



ASTA - JA for PROSPERITY

Capacity-building and Sustainable Development

ANNUAL REPORT 2016-2017



Asta-Ja Research and Development Center Kathmandu, Nepal

January 8, 2018



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Acronyms and Abbreviations

Asta-Ja RDC	Asta-Ja Research and Development Center
Asta-Ja ICC	Asta-Ja International Coordination Council
CDES	Central Department of Environmental Science
CEO	Chief Executive Officer
CG	Chaudhary Group
DADO	District Agriculture Development Office
FAO	Food and Agriculture Organization
FCHV	Female Child Health Volunteer
JHU	The Johns Hopkins Medical University
MOAD	Ministry of Agricultural Development
MOH	Ministry of Health
NPC	National Planning Commission
ODK	Open Data Kit
UNICEF	United Nation Children’s Fund
ZHC	Zero Hunger Challenge

Executive Summary

Asta-Ja Research and Development Center (Asta-Ja RDC) made significant progress in community capacity building, research and development, and institutional strengthening during the fiscal year 2016-2017. During the year, Asta-Ja RDC took on four major initiatives: 1) implementation of UNICEF-funded “Rebuilding Nutritional Security of Golden 1000 Days Earthquake hit Families” project, 2) field monitoring the effectiveness of hermetic bags provided by GreaterGood.Org and the hunger site for 2015 Earthquake victims, 3) hosting the 1st meeting of the Asta-Ja International Coordination Council (Asta-Ja ICC), and 4) spring water quality sampling in the mid-hill region of Nepal.

Loss of dry foods due to microorganisms (molds, bacteria), insects, and rodents contributes significantly to malnutrition in Nepal. Therefore, we distributed 7,998 triple layer hermetic PICS bags to 1,049 households for grain storage and 29 electric corn shellers (one corn sheller for 35-40 households) under the UNICEF-funded project in Ugrachandi Nala VDC in Kavre. The hermetic bags, a multilayer plastic bag with a gas barrier, is used for agricultural commodity storage. The bag acts as a gas and moisture-proof barrier to prevent food from rotting. We educated local communities on the use of hermetic bags and pesticide-free Dry Chain technology. To test the effectiveness of the hermetic bags, we analyzed how hermetic bag storage affected the nutritional quality of the grains, including analysis of thiamin, carbohydrate, and total aflatoxin content in 33 grain samples.

We hosted a field visit for Mr. Tim Kunin, Chief Executive Officer of GreaterGood.Org, on January 11, 2017. In 2015, GreaterGood.Org, the hungersite, Asta-Ja RDC, and the District Agriculture Development Offices collaborated in distributing 40,000 GrainPro Super Grain Bags to the Gorkha Earthquake victims across 23 earthquake-devastated districts. GreaterGood.Org and the hungersite also provided seed packets for earthquake victims in select areas of Kathmandu, Nuwakot, Kavre, and Sindhupalchowk districts.

The 1st Asta-Ja ICC meeting was held on August 12, 2017, in the Asta-Ja RDC Office at Bafal, Kathmandu, Nepal. Members from Asta-Ja ICC, Asta-Ja Abhiyan Nepal, Asta-Ja Agriculture Cooperatives, Asta-Ja RDC, and other stakeholders participated in the meeting. Asta-Ja ICC Advisor and ex-Finance Minister of Nepal, Professor Madhukar Shamshere Jung Bahadur Rana, graced the meeting with his participation as well.

Asta-Ja RDC collaborated with the researchers at the School of Geosciences at University of Louisiana at Lafayette, Louisiana USA, for a pilot study on spring water quality in the mid-hill region of Nepal. Accordingly, 30 spring water samples were collected from Kavre, Kathmandu, Lalitpur, Nuwakot, and Tanahu districts between 7/17/2017 and 9/12/2017. Water quality testing parameters included turbidity, conductivity, pH, lab temperature, Ca, Mg, HCO₃, SO₄, Na, NO₃, Cl, Fe, As, and total coliform.

Asta-Ja RDC remains committed to working with governmental and nongovernmental organizations, community groups, international agencies, academic institutions, and local communities in community capacity building, nutrition and health, food storage, food security, and natural resources conservation and development.

BACKGROUND

Asta-Ja Research and Development Center (Asta-Ja RDC) is a registered non-profit and non-governmental organization with headquarters in Kathmandu, Nepal. We are dedicated to enhance grassroots community involvement in research and development of Asta-Ja (Eight-Ja) , Nepali letter 'Ja', meaning, *Jal* (water), *Jamin* (land), *Jungle* (forest), *Jadibuti* (medicinal & aromatic plants), *Janashakti* (manpower), *Janawar* (animals), *Jarajuri* (crop plants), and *Jalbayu* (climate) for poverty alleviation and socio-economic transformation of Nepal.

Asta-Ja RDC's goal is to develop partnership with research and developmental institutions, governmental agencies, community organizations, universities, non-governmental organizations, and other stakeholders and work collaboratively in agricultural, food and nutrition, natural resources, environmental and other research and developmental projects. We strive for community capacity-building, gender/ethnic equity, social justice, innovations and solutions to nation's agricultural, natural resources, and environmental problems and management challenges. We are well-connected to grassroots communities, governmental agencies, and policy making bodies.

The Asta-Ja RDC is dedicated to community capacity-building through training, technology transfer, logistic support, policy advocacy, and research and development. In order to bring knowledge, experiences and skills together for nation-building from both outside and within the country, the Asta-Ja RDC has created a wonderful interdisciplinary network of about 110 individuals of Nepal origin representing 17 countries (Please see Asta-Ja International Coordination Council (Asta-Ja ICC) Team at <http://www.astajardnepal.org/asta-ja-icc.html>, who are highly enthusiastic and committed to the socio-economic development of Nepal. This is certainly the first network of its kind in the history of Nepal. This network includes highly accomplished scientists, academicians, businessmen, medical doctors, engineers, computer scientists, graduate students, administrators, IT professionals, service providers, researchers, and other professionals.

MAJOR ACHIEVEMENTS

Rebuilding Nutritional Security of Golden 1000 Days Earthquake hit Families

Introduction

On February 1, 2017, Asta-Ja Research and Development Center (Asta-Ja RDC) and the United Nations Children's Fund (UNICEF) agreed to implement a project entitled "Rebuilding Nutritional Security of Golden 1000 Days Earthquake Hit Families" to reduce malnutrition among mothers and children affected by the 2015 Gorkha Earthquake. Loss of dry foods contributes significantly to the malnutrition of this population. Most dry food losses occur due to microorganisms (molds, bacteria), insects and rodents. Insects and molds proliferate in





inadequately dried and stored foods. Pesticides are widely used to control insects to minimize storage loss, resulting in increased risks of accidental poisoning. Storage molds, mostly *Aspergillus species*, produce toxic carcinogenic secondary metabolite, aflatoxin (AFB1) at water activity (a_w) > 0.85. AFB1 has been linked to liver cancer and other health effects. While strict mycotoxin mitigation measures are in place in developed countries, aflatoxin minimization efforts in food systems are just beginning in developing countries.

UNICEF is involved in improving early childhood health in Nepal and elsewhere (<http://unicef.org.np/campaigns/golden-1000-days>). Thus, UNICEF funded Asta-Ja RDC NPR 5,408,150 to implement an interdisciplinary Dry Chain project in a village in Kavre district. There were two specific objectives of the project: 1) to minimize food and nutrition losses through preventive measures to control molds, insects and rodents, and 2) to raise awareness about the nutrition sensitive Dry Chain technology by training local communities. The major activities of the project included educating the village on the pesticide-free Dry Chain technology and use of hermetic bags for food storage, distribution of 7,998 hermetic bags and 29 electric corn shellers to the selected households, and laboratory tests for nutrient and quality analysis of food grains. Zest Laboratory in Kathmandu was used for analysis of the grains samples. Dr. Peetambar Dahal, Retired Seed Scientist from University of California, Davis, USA, and Asta-Ja RDC Volunteer, led a team of scientists and staff from Asta-Ja RDC for the implementation of this project.

Project Implementation

In order to implement this project, a number of stakeholder meetings were held in Kathmandu including Child Health Division in the Department of Health Services, Ministry of Health (MOH), and UNICEF Chief Mr. Stanley Chitekwe. We consulted other stakeholders including NAFSEEDs, Dahal Trading, MOAD, MOH, Nepal Reconstruction Authority, Zest Laboratory, and Department of Food Technology and Quality Control. We also collaborated with Jeff Davids, who works on [SmartPhones4Water](#) in Kathmandu and uses Open Data Kit (ODK) to enable citizen scientists to collect hydrologic information through Android phones.

At the district level in Dhulikhel, we held group consultation with representatives from District Public Health Office, District Agriculture Development Office, Local Development Office, Veterinary Office, UNICEF affiliated staff and NGOs. Through these interactions and a number of field visits, earthquake affected Ugra Chandi Nala VDC in Kavre district was identified for project implementation. A total of 1,000 households who produce rice and maize were targeted using the network of Female Child Health





Volunteers (FCHV) at the village health post that regularly provides other nutrition and health knowledge to pregnant women and children (Golden 1000 days families).

Each target family was to be provided with eight hermetic bags to store food “dried to suitability to milling or processing moisture content.” Any food not dried to milling moisture content should not be stored inside hermetic bags. One electric corn sheller was to be provided to groups of about 30-40 households so that maize cobs could be

shelled and stored in hermetic bags, avoiding open storage in raised structures. Besides, the hermetic storage would minimize women labor in postharvest food management, freeing more time for mothers in the nurturing and education of the children. The households will store dry food for about eight months in hermetic and traditional bags and selected families will provide initial and final samples for nutrient, anti-nutrient and physical quality analysis.



We procured triple layer hermetic PICS bags from NAFseeds, Patan, and



the corn shellers from Dahal Trading Concern, Tripureswor, Kathmandu. We used network of FCHVs at the Health Post and delivered supplies to

the groups of target households that assembled at each ward. Although we originally thought of including one thousand of 1000 Golden Days families in our project from nearby Dhulikhel areas, based on several field level interaction meetings we learned that a large geographical area in the district would be necessary to cover one thousand 1000 Golden Days families. It was not possible for us to cover a large area in the district due to limited resources available in the project. Additionally, a corn sheller was supposed to be shared between households, which required target households in clusters for



project implementation. Therefore, it was agreed that we would select a target village nearby Dhulikhel consisting of about one thousand households for project implementation, and within this target village no 1000 Golden Days families would be excluded from the project. We identified Ugrachandi Nala VDC for this project. Our survey indicated that there were approximately 20 pregnant women and 110 children under 2 years in the target village.



We invited FCHVs from each ward of Ugrachandi Nala VDC at the Health Post on March 6, 2017, where Dr. Peetambar Dahal explained the program's concepts and asked their help to take the program to their wards. FCHVs asked us to talk directly to the target households about the program. Seemingly simple, it was a tough proposition that would involve changing traditions. Through the network of FCHVs at the Health Post, we identified 1,000 households who produce rice and maize covering Ward 4 (partial) and



Wards 5 through 9 in Ugrachandi Nala VDC. We demonstrated the proper use of hermetic food storage bags and the corn shellers to target households at each ward. We asked households to take pictures of their grains before shelling. We described the project objectives and usefulness of the hermetic bags and corn sheller to improve nutrition in the households. We discussed the pesticide-free control of insects—a major grain storage problem faced by the households. We

shared nutritional messages advised by UNICEF during the material distribution in each ward and will repeat these in monitoring visits. We also told them that we will be monitoring the use of hermetic bags and corn shellers at each household. FCHVs regularly provide other nutrition and health knowledge to pregnant women and children (Golden 1000 days families) in the area. Based on our interaction with households and further suggestions by CDO Mr.



Tharka GC on Feb 27, 2017, we replaced the manual corn shellers with electric ones. The FCHVs supported this change. User groups have devised strategies to replace the corn shellers in case of breakdown. We noted that corn stored in structures outside of houses was of inferior quality such that it was being fed to livestock.



The households have agreed to store dry food for about eight months in hermetic and traditional bags. Selected families will provide initial and final samples for nutrient, anti-nutrient and physical quality analysis. The table below shows the FCHVs and the quantity of bags and electric corn shellers distributed in their respective wards.

FCHVs	Ward #	Household #	Bags	Bundles of 50	Corn shellers
Ambika Sanjel	4 (partial)	55	440	9	2
Subhadra Bajgai	5	250	2000	40	6
Sita Sigdel	6	197	1182	22	5
Manju Dahal	7	212	1696	34	6
Parbati Bajgai	8	175	1400	28	5
Shanta Shrestha	9	160	1280	27	5
Total		1049	7998	160	29

Monitoring and Evaluation



The monitoring of hermetic bag usage started during the dry season on April 4th, 2017, in ward # 4 in Ugra Chandi Nala VDC. Mrs. Sanjel graciously walked with the team to individual households. UNICEF Chief Mr. Stanley Chitekwe and nutrition specialist Mr. Anirudra Sharma visited the project site on July 12, 2017. During field monitoring, we used ODK Data to register our visit. Notably, Mr. Raj Kumar Shrestha (27.66 °N, 85.50 °E, 1515.85 m), noticed through the clear plastic of the bag that after three days of storing his grains, the insects suffocating within the grains

had risen to the empty space within the bag for air. In another household, moths were visibly flying inside the bags. The team members walked to individual households



and demonstrated the use of hermetic bags to those who had not properly used it.

Approximately 25 households could be evaluated in one day. We realized

during this visit that it was necessary to collect food samples in a shorter timeframe to ensure the quality of food samples. We also noticed that not all households had rice grains available for storage as they had already sold them after harvesting. This was due to inability



to protect rice from insects. Similarly, most households had little corn available for storage. Those who had more grains appreciated the use of hermetic bags. A female member wanted 20 more bags to store her food. The households also shared that they would prefer to use their own harvest instead of purchasing rice from markets which might not be pesticide-free. We did not reach the households at the time of rice and maize harvest seasons. It was spring season ready for transplanting tomatoes and chilies.





We advised households to use hermetic bags to store grains at processing or milling moisture content only. Drying corn to the required moisture content before storing will be a big challenge.

Even for shelling corn, it is necessary to bring down its moisture content to about 18% from an initial 25-30 % at harvest. With undried corn, mold begins to accumulate within 3-4 days after harvest.



Drying corn and rice during the rainy season will require the concerted efforts of several agencies and is beyond the scope of this project. We



raise this issue because artificial drying may be necessary during the rainy season if food grains can not be dried to milling or processing moisture contents.



Mr. Babu Ram Acharya from UNICEF asked to see the ongoing activities at Ugrachandi Nala on April 4, 2017. Accordingly, Mr. Hari Bhusal from Asta-Ja RDC showed the sampling and proper use of the bags to Mr. Babu Ram on April 5, 2017. Dr. Peetambar Dahal interacted with Chief of UNICEF in Nepal, Stanley Chitekwe and Prof. Keith West and Swetha Manohar of The Johns Hopkins Medical University (JHU) and shared the nutrition sensitive Dry Chain concept. Prof. West admired the concept and agreed to work further on research and interventions. JHU has been involved in a Vitamin A supplementation program in Nepal that has reduced child mortality by about 30%.

Moisture becomes a serious concern to protect dry grains for shelterless people during natural disasters. Massive annual grain losses in Asia occur due to the lack of moisture management strategies. Toxigenic storage molds not only have an immediate health effect, including death as a possible outcome, but also long term effects like liver cancer. An inverse relationship exists between nutrient loss and moisture content of stored dry foods.



We intended to reach out to all households, demonstrate proper use of hermetic bags, and ask household members to store their dry foods (rice, maize) before rains. Accordingly, monitoring team (Drs. Jwala Bajracharya, Bishnu Chapagain, Udhab Khadka, Mr. Madhav Adhikari and Hari Bhushal) visited ward 4, 7, 8 on May 19, 2017. Our team found women harvesting potatoes during their visits. Potato production ranged between 1000 kg to 30,000 kg per

household. Some women told us that they grind and sell their grains for feed purpose if their grains rot during storage. Thus, toxins from dry food products pass to Cold Chain foods like meat and dairy products. This insight is similar to our pre-survey findings of the village on February 27, 2017, and the first monitoring on April 4, 2017. For the final monitoring and evaluation in early October 2017, we invited former UNICEF evaluation specialist and current Asta-Ja RDC Advisor Dr. Krishna Belbase for a field visit. Dr. Peetambar Dahal joined from California, USA, as well. Additional team members involved in the final monitoring and evaluation included Dr. Jwala Bajracharya, Hari Bhushal and Asmita Sharma. We shared our findings with elected officials of the Banepa municipality and the representatives from District Agri. Development Office, Post-Harvest Directorate (PHMD), and Agri TV.

Laboratory Analysis

Our original plan was to use laboratory services at Center for Molecular Diagnostics, Kathmandu and International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Hyderabad, India. We previously discussed with UNICEF to send samples to India. We became aware that sending samples to India could be lengthy process due to governmental regulations. After visiting several laboratories in Kathmandu, Dr. Jwala Bajracharya and Dr. Peetambar Dahal trusted the services of Zest Laboratory in Bhaktapur (<http://www.labgo.in>) and decided to utilize this lab for laboratory determination. Accordingly, Dr. Peetambar Dahal and Mr. Hari Bhushal delivered 18 corn and 15 paddy samples to Zest Lab for quality analysis on April 11, 2017. Laboratory determination of these samples include for moisture content, thiamin, carbohydrate, total aflatoxins, damaged grain, undamaged grain, live insect, dead insect, and foreign matter.

Natural Drying

We started a pilot study on natural drying in Ugrachandi Nala VDC in October 2017. The specific objective of this pilot study was to evaluate the effectiveness of repeated natural drying for successful food storage, as well as the impacts on nutrients and aflatoxins during storage. Accordingly, we provided one tarpaulin (15 ft x 18 ft) to each of the 35 households in the Kavre study site and asked them to dry corn. Then we collected one kg sample of dried corn and one kg of not-dried corn from each household for laboratory determination. The samples are in stock, pending fund availability for the second phase of the project. Moisture content was determined for each of the samples when they were collected. While dried sample's moisture contents were around 13-14%, undried samples had over 25%. Corn drying was done for 3 to 4 days before sampling.



GreaterGood.Org CEO Tim Kunin Visits Asta-Ja RDC Project Site

Mr. Tim Kunin, Chief Executive Officer GreaterGood.Org, visited the Asta-Ja Research and Development Center (Asta-Ja RDC), Kathmandu, Nepal, on January 11, 2017. With support from GreaterGood.Org and the hungersite, Asta-Ja RDC, in coordination with District Agriculture Development Offices, distributed 40,000 GrainPro Super Grain Bags to the Gorkha Earthquake victims in 23 earthquake devastated districts in 2015. GreaterGood.Org and the hungersite also provided seed packets for earthquake victims in select areas of Kathmandu, Nuwakot, Kavre, and Sindhupalchowk districts. Asta-Ja RDC organized an all-day program for Mr. Kunin's visit, which included a





meeting with the government officials in the District Agriculture Development Office (DADO) in Dhulikhel, Kavre, field visits, and a dinner meeting with Asta-Ja RDC officials. Mr. Kunin, along with four DADO officials and the Asta-Ja RDC team, visited two earthquake affected communities in Kavre district. The field visit of Mr. Kunin was coordinated by Dr. Bishnu P. Chapagain, General Secretary of Asta-Ja RDC, and two Asta-Ja RDC staff members, Mr. Yubaraj Bhandari and Mr. Hari Bhusal. He had interactions with communities about the usefulness of the Super Grain Bags. The first visit was at Kantitar, Chandenin Mandan-1,

Kavrepalanchowk, located 65 km north east of Kathmandu.



At the dinner meeting with Mr. Kunin, Mr. Pushpa Lal Moktan, Acting President of Asta-Ja RDC, thanked GreaterGood.Org and the hungersite for helping restart agricultural activities for earthquake victims. He also expressed Asta-Ja RDC's willingness to work in the future with GreaterGood.Org and the hungersite to continue supporting earthquake victims, in particular, and to improve the livelihood of the poor and marginalized communities of Nepal, in general. Mr. Pushpa Lal Moktan presented a plaque and a Nepali cap as a token of appreciation to the CEO Mr. Tim Kunin. Mr. Kunin expressed his pleasure in working with Asta-Ja RDC. He was happy to see that those in need were utilizing materials supported by GreaterGood.Org. He



mentioned that GreaterGood.Org is willing to provide additional support to improve the livelihood of poor people in Nepal, and he hopes for future collaborations with Asta-Ja RDC in the areas of agricultural development and agribusinesses. He thanked the Asta-Ja RDC team for organizing the meeting with government officials in Kavre, field visits, and hosting a dinner reception.

The 1st Meeting of Asta-Ja International Coordination Council (Asta-Ja ICC)



The 1st Asta-Ja ICC meeting was held on August 12, 2017, in Asta-Ja RDC Office at Bafal, Kathmandu, Nepal. With the gracious presence of Asta-Ja ICC Advisor, Professor Madhukar Shamshere Jung Bahadur Rana, development economist and ex-Finance Minister of Nepal, Asta-Ja ICC members representing USA, South Korea, and Nepal, representatives from Asta-Ja Abhiyan Nepal and Asta-Ja Agriculture Cooperatives, Asta-Ja RDC volunteers, and other stakeholders participated in the meeting. Community capacity building and the application of the Asta-Ja Framework as a resource planning

and management tool by national, regional, and local agencies remained the focus of the meeting. Professor DD Poudel led a workshop entitled “Asta-Ja Planning and Management Workshop (A Case of Kathmandu Metropolitan City)” where the Asta-Ja Framework was presented as a unifying planning and management tool. He introduced the Asta-Ja Log Frame, which consists of a matrix of Asta-Ja (*Jal, Jamin, Jungle, Jadibuti, Janashakti, Janawar, Jarajuri, and Jalabayu*) and the eight principles of Asta-Ja (community awareness; capacity-building; policy decision making;



interrelationships and linkages; assessment of Asta-Ja; sustainable technologies and practices; institutions, trade and governance; and sustainable community development and socio-economic transformation). Furthermore, he demonstrated techniques for problem analysis, setting goals, and project development based on the log frame. Linkages between the principles of Asta-Ja and the UN’s Sustainable Development Goals were established and discussed. Professor Poudel made future recommendations for the advancement of Asta-Ja campaign: 1) institutional strengthening, 2) coordination with governmental agencies and other

stakeholders in planning and management of Asta-Ja resources, 3) expedited research and development on Asta-Ja resources, 5) formation of Asta-Ja Consortium, 6) development of Asta-Ja Data Portal, and 7) the establishment of Asta-Ja Think Tank.

Spring Water Quality Sampling in the Mid-Hill Region of Nepal



Asta-Ja RDC collaborated with the researchers at the School of Geosciences at University of Louisiana at Lafayette, Louisiana USA, for a pilot study on spring water quality in the mid-hill region of Nepal. Accordingly, 30 spring water samples were collected from the mid-hill region of Nepal between 7/17/2017 and 9/12/2017. Water samples were collected from springs in terrain ranging from valley floors to hill slopes. On 7/17, 5 samples were collected from Kathmandu district, 7 samples were collected between 7/26 and 7/27 from Tanahu district, 8

samples were collected on 8/06 in Nuwakot district, 7 samples were collected on 8/16 from Kavre district, and 3 samples were collected from Lalitpur district in Kathmandu Valley on 9/12. For the purposes of this study, samples from Kathmandu district and Lalitpur district were grouped together as samples from Kathmandu Valley. Each sample was retrieved as close to the spring source as possible. In cases where the spring was inaccessible, water samples were collected downstream or via pipes installed by locals to access the spring water. The location and pictures of each site was entered using Open Data Kit (ODK) data collection. ODK was used to determine the coordinates and



altitude of each site. The surrounding land use and spring characterization based on geomorphology (fractured, depression, contact) was logged into a field logbook. Field measurements of pH and conductivity of water samples were done using a field test kit and thermometer. A mercury thermometer was used to measure temperature. For sample collection, two plastic bottles were used for each sample site. A 1L bottle was used to collect samples for laboratory tests and a 165mL bottle was used to collect samples for bacteriological testing. Each bottle was carefully rinsed two times using



water from the spring before being filled with the spring water. Water samples were stored in an ice chest and returned to the lab for testing. Water quality parameters for laboratory determination included turbidity, conductivity, pH, lab temperature, Ca, Mg, HCO₃, SO₄, Na, NO₃, Cl, Fe, As, and total coliform.

Asta-Ja Outreach Activities

Talk program on “Mold and human diseases” by Prof. Dr. Achyut Sharma

Prof. Dr. Achyut Sharma, Asta-Ja ICC Member, gave a presentation entitled “Mold and Human Diseases” in the Central Department of Environmental Science (CDES), Tribhuvan University (TU), Kirtipur, Kathmandu, Nepal on May 4, 2017. The CDES is one of the newly established Departments at TU. More than 60 students, faculty, and researchers attended the talk. Dr. Udhav Raj Khadka, the treasurer of Asta-Ja RDC and a faculty member at CDES, Tribhuvan University, coordinated the event.

Television interview of Dr. Peetambar Dahal by Himshikhar TV on Dry Chain food storage technology for protecting food from flood damage

Dr. Peetambar Dahal, Asta-Ja RDC Member, at Shikhar Sambad, Himshikhar TV, talked about Dry Chain Food Storage Technology for protecting food from flood damage on August 29, 2017.

Specialty Group Meeting- Scientists and Students of Nepali Origin

Asta-Ja RDC was introduced to the Specialty Group Meeting of Scientists and Students of Nepali Origin in USA on October 23, 2017, during the ASA-CSSA-SSSA Annual Meeting, Oct 22-25, 2017, in Tampa, Florida, USA. Asta-Ja ICC



members Dr. Khusi Ram Tiwari, Dr. Kabindra Adhikari, and Dr. Upendra Man Sainju is



introduced Asta-Ja to the audience. Dr. Kabindra Adhikari introduced and discussed the Nepal Soil Information System (NepSIS), a Digital Soil Mapping project, that Asta-Ja RDC is currently conceptualizing with potential collaborators in the US and in Nepal. This was the first official meeting of its kind and an historical event for members of this group.

Meeting with governmental, multi-lateral and other agencies and stakeholders

Dr. Peetambar Dahal was invited by Mr. Suresh Paswan, Nutrition Officer in District Public Health Office, Kavre, to a program at Dhulikhel that was attended by Asst. UN Secretary General Gerda Verburg on April 7, 2017. This interaction program was also attended by UNICEF Chief in Nepal Mr. Stanley Chitekwe, Chief of DPHO Dr. Sapkota, NPC Members Prof. Geeta Bhakta Joshi, Ms. Savita Malla, Mr. Krishna Neupane, and representatives from district Agri., Veterinary, Water

and Sanitation Office, and Chief District Office. The objective of the meeting was to observe nutrition in emergency and recovery efforts in Kavre district. Ms. Verburg, the head of UN's Scaling-Up nutrition project, brought the issue of food and nutrition.

Dr. Dahal shared the Dry Chain concept with Chaudhary Group (CG) in July 2016. An effort was made to share the recent developments with Mr. Nirvan Chaudhary in CG at Entomology Division, Khumaltar, but Mr. Chaudhary was unavailable for the meeting. However, the dry chain concept and ongoing activities at Kavre was shared with a group of retired officers in attendance (Dr. Madhusudan P Upadhyaya, Dr. Govinda Acharya, Mr Mahendra Thapa, Dr. Jagat D Ranjit, Mr. Krishna Khanal, Mr. Rishiram Upadhyaya, Mrs. Bhavan Shrestha, Dr. Jwala Bajracharya).

Dr. Dahal met with Mr. Somsak Pipoppinyo, FAO Representative in Nepal and Bhutan, Dr. Binod Saha, Asstt. FAO Representative, Mr. Shrawan Adhikari, Program Officer in Kathmandu. FAO has been actively involved in improving food security in Nepal. FAO highlighted different ongoing programs, including the Zero Hunger Challenge (ZHC), and expressed that they were interested in Asta-Ja RDC-UNICEF Kavre program.

Asta-Ja Fundraiser

A fundraiser campaign on Gofundme started on July 5, 2017, and ran for about 10 days to raise funds to help set up Asta-Ja RDC Kathmandu Office. Mr. Sahas Shrestha, Asta-Ja ICC member in Houston, Texas, USA, coordinated the campaign. Thirty donors participated and a total amount of \$1,405 was collected during the campaign. We would like to thank all the donors for their support to make the campaign successful.



Help Asta Ja RDC setup office

Executive Board

The Asta-Ja RDC includes an 11-member Executive Board with President, Senior Vice-President, Vice-President, General Secretary, Secretary, Treasurer, and five Members. Its esteemed Executive Board includes highly recognized and experienced professionals with the highest level of ethics, morale, and commitment for community services, research and development, and nation-building. These Board Members have earned their highest degrees from a wide range of countries including the USA, India, Thailand, UK, Germany and Israel. Professionally, the Asta-Ja RDC Executive Board Members include academicians, researchers, agricultural extension specialists, community workers, scientists, and others. They have collected a wealth of working experience from many governmental and non-governmental organizations, international agencies, private companies, and both inside and outside Nepal.



President
Dr. Durga D. Poudel
Soil and Environmental Scientist
Founder of the Asta-Ja Framework
Founding Member Asta-Ja Abhiyan Nepal
International Coordinator Asta-Ja ICC



Senior Vice-President and
Acting President
Mr. Pushpa Lal Moktan
Rural Development Expert



Vice-President
Dr. Chandra Kant Gyawali
Constitution Specialist, Lawyer,
and Sociologist



General Secretary
Dr. Bishnu P. Chapagain
Phytochemistry and
Agricultural Scientist



Secretary
Dr. Jwala Bajracharya
Agricultural Plant Scientist,
Value Chain and Women Empowerment



Treasurer
Dr. Udhav Raj Khadka
Environmental Scientist



Member
Mr. Madhav Adhikari
GIS Specialist



Member
Mr. Amleshwar Singh
Forestry and
Agroforestry Specialist



Member
Dr. Kamal Kant Acharya
Geologist



Member
Ms. Chandrika Rana
Magar
Social Worker/
Communication



Member
Dr. Jagat Devi Ranjit
Agronomist

Our Office



Asta-Ja RDC relocated its headquarters to Bafal, Kathmandu this year. The new office lies between Kalanki and Balaju, near the Mata Devi Petrol



Station. We placed a large Asta-Ja RDC signboard in the front of the building and our offices are located on the second floor. Our space includes a large conference room, a reception room, and an office. For contact, please call Office Coordinator Mr. Hari Bhusal at +977 986 0714359 or send an email at Haribhushal01@gmail.com. To contact the President of Asta-Ja RDC, please send an email at ddpoudel@gmail.com.

