



Vol. 8 No. 2

April - June 2001

## NARC-IRRI Research Planning Workshop

In pursuant to the Memorandum of Understanding (MoU) between the Nepal Agricultural Research Council (NARC) and the International Rice Research Institute (IRRI) signed at IRRI Philippines on 19 January 2001, key officials and scientists of the NARC and IRRI together with the representatives of non-

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### NARC Expressed Felicitations

NARC, in a function organized on 2 June 2001 at NARC Building, Ramshah Path felicitated His Majesty King Gyanendra Bir Bikram Shah Dev on His Majesty's accession to the Throne. Executive Director Dhruva Joshy, on behalf of NARC family expressed hearty and loyal felicitations. Flowers and garlands were offered to His Majesty's Portrait.

### Hearty Felicitations



We NARC family extend our Hearty and loyal felicitations to His Majesty King Gyanendra Bir Bikram Shah Dev on His Majesty's accession to the Throne of Kingdom of Nepal and wish His Majesty a long and prosperous reign and prosperity of the country

## Tenth NARC Annual Day Observed

Tenth Annual Day of the NARC establishment as an autonomous organization was observed with a special function held at NARC Building, Singh Durbar Plaza, Kathmandu on May 8, 2001.

### Inauguration

The function was inaugurated by Hon'ble Minister for Agriculture and Cooperatives Mr. Chakra Prasad Bastola as the Chief Guest to the function. Minister of State for Agriculture and Cooperatives, Mr. Narendra Bikram Nemwang Chaired the Function. The function was attended by chiefs/heads/officials of different institutions, NARC

officials and employees. Welcoming the function the Hon'ble Minister talked about the agriculture constraints in the country and importance of the research in agriculture.

### Welcome address

The Executive Director Mr. Dhruva Joshy welcomed all the guests and participants in the function and talked about the achievements of the last nine years of the NARC establishment. He called the day an auspicious occasion to review and evaluate the past works/achievements and reassert commitment for further endeavor in making out research outputs to help farming community and the nation as a whole. The NARC is in the way taking a direction with institutional reforms and wider linkages and what is necessary is a change in attitude, he said. He expressed commitment that in consideration of past

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### ISSUE HIGHLIGHTS

- NARC-IRRI Research Planning Workshop
- Tenth NARC Annual Day
- Regional Agricultural Research communication Workshop Held at Nepalgunj
- Impact Study of Agricultural TV, Radio Programs and Publications of AICC
- Press Conference organized
- REWIN Workshop on PRISM Held
- RWC-PRISM-Project and Research Information System Module
- Trout fish released in farmer's raceways

## Impact Study of Agricultural TV, Radio Programs and Publications of AICC

Agricultural Information and Communication Centre (AICC) under Ministry of Agriculture and Cooperatives, previously Agriculture Communication Division (ACD) under Department of Agriculture has been producing and distributing promotional materials (leaflet, folders, poster, booklet, magazines etc.) to farmers and extension workers since a long time back. Radio agricultural programs from Radio Nepal that is of most access to people all over the country is another effort of the Centre in educating farmers with new and improved technologies in various agricultural fields. It has a history of three and a half decades and now it is being broadcast daily in the evening time covering a wide range of subjects. Daily agricultural programs on Nepal Television started since July 1998 with joint collaboration between AICC, NARC and NTV that is constantly being broadcast at every evening time. However, agriculture related program in irregular basis used to be broadcast from NTV since some years back.

It is for the first that the impact of these agriculture promotional programs has been evaluated. The study was conducted by Centre for Economic Development and Administration (CEDA), TU for the AICC to further improve the programs. The main objectives of the study was to assess the impact of audio, video and printed production of the AICC in disseminating technologies and new knowledge in agriculture for enhancing sustainable production/productivity in crops/livestock sector and identify the areas for improvement in the future.

The over-all impact evaluation of these programs from the framers and extension staffs survey has been reported to be useful sources of knowledge and information to farmers. Agriculture program from Radio Nepal has been found most effective followed by NTV and publications. It has been also reported that the knowledge and information obtained from these sources have been practically applied in the field by the farmers. However, some recommendations have been made for improvement in quality and quantity of the programs that are as follows.

### Recommendations:

- Efforts should be made for preparing such programs more effective by making them simple, short, to the point and practical, which should be prepared mostly by the concerned experts.
- There is utmost need to continue to broadcast more programs in a more attractive way on different issues. In addition, it has also been suggested to make dramas to broadcast from Radio Nepal and NTV's agricultural programs
- Make more programs with interviews of the successful farmers and discussions among the farmers. Documentary films can also be made about them and shown from time to time at the farmers' training or gatherings.
- Start discussion programs with the concerned officers of different ecological and different regions in order to discuss about the regional problems. The participants in the discussion could be among i) DADO; ii) Livestock officers ; and iii) Cooperative officers
- Popularize AICC's programs with songs related to agricultural activities, So, motivate the JT/JTAs and other interested composers to compose such songs.
- From Nepal Television, make some dramas related to agricultural activities (such as television series like "Devi" which was very popular) to impart knowledge about the farming practices and methods to improve farming techniques.
- In the television, more efforts should be given to include more visuals to make it attractive and eye-catching.
- Make some programs in local languages such Maithili or Bhojpuri. Use simple spoken Nepali language and avoid English words.
- Pre-inform about every day's program as well as next day's program in a regular way.
- Broadcast time of the agricultural program from Radio Nepal and NTV that is same at present should be changed so that the same farmers

### Researchers - Press Interaction Held

At the completion of the ninth year of the establishment of NARC as an autonomous organization, an interaction between NARC Scientists and Journalists was held at NARC Building, Singh Durbar Plaza on 7 May 2001.

In the program Executive Director Dhruva Joshy briefed about works and achievements of NARC and impacts of the research in the field. As he pointed out NARC after a series of research and trials at stations and on farm has recommended high yielding and location-specific varieties of different crops with total package of practices to farmers and the coverage of the recommended varieties in the farmers' field is large. The coverage of released and recommended varieties of rice, maize and wheat in the fiscal year 2056/57 was 71, 67, and 90 percent of the total cultivated areas of the crops respectively. Due to short duration varieties developed, it has been possible to cultivate 80-90 % of the land that used to remain fallow in winter. The Executive Director informed the journalists that NARC has prepared a 10-year agriculture research strategy for the first time that will guide for institutional development and the research works of NARC.

could hear/watch both Radio and TV programs.

- Although the varieties of publication series (leaflet, folders, posters, booklets, magazines) of AICC are quite popular among the farmers, there is still some room for improvement to make them user-friendly and location-specific as regard to language, graphics, relevancy, consistency, completeness and clarity.
- Initiate to develop a library or documentation unit in each Centre or Sub-centre so that interested farmers can go there and refer the publications. Instead of all publications, only relevant publications as per the geographical and ecological regions should be safely documented.

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## Regional Agricultural Research Communication Workshop Held

Regional Agricultural Research Station (RARS), Nepalgunj organized the First Regional Agricultural Research Communication Workshop at Khajura Nepalgunj on 13 March 2001.

The one-day workshop organized to discuss the role of communication in agriculture technology transfer and make communication strategy in the Regional Agricultural Research Station was participated by researchers, extension workers, journalists and representatives from NGOs and farmers in which the participants emphasized the regular linkages and coordination among research, extension and media.

Mr. Shankar Giri, Council Member of the NARC as the Chief Guest inaugurated the Workshop at the special opening function chaired by Dr. Padma Bahadur Singh, Chief of Agricultural Information and Communication Center (AICC). Mr. Shambhu Bahadur Pandey, Director of RARS, Nepalgunj, welcomed all the guests and participants and highlighted the objectives of the workshop and briefed about the technologies developed at the RARS. At the function Mr. Shankar Giri, the Chief Guest, Dr. Padma Bahadur Singh, Chief of AICC; Mr. Bholu Man Singh Basnet, Chief of Communication, Publication and Documentation Division, NARC; Mr. Pramod Pradhan, Regional Chief of Rastriya Samachar Samiti (RSS), and Mr. Dil Bhushan Pathak of Kantipur Publications spoke about the importance of communication in agricultural research and development. Mr. Rishi Raj Sharma, Senior Scientist at the Station conveyed the vote of thanks. The function was convened by Mr. Subhashananda Vaidhya.

In the technical sessions of the workshop, presentations and discussion on the present status, past experiences and future strategies of agriculture communication was held. The workshop concluded with some suggestions as follows:

- Interaction of farmers, researchers, Extensionists, journalists be organized at regional level
- New/proven technologies be publicised through local news papers and Radio.
- Information materials on new technologies be prepared in time
- Provision of rewards for best news on agriculture be made.

## REWIN Workshop on PRISM Held

REWIN (Regional Working group on Information Management) of Rice-Wheat Consortium (RWC) for the Indo-Gangetic Plains (IGP) had a training workshop on Project and Research Information System Module (PRISM) from May 31 to June 5, 2001 at New Delhi, India.

The Workshop organized by the Rice-Wheat Consortium (RWC) of the CIMMYT in collaboration with WISARD-IAC/WIS Int, and Option Infinite, was participated by representatives from India, Nepal and Bangladesh. The participants had theoretical and hands-on practical knowledge on PRISM and had discussion about efficient implementation of this shared information systems.

### Recommendations of the REWIN Workshop

The Workshop recommended:

- To submit a proposal to support a further implementation of PRISM in the four countries and secure funds for those tasks that can't be allocated from funds available within the national system and the respective research organizations
- That a promotional strategies is developed to make potential users more aware about PRISM
- That the National Focal Points (NFPs) and Organizational Focal Points (OFPs) need to promote PRISM through awareness campaigns in the region
- That REWIN and the developers of PRISM/WISARD work closely together to adapt PRISM to the requirement of the users
- That additional information is available on the PRISM website such as news item, grant, upcoming events, successfully proven and pipeline stories, technologies, innovations, and

training opportunities, to attract more users

- That the PRISM/WISARD build up mechanism for off-line data entry
- Incorporate visuals/illustrations/ Maps/GIS & GPS with graphics in PRISM
- At the end of each year, the information contained in PRISM be published in CDs and distributed to NFPs/OFPs/Libraries of the participating countries

### Conclusions of the REWIN Workshop

The RWC, REWIN and WIS International:

- Acknowledge the innovative RWC-PRISM information system bringing together information on organizations, experts, projects and sharing this on the internet in an easy-to-use interface with all stakeholders in the region
- Are aware that the decentralized data entry needs content management and quality control by NFPs and OFPs.
- State that with the expertise provided in the workshop the consortium countries will be able to establish the NFP/OFP structures
- State that that NFPs and OFPs participating in the started data entry on their respective countries for which directories of organization were produced
- Are aware that the success of PRISM will depend on the Participation of individual users having clear insight of the potential benefits of participating in data entry
- State that PRISM data should be output in more presentable forms by geo-referencing to satisfy different group of users
- Observe that good internet connectivity must be ensured for PRISM to operate efficiently



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# RWC-PRISM

## Project and Research Information System Module

PRISM is an internet-based platform for existing and new information on agricultural research and development searchable through one window. The system provides overviews of organization and experts in agricultural research and development and their projects and outputs by region/country, theme and /or type of organization.

RWC-PRISM uses the Interact Tool of WISARD (Web-based Information System on Agriculture Research and Development) for data entry, updating and focal point management.

Decentralized data entry is one of the main cornerstones of the RWC-PRISM and WISARD systems. Any one can input data (organization, expert or project) on-line with Interact Tool at:

[www.wis.cgiar.org/rwc/sharedhome.html](http://www.wis.cgiar.org/rwc/sharedhome.html)

or

[www.wisard.org](http://www.wisard.org)

One has once to register and create own user ID and password that is free on-line at the sites. The data entered will come to the internet browsers after focal point accepts them after checking the quality of data input.

### Objectives

- To strengthen capacity of the regional NARS and relevant stake holders in (content) management in order to guarantee broad use of the information system by all stakeholders
- To share information, avoid duplication reduce costs and increase efficiency under a network of stakeholders

### How ?

PRISM offers a web-based information system to:

- Increase transparency, efficiency and impact of efforts
- Catalyse interactions and partnerships
- Support management of ARD organizations
- Increase use of existing information and knowledge

### For whom?

PRISM is for supporting:

- Policy makers
- Researchers and development practitioners
- Managers of international, regional and national organizations in the public and private sector, NGOs and farmers organizations.

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experiences and time's needs, the agriculture research system will be updated for effective outputs.

policy need to be brought forth so as the Nepalese agriculture products can compete with those from other countries.

He said the agriculture can no longer be "a culture" but "a business".

He also outlined the constraints of agriculture development in the country that the farmers can not afford the costly agriculture inputs, and there is lack of infrastructure like irrigation, roads etc. Hon'ble Minister of State for Agriculture and Cooperatives, Mr. Narendra Bikram Nemwang remarked the contribution of the

agriculture research in the fields and urged the need to take the technologies to the farmers as they themselves are not able to adopt them. He also outlined the need to introduce appropriate alternatives in agriculture that may be more beneficial to farmers. Mr. Hari Shankar Tripathi, Hon'ble Member of National Planning Commission said Agriculture is the only source for poverty alleviation in Nepal and research is very necessary. Secretary of Ministry of Agriculture and Cooperatives said the contribution from research is remarkable but the population growth has urged for more. He said in addition to the agriculture research other requirements like inputs, irrigation, roads are the other priorities of the country. Dr. Madhusudan Prasad Upadhyaya, Senior Scientist talked about the contribution of agriculture research and the limitations.



Photo: Rajendra Bajracharya

Hon'ble Minister Chakra Prasad Bastola inaugurating the function by lighting traditional lamp (BAPS)

### Remarks and directives

The Hon'ble Minister remarked that importance and relevance of agriculture research has been further increased in order to make our agriculture production more competitive in world market. In order to shift the subsistence agriculture system to commercial one, an appropriate agriculture



Photo: Rajendra Bajracharya

Inviteses and participants in the NARC Annual Day Function

### NARC Employees Honored

Thirty-Four NARC employees having completed 25 years of their service were honored with plaques and certificates by Hon'ble Minister during the NARC Annual Day Function

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- Initiate to put some of the useful AICC's publications for sale in a local bookshop at cost price at least on a trial basis for one year. Such publications should match with the geographical and ecological region and location specific publications.
- Need advertisement about the publications so that more farmers will know about such materials available for their benefit. Put an advertisement board informing about the availability of such publications for sale with price.
- Use latest technology on communication such as Internet/website to put publication materials for wider dissemination.
- Time to time follow-up survey is very necessary to make necessary changes as per time.
- AICC may seek expert services, for strategic planning exercise, Internet/website development, radio drama series development and so on.

### **Research & Development Strategy on Maize Prepared**

Agriculture Research Station (ARS), Dailekh has prepared a short term **Operational research and development plan (strategy) for increasing the production and productivity of maize in the Mid and Far Western Hills of Nepal.** The five-year plan that begins in 2002 has focussed towards the identified constraints and potentials from the survey conducted in different districts in the past year.

The operational plan has been divided in two parts namely, Maize varietal improvement and development plan, and Sustainable and collaborative community based seed production program at village level.

### **NARC Day observed at Regional Station**

The tenth NARC Annual Day was also observed at Regional Agricultural Research Station, Nepalgunj with a special function on 8 May 2001.

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PC computers, one A0 size Calcomp digitizer, one A3 size Summasketch III professional digitizer, one 24" HP Design Jet colour plotter, and one A4 size HP Laser Jet colour printer. All the computers in the lab are in networking to each other for access of the data. The software used in the GIS lab is Arc/Info 3.4D, Arc-view 3.1, IDRISI win 2, ILWIS 2.1 and other supporting software's e.g. Dbase, Excel, Minitab.

So far, we have applied the GIS technique to monitor the land use changes in the Sundi Khola micro watershed in Kavre district and Rupandehi district. Other application of GIS was in the management of natural resources of Rupandehi district. We have done soil survey in this district and prepared different layers of maps, e.g. land use, geo-pedological, river, roads, VDC, soil pH, organic matter, nitrogen, phosphorus and potash. We had also prepared the agro-ecological zone map of district considering the land use, soil, rainfall, temperature and length of growing period parameters. Another application of GIS tool was to analyze and mapping of time series data of fertilizer use and crop production in Nepal. In this study, we used the different years of Central Bureau of Statistics (CBS) and Agriculture Input Corporation (AIC) data to correlate the crop yield with the use of fertilizer.

### **Constraints and Limitations**

Despite technological advancement of RS/GIS, their dramatic declining costs

and improved user-friendly software, the potential benefits of RS/GIS have not been fully exploited. The use of RS/GIS must involve awareness of the limitations of not only the available data but also the understanding of environmental processes and technology in use. There are such other limiting factors as data standardization, data access and exchange, deficient institutional framework, complex topography, and lack of trained manpower. ● ● ●

### **Trout Fish Released in Farmer's Raceways**

Fingerlings of Rainbow Trout fish were released in farmer's private raceways ponds maintained for commercial Trout fish culture at Madaanpur, Nuwakot, with a special function on 9 May 2001.

About 7000 trout fries and fingerlings provided from NARC for a subsidised price ( NRs 2 per pc) were released in the newly prepared raceways. A package of Trout culture technology developed by the fisheries research of NARC at Godavari and Trishuli has also been provided to the farmers. Trout culture as a private business of farmers have been successfully launched at three other places in Parbat and Nuwakot Districts since some years back. Breeding of trout is done at Fisheries Research Division/Station at Godavari/Trishuli. The farmer's trout culture farms are identified as outreach research sites of fisheries research of NARC.

The Rainbow Trout (*Oncorhynchus mykiss*), a fresh cold water fish species, gives a high price with its taste and delicacy. The trout was first brought to Nepal from U.K. in 1989.



Executive Director, Dhruva Joshy releasing trout fingerlings in farmer's raceways; Directors and Scientists from NARC and farmers present besides

Photo: Rajendra Bajracharya

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# Remote Sensing and GIS in Agriculture Research and NARC Experience

- Kamal Sah

Remote Sensing (RS) and Geographic Information System (GIS) technology is growing rapidly throughout the world. For any kind of planning related with natural resources a comprehensive, accurate and timely information on the spatial distribution of natural resources like vegetation, soil, water, agriculture land use/land cover categories, waste lands and grazing lands, etc, is most necessary. In the past, people had to rely on field survey personal contact for information that was very time consuming and inaccurate. Satellite remote sensing, with its unique capability of providing repetitive synoptic view and rapid coverage over large areas of the world, is an important tool not only for specific field of study, but also for the multiple application and integrated planning, development and management of land, water, forest, agriculture, climate, communications and other natural resources. The information gathered from the remote sensing data is accurate, less time consuming and cost effective.

## What is Remote Sensing?

*“Remote Sensing is defined as the science and art of obtaining information about an object, area, or phenomenon through the analysis of data acquired by a device that is not in contact with the objects, area, or phenomenon under investigation.”*

In normal life, every day we are getting some data through our eye sensors while reading books and doing other works. The data our eyes acquire are impulses corresponding to the amount of light reflected from the dark and light areas on the books. Using various sensors, we remotely collect data that may be analyzed to obtain information about the objects, areas, or phenomena being investigated. The remotely collected data can be in many forms like variations in force distribution, acoustic wave distributions or electromagnetic

energy distributions. For example our eyes acquire data on variations in electromagnetic distribution in the visible portion of the energy.

## What is GIS?

*“A Geographic Information System (GIS) is a computer-assisted system for the acquisition, storage, analysis and display of geographic data.”*

GIS has been designed to help us answer two types of questions:

1. What happens in a particular place?
2. Where does a particular thing happen?

Both of these are questions about spatial information, they are asking about where things are. Any business, which needs to ask questions of this type, and this day probably does, use a geographical information system. GIS has had an enormous impact on virtually every field that manages and analyses spatially distributed data. The incorporation of GIS capabilities into an institution requires an investment in hardware and software, manpower and organization-wide education and training. In many ways, learning GIS involves learning to think- learning to think about patterns, about space and about processes that act in space. Today, a variety of software tools are available to assist the RS/GIS activity, e.g. Arc/Info, Arc-view, IDRISI, ERDAS and ILWIS.

## Remote Sensing and GIS in Agriculture Research

Farmers, more than any other professionals, have an intimate relationship with the land. The qualities of their land have a direct bearing on the quality of their crops or the well being of their animals. Some fields will always be water-logged in the winter, and so are not good for cattle. The soil in other fields will be low and will need more fertilizer than others, and so on.

This means that the farmer always has to think about how she or he is going to manage various parts of the farm, because they are all different. To use the jargon of RS/GIS, there is tremendous *spatial variability* in farmland and farmers need to understand the effects this will have on their crops and livestock.

The application of RS/GIS tool is increasing day by day in many fields. Agricultural research scientist has also applied the RS/GIS tool for their research work. Many international and national agricultural research organizations have their own RS/GIS facilities and using this tool for the agricultural research. Some examples of RS/GIS application in agriculture is given below:

- Acreage estimation of the agricultural crops.
- Monitoring of the crop vigour at different stages.
- Monitoring of the diseases and pest attack in different crops.
- Crop modeling and yield estimation of the agricultural crops.
- Monitoring crop rotation, cropping intensity, cropping pattern and land use changes over time.
- Land or crop suitability analysis and mapping.
- Soil survey and mapping.
- Agro-ecological zonation.
- Irrigation management of the crop fields.
- Assessment of the soil moisture condition of the agriculture fields.
- Estimation of soil loss from the agriculture farm or watershed area.

## RS/GIS in NARC

In 1995, the GIS lab was established in the Soil Science Division of NARC. Presently the lab is facilitated with five

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## TRAINING WORKSHOP/SEMINARS, STUDY & TOURS ABROAD (April - June 2001)

S.N.	Name	Position/Faculty	Subject	Duration	Country
<b><u>SEMINAR/WORKSHOP/MEETING</u></b>					
1.	Mr. Dhruva Joshy	Executive Director	GFAR Meeting at Durban & Sixth General Assembly and Expert Consortium Meeting	18-25 May	South Africa & India
2.	Mr. Dularchan Shahu Pathik	Director/Crop&Hort.	SAVERNET-II Final Workshop	3-8 June	Thailand
3.	Dr. Sundar Kumar Shrestha	Chief/Plant Patho Div	„ „ „	3-8 June	Thailand
4.	Dr.. Kedar Budhathoki	Chief/Hort Div	„ „ „	3-8 June	Thailand
5.	Mr. Dhruva Narayan Manandhar	Chief/Entomo. Div.	„ „ „	3-8 June	Thailand
6.	Mrs. Ram Devi Timila	S-3/Plant Patho.	„ „ „	3-8 June	Thailand
7.	Mr.s. Sharada Joshi	S-3/Plant Patho.	„ „ „	3-8 June	Thailand
8.	Mr. Bhola Man Singh Basnet	Chief/Commn.Publ Div.	PRISM Training Workshop	31May-6June	India
9.	Mr. Ram Bahadur Maskey	S-3/Soil Science	Meeting on Research Planning at AIT	21-22 June	Thailand
10.	Mr. Bimal Kumar Baniya	S-4/Agri-Botany	Genetic Diversity Analysis and In-situ Conservation		Burkina Faso
11.	Mr. Dhruva Joshy	Executive Director	APARI Executive Committee Meeting	21-22 June	India
12.	Dr. Raj Kumar Shrestha	S-3/Soil Science	5th International Conference on Diffuse Pollution and Watershed management	10-15 June	USA
<b><u>OBSERVATION TOUR</u></b>					
13.	Mr. Bhola Man Singh Basnet	Chief/Commn.Publ Div.	Observation Tour at Haryana and Punjab	12-17 April	India
<b><u>TRAINING</u></b>					
14.	Mr. Krishna Prasad Gautam	S-3/Fisheries	Fish Training	24-Apr.-1Month	Egypt
15.	Mr. Upendra Lal Chaudhary	S-3/Hort	Characterization, Evaluation and Conservation of Tropical Fruits	14-26 May	India
16.	Mr. Gopal Prasad Lamsal	T-6/Fisheries	Overseas Technical Trainers Program	6 Jun.-5 Mar. 2002	Japan
17.	Mr. Ajaya Ratna Bajracharya	T-6/	Screening Maize genotypes for Weevil Resistance training at CIMMYT	14-24 July	Kenya
18.	Dr. Buddhi Ratna Khadge	S-3/Pathology	Fulbright Visiting Scholar Program	29 June-Nov.	USA
<b><u>STUDY</u></b>					
19.	Mrs. Jagat Devi Ranjit	S-3/Agronomy	Ph.D. in Weed Science	21 Jun-20 Jun 2004	Thailand
20.	Mr. Chet Raj Upreti	S-3/Livestock	Ph.D. in Animal Science	21 Jun-20 Jun 2004	Philippines
21.	Mr. Subarna Man Pradhan	S-3/Livestocks	Ph.D. in Animal Science	21 Jun-20 Jun 2004	Philippines
22.	Mrs. Neeta Pradhan	T-6/Fisheries	M.Sc. in Aquaculture	20 Jun-19 Jun 2003	Thailand
23.	Mr. Ram Kumar Shrestha	T-6/Fisheries	M.Sc.in Aquaculture	20 Jun-19 Jun 2003	Thailand

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governmental organizations met on 3-4 May 2001 at the NARC Building, Singh Durbar Plaza, Kathmandu. The workshop aims to develop a project outline to meet Nepal's rice research and development (R & D) requirements based on farmers' needs and to identify the roles of NARC, IRRI and other stakeholders (NGOs etc.) in addressing the priority needs.

The current situation and strategy of rice research and development in Nepal and the medium term plan of IRRI were presented and discussed to indicate the present situation. The participants then identified three priority research themes that need to be addressed:

- Integrated Germplasm Management (IGM)
- Integrated natural Resource Management (INRM), and
- Policy support (PS)

The workshop identified high priority activities within the themes for:

- 1) deliverables (options that are ready to be prompted)
- 2) those that require further research
- 3) training needs.

The high priority ranking of the identified R & D concerns integrate the needs, potential for impact, feasibility and timeframe. The project proposal will be developed later by NARC, IRRI and other stakeholders on the basis of the output of the workshop.

It was further agreed that IRRI will help NARC develop a project proposal and to jointly seek funding to implement the identified proposed project that will focus on technology generation and dissemination in alleviating poverty

## Heartfelt Condolence



We NARC family express our deep sorrow and heartfelt condolence over the unexpected and untimely demise of **Their Majesties King Birendra Bir Bikram Shah Dev, Queen Aishwarya Rajya Laxmi Devi Shah, King Dipendra Bir Bikram Shah Dev and other Members of the Royal family**

### NARC Expressed Sorrow

In a gathering on 2 June 2001 at NARC, Ramshah Path, the NARC staff expressed deep sorrow and heartfelt condolence over the unexpected and untimely demise of Their Majesties King Birendra Bir Bikram Shah Dev, Queen Aishwarya Rajya Laxmi Devi Shah, King Dipendra Bir Bikram Shah Dev and other Members of the Royal family.

through closing the yield gap of rice farming in Nepal.

Finally, the NARC and IRRI through Director for Planning and Coordination, NARC and Deputy Director General for Research, IRRI have agreed to pursue the outputs of the research dialogue.

### Upcoming Events

International Conference on Wild Rice, 4-10 November 2001, in Kathmandu organized by Green Energy Mission (GEM), Nepal

Symposium on Maize Research and Production in Nepal, 4-6 December 2001, in Kathmandu, organized by National Maize Research Program, NARC and Hill Maize Research Project (HMRP), CIMMYT.

### Patron:

Dhruva Joshy  
Executive Director

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