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National Winter Crops Research Workshop

The 25th National Winter Crops Research Workshop was held at Khumaltar on 11-12 September 2002.

About 150 scientists, technicians, extension workers, representatives from NARC, Department of Agriculture, HARP, CIMMYT, Agriculture Inputs Corporation and farmers participated the workshop.

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AGROEXPO 2002 Held

A five-day Agribusiness Fair "AGROEXPO 2002" was organized by Federation of Nepalese Chambers of Commerce and Industries (FNCCI)/ Agroenterprise Center (AEC) in Kathmandu from 18-22 September 2002. The fair was inaugurated by **Her Majesty Queen Komal Rajya Laxmi Devi Shah**. Different agricultural products and technologies were exhibited in the Fair. The NARC actively participated in the exhibition



Her Majesty Queen observing the Fair "AGROEXPO 2002"

National Summer Crops Research Workshop

The 23rd National Summer Crops Research Workshop organized by NARC was held at Khumaltar from 2-3 July 2002.

The two-day workshop was held with the objectives to review the research activities on summer crops in the past years and their outcomes; discuss existing problems; and recommend technologies for release and pipeline.

The workshop was participated by scientists/researchers from National Commodity Research Programs, Regional Agricultural Research Stations, Disciplinary Divisions of NARC; Department of Agriculture, District Agriculture Development Offices of Department of Agriculture; NGOs, Donor agencies and others. In the workshop, working papers about the researches on various summer crops: rice, maize, finger millet, buckwheat,

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Maize Variety Released

Variety Release and Registration Sub-committee under National Seed Board that met on 16 August formally released a new maize variety along with a complete package of practices for farmers to commercially cultivate in Mid-hills (1,000 - 1,700 masl) of Eastern, Central and Western Developmental Regions of Nepal.

The variety: "Mankamana-3" is released after many years' research and experiment at Agriculture Research Stations: Pakhribas, Lumle, Kabre, Rampur, Dailekh; Plant Pathology and Botany Divisions of NARC; LIBIRD and farmers' field at different places in

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ISSUE HIGHLIGHTS

- Maize variety released
- National winter crop research workshop
- National summer crop research workshop
- National livestock and fisheries research workshop
- National outreach research workshop
- MoU between NARC and HICAST
- NARC-SSMP signed MoU
- Letter of agreement between NARC and LIBIRD
- Workshop on SRI

MoU between NARC and HICAST

For a collaboration to improve the efficiency of resource use based on mutually agreed terms and conditions, to improve the rural livelihood through enhanced production and use of quality human resources without hampering the mandated work, the Nepal Agricultural Research Council (NARC) and Himalayan College of Agricultural Sciences and Technology (HICAST) signed a memorandum of understanding (MoU) on 22 July 2002.

Under the MoU, NARC will permit its scientists and technical experts to take classes and supervise students' research work; provide opportunities to visit and utilize its research laboratories and farm facilities for the research work by the graduate students; will consider HICAST as one of the potential institution for conducting joint training courses and/or collaborative research activities as per agreed terms and condition.

The HICAST will provide a certain quota to NARC for nominating its in-service candidates under government scholarship for under graduate and/or post graduate studies at HICAST; will provide honorarium and designate NARC scientists and technical experts as visiting professor, associate professor, assistant professor as per the HICAST/Purbanchal University's standard; will share the actual expenditure of farm and laboratories running cost made for student's research work.

NARC and HICAST will develop and conduct collaborative research/studies as per mutually agreed TOR/Project proposal; will exchange publications and research materials; invite resource/relevant persons in workshops, seminar training etc.

The MoU was signed by Mr. Raghunath Prasad Sapkota, Executive Director, NARC and Dr. Binayak Prasad Rajbhandari, Chairperson, HICAST.

NARC-SSMP signed MoU

Nepal Agricultural Research Council (NARC) and sustainable Soil Management Program (SSMP) signed memorandum of understanding (MoU) on 13 September to contribute to the promotion of sustainable soil management in the mid-hills of Nepal. The objectives of the MoU are:

- Support extension-research linkages which result in an effective flow of information between researchers, extension staff and farmers for addressing specific SSM topics
- Support collaborative work on SSM between farmers, collaborative institutions of SSMP and NARC in the mid-hills following a method of

farmer-led experimentation or on-farm research

- Stimulate demand-driven and innovative research by NARC or mutually agreed upon topics with high and immediate practical relevance.

The MoU incorporates activities and responsibilities of NARC and SSMP related to the above objectives for next five years.

The MoU was signed by Mr Shambhu Bahadur Panday, Director for planning and coordination NARC and Mr. George Weber, Team Leader, SSMP.

Letter of Agreement between NARC and LIBIRD

With the view to undertake the implementation of the Nepal component of the global project "Enhancing the contribution of Nutrition but Neglected crops to Food Security and to Incomes of the Rural Poor", Nepal Agricultural Research Council (NARC) and Local Initiatives for Bio-diversity Research and Development (LIBIRD) signed a letter of agreement on 9th September 2002.

The global project is supported by International fund for Agricultural Development (IFAD) through International Plant Genetic Resources Institute (IPGRI) South Asian office in which the Asian component of the project is coordinated by MS Swaminathan Research Foundation (MSSRF).

Under the letter signed, NARC will coordinate project activities, monitor progress, support integration into the national program and report to the regional and global management levels; prepare work-plan with LIBIRD and other partner; provide elite germplasms for participatory crop improvement; support LIBIRD in project activities and assist by providing information facility and feedback; manage to flow the fund to the LIBIRD as per the agreed activities after receiving the project fund from MSSRF.

The LIBIRD will take over all responsibility of implementing project related activities at Kaski site; coordinate with the local communities and institutions for the management of millet bio-diversity; submit work-plan to steering committee through National Coordinator for approval; provide six monthly technical and financial reports to National coordinator, NARC, IPGRI and MSSRF.

The letter was signed by Mr. Raghunath Prasad Sapkota Executive Director, NARC and Dr. Anil Subedi Executive Director, LIBIRD.

Raghunath Prasad Sapkota Confirmed as Executive Director

His Majesty's Government appointed Mr. Raghunath Prasad Sapkota as the Executive Director of Nepal Agricultural Research Council (NARC) on 16th September 2002 for the next four years.

Mr. Sapkota had been acting Executive Director for about one year and earlier he worked for Executive Director, Director for Crops and Horticulture Research, Chiefs as Division and Regional Stations.

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oilseed crops, grain legumes and jute were presented and discussions on different issues were held followed by group presentation about the recommendations on technologies for release, pipeline technologies, and some system and management issues.

The workshop after deliberate discussion in two different groups made out the following recommendations.

RECOMMENDATIONS

RICE

Varieties to be released:

BG-1442 (For spring and Bhadaiya rice under Rice-Vegetable pattern.)

BPI 3-2 (For partially irrigated to irrigated areas of eastern, central and western Terai as main season rice.)

NR 10825-29-3-1 (For mid hills, 3000-5000 ft.),medium fertility condition)

Pusa-834 (Fine and aromatic rice variety for main season for eastern, central and western Terai, and river basin areas of hills.)

Varieties in Pipeline :

NR 1487 (main season rice for rainfed lowland of Terai and lower altitudes of western hills)

NR 1249 (Bhadaiya rice for rainfed shallow of Terai.)

BR 802-78-2 (Main season rice for irrigated condition.)

CNTR 85033-9-1-1 (Main season rice - fine and aromatic).

NR 10353-8-2-1 (For mid hills)

NR 10414-34-2-1 (For mid hills).

NR 10375-20-1-2 (For mid-hills, substitute for Taiwanese varieties)

Lumle 2 (For high hills, >1500 masl).

LR 91006 (For high hills, >1500 masl).

MAIZE

Varieties to be released:

Population 22 (Full season OPV for mid hills)

CTS 99 3004 (Full season hybrid.)

CMSQ 983018 (Full season single QPM hybrid.)

Varieties in Pipeline :

Hill pool yellow, Hill pool white, ZM 621, Population 44 C10, Bangalore 97 45 (Full season OPV for mid hills)

Upahar, Narayani, Across 9331 CRF (Full season OPV for Terai, Inner Terai and foot hills)

Pool 15E; Pool 17E; Arun-4 and ZM 301 (Early genotypes for mid hills, Terai and Foot hills)

CTS 00 3090, CTS 00 3189, CTS 00 3102 (Full season normal yellow single cross hybrid)

CTS 00 114 (Early normal yellow single cross hybrid)

CMSQ 98 3020, CMS 98 3006(Full-season Single cross QPM hybrids)

OILSEEDS

Varieties to be released:

Groundnut: ICGV-86124, ICGV-86125, ICGV-86300 and ICGV-91074 (for Terai and mid-hills)

Varieties in Pipeline:

Groundnut: ICGV-90173, ICGV-97508 and ICGV-92218 (short duration, Terai and mid hills)
ICGV-88473 and ICGV-97129 (medium duration, Terai and mid hills)

Niger: Acc.No. 5321 and Acc. No.5360 (for Terai and mid hills)

HILL CROPS

Variety to be released:

Finger millet: GE-5176 (mid-hill)

Varieties in Pipeline:

Finger millet : GE-5016 and GE-0483

Buckwheat: Bitter variety: Acc.#2223, Acc.#2227
Sweet variety: GF-5274, GF-5283

GRAIN LEGUMES

Varieties to be released:

Cowpea: IT 86D-792

Pigeonpea: Pusa 9 and Pusa 14 (in early rice-pigeonpea and summer maize-pigeonpea cropping pattern)

Soybean: PK 416 (for maize +soybean intercropping and, soybean-toria cropping pattern); HUACHIN 2 and Suidachung (suitable for green pod vegetables)

Mungbean: VC 6372 (45-8-1), VC 3960 A -88 (Resistant to mungbean yellow mosaic virus)

Varieties in Pipeline:

Cowpea: IT 82D -787, IT 82D -2087, IT83D-442

Pigeonpea: ICP 7035, Lalbandi Local

JUTE

Varieties to be released:

THAI/Y/072 (suitable for mid high to upland ecosystem)

Varieties in Pipeline:

Non_soong-1 (mid-high to upland conditions)

CHINA-1 (lowland ecosystem, Jute-Rice-Winter crops pattern)

Suggestion for faster dissemination of varieties:

- Efforts be diverted to promote Plant Varietal Selection (PVS)
- The number of FAT (minikit) be increased and distributed through Agricultural Development Offices (ADOs)
- Promotion of community based seed multiplication program.
- linkage/coordination be strengthened among stakeholders.
- Useful publications be prepared and distributed

Suggestion to narrow down yield gap:

- PVS, FAT, CBO seed multiplication.
- Large plot demonstration under high, medium and low input condition.
- Improved quality seed should be made available in time.
- Integrated Crop Management technologies be popularized

Suggestions on Seed:

- Seed technologist should be posted to each Farm/Station
- Balance-sheet for seed requirement be prepared in advance.
- Infrastructure for seed processing should be developed and strengthened at Farms and Stations
- Packaging of seeds be promoted
- Strengthen Coordination with seed companies
- A tripartite contract arrangement between National Seed Company/AIC, National Seed Board and NARC be made for multiplication and distribution of foundation seeds as per seed plans developed and finalized by national seed planning meeting

- Community based seed production program be tied up with the district level seed program DISSPRO of DOA.

Suggestion on research management system:

- Budget for multi-location trials should be directly released to the concerned collaborating farms and stations.
- Collaborators at each station should be identified
- Faculty of plant breeding be created
- Each commodity program must have plant breeder.

National Outreach Research Workshop

With the theme “recent spread and impact of agricultural technologies in Nepal”, the Sixth National Outreach Research Workshop was held at Khumaltar on 4 July, 2002. The workshop organized by Outreach Research Division of Nepal Agricultural Research Council (NARC) had the objective/purpose to:

- expose NARC technologies (pipeline) on the priority basis
- expose NARC scientist in the approach of partnership (NARC Vision, 2020)

The Workshop tried to bring many organizations/institutions both in private and public sectors together in one common forum. Spread of successful technologies were reported in off-season vegetables, community forestry, dairy and poultry sector development, and seed sectors in Nepal by different institutions (NARC, NGO & INGO).

The workshop was participated by about 125 delegates that include NARC scientists, representative from MOAC, DOA, DLS, Livestock Development Project, IPM Project, SSMP, IAAS, CIMMYT, CEAPRED, LIBIRD, Water Users Associations, Plant international, Care Nepal, etc. Mr. R P Sapkota, Executive Director, NARC welcomed the participants and guests on behalf of NARC in the joint plenary session. Paper presentations and discussions were held in two separate groups: I Crops and Horticulture, and II Livestock and Fishery.

The workshop concluded with the following suggestion and recommendations.

Suggestions/Comments and Recommendations

- NARC Partnership focus on Participatory Technology Development (PTD)
 - Pluralistic Approach
 - Multiple Stakeholders Approach
 - Facilitating Approach
- Outreach Research sites should be developed as “Resource Center” approach,
- Criteria need to be developed for effective collaboration,
- Livestock, fishery and horticultural technologies need to be integrated,
- Informal farmer’s groups and CBO’s also linked for technologies spread,
- Outreach programs also need to be linked to local institutions and government,
- Review and monitoring of on-going OR programs need to be emphasized,
- In-countries for outreach research sites should be increased,
- Program level linkages of all partners should be increased

At the conclusion, Mr. R P Sapkota, Executive Director, NARC and Mr. B K Kaini, Director General, Department of Agriculture (DOA) expressed views on PTD approach and hoped the suggestion will be followed.

National Workshop on Livestock

The Fifth National Workshop on Livestock and Fisheries Research was held in Kathmandu on 10-11 July 2002.

The two-days workshop was held to review research activities in livestock and fisheries, the technologies at hand and in pipeline, and to discuss and suggest for future strategy.

In the workshop, about forty different policy and technical papers and research reports on livestock production and management, fisheries, animal nutrition, animal breeding, pasture, forage and agro-forestry, and animal health were presented. The workshop reviewed the technologies in use and recommended for other technologies.

Recommendations

Pipeline technologies:

Animal Breeding

- Heat synchronization
- Quail breeding
- Development of suitable broiler poultry breed
- Determination of suitable goat breed/genotype for western terai
- Indigenous buffalo selection
- Suitable goat genotype for low hills and river basin
- Promising lines/strains with Khari goat

Animal Health

- Mycoplasma antigen preparation.
- Treatment & Preventive measures of infertility in cattle.
- Control measures of Degnella like disease.
- Efficacy of Herbal drugs against ecto-parasites.
- Control strategy of marek’s disease in chicken.
- Use of medicated blocks on feed pellets for the control of GI nematodes in Goats.

Production & Management

- Early maturity through improved feeding management
- Reduction in piglet mortality
- Cost effective meat production from male buffalo and poultry birds
- Spreads of cost effective dairy tech in rural area
- Preparation of low cost feed for Angora rabbit

Forrage, Pasture & Agroforestry

- Year round forage production for Dairy pockets.
- Variety released of major forage crops.
- Identification potential forage seed production sites.
- Stall feeding of goats.
- Technologies for different eco-zones

Other suggestions

- Establishment of uncle herds for all species
- Uptake path way for adoption of technologies
- Partnership/collaboration in research program planning
- Monitoring & evaluation of technology adoption
- Livestock outreach research for technology transfer and feedback
- Research on existing problems

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In the workshop, coordinators from different winter crop research programs (Wheat, Grain Legumes, Oilseeds, Barley, sugarcane and Tobacco) presented reports. Other various papers on the related crop research were also presented in two divided groups followed by discussions and recommendations.

RECOMMENDATIONS

WHEAT

Genotypes identified for release:

BL 1887 (for whole Terai under Timely Sown and Late Sown Irrigated conditions)
BL 1813 (for Hill conditions)
NL792 (for Western Terai under Timely Sown Rainfed and Irrigated conditions)

Genotypes in the pipeline:

BL 2047, BL 2064, BL 1965, BL 1923, BL 1938, BL 1755 & BL 1862.

Other technologies to be released:

- Direct seeding of rice (non puddled) in rice-wheat cropping system for wheat production under low land ecosystem.
- Power tiller seed drill and Zero-tillage technologies for terai region under rice-wheat system.
- Zero-tillage and surface seeding technologies for wheat cultivation in rice-fallow system where excessive soil moisture is problem for crop establishment.
- Surface seeding/zero-tillage in case of drought or less soil moisture after giving a pre-sowing irrigation.
- Mixed cropping of wheat + peas (60 kg + 45 kg seed/ha, respectively) in Far Western Mid hills resulting higher Land Equivalent Ratio (LER) of 1.308.
- Wheat + mustard (80 kg + 4 kg seed/ha, respectively) mixed cropping system in Far-Western Mid hill condition.
- Combination of organic and inorganic fertilizers (50:50) for maintaining sustainable soil fertility in rice – wheat system in terai and river basin of hills.
- Application of 50 kg potassium per hectare in wheat is recommended for high yield and also to reduce foliar blight severity.

Other technologies in pipeline:

- Leaf Colour Chart (LCC) method for adjusting the rate and time of N application. Follow-up training to farmers and extension workers on use of LCC should go simultaneously.
- Seed priming under sub-optimum soil moisture regime.
- Vitavax 200 FF @ 3.5 ml/kg for seed treatment to control loose smut of wheat.
- Application of crop residues (rice straw @ 3 ton and wheat straw @ 1.5 (ton/ha) applied either as mulch or

incorporated in presence of NPK can be an alternative source to increase SOM and to achieve sustainable yield of rice wheat.

- 40 kg N/ha is recommended for late sown wheat.
- Potato + mustard (3:1 or 4:1) inter cropping system is beneficial in potato disease prone area.

General suggestions:

- More emphasis should be given for technology transfer by combined efforts of NARC, DOA, machinery manufacturer or suppliers and farmers.
- Need a well equipped glass house to create artificial epiphytotic condition for rust and other diseases development.

Grain Legumes

LENTIL

Varieties to be released:

ILL 2580, ILL 4402 (Terai and Inner Terai)
ILL 7723 (Western, Mid and far western)
ILL 7982 and ILL 6829 (Mid hills and Valley)

Varieties in pipeline:

ILL 6819, LN 00136 (Terai and Inner Terai)
Jutepani (Inner Terai & Mid hills)
ILL 7536 (Mid and Far Western Terai)

CHICKPEA

Varieties to be released:

ICCX 840508-36, ICCV 96329 (Terai and Inner Terai)

Varieties in pipeline:

Avrodhi, ICCX 840508-41, ICCL 87312 (Terai and Inner Terai)
KWR-108, ICCV 95423 (Mid and Far Western Terai)

Other technologies:

- October 16 to 30 optimum sowing date for Rajma bean (838 kg/ha).
- 50cm X 10cm spacing for sowing Rajma bean
- Seed treatment with *Trichoderma harizianum* + Vitavax + Soil application of micro nutrients (Cu, Bo, Zn, Mn, and Mo) for reducing wilt disease complex in chickpea.

Hill-crops

BARLEY

Varieties to be released:

X VEOLA-13 (Mid hill Rainfed)

Other technologies:

- Mass selection from local germplasm be proposed in future breeding program
- IPNM or combination of organic and inorganic fertilizers is necessary in order to produce sustainable yields as well as

maintaining soil fertility in the long run.

- 80:30:0 N:P:K kg/ha at Mid hill condition.

General Recommendation:

- Quality research for promoting industrialization (market + Food).
- Nutritional and medicinal aspect of barley for disseminating in farmers' level.
- More assessment on socio-economic including psycho-statistics.
- Collaboration to extend with countries/international centers to develop technology.

OILSEEDS

Varieties to be released:

Tori: PT-30 (Terai & mid hills)
M-27 (Terai)
Surkhet Local (Western Terai & Mid hill)

Mustard: Vardan and ICJ 96126 (Terai)

Varieties in pipeline:

Tori: ICT 9137 and Acc.#6794 (Terai)

Mustard: ICJ96154 and ICJ9658 (Terai)

Other technologies:

- Maize-tori cropping sequence for sustained tori productivity in upland conditions.
- Wheat + Sunflower (4:1) inter-cropping system in partially irrigated conditions in lowland.
- Wheat + tori or Wheat + mustard (4:1) inter-cropping system biologically efficient system in inter-cropping system.

SUGARCANE

Varieties to be released:

CoSe 95422 (Irrigated/Rainfed condition)

CoSe 92423 (Irrigated condition)

Other technology:

- Use of pressmud cake @ 3 t/ha as phosphatic fertilizer in sugarcane crop is recommended.

TOBACCO

- Thermo coal barn is recommended for curing of FCV leaf tobacco.

Seed Production

Source seed (B+F) production should be produced by different farms and stations according to the target approved by NARC.

General Suggestions

- germplasm enhancement scheme under National Commodity Research Program should prioritise to utilise local genetic resources and strengthen national capability in diversifying genetic diversity.
- Frontline demonstration of recently released varieties of different commodities should be conducted by respective

ARS, RARS in their command areas.

- Food research unit should be well equipped for quality analysis of different commodities.
- Workshop duration be adequate for detail discussion and final recommendation
- Proceeding of the Workshop should be published in commodity-wise volumes
- Monitoring and follow-up of the past workshop recommendations.
- In connection with crop yield gap analysis and constrains, technological coefficient be derived by outreach research units.
- Weather database be updated
- Experimental database (soil, water, pests, varietal, yield component, management) be well reviewed both by the researcher and program coordinator before publication.
- Review of previous recommendation is imperative for further refinement of the recommendation.
- Training Division be strengthened for skill building of scientist/researchers in different disciplines
- Multi-disciplinary research should be encouraged with proper norms. Commodity program should also consider collaborators/personnel involved in the respective commodity for training/workshop/visits.
- Competent technical committee for recommending other than variety should be formed with proper norms
- Higher studies in new areas of agriculture research (eg, agro-meteorology, plant physiology, bio-technology, floriculture, etc.) be encouraged.
- Workshop be well planned and managed with sufficient time for discussions and seminars/workshops to review disciplinary topics be also organized in every five years
- Communication, publication and documentation strengthened in each R/ARS/Commodity program /Divisions
- Large plot demonstration of promising technologies be initiated in NARC for research impact and dissemination.
- Effective mechanism for budget releasing for collaborative projects and monitoring of all research projects.

Workshop on an Interface: Research-Extension-Education

Workshop on "An Effective Interface between Agriculture Research, Extension and Education in Nepal" was organized jointly by NARC, DoA, DLS, IAAS and ACoS-Nepal on 27 August 2002 at the NARC Conference Hall, Khumaltar.

The workshop was devoted to review the current status, practices and institutional inter-relationships of the organizations working for agriculture research, extension and agriculture education in Nepal; and to develop a general framework for an effective interface among agriculture research, extension and education for better responsibility sharing and accountability for output maximization.

TRAINING WORKSHOP/SEMINARS, STUDY & TOURS ABROAD (July - September 2002)

S.N.	Name	Position/Faculty	Subject	Duration	Country
SEMINAR/WORKSHOP/MEETING					
1.	Mr. Bedananda Chaudhary	S-3/Agronomy	20 th Session of the Int'l Rice Commission	22-26 July	Thailand
2.	Dr. Bhava Prasad Tripathi	S-3/Soil Science	8 th Asian Regional Maize Workshop	5-8 August	Thailand
3.	Dr. Keshab Babu Koirala	S-2/Agronomy	8 th Asian Regional Maize Workshop	5-8 August	Thailand
4.	Mr. Padam Raj Shakya	S-3/Soil Science	8 th Asian Regional Maize Workshop	5-8 August	Thailand
5.	Mr. Ram Bahadur Katuwal	T-6/Agronomy	8 th Asian Regional Maize Workshop	5-8 August	Thailand
6.	Mr. Bhanubhakta Pokharel	T-6/Agronomy	8 th Asian Regional Maize Workshop	5-8 August	Thailand
7.	Dr. Bhava Prasad Tripathi	S-3/Soil Science	The Dev. of Bio-physical and Socio-eco Tools for Assessing Soil fertility	14-21 August	Thailand
8.	Dr. Chandra Bahadur Karki	S-3/Pathology	41 st All India Wheat Meeting	24-27 August	India
9.	Mr. Madan Raj Bhatta	S-3/Breeding	41 st All India Wheat Meeting	24-27 August	India
10.	Mr. Krishna Adhikari	S-3/Agronomy	5 th Annual Workshop of the Asian Maize & Socio-Economic Working Group Meeting	1-4 August	Thailand
11.	Mr. Shambhu Bahadur Panday	Director/Planning	Regional Workshop on the CGPRT Food-Crops Supply/Demand and Potential/Constraints for their expansion	23Aug.-4 Sept.	Indonesia
12.	Mr. Gautam B. Manandhar	S-3/Ag.Engg	2 nd Int'l Symposium and Exhibition on Marine and Aquatic Products Processing Technology	11-13 September	China
13.	Mr. Dularchan Shahu Pathik	Director/Crop&Hort	RWC-GCTE ResearchPlanning Workshop	8-10 October	India
14.	Dr. Kishore K. Sherchand	S-3/Agronomy	RWC-GCTE ResearchPlanning Workshop	8-10 October	India
15.	Mr. Bholu Man Singh Basnet	S-4/Chief, CPDD	ICT Expert Consultation on the Development of Second Phase of APARIS	24-25 October	Thailand
16.	Mr. Raghunath Pd. Sapkota	Executive Director	ICT Expert Consultation on the Development of Second Phase of APARIS	24-25 October	Thailand
OBSERVATION					
17.	Mr. Raghunath Pd. Sapkota	Executive Director	Study Visit to CIMMYT Head quarters & Cornell University	24 Sept-10 Oct.	Mexico & USA
18.	Mr. Chit Ranjan Yadav	S-4/Agronomy	Co-Experience Exchange Tour	20-27 September	India
19.	Mr. Parshu Ram Lal Karna	S-4/Pathology	Co-Experience Exchange Tour	20-27 September	India
20.	Dr. Tanka Prasad Barakoti	S-3/Agronomy	Co-Experience Exchange Tour	20-27 September	India
TRAINING					
21.	Mr. Dilip Chandra Paudel	S-3/Pathology	Maize Post Harvest Technology Training	29 July -2 August	India
22.	Mr. Govind Timilsina	S-1/Entomology	Maize Post Harvest Technology Training	29 July - 2 August	India
23.	Mr. Rosan Basnet	T-6/Pathology	Maize Post Harvest Technology Training	29 July - 2 August	India
24.	Mr. Sunil Aryal	T-6/Entomology	Maize Post Harvest Technology Training	29 July - 2 August	India
25.	Mr. Rosan Manandhar	T-6/Entomology	Maize Post Harvest Technology Training	29 July - 2 August	India
26.	Ms. Dayamani Devi Gautam	T-6/Agronomy	Weed Management in Rice Culture	13 Jul-30 Sept.	India
27.	Mr. Nabin Gopal Pradhan	T-6/Horticulture	Training on Flower and Gardening Technology	16 Aug-30 Sept.	China
28.	Mr. Ram Narayan Chaudhary	S-3/Pathology	Experimental Design and Data Analysis	19-29 August	India
29.	Mr. Daya Nidhi Pokharel	T-6/Agronomy	Pigeonpea Training	Sept.-Oct.	India
30.	Mr. Diwakar Sharma	S-3/Agronomy	Quality Protein Maize Improvement and Dissemination	26 Aug- 20 Sept.	Mexico
31.	Mr. Rameswor Maharjan	T-6/Pathology	Training on Sterility Mosaic Disease	29 Aug.-6 Aug	India
32.	Mr. Nawal Kishore Yadav	S-3/Agronomy	12 th Australian Plant Breeding Conference	15-20 Sept.	Australia
33.	Dr. Bhoj Raj Joshi	S-3/Veterinary	Training on Nematophagus Fungus	15 Sept.-4 Oct.	Malaysia
34.	Mr. Keshav Prasad Shivakoti	T-6/Livestock	Animal Husbandry Production & Management	16 Sept. - 30 Oct.	China
STUDY					
35.	Mr. Ajaya Shree Bajracharya	T-6/Entomology	M.Sc. in Entomology	4 Aug.'02-3 Aug '04	India
36.	Mr. Tika Bahadur Karki	T-6/Agronomy	M.Sc. in Agronomy	4 Aug.'02 - 3 Aug. '04	India
37.	Dr. Chandra Laxmi Shrestha	S-3/Pathology	Fullbright Foreign Scholarship, Kansas State University	Aug '02 - Feb '03	USA
38.	Dr. Surya Laxmi Maskey	S-4/Soil Science	Fullbright Foreign Scholarship, Cornell University	Aug '02 - Feb '03	USA

Workshop on System Learning Approach

The Third Livestock Development Project (TLDP) organized National Workshop on System Learning Approach (SLA) on 29-30 September 2002 at Pokhara. The objectives of the workshop were to:

- describe characteristic of SLA
- share ideas and experiences on SLA
- make a common understanding on SLA

The thematic areas of the workshop were:

- TLDP objectives, approaches and programs on SLA
- concept of systems thinking and experiential learning
- applications of SLA in development

In the workshop various experiences of SLA on program planning, program implementation, monitoring and evaluation, office management and training etc. were presented. NARC had the active participation in the workshop.

The TLDP is a people centered project executed by the Ministry of Agriculture and Cooperatives, Department of Livestock Services with loan assistance from the Asian Development Bank.

Indian Delegates visited NARC

Indian delegate in science and Technology led by Prof. V.S. Ramamurti visited NARC on 29 August 2002.

Interaction on Science and Technology

Royal Nepal Academy of Science and Technology (RONAST) organized an interaction on Development of Science and Technology and the Poverty Alleviation: Some selected programs on 28th August 2002. The interaction was focused on the issues like official support to SST; Review and revision of S & T policy, institutional development; training manpower in emerging areas of S & T; research and development; science education; natural resources utilization, management; agriculture biotechnology; environment; coordination and collaboration etc. NARC participated in the interaction.

A one-day national workshop on EM Technology and its future strategy was organized in Kathmandu on August 2002 in order to bring the EM Technology into the national streamline for environmentally and economically sustainable agricultural development in Nepal.

The workshop was focused on the following strategies:

- Formation of 'National EM Technology Committee' under the aegis of Ministry of Agriculture and Cooperatives
- EM technology development and dissemination should be reflected in the National policy document
- EM technology research and

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the country.

"Mankamana-3" is found to be resistant to foliar disease-leaf blight and lodging and has yield potential of 10.6 metric tonnes/ha. under the recommended condition. Crop maturity period is 142 days.

This variety has been vary popular for its colour, taste, cob size etc. It is white in colour that gives quality of food and market price

The original designation of this variety is "Population-22 C9 (PR 92 A-004)" recombined at CIMMYT, Mexico.

National Workshop on EM Technology

development in agriculture and environment sectors

- EM village concept should be replicated at the grass roots level
- EM quality standard should be set and followed for productive and marketing
- Government at the initial stage should provide funding for sensitization of EM technology

In the workshop discussion on various issues were held in groups and suggestions were presented on implementation and institutional development. A network 'Nepal EM Network' works proposed that includes concerned institutions, organizations, industries, farmers etc.

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