



APAARI

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EDITORIAL

Regional approaches to identify agricultural research and development priorities have received considerable attention in the recent past, through bottom up exercise involving diverse stakeholders such as NARS, IARCs, ARIs, NGOs and other international organizations (FAO, IFAD, GFAR). Such an approach has also been adopted by CGIAR in its vision and strategy, and there has been a growing concern as to how best regional priorities can be matched with international priorities, taking care of the R&D needs of the national systems.

APAARI in its 'Vision 2025' has focused on some of these concerns and highlighted these during its last two Executive Committee meetings and Expert Consultations. This year, it has held three sub-regional meetings on ARD Priority Setting; for West and South Asia at ICRISAT, Patancheru, 5-7 July 2001; for East and Southeast Asia at IRRI, Los Baños, Philippines, 27-28 June 2001; for the Pacific region at Nadi, Fiji, 29-31 October 2001. The recommendations of these were further discussed at the Expert Consultation in Bangkok during 12-14 November 2001. This exercise while analyzing the regional priorities, took note of the common priorities for the sub-regions and as to how best to integrate these with the ten CG Challenge Programmes (CPs) identified recently. It also emphasized that in viewing this, the role of regional networks is also to be examined critically and efforts are made to bridge the existing gaps.

Based on the above deliberations, several common areas for research opportunities/regional priorities could be identified namely; broad research areas of natural resource management, genetic resources, commodity chain development, meeting protein needs of growing population, tree and forest management, and cross-cutting activities on: information and communication management and capacity building. Also, within each of these priorities, further specific research areas could be identified.

In its task ahead, APAARI as a regional forum contemplates to integrate regional and international concerns as reflected above. The work will be undertaken by a technical advisory group which will look critically into the current R&D scenario – collaboration among NARS, linkages with IARCs, regional networks and other partners such as GFAR, FAO, ACIAR etc. Such a holistic approach would help analyze regional research gaps, assess R&D needs, requirements for global collaboration and identify new research areas for future support by the donor organizations. In crystallizing its regional priorities, APAARI will keep in view the design and implementation of the respective CG Challenge Programmes (covered in an article in this issue) and develop its regional research proposals accordingly for donors' support so as to provide further thrust by bringing back the sustainable agricultural development on global research agenda. Another expected outcome of this 'bottom up' exercise would be stronger partnership among NARS to pursue agreed research agenda in future for greater mutual benefit.

Editors

APAARI EXPERT CONSULTATION ON ARD PRIORITY SETTING FOR AGRICULTURAL RESEARCH FOR DEVELOPMENT IN THE ASIA-PACIFIC REGION

12–14 November 2001, Bangkok, Thailand

The Sixth Executive Committee Meeting of APAARI and the Expert Consultation on Regional Priority Setting for Agricultural Research for Development in the Asia-Pacific Region were held at Bangkok, Thailand from 12-14 November 2001. In the Sixth General Assembly of APAARI and the Expert Consultation on "Strategies for Implementing APAARI Vision 2025: Agricultural Research for Development in the Asia-Pacific Region", held at Chiang Rai, Thailand, 8-10 November 2000, it was decided that APAARI should take a re-look at the regional priorities already identified/recommended for regional co-operation/partnership in R&D, so as to crystallize current ARD priorities in the region. As a follow-up of this decision, APAARI successfully completed the ARD Priority Setting exercise at the sub-regional level i.e. West & South-Asia (5-7 July 2001, at ICRISAT, India), East & Southeast Asia (27-28 June 2001 at IRRI, Philippines) and Pacific Island Countries (29-30 October 2001 at Fiji). The present Expert Consultation was therefore, planned to jointly discuss and collate the results of the three sub-regional meetings, streamline the regional priorities and to draw an action plan that focuses on poverty reduction, food security, better environment and overall



Participants at the Expert Consultation

sustainability of agriculture in the Asia-Pacific region. There were about sixty participants from member NARS, associate member institutions/ organizations. International Livestock Research Institute participated as the new associate member. Chinese Academy of Agricultural Sciences, China, International

Potato Centre (CIP), Asia-Pacific Association of Forestry Research Institutions (APAFRI), Agricultural Science Technology Indicators (ISNAR & IFPRI), Global Forum on Agricultural Research and International Centre for Biosaline Agriculture, were the special invitees.

INAUGURAL SESSION

The meeting was inaugurated, on behalf of the Hon'ble Minister of Agriculture and Co-operatives, Royal Government of Thailand by Mr Pramote Raksarast, Deputy Permanent Secretary, Ministry of Agriculture. Mr Raksarast, conveyed the message of good wishes of Hon'ble Minister of Agriculture and Cooperatives, Royal Government of Thailand, for the success of the Expert Consultation. The diverse representation and a bottom up approach of APAARI in setting the ARD priorities were mentioned as instrumental to meet the challenges of poverty, malnutrition and food



Release of APAARI Success Stories – CD ROM by the Chief Guest, Mr Pramote Raksarast

security. The role of regional fora such as APAARI, to provide the bridge for the research gaps was very much appreciated.

Dr R.S. Paroda, Executive Secretary of APAARI, in his address extended a warm welcome to all the participants. He briefly outlined the objectives of the Expert Consultation and gave an account of APAARI mandate, its activities and its achievements during the last decade. Dr R.P. Sapkota, Chairman, APAARI emphasized on the need for ARD prioritization work to crystallize research challenges in the region. To address these challenges, strengthening of NARS in the region and partnerships between and among the research providers was identified as critical for agricultural development in the region. He stated that this Expert Consultation was intended to carry the process of sub-regional ARD priority setting further and build on the findings to draw a comprehensive set of priorities and a plan of action that focuses on poverty reduction, food security, better environment and overall sustainability of agriculture in the Asia-Pacific region. Dr Fernando Chaparro, Executive Secretary, GFAR presented an overview of the Regional priority initiatives of other agricultural fora such as FORAGRO, CAC, FARA, AARINENA etc. Dr Emil Q. Javier, Chairman, TAC-CGIAR, emphasized on the need to map poverty at global level and suggest ways to come out of it. Dr R.B. Singh, Assistant Director General, FAO-RAP and special guest on the occasion, outlined that the ARD priority setting is essential for improving the efficiency and effectiveness of the research system. He expressed his serious concern at the declining trends in agricultural research investments and desired that national leadership must be made aware of the fact that the returns to investments in agriculture are among the highest. He was hopeful that the ongoing APAARI exercise would also prove to be useful for the FAO in developing the regional perspective. Dr Singh appreciated the growth of partnership between APAARI and other institutions/organizations, and assured of continued support.

On this occasion, Dr Emil Q. Javier, released an APAARI publication – Proceedings of Expert



Dr Emil Javier, Chairman TAC-CGIAR being presented the APAARI plaque

Consultation on the Development of an Asia-Pacific Agricultural Research Information System (APARIS) held during 6-7 November 2000 at Chiang Rai, Thailand; Dr R.B. Singh released the publication on "National Agricultural Research Systems in The Asia-Pacific Region – A Perspective (A Supplement) Country Status Report – Australia" and Mr Raksarast released a CD-ROM of APAARI Success Stories.

TECHNICAL SESSIONS

The Expert Consultation was structured into four Technical Sessions. In the Technical Session-I, Synthesis Reports of Sub-regional ARD Priority Setting meetings were presented by Dr Suresh Pal for West and South Asia; Dr P.S. Faylon for East and Southeast Asia and Dr R.D. Ghodake for the Pacific region. Dr Yi Wang, Associate Professor, CAAS, on behalf of Prof. Zhai Hu Qu, President, CAAS, made a presentation on "CAAS and Its Research Priorities". Dr Wang presented an overview of the Chinese NARS indicating the structure, staff strength and administrative set-up. It was informed that CAAS is affiliated to the Ministry of Agriculture, and as the apex agricultural research academy, is mandated to undertake research on programmes of national or regional importance, on fundamental or key scientific issues and also on the development of technologies that will contribute to food security and sustainable development. In Session-II, presentations were made on ARD priorities of International Agricultural Research Centres in the Asia-Pacific region. The speakers were: Dr (Mrs) Jill Lenne – ICRISAT, Dr William G. Padolina – IRRI, Dr Abderrezak Belaid – ICARDA, Dr V. Ramanatha Rao – IPGRI, Dr Tissa Bandaragoda – IWMI, Dr C. Devendra – ILRI, Dr S. Ilangantileke – CIP, Dr Stein W. Bie – ISNAR, Dr George Kuo – AVRDC, Dr J. Campbell, ICIMOD, and Dr Faisal Taha – ICBA. In general, each speaker elaborated on the work that was being undertaken by their respective institutes *vis-à-vis* research/R&D priorities in the region. During discussions Dr Emil Javier, Chairman elaborated on the CGIAR

Challenge Programmes that address issues of overwhelming significance, of global, regional or sub-regional importance but with a global impact, and require partnerships among wide range of institutions to generate significant outputs. He desired that the ARD priorities for the region be effectively linked to these ten challenge programmes, namely:

- Agriculture and Combating Desertification;
- Animal Diseases, Market Access, Food Safety and Poverty Reduction;
- Climate Change;
- Development of Sustainable Agricultural Production Systems in Central Asia and the Caucasus (CAC);
- Global Genetic Resources: Conservation, Management and Improvement for Food and Nutritional Security, Agrobiodiversity and Sustainable Livelihoods;
- Global Initiative on HIV/AIDS, Agriculture and Food Security;
- Global Mountain Programme;
- Harnessing Agricultural Technology to Improve the Health of the Poor: Bio-fortified Crops to Combat Micronutrient Deficiency;
- The African Challenge Programme;
- Water and Agriculture.

After Session-II, three groups were constituted from all the participants, one each on West and South Asia, East and Southeast Asia and Pacific Island Countries, to have a relook at the regional priorities. The group reports were presented and discussed in Session – III. Dr (Mrs) Jill M. Lenne, Dr P.S. Faylon and Dr William G. Padolina, and Dr Ian Bevege and R.D. Ghodake, were the facilitators for each group respectively.

The working groups were given the following set of points/issues for their consideration.

1. What are the next steps in terms of finalizing the sub-regional priority setting reports?
2. In each sub-region, what conclusions can be derived from the work done so far in terms of:
 - a. NARS-NARS collaboration and sub-regional programmes or networks.
 - b. CGIAR strategy in each sub-region and NARS-IARCs collaboration.
 - c. Role of other stakeholders (i.e. NGOs, private sector, etc).

Can we identify topics/issues that emerged from the three sub-regional reports, that can be identified as “common concerns” or “shared priorities” that cut across all 3 sub-regions that may lead to region-wide priorities?

SUB-REGIONAL ARD PRIORITIES

West and South Asia	East and South East Asia	Pacific Region
Natural resource management (Soil, water, biodiversity)	Food security	Crops
Marketing, Trade,	Improving quality/ competitiveness	– Value addition
PHT and Commercialization	a. Biosafety	– markets and marketing
Sustainable seed systems	b. Marketing (Processing, marketing)	– PGR
Animal health and nutrition including fish	c. Policies (GMOs etc.)	
Cross Cutting	Fishery/ Marine	Livestock
Mapping Poverty, food insecurity	Cross Cutting	– Feed formulation and development
	Biodiversity	– Animal waste management
		– Livestock improvement (introduction and selection)
		– Zoonoses
Capacity building to meet priority challenges	Research support	Forestry
Risk management	Policy	– Timber utilization
ICT	Capacity building	– Felling cycles
Policy research for strengthening NARS, Water; seed; diversification, trade		Natural Resource Management
		– Land and soil fertility
		– Watershed
		– Integrated NRM
		Cross cutting
		ICT
		Produce marketing
		Supply-demand
		NRM

4. How can these priorities, either sub-regional or regional, be translated into concrete proposals for collaboration/partnerships? Who will fund them and who will do what? For example, do they have implication(s) for:

- a. Ongoing collaborative efforts?
- b. Can they relate to emerging challenge programmes?
- c. Are they totally new proposals that have to be funded?

The sub-regional priorities identified by the respective groups are summarized in the box (p. 4).

A special Session – IV, deliberated on ICT activities, to get an update on APARIS, EGFAR and information on Agricultural Science and Technology Indicators (ASTI), initiative of ISNAR and IFPRI. The session reviewed the progress of ICT initiatives that have been launched by GFAR and APAARI, and also to know about the activities of Agricultural Science and Technology Indicators. The presentations were made by Dr Fernando Chaparro, GFAR, Ms J. Achara, APAARI, and Ms Nienke M. Beintema, ASTI respectively. Dr Fernando Chaparro, Executive Secretary, GFAR presented an update on EGFAR highlighting on its integrated/coordinated role in providing exchange of information and knowledge. Ms J. Achara, IT Manager, APAARI presented an overview of the status of APARIS highlighting the progress and the initiatives being taken to develop the information gateway. The Plan of Action met approval of the members who appreciated the progress achieved in ICT activities. Ms Nienke Beintema briefed on the aims and programme of Agricultural Science and Technology Indicators (ASTI) initiative of ISNAR and IFPRI. She pointed out that ASTI initiative has been launched with the objective “to provide internationally comparable information on the investment and institutional environment surrounding agricultural R&D, thereby reforming and improving research policy decisions around the world”. The ASTI initiative was well received by the participants.

Two important issues emerged for the endorsement of the APAARI Executive Committee. These were: a) ASTI and APAARI need to finalise an MOU to supplement the ISNAR/IFPRI proposal to extend their activities in the Asia-Pacific region, and b) Besides working with CABI to develop a gateway function, APAARI would seek external inputs for further development and implementation of APARIS and for its long-term sustainability.

PLENARY SESSION

The plenary session was held under the Chairmanship of Dr R.S. Paroda. It dealt with three main issues: Finalization of sub-regional reports on ARD priorities, arriving at a consensus at research issues common for all the three sub-regions and to translate ARD priorities into research.

In this session, Dr Fernando Chaparro, Executive Secretary, GFAR, served as the Facilitator for the three groups and presented synthesis of common research concerns and issues in the Asia-Pacific Region, reflecting their linkage with the Challenge Programmes of CGIAR. In all seven research issues/themes/problems were agreed upon. The common areas of research opportunity included i) Natural Resource Management, ii) Genetic Resources iii) Commodity Chain Development, iv) Meeting Protein Demand, v) Tree and Forest Management. Two important cross cutting areas of research opportunities were i) Information Management for Agricultural Development to address the issues such as packaging, access and use of information and ii) Capacity Building to address issues of Human Resource Development, institutional development, research policy development (food insecurity and poverty mapping).

An important feature of the synthesis was that each of the common issues were effectively linked with more than one Challenge Programmes of CGIAR. These are as follows:

Common Issues	Challenge Programmes
i. Natural Resource Management	Water and agriculture Desertification Climate change Mountain agriculture
ii. Genetic resources	Climate change Biofortification Genomics Mountain agriculture
iii. Commodity chain development	Biofortification
iv. Meeting protein demand	Animal health Mountain agriculture
v. Tree and forest management	Water and agriculture Desertification Climate change Mountain agriculture
Cross Cutting	
vi. Information	
vii. Capacity building	

For translation of research priorities into implementable programmes, it was decided that it is appropriate to have an assessment of the ongoing R&D programmes for identification of the gaps. This should be followed by an assessment of the existing research programmes, networks and activities for addressing the identified research gaps. Wherever possible, existing research capacity must be strengthened. In case there are still some research gaps, then efforts be made to identify research providers for them from the NARS, IARCs and others working in the region and a collaborative partnership between these research providers should be established. Finally, the sources of funds for the new programmes should

be identified and research proposals developed using guidelines of the funding/donor agencies.

The members agreed that the sub-regional reports should be circulated widely to all the stakeholders and their comments and suggestions should be sought by end of December 2001. The reports, then should be revised by the resource persons on the lines of discussions held during the meeting as well as comments and suggestions received from the stakeholders. The revised reports are to be made ready by January 2002.

A special meeting of the FAO-CGIAR-APAARI, under the Chairmanship of Dr Emil Q. Javier, Chair, TAC, CGIAR, was also convened after the Expert Consultation.

SIXTH APAARI EXECUTIVE COMMITTEE MEETING

The Sixth Executive Committee meeting, under the Chairmanship of Dr R.P. Sapkota was held on 14 November 2001 at Bangkok. In addition to the members of the Executive Committee, the representatives of member NARS, associate members and invitee organizations also participated.

Dr Ian Bevege, Principal Advisor, ACIAR and former Chairman of APAARI, who provided valuable services and support to strengthen APAARI activities in general, and ICT initiative-APARIS, in particular, was given a warm send off. He was presented mementoes by Dr Sapkota and Dr Paroda.

Dr R.S. Paroda, Executive Secretary, presented the Action Taken Report on the decisions of the last General Assembly and the APAARI Executive Committee Mid Term Meeting, held on 22 June 2001 at New Delhi.

OUTCOME OF THE MEETING

Some of the important decisions that emerged during the deliberations are as follows:

In view of APAARI initiatives in ICT, particularly the development of APARIS, the service contract of ICT Manager, Ms J. Acharya was extended for another term of two years.

The APAARI Executive Committee endorsed the ASTI project of IFPRI/ISNAR and its proposal to extend its activities into Asia-Pacific during

2002. APAARI and ASTI will develop an MOU to undertake a joint programme.

- APAARI noted the progress of CABI in the development of a proposal for a Gateway Function for APARIS. APAARI endorses in principle the incorporation of a gateway function as a cornerstone of APARIS. APAARI needs to further develop and implement APARIS to ensure its long-term sustainability and complementarity to other information systems
- It was agreed that other regional fora/organizations such as APAFRI, NACA, APSA, FARA, FORAGRO and AREENENA, be approached to become the associate members. This would enhance interaction between and among the fora.
- The theme of next Expert Consultation was identified as "Strengthening of Research Partnerships through Networks and Consortia". The venue would be decided by the APAARI Executive Committee in its meeting early next year.
- Dr William G. Padolina, DDG, IRRI, presented the report of CORRA, Dr J.S. Sindhu, Executive Director, APSA gave a brief account of APSA activities and Dr S. Appanah apprised about the APAFRI programmes.

Dr J. Kumar, Vice Chairman, APAARI proposed a vote of thanks.

ICLARM CHALLENGE PROGRAMMES: AN AQUATIC RESOURCES PERSPECTIVE

Tackling global challenges will place greater emphasis on collaboration amongst all partners in the research and development process. International Centre for Living Aquatic Resources Management (ICLARM) is providing the concepts given below as a contribution to the discussions going on in the formulation of Global Challenge Programmes both immediately and in the long-term future. ICLARM supports the current efforts to establish these programmes and has contributed to their development in different fora. Some important ideas for discussion and follow-up are predicted based on knowledge of the aquatic resources sector and the need to reflect the sector in collaborative global evaluations. Other ideas are more generic and are raised to promote further discussion and the establishment of complementary and synergistic approaches.

The concepts identified are also based on discussions with concerned partners at various times. For example, one of the NARS representative has indicated that "fisheries research and development in developing countries, perhaps linking ICLARM (fish), ISNAR (institutional development, planning and management) and IFPRI (economic policy) in regional projects would be excellent for the challenge programmes. He saw that such a consortium could address governance, financing, stocking and alternative livelihoods (e.g. aquaculture) with overall policy. Linking countries with different NARS and using their strengths would be mutually advantageous.

CONCEPTS IDENTIFIED

Eleven diverse ideas/activities have been proposed:

1. ***Sustaining Aquatic Productivity: Enhancing Food Production from the World's Freshwaters:*** ICLARM supports and is contributing to the development of the Challenge Programme on Water. The portfolio of research covering the living aquatic resources sector in relation to water use is large, particularly to address on a global scale for developing countries. Some of these additional elements have been highlighted.
2. ***A Water Basin Initiative Based on the Mekong River:*** Related to the above concept, this builds on ICLARM's collaborative research experiences in the Lower Mekong Basin with the Mekong River Commission, IWMI and other partners – an example of a comprehensive water basin initiative.
3. ***Climate Change–Aquatic Component:*** ICLARM has contributed with other CGIAR partners to suit the activities being considered by the Inter-centre Working Group on Climate Change, linking two known indicators of climatic change in the coastal and marine sector to evaluate risks and opportunities for the appropriate use of aquatic resources in island states.
4. ***Aquatic Animal Diseases, Food Safety and Trade:*** This has focus on the effects of diseases and improved methods for risk analysis, disease control and diagnosis in the aquatic resources sector of developing countries. It is provided as an input into the development of a wider Challenge Programme on livestock diseases, food safety and trade.
5. ***Reversing Habitat Degradation and Increasing Productivity in the Coastal Zone:*** The coastal zone is subject to the environmental stresses of population growth and environmental degradation. It draws attention to the means by which CGIAR centres and other international bodies can bring together available knowledge to maximize the resilience of the fragile coastal environments and to enhance their productivity.
6. ***Assessing the Agroecosystems, Forests, Coasts, Freshwaters, Grasslands and Mountains of the Developing World:*** The emphasis is on Contributions of the Future Harvest Centres to the Millennium Ecosystem Assessment possibility for the CGIAR Centres to link with the activities of the Millennium Ecosystem Assessment.
7. ***Challenges and Options of Globalization for Small-Scale Fishers/Farmers/Foresters:*** Globalization will impact the CGIAR beneficiaries in many ways that have not been adequately researched. The persistence of some poor and marginal groups may be threatened by these trends and it will be important to have a thorough grasp of these potential developments.
8. ***Fish as Indicators of Global Change:*** The connectivity of aquatic systems and relative sensitivity of living aquatic resources make fish potentially key indicators of processes ranging from pollution to habitat loss, to poor governance.

9. **Vulnerability under Increasing Variability:** This stresses on the aquatic resource-dependent livelihoods as a framework for prioritizing development and research assistance to the poor. Vulnerability mapping has been suggested as a key element of the required climate change research. The relationship between poor populations dependent on different aquatic resources systems and other types of change in these systems is also highlighted.
10. **Fish for Food Security:** The Contribution of Fish and Aquatic Products to Food Security and Nutrition – The goal of food security for the poor is central to the CGIAR mission. Research must

be undertaken specifically on fish – which is almost a neglected resource, as a component of a continuing multi-centre approach to this global issue.

Bridging the Gap Between Research and Policy: Knowledge systems as a key CG output with ICLARM's experience in the production of databases in key areas of the aquatic resources sector are examined in the light of collaborative possibilities for the CGIAR centres in knowledge management.

[ICLARM paper distributed at the APAARI Expert Consultation; for further details contact: Dr (Ms) Merryl Williams, Director-General, ICLARM, Jalan Batu Maung, Batu Maung, 11960 Bayan Lepas, Penang, Malaysia]

IWMI INTEGRATES IBSRAM LAND MANAGEMENT INTO ITS WATER RESOURCES RESEARCH PROGRAMME

A wealth of expertise on sustainable management and soil science had been added to IWMI's water research portfolio, with the merging of the research activities of the International Board for Soil Research and Management (IBSRAM) into the IWMI research programme. The addition of the IBSRAM strengthens IWMI's water resources expertise in several ways. IBSRAM's research and the tools it has developed over the past 15 years to strengthen IWMI's position as a natural resources research centre and bring new skills and a network of new contacts – at the farm and NARS level – into the CGIAR. The sustainable land management research that integrates into IWMI's science programme includes:

Catchment management network: A consortium for integrated research on catchment management, composed of different stakeholders in water catchments – in Indonesia, Laos, Malaysia, Nepal, Philippines, Thailand, and Vietnam, together with 20 national partners, and three advanced research organizations.

Soil conservation on sloping lands: A seven-country network (China, Indonesia, Laos, Malaysia, Philippines, Thailand and Vietnam) has been developed with scientists and farmers. Findings are now being introduced on a large scale at suitable locations through demonstration and extension programmes.

Acid and infertile soil management network: This programme seeks ways to better manage acid and

infertile soils, with particular attention to phosphorus management in Indonesia, Myanmar, Philippines and Vietnam. Capacity building for relevant soil analyses is being done in all eight ASEAN countries.

Research to determine nutrient balances of farms on marginal lands: Creation of land management information for farmers, that brings together relevant information about land management from many sources, and makes it truly accessible to farmers and their children through the Internet. This work is implemented through partners in Indonesia, Philippines, and Thailand.

Nutrient recycling in urban and peri-urban areas: Research and cooperation with many partners to set-up a regional consortium for research and capacity building.

Training programme for national research centres in land and water legislation: This aspect helps the concerned organizations review their legislation for water and land management, and to support the adoption of the best elements from other countries.

All past research produced under IBSRAM will be a part of the sustainable land management programmes. IBSRAM tools are being integrated into the IWMI tool kit and will be disseminated to partners and users across the developing world.

[IWMI Research Update: September 2001; also web page on the IWMI site. www.iwmi.org/landmanagement]

FIFTH ANNUAL MEETING OF THE COUNCIL FOR PARTNERSHIP ON RICE RESEARCH IN ASIA (CORRA)

The Fifth Annual Meeting of the Council for Partnership on Rice Research in Asia (CORRA) was held on 10-11 November 2001 at Rama Gardens Hotel, Bangkok, Thailand. The meeting was organized by the International Rice Research Institute (IRRI) and hosted by the Department of Agriculture, Thailand. Ms Aranya

Sapprasert and staff from the IRRI Bangkok Office ably supported the Secretariat. About 25 participants coming from the National Agricultural Research and Extension Systems (NARES) and IRRI attended the meeting. The IRRI participants included Dr Ren Wang, Dr William G. Padolina, Dr Edwin L. Javier, Dr Mark Bell, Dr Thanda Wai, Dr Suan Peng Kam, Mr Ramon A. Oliveros and Dr Boriboon Somrith. Dr R.S. Paroda, Executive Secretary of APAARI, attended the meeting on its behalf. The member countries represented were: Bangladesh, Cambodia, China, India, Indonesia, Laos PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, South Korea, Thailand and Vietnam.

AREAS OF INTEREST

The report on the status of rice research in each of the CORRA-member countries highlighted the common areas of interest. These include whole farm integrated management to increase profit and protect the environment, quality and post harvest, drought and water use efficiency, hybrid rice research and capacity building. The updates on and proposed activities of the International Network on Genetic Evaluation of Rice (INGER) were discussed and actions taken. During 27 years of its existence, INGER had developed 21,000 breeding lines and released 500 varieties in about 90 countries. The INGER was committed to free, safe exchange of rice germplasm and information for the overall development of this important crop. In its efforts to share the useful materials for genetic improvement of rice, INGER has developed its code of conduct as also its material transfer agreement (MTA). The members were apprised of IRRI studies on aerobic rice, application of GIS for



Participants at the Annual Meeting

data integration, and their efforts to form a GIS network among the CORRA members. The other important field of rice research, in conformity with the Challenge Programme of the CGIAR at IRRI is on the Functional Genomics. IRRI had established an international network consisting of ARIs, IRRI and NARS (China and India).

The discussion on the issues of intellectual property rights (IPR) and plant variety protection (PVP) in rice highlighted the increasing concerns of the NARS to protect their germplasm considering that not all CORRA-member countries have PVP laws in place. Research issues on aerobic rice, functional genomics and geographic information system (GIS) were also tackled during the meeting.

The interesting discussions on the agenda generated a further need for information that the CORRA members suggested on the following topics for next year's meeting:

- GIS network
- Participation of private sector
- How INGER will meet the needs of NARES
- Status of transgenic rice research at IRRI
- Integrated nutrient management
- Post harvest losses in rice, international rice trade and marketing, updates on IPR-PVP
- Water management
- Hybrid rice and functional genomics

In this meeting, Prof. Zhai Hu Qu, President of the Chinese Academy of Agricultural Sciences (CAAS), was elected as the new CORRA Chairman. He replaced Dr Joko Budiarto of Indonesia whose 2-year term ended. Prof. Zhai will serve as CORRA Chairman for the next two years (2002-04). It was suggested that the next CORRA meeting be held in Beijing from 14-15 September 2002, prior to the International Rice Congress being held from 16-20 September 2002.

[Contributed by: Dr Ramon A. Oliveros, International Rice Research Institute, Los Baños, Metro Manila, Philippines]

INTERNATIONAL CONFERENCE ON THE DEVELOPMENT OF AGRICULTURAL INFORMATION MANAGEMENT, TECHNOLOGY AND MARKETS IN THE 21ST CENTURY

The International Conference on the Development of Agricultural Information Management, Technology and Markets in the 21st Century was held at China-EU Centre for Agricultural Technology (CECAT) in Beijing, China from 4-6 November 2001. It was attended by specialists from 20 countries representing various national, regional and international organizations such as ACIAR, CABI, FAO, IPGRI, ISNAR, NARI-PNG, Library-Centre for International Forestry Research, CIFOR-Indonesia, Agricultural Research Corporation-Sudan, Africa, University of Minnesota Libraries-USA, etc. The conference was organized in three main themes: – (i) Advanced ICT and Information/Knowledge Management, (ii) Agricultural Information Strategies and Policies, and (iii) Agricultural Information Market and E-commerce. In all, 56 papers on diverse topics were presented.

Co-ORGANIZERS

The organization of the conference was supported and guided by the International Cooperation Department of the Chinese Ministry of Agriculture (MoA) and the Informationalization Promotion Administration Department of the Chinese Ministry of Information Industry. Co-organizers include the following:

- International Association of Agricultural Information Specialists (IAALD)
- IAALD China Chapter (CCIAALD)
- China-EU Centre for Agricultural Technology (CECAT)
- Sciencetech Documentation and Information Centre of Chinese Academy of Agricultural Science (SDIC)
- China Agricultural University Library (CAUL)
- CAB International (CABI)
- Information Centre of the Chinese Ministry of Agriculture
- China Electronic Commerce Association
- Australian Centre for International Agricultural Research (ACIAR)
- Farmers Daily (China)
- Asia-Pacific Association for Agricultural Research Institutions (APAARI)

- Technical Centre for Agricultural and Rural Cooperation (ACP/EU) (CTA)
- AusAID

APAARI was a cosponsor of this meeting.

APAARI PRESENTATIONS

Ms J. Achara, Information Technology Manager, APAARI presented a keynote paper entitled “Strategy Development for Asia-Pacific Agricultural Research Information System (APARIS)”, describing Information Communication Technology (ICT) activities of APAARI. The presentation covered APAARI objectives, its mandate, highlighting ICT activities in APAARI and the priority given to ICT in its Perspective Plan and Vision 2025.

The presentation outlined the bottom-up approach used by APAARI starting from identifying Information Nodal Points (INPs), the Expert Consultation on the development of APARIS held at Chiang Rai, Thailand from 6-7 November 2000 and the development of APARIS Concept Note and Action Plan. The proposed activities of APARIS as phased were explained so as to share APAARI experience in developing regional information strategy and system, and to bring attention of potential collaborators/partners in the possibility of co-implementing/supporting whatever activities seem appropriate. After presentation, IPGRI showed interest in future collaboration with APAARI for linking up PGR Networks information to APARIS Regional Information System.

APAARI nominated/supported participants from member-NARS India and the Philippines also presented the national ICT programme. Dr S.D. Sharma from ICAR, India presented a paper “Agricultural Information Management – Systems and Services.” His presentation elaborated on the Agricultural Research Information System (ARIS) that exists under ICAR, and the current level of information exchange that takes place through ARIS network. The emerging needs of Project Information Management System (PIMS) and Data Warehouse (DW) requirements were presented as well as the current ongoing projects on PIMS and integrated National Agricultural Research Information System

(INARIS). The achievements under these activities and action plan for further developments were highlighted

Dr Richard M. Juanillo from PCARRD, Philippines presented a paper on "Development of Agricultural Information Strategies and Policies: The PCARRD Experience." The presentation aimed to share with audience an experience of Philippine National Agricultural Research System in developing the agricultural information strategies and policies for the agriculture, forestry, environment and national resources sectors' research and development. Presentation was given in four parts: (i) Background of the Philippine Agriculture, Forestry, Environment and Natural Resource Sectors, (ii) The Science and Technology (S & T) Environment for Agriculture, Forestry, and Natural Resource Sectors (AFNRs), (iii) the PCARRD experience in the ICT development for the AFNRs, and (iv) Future directions of ICT in the Philippine NARS in the next 10 to 20 years.

EMERGING ICT CONCERNS

Some key issues that emerged out of the conference are as follows:

1. **Collaboration:** A common concern that emerged in the conference was the need for collaboration, partnership and resource sharing. It is an important issue that faces ARD organizations to avoid duplication of efforts by making best use of ICT for agricultural research and development.
2. **Information Services in Developing Countries:** An issue of Digital Divide in the developing countries is prominent. There is an emerging need of efficient way to disseminate research results to end-users. Communication centres, for example, Telecom Centre is one good example in narrowing digital divide as it can facilitate information services from research scientists to reach farm level.
3. **Technical Concerns:** The suggested technical aspects in applying Agricultural Information Management and Technology are to establish networking, training (e.g. internet-based training), and technology deployment in transferring knowledge to rural area. In doing so, focus should be upon users' technological capacity rather than hi-technology. An important aspect apart from technology is an innovative and well-managed content.
4. **Sustainability:** There is a concern of sustainability in developing information system. Now-a-days,

there are many applications developed by many organizations, which could provide guidelines that can be suitably utilized by others.

5. **Promoting Information Service to Farmers:** An important issue is to look for effective ways for promoting information service to farmers such as on the language barrier to farmers in receiving valuable knowledge from research outputs. There was a suggestion given that materials that will be delivered to farmers should be in an easy-to-understand facet and in the national language.
6. **Planning:** Information planning for the Agricultural sector was well-stressed, it should be started within areas of priority setting, organization structure, collaboration, and monitoring/evaluation.

WAY FORWARD/DEVELOPING AN ACTION PLAN

In the closing session of the conference, an action plan was developed which covered the following activities/proposals:

- Develop a vigorous website or improve IAALD's website with good practice guidelines being posted
- Conduct discussion forums
- Develop a portal (like AgNIC)
- Conduct IM/IT training activities
- Strengthen Electronic document delivery (resource-sharing)

The conference provided a good opportunity for APAARI to exchange information on Asia-Pacific regional ICT activities with other national, regional, and international Agricultural Research and Development (ARD) organizations. Overall, the conference provided an opportunity for networking among organizations that have been actively using ICT for agricultural research and development that can lead to future collaboration.

[Contributed by: Ms J. Achara, ICT Manager, APAARI, C/o FAO-RAP, 39, Maliwan Mansion, Phra Atit Road, Bangkok 10200, Thailand]



JAPAN INTERNATIONAL RESEARCH CENTRE FOR AGRICULTURAL SCIENCES (JIRCAS): STRUCTURAL REORGANIZATION

On 1 April 2001, under the Japanese Government's administrative reform calling for the reorganization of government-affiliated research organizations, the Japan International Research Centre for Agricultural Sciences (JIRCAS), became an independent administrative institution (a semi-autonomous agency) under the supervision of the Ministry of Agriculture, Forestry, and Fisheries of Japan (MAFF).

THE NEW ORGANIZATION: MISSION, MANDATE AND MANAGEMENT

The introduction of the new system of Independent Administrative Institutions (IAI) is at the core of the administrative reform. This system has been introduced to enhance the effectiveness, quality, and transparency of technological development by splitting the administration into its implementation functions, and its planning and drafting functions. By converting the implementation functions of the national research institutions to the IAI system, each institution has gained its own independent judicial status. Therefore, under the new system, JIRCAS will conduct not only autonomous and flexible programmes, but also commit itself to a strict *ex post facto* evaluation and review of its performance, as well as disclosure of various institutional issues.

The new mandate given to JIRCAS by the Japanese Government does not fundamentally change the previous mandate, in which JIRCAS was entrusted with the mission of "promoting the development of sustainable agriculture, forestry, and fisheries compatible with environmental preservation in developing regions of the world". Although the demand for food is increasing due to population increase and improvement in dietary habits, agricultural production remains at a low and unstable level in many developing

countries. As a result, hunger and poverty remain the prominent issues. Moreover, concern for the deterioration of the global environment has generated the need for the development of sustainable systems of agriculture, forestry, and fisheries that are non-destructive to natural ecosystems.

The most distinctive features of the new IAI system are: (i) semi-autonomy with limited control from outside institutions, and (ii) *ex post facto* performance evaluations, the results of which each IAI uses to plan subsequent activities. Under the new system, MAFF presents to JIRCAS its mid-term objectives, a list of goals that the "New JIRCAS" is expected to achieve during a five-year period. The mid-term objectives include issues related to the enhancement of the efficiency of research activities, improvement of the quality of research programmes, and financial performance. Based on the mid-term objectives, the IAI drafts a mid-term plan to achieve these objectives autonomously.

The IAI Evaluation Committees, established under MAFF and composed of experts not belonging to the public sector, will also periodically review the performance of IAI research activities. Each fiscal year, an IAI Evaluation Committee will investigate and analyze the progress made on the previous year's mid-term objectives. The results of evaluation will be subjected to operational and financial modification in the following fiscal year.

Since the research activities need to be fully executed, the government will allocate, within budgetary limitations, most or all of the financial resources required to carry out the defined objectives. In addition, JIRCAS will make utmost efforts to gain supplementary financial support from such sources as other governmental offices or the private sector to fulfill the mid-term objectives.



JIRCAS Headquarters

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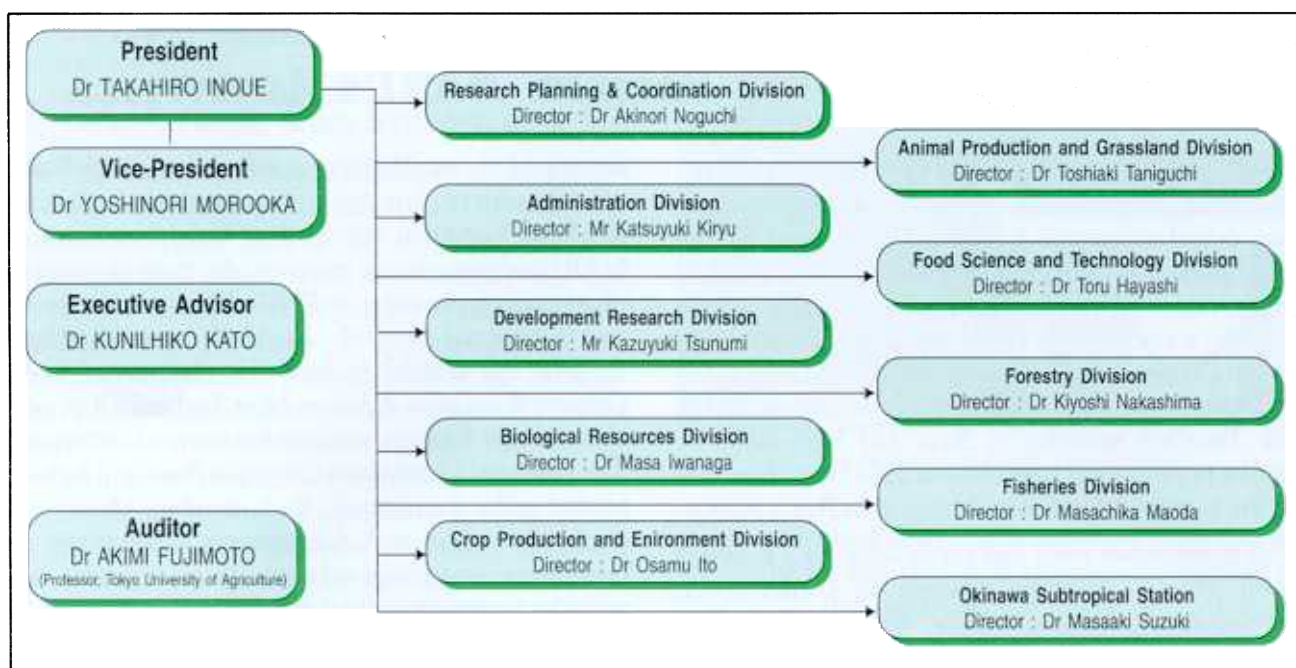
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Re-organised Set-up of JIRCAS

SPECIFIC ROLE AND RESEARCH STRATEGY

Given that the role of JIRCAS is to promote the advancement of agriculture, forestry, and fisheries in developing regions of the world through integrated collaborative research programmes, the "New JIRCAS" has established the following priorities for research strategy.

- To develop production and utilization systems in sustainable agriculture, forestry and fisheries in harmony with the environment by conducting research on such topics as stress-tolerant crops, technologies for preserving arable land environments, new farming systems for ensuring profitability to producers, and technologies for efficient post-harvest management and utilization.
- To rehabilitate, maintain, and improve the utilization of natural resources, with emphasis on tropical forest and coastal ecosystems

In order to complete the mid-term objectives adhering to the above research strategies, the "New JIRCAS" plans to conduct and take full advantage of:

- i. international collaborative research programmes in developing regions, deputing researchers on long- and short-term basis;
- ii. collaborative research with researchers from developing regions;
- iii. domestic research that will further enhance international collaboration;

- iv. accumulation and analysis of research information for supporting collaborative work;
- v. international symposia, workshops and seminars;
- vi. technical assistance relating to food and environmental issues; and
- vii. functioning as a think tank for advisory committees of national organizations involved in overseas development.

TOWARDS IMPROVED WORKING

In conclusion, the reorganization of JIRCAS into an IAI makes it possible for JIRCAS to gain more flexibility in the implementation of its research programmes. The reorganization will also transform working procedures, enabling JIRCAS to recruit researchers from universities or institutes that do not belong exclusively to the public sector, and the financial aspects of the institution, since funds can now be obtained from both the public and private sectors. At the same time, the strict evaluation by the Evaluation Committee may enhance the quality of the research programmes and lead to more efficient utilization of financial resources, ultimately furthering collaborative activities compatible with the needs of developing regions.

[Dr Tetsushi Hidaka, Development Research Coordinator, Japan International Research Centre for Agricultural Sciences (JIRCAS), 1-1, Ohwashi, Tsukuba, Ibaraki 305-8686, Japan]

STRENGTHENING AGRICULTURAL RESEARCH AND DEVELOPMENT IN THE PACIFIC: NARI'S ACTIVITIES

PLANT GERMPLASM CONSERVATION AND USE

Ms Rosa Kambuou, Principal Scientist (Plant Genetic Resources) spent two weeks in Fiji during October 2000 working with Aliko Turagakula (MAFF, Fiji) and Mary Taylor (Regional Germplasm Centre, Fiji) to develop a status paper entitled 'Framework for Plant Genetic Resources (PGR) Conservation, Management and Use in the Pacific'. This paper was presented at the TaroGen meeting in Suva last November. A similar presentation later (March 2001) was also made at the Regional Bio-Safety Meeting in Apia, Samoa.

Emphasis has been laid on developing a regional plant genetic resources strategy on conservation, management and use in the Pacific, through a networking approach. The networking approach will tackle the issues and constraints as to: (i) need to reduce the financial burden on individual Pacific Island Countries (PICs) of maintaining national collections of food crop (and other) cultivars, (ii) need to rationalise collections and reduce duplication of effort, and (iii) focus on accessing genetic resources of other PICs through collaborative, mutually beneficial arrangements. To implement this approach, work agreement is needed among PICs on how to exchange and regulate movement of germplasm. There are legitimate concerns relating to Intellectual Property Rights and quarantine matters and other related policy issues. A number of conservation strategies have been discussed including *in situ* collections (where varieties are maintained by the farmers themselves), *ex situ* field collections, and tissue culture collections. A balance has to be achieved between the various methods based on cost and minimization of risk.

Based on the above considerations it recommended that the Pacific Island Countries (PICs): (i) establish a regional PGR Network, (ii) develop an appropriate policy and legal framework for PGR in the region, (iii) work out a long-term sustainable funding strategy for PGR conservation and utilization in the Pacific, (iv) develop an effective conservation and management strategy for PGR, (v) strengthen national and regional capacity for implementing PGR strategy, and (vi) develop materials for raising awareness on PGR at all levels.

SOUTH PACIFIC PLANT GENETIC RESOURCES NETWORK ESTABLISHED

A meeting was held in Suva from 10-13 September, 2000 to bring together South Pacific countries

interested in establishing a network to coordinate management of plant genetic resources in the Pacific. Ms Rosa Kambuou attended as a representative of NARI and presented a paper on the current status of plant genetic resources in PNG. All countries agreed that a regional network should be established and ACIAR has offered to fund the position of Plant Genetic Resources Advisor. New Zealand ODA will also provide funding support for network activities. The Regional Germplasm Centre in Suva will be fully funded under the network. Each member country will establish a National Germplasm Committee to coordinate germplasm activities in the country and provide a contact point for the network.

TARO CONSERVATION AND BREEDING

In PNG, the programme on conservation of taro genetic resources and genetic improvement of taro by breeding is located at Wet-Lowlands Mainland Programme-Bubia, under the National Agricultural Research Institute (NARI). The components are supported by AusAID funded Taro Genetic Resources Network: Conservation and Utilization project (TaroGEN) and Taro Networking for South East Asia and Oceania (TANSO).

The aim of the projects in PNG is to collect taro genetic resources and describe the collected accessions by morphological and molecular markers. Till now, 800 taro accessions have been collected from 16 different provinces. These accessions have been fully characterized and are being maintained as a national germplasm bank. The genebank would be very useful in breeding high yielding and good quality taro varieties that can be cultivated successfully and economically, without any significant losses from parasites (taro leaf blight, taro beetle and viruses). In this context, several varieties have already been bred. Breeding is currently in its fourth cycle of recurrent selection. Seven selected elite lines from cycle-2 population were evaluated in form of GxE trials at different agro-ecological zones of PNG. Three lines were recommended on the basis of wider adaptability, high yield, better eating quality and resistance to leaf blight disease. The recommended varieties were endorsed by national Taro Improvement Co-ordinating Committee and are in final stage of release. Six promising lines from cycle-3 and more than 100 superior lines from cycle-4 have also been identified. Further testing is under way. In future, more focus

would be given to farmer's participatory plant breeding/on-farm emphasis.

7TH INTERNATIONAL SAGO SYMPOSIUM

The 7th International Sago Symposium entitled "Sago as Food and Renewable Resource for the New Millennium", was held at the Holiday Inn, Port Moresby from 27-29 June 2001. It was jointly organized by the Department of Agriculture and Livestock (DAL), PNG University of Technology, and the National Agricultural Research Institute (NARI). The symposium brought together renowned scientists from all over the world with a wealth of experience in their respective areas of speciality in sago research and development. Papers were presented from USA, Holland, Indonesia, Malaysia, Australia, Japan and PNG. Papua New Guinea has the largest natural stand of sago in the world and is believed to be the centre of diversity. In this context, hosting the symposium in PNG proved fruitful nationally for exploring more opportunities to develop sago as a commodity. The symposium recommended that sago palm genetic resources from different countries should be described for future use and breeding programmes, and that information on sago palm should be collected,



Taro breeding: developing new varieties

stored and distributed. FAO suggested that a mini-secretariat on sago should be established/organized to accelerate the exchange of ideas and promote cooperation. This was supported by the Speaker of National Parliament who called for the establishment of an International Sago Research Institute. Japan is proposed to be the venue for the 8th International Sago Symposium.

[Contributed by Mr James Larki and Ms Ipul Powaseu, National Agricultural Research Institute, Lae, Papua New Guinea]

PACIFIC ISLAND NATIONS PREPARE FOR WORLD FOOD SUMMIT

Senior ministers from seven Pacific Island nations and New Zealand, with representatives of Australia and Fiji, met in Port Vila, Vanuatu on 23-24 July, 2001 to discuss food security priorities in the region in preparation for the World Food Summit: five years later (WFS: fyl). The agriculture ministers of Kiribati, Marshall Islands, New Zealand, Samoa, Solomon Islands and Vanuatu, the Prime Minister of Tonga, HRH Prince 'Ulukalala Lavaka Atá, and the Deputy Prime Minister of Niue, Honourable Young Vivian were present at the Fourth Meeting of Southwest Pacific Ministers of Agriculture. The acting President of the Republic of Vanuatu, Honourable Donald Kalpokas opened the meeting, which was chaired by the Prime Minister of Vanuatu, Honourable Edward N. Natapei. FAO Director-General Jacques Diouf, briefed the ministers on the preparations for WFS: fyl. Reaffirming national commitments at the November 1996 World Food Summit, the ministers supported the Director-General's call for voluntary contributions to help fight hunger. They reviewed progress in implementing the programme of action set out by their third meeting in Tonga in April 1999 as well as the achievements in various areas by the FAO Subregional Office for Asia and the Pacific (SAPA). A communiqué issued expressed concern over the growing consumption of unhealthy processed foods, which has made diseases linked to obesity a serious public

health problem in Pacific Island nations. Agreeing that stricter food safety regulations were needed, especially for imported food, the ministers said it was important to ensure a steady supply of affordable local food in Pacific Island countries. The meeting emphasised the need for a "well-defined, coherent and achievable agricultural policy contributing to the long-term prosperity and growth of the Pacific Island economies". This must be based on the "complexity of land tenure issues in the region", the communiqué said. National policies should also be consistent with the "evolving trade environment" created by the new world trade rules, it said. Pacific Island countries must work together for judicious use of their fisheries resources, which are a vital source of food and income, it added. The ministers also urged continued government support to small farmers who make an important contribution to the food supply in their countries. They stressed the need for suitable, national forest management plans and laws. Saying they were worried by the intensive herbicide use in their countries, the ministers favoured greater reliance on integrated pest management and organic farming. Pacific Island countries also need sound quarantine and bio-security systems to protect domestic food production and promote trade, they added.

[Maliwan-FAO-RAP Newsletter July-Sept. 2001]

ACIAR DEVELOPMENT ASSISTANCE PROGRAMME: SOME NEW INITIATIVES

NEW PARTNERS FOR ACIAR

ACIAR's involvement in Australia's Development Assistance Programme has expanded in the past twelve months, with projects commencing in East Timor and North Korea.

ACIAR joined the first assistance task force that visited East Timor as soon as possible after the 1999 vote for independence. Almost 90 per cent of East Timor's people live in rural communities and many of them became reliant on emergency aid during the civil unrest that ensued after the independence vote. This emergency aid included seed and plant material poorly adapted to local needs. ACIAR therefore developed its 'Seeds of Life' project, which is introducing improved varieties of the country's major food crops and evaluating them in local conditions to identify the best options for local farmers. ACIAR is working with a range of organizations, from CGIAR members to NGO agencies to restore staple food crops.

STRENGTHENING ARD IN EAST TIMOR: BIG YIELD GAINS IN SWEET POTATO TRIALS

The first harvest of sweet potato in the 'Seeds of Life' project yielded a bountiful return. At Bacau (lowland), the sweet potatoes supplied by the International Potato Centre (CIP) are yielding six times as much as the local ones (12+ tonnes vs 2 tonnes per hectare with fertilizer). It is creating great interest with the farmers, and with Timorese leader Xanana Gusmao, as they thought sweet potato would not grow very well there.

In Aileu, a mountain town, the response was overwhelming-the farmers made off with most of the sweet potato cuttings. ACIAR Research Programme Manager Colin Piggan, who is head of the Seeds for Life project, said that new varieties in commercial quantities could be available within two to three years; that the harvest in Aileu had yielded an average of 5.3 kg per row for the local tuber and up to 27 kg for the new varieties about a six-fold increase in yield.

STRENGTHENING ARD IN NORTH KOREA

In February 2000, Australia and the Democratic People's Republic of Korea (North Korea) resumed diplomatic ties. In November 2000, ACIAR signed a Memorandum of Understanding to facilitate agricultural research and development, the first bilateral development cooperation agreement between the two countries.

North Korea had suffered food shortages for seven consecutive years, with decrease in production of important crops. Compounding this problem is a lack of training amongst agricultural scientists in modern agricultural methods. ACIAR has already begun training agricultural scientists, with two groups visiting Australia in the first six months of 2001. Discussions regarding a range of possible research needs have also been held and projects are under development, focusing on improving yields in staple crops.

North Korean scientists study soil management: As part of the new ACIAR initiatives to help the Democratic Peoples' Republic of Korea (DPRK) rebuild their agricultural production capacity, eight scientists from DPRK attended a short course in soil management at Charles Sturt University (CSU) in Wagga, New South Wales. From April to June, this year the eight scientists lived and studied at the university. Professor Ted Wolfe and his colleagues from the School of Agriculture coordinated the course, which was delivered in English. The programme consisted of lectures and visits to regional centres to study topics such as irrigation, management of soil fertility and soil tillage, and agricultural systems.

Joint research proposed: One positive outcome of the visit of Korean scientists is a proposal to study the role of legumes and reduced tillage in enhancing the sustainability of DPRK maize and rice farming systems. The Charles Stuart University is now working with institutions in DPRK to develop an ACIAR project.

[Contributed by: Janet Lawrence, Science Communicator, Australian Centre for International Agricultural Research, Canberra, Australia]

DR R.S. PARODA HONOURED BY AMERICAN SOCIETIES

Dr R.S. Paroda, Executive Secretary, APAARI has been conferred the Honorary Membership of the prestigious Crop Science Society of America and American Society of Agronomy. The honour came in recognition of his outstanding contribution and leadership to agricultural research in his crusade against hunger, spanning nearly two decades, for the developing countries.



SEED AND PLANT IMPROVEMENT INSTITUTE, AREEO, IRAN: RESEARCH HIGHLIGHTS

MAJOR OBJECTIVES

Seed and Plant Improvement Institute (SPII) was established in 1960, to carry out research on breeding and agronomy, and to develop cultivars of major agricultural crops and make them available to the farmers.

The following research activities have been carried out by the institute:

- Breeding and agro-technical studies on important agricultural and horticultural crops such as: wheat, corn, oilseeds, food legumes, forage crops, vegetable crops, potato, apple, almond, pear, peach etc.
- Production of super elite, elite and registered seeds from introduced and improved cultivars of important agricultural crops and also the production of scion and root stocks from various fruit cultivars suitable for different climatic conditions in the country.
- Breeding of horticultural and field crops for higher yield, quality and resistance to biotic and abiotic stresses.

PRESENT SET-UP

Research activities are currently being conducted in eight research departments namely: Cereal Research Department; Oil Crops Research Department; Corn and Forage Crops Research Department; Vegetable Crops Research Department; Horticulture Crops Research Department; Potato, Onion and Irrigated Food Legume Crops Research Department; Plant Genetic Resources Research Department; Seed Control and Certification Research Department.

These eight departments co-ordinate and conduct research activities in breeding and agronomy at SPII's headquarter in Karaj and at 30 Agricultural Research Centres and 80 Experimental Stations across the country. Brief information on each of these departments is given.

Cereal Research Department: The research activities on cereals were commenced in 1931 and continued with SPII and many cultivars had been selected and released from the landraces. So far, seventy-seven cultivars have been released in wheat, 15 in barley, 2 in durum wheat, 2 in triticale and 1 in rye. The breeding objectives in cereals are listed below:

- Tolerance to environment stresses: drought, salinity, heat and cold.



Seed Technology Laboratory

- Wide adaptability and yield stability.
- High yield and high input (fertilizer, irrigation etc.) responses.
- Development of cereal cultivars for dual purpose for seed and forage production.
- Tolerance to biotic stresses such as rusts and powdery mildew.
- Lodging resistance by reducing plant height for regions where lodging is a problem.

The department has a well-equipped laboratory for studying /estimating qualitative characteristics of the flour and baking quality of bread wheat as well as quality of durum wheat.

Corn and Forage Crops Research Department: The department was established in 1970. It has so far developed about 5000 inbred lines of various type of corn. Annually, more than 2000 crosses are being made to develop successful hybrids. At present more than ten commercial hybrids are available to farmers. The department has successfully utilized cytoplasmic male sterility and male fertility restorer in hybrid production programmes. Increasing the nutritive quality of corn is also under investigation and the aim is to transfer the opaque 2 gene which is responsible for the increase of essential amino acids in commercial hybrids. The department is also responsible for introducing forage crops cultivars suitable for different climatic regions of the country. There are research projects going on for development of hybrid sorghum production and of synthetic alfalfa varieties. The department has been able to release 50 cultivars of alfalfa which have been selected from local populations.



Scientists examining wheat-breeding experimental plots

Plant Genetic Resources Research Department:

This department was established in 1982 and is responsible for the collection and preservation of landraces and wild relatives of field and horticultural crops. As a routine activity, studies on taxonomical classification, genetic diversity and geographical distribution are being conducted. In addition, the germplasm are evaluated for their potential as sources of various economical traits as well as resistance to biotic and abiotic stresses. The department has very close collaboration with IPGRI in its international efforts for conservation of genetic resources.

Horticultural Research Department:

The Horticultural Research Department commenced its research activities at Karaj in 1950, with the establishment of a garden and propagation of scion and root stocks of sub-temperate fruits. Activities of the department cover five groups of crops adaptable to temperate, subtropical, dry climate and ornamental and medicinal plants. Because of much climatic variability, wide adaptability is an important breeding objective. Selection and hybridization of superior genotypes as well as studies on interaction of scion-root stock has resulted in the introduction of suitable cultivars and stocks for each agro-climatic region. One of the major responsibility is the propagation of released cultivars and thus the department produces grafted seedling of different fruit trees for distribution.

Oilseeds Crops Research Department:

This department was established in 1969 to co-ordinate oil-seed crops research. It's main breeding objectives is sunflower improvement for high oil content, early maturity and tolerance to biotic and abiotic stresses. In addition, in soybean breeding programme focus is on nitrogen fixation, as well as extension of soybean as a second crop, following barely. In sesame, earliness and resistance to shattering are the main breeding objectives, and in safflower, which is native to Iran, evaluation is being carried out in germplasm collected for selection of superior genotypes.

Vegetable Crops Research Department: Research activities on vegetables crops are aimed to develop suitable cultivars for different regions. At present the main objectives are to develop high yielding cultivars with resistance/tolerance to abiotic and biotic stresses, preservation of germplasm through collection and evaluation of germplasm in breeding programme. Research activities are carried out on four groups of vegetable crops: Solanaceae, Cucurbitaceae, root and leafy vegetables.

Potato, Onion and Irrigated Food Legume Research Department:

This department was established with the formation of the SPII. The research on potato and onion was commenced to identify native varieties, their selection and purification. The department has introduced new germplasm of these crops. Research activities on agro-techniques are also carried out as well as on production and distribution, registration and seed certification. The research on pulses at SPII was started in 1963 in collaboration with the faculty of Agriculture, Tehran University and international research centres. This collaboration resulted in collection of landraces and local varieties and introduction of germplasm from other regions of the world. At present research on irrigated food legumes including : beans, faba bean, pigeonpea etc. is being carried out at SPII. In potato, as the result of the research conducted, the average national yield has increased from 4.8 tonnes per hectare to 23 tonnes per hectare.

Seed Control and Certification Research Department:

The activities of this department are based on the increasing demand for the seeds of recommended improved cultivars of different crops by the farmers. The department controls and supervises the seed



Evaluation of Iranian Lucerne Ecotypes

multiplication of improved cultivars by private contractors. More than 60,000 seed lots are registered and certified by the department every year, which are tested for genetic purity, germinability, moisture content, 1000 kernel weight, etc.

International Collaboration: The SPII enjoys very close collaboration with International Agricultural Research Centres such as CIMMYT, ICARDA, CIP,

CIAT, ICRISAT and IPGRI as well as with research institutes and universities in other countries. Exchange of germplasm, training courses, specific case studies, and visiting scientist programmes are being planned and accomplished through R&D collaboration.

[Contributed by Mrs M. Head, International Affairs Officer, SPII, Karachi]

APARIS CHOSEN FOR LISTING IN AGRIGATE

The Asia-Pacific Agricultural Research Information System (APARIS) has been chosen for listing in AGRIGATE, the Australian web-based gateway to agricultural research information. A listing in AGRIGATE includes a site description and a link to your materials. The resources are selected by an editorial review process consisting of specialist librarians and members of the agriculture research community. The purpose of AGRIGATE is to support identification and dissemination of high quality research materials.

AGRIGATE is a project of the libraries of the Universities of Melbourne, Adelaide and

Queensland, and the CSIRO. It has been funded in part by a grant from the Australian Research Council. A reference group, including representatives from CSIRO, the Universities of Melbourne, Adelaide and Queensland, the National Library of Australia and Agriculture Fisheries and Forests Australia, has developed the service.

For more information on AGRIGATE go to: <http://www.agrigate.edu.au>

[Courtesy: Mr Jan Whitaker, Data Custodian, Agrigate, c/o The Baillieu Library, The University of Melbourne, Parkville Vic 3052, Email: jwhit@primenet.com]

COUNCIL FOR AGRICULTURAL RESEARCH POLICY SRI LANKA: DEVELOPS AGRICULTURE DATABASE

The Council of Agricultural Research Policy, Sri Lanka (CARP), coordinates national activities in agricultural research and development, including policy dimensions. One of its recent initiatives has been to streamline the agricultural information system, developing Agriculture Database System. CARP serves as the focal point of the Agricultural Research Information, which helps to share resources with scientists and others in the agricultural sector. Some of the databases relating to agricultural activities in Sri Lanka, developed and maintained by the CARP Secretariat as listed below can be accessed (by prior information), for research and development purpose.

- 1999 INFORM (Information for Agricultural Research Managers): Directory of on going Agricultural Research projects in the NARIs; according to personnel, commodity, discipline and Institute.
- SocioEconomic: Directory of Socio-Economists in the NARS, Directory of Socio-Economic Research in the NARS.

Recent Publications

- *Plant Protection*: Directory of Plant Protection Personnel and Research in Sri Lanka; National Bibliography on Plant Protection (coverage 20 years).
- *CARP Contract Research Programme*: From 1990 to August 2001 according to personnel and Institution.
- *Bibliographies*: Sri Lanka National Agricultural Bibliography Vols. 1, 2, and 3; Papaya, Mango, Pineapple, Banana, Organic Farming under preparation.
- *Picture Databases*: Diseases of Rubber; Integrated Pest Management in Paddy; Weeds of Significance in Sri Lanka; Tropical Fruits of Sri Lanka.
- *Traditional Agriculture Database*: Under preparation.
- *Digitized Maps*.

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APAARI PUBLICATIONS

SUCCESS STORIES

- **Baby Corn Production in Thailand** (1994/1)
by Dr Chamnan Chutkaew and Dr R.S. Paroda
- **Tilapia Farming in the Philippines** (1994/2)
by Dr Rafael D. Guerrero III
- **Hybrid Rice in China** (1994/3)
by Mr Lou Xizhi and Dr C.X. Mao
- **Dairying in India** (1994/4)
by Dr R.P. Aneja
- **Hybrid Cotton in India** (1995/1)
by Dr A.K. Basu and Dr R.S. Paroda
- **Palm Oil Industry in Malaysia** (1995/2)
by Dr Y.B. Basiron
- **Transformation in Korean Farming – A Success Story of Effective Linkages** (1996/1)
by Dr Chae Yun Cho
- **Cotton Production in Pakistan** (1996/2)
by Dr Badaruddin Soomro and Dr Parvez Khaliq
- **Orchids in Thailand** (1997/1)
by Dr Kanchit Thammasin
- **Wheat Production in Iran** (1997/2)
by Dr Abbas Keshavarz and Dr M.J. Mirhadi
- **Agro-Tourism in Australia** (1997/3)
by Dr Tom Connors
- **Direct Seeded Rice in Malaysia** (1998/1)
by Dr Cheong Ah Wah
- **Groundnut in China** (1998/2)
by Dr Duan Shufen, Dr Hu Wenguang and Dr Sui Qingwei
- **Oilseeds in India** (1999/1)
by Dr Mangala Rai
- **Integrated Pest Management in Rice in Indonesia** (1999/2)
by Dr Soejitno
- **Bivalve Mariculture in India** (2000/1)
by Dr V.N. Pillai et al.
- **Farming of Carrageenophytes in the Philippines** (2001/1)
by Dr Rafael D. Guerrero III

OTHER PUBLICATIONS

- APAARI. 1999. National Agricultural Research Systems in the Asia-Pacific Region – A Perspective, 1999, Asia-Pacific Association of Agricultural Research Institutions. FAO Regional Office for Asia and the Pacific, Bangkok.
- Proceedings – Fifth General Assembly of APAARI and Expert Consultation on Research Management Mechanisms of National Agricultural Research Systems (NARS), 13-15 October 1998, Suwon, Republic of Korea.
- Proceedings – Expert Consultation to Develop APAARI Vision 2025 & Fifth Executive Committee Meeting of APAARI, 29 November to 1 December 1999, FAO-RAP Bangkok, Thailand.
- Proceedings – Expert Consultation on Development of an Asia-Pacific Agricultural Research Information System, 6-7 November 2000, Chiang Rai, Thailand.
- Proceedings – The Sixth General Assembly of APAARI & Expert Consultation on Strategies for Implementing APAARI Vision 2025: Agricultural Research for Development in the Asia-Pacific Region, 8-10 November 2000, Chiang Rai, Thailand.
- National Agricultural Research Systems in the Asia-Pacific Region – A Perspective (Supplement) : Country Status Report–Australia.
- APAARI – A Decade of Progress, reprinted in 2001.

FUTURE CONFERENCES

Title : International Conference on the Impacts of Agricultural Research and Development
Venue : San José, Costa Rica
Period : 4- 7 February 2002
Contact : CIMMYT
e-mail : impacts-cgiar.org
website : <http://www.cimmyt.org/research/economics/impacts/index.htm>

Title : Sixth Gaters Research Conference: Plant Genetic Resources in the Genomic Era: Genetic Diversity, Genomic Evaluation and New Applications
Venue : Gatersleben, Germany
Period : 7 -11 March 2002
Contact : Mr. W. Muhlenberg
Fax : ++ 49 394825500

Title : Regional Symposium on Environment and Natural Resources
Venue : Universiti Kebangsaan Selangor, Malaysia
Period : 10-11 April 2002
Contact : Dr Mohammad Osman
The Symposium Secretariat, School of Environmental and Natural Resource Sciences, UKM, Bangi, Selangor, Malaysia
Fax : 603-89252698/89253357
e-mail : mbopar-pkrisc.cc.ukm.my

Title : Second International Colloquium on Medicinal Plant Health and Environment
Venue : Rabat, Morocco
Period : 2-4 May 2002
Contact : Rabat Institute, BP 6203, Rabat, Morocco
E-mail : hmamouchim@wanadoo.net.ma
hmamouchim@hotmail.com

Title : Fourth International Symposium on Hybrid Rice
Venue : Hanoi, Vietnam
Period : 14-17 May 2002
Contact : Dr S.S. Virmani, PBGB, International Rice Research Institute, DAPO Box: 7777, Metro Manila, Philippines.

Title : Ecological and Economic Benefits of Mountain Forests
Venue : Innsbruck, Austria
Period : 15-18 September 2002
Contact : Mr Robert Jendl, Forstliche Bundesversuchsanstalt, Seckendorff Gudent Weg 8, A-1131 Vienna, Austria
E-mail : mountain_forest@fbva.bmf

Title : International Rice Congress – 2002
Venue : Beijing, China
Period : 16-20 September 2002
Contact : Dr T.W. Mew, IRRI, DAPO Box: 7777 Metro Manila, Philippines
Fax : ++63-2-8911292
e-mail : t.mew@cgiar.org

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