharya@crs.org</a></p>
<b>Host Organization (Primary contact)</b>	<b>Host Organization (Secondary contact)</b>
<p><b>Surya Baral</b>          Designation: Sr. Horticulture Development Office          Address: NCFD, Kirtipur, Kathmandu          Email: <a href="mailto:nafd.gov.np@gmail.com">nafd.gov.np@gmail.com</a>          Contact number: +977-9841548284</p>	<p><b>Ms. Shanta Karki</b>          Designation: Chief (Joint Secretary)          Address: NCFD, Kirtipur, Kathmandu          Email: <a href="mailto:shantakyoto@gmail.com">shantakyoto@gmail.com</a>          Contact number: +977-9851230271</p>