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Vol. 9 No. 1

January - March 2002



His Majesty King Gyanendra Bir Bikram Shah Dev is very keenly observing agriculture technology developed by NARC at the Exhibition

International Seminar on Mountains held

As a special mark to the year 2002 declared earlier as International Year of Mountains by United Nations, the International Seminar on Mountains was held in Kathmandu from 6-8 March 2002.

Exhibition on Mountains

A special exhibition on mountain was organized during the three-day International Mountain Seminar at Birendra International Convention Center, Baneswor, Kathmandu. The exhibition was aimed at introducing some of Nepal's mountainous traits to the delegates in the seminar. The exhibition was participated by various organization including NARC.

(Photos see on page 8)

The Seminar was inaugurated by His Majesty King Gyanendra Bir Bikram Shah Dev and was addressed by Rt. Honourable Prime Minister Sher Bahadur Deuwa at a special ceremony attended by about two hundred and fifty national and international delegates from twenty different countries.

The Seminar was organized by the Royal Nepal Academy of Science and Technology (RONAST) in cooperation with Ev-K2-CNR of Italy and with the co-sponsorship of the International Centre for Integrated Mountain Development (ICIMOD), World

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New Rice Varieties Released

Variety Approval, Release and Registration Sub-Committee of the National Seed Board under Ministry of Agriculture and Cooperatives on Feb. 21, 2002 officially released two new rice varieties "Chandannath-1" and "Chandannath-3" for Jumla (2,300 masl) and similar locations.

The two rice varieties as alternatives to the local variety "Jumli Marshi" have been released based on promising results after years of trials and testing at Agricultural Research Station (ARS), Jumla and farmers' fields at different locations.

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ISSUE HIGHLIGHTS

- International Mountain Seminar
- Two Rice varieties released
- 20 year Vision of NARC
- 2nd REWIN Workshop on PRISM
- Nepal Development Forum Meeting held in Nepal
- Rice anther culture at NARC
- MoU Between NARC and National Dairy Development Board
- Workshop on Fodder research and development
- Photo series on HM's visit to NARC's Exhibition

Workshop on Technology adoption

Workshop on "Study on the Constraints and dynamics of the Adoption of Recommended Technologies by Nepalese Farmers" was held on 8 March 2002 at NARC, Ramshah Path, Kathmandu.

The survey study report on impact of the technology on farmers conducted by an independent consultancy was presented at the workshop and comments from commentators and participants were held.

The study was conducted at different locations and different levels of farmers and extension people in the country to find out technology adoption level and impact, the way of technology transfer and dissemination, constraints in technology adoption.

The study has made recommendations on technology development, transfer and dissemination as follows:

Technology development

- The breeders must concentrate on developing hybrid varieties with cultivation techniques as farmers are demanding them much
- Researchers should concentrate their efforts on off-season vegetable production technologies
- Researches on buffalo and goat farming technologies for milk and meat production essential for poverty alleviation
- Researches on Eco-regional potential food crops be conducted

Technology development

- Interaction between researchers and extension people be held regularly on technology requirements and technologies themselves
- Screen the technologies based on potentiality of particular districts and provide them to farmers
- Research scientists must visit the sites of application to determine the applicability of technology for further modification

Technology dissemination

- Extension people at districts should study technology seeking behavior of farmers and disseminate technologies through farmers group
- Every DADO should divide areas based on agriculture development potentials and make list of technologies required per pockets
- Extension people should determine the easy availability of inputs (seed, fertilizers, irrigation) before disseminating new technologies and assured market for outputs.
- Frequent interaction between farmers and extension people be made

2nd REWIN workshop on PRISM

2nd REWIN (Regional Working group on Information Management) workshop on PRISM (Project and Research Information System Module) coordinated by the Rice-Wheat Consortium (RWC) for the Indo-Gangetic Plains (IGP) of the CIMMYT took place in New Delhi from 26-31 January 2002.

The six-day workshop was officially opened by Dr. Peter Hobbs, Regional Representative of CIMMYT and Dr. Raj K Gupta, Regional facilitator, RWC/CIMMYT followed by progress report presentations.

During the workshop, facilitated by Mr. Ruud Crul and Mr. F. Neuman with the use of metaplan technique and several additional tools such as force-field analysis, visioning and priority setting, the working group identified factors that were/are positive and supportive to progress of PRISM and factors that were/are negative and hampering progress and actions were formulated to overcome the problems. Major aspects of data quality were also identified by the working group with indicators for each of the aspects.

Based on planning session and the draft proposal of the previous workshop last year the REWIN Group worked on a Action Plan for Year 2002 that identified activities, the responsible persons, coordinators and indicators to monitor progress. and on the formulation of proposals for implementation of the identified activities for the years 2002 – 2005. A list of potential international donors was prepared and a draft proposal which will be adapted to national level requirements. Discussion in the group resulted in consensus on submission of national pilot project proposals to get funds for the short-term activities at the national level. For the longer-term activities the draft regional proposal – as formulated during this workshop - will be further elaborated by the REWIN Group in the coming months.

In a separate session an inventory was made for the uses of PRISM for Information management at organizational, national and international level. The REWIN Working Group selected a number of organisations at the international level to be invited in the coming year. And each country selected organisations to be invited at the national level.

Directories were made on ARD organizations available in PRISM by the three countries during the workshop for PR and presentation purposes.

Recommendations of REWIN Workshop

- Submit a proposal to support further implementation of PRISM in the four

countries and to secure funds for those tasks that can't be allocated from funds available within the national system and the respective research organizations

- develop a promotion strategy to make potential users more aware about PRISM through awareness campaigns in the region
- REWIN and the developers of PRISM/WISARD work closely together to adapt PRISM to the requirement of the users
- additional information be made available on the PRISM website such as news items, grants, upcoming events, successfully proven and pipeline technologies, innovations, and training opportunities to address multiple users needs.
- the PRISM/WISARD build up a mechanism for off-line search and data entry
- Incorporate visuals/illustrations/Maps/GIS & GPS with Graphics and the option of adding photos for persons 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.
- NFPs and OFPs be supported by the respective national systems and RWC to carry out their tasks
- Existing organizations in the region should aim at providing better connectivity whereas organizations with data-sources participate in PRISM to share information in a systematic manner
- National coordinators of the RWC in the respective countries should initiate a process to identify and ensure OFPs in the country
- Follow-interaction of REWIN is required on a half year basis initially. The workshop will be held in one of the respective countries on a rotational base.

The RWC-PRISM system is a shared regional platform for use by stakeholders in the IGP-region. It focuses on projects, organizations, experts and outputs of research (e.g. publications, models etc). The system has specific RWC-IGP functionality and classifications on top of the general functionality and common clearing mechanism in WISARD, the Web-Based Information System on Agricultural Research for Development. It is system based on decentralized management intended to support stakeholders in the region.

Nepal Development Forum Meeting Held In Nepal

The Nepal Development Forum Meeting was held in Kathmandu and Pokhara from 4-7 February 2002.

The meeting held first time in Nepal was participated by representatives from 24 donor countries, agencies and high government officials and was formally inaugurated by Rt. Hon'ble Prime Minister Sher Bahadur Deuba.



Development Exhibition Held

During the meeting, a special exhibition with the view to expose development activities and achievements to the participants and general public was also organized at Birendra International Convention Centre, Kathmandu

← Rt. Hon'ble Prime Minister along with Rt Hon'ble Speaker of House of Representative, Rt. Hon'ble ChairMan of Royal Assembly Standing Committee and Ministers observing NARC's Exhibition stall Mr. Bhola M S Basnet is briefing ↓

In the meeting Government of Nepal presented the Tenth Five Year National Plan, Poverty Reduction Strategy Paper (PRSP), the Medium Term Expenditure Framework and strategies and plan of action for the sectoral reforms as the key agenda.

Rt. Hon'ble Prime Minister in his inaugural address said the government is committed to achieve the goal by modernizing and commercializing

agriculture sector. "Without strengthening rural economy through changes in agriculture sector, there is no hope for economic transformation and poverty alleviation".



MoU on Dairy Research and Development Signed

Nepal Agricultural Research Council (NARC) and National Dairy Development Board (NDDDB) signed the memorandum of understanding (MoU) on 18 March 2002 for undertaking studies and researches for dairy research and development.

In the MoU, commitments from NARC and NDDDB have been expressed. Under the MoU NARC will:

- Provide the research facilities available at NARC for joint collaborative research
- Participate in the review and evaluation of the project
- Provide the report of the research project by undertaking workshop, uptake pathway and analysis of the research project
- Take a lead role for the development of the dairy research project

The commitments from NDDDB are:

- To play role on identification of issues, problems faced by the dairy farmers, entrepreneurs, consumers and other related agencies for improved dairy production and industry
- Develop joint projects for addressing identified issues and problems
- Work together for donor's support to undertake research project

A detailed workplan will be developed jointly by NDDDB and NARC for the development of technology on dairy science

The MoU was signed by Mr. Raghunath Prasad Sapkota, Acting Executive Director of NARC and Dr. Tarak Bahadur K.C., Executive Director of NDDDB

Stakeholders' Workshop on Fodder Research and Development

With the view of improving livestock production through integration of biology-based technical support and indigenous knowledge of tree fodder, a one-day stakeholders workshop was organized on 19th March 2002 at Dhulikhel, Nepal.

The workshop was jointly organized by NARC, Bangor University of UK, Department for International Development (DFID), Hill Agriculture Research Project (HARP) and Agriculture Research Station (ARS), Pakhribas. In the Workshop presentations on research activities conducted in different districts in eastern Nepal and achievements, discussions on future strategies were held.

In Nepal 250 different fodder trees are reported to have been found among which 150 are in mid-hills.

20-year vision for agriculture research

Based on Agriculture Perspective Plan (APP); national agricultural policies and experiences with the institutional development of agriculture research in the country, the 20-year vision has been prepared passed and released.

Major objective of this strategic vision is to provide guideline for integrated management of the research on agriculture and related natural resources as per national needs and priorities. Summary of the document is given below.

Summary

This is a strategic vision for agricultural and related natural resources (ANR) research to holistically address nationally identified needs and priorities while at the same time tapping institutional, human and financial resources from a wider spectrum of stakeholders and research providers. It underscores the new institutional changes needed for making the ANR research system in Nepal more problem-based and output-oriented. Future identification and prioritisation of ANR research agendas, allocation of financial and human resources, and monitoring and impact assessment will in future be in consistence with this strategy and its guiding principles.

The Vision and Strategy focuses on poverty reduction through effective and efficient utilization of scientific information in agriculture and related natural resources. The major ANR research priorities include field crops, horticulture, livestock, fisheries, related natural resources issues, socio-economic aspects of the farming systems, price analysis and marketing, on-farm water management, agro-forestry, gender issues, and, above all, policy research.

While maximally accessing research results from the neighbouring countries and from internationally relevant CGIAR and other institutes, national capacity will be enhanced to adapt and modify technologies to best meet its own requirements.

Global economic liberalization and the country's impending admission to the World Trade Organization (WTO) offer new challenges and opportunities. Keeping in view the relation with other countries and the new changed context, researches will be conducted in market management and other relevant fields to address the national interest.

As the role of the government is being redefined as a promoter, facilitator or regulator, rather than an implementer, involvement of non-governmental sector in research will be encouraged.

Two separate bodies, one for policy formulation and co-ordination at the national level, and other for implementation of the research, will be set up within the organization. The Nepal Agricultural Research Council (NARC) as an apex body will function the policy formulation and co-ordination at the national level; and the Nepal Agricultural Research Executive Board (NAREB) will carry out implementation of research.

Competitive grant research scheme (CGRS) within NARC will be run as per the concept of National Agricultural Research and Development Fund (NARDF) established with the view to enhance involvement of non-governmental sector in agriculture research. NARDF and NARC will jointly work to make NARC policy body more effective in the competitive grant research scheme. Fund will be provided for identified basic and core researches.

NARC will make a thorough review of this vision every five years and make appropriate changes and modifications in its strategy and operational procedures as required.

Considering the diversity in different regions in terms of agro-ecology, socio-economic situation and R&D actors, NARC will place emphasis on the development of region specific ANR research agendas. It will also encourage

and support the Regional Technical Working Groups (RTWGs) and National Technical Working Group (NTWG) and modify if necessary. Emphasis will be given to systems based multidisciplinary and multi-commodity research.

Environmental sustainability, gender equity, growth promotion and income generation will be the distinguishing features of all research undertakings, besides their explicit positive contribution to poverty alleviation.

NARC will ensure that indigenous knowledge; traditional practices and locally available resources are duly considered and utilized in research programmes and technology development. Similarly, locally available resources including soils, germplasm and skills will be optimally used for increased productivity and efficiency.

NARC will promote commercialisation in the ANR sector by facilitating research which will result in value addition through the development of downstream processing opportunities and post-harvest technologies related to cereal crops, cash crops, vegetable and fruit crops, livestock and fisheries. By the same token, it will also give attention to problems and technology needs of clients in the input industries and service providers such as farm machinery, irrigation equipment, and pesticide retailers.

Human resources for all the potential ANR research providers will be developed. This will include engagement and placement of qualified and experienced staff, on-the-job training of technical staff, academic training based on research in affiliation with selected universities, sponsorship, and development of a culture of science and technology. Appropriate environment will be provided for professional development for all the scientists and researchers. ●

(An unofficial translation from Nepali)

Rice Anther Culture at NARC, Khumaltar

- Bal K Joshi and Hari P Bimb

Aseptive culture of cells, tissues and organs in defined nutrient medium has been an important tool in basic and applied research aimed at plant improvement. Since the first successful production of haploids from anther culture of *Datura innoxia* (Brar and Khush, 1994), haploids have been produced through anther culture in more than 200 plant species. Various media, pretreatments stage of the pollen, genotype and growth condition of donor plants affect culturing ability of anthers. This technique can be applied for the production of homozygous lines and development of new varieties. The technique is important in developing the true breeding lines in the immediate generation from any segregating population, thereby shortening the breeding cycle of new varieties. Anther culture has successfully been used to develop improved varieties of wheat, rice, and tobacco. In rice alone more than 100 varieties and breeding lines have been developed in China through anther culture (Chen, 1983). It also offers a unique opportunity to improve selection efficiency for various traits since there is no dominance variance in the population. Anther culture also helps to create variation, which can be used in crop improvement. This technique not only shortens the duration to complete a breeding cycle but also save land area and man labor to grow and screen the segregating plant materials.

With the objective to develop homozygous lines from segregating populations of rice, anther culture was initiated in biotechnology laboratory at Khumaltar, Nepal since 2001. To develop the protocol for anther culture, released rice varieties

were taken. Anther from Chainung-242, Taichung-176, Palung-2, NR10375-14-2-1, Khumal-4, Machhapuchhre-3 and Chommrong were cultured *in vitro*. These are the recommended varieties for different regions in Nepal.

Anthers were cultured per the procedure developed by Zapata (1985). Panicles were kept in an incubator at 6°C for 8 days after collection from the field. A total of 90 anthers were plated per genotype in 60- by 15-mm petri plates at a density of 30 anthers per 6 ml of N₆ medium. The experiment was laid out in complete block design with 3 replications. Culture were incubated in the dark at 25°C until calli were produced. Callus induction ability was calculated on the basis of the number of anthers producing callus.

Genotypic effects and stages of pollen were significant (P<0.01) and contributed most to the total variation obtained in the experiment. Machhpuchhre-3, Chommrong, Chainung-242 and Taichung-176 cultivars were more responsive than the others types. This suggests that cold tolerant varieties have more callus induction capacity in N₆ medium. Highest callus induction (6%) was obtained in Chommrong and lowest (0.8) in NR10375-14-2-1. Spikes collected at the stage of 6 cm length from base of flag leaf to auricle of last leaf were best stage for anthers culture in these varieties.

After successful callus induction, plant regeneration from callus is another important step in the development of homozygous lines. Plant regeneration will be initiated next year. This technique of callus induction can be used to develop double haploids plant from

segregating lines, which help to shorten the breeding cycle and can be applied to other crops for developing varieties.

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- Brar, DS and GS Khush. 1994. Cell and tissue culture for plant improvement. *In*: Mechanisms of plant growth and improved productivity through modern approaches, (AS Basra, ed.). Marcel Dekkar, Inc., New York. pp. 229-270.

Participatory Action Planning Workshop Held

The Participatory Action Planning (PAP) Workshop was held at RARS, Bhairahawa from 7 to 12 January 2002. The objective of the workshop was to develop a participatory action plan for farmer groups as per project documents; and provide the tools and experience to project scientists to be able to conduct a PAP on their own in the future. The workshop combined an overview of concepts and principles of PR & D with the actual PAP in three farmer groups under RARS, Bhairahawa.

It was organized with support from CIMMYT, Asian Development Bank, New Zealand, System-Wide PR&GA (Participatory Research and Gender Analysis), and CIAT.

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The "Jumli Marshi" the only variety grown in the location has been in very critical situation with an increasing incidence of disease particularly blast resulting massive loss in the yield for last some years. Need of varietal diversity of cold tolerant rice to substitute the single local one in Jumla was visualized long ago. These two varieties have been brought out after long concentrated research efforts to meet the demand of the farmers. These new varieties have been found suitable for Jumla as they are high yielding, cold tolerant,



Chandannath-1

blast disease resistant, good tillering, easy to milling, good for taste, giving high rice recovery, better straw yield, less damage by hailstone, low shattering loss.

Jumla is regarded as the highest altitude in the world for rice cultivation.

It has been a public belief that Baba Chandan Nath brought rice to the Jumla Valley some 12-13 century ago.



Chandannath-3

Visits	Upcoming Events
<p>Dr. Geoffrey Hawtin, Director General, International Plant Genetic Resources Institute (IPGRI) visited Nepal on 15-16 March 2002. He visited Pokhara (<i>In-situ</i> Conservation sites) and had a press conference at NARC Building, Kathmandu.</p> <p>Research on plant genetic resources and <i>In-situ</i> conservation is being conducted collaboratively by NARC, IPGRI and LIBIRD (Local Initiative for Bio Diversity Research and Development)</p> <p style="text-align: center;">● ●</p> <p>World Bank Mission was in Nepal on February 3rd and 4th weeks 2002. The Mission visited NARC and had review meeting on Agriculture Research and Extension Project (AREP) implementation. Nepal Agricultural Research Council (NARC) is the implementation body of the research component of the Project.</p> <p style="text-align: center;">● ●</p>	<p style="text-align: center;">FAO Regional Conference</p> <p>26th FAO Regional Conference for the Asia and the Pacific is being held in Kathmandu, Nepal on 13-17 May 2002. Conference Management Committee and various Sub-Committees have been formed under Ministry of Agriculture and Cooperatives.</p> <p style="text-align: center;">Asian Regional Maize Workshop</p> <p>8th Asian Regional Maize Workshop is going to be held in Bangkok, Thailand on 5 - 8 August 2002. It is being organized jointly by CIMMYT, DOA, Thailand and Kasetsart University.</p> <p style="text-align: center;">Int'l Conference on Wild Rice</p> <p>International Conference on Wild Rice, 21-23 October, 2002 in Kathmandu, organized by Green Energy Mission (GEM), Nepal</p> <p style="text-align: center;">NARC Day</p> <p>11th Annual Day of NARC establishment on 8 May 2002 in Kathmandu</p> <p style="text-align: center;">NARC ICRISAT Day</p> <p>Silver Jubilee of NARC - ICRISAT Partnership Day on 18 May 2002 in Kathmandu</p> <p style="text-align: center;">Workshop on Wheat Cropping System</p> <p>Workshop on DFID Funded Project: Participatory Research to increase the productivity and sustainability of wheat cropping system in the Eastern Sub-continent of South-Asia on 1st May 2002 in Kathmandu.</p> <p style="text-align: center;">DFID Project Workshop</p> <p>DFID End of Project Workshop on 7-10 May 2002 in Kathmandu.</p> <p style="text-align: center;">Events on International Year of Mountains 2002</p> <p>Celebrating Mountain Women: International Conference from 28-31 May 2002 in Kathmandu.</p> <p>Geographic Information System Forum South Asia 2002 from 11 to 15 November 2002.</p> <p>Booking the Mountains: A Book Fair and Exhibition organized by International Centre for Integrated Mountain Development (ICIMOD) from 26-28 September 2002. NARC is also involved in the program.</p>

TRAINING WORKSHOP/SEMINARS, STUDY & TOURS ABROAD (January - March 2002)

S.N.	Name	Position/Faculty	Subject	Duration	Country
SEMINAR/WORKSHOP/MEETING					
1.	Mr. Ram Prasad Uprety	S-4/Pathology	Food Barley Workshop	14 -17 January	Tunisia
2.	Mr. Bhola Man Singh Basnet	S-4/Comm.	REWIND Workshop on PRISM	25-31 January	India
3.	Mr. Gautam Buddha Manandhar	S-3/Engineering	RNAM TAC/GB Meeting	4 -6 February	China
4.	Mr. Pushpa Raj Bhurtyal	S-3/Horticulture	Processing and Marketing: UTFANET/ SC Meeting	6-8 February	Thailand
5.	Mr. Dularchan Sahu Pathik	Director/Crop&Hort	RTCC Meeting	13-15 February	India
6.	Mr. Janmejaya Tripathi	S-3/Agronomy	RTCC Meeting	13-15 February	India
7.	Mr. Mr. Dularchan Sahu Pathik	Director/Crop&Hort	RWC/OSC Till-Farming Symposium	20-21 February	USA
8.	Mr. Raghunath Prasad Sapkota	Act. Exec. Director	8th Regional Steering Committee Meeting of RWCS	13-15 February	India
9.	Dr. Kedar Budhathoki	S-4/Horticulture	2nd Annual Meeting of ADB -TFT Project and Training Workshop for PD and SW	28 Feb.-8March	Vietnam
10.	Mr. Devendra Kumar Chaudhary	S-3/Agronomy	Conference on Breeding Upland Rice for Drought Prone Areas	11-15 March	Philippines
11.	Dr. Raj Kumar Shrestha	S-3/Soil Science	Integrated Soil, Water and Nutrient Management for Sustainable Rice-Wheat Cropping System in Asia	4-8 March	Australia
12.	Dr. Kishore Kumar Shrechand	S-3/Environment	APN Meeting on Climate Change	11-15 March	India
13.	Dr. Hari Prasad Bimb	S-3/Bio-Tech	Bio-Technology Expert Consultation Meeting	21-24 March	Thailand
14.	Mr. Raghunath Prasad Sapkota	Act. Exec. Director	Bio-Technology Expert Consultation Meeting	21-24 March	Thailand
OBSERVATION					
15.	Dr. Ram Pratap Sah	S-4/Agronomy	Training Study Tour on Fine Aromatic Rice	6-15 January	Thailand
16.	Dr. Yjna Gajadhar Khadka	S-3/Soil Science	Developing Integrated Nutrient Management Options for delivery	11 Feb.-1 March	Philippines
17.	Mr. Rebatu Raman Chaudhary	S-3/Agronomy	Tour on Sugarcane Farming Technology	6-12 February	India
18.	Mr. Pushpa Raj Bhurtyal	S-3/Horticulture	Study Visit on Guava Production in Hills	24 Feb.-4 March	Thailand
19.	Mr. Madan Raj Bhatta	S-3/Agronomy	Study visit on Wheat Research	11-17 March	Bangladesh
TRAINING					
20.	Mr. Suresh Rai	S-3/Soil Science	Geographic Information System (GIS) Country Almanac Training	21-29 January	India
21.	Mr. Janmejaya Tripathi	S-3/Agronomy	Geographic Information System (GIS) Country Almanac Training	21-29 January	India
22.	Mrs. Gyanu Gurung Manandhar	S-3/Pathology	In-service Maize Breeding Training	18 Feb.-7 June	Mexico
23.	Mr. Giridhari Subedi	S-3/Horticulture	Regional Training Course on <i>In-vitro</i> Conservation and Cryo Preservation of Tropical Fruit Genetic Resources	4-16 February	India
24.	Mr. Bedananda Choudhary	S-3/Agronomy	Regional Seminar and Group Training on Monitoring and Assessment	12-15 February	India
25.	Mr. Kamal Sah	S-3/Soil Science	Regional Seminar and Group Training on Monitoring and Assessment	12-15 February	India
26.	Mr. Govinda Hamal	T-5	Maize Crop Management Training	3 March-11 June	Kenya
27.	Mr. Ambika Arayal	T-5	Maize Crop Management Training	3 March-11 June	Kenya
28.	Mr. Min Raj Gautam	T-6	Maize Crop Management Training	3 March-11 June	Kenya
29.	Mr. Fatta Bahadur Baruwal	T-5	Maize Crop Management Training	3 March-11 June	Kenya
30.	Mr. Yuba Raj Thapa	T-6	Maize Crop Management Training	3 March-11 June	Kenya
31.	Mr. Amar Bahadur Pun	T-5	Maize Crop Management Training	3 March-11 June	Kenya
32.	Mr. Ramji Khadka	S-3/Agronomy	International Course on Participatory Research and Development	3 -22 March	Philippines
33.	Mr. Shreemat Shrestha	S-3/Engineering	Training on Evaluation of Farm Machinery	3-22 March	Philippines
STUDY					
34.	Mrs. Ram Devi Timila	S-3/Pathology	Ph.D. in Plant Pathology	1Feb.02.-31Jan.'05	USA
35.	Mr. Shambhu Prasad Dhital	S-3/Horticulture	Ph.D. in Potato Crop	23 Feb.02-22Aug.'04	Korea
36.	Mr. Surya Prasad Pandey	S-4/Soil Science	Ph.D. in Soil Science	14 Mar. '02-13 Mar.'03	U.K.



His Majesty King Gyanendra Bir Bikram Shah Dev inaugurating the International Mountain Seminar

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Conservation Union (IUCN), King Mahendra Trust for Nature Conservation (KMTNC), Swiss Agency for Development and Cooperation (SDC) and World Wildlife Fund (WWF).

As an outcome of intensive interaction in the Seminar, **Kathmandu Declaration on Mountains** was released that contains ten chapters dealing different mountain related issues, concerns and commitments with an aspiration of having better mountain environment in future.



His Majesty King Gyanendra Bir Bikram Shah Dev and Her Majesty Queen Komal Rajya Laxmi Devi Shah are observing the NARC's Exhibition stall. Mr. Bhola Man Singh Basnet, Chief of Communication, Publication and Documentation Division of NARC is briefing Their Majesties about agriculture research activities and achievements during 16 minute long observation of the stall

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Published by :
Communication, Publication and Documentation Division

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Bhola Man Singh Basnet : Division-Chief (Technical Editor)
Krishna Raj Bhatta : Editor

Website: <http://www.narc-nepal.org>

To

Printed at : The Rising Sun Printers, Teku, Kathmandu, Tel.: 243557