



APAARI

NEWSLETTER



VOL. 6 No. 1

JUNE 1997

ISSN: 0858-6063

EXECUTIVE COMMITTEE

| | | |
|---------------------|---|---|
| Chairman | : | Dr M. Akbar (Pakistan) |
| Vice-Chairman | : | Dr Nobuyoshi Maeno (Japan) |
| Members | : | Dr Z. Karim (Bangladesh) Dr Vichitr Benjasil (Thailand) Dr J. Kumar (Fiji) Dr William D. Dar (Philippines) |
| Executive Secretary | : | Dr R.S. Paroda (India) |

EDITORIAL COMMITTEE

- | | |
|------------------|---------------------|
| • R.S. Paroda | • R.B. Singh |
| • William D. Dar | • Narong Chomchalow |

EDITORIAL

The twentieth century has witnessed spectacular advances in agriculture. During this, research managers had an easy task of resource allocation; especially aiming at the overall growth in food production. The last decade of the century has, however, added considerable complexity. Sustainability, regional balance, trade-technology links, demand shifts towards non-foodgrains, income growth for the poor, globalization are a few of the many new paradigms that have drawn considerable attention throughout the world during this period. With time, this complexity is expected to grow further. At present, resource allocations for agricultural researches are gradually declining, and there is an apparent reduction in donor support also. This indicates a need for critical analysis of on-going research programmes, their priority-setting, monitoring and evaluation (PME).

Fortunately, in most of the National Agricultural Research Systems (NARS) in the Asia-Pacific region, basic system for informal research priority-setting and monitoring exists. Those with a strong support in this, have progressed well. Others are still in the process of building their institutional capabilities. However, all NARS require to bring changes in their existing priorities, encompassing context, design, implementation and evaluation. The PME is important now than ever before!

For any priority-setting, monitoring and evaluation, an effective administrative system, linking project-information system with project-based funding and evaluation of scientists' and institutions, is required. The very purpose of the PME will be defeated, if the evaluation system is not effective and transparent.

The procedure for project evaluation and impact assessment which is often critical for attracting required funding/donor support needs greater attention. To add value for investment, in real terms, an impact assessment must find priority in any research system. Impact Evaluation and Assessment (IEA) would enable research managers to have mid-course adjustments as well as reprioritization of programmes for achieving desired objectives.

The APAARI proposes to work with member NARS to strengthen their PME capabilities for getting better value of their investments made in agricultural researches in the Asia-Pacific region.

Editors

CONTENTS

| | |
|--|----|
| • Editorial | 1 |
| • Asia-Pacific Consultation on Plant Genetic Resources | 2 |
| • Rice-Wheat Consortium for the Indo-Gangetic Plains | 5 |
| • Second Meeting of the Tropical Asian Maize Network | 9 |
| • AVRDC Launches Phase II of the SAVERNET | 11 |
| • Third Steering Committee Meeting of the UTFANET | 12 |
| • CGIAR 1997 Mid-Term Meeting | 13 |
| • Global Programme for Musa Improvement (ProMusa) Launched | 15 |
| • Global Forum Steering Committee Meets at Cairo ... | 16 |
| • An Institute Profile-Nepal Agricultural Research Council, Nepal | 17 |

ASIA-PACIFIC CONSULTATION ON PLANT GENETIC RESOURCES



Consultation for identifying key issues relating to Plant Genetic Resources in the Asia-Pacific Region

A Consultation meeting, sponsored by the International Plant Genetic Resources Institute (IPGRI), was held at the IARI Library, Pusa Campus, New Delhi, from 27 to 29 November 1996. The thrust of the Consultation meeting was on pinpointing key issues relating to Plant Genetic Resources (PGR) in the Asia-Pacific Region and on identifying ways for regional collaborations. The meeting was divided into five sessions: Analysis of Recent Fora Related to PGR from an Asia-Pacific Perspective; Status of PGR Network in Asia-Pacific; The Key Issues; Mechanism for Regional Collaboration; and Plenary Session.

The Asia-Pacific Region was represented by 21 countries. In addition, representatives from a number of international organizations also (CIP, FAO, ICRISAT, IFAD, IPGRI) attended the meeting. Dr R. S. Paroda, Director-General, ICAR, and Secretary DARE, Government of India, had presented the keynote paper on 'Regional Collaboration on PGR Conservation and Use in Asia-Pacific'.

During the three-day Consultation, the issue of empowering farmers and communities in PGR conservation and benefit-sharing came up many times; more than any other single issue. In this context the following specific points were raised: (i) Farmers' access to PGR, (ii) Farmers' access to technology, (iii) Farmers' access to funds.

In achieving farmers' rights, development of social organizations, credit and marketing facilities for farm produces, and a reform in the formal sector

research institutes to undertake decentralized breeding with farmers' involvement (i.e. participatory breeding) and the value of the traditional knowledge were emphasized.

RECOMMENDATIONS

The Consultation Meeting was divided into two groups: **Group I** to make recommendations on Key Issues on PGR and **Group II** to deal with Mechanisms for Collaboration on PGR.

GROUP I: Key Issues on PGR

Conservation of PGR

- *In-situ and On-farm Conservation.* Under this inventory of national PGR and traditional knowledge, characterization, on-farm conservation, cropping systems, research framework and an assessment of existing projects needs to be taken up for consideration.
- *Ex-situ Conservation.* In this, national needs, access to germplasm in genebanks by potential users and the needs in regional assistance are to be emphasized.

Utilization of PGR

- Characterization and documentation of PGR
- Interface between farmers (including those in marginal areas) and breeders
- Strengthening of national capacity, including farmers and the private sector.

SAVING THE GENES OF OUR FUTURE FOOD

A new crop-breeding strategy that will help ensure food security for the world's poorest has been developed by the ICARDA. The objective is twofold: to breed crops that will give greater yield stability, and thus food security in the world's harshest environments; and to preserve, through use, the plant biodiversity, that is the raw material of such crops.

ICARDA's new strategy includes:

- Using local landraces and crop wild relatives to breed new crops; for example Arta barley, derived from landraces, which has been returned to farmers' fields in the Middle East, and is outperforming local landraces by 70 %, despite a harsh environment and lack of inputs.
- Bringing in farmers as partners in crop-breeding programme, so that their feedback can be incorporated and the varieties thus produced are already in the fields when the process is completed, thereby making it easier for their neighbours to adopt them. And it means that the genetic diver-

sity used in the process stays in the countryside and is simultaneously preserved.

- Besides maintaining a genebank of over 110,000 accessions, it works with national programmes on new ways of preserving wild relatives and landraces *in-situ*, where they will continue to adapt. This is being done through a project that may become a model for *in-situ* conservation worldwide.

ICARDA is Co-operating with the IPGRI in its drive to preserve biodiversity in West Asia, North Africa and the newly-independent republics of Central Asia.

"Since the Earth Summit in Rio de Janeiro, organizations like ICARDA have worked hard to spread the word that the store of genetic material used in agriculture is the most vital area of biodiversity to human existence," said ICARDA's Director-General, Adel El-Beltagy. "There have been numerous conferences and seminars, but that's not enough. It's time to stop talking, and act."

(ICARDA) (Source : CGIAR Newsletter, April 1997)

Policy on PGR

- Need for assistance to develop national policy on PGR
- Harmonization of policies in the region
- Access to PGR and information related to PGR
- Development of framework for access to PGR
- Development/institutionalization of funding mechanism
- Post Convention for Biodiversity collection of PGR with prior informed consent (PIC).

Farmers' Rights

Farmers' rights is now a reality. Mechanism for operationalizing it needs to be developed.

GROUP II: COLLABORATION ON PGR

The areas in which collaborations needs to be developed are following.

Germplasm Conservation and Exchange

The existing collaboration should be extended to private sector and informal sector.

Linkage between Conservation and Utilization

- Strengthening of existing linkages
- Developing new linkage (linkage among and between IARCs, NARS, private sector, NGOs farmers' organizations)
- Giving helping hands to less developed national programmes

- Crop-based networks could be used as vehicles for strengthening linkages.

Database Development

- Australia, FAO, IARCs can serve as facilitators and as information centres in the region.
- National programmes need to develop database and send it to facilitating centres.

Capacity Building

- Institutional structures
- Human resource development (including incorporating programme at schools and involvement of the civil society)

Public and Political Awareness

Setting up of special advisory group(s) for the purpose (at the national level)

Networking

- In addition to the existing networks (IARC-Regional-Sub-Regional-Bilateral and Crop Networks), a Pan Asian Network should be established.

In the meeting it was agreed that the APAARI could serve as an umbrella organization for the networking.

(Sources : SAIC Newsletter; IPGRI Newsletter)

MAKING MURI

Joygun Nessa's life in Tangail, Bangladesh, revolves around rice: she eats it; her family produces it on the farm; and it supplies her with a livelihood: making muri, puffed rice.

Rice and salt and sand—as a medium for puffing the rice—is all she needs. Ms Nessa, however, does not use just any rice. She recommends IR8, developed by the IRRI, or BR11 for the best results.

To prepare her speciality, she uses a clay-stove, in which the fire is underground. It uses one-third less fuel than other stoves; which is important in a country suffering from fuel shortage. She has been using the stove for about 7 years.

Squatting by the stove, she stokes the fire by throwing fistfuls of wheat-straw down the stove holes. Sometimes she uses cow-dung balls, rice hull and sticks for fuel. The heat produced is intense.

Over one of the holes, she heats up a large clay-pot with sand in it. Rice in salted water is warmed in a small pot over a different hole. She stirs the rice with naruni, a utensil made of palm-mid-ribs bunched together.

When the right temperature is reached, she skillfully pours rice into the big pot with the sand and swirls it for 30 seconds. Suddenly, the rice becomes alive in a burst of steam and fills the pot.

Ms Nessa knows exactly when the rice is done puffing. If she hesitates a moment too long, the rice will burn. With the precision of a master chef, she dumps the contents into a clay strainer and shakes out the sand.

The muri is warm and mildly salty, with a nutty taste. She makes it every day so that its fresh for her customers and family.

She markets the muri in bulk and in small plastic bags at the family's grocery store. From 40 kilograms of rough rice, she gets about 26 kilograms of muri. For every kilogram of muri sold, she earns 20 taka. Ms Nessa usually sells 52 kilograms of the snack-food each week, earning about 1,400 taka. Her yearly income from this business is 72,800 taka.

If she would simply sell the rough rice in the market, she would get 12 taka per kilogram. Selling the 80 kilograms of rough rice, used to make muri, she would only earn 960 taka—440 taka less.

Muri is profitable!" she says with a smile.

(IRRI) (Source: CGIAR Newsletter, June 1997)

WOMEN DAIRY FARMERS IN AFRICA

Women provide 46% of Africa's agricultural labour, produce about 70% of its food, perform almost 60% of the marketing and do at least half of the tasks involved in storing food and raising animals. Alarming, however, only 20% of these women are the direct recipients of the extension advice. Studies by the ILRI and the Kenya Agricultural Research Institute (KARI) have investigated, what effects a smallholder dairying package had on women's workloads and what applications this would have for dairy development.

The study showed that, while 84% of the farms, included in the study were owned by men, 84% of the dairy-operators were women. On the farms, where extension messages were delivered to men, three-quarters of dairy-operators were women.

Across all the farms, 48% of the people interviewed said that women did all or most of the dairy work, 25% said that hired labourers did most of the work and 22% indicated it were children who provided most of the labour. Only 5% said that husbands did most of the work in the dairy units. But on the farms, where men received the extension advice, over half of the husbands had exclusive control over the income generated by the dairy enterprise and in another 27% of the cases they shared control, despite the fact that three-quarters of the dairy-operators were females. Extension officers reported that some female dairy-operators lacked enthusiasm and conscientiousness in following extension advice because they derived little personal financial reward from their efforts in the dairy enterprise.

However, almost all (97%) of the people interviewed said that their total household income had increased since they adopted the Kenya National Dairy Development Project package and nine out of ten said that they had more milk for home consumption. The women felt that the benefits to the household outweighed their lack of reward. The most common use of the additional dairy income was for food for the household (72%), followed by school fees (34%), dairy inputs (34%), hired labour (22%), school books (16%) and clothing (9%).

Any strategy for increasing dairy production in subhumid East Africa must take into account that many, if not most, smallholder units are managed by women and that these women must be involved in defining the research agenda to make sure their needs are taken into account.

(ILRI) (Source: CGIAR Newsletter, June 1997)

RICE-WHEAT CONSORTIUM FOR THE INDO-GANGETIC PLAINS

The Rice-Wheat Consortium for the Indo-Gangetic Plains was established in May 1994 in a meeting held in New Delhi, which was convened by the World Bank, and was attended by the Senior Executives of the National Agricultural Research Systems (NARS) of the region and the International Centres. The primary objective of this Initiative is to promote research on issues that are fundamental to achieve enhanced productivity and sustainability of an important cropping system 'Rice-Wheat' of the South Asia. The Consortium has built up on the Asian Development Bank (ADB) funded Rice-Wheat Initiative, established in 1990; but with greater responsibility for planning and supervision given to the NARS. The Consortium comprises NARS of Bangladesh, India, Nepal, and Pakistan, ICRISAT, CIMMYT, IRRI, IIMI, and Cornell University, USA. The major task of the Consortium (available at :<http://www.cgiar.org/rwc>) is to locate specific areas most seriously threatened in these countries, to identify biological, physical and socio-economic causes of problem and develop, test, and promote implementation of strategies that will bring greater sustainability and higher productivity to rice-wheat cropping system.

OBJECTIVE

- To foster vision by enabling researchers from different institutions, backgrounds, and disciplines to perceive complex problems associated with rice-wheat research in a similar way, with a shared sense of what must be done and with an equivalent sense of comparative advantage of each participant in the common research process.
- To operate flexibly by being able to draw on an array of specialists as needed to support high priority-research activities.
- To avoid isolation by linking Rice-Wheat research specialists to other branches of research and extension.
- To offer incentives by making inter-institutional collaborations more attractive to

participants and by fostering quality-work among scientists.

- To introduce new methods such as farmer participatory research, which may have been developed elsewhere, and could be relevant to problems at hand.
- To set priorities by focussing research on problems affecting many farmers, with an emphasis on solutions most likely to be attractive to them.
- To enhance transfer of improved technology to farmers through established institutional linkages with various Departments of Extension and Agriculture.



The Regional Technical Co-ordination Committee (RTCC) meets twice in a year. Fourth Meeting of the RTCC was held in New Delhi in November 1996

MANAGEMENT STRUCTURE

A Regional Steering Committee (RSC), a Regional Technical Co-ordination Committee (RTCC), and a Facilitation Unit (FU) constitute Consortium management. The RSC comprises Chief Executives of the NARS of Bangladesh, India, Nepal, and Pakistan; one representative of the participating International Centres (on rotational basis); and a representative

of the donor community. The Facilitator of the Consortium acts as the Member-Secretary of the RSC and the Committee meets once in a year. The Facilitator is responsible for implementing decisions of the RSC. The RSC provides policy guidance and direction for the overall Initiative; endorses research priorities, work programmes, and budgets for the collaborative work as prepared by the RTCC and as are relevant to the programme objective; and monitors effectiveness of the Consortium in achieving its goal of improving cost-effectiveness of research effort to develop technologies for enhancing sustainable production of rice-wheat-based cropping systems in the Indo-Gangetic region.

The RTCC comprises one senior representative each (National Rice-Wheat Co-ordinator) from 4 NARS, one staff-member from IRRI, CIMMYT, IIMI, Cornell University, and ICRISAT, assigned to rice-wheat activities of the region, and the Facilitator, who acts as the Moderator. The RTCC

reviews and discusses national agricultural research programmes, their deficiencies and constraints, as presented by the national co-ordinators; develops collaborative programmes in research and related activities to strengthen cost-effectiveness of research effort; develops ways to strengthen and promote linkages between national programmes; ensures integration of collaborative activities among the national programmes; serves as a forum for exchange of information between the key participants; and seeks ways to facilitate exchange of know-how and research results across the region.

The Facilitator Unit (FU) acts as the nodal point to ensure necessary co-ordination among the members. Under the guidance of the RSC, the Facilitator provides technical, managerial, and financial support (where required) to National Rice-Wheat Co-ordinators in the 4 NARS and to other scientists; assists National Rice-Wheat Co-ordinators to prepare proposals for national or bilateral donor funding, and helps them to mobilize financial and technical resources; and acts as a communication node among participants in the Consortium for both scientific and administrative issues.

RESEARCH PRIORITIZATION

The research components of the Consortium include 4 main research themes: Tillage and Crop Establishment (TCE), Integrated Nutrient Management (INM), Integrated Pest Management (IPM), and Water Management (WM). Within these, are additional issues of germplasm development and policy analysis. It is also recognized that all these are integrally linked and hence Consortium would highlight interactions that exist between these components. The research in the identified themes would follow a logical sequence of activities; from diagnosis and problem definition to identification and evaluation of interventions.

Following objectives, which were pinpointed in 4 thematic workshops held during 1995, have been established for the 4 identified themes.

Integrated Pest Management (IPM)

- To facilitate and promote, improved, standardized, regional IPM research on rice-wheat cropping systems.

Tillage and Crop Establishment

- To develop improved tillage and crop establishment practices for establishing rice, wheat, and other upland crops, that result in more timely sowing, reduced costs, and overall system profitability and productivity.

Water Management

- At the national level, it is to conduct strategic and adaptive researches, and at the farm and irrigation-system level, this includes policy and institutional issues. And will ultimately improve farmer's profitability, and/or influence quantity and quality of water available for agriculture.
- At the regional level, it is for conducting comparative analyses to maximize synergy benefits of working together, using a common framework and methodologies.



Bed planting for wheat, a technology developed by the CIMMYT, is being introduced in the region after acclimatization. This allows efficient water and weed management



Testing Urea Super Granules (USG) in paddy fields, using indigenously fabricated USG Applicator; which leads to a saving of 20% fertilizer-nitrogen

Integrated Nutrient Management (INM)

- To determine extent of, and reasons for low yields of rice-wheat systems in some areas, and declining total factor productivity in other crop rotations.
- To understand short- and long-term nutrient processes that influence maintenance and enhancement of soil fertility and productivity.
- To develop integrated nutrient management practices to optimize nutrient-use efficiency.

COMPLIMENTARY PROGRAMMES

- The Department for International Development, UK, has provided US\$ 200,000 for a 3-year project under the Consortium umbrella for developing tillage options in Rice-Wheat Cropping Systems.
- The USAID has funded a 5-year Project on Soil Management through the Cornell University, USA (US\$ 3,000,000). The programmes are developed by the NARS, on need basis, and are implemented by the partners through the Consortium structure.
- The ADB has provided US\$ 600,000 to the ICRISAT for a 3-year project to develop technologies in rice-wheat-legumes cropping systems in the Indo-Gangetic plains.

INFORMATION EXCHANGE

Information exchange, one of the key Consortium activities, is promoted through:

- Monthly Rice-Wheat Information Sheet to keep partners informed on Consortium activities.
- Publication of 'Consortium Paper Series' as a forum for developing scientific papers, covering significant research topics (to be brought out soon).
- Developing Posters, emphasizing role of partnerships and new research approaches in solving emerging problems.
- Organizing intercountry study tours to provide scientists an opportunity to see and interact with



Tillage equipment from China (which has 10 million hectares under rice-wheat cropping systems) was provided by the Consortium under the DFID Project to various sites in the region for experimental field testing and adoption

scientists on current farming situations, adoption of technologies, new research techniques, etc.

- Promoting informal network among scientists having a common scientific interest.

ENHANCING SCIENTIFIC CAPABILITY

The FU organizes specific topic-related conferences, workshops, and training programmes for the NARS scientists, e.g. Nutrient Modelling, GIS, Review of Long-term Fertilizer Experiments, Pest Management, etc. with backstopping from International Centres and other Advanced Institutions.

FUNDING

The Consortium is supported by an International Donor Support Group. Funds have been provided by the Governments of Netherlands, Sweden, Switzerland, and the International Fund for Agricultural Development (IFAD).

APAARI SUPPORT OFFICE AT NEW DELHI

On 8 May 1997, Dr Jacques Diouf, Director-General, of the Food and Agriculture Organization of the United Nations, inaugurated the APAARI Support Office at the FAO Country Office in New Delhi (India). This office accommodates the FAO/APAARI secretariat.

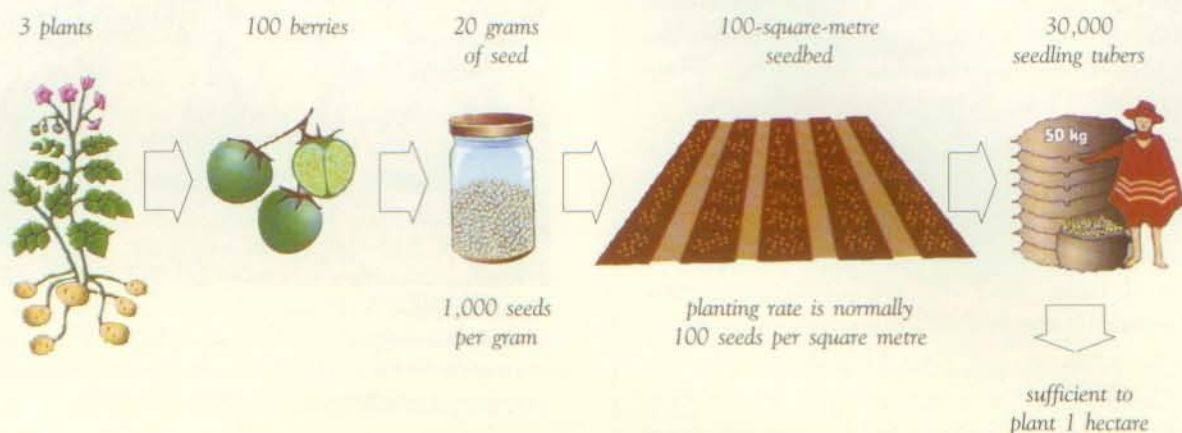
On this occasion, Dr Diouf was briefed about the APAARI activities by Dr R.S. Paroda, Executive Secretary, APAARI; and a set of recently published APAARI publications, including 'Success Story' series, were presented to him.

A memento was also given to Dr Jacques Diouf by Dr R.S. Paroda as a token of appreciation of the FAO support to the APAARI.



Dr Jacques Diouf, Director-General, FAO, at the APAARI Support Office, New Delhi

TPS ARITHMETIC



This illustration traces the process required to generate enough seedling-tubers to plant 1 hectare of potatoes from just 20 grams of true potato seed (TPS). The arithmetic involved is as simple as it is elegant. Potato-plants produce berries that contain true seeds. One gram of TPS contains 1,000 tiny seeds. Twenty grams of TPS is sufficient to plant a seedbed of 100 square metres. This seedbed produces 30,000 seedling-tubers that weigh approximately 500 kilograms, enough to plant 1 hectare. That is a far cry from the 2.5 metric tonnes of conventional seed-tubers required per hectare.

(Source : CIP 1997. CIP in 1996. The International Potato Centre Annual Report, Lima, Peru)

PEOPLE AS PESTS

Sticking forlornly out of the ground, only five leaves left on its skimpy branches, the seedling is dwarfed by the placard proclaiming its name and planting date: *Azadirachta indica*, 15 November 1986. A neem tree.

According to H.J. von Maydell's field guide *Trees and Shrubs of the Sahel*, the neem is "fast-growing: two-thirds of the height (to 20 metres) may be reached after three years." Photos from India show an evergreen with well-leaved branches forming a thick canopy. Yet this specimen in dryland Africa is barely one metre tall, a twig holding grimly onto life in what should be the favourable environment of an agroforestry research station.

"What happened to that little thing?" asks a visitor. The reply is revealing. "It got browsed by too many people. It was planted as a part of

a trial, but after a few months, the farm manager noticed it wasn't growing. Other trees around it were doing well, so he knew it wasn't soil deficiency or lack of rain. He thought it must be animals eating the leaves, so he fenced it in with wire-mesh. There are dik-diks (small antelopes) and rabbits here, and he concluded they really liked neem leaves."

"But the tree still didn't grow. Finally he decided to watch, and found farm-workers were picking the leaves – for medicine. In Kiswahili, the tree is called mwarubaini, which means '40 cures.' It's said to be able to cure 40 diseases, and everybody wanted some of that medicine. He had to order them not to touch the tree.

"And that's the only reason it's still alive."

Tom Pawlick

Agroforestry Today 1(2):2-5

(Source: *Neem-a Tree for Solving Global Problems-1992*
National Academy Press, Washington DC)

SECOND MEETING OF THE TROPICAL ASIAN MAIZE NETWORK

The second meeting of the Tropical Asian Maize Network (TAMNET) was held at Vigyan Bhawan, New Delhi, India, from 18 to 20 November 1996. Experts from Bangladesh, China, India, Indonesia, Nepal, Philippines, Thailand and Vietnam participated in the meeting, besides the representatives of the Asia and Pacific Seed Association (APSA), CIMMYT and FAO. There were also observers from India, Nepal, the Philippines and Thailand.

OBJECTIVES

- To follow-up on TAMNET activities, particularly on the results of Hybrid Maize Trials.
- To discuss and determine workplan for future activities.

TAMNET ACTIVITIES

Regional Hybrid Maize Trials

The Kasetsart University 3-way cross hybrid KTX 3503 appears to be most promising with an average grain yield of 6,877 kg/ha at 10 locations (6 countries). The 1996 results are still to be analyzed. An interesting development in 1996 was the participation of the private sector in trials with 8 hybrids from 6 seed-companies.

TAMNET Newsletter

Almost all TAMNET countries have featured in 6 issues, released so far. However, while a significant number of articles are received from Thailand, Vietnam, China and India, response from other countries needs to be enhanced. Efforts are made to cover various disciplines such as plant breeding, agronomy, plant pathology, entomology, biochemistry, etc., so that newsletter shall appeal to a wider audience and promote interdisciplinary linkages.

1997 WORKPLAN

An extensive discussion was carried out in the meeting on the future workplan for the TAMNET trials, and a general agreement was reached (See at right column – 1997 TAMNET Trials).

RECOMMENDATIONS

- It was acknowledged by all the participants that the Tropical Asian Maize Network has succeeded in promoting collaboration in maize research and development among the countries of the region.
- In reviewing the status of the TAMNET trials, the participants felt that there were some

1997 TAMNET TRIALS

| Country | Entries* | | Locations | |
|------------------------|-----------|-------------|-----------|-------------|
| | Early | Full Season | Early | Full Season |
| Bangladesh | – | – | 1 | 1 |
| China | 1 | 1 | 2 | 1 |
| India | 2 | 2 | 4 | 4 |
| Indonesia | 2 | 1 | 2 | 2 |
| Nepal | – | – | 1 | – |
| Philippines | 1 | 2 | 1 | 1 |
| Thailand | 2 | 3 | 3 | 3 |
| Vietnam | 2 | 1 | 3 | 3 |
| Sub-total | 10 | 10 | 17 | 15 |
| CIMMYT | 2 | 2 | – | – |
| Private companies 17** | 15** | – | – | – |
| Regional check | – | 2 | – | – |
| Local check | 1 | 1 | – | – |
| Total | 30 | 30 | 17 | 15 |

* About 3 kg of seeds of each country are to be supplied. Only seeds of high germination percentages should be submitted. Package of seeds, together with phytosanitary certificate, should be sent to FAO/RAP via pouch service of the FAO Representative Office in each country (if available)

** A charge of US\$1,000 will be levied for each entry submitted to TAMNET by private companies

difficulties and problems relating to delay in submission of adequate quantities of high-quality seeds, reporting, monitoring and trial data collection. In order to overcome these problems, the Consultation recommended that:

- Minimum of 3 kg of seed from each entry (of at least 90% germination ability) should reach the Regional Trial Co-ordinator, Chairman, Chamnan Chutkaew, by 31 December. The seeds should subsequently be packed properly and sent to member-countries before the end of January.

THIRD TAMNET MEETING

Vietnam proposed to host the Third TAMNET meeting in November 1997

- Three reports should be sent to the Regional Co-ordinator by every National TAMNET Trial Co-ordinator. The first one should be sent one month after the receipt of the seed

sample, and should include acknowledgement of receipt of seed sample, date of planting, exact location of test site and field stand. The second report should be sent during flowering/grain-filling stage, to include information on the performance of the entries. The final report should be sent one month after harvest, to include all data collated. Each report should be accompanied by photos, if possible.

- c) Monitoring of trials should be ensured by the National Co-ordinators, to improve quality and to achieve highest level of performance in conducting trials.
- d) Guidelines for the conduct of the trials (Trial Protocol) should be updated regularly based on gained experience and new developments.
- The need to have TAMNET Trial data analysed properly and promptly and sent to member-countries as well as to participating private seed companies was recognized by everyone. The National TAMNET trial Co-ordinators, therefore, should make sure that all data are sent to Regional Co-ordinator as soon as possible after harvest.
- The participation of the private sector in the 1996 TAMNET trials was welcomed by all participants. It was proposed that efforts should

be made for further strengthening of the co-operation between the public and private sectors.

- The germplasm exchange (including inbred lines) should be further promoted. The issue was subsequently discussed during the meeting and as a result 5 countries (China, India, Indonesia, Philippines and Vietnam) agreed to exchange their inbred lines on one-to-one reciprocity basis for research purposes. Moreover, India and China agreed in principle to exchange their inbred lines with full right, in order to use them as parents in commercial hybrids.
- Due to importance of hybrids in maize production and productivity, regional training programmes on Hybrid Maize Technology should be encouraged and promoted.
- The success of the TAMNET Newsletter depends, to a great extent, on the co-operation of the fellow maize-workers. All the National TAMNET Co-ordinators should intensify their efforts and make sure that significant number of articles are sent for publication. Contributors of articles should make sure that their articles are of general interest to fellow researchers and developers, rather than having a narrow focus.
- Each TAMNET meeting should take place rotation-wise in a different member-country.

(Source : RAP Publication 1997/1)

DOCTOR OF SCIENCE (Honoris Causa) FOR DR ISMAIL SERAGELDIN

Dr Ismail Serageldin, Vice President of the World Bank and Chairman of the Consultative Group on International Agricultural Research (CGIAR), was conferred Doctor of Science (Honoris Causa) degree on 7 February 1997 at the 35th Convocation of the Indian Agricultural Research Institute (IARI), New Delhi, India. An eminent scientist, educationist and administrator, Dr Serageldin has demonstrated a strong personal commitment to mobilizing the highest scientific capacities to serve the needs of the poor of the world.

Dr Serageldin has been largely responsible for re-engineering the CGIAR, one of the world's



Dr Ismail Serageldin honoured with Doctor of Science (Honoris Causa) at the IARI, India

largest scientific institutions, dedicated to promoting food security, for making it more responsive to needs of developing countries. He is also the Founder and Chairman of the Consultative Group to Assist the Poor (CGAP) – a multi donor effort to increase resources in micro-finance to broaden and deepen success of pioneering work in the field of enhancing

access of the poorest of the poor to credit. He has worked mostly with the Third World Foundation of North America, the Third World Academy of Sciences, Italy, the US Academy of Sciences and others, to help build science capacity in developing countries.

(Source : Farm Digest, March 1997)

AVRDC LAUNCHES PHASE II OF THE SAVERNET



Participants at the SAVERNET

On successful completion of the first phase of the activities of the South Asian Vegetable Research Network (SAVERNET), the Asian Development Bank (ADB) has agreed to financially support the Phase II of the SAVERNET for 3 years, starting from 1 July 1997. The Joint Planning Meeting was held at Kandy and at Bandarawela in Sri Lanka from 5 to 9 May 1997. From India Dr D.P. Singh, ADG (Vegetables), Indian Council of Agricultural Research, represented as the National Co-ordinator.

After thorough discussions with participants from Bangladesh, Bhutan, Nepal, Pakistan, Sri Lanka and the AVRDC Taiwan team, led by Dr H. Imai, under the overall leadership of Dr S. Shanmugasundaram (Network Co-ordinator), a detailed workplan was finalized on various activities to be undertaken under Phase II. The following activities have been finalized.

SUBNETWORK 1

- Translating results under phase I for application in farmers' fields.
- On-farm evaluation of elite variations
- Further testing of promising material

- Exchange and evaluation of elite varieties
- Inclusion of private sector varieties/hybrids and technology
- Recording cultural practices from NARS

SUBNETWORK 2

- Bacterial wilt resistance in tomato and eggplant
- Leaf curl and other viruses resistance in tomatoes and chillies
- IPM of fruit and shoot borer of eggplant and fruit worm in tomato
- Off-season production of tomatoes and chillies.

The above activities will be undertaken at the Indian Institute of Horticultural Research, Bangalore, Project Directorate for Vegetables Research, Varanasi, and Indian Agricultural Research Institute, New Delhi.

It is expected that significant achievements will be made in Phase II with the active co-operation of 6 participating countries and the AVRDC, Taiwan. It will also open doors for Inter-network linkages.

THIRD STEERING COMMITTEE MEETING OF THE UTFANET

The Third Steering Committee Meeting of the UTFANET was held on 13-14 April 1997 at the Bangladesh Agricultural Research Institute, Joydebpur, Bangladesh.

The meeting was inaugurated by Dr Z. Karim, Chairman of the BARC. Dr M.A. Mazed, Director-General of the BARI, was the chief guest. Dr Quasem, the national co-ordinator of Bangladesh, highlighted the importance of underutilized tropical fruits in relation to nutrition and economy of Bangladesh.

While discussing, project development on priority species, it has been suggested that no individual country project will be funded by the UTFANET. In the intercountry network projects, both short-term and long-term, funding support will be considered for: temporary staff (research fellow), travel grants (to visit advanced laboratories in UTFANET member-countries), purchase of laboratory equipment and recurrent expenses. It was also decided that the fund should be released on a six-month basis; on submission of a satisfactory report of the project activities. The following projects were approved in the meeting.

Long-term Project

Intercountry network projects on 3 priority species—pummelo by India, jackfruit by Bangladesh and mangosteen by Philippines—will be developed covering germplasm collection, evaluation and varietal improvement; standardization of propagation methods; development of appropriate production technology; development of appropriate technology for post-harvest management and processing.

Such project proposals will be sent to the UTFANET co-ordinator for submission to prospective donors agencies for funding support.

Short-term Project

It is agreed that a small project on standardization of propagation techniques of pummelo should be carried out in India, Nepal and Vietnam.



Participants at the third Steering Committee meeting

IPGRI's ACTIVITIES RELATED TO THE UTFANET

It was decided that the UTFANET and the IPGRI should develop collaborative activities, and MOU between the IPGRI and the UTFANET should be finalized. The following areas were identified for joint programmes.

- The IPGRI would help the UTFANET to finalize descriptors of jackfruit, which will be published jointly by them.
- The IPGRI would explore possibilities of assisting the UTFANET in a joint germplasm collection of jackfruit in north-eastern Bangladesh and eastern India; where the Steering Committee felt that the germplasm is under threat of erosion.
- They would collaborate in capacity-building, particularly in areas already identified.
- They would collaborate on documentation of PGR information, and disseminate it in electronic format.

The National Co-ordinator of Bangladesh has been appointed as Deputy Chairperson. It was also agreed that duration for Chairperson and Deputy Chairperson's post should be extended to 2 years; from now on Dr Dar will take over as Chairperson from Dr Ghosh for 1997 and 1998.

NEW CHAIRMAN AND VICE-CHAIRPERSON FOR GB OF ICRISAT



Dr R.S. Paroda

Dr R.S. Paroda, Director-General, Indian Council of Agricultural Research (ICAR) and Secretary, Department of Agricultural Research and Education (DARE), Government of India, New Delhi, has been elected as the Chairman of the ICRISAT Governing Board (GB) on 28 February 1997.



Dr R. Sohlberg

Dr Ragnhild Sohlberg, Vice President, External Relations and Special Projects, Human Resources Development, Norsk Hydra a.s., Norway, is the new Vice-Chairperson of the GB.

Dr Paroda has been a member of the Governing Board since September 1994, and Dr Sohlberg has been a member since April 1995.

CGIAR 1997 MID-TERM MEETING

The 1997 Mid-Term Meeting of the CGIAR was held in Cairo, Egypt, from 26 to 30 May 1997.

In this meeting, the CGIAR Chairman, Dr Ismail Serageldin, in his opening address spoke on the research programmes and policies that will enable CGIAR to mobilize cutting-edge science as an instrument for achieving sustainable agriculture for food security in the twenty-first century. He emphasized, in particular, the importance of substantially enhancing the capacity of CGIAR in the area of biotechnology.

Thailand was admitted to the CGIAR membership by acclamation. Representatives from Greece, Morocco and Turkey had attended MTM97 as observers

MEDIUM-TERM RESEARCH PLANS FOR 1998-2000

The Group received a report from the TAC Chair on the medium-term planning process.

The TAC largely maintained the recommendations it had presented at the MTM96, with the exception of the professional development and training, which received an increased allocation in response to the regional fora. The recommendations called for:

- increasing percentage share allocated to the CIFOR, ICRAF, ICLARM, ILRI, IIMI and IITA
- maintaining current percentage shares of the IFPRI, ISNAR, IPGRI, IRRI, WARD and ICARDA
- decreasing percentage shares of the CIP, CIMMYT, ICRISAT, and CIAT

The broad points which were emphasized during the Group's discussion on MTP proposals are as follows.

- The TAC had conducted a thoughtful analysis, which was welcomed by the Group. TAC's guidance has led to higher quality MTPs.
- Centres had made significant progress in addressing poverty and gender concerns in their MTPs; and this emphasis should continue.
- Follow-up is needed to ensure inclusion of partners in the work of the CGIAR; from planning, to conduct research, to evaluation.
- The TAC should continue to monitor gains from new scientific developments, relevant to the CGIAR's work.

- The MTPs should provide a sufficient basis for monitoring impact; to ensure that the CGIAR technologies reach intended beneficiaries.

The Group endorsed TAC recommendations for the 1998-2000 medium-term planning.

1998 RESEARCH AGENDA AND FUNDING REQUIREMENTS

The 1998 research agenda recommended by the TAC consist of centre activities slated for implementation during the first year of the medium-term planning period. With regard to the financial requirements for the 1998-2000 medium-term planning period and 1998 financial prospects, the Group received a report from the Finance Committee Chair. Indicative financial requirements of \$350 million, recommended by the TAC, represent a 7.7% increase over the 1997 financing plans. This proposed requirements, however, were considered too optimistic by the Finance Committee.

FUTURE MEETINGS

| | | | |
|------|-----|---------------|---------------------|
| 1997 | ICW | 27-31 October | Washington, DC, USA |
| 1998 | MTM | 25-29 May | Brazil |
| | ICW | 26-30 October | Washington, DC, USA |
| 1999 | MTM | 24-28 May | To be determined |
| | ICW | 25-29 October | Washington, DC, USA |

The Group adopted a financial planning target of \$335-340 million, as recommended by the Finance Committee, and commissioned the preparation of centre financing plans for approval at the ICW97.

The External Programme and Management Reviews (EPMR) of the three centres—ICRISAT, ISNAR and IPGRI—were considered during the MTM97

POSITIONING CGIAR IN THE GLOBAL SYSTEM

The Group discussed and shared perspectives on the positioning of the CGIAR within the global system.

The discussion covered a range of issues. Among the broad points emphasized by the Group were:

- The key focus of the CGIAR should remain on the generation of the international public goods. Conserving germplasm, increasing productivity, protecting natural resources, and building capacity will likely constitute the primary dimensions of the future CGIAR work. The

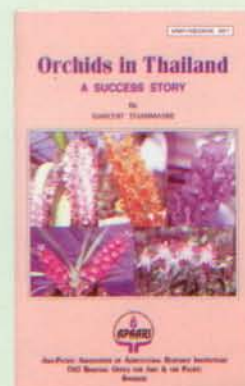
CGIAR will continue to be needed as a leader and focal point in people-centred, interdisciplinary, and international research related to questions of natural resources management.

- In addition to continuing its traditional role as a network of institutions, conducting first-rate research, the CGIAR could play additional roles such as a catalyst of change, technology integrator, and supporter, gap-filler, and critical mass creator.
- The CGIAR needs to be well connected to global developments related to policy, and to formulate or update its own policies in key areas such as genetic resources and intellectual property rights.
- The CGIAR must ensure the conduct of good science in its own and partner-institutions.
- The CGIAR needs to significantly strengthen its capacity in biotechnology, and should take advantage of breakthroughs in other areas such as artificial intelligence, modern communications, and GIS, GPS and system sciences.
- The CGIAR should increasingly operate through partnerships; in this regard, developments in the formation of regional fora and the Global Forum are encouraging.
- The CGIAR should be aware that inevitable tensions will arise as a result of changing research competencies and relations with partners, on the issue of science and knowledge generation and dissemination versus institutional support and human resources development, facilitating partnerships versus sticking to the core business of knowledge generation, public goods versus intellectual property, and delivering knowledge versus reducing poverty or environmental degradation; such tensions can be creative, but if not properly balanced, could also be destructive.
- Change will be required for further re-engineering and renewal in the CGIAR; new institutional forms will be needed to conduct new science.
- The CGIAR should promote competition and make greater use of outsourcing, in order to increase its efficiency.

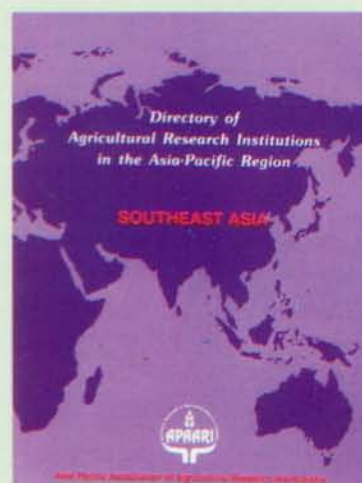
FOLLOW-UP TO THE GLOBAL FORUM

The Group received a report from the Global Forum Steering Committee on its work and future plans. The relative roles of the Global Forum and the

LATEST APAARI PUBLICATIONS



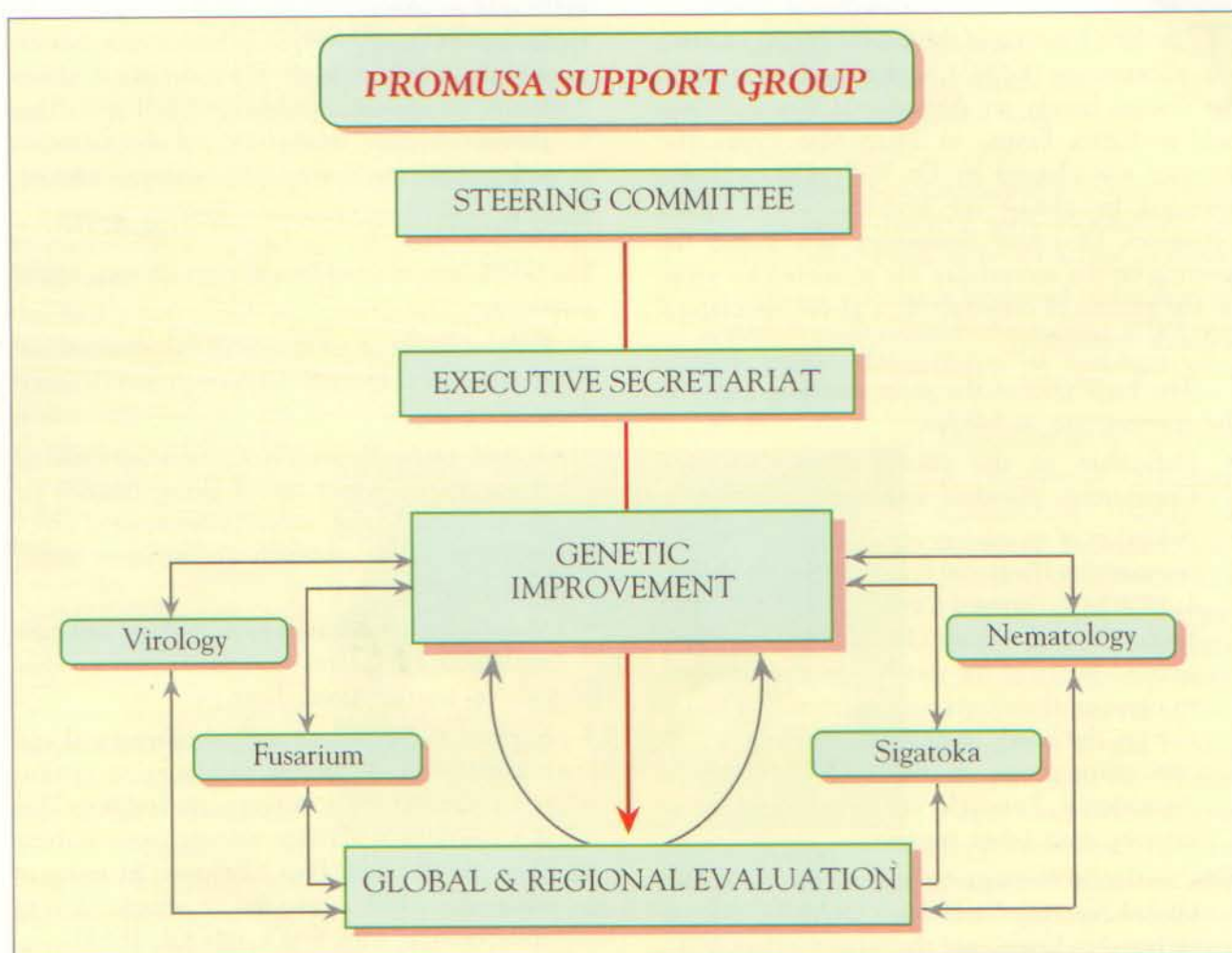
This describes the key factors responsible for success of orchid production and trade vis-a-vis economy in Thailand.



This Directory enlists 75 institutions/organizations/universities of 8 countries—Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. It includes selected indicators for agricultural development of countries and brief profiles of their agricultural and forestry related important research institutions/organizations/universities.

regional and subregional fora have been clarified. The Global Forum serves to integrate various components of global agricultural research system, and provides a platform for greater interaction among regional and subregional fora and other actors in the global system, such as ARIs, international centres, NGOs, and the private sector. The regional and subregional fora play a parallel role, in which NARS are the key components.

GLOBAL PROGRAMME FOR MUSA IMPROVEMENT (PROMUSA) LAUNCHED



The International Network for the Improvement of Banana and Plantain (INIBAP) and the World Bank have jointly initiated a Global Programme for Musa Improvement. This programme, known as **ProMusa**, exemplifies new vision of global partnerships in international agricultural research, advocating at the **Global Forum on Agricultural Research** as a means to foster collaboration within the global agricultural research system. **ProMusa** was officially launched at a meeting in Guadeloupe.

ProMusa is a broad-based programme, which aims at involving all major players. This programme builds on the existing achievements, and has been developed as a mechanism to further maximize outputs and accelerate impact of overall Musa improvement efforts. It is an innovative mechanism to bring together research carried out both within and outside the CGIAR; creating new partnerships between the National Agricultural Research Systems and research institutes in developing and de-

veloped countries. The formation of such partnerships will not only create synergies, which will result in "added value", but will also contribute to strengthening capacity of the NARS to conduct research on banana and plantain.

This programme will be overseen by a Steering Committee with representatives from the NARS, International Agricultural Research Centres and Advanced Research Organizations. The APAARI will be requested to nominate a representative on the Committee. Programme co-ordination is effected through an Executive Secretariat, which has been provided by the INIBAP.

The INIBAP, as a programme of the IPGRI, has recently been the subject of an External Programme and Management Review. The review panel has strongly endorsed ProMusa and has been particularly positive about the *modus operandi* of the programme. The programme has also been endorsed by the CGIAR at its mid-term meeting.

GLOBAL FORUM STEERING COMMITTEE MEETS AT CAIRO

The First Meeting of the Global Forum Steering Committee (GFSC), under the framework of the Global Forum on Agricultural Research, was held in Cairo, Egypt, on 24-25 May 1997. The meeting was chaired by Dr Willy Dar, and was attended by almost all invitees. The CGIAR Chairman, Dr Ismail Serageldin, also joined the meeting on the second day. He presented his views on the process of constructing a global agricultural research community.

The highlights of the main decisions taken at the meeting are as follows.

- Definition of the Global Forum Steering Committee's mandate and functions.
- Adoption of an interim committee membership composition (Regional Fora: 5; ARIs: 3; IARCs: 1; NGOs: 1; Farmers' Organizations: 1; Private Sector: 1; and Donor Group: 1). The GFSC stressed the need for various types of members to organize their own constituencies (if this is not yet the case), in order to strengthen their own participation in the Global Forum on Agricultural Research and their capacity to interact with other regions.
- Creation of two secretariats: one for the NARS Global Steering Committee (NARS-GSC), to be based in Rome, and the other for the GFSC, to be based in World Bank-ESDAR. The location of the NARS-GSC secretariat is still under discussion.
- Discussion and definition of the secretariat services and operational support that will be provided by each secretariat, and the interaction between the two.
- Endorsement of the GFSC's outline of activities, including establishment of an electronic global forum on agricultural research (EGFAR). This provides a clear orientation for the activities to be carried out by the GFSC in the near future.

WORK PROGRAMME OF THE GFSC: INITIAL ACTIVITIES

The GFSC agreed to undertake the following initial activities.

- Enhancement of exchange of information (on technologies, research projects, research institutions, etc.)
- A platform for discussion of generic agricultural research issues that are of global interest (ie sustainability issues, biotechnology, rural innovation processes, research management issues, etc.)
- Monitoring of research partnerships and case analysis of successful ones, in order to see what can be learned from them.
- Support to NARS, as well as subregional and regional fora, in aspects pertaining to institutional strengthening and capacity-building. This is a continuous activity, and we hope to hear from the Regional Fora Chairmen in terms of what the GFSC can do or should do, in collaboration with FAO, ISNAR, IFAD.
- Identification of collaborative projects. Interesting joint research projects are already emerging in various regions, involving IARCs, NARS and ARIs. This is a particularly important activity that may complement and strengthen joint research efforts that IARCs are already carrying out with other key-actors.

ANNOUNCEMENT

The Fourth Executive Committee Meeting of the APAARI and an Expert Consultation on "Management and Strengthening of Regional Research Networks in the Asia-Pacific Region" will be held at the Agricultural Research, Education and Extension Organization (AREEO), Teheran, Iran from 19 October to 21 October 1997.

The APAARI is planning to organize an Expert Consultation on "Agricultural Research Management Mechanisms of NARS, their Strengths and Opportunities" in the early part of the 1998. The exact date and venue of this will be decided at the Fourth Executive Committee Meeting at Teheran.

NEPAL AGRICULTURAL RESEARCH COUNCIL (NARC), NEPAL

Nepal Agricultural Research Council (NARC) was established as an autonomous organization under the "Nepal Agricultural Research Council Act-1991" (First Amendment in NARC Act was made on 14 February 1997) with the prospect of having an efficient, effective and dynamic agricultural research system in Nepal for uplifting economic levels of people through research activities in agriculture; as Nepal is predominantly an agricultural country. About 81% of its population is engaged in agriculture.

OBJECTIVES

- To conduct high-level studies and researches on various aspects of agriculture.
- To identify existing problems in agriculture and find out measures to solve.
- To assist His Majesty's Government of Nepal, in the formulation of agricultural policies and strategies.

FUNCTIONS AND RESPONSIBILITIES

- Conduct high-level research work in various fields of agriculture, required in-line with the national agricultural policies.
- Prioritize studies and researches to be conducted.
- Provide research and consultancy services to its clients.
- Co-ordinate, monitor and evaluate agricultural research activities in Nepal.
- Document research activities.

ACTIVITIES

- I. Implement research programmes by itself or in collaboration with other institutions on:
i) Cereals and Cash Crops, ii) Horticulture, iii) Livestock and Animal Health, iv) Fisheries, v) Pasture and Fodder, vi) Agroforestry/Farm-Forestry, vii) Soil and Irrigation Management,

viii) Botany and Biotechnology, ix) Entomology, Plant Pathology and Plant Protection, x) Farming Systems, xi) Agri-Extension, xii) Agri-Economic and Marketing, xiii) Food Science, and xiv) Other subjects related to agriculture.

- II. Implement research with a focus on generation of agricultural technology suitable for various agroclimates of Nepal.
- III. Provide client-oriented contract out-research services to farmers, agri-extensionists and agro-entrepreneurs.
- IV. Conduct research work to increase long-term agricultural productivity without depleting environment.



NARC headquarters

FINANCIAL RESOURCES

Financial resources for its functioning are obtained from: Grants from His Majesty's Government of Nepal; Grants from national and international donor agencies and governments; Funds obtained from research or consultancy services.

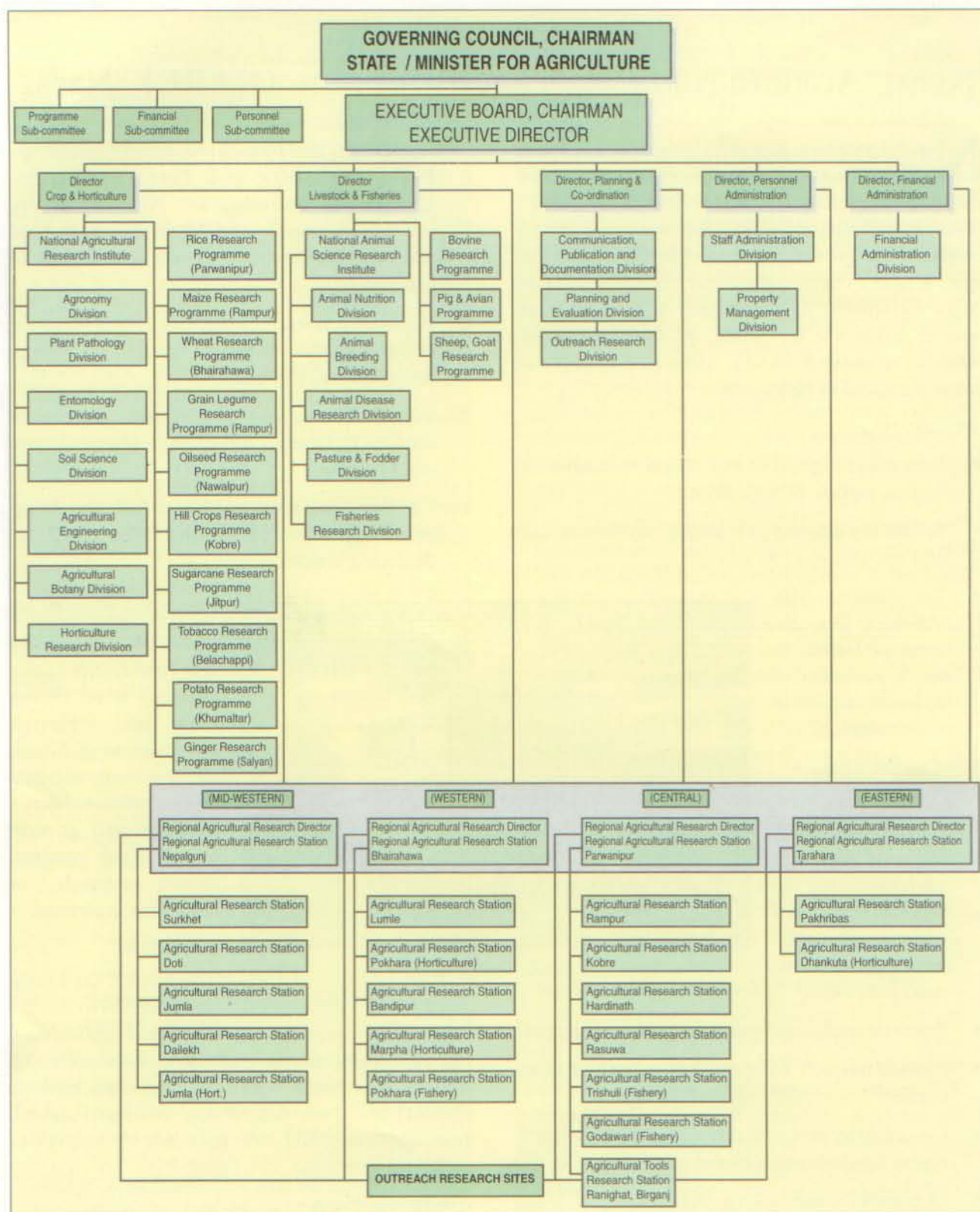
STRUCTURE

The NARC has 12 disciplinary divisions, 13 commodity programmes, 4 regional agricultural research stations, and 18 agricultural research stations. The Nepal Agricultural Research Institute (NARI) and National Animal Science Research Institute (NASRI) are handled by respective technical directors.

COMMUNICATIONS

The Communication, Publication and Documentation Division (CPDD), at present, has National Agricultural Documentation Centre (NADC)/ Central Library, Publications and Communications/Public Relations/Audio-Visuals.

The NARC has created CPDD and NADC as the modern information facilities with Micro CDs/



ISIS-based International Information System for Agricultural Sciences and Technology (AGRIS) and Current Agricultural Research Information System (CARIS) database on Compact Disc – Read Only Memory (CD-ROM).

The NARC informs its clients about its activities and achievements through various electronic and print media e.g. publication of news digest, newsletter, proceedings, annual report, research highlights, popular articles, booklets, year planner, planning

plus M & E booklets, sample cover page, breakthroughs, video-films etc. More than 80 agricultural research and development related institutions of the world are in "Networking" with the NARC. The NARC has established "Exchange Programmes" with some of the institutions. The creation of promotional materials about the NARC is a must so as to sensitize or create public awareness about the importance of agricultural research. It has established very cordial linkages among I/NGOs, electronic and print media. The NARC has E-mail and Fax facilities and it is planning to establish "Internet" connection too.

ACHIEVEMENTS

- One hundred and forty-eight (148) types of cereal and horticultural crop varieties have been officially released and registered with total package of practices.
- Successful technologies/stories generated by the NARC are disseminated or promoted through different media in order to sensitize/create public awareness about agriculture.
- The Institute has developed "package of practices" for Trout Fish Farming.
- It has proved usefulness of integrating chemical fertilizers with pre-rice green-manures (*Sesbania cannabina*) for sustainable plus satisfactory rice productivity on a long-term basis, without deteriorating 'soil health'/environment. *Sesbania rostrata*, which has, the ability to fix atmospheric nitrogen, has shown promise as a supplementary source of mineral-nitrogen.
- The Institute has also developed package of practices for mushroom farming.
- Developed package of practices for viral disease-free potato-seed production through tissue-culture technique.
- Developed package of practices for improving milk production of local cows by artificial insemination (A.I.)
- Developed some of the technologies for Integrated Pest Management (IPM) by verifying in 'Farmers Field School' (FFS).
- Developed a 'zero tillage technique' for wheat establishment.



Screening of rice varieties against mealy-bug



The pipeline cultivar Yongen, for replacing the Taichung 176, against blast disease in Kathmandu Valley



Milking nak

RECENT RAP PUBLICATIONS

Some of the important publications brought out recently by the FAO Regional Office for Asia and the Pacific (RAP*) are listed below.

1. Farm Management Technology Bulletin : A guide to low-input sustainable agriculture for the Asian farmer-The Philippine Case (RAP Publication: 1996/25)
2. FAO in the Asia-Pacific Region (RAP Publication: 1996/26)
3. The Khao Kho Story : Reclaiming the barren hills of Thailand's Central Highlands (RAP Publication: 1996/27)
4. Selected indicators of food and agriculture development in Asia-Pacific Region, 1985-95 (RAP Publication: 1996/32)
5. Report of the Regional Expert Consultation on Strengthening the Agricultural Extension Systems for Sustainable Agriculture and Rural Development, 17-20 September, Bangkok, Thailand (RAP Publication: 1996/33)
6. Farm Management Technology Bulletin 2 : A guide to low-input sustainable agriculture for the Asian farmer-Low input agriculture practices in Sri Lanka (RAP Publication: 1996/34)
7. Farm Management Technology Bulletin 2 : A guide to low-input sustainable agriculture for the Asian farmer-The Vietnam Case (RAP Publication: 1996/35)
8. Farm Management Technology Bulletin 2 : A guide to low-input sustainable agriculture for the Asian farmer-The Case for Indonesia (RAP Publication: 1996/36)
9. Seed suppliers for tree planting in the Asia-Pacific Region - A brief overview (RAP Publication: 1996/37)
10. Farm Management Technology Bulletin 2 : A guide to low-input sustainable agriculture for the Asian farmer-The Indonesia Case (RAP Publication: 1996/38)
11. Report of the Expert Consultation on the Role of Private Sector on Sustainable Agriculture and Rural Development, Bangkok, Thailand, 22-25 October 1996 (RAP Publication: 1996/39)
12. Report of the 25th Session of APFIC, 15-24 October 1996 (RAP Publication: 1996/40)
13. NFAP Documentation Center : Asia and the Pacific (RAP Publication: 1996/41)
14. Report of the APFIC symposium on environmental aspects of responsible fisheries (RAP Publication: 1996/42)
15. An overview on Asian elephant gone astray for domesticated Asian elephant (RAP Publication: 1996/43)
16. Proceedings of the Regional Expert Consultation on *Eucalyptus*, 4-8 October 1993, Volume II (RAP Publication: 1996/44)

* RAP publication nos. 28, 29, 30, 31 have been cancelled.

Note: Copies can be obtained on request from the FAO, RAP, Maliwan Mansion, Phra Atit Road, Bangkok 10200, Thailand.

FUTURE CONFERENCES

1. Title : International Conference on Ethnoveterinary Medicine
 Venue : BAIF Development Research Foundation, Pune, India
 Period : 4-6 November 1997
 Contact : Dr D.V. Rangnekar
 Vice-President, BAIF Development Research Foundation, Mafatlal Industries Compound PB No. 2030, Asarwa, Ahmedabad 380 016
 Telephone : 079-2123940
 Fax : 079-2123045
 Email : BAIF.AHM@LWAHM.NET dv.rangnekar@smr.sprintrpg.ems.vsnl.net.in.
2. Title : International Symposium on Atmospheric Chemistry and Future Global Environment
 Venue : Nagoya, Japan
 Period : 11-13 November 1997
 Contact : Dr Yoshizumi Kajii
 RCAST, University of Tokyo
 4-6-1 Komaba, Meguro-Ku, Tokyo 153, Japan
 Telephone : (+81-3) 3481-4563
 Fax : (+81-3) 3481-4562
 Email : kajii@atmchem.rcast.u-tokyo.ac.jp
3. Title : 12th International Conference and Workshop on Applied Geologic Remote Sensing - Practical Solution for Real World Problems
 Venue : Denver, Colorado, USA
 Period : 17-19 November 1997
 Contact : ERIM/Geologic Conference
 P.O. Box 134 001
 Ann Arbor, MI 48 113-4001, USA
 Telephone : 313 994-1200, ext. 3234
 Fax : 313 994-5123
 E-mail : Wallman@erim.org.
4. Title : International Symposium on Agro-environmental Issues and Future Strategies Towards the 21st Century
 Venue : Faisalabad, Pakistan
 Period : 25-30 May 1998
 Contact : Prof Jehangir Khan Sial, Symposium Director and Chairman (Basic Engineering), Faculty of Agricultural Engineering and Technology
 University of Agriculture, Faisalabad, Pakistan
 Telephone : 0092-41-30281-89/ext. 434
 Fax : 0092-41-30169, 647846

APAARI Represented at MTM 97 of the CGIAR

Dr M. Akbar, Chairman, APAARI, participated and made a presentation on the 'APAARI Activities in the Asia-Pacific Region: Current Status and Future Prospects' at the Global Forum Meeting during 25-27 May, at the Mid-term Meeting of the CGIAR at Cairo, Egypt.