



A Quarterly Newsletter of Nepal Agricultural Research Council (NARC)

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April- June, 2010

National Rice Day Observed

Agronomy Division of Nepal Agricultural Research Council (NARC) organized National Rice Day with a special function at Agronomy farm, Khumaltar on 29 June, 2010.



Photo Courtesy: Agronomy Division

Rice transplanting on the occasion of National Rice Day

Cont in page 8

IN THIS ISSUE

- National Rice Day Observed
- National Workshop on Outreach Research
- Biotechnology Conference 2010
- Workshop on Conservation and Promotion of Acchami Cattle in Nepal
- Training, Workshop/Seminar, Study and Tour
- Shrestha Obtained Ph.D. Degree

National Workshop on Outreach Research

The Ninth National Outreach Research Workshop was organized at Khumaltar on 7-8 June, 2010. Workshop was participated by scientists, technical officers, Extensionists, Development workers representatives from NARC, DOA, DOLS, HICAST and NAST. Around 70 technical papers were presented on different aspects of agriculture. The workshop was inaugurated by the Honorable Member of National Planning Commission Dr. Subodh Narayan Jha at a special function by lighting the Panas. The Executive Director of NARC Dr. Bharatendu Mishra, Director General of DOA Mr. Vijay Kumar Mallik spoke on the importance of Outreach workshop. Other speakers were Dr. Bhava Prasad Tripathi, IRRI representative to Nepal and Dr. Min Nath Paudel, Chief of Outreach Research Division.

Cont in page 3

Biotechnology Conference 2010

Biotechnology Unit, Khumaltar, Lalitpur of Nepal Agricultural Research Council (NARC) organized the "Biotechnology Conference 2010" on June 27-28, 2010



Participants at Inaugural Ceremony of Biotechnology Conference

at NARI Hall of National Agricultural Research Institute, Khumaltar, Lalitpur. This was the first conference on the Biotechnology organized by NARC with the objective of "familiarizing the importance and uses of Biotechnology for food security and poverty alleviation in Nepal among expertise involved in policy, administration, research and development".

Mr. Mrigendra Kumar Singh Yadav, Honorable Minister for Agriculture and Cooperatives (MOAC), and Chairman

Cont in page 6

Workshop on Conservation and Promotion of Achhami Cattle in Nepal

A one day district level workshop on “Conservation and Promotion of Achhami Cattle” was organized by Animal Breeding Division at Khumaltar on June 6, 2010 with participation of representatives of two major stakeholders; NARC and DLS. The workshop was organized under the chairmanship of Dr. Upendra Man Singh, Director, National Animal Science Research Institute (NASRI). The main objectives of the workshop were to share the findings of the Project “Conservation and utilization of rare Achhami cattle breed of Nepal” and to develop future action plan for the conservation of the breed. Three papers were presented during the workshop from NARC and DLS.



Photo Courtesy: NASRI

*A Achhami Cattle:
Indigenous breed of cattle*

The project was initiated in July, 2006 with a special goal to conserve the endangered Achhami cattle breed and its promotion. This breed is located in the far western region of Nepal and is claimed as the smallest cattle breed in the world. The paper presented demonstrates the phenotypic and productive performance, population status, breeding system, reasons for population decline and farmers’ perception on Achhami cattle. The estimated body weight of adult Achhami cattle was 150kg and measured average body length, heart girth and wither height were 100cm, 116cm and 86cm respectively. Ages at sexual maturity and at first calving were recorded to be 36 and 46 months respectively. Achhami cattle produced 1.5 litre milk per day ranging from 0.5 to 2.4 litres. The variation in milk production and alarming declination in the population of this breed needs the serious attention of all the responsible authority.

Normally natural service is used to breed Achhami cows. Achhami as well as other indigenous bulls are being used for this purpose. AI is not practiced in this breed yet as AI program is not initiated in this district. Since the population of this breed is very small and it has been neglected for many centuries, animals are mated between close relatives. Thus, inbreeding is one of the major reasons responsible for productivity decline in this breed.

The importance of indigenous animals should not be overlooked only because of their low productivity. Farmers have experienced that this breed has high resistance to many economically important diseases such as HS, BQ, mastitis and other endo and ecto parasitic problem. The positive attributes of this breed warrant further research for scientific backup.

Apart from milk, they provide dung for organic manure to improve fertility, draft power for ploughing field, and also have great socio-economic value. But their declining productivity and threat of extinction have become a serious problem. With proper selection and breeding, the potential of our native breeds can be drastically improved which helps for in situ conservation of our important animal genetic resource.

The farmers in Achham are not aware that they have the world’s one of the smallest cattle which is the pride of themselves and the country as well. Awareness programme should be conducted to disseminate about the importance of Achhami cattle. During group discussion, all the participants had emphasized for providing subsidy to Achhami keepers apart from the awareness program for its conservation.

Achhami breed should be taken as a national heritage from the national perspective. Activities through all aspects (breeding, health, nutrition, management) should be undertaken to develop Achhami conservation and utilization by all the stakeholders (DLS, NARC, IUCN, Department of Wildlife conservation, NGOs, INGOs etc). In order to preserve Achhami cattle, special and separate programme “*Achhami Conservation Project*” should be launched which helps for the conservation of this endangered species in seal sense.

Based on experiences of stakeholders on research and extension and group discussion following promotion plan on conservation and improvement for Achhami Cattle were prepared:

Activities	Responsibility	Collaboration
Population estimation/ herd composition	DLS	NARC/NGOs
Study on Genetic potential(Production traits, adaptive traits and others)	NARC	DLS/Universities
Study on disease status	NARC	DLS/Universities
Study on nutritional status	NARC	DLS/Universities
Fodder inventory and calendar	NARC	DLS
Breeding Management (Nucleus herd/ Elite herd/ Breeder farmer’s committee/ breed registration)	NARC	DLS/MOAC
Development of pocket areas	DLS	CBONGOs
Awareness program	DLS	NARCCBONGOs/Universities/National Trust for Nature Conservation
Incentive programs	DLS	NARC/CBO/NGOs
Herd health and management	DLS	NARC
Study on Socio-economic aspects	NARC	DLS/Universities
Valuation study of beneficial and non-beneficial traits	NARC	DLS/Universities
Development of fodder and pasture	DLS	NARC
Introduction of Achhami promotional activities including market with new market products (Value chain)	DLS/ NARC	NARC
Animal fair/ exhibition	DLS	NARC/CBO/NGOs
Molecular studies in Achhami cattle	NARC	DLS/Universities

Cont. of page 1

The participants under three broad disciplinary groups thoroughly discussed and short listed the findings as agricultural technologies suitable in Tarai, hills and mountain environments under irrigated and rainfed conditions. The status of the identified technologies was also evaluated and analyzed by the group members. The two days workshop was concluded with recommendations after discussion on group reports.

Recommendations of Outreach Workshop

Crops and Horticultural Technologies

Proven technologies for dissemination under irrigated condition:

Mountain region:

Rice

- Lumle-2
- NR10481-B-11-1-1-1
- NR 10479-B-3-2-1-1

Hill region:

- Rice CNTRL 85033

Tarai region:

- Sugarcane: Cose 98231 : Early maturing, high yielding, red rot resistant for central and eastern terai

Pipeline technologies:

Hill region:

Rice

- Hanareumbyeo
- NR10353-8
- IR 70422-95-1-1
- IR 72997-159-2-2-1
- 9939
- IR 51656-SR-2

Potato

- CIP 389746.2

Terai region:

Potato

- CIP 388580.6
- LBR 40
- 3922280.64
- 388764-26LB

Rayo

- ICJ 9704, Divya : short duration (110 days), high yielder, fit well in mixed cropping in wheat

Proven technology for dissemination under rainfed condition:

Mountain

Orthodox Tea

For organic soil nutrient management

- 1 kg of vermin compost per bush per year in two split dose
- 3 kg of improved ditch compost per bush per year in 2 split dose

Apple (organic insect and disease management technology developed)

- ATSO a mineral oil @ 10 ml/l was effective to control Sanjose scale
- 1% bordeuex mixture was effective to control shooty mould
- Bordeuex paste was effective to control papery bark and stem black disease
- Neem oil was effective against various beetle
- 28% yield increasement with improved orchard management practices

Maize

- Ganesh 1 suitable for GLS prone areas

Hill region:

Acid lime

- Terahthum local for high yielding, seasonal crop (Kartik to Poush) high juice and acid percent, good aroma, round shaped & smooth rind
- Kasugamysin @ 1ml/l water to control citrus canker disease
- Antiro@ 10 ml/l water to control gummosis, root rot disease

Orthodox Tea

For organic soil nutrient management

- 1 kg of vermin compost per bush per year in two split dose
- 3 kg of improved ditch compost per bush per year in 2 split dose

Maize

- Mana-3, Deuti and Mana-1

Terai region:

Jute

- JRO-524 (good quality fiber, high fiber yield)
- Jute bundle press with water hyacinth produced silky type fiber and reduced 2-3 days retting period.
- Spraying of Targa super @ 2m/l water found effective to control grassy weeds
- Red amaranth (10 kg/ha) mixed together with jute (6 kg/ha) effective to suppress weeds and also fetches extra income.

Rice

- IR 74371-54-1-1, IR 74371-46-1-1 and IR 74371-70-1-1 (drought tolerant high yielding)
- Samba mahsuri+sub1, IR 64+sub1 and Swarna +sub1 (high yielding in submergence condition)

Lentil

- ILL 7723 : Medium seeded favourable condition of mid and far western

Sugarcane

- BO-136 : Mid late, Feb planting, red rot resistant to central and eastern

Tori

- Full package of practice (treated improved seed – 3gm bavistin/kg seed, 60:40:20 kg NPK/ha, 2 spray of insecticide/fungicide (indo sulphur 2-3 ml/l water at pick flowering time/need base), Dithan M 45 2-3 gm/l water at 50 and 70 days of seeding) gave 49% higher seed yield over farmer practice (705 kg/ha)

Pineapple

- For year round pineapple production planting suckers 3-4 times from April – October with application of ethrel @ 25 ppm after 12 months of planting

Pipeline technologies:

Mountain region:

Potato

- 392222.25 (high yielding and drought tolerant)
- HPS 7/67 and 059.3 (high yielding)

Hill region:

Pigeonpea

- ICPL 88039 : Extra short duration upto 1400 m asl

Terai region:

Pigeonpea

- ICPL 88039 : Extra short duration upto 1400 m asl

Jute

- DS-066, DS-058 and O-4 (quality fiber and high yield)

Acid lime

- NCRP-49, 55 and 53 for high yielding, off-season (Asadh to Bhadra), high juice and acid percent, good aroma, round shaped & smooth rind, disease resistant in upland condition.
- Complete package of cultivation technology

Tori

- ACC#9109, ACC#9118 (high yielder)

Pigeonpea

- ICP 7035 : Long duration sterility mosaic and wilt resistant variety for mid and far western region.

Seed technology

- Strengthened and build the capacity of in use and production of quality and seed in outreach sites through training enhance the use of quality seeds.

Tori

- ACC#9109, ACC#9118 (high yielder)

Pigeonpea

- ICP 7035 : Long duration sterility mosaic and wilt resistant variety for mid and far western region.

Seed technology

- Strengthened and build the capacity of in use and production of quality and seed in outreach sites through training enhance the use of quality seeds.

Cross Cutting Technologies

Proven technologies for dissemination

Irrigated condition:

Hill region:

- The policy developing for fixing the degree of polishing 6-8% in the mills of Nepal The milling recovery of rice can be increased by 4% in the total production of rice.
- Potato clones PR 85861.12, PR 85861.11, PR 225861.2, CIP 384321.15 and LBr-40 verified as LB resistant and high yielding clones under terai and mid hill conditions (provided the quality seed.)
- Cowpea genotype IT86F-2089-5 (green) are recommended to low hills and river basin area for two planting season (Falgun in irrigated and Bhadra in upland condition)

Tarai region:

- The policy developing for fixing the degree of policy 6-8% in the mills of Nepal, the milling recovery of rice can be increased by 4% in the total production of rice.

Rainfed condition:

- The dose 20 kg of Sulphur per ha. along with recommended dose of fertilizer (100:60:40 kg NPK + 10 ton compost) performed better yield of maize (var. Rampur composit) in Chitwan with 5.26 ton of grains per hactre.
- The genotypes N-29 is found best yielder than recommended variety Radha-4 in rainfed condition in mid-western region of terai.

Technologies need fine tuning

Irrigated condition:

Hill region:

- Pre-emergence application of pendimethalin 30 EC @ 1 l ai /ha(3.3l/ha) for the management of *Spergula arvensis* (Durga datta Jhar) in wheat in Parbat district. And further studies in wheat and other crops is to be carryout in other districts.

Terai region:

- Clear cut policy on Hybrid maize for regulation of the imported seed and to minimize the effect on local bio-diversity.
- The genotype IR-60267-PMI-3-1-3-1 found better yielder than Janaki in mid-western terai.
- Aromatic rice IR 70422-95-1-1 genotype performed better than Rato basamati in mid-western terai.
- Wheat genotype BL 2930 performed better than Gautam in mid-western terai condition.
- In Mustard genotype ICJ 9704 yield more compared to Krishna in mid-western terai region.

Rainfed condition:

- Chiraito could be transplanted in the terrace riser and flat land, but the growth is slow and yield is low.
- Weeding trails should be conducted in both conditions to conform and validate the result.

Pipeline technologies:

Irrigated condition:

Hill region:

- *Trichoderma* sps. found effective in controlling clubroot.
- Tomato cultivars T-597-5, C-315, Pusa ruby, Nayak B-SS-422 should be tested in sick field for Nematode.
- Tomato cultivar T-597-5 can be used as resistant sources in tomato breeding

Livestock and Fisheries Technologies

Proven technologies for dissemination

High hill and mountain region:

Cold water fisheries

- Trout seed and table fish production

Mid hill

Warm water aquaculture

- Cage culture of grass carps

- Seed production of Gardi
- Fish drying technology (post harvest)
- Treatment of coccidiosis in trout
- Technology for starter feed production for trout nursing
- Small scale aquaculture technology

Tarai region:

- Tilapia in pond polyculture (post harvest technology)
- Tilapia cage cum pond integration
- Fish drying technology
- Breeding of ornamental fish

Technologies need fine tuning

High hill and mountain region:

Cold water fisheries

- Trout nursing management
- Trout feed and nutrition

Mid hill

Warm water aquaculture

- Cove (pen) culture
- Gardi nursing and table fish production
- Sex reversal (mono-sex) technology
- Genetic management of carp
- Stock enhancement

Terai region:

- Cove (pen) culture
- Gardi nursing
- Sex reversal (mono-sex) technology
- Seed production of prawn
- Prawn polyculture with carp
- Breeding of ornamental fish
- Genetic management of carp
- Stock enhancement

Pipeline technologies:

High hill and mountain region:

Mid hill

Warm water aquaculture

- Cat fish farming
- Seed production of some riverine fish

Tarai region:

- Cat fish farming

of Nepal Agricultural Research Council inaugurated the conference. Mrs. Karina Begum, Honorable State Minister for MOAC, Prof. Shubodh Narayan Jha, Honorable Member of National Planning Commission and Mr. Nathu Prasad Chaudhary, Secretary of MOAC were present in the conference as special guests. All Joint Secretaries of MOAC and Line Directors of NARC, Member Secretary of National Agricultural Research and Development Fund (NARDF), Executive Director of Center for Environment and Agriculture Policy, Research, Extension and Development (CEAPRD) were present in the conference. The inaugural ceremony of the conference was chaired by Dr. Bharatendu Mishra, Executive Director of NARC. More than 100 researchers and representatives from different public and private organizations actively participated in the conference. Dr. D. Boom from ICIMOD, Dr. Nihal Singh from WHO, Dr. Arun Kumar Joshi from CIMMYT, Dr. Babu R. Marasini from Ministry of Health and Population, Dr. Ram P. Sah and Dr. Nanda P. Shrestha, Former Executive Directors of NARC, Mr. Nathu P. Chaudhary, Prof. Shubodh Narayan Jha, and Mrs. Karina Begum expressed their views on the importance and implication of Biotechnology in context with the food security in Nepal. All of them emphasized the present need of Biotechnology research and requested for upgrading the present Biotechnology Unit to either Division or Department or Center to its full strength for leading the research with fruitful results. The participation from various fields of agriculture, livestock, veterinary, commerce and supplies, industries, FNCCI, Health and Population, WHO, ICIMOD, CIMMYT, IRRI, CEAPRED, made this conference highly valuable.

The technical sessions of the two days conference was composed of five sessions namely i) Invited and Review Papers chaired by Dr. Ram P. Sah, Former Executive Director of NARC, ii) Status Papers chaired by Former Executive Director Dr. Nanda P. Shrestha, iii) Research Papers chaired by Prof. Dr. Sanu Devi Joshi, Central Department of Botany, TU, iv) Policy Papers chaired by Dr. Niranjana P. Adhikary, Director for Crops and Horticulture Research, NARC, and v) Concluding and Recommendation Session chaired by Dr. Dinesh R. Bhujju, Chief, Science and Technology Division of Nepal Academy of Science and Technology (NAST). A total of forty four papers comprising five invited and review papers, twelve status papers, twenty two research papers and five policy papers were presented. All sessions were actively participated, interacted and critically discussed by the participants. All participants realized and expressed the need of active policy on biotechnology research, education and development and production. The policy should be able to encourage the private sector for the utilization of outcomes of research and academia.

In the workshop presentation of Biotechnology papers were from various research fields of agriculture, seed,

livestock, fishery, veterinary research and vaccines, human health, medicinal plants, horticultural plants, agro-forestry, genetic diversity studies at molecular level, DNA studies for crime detection, medicinal pharmaceuticals.

In the final session of concluding and recommendation, participants critically analyzed the presentations and problems faced by the Biotechnology community in Nepal and made final recommendations for urgent undertakings.

Conclusion and Recommendation Research and Development Sector

1. Creation of dedicated fund by the Government (Competitive grant- private and public institutions)
2. Preparation of strategic plan- research priority setting from respective Ministry.
3. Establish proposed National Biotechnology Centre an integrated institution of Centre of Excellence with interdisciplinary approach.
4. Promote Private Public Partnership through a consortium.
5. Develop guidelines regarding bio-safety for transfer of biological materials (import and export) and R & D.
6. Promote exchange programs to enhance national and International scientific capabilities.
7. Effective Implementation and application of provisions mentioned in Biotechnology Policy.

Education Sectors / Academia

8. Provide research fund for national universities and undergraduate (Bachelor level) colleges for biotechnology related researches.
9. Upgrading of the curriculum into international standards.
10. Promote exchange programs to enhance national and International scientific capabilities.

Production Sector

11. Tax relaxation in production units (e.g. Land, building, equipments, consumables and raw materials).
12. Ensure and subsidy on power system.
13. Promote and provide incentives in commercialization of successful prototypes developed in various institutions and academia.
14. Ensure access and benefit sharing regarding biological resources among stakeholders.
15. Provision of soft loan for biotechnological industries by the Bank, Government and/or INGOs.
16. Tax holidays on return of investment.
17. Local authority should provide land for production purpose to the interested entrepreneurs.

Follow up activities

18. Effective Implementation and application of provisions mentioned in Biotechnology Policy and Bio-safety guideline.
19. Formation of a Technical Committee of experts with representation of various stakeholders.
20. Organize periodic interactions.
21. Prepare guidelines for R&D related with GMO and LMO.
22. Bring out proceedings of this conference.

Training, Workshop/Seminar, Study and Tours

S.N.	Name	Position	Office	Subject	Duration	Country
1	Dr. Dil Bdr. Gurung	Co-ordinator	NMRP, Rampur	Maize Molecular Breeding	April 15-16, 2010	Mexico
2	Dr. Bhartendu Mishra	ED	NARC	STRASA Meeting	April 09-12, 2010	India
3	Dr. Prakash Kumar Pokharel	S-4	NARC	Contemporary approaches to genetic resources conservation and use	April 12-30, 2010	Netherland
4	Dr. Hirakaji Manadhar	S-4	NARC	Asian food & agriculture cooperation initiative	April 15-16, 2010	Philippines
5	Dr. Renuka Shrestha	Co-ordinator	NGLRP, Rampur	IFLRC-V	April 26-30, 2010	Turkey
6	Dr. Bhartendu Mishra	ED	NARC	Agri-Entrepreneurship	April 28-May 8, 2010	India
7	Mr. Ram Bdr. Bhujel	Chief	ARS, Bijayanagar	APAARI	April 29-30, 2010	Thailand
8	Mr. Daya Nand Mandal	S-4	NARI, Khumaltar	Training course on hybrid rice technology for developing countries	April 28-August 17, 2010	China
9	Mr. Ram Tej Chaudhary	T-6	RARS, Parwanipur	Training course on oil crop comprehensive technology for developing countries	May 10-August 29, 2010	China
10	Mr. Samid Ahamed	S-1	RARS, Nepalgunj	Training course on dry land farming technology for developing countries	May 25-July 19, 2010	China
11	Dr. Nirajan Prd. Adhikari	Director	Crop & Horticulture Research, NARC	9th CURE review and steering committee meeting	May 3-6, 2010	Cambodia
12	Dr. Jwala Bajracharya	S-4	Agri-Botany Division, Khumaltar	Horticulture CRSP inception workshop	May 16-19, 2010	Singapore
13	Mr. Megh Bdr. Nepali	T-7	SARPOD, Khumaltar	Baseline report of the STRASA project	May 17-21, 2010	Philippines
14	Mr. Sudeep Gautam	T-7	SARPOD, Khumaltar	Baseline report of the STRASA project	May 17-21, 2010	Philippines
15	Dr. Bhartendu Mishra	ED	NARC	Nepal china joint committee on agricultural cooperation	May 11-18, 2010	China
16	Dr. Shambhu Prd. Khatiwada	Chief	ARS, Pakhribas	Inception workshop of the SAARC initiative on regional food security	May 19-20, 2010	Bangladesh
17	Mr. Yub Raj Bhusal	S-1	ARS, Malepatan	Non destructive sampling technique of fruits & vegetables	May 7-28, 2010	Australia
18	Dr. Bhartendu Mishra	ED	NARC	Borlang global rust initiative (BGRI) 2010	May 30-June 4, 2010	Russia
19	Mr. Madan Raj Bhatta	S-4	Agri-Botany Division, Khumaltar	Borlang global rust initiative (BGRI) 2010	May 30-June 4, 2010	Russia
20	Mr. Shesha Raman Upadhyay	S-4	NWRP, Bhairahawa	Borlang global rust initiative (BGRI) 2010	May 30-June 4, 2010	Russia
21	Mr. Ramesh Dhakal	T-6	NGLRP, Rampur	PhD Agronomy & Crop Sciences	June 1, 2010-May 30, 2013	USA
22	Mr. Dinesh Pariyar	Director	Planning & Co-ordination, NARC	SPRN Inception Workshop	June 1-4, 2010	Norway
23	Dr. Tek Bahadur Gurung	Director	Livestock & Fisheries Res., NARC	SPRN Inception Workshop	June 1-4, 2010	Norway
24	Mr. Suresh Kumar Wagle	Chief	FRD, Godawari	SPRN Inception Workshop	June 1-4, 2010	Norway
25	Mr. Umesh Kumar Acharya	T-6	NARC	R & D course on integrated pest management on fruit trees & forestry	June 7-28, 2010	Israel
26	Dr. Yajna Gajadhar Khadka	Chief	Soil Science Division, Khumaltar	Strategies for arresting land degradation in South Asian countries	June 21-23, 2010	India
27	Mr. Binod Kumar Gupta	T-6	Jute Research Program, Itahari	M.Sc. Ag.	June 24, 2010-June 23, 2012	IAAS, Rampur
28	Mr. Rajendra Prd. Upreti	T-6	Soil Science Division, Khumaltar	PhD	Feb 1, 2010-Jan 31, 2013	UK

Shrestha obtained Ph.D. degree

Mr. Surendra Lal Shrestha, Senior Scientist (S-3) in Nepal Agricultural Research Council (NARC) has obtained Ph.D. degree in Horticulture from Kangwon National University, South Korea.



His research work in his Ph.D. course was on the establishment of hybrid breeding system in sweet pepper (*Capsicum annum* L.).

The main objective of his study was to create and select new genotypes of sweet pepper equal or better than the existing popular hybrid cultivars. In this process, he has developed pure-lines through anther culture of ten widely grown commercial hybrid cultivars. By hybridization of pure-lines, he developed one hundred twenty nine hybrid lines from where he has selected seven hybrid lines on the basis of quality, yield and heterosis. He found the effect of genotype of donor plants on the success of anther culture and 25% anther culture derived plantlets were haploid.

Dr. Shrestha born in 1964, obtained his B.Sc. (Hons) Agriculture from University of Agriculture, Faisalabad, Pakistan. He had his M.Sc. in horticulture in Benguet State University, Philippines. In addition, he has got post-graduate diploma in Ecology and Environment from India and Master's of Arts degree in Sociology from Nepal.

Cont. of page 1

Hon'ble Minister for Agriculture and Cooperatives Mr. Mrigendra Kumar Singh Yadav was the chief guest and Hon'ble Minister of state for Agriculture and Cooperatives Ms. Karina Begum was special guest in the function. Executive Director of NARC Dr. Bharatendu Mishra gave welcome speech and highlighted the importance of National Rice Day. The programme was coordinated by Dr. Jagat Devi Ranjit, chief of Agronomy Division.

On the occasion Joint Secretary Dr. Hari Dahal and Mr. Phulgen Pradhan from Ministry of Agriculture & Cooperatives, Dr. G.O. Ferrara from CIMMYT, Dr. B.P. Tripathi from IRRI-Nepal, Dr. Arun Joshi from CSISA project and Directors, Division chiefs, Senior scientists, Scientists, Technical officers and other staff members of NARC were attended the programme. The programme was also participated by NARI and NASRI Directors of NARC, Director of Crop Development Directorate, DoA.

On the occasion Hon'ble Minister and other guests were observed direct seeded rice field plots at Agronomy farm and initiated rice transplanting in the puddled rice plot. The team also visited the newly constructed Gene Bank and got information about the progress and future activities of Gene Bank.

During the programme an exhibition was organized and different improved varieties of rice seeds were demonstrated for display.

Government of Nepal has declared to celebrate "National Rice Day" on Asar 15 (29 June) each year and accordingly this function is observed with various activities in the country.

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