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Workshop on Hydropower Dams: Impact on Fish Biodiversity and Mitigation Approaches

With an objective to prepare the strategic recommendations for sustainable fish biodiversity conservation and mitigation approaches in dammed river, Nepal Agricultural Research Council (NARC) and Nepal Electricity Authority (NEA) jointly organized a workshop on "Hydropower Dams: Impact on Fish Biodiversity and Mitigation Approaches" in Kathmandu on 11 November 2003.

The one-day workshop formally opened by Hon'ble Vice Chairman of National Planning Commission Dr. Shankar Prasad Sharma had a full-day technical session that gathered different views and opinions on the impact of dams on aquatic environment followed by discussion and strategic

recommendation on policies of dam construction and aquatic biodiversity; conservation and utilization of aquatic resources for livelihood enhancement of displaced community.

NARC-NEA Fishery Project

As per the need to address the environmental concern on aquatic ecology of the river, and socio-economic factor affected by dams at the surroundings, a fishery project has been initiated at Kaligandaki river. Kali Gandaki Hydroelectric Project is the largest hydropower (144 MW) in Nepal. The main objective of the project is to study and produce indigenous riverine fish and stock up and down streams of the reservoir to

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MoU for Technical Cooperation between Nepal and The Republic of Korea

With a view to promote technical cooperation and accelerate agricultural progress based on mutual benefits of Nepal and The Republic of Korea, Nepal Agricultural Research Council (NARC) and The Rural Development Administration (RDA) of the Republic of Korea signed a memorandum of understanding (MoU) on 13 November 2003 in Kathmandu.

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The Year 2004: International Year of Rice

The 57th General Assembly of the United Nations (UNO) declared the Year 2004 as International Year of Rice.

ISSUE HIGHLIGHTS

- Workshop on hydropower dams: Impact on fish diversity
- Wheat seed distribution
- MoU for Technical Cooperation between Nepal and The Republic of Korea
- MoU between NARC and SIMI
- Workshop on Fingermillet Project
- Review and Planning Meeting of HMRP
- Bhutanese Scientists on Training in Hill Maize in Nepal
- Presentation on Uptake Pathways and Scaling-up of Agricultural Technology



Photo: Rajendra Bajracharya

Nepal Agricultural Research Council (NARC) is an apex body for agricultural research in the country with the goal of poverty alleviation with sustainable growth of agriculture production through development of appropriate technologies in different aspects of agriculture

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maintain the fish diversity and for employment opportunity and income generation of fisher community by applying modern fishing techniques and fish farming as well.

The NARC and NEA are implementing jointly the project for about one and half year establishing hatcheries and initiating development of systematic breeding and rearing techniques. The fish hatchery in at the Kaligandaki "A" Hydroelectric Project is the first attempt to maintain the fish biodiversity affected by damming in the river system. The works conducted so far include collection and release of indigenous fish species (More than 100,000 fingerlings released in the river); breeding of four species; installation of lab equipments; studies on aquatic biodiversity, environment and socio-economic status of fisher community.

MoU between NARC and NEA

A memorandum of understanding (MoU) has been recently signed for running the fishery program at the Kaligandaki 'A' Project and to produce fingerlings of indigenous fish species, study and develop technology of economically high value riverine fish species to culture as well as stock in the river system to maintain the fish population. The resource use based on mutually agreed terms and conditions is to develop suitable technologies as a model to improve the livelihood of Nepalese people through enhancing fish production and providing job opportunities to the fisher "Bote" community and local people of the affected areas without hampering the mandated work.

Under the MoU, NARC will be responsible to arrange the required experts, scientists, technical and other supporting staffs to run the fishery project. It will also utilize fish hatchery, research laboratories and its station facilities for the research work and to produce fingerlings of possible and economically important riverine indigenous fish species and stock in to

the river. NEA will provide all physical facilities at the Project site, budget for operation, maintenance, office expenses, staff incentive as per project proposal.

A steering committee represented from NEA, Directorate of Fisheries Development of Department of Agriculture and NARC will be formed for this program that will meet in every six month.

The MoU is signed for a period of five years, renewable and revisable upon mutual consent.

Research Conference on Crops and Livestock Survey

In line to a program on "Strengthening the National Statistical System", a conference on "Crops and Livestock Survey" was organized in Kathmandu on 11-12 December 2003.

The two-day conference entertained presentation and deliberate discussion on agricultural practices and present trends in agricultural statistics. The conference was organized by Central Bureau of Statistics, HMG.

Workshop on Fingermillet Project

The progress review workshop on the finger millet project "Enhancing the Contribution of Nutritious but Neglected Crops to Food Security and to Incomes of Rural Poor: Nepal Component" was held in Kathmandu on 12 December, 2003

The major objective of the two-day workshop was to share and exchange experiences among project partners and stake holders; to document the progress made and information generated from the study conducted in the project sites; and to review and compile the progress made under various thematic areas.

Under the project, different activities on varietal evaluation, seed production, crop production management, socio-economic studies, public awareness about the importance of fingermillet, value addition and market promotion have been conducted.

The project was started two years ago in Nepal as a part of a global project in coordination with MS Swaminathan Research Foundation (MSCRF) with financial support of the International Fund for Agricultural Development (IFAD), Rome and International Plant Genetic Resources Institute (IPGRI), Rome. Nepal Agricultural Research Council (NARC) is national coordinating center for Nepal component that has the objectives to utilize the potentiality of fingermillet genetic resources through development

oriented research, which contributes to raise the incomes and strengthen the food security of small farmers. Researches under the global project are conducted in Bolivia, Peru, Ecuador, Egypt, Yemen, India, Nepal etc. Researches on fingermillet as medicinal plant are also being conducted under the project.

Finger-millet is the important crop in the hills of Nepal. Most of the area under mid hills belongs to maize/millet relay production system. The crop is more important in subsistence farming system of inaccessible area where it is grown without external input in marginal land. Because of long duration storability this crop has paramount significance on the food security of poor people. Thus, finger millet has significant role to sustain hill agriculture system and is a staple food of poor people.

Fingermillet is very rich in calcium, minerals and phosphorus as compared to cereals. It is a good source of limiting amino acids like lysine and methionine and rich in vitamins like thiamine, riboflavin, and niacin. Thus, finger millet is a natural gift to poor for their nutritional security, as they cannot afford to buy expensive fruits and livestock products. But, it is still a neglected crop and considered as low status food. As per preliminary estimation for the Fiscal Year 2003/04, the total fingermillet cultivated area in Nepal is 2,58,597 hectare and production 2,83,378 mt and productivity 1,096 kg/ha.

Review and Planning Meeting of HMRP

With the objective to review maize research results of 2003 and plan for 2004, a two-day review and planning meeting of the Hill Maize Research Project (HMRP) was conducted on 1-2, December 2003 at Khumaltar, Lalitpur.

In the meeting, results of different maize research and development activities conducted under the HMRP at different stations for review and interaction and proposed programs for the next year were presented. The aspects of the program activities include maize varietal investigation, crop management, soil fertility, crop protection (disease, insects, weed), agro-forestry and seed production.

The Hill Maize Research Project (HMRP) was initiated in 1999 with the goal of improving maize production and productivity in the hills of Nepal. An innovative process using GIS-based data from the Nepal Almanac Characterization Tool, extensive surveys of farmers and expert opinion was used to establish research priorities for the project. Strategies for addressing these priorities were developed in working group and planning meeting. Extensive testing of exotic materials from CIMMYT has identified a number of promising new varieties and establish collaborative research links. On-station and on-farm testing of varieties and crop management practices have expanded during the last some years of the project. Community-based seed production has been initiated to allow for the provision of seed of improved varieties in inaccessible areas. A broad range of training provided by HMRP has helped to improve the efficiency of research. Linkages with other organizations enabled by the small-grants project have greatly increase the potential for

disseminating promising new technologies.

In order to increase income and food security of farm families in the hills of Nepal by raising the productivity and sustainability of maize-based cropping systems in the hills, the project has as its objectives: i) to develop and disseminate improved maize varieties specifically adapted to hill environments; ii) to develop and promote resource-conserving productivity-enhancing crop management practices for maize-based systems, appropriate to farmers' circumstances and compatible with existing cropping and livestock systems; iii) provide technology that will reduce crop losses due to drought, low fertility, diseases and pests (including post-harvest insects and ear rots) through focused breeding efforts and integrated pest management approaches (mainly host plant resistance); and (iv) to build sustained research capacity in the National Maize Research Program of NARC and in allied institutions and enhance the linkage between technology generation/verification and its delivery to farmers, with special focus on the delivery of seed of improved varieties and promotion of management options in a participatory manner in farmers' fields.

The activities of the project can be broadly categorized as: i) identifying research priorities and establishing strategies for addressing these priorities, ii) developing and testing new technologies, iii) disseminating technologies, iv) and training. The significant outputs of these activities include: Identifying priorities and establishing strategies; Developing and testing new technologies; Disseminating technologies; Training and study for researchers.

Bhutanese Scientists on Training in Hill Maize in Nepal

Two Bhutanese agricultural Scientists were in Nepal Agricultural Research Council (NARC) on a fifteen-day training in maize research.

The training program was organized by National Maize Research Program (NMRP) under Hill Maize Research Project (HMRP) of Swiss Development Cooperation (SDC/N), International Centre for Maize and Wheat Improvement (CIMMYT) and NARC. The training was conducted on different aspects of maize research and development i.e. breeding, seed science, seed multiplication, disease and insects, soil science and complete package of practices developed in Nepal. The training was held at NMRP Rampur, Chitwan; National Agriculture Research Institute (NARI), Khumaltar; and Regional Agricultural Research Station, Lumle.

Some Nepalese crop varieties officially released after research and recommended for different eco-regions of Nepal have been popular in Bhutan also.

Review and Sharing Workshop on Agro-forestry

In order to review the agroforestry programs conducted at different parts of the country, Nepal Agroforestry Foundation, an NGO organized a Review and Sharing workshop in Kathmandu on 15-16 October 2003.

The Two-day workshop represented by Nepal Agricultural Research Council, had presentation and discussion on the program progress reports. Policy and provisions of different institutions were presented in the workshop. Mr. Bhola Man Singh Basnet presented policy and provision of NARC on agroforestry.

During the workshop, video development and display and field visit were also held.

Presentation on Uptake Pathways and Scaling-up of Agricultural Technology

A consultancy report on “Uptake Pathways and Scaling-up of Agricultural Technology to enhance Livelihood of Nepalese” was presented at a function organized by Hill Agriculture Research Project (HARP) in Kathmandu on 19 December 2003.

The report has been intended to provide recommendations on appropriate methods for identifying and using uptake pathways, and for scaling-up of agricultural technologies for HARP, NARC and National Agricultural Research and Development Fund (NARDF) that will also give hints to look at the functions and integration of research and development organizations, and the methods used by them to serve the farmers and consumers of Nepal. The study report has been taken as a contribution to a process leading to a multi-partner agricultural information system.

The report was prepared jointly by an international and a national consultants based on study on research and extension projects in the fields, consultation and discussion with government, non government international research and community based organizations. A two-day workshop was earlier organized to review the past experiences of uptake pathway and scaling-up of several technologies developed in Nepal through different means that held discussions on policy and methodological issues, constraints and solution for uptake pathways and Scaling-up, and roles of research and extension institutions, NGOs, private sectors and CBOs in uptake pathways and scaling-up.

The report gives an account of examples of successful scaling-up of technologies in Nepal initiated by different organizations and different scaling-up tools (eg. demonstrations, field days, training, on-farm trials, farmers’ field schools, mass media, exhibition etc.) used by them. The scaling-up process involves the testing of technology with farmers within the over all uptake system of inputs, markets, support needs, economic viability and proper farming system.

The report has made out some draft recommendations as follows:

Recognizing the environmental and socio-economic diversity in Nepal, scaling-up should:

- use a range of approaches, tools and methods selected according to the objectives, situations and available resources of the research, and of the clients for the research results
- draw on the rich formal and informal knowledge and implementation capacity available in the public, private, NGO and CBO sectors
- be flexible, dynamic and creative. There is no “right” way to scale up
- be efficient in the use of resources
- be clear who the client is, and accountable to the client

Planning for effective scaling-up

- The role of research should be extended from technology generation to include scaling-up to the point at which available technology has been delivered to the farmer
- The identification of uptake pathways and scaling-up methods be included in project design from the start
- Funding for pre-project activities between project concept note (PCN) and full proposal, situation analysis, needs assessment of the ‘uptake environment’, stakeholder analysis be included for future projects
- Research and development teams be assembled at the start of any applied/ adaptive research project, to plan, implement and monitor the project
- Scaling-up projects should include economic analysis (in a form understandable by clients). Those technologies that pay for themselves within the first year have the best chance of adoption.
- A move towards scaling-up of research does not obviate the continued need for supporting upstream research, but this should be demand driven
- The R&D organization consider shifting the emphasis from

demonstration to experimental learning methods such as Farmer Field School (FFS) and Participatory Varietal Selection (PVS)

- Scaling-up takes time, especially where participatory relationship needs to be developed. Project should allow realistic timeframes for projects that also take the subject matter into account
- Scaling-up approaches and methods are a legitimate area for research in their own right

Communication

- The development of a project communication strategy early in the project cycle for all projects
- Involvement in scaling-up will require research institutions to acquire (in-house or contracted) new skills in communication, market analysis and participatory approaches
- Best use should be made of the Regional Working Group (RTWG) and RECOM meetings for creating awareness, receiving feedbacks and making plans for further scaling-up

Monitoring and evaluation

- Monitoring and evaluation of projects should also include participatory M&E by project clients to gauge their satisfaction with project progress and identify areas that need modification
- NARC/NARDF should consider the (Sustainable Soil Management Program) SSMP practice of annual project stakeholder meetings to determine activities for the next year. This process provides a forum for reflection and adjustment.

Extra steps in scaling-up

- At the end of scaling-up projects, the research and development team should draw up a realistic Action Plan that details what action (who, where, when with what resources) is needed to further scale-up the technology
- Scaling-up of technology has no end date, as secondary opportunities and problems arise that will require continued backstopping. Research

budgets will need to cater for this on going-if low level-staff and financial commitment

Information system

- There is little Regional characterization to guide scaling-up into new areas. GIS could be a useful tool to integrate information leading to the identification of areas suitable for the extrapolation of technology
- NARC or NARDF should develop database of available technologies, research providers and knowledge seekers in a form that is probably better contracted out.
- Such database would enable NARC, NARDF or a private company to broker research information to clients
- Researchers and development agencies should develop promotional material together, combining their knowledge bases
- The approaches emerging for participatory research and scaling-up should be incorporated into the curricula of University and Training Centre courses

Pathways for research

- Researcher should consider linkages and joint funding with projects and programs
- The District Agricultural Development Committees are one important "window" through which to promote technologies
- There is continued lack of clarity on the roles of NARC and Departments during early scaling-up. This requires resolution by those organizations

Motivation of the research base

- The reward system for researchers is in need of an overhaul in the light of a focus on providing tangible benefits to farmers. Researchers need to be awarded for their contribution to farmer's livelihood, rather than to the knowledge base of academics.
- The plurality of research providers should be acknowledged and encouraged, rather than controlled and contained

Swedish Scientists Visited NARC

A team of Swedish Scientists visited different entities of Nepal Agricultural Research Council (NARC) in November 2003.

The team consisting of Prof. Anders Jonsson, Research Director of V-L Foundation, Swedish Farmers' supply and Marketing Cooperation; Prof. Olof Olsson, Plant Molecular Biologist, Gothenburg University; and Dr. Gokarna Gharti-Chhetri, Gothenburg University, Sweden visited Agriculture Botany Division and Biotechnology Unit at Khumaltar on 10 November, and Regional Agriculture Research Station at Lumle on 14 November. The team had also meetings with Executive Director, Director of Planning and Coordination, Director of Crop and Horticulture Research, Director National Agriculture Research Institute (NARI) at the NARC Head Quarters.

The scientists also gave talk programs during their visits.

The team was on a week-long visit to Nepal who also visited National Planning Commission, Royal Nepal Academy of Science And Technology (RONAST), Tribhuvan University (TU), and Himalayan College of Agriculture Science & Technology (HICAST) and had meetings with officials of the respective offices.

Policy issues

- A conducive policy environment is needed to encourage scaling-up. Elements of this include: improving accessibility to rural credit; supporting emerging markets; ensuring input supply to remote areas; and encouragement of farmer associations/cooperatives.
- Scaling-up projects should not be afraid to influence local or national policy if that is needed to provide the best environment for adoption

Talk Programs Held at NARC

"Agriculture Research in Sweden for the benefit of Farmers" by Prof. Dr. Anders Jonson, Research Director of V-L Foundation, Swedish Farmer's Supply and Marketing Cooperation organized by NARC at Khumaltar on 10 November, 2003.

●
"Development of Stress Tolerant Plants by Biotechnology and Building Collaborative Research between Sweden and Nepal" by Professor Dr. Olof Olsson, organized by NARC at Khumaltar on 10 November 2003.

●
"The Quest for Nitrogen Fixation in Rice" by Professor E.C. Cocking, Fellow of Royal Society of London & Director, Centre for Crop N Fixation, University of Nottingham, UK, organized by NARC at Khumaltar on 17 November 2003.

MoU between NARC and SIMI

For a collaboration to recommend optimum utilization of water to small holders; to disseminate research results to the farming community; and to identify smallholders' researchable problems for further research design, the Nepal Agricultural Research Council (NARC) and Smallholder Irrigation Market Initiative (SIMI), a joint project of Winrock International and International Development Enterprise (IDE) with local partners signed a memorandum of understanding (MoU) on 25 November 2003.

Under the MoU signed for a two year term, NARC will provide technical resource persons and physical facilities for conducting research activities and for training and SIMI will provide funds to carry out project activities set forth mutually, organize trainings to NARC staff where needed and provide technical assistance to carry out project activities. The project activities will be as per detail work plan developed jointly by nominated representatives from both parties.

NARC Scientists: Recent Ph.D. Holders



Ms. Krishna Kumari Shrestha, Senior Pathologist in NARC has obtained Ph.D. in Plant Pathology from the University of Connecticut, USA.

In her Ph.D course, Dr. Shrestha made study on "Integrated disease management of tomato late blight, *Phytophthora infestans* (Mont.) de Bary"

Biopesticides such as *Azadirachta indica* (Neem), *Artemisia vulgaris* (Mugwort) and *Trichoderma viride* were tested along with the fungicides Krilaxyl (metalaxyl 8 % and mancozeb 64 %) and Dithane M-45 (mancozeb 80%) in Nepal during 2000 and 2001. The three biopesticides as well as both the fungicides were found to be more effective than the control. Two cropping periods, normal and 3 weeks after normal were tested against the presence of lateblight and its effect on yield.

Eighty tomato genotypes were evaluated against late blight under field conditions in Nepal and under laboratory conditions in the University of Connecticut.

Dr. Shrestha, has worked in the field of agriculture as a plant pathologist for the last 30 years.



Mr. Niranjana Prasad Adhikari, Senior Scientist (S-4) in NARC obtained PhD in agronomy from Indian Agricultural Research Institute (IARI), New Delhi, India.

In his Ph.D course, Dr. Adhikari made study on "Effect of integrated nitrogen management on yield and quality of aromatic rice and their residual effect on succeeding wheat."

The field experiments were carried out at IARI, New Delhi during the crop seasons of 2001-2002 and 2002-2003. The study had the objectives to study the effect of integrated nitrogen management on growth, yield and quality of aromatic rice cultivars; the residual effect of integrated nitrogen management on growth and yield of succeeding wheat; to evaluate the influence of integrated nitrogen management on nitrogen uptake by aromatic rice and wheat; and to study the impact of integrated nitrogen management on fertility status of soil in rice-wheat cropping system.

Dr. Adhikari, born in 1954, obtained his M.Sc. in Agronomy from University of Philippines at Los Banos. He has been working in the agriculture research field for the last three decades.



Ms. Junoo K Tuladhar, Soil Scientist (S-2) in NARC has obtained Ph.D. in soil science from the University of Bonn, Germany.

In her Ph.D course, Dr. Tuladhar made study on "The effect of *Azola* on nitrogen use efficiency in rice-wheat rotations of Nepal"

The role of the floating aquatic fern *Azola* in reducing ammonia volatilization from applied urea, the effect of *Azola* and urea combination on grain yield and the possibility of nitrogen sequestration by *Azola* was studied in farmer's fields under rice-wheat rotation Bageswori Village Development Committee, Bhaktapur, Nepal. Two experiments on rice and one on wheat were conducted in 2001 and 2002. A complementary pot experiment was carried out at the experimental station of Khumaltar in 2001. Treatments with different levels of N(0,30,60,90,120 kg/ha⁻¹), *Azola* alone, and urea (60 kg ha⁻¹) combined with *Azola* were evaluated.

Dr. Tuladhar obtained her M.Sc. (Soil Science) from University of Reading, UK in 1996. She has been working in Soil Science Division, NARC.



Mr. Ram Brikchha Prasad, Senior Scientist (S-4) in NARC obtained Ph.D. in agronomy from the University of Wales, Bangor, UK.

In his Ph.D course, Dr. Prasad made study on "Maize and soybean intercropping in Nepal."

In order to identify the constraints of maize/soybean intercropping system under farmers' conditions; the effect of varying plant population on the growth and yield of maize and soybean plants when grown as intercrops; and the effect of maize removal at different times (as practiced by local farmers) on growth and yield of maize and soybean grown as intercrops, the field experiments and farmers survey were conducted at Deorali Village Development Committee of Palpa District, Nepal during summer cropping periods in 2001 and 2002 and a pot experiment was conducted in 2003 at Henfaes Research Centre, University of Wales.

Dr. Prasad, born in 1952, has been working in the agriculture research field for the last three decades.

TRAINING WORKSHOP/SEMINARS, STUDY & TOURS (October - December 2003)

S.N.	Name	Position/Faculty	Subject	Duration	Country
<u>SEMINAR/WORKSHOP/MEETING</u>					
1.	Mr. Raghunath Prasad Sapkota	Executive Director	Council of Rice Research in Asia CORRA & International Rice Conference	11-15 Oct.	Malaysia
2.	Dr. Jwala Bajracharya	S-4/Ag.Botany	Workshop on creating an opportunity for Investigators	23-25 Oct.	Kenya
3.	Dr. Hari Prasad Bimb	S-4/Biotechnology	Asian Maize Biotechnology Network Meeting	4-6 Nov.	Thailand
4.	Mr. Shree Krishna Adhikari	S-4Ag.Engineering	Baseline Conference of the Challenge Program on Water and Food	2-6 Nov.	Kenya
5.	Mr. Nawal Kishore Yadav	S-3/Agronomy	CLAN Steering Committee Meeting and Pigeonpea Meeting	10-14 Nov.	India
6.	Mr. Khadga Bahadur Shrestha	S-2/Ag.Engg.	APCAEM Regional Seminar on Post Harvest Technology	3-5 Nov.	China
7.	Mr. Shree Krishna Adhikari	Chief/Ag.Engg. Div.	Technical Advisory Committee & Agricultural Engineering Machinery	24-27 Nov.	China
8.	Dr. Shree Ram Neupane	Chief/Anm.Breeding	W/S for Discussion on C/Rep.on the State of the World's Animal Genetic Res.	8-10 Dec.	Bangkok
9.	Mr. Raghunath Prasad Sapkota	Executive Director	The 7th Executive Committee Meeting of APAARI	1-4 Dec.	Bangkok
10.	Mr. Hari Ram Shrestha	Director/Livestock	Stakeholder W/S on Using Livestock to improve livelihoods of landless	9-17 Dec.	Bangladesh
11.	Mr. Bholan Man Singh Basnet	Chief/C.P&Doc.	Expert Consultation on Strengthening Regional Agricultural Information	1-3 Dec.	Bangkok
12.	Mr. Bir Bahadur Maharjan	Chief/Planning	Thematic Workshop on Aquatic Ecosystem and Fisheries	21-22 Dec.	Bangladesh
13.	Dr. Ash Kumar Rai	Chief/Fish. Res. Div.	Thematic Workshop on Aquatic Ecosystem and Fisheries	21-22 Dec	Bangladesh
<u>TRAINING/STUDY OBSERVATION</u>					
14.	Mr. Manoj Kumar Thakur	T-6/Comn	Information and Communication Technology	8-16 Oct.	Indonesia
15.	Dr. Madhusudhan Pd. Upadhyay	S-4/Ag.Botany	Study Visit	9-20 Oct.	India
16.	Dr. Shree Ram Neupane	Chief/Anm. Breeding	Study Visit	9-20 Oct.	India
17.	Mr. Shreemat Shrestha	S-3/Ag.Engg.	Several Bullock Drawn Zero Till Drills & Light Weight Power Tillers	24 Nov.-2 Dec.	India
18.	Mr. Ghana Shyam Malla	T-6/Ag.Env.	Study Visit on Climate Prediction and Agri. Methane NO ₂ Emission	24 Nov.-8 Dec.	India
19.	Mr. Mahendra Jung Thapa	S-3/Post-harvest	Study Visit on Post-Harvest Technology	2-16 Dec.	India
21.	Mr. Ravi Rasaili	T-6/Ag.Engg.	Study Visit on Post-Harvest Technology	2-16 Dec.	India
22.	Mr. Rebati Raman Chadhary	S-3/Sugar Res.Prog	Training/Study Visit at Sugarcane Breeding	10-22 Dec.	India
23.	Mr. Rabendra Prasad Sah	T-6/Agronomy	Rainfed Rice-Fallows Cropping	11-17 Dec.	India

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Under the MoU, both the parties will exchange technical information including research papers, scientific publication and other relevant materials; exchange animal and plant germplasm and breeding materials on a reciprocal basis; conduct joint researches, symposia, workshops, seminars and trainings, study visits on subjects mutually agreed.

The MoU was signed by Mr. Raghunath Prasad Sapkota, Executive Director, NARC and Dr. Young Wook Kim, Administrator, Rural Development Administration (RDA), Republic of Korea.

Korean Team Visited NARC

An official team from Rural Development Administration of Republic of Korea visited different units and stations of NARC on 9-13 November 2003.

The team consisting Dr. Kyung-Han Ryu, Director and Dr. Young Wook Kim, Administrator, Rural Development Administration of Republic of Korea visited different disciplinary divisions at Khumaltar and Regional Agricultural Research Station, Lumle and Fishery Research Station, Begnas. During the visit, the team had meetings with Executive Director and Directors of NARC. A memorandum of understanding (MoU) between NARC and The Rural Development Administration of Republic of Korea was also signed during the visit.

Wheat Seed Distribution

With the view to motivate farmers' participation in research and promote wheat production, wheat seeds were distributed to farmers amidst a special function at NARC, Khumaltar, Lalitpur on 23 October 2003.

Based on the participatory variety selection (PVS) at different places in the valley for last some years, seeds of the variety "B L 1473" already released and "B L 1813" in the process of release were distributed a packet of 20 kilograms each to fifty five farmers from Kathmandu, Lalitpur and Bhaktapur districts.

Secretary of Ministry of Agriculture and Cooperatives, Mr. Poorna Prasad Manandhar, the Chief Guest to the function distributed the wheat seed packets to the farmers.

During the occasion, the Secretary, Director General of Department of Agriculture, Mr. S.S.Shrestha CIMMYT scientist, Dr. G.O. Ferrera, Director of Crop and Horticulture Research Dr. R. P. Sah, Kathmandu District Agriculture Development Officer Mr. Dila Ram Bhandari and farmer representative, Mr. Bala Ram Maharjan spoke on the importance of the program. Mr. Madan Raj Bhatta, Coordinator of Wheat Research Program talked about the wheat varieties.

At the functions, Farmers, Agriculture Development Officers, representatives from Ministry of Agriculture, Department of Agriculture, Scientists/Researchers from NARC and CIMMYT were present.



Photo: Rajendra Bajracharya

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