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Twelve National Rice Day-2072 Celebrated

A one day rice transplanting ceremony was organized on Asar 15, 2072 to observe 12th National Rice Day-2072 at Agronomy Division, Khumaltar, Lalitpur with the slogan of "Mechanization in Rice Farming, Minimization in Production Cost". Honorable Minister for Agriculture Development Mr. Hari Prasad Parajuli was the special guest of the ceremony. Honourable Member of Planning Commission Dr. Bharatendu Mishra was the chief guest. Director of National Planning and Coordination, Dr. MN Paudel of NARC chaired the inaugural function. Executive



Rice transplanting by Hon. Minister of Agriculture Development Mr. Hari Prasad Parajuli and Senior Officials at Khumaltar, Lalitpur

Director of NARC Dr. YR Pandey, Director General of DoAD Dr. Yubak Dhoj GC, Director General of DoLS Dr Bimal Kumar Nirmal, CIMMYT representative to Nepal Dr Arun Joshi, IRRI-Nepal Scientist Dr. BP Tripathi attended celebrate function along with senior officials from Ministry of Agriculture Development, DoAD, DoLS and NARC. In this occasion, majority of national media covered national rice day activities of the day. Honorable Minister Mr. Parajuli and other participants transplanted rice seedlings at the rice field of Agronomy Division. As

contd in page 8

IN THIS ISSUE

- Twelve National Rice Day-2072 Celebrated
- National Rice Day at NRRP, Hardinath
- Collaborative effort in success: Plant pathology training in RARS, Khajura, Banke
- RATWG Workshop held at RARS, Lumle
- Outreach Sites established by Agricultural Research Station (Horticulture), Dailekh
- Marpha Rayo Less Susceptible to Clubroot Disease
- Training, Workshop/Seminar, Study and Tours
- Vista obtained Ph.D. Degree

National Rice Day at NRRP, Hardinath

The 22nd National Rice Day was organized at National Rice Research Program (NRRP), Hardinath, Dhanusha on Asar 15, 2072 with the slogan "Mechanization in Rice Farming, Minimization in Rice Production Cost".

The programme was organized under the chairmanship of Mr. Nawal Kishor Yadav the National Rice-coordinator of NRRP. The chief guest of the ceremony was Mr. Kalika Prasad Parajuli, Chief District Officer (CDO), Dhanusha along with other guests viz. Mr.

contd in page 2

A Collaborative effort in success: Plant pathology training in RARS, Khajura, Banke

A training programme on “Disease diagnosis and basic plant pathological techniques for early career scientists” was organized in the NARC Regional Agricultural Research Station (RARS), Khajura, Banke. The plant pathology training was conducted from April 6 to 12, 2015 (Chaitra 22 to 29, 2071 B.S.). The programme was organized by NARC RARS, Khajura with the support of International Development Enterprises (IDE) Nepal, USAID, Virginia Polytechnic Institute and State University (Virginia Tech), and Integrated Pest Management – Collaborative Research Support Program (IPM-CRSP). Mr. Ram Bahadur Khadka scientist (S-1) on plant pathology unit at RARS, Khajura co-ordinated foreign scientists, scientists and IDE Nepal to conduct the training. There were 31 participants from different organizations viz. NARC stations (11), Agriculture and Forestry University (AFU) (6), Institute of Agriculture and Animal Sciences/Tribhuvan University (IAAS/TU) (9), Integrated Pest Management – Innovation Lab (IPM-IL)/CEAPRED (3) and IPM-IL/IDE (2). As a resource person Dr. Naidu Rayapati,

Associate Professor, Department of plant pathology, Washington State University, USA and Dr. Amer Fayad, Associate Director, IPM-IL, Virginia Tech, USA facilitated sessions on plant viral diseases. Dr. Baidya Nath Mahato, principal scientist (S-5) and division head, Mrs. Sarada Joshi (S-4) and Dr. Ram Devi Timila (S-4) from plant pathology division (PPD), Khumaltar facilitated sessions on plant bacterial, fungal and other diseases. There was a field visit in Banke district to the IPM resource centre at Sitapur and a commercial farmer at Kalika VDC on April 10. Mr. Gautam Shrestha (S-1) helped participants to learn using referencing software in scientific writing. In the closing ceremony, chairperson, regional director, Dr. Ishwori Prasad Gautam (S-4), acknowledged the contribution made by Mr. Ram Bahadur Khadka to successfully accomplish the training programme. He also informed the gathering about declaration of RARS, Khajura as a centre of excellence for next fiscal year 2072/73 by the NARC central administration.

RATWG Workshop held at RARS, Lumle

Regional Agriculture Technical Working Group (RATWG) Meeting was held at Regional Agricultural Research Station (RARS), Lumle on 6th Jestha, 2072 (20 June 2015). The workshop was inaugurated by Dr. Y.R. Pandey, Executive Director of Nepal Agricultural Research Council by irrigating water to the flower plant in a Gamala. The meeting was chaired by Dr. Ram Chandra Adhikari, Regional Director of RARS, Lumle. Mr. Dinesh Thapaliya, Secretary and Regional Administrator of the Western Region Administration Office, Pokhara was the Special Guest. Similarly, Mr. Dila Ram Bhandari, Programme Chief, Plant Development Directorate (DoA); Dr. Prakash Shrestha,

Regional Director, Regional Livestock Service Directorate, Pokhara; Dr. Tek Bahadur Gurung, Director, National Animal Science Research Institute; Dr. Yajna Gajadha Khadka, Director, National Animal Science Research Institute and Dr. Krishna Prasad Paudyal, Chief, Communication, Publication and Documentation Division (CPDD) were also present in the meeting. Chiefs from different District Agriculture Development Offices and Livestock Service offices, Scientists, Technical Officers, Technicians, Journalists and farmers from the different districts actively participated in the workshop and discussed on the problems of the farmers of the region.

Outreach Sites established by Agricultural Research Station (Horticulture), Dailekh

ARS, Dailekh established its outreach sites by organizing one day district level stakeholder workshop on 17th of Baisakh at Jhalak Dhakal Memorial Hall of ARS, Dailekh. According to the regular activity of FY 2071/72, ARS, Dailekh in the very beginning organized two village level workshop one each at Baraha VDC of Dailekh district and Malika VDC of Achham District dated on 21 and 22 Jestha respectively. Key farmers' of respective VDCs, representatives from DADO and its Service Center, VDC, functioning NGOs/INGOs, Agrovets and media personnel participated in the village level workshop. Senior Scientist, Technical Officer and Technicians of ARS, Dailekh also participated in the workshop whereby various researchers/speakers highlighted on the objectives and importance of OR sites in the research, future strategy of the station and workplan to accomplish the establishment activity. In the mean time, representatives from DADO and NGOs/INGOs expressed their keen interest on the upcoming research activities of NARC station at OR site and committed on the coordination aspect for the successful implementation of the program. From the workshop, Ward No. 1, 3 and 5 of Baraha VDC and Ward No. 2, 3, 4 and 8 of Raniban VDC were elected for the baseline survey before launching activity at those sites. The site on Baraha VDC was chosen such that it covered the landscape from 600 masl of Saltada to 1850 masl of Tudikhel, Ghodabas. Accordingly, the selected coverage of Raniban VDC extends from 600 masl

of Karnali river basin to 1500 masl of Bangurkhal (Ward No. 8). A week long baseline household survey was conducted on randomly selected 63 HHs of Baraha VDC and 104 HHs of Raniban VDC from 28th Jestha to 5th Ashad.

The station then organized one day district level workshop amid Chief District Officer (CDO) of Dailekh, DADO representative of Dailekh and Achham, functional NGOs/INGOs, media personnel and farmers of both sites. Senior Scientist, Basant Chalise and Technical Officer, Bikash Ghimire of ARS, Dailekh presented on the outcomes of baseline survey demonstrating the household status, income source, food sufficiency level and overall farming scenario of the district. Speakers of the workshop including farmers, media personnel and representatives from DADO, NGO/INGO were delighted to know about the establishment of new OR site and promised to put hand-in-hand during the execution of the program. Chief Guest of the workshop Chief District Officer, Pitamber Ghimire praised ARS team for taking such an innovative and fruitful program in action from which farmers would be directly benefitted. Chair person of the program Station Chief, Dr. Tul Bahadur Poon finally wrap up the program highlighting the background of outreach research in NARC and Nepal as a whole and claimed that ARS, Dailekh would launch several varietal trails, verification of on station tested technology and CBSP programs that would help farmers to upgrade their farming standard.

Marpha Rayo Less Susceptible to Clubroot Disease

Dr. R.D. Timila, Senior Scientist and S. Manandhar, Scientist, Plant Pathology Division, NARC

Clubroot caused by soilborne fungus, *Plasmodiophora brassicae* Woronin is one of the devastating diseases of all brassica vegetable crops such as cauliflower, cabbage, garden cress, broad leaf mustard, turnip and so on. It is the major problem for brassica vegetables cultivating areas of Nepal. In severe cases it can cause significant crop losses. Once a field is infected, eliminating the pathogen is difficult because its thick walled resting spores have been reported to remain viable in soil for more than 18 years. As a result, once pathogen populations have developed to economically damaging levels, the goal of the farmer should be to manage rather than eradicate the disease. One of the control strategies is to raise the soil pH to >7.2 through liming, however, using the fungicide named Nebijin (flusulfamide) is another effective option.

different varieties of Broad leaf mustard. In survey and interaction with the farmers at different locations, the popular variety Marpha choudapat was found with less clubroot incidence. To verify this, a trial was conducted in clubroot infested farmers field at Luvu. The field was highly infested with clubroot disease in the previous year and the average pH of the soil of the experimental field was 6.02. In field visit of some of the farmers at Lalitpur, field observations by uprooting of plants showed lesser disease incidence in Marpha choudapat variety compared to farmers local variety of BLM (Table 1). The incidence of clubroot disease ranged from 0-50% in Marpha choudapat, whereas, in local variety it ranged from 20-100%



Infected Broad leaf mustard plants with clubbed root

Broad leaf mustard (*Brassica juncea*) is one of the most popular green leafy vegetables of Nepal. It has been used as a typical winter vegetable. In recent years, it is being cultivated year round. During hot seasons, it is produced by direct seeding and brought in market with the root. Whereas in winter, it appears as transplanted crop and harvested leaves are brought in the market. Clubroot disease has been devastating the crop as well as reducing the leaf yield. Farmers are cultivating

Table 1. Clubroot disease incidence in Local and Marpha choudapat(2070) varieties of broadleaf mustard.

Farmers	Marpha choudapat	Local	Location
1. Farmer 1	0.0%	20.0%	Changathali
2. Farmer 2	20.0%	80.0%	Changathali
3. Farmer 3	50.0%	63.0%	Changathali
4. Farmer 4	30.0%	100.0%	Changathali
5. Farmer 5	56.0%	69.0%	Godamchour

Table 2. Clubroot disease severity and incidence in Marpha choudapat and local varieties at Luvu, Lalitpur (2071)

Variety	Clubroot Severity	Clubroot Incidence percent	Reduced Clubroot severity %	Reduced Clubroot incidence %
Marpha	1.05	5.194	58.33	92.66
Local	2.52	70.74	—

In verification test at Luvu , clubroot severity and incidence percent were reduced by 58% and 93 % in Marpha variety respectively (Table 2). It showed that Marpha choudapat variety could be cultivated in clubroot infested field in place of local variety for economic benefit.



Clubroot infested field of broad leaf mustard (left) and uprooted plants (right) at Mulpani, Kathmandu



Response of local variety (upper) and Marpha choudapat (lower) variety of Broad leaf mustard to clubroot disease.

Training, Workshop/Seminar, Study and Tours

April- June, 2015

SN	Name	Position	Office	Subject	Duration	Country
April						
1.	Mr. Netra Prasad Osti	S-4	Animal Nutrition Division, Khumaltar	FAO, Regional Expert Meeting to review National Feed Assessment Report and Methodology	27-29 April, 2015	Thailand
2.	Mr. Bholu S. Shrestha	S-4	Animal Breeding Division, Khumaltar	8th Asian Buffalo congress	21-25 April, 2015	Turkey
3.	Mr. Madan Raj Bhatta	S-4	NAGRC, Khumaltar	Final Regional Meeting of the project "Enhancing understanding and implementation of the ITPGRFA in Asia	22-24 April, 2015	Thailand
4.	Raju Kadel	S-3	Animal Breeding Division, Khumaltar	Molecular characterization of farm animal genetic Resources, Training	20-26 April, 2015	India
5.	Pankaj Kumar Jha	S-1	Animal Breeding Division, Khumaltar	Molecular characterization of farm animal genetic Resources, Training	20-26 April, 2015	India
6.	Saroj Sapkota	S-1	Animal Breeding Division, Khumaltar	Molecular characterization of farm animal genetic Resources, Training	20-26 April, 2015	India
7.	Dr. Chet Raj Upreti	S-5	Director, Livestock & Fisheries Research	8th Buffalo congress	21-25 April, 2015	Turkey
8.	Sarita Manandhar	S-1	RARS, Tarahara	International training on communication Research to Stakeholders	26 April - 2 May, 2015	India
May						
1.	Mr. Krishna Hari Ghimire	S-3	NAGRC, Khumaltar	3rd AFACI International Training workshop on Germplasm Management System	11-20 May, 2015	Korea
2.	Dr. Hari Bd. K.C.	T-8	TSD, Singhdarbar Plaza	3rd AFACI International Training workshop on Germplasm Management System	11-20 May, 2015	Korea
3.	Dr. Dhruva Bhattra	S-3	Horticulture Res. Division, Khumaltar	Vegetable go to school Project meeting on data management	12-18 May, 2015	Thailand
4.	Dr. Shambhu Pd. Khatiwada	S-4	Director, Crop & Horticulture Research	Annual Review and planning meeting of IFAD Grant IR 1363- ICARDA Project	27-29 May, 2015	India
5.	Dr. Sudha Sapkota	S-2	Monitoring & Evaluation, Division	Farming System Analysis	21-23 May, 2015	India
6.	Mr. Arjun Poudel	S-1	Outreach Division, Khumaltar	Farming System Analysis	21-23 May, 2015	India
7.	Dr. Min Nath Poudel	S-4	Director, Planning & Coordination	14th CURE Review, Planning and Steering Committee Meeting	19-21 May, 2015	Myanmar
8.	Dr. Shambhu Pd. Khatiwada	S-4	Director, Crop & Horticulture Research	14th CURE Review, Planning and Steering Committee Meeting	19-21 May, 2015	Myanmar
9.	Mr. Ram Bd. Khadka	S-1	RARS, Nepalgunj	South East Asia SRI Conference 2015	26-28 May, 2015	Malaysia
10.	Bandhu Raj Baral	S-3	National Maize Research Program, Rampur, Chitwan	International Training Course on Smart Use of Fertilizers to Improve Crop Production and soil conservation	10-15 May, 2015	Chinese Taipei
11.	Rajendra Darai	S-3	Grain Legume Res. Program, Khajura	Agricultural model Intercomparison and improvement internal partners intensive workshop	20-24 May, 2015	India
12.	Dinesh Babu Thapa Magar	S-1	SAPOD Division, Khumaltar	Agricultural model Intercomparison and improvement internal partners intensive workshop	20-24 May, 2015	India

SN	Name	Position	Office	Subject	Duration	Country
13.	Samaya Gaire	S-1	Monitoring & Evaluation, Division	Impact Assessment of Agricultural Technologies	25-31 May, 2015	India
14.	Dinesh Babu Thapa Magar	S-1	SAPOD Division, Khumaltar	Impact Assessment of Agricultural Technologies	25-31 May, 2015	India
15.	Bibek Sapkota	S-1	NARC, Plaza	Research Data Management Training	26-28 May, 2015	Philippines
16.	Jhanga Bd. Prasad	S-1	RARS Parwanipur	Food Legume Improvement	18-26 May, 2015	Lebanon
17.	Rabindra Pd. Sah	S-1	Grain Legume Res, Program, Khajura	Food Legume Improvement	18-26 May, 2015	Lebanon
June						
1.	Dr. Bal Krishna Joshi	S-3	NAGRC, Khumaltar	Plant Genetics Resources in Asia (PGR Asia) Kickaft meeting	15-19 June, 2015	Japan
2.	Dr. Y.R. Pandey	S-4	Executive, Director	Future strengthening NARC-ICARDA Collaboration (to acquaint with ICARDA's Senior Management and Scientist to develop future research collaboration pertinent to Nepalese condition)	01-04 June, 2015	Lebanon
3.	Dr. Y.R. Pandey	S-4	Executive, Director	Plant Genetic Resources in Asia (PGRAsia) Kickoff Meeting	15-19 June, 2015	Japan
4.	Dr. Ananda Kumar Gautam	S-4	Agri Environment Division, Khumaltar	Agromet Products and yield forecasting	29 June- 03 July, 2015	USA
5.	Mr. Purushotam Pd. Khatiwada	S-4	Monitoring & Evaluation, Division	Third meeting of the SAARC Intergovernmental Core Group on Agricultural Research Extension and farmers Linkages (IGCG-REF)	25-26 June, 2015	Sri-Lanka
6.	Dr. Tek Pd. Gotame	S-1	Horticulture Res. Division, Khumaltar	1st AFACI International Training Workshop on Postharvest Management Technology for Horticultural Crops	7-20 June, 2015	Thailand
7.	Mr. Sarad Chandra Ghimire	T-6	ARS (Horticulture). Malepatan, Pokhara	1st AFACI International Training Workshop on Postharvest Management Technology for Horticultural Crops	7-20 June, 2015	Thailand
8.	Mr. Sanjaya Bista	T-8	Entomology Division, Khumaltar	International Training workshop on sericulture production technology	01-10 June, 2015	Korea
9.	Dr. Shambhu Pd. Khatiwada	S-4	Director, Crop & Horticulture Research	FAO's Consultation on the promotion of Pulses for the multiple benefits in Asia Meeting & CLAN Steering Committee Meeting	28-30 June, 2015	Thailand
10.	Kishor Kumar Shrestha	S-4	Pasture & forage Division, Khumaltar	Technological advancement in Agro forestry system : strategy for climate smart agriculture technologies in SAARC countries	15-19 June, 2015	India
11.	Ghanshyam Malla	S-3	Agri Environment Division, Khumaltar	Technological advancement in Agro forestry system : strategy for climate smart agriculture technologies in SAARC countries	15-19 June, 2015	India
12.	Madan Raj Bhatta	S-4	NAGRC, Khumaltar	Strengthening national capacities to implement the ITPGRA (GRP12 project) International workshop on the effective implementation of the ITPGRFAMLS	23-26 June, 2015	Italy
13.	Giridhari Subedi	S-4	Horticulture Res. Division, Khumaltar	AFACI program workshop on horticulture (Postharvest)	23-27 June, 2015	Philippines

contd of page 1

a Nepalese tradition & cultural value. Dahi-Chiura (curd+flattend/beaten rice) was served to all participants as a *Prasad* of Asadh 15.

On the same day, Ministry of Agriculture Development organized “President Excellent Farmers Award” ceremony at NARI, Hall, Khumaltar, Lalitpur. Hourarable Minister of Agriculture Development Mr. Hari Prasad Parajuli awarded Excellent Farmer Award to Mr. Kalu Hamal of Kailali District with NRs. 2 Lakhs (Two hundred thousands) and letter of appreciation. Similarly, Mr. Chandra Lal Tamang of Dhankuta, Mr. Chhyam Bahadur Thapa, Kaski, Mr. Chhaya Dutta Bhusal, Bardiya and Mr. Prakash Pant, Chitwan was awarded with NRs. 1 lakhs and letter of appreciation.

contd of page 1

Damodar Thapa, Chief Comptroller, District Comptroller Office, Dhanusha and Mr. Yugal Kishor Tiwari, Senior Agriculture Development Officer of Dhanusha. The progressive farmers of the nearby villages of Dhanusha district and NRRP staff member also present in that occasion. All the participants were participated in Rice transplanting and serve Dahi-Chiura (Curd-Bitten rice and mango). Though due to late rain-set farmers have not started rice transplanting at their own field.

This year due to the late monsoon farmers could not started the rice transplanting at Dhanusha district on time. In Nepal the rice transplanting is dependent on monsoon rainfall for normal season rice.

Vista obtained Ph.D. Degree

Mr. Shree Prasad Vista, Senior Scientist (S-3) in Soil Science Division, Nepal Agricultural Research Council has obtained Degree of Doctor of Philosophy in Agriculture in Agricultural Chemistry and Soil Science from Bidhan Chandra Krishi Viswavidyalaya, West Bengal, India. His research work in his Ph.D. programme was on “Utilization of Iron Slime for Agricultural Purposes”.



A completely new venture on utilization of iron slime for agricultural purposes was taken up by him to explore its utility. He carried out a series of laboratory, green house and field experiments to investigate the effect of iron slime on physical, chemical and physico-chemical properties of soil as well as uptake of both macro and micronutrients by rice and cabbage. Characterisation of iron slime showed neutral in reaction, contained considerable amount of available plant nutrients and have fairly good enough with its fertility status. This indicated that iron slime has favourable combination with organic matter in buffering soil pH as well as increasing organic carbon and CEC of soil. Addition of iron slime and organic matter contributed a significant effect on accumulation of available N in soil. Phosphorus content in plant showed direct relationship with the addition of iron slime. Soil amended with iron slime improved P nutrition throughout the growing period of rice. Iron slime alone also supplied P to rice crop.

The total micronutrients content especially Fe, Mn Cu and Zn were found to be of higher order in cabbage grown in sole iron slime and iron slime treated soil. The total Fe content in cabbage was observed to be directly proportional to the amount of added iron slime. Addition of iron slime in soil also influenced yield and yield attributing parameters of rice.

Dr. Vista obtained his BSc. (Ag) from College of Agriculture, Central Agricultural University, Imphal and completed his M.Sc. (Ag.) from Bidhan Chandra Krishi Viswavidyalaya, West Bengal, India in Agricultural Chemistry and Soil Science.

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