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Asia-Pacific Association of Agricultural Research Institutions

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Editorial

Rapid advances in information and communication technology (ICT) have accelerated the pace of technology dissemination for faster adoption of technologies at the grass root level. Many NARS in Asia-Pacific have made rapid strides in using ICT for knowledge access at all levels. Yet, the concern for "digital divide" exists and many developing country NARS have not been able to take full benefit of the new exciting opportunities that could advance the process of agricultural research for development (ARD). Sharing of knowledge and success stories through regional cooperation, is, therefore, utmost critical for NARS to reap the benefits from technological advances made elsewhere in the field of agriculture. Thanks to the "ICT Revolution", the whole world is today a "Global Village" and hence urgency to catch up with new advances in this field is indeed a formidable challenge before all NARS, which need to be addressed by the members of APAARI.

It is in this context, that APAARI, in close cooperation with its stakeholders, including NARS, FAO, and CG Centers, has been pursuing development of Asia-Pacific Agricultural Research Information System (APARIS) for the last three years. APARIS is intended to enable information sharing among NARS, an essential component of modern research in all areas. The system is driven by National Information Nodal Points (NINPs) from member institutions and owned by NARS, while APAARI provides a facilitator's role and an apolitical platform to share experiences and knowledge. The system is expected to serve a variety of agricultural information users, including ARD professionals, institutions, learning community, and farmers. On a global level, APARIS will be linked to other regional systems and the GLOBAL-RAIS, a GFAR initiative. Efforts are being made to involve other ICT players, including e-learning deliverers, NGO initiatives, and the private sector. Such an interactive approach will result in more efficient dissemination of information that is useful for timely decision-making by different stakeholders.

It is hoped that APARIS will play an important part in the knowledge-based agriculture in coming years with greater involvement of its stakeholders and useful feedback from its users.

Editors

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Expert Consultation on Strengthening Asia-Pacific Agricultural Research Information System

The Expert Consultation on Strengthening Regional Agricultural Information System: Role of ICT in ARD was held from 1-3 December 2003 at the Asian Institute of Technology, Bangkok, Thailand in conjunction with the sessions on Regional Research Networks and Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), and followed by the Seventh APAARI Executive Committee meeting. There were about 70 participants from member NARS, associate member institutions and other regional and international ARD organizations. Representatives from regional agricultural research forums of West Asia and Africa also participated. Some special invitees, representing NGOs and the private sector attended the consultation.

Dr. Paroda informed that APARIS and APCoAB were the two major initiatives being taken up by APAARI as they strategically focus on two rapidly emerging technologies, namely, information and biotechnology, both having immense potential to transform agriculture in favor of the resource-poor farmers of the region. He appreciated and thanked for the partnerships of FAO, GFAR, CGIAR institutes and other organizations with APAARI and hoped that the present consultation will result in defining a collaborative action plan, also involving various member NARS, to build capacity at the NINP level for further promotion of ICT in ARD in the region. He stressed the need for NARS to examine and revise their information and communication management (ICM) models to harness the benefits offered by new IT tools and techniques. He added that the other important objectives of the expert consultation were to review the progress of various research networks presently under operation and also to explore the possibilities of establishing an Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) to

Meeting Participants

Inaugural Session

Dr. Nurul Alam, Vice Chairman, APAARI welcomed the participants. Prof. Mario Tabucanon, Provost, AIT also welcomed and thanked APAARI for choosing AIT as the host institution for the expert consultations and the executive committee meeting. Dr. Raj Paroda, Executive Secretary of APAARI presented the objectives of the expert consultation and welcomed the dignitaries including Dr. Mutsuo Iwamoto, Chairman, APAARI; Dr. Mohammad Roozitalab, Chairman, GFAR; Mr. Hiroyuki Konuma, FAO Deputy Regional

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ensure that the needed benefits from new sciences reach the society.

Dr. Mohammad Roozitalab, Chairman of GFAR, in his special remarks appreciated the progress made by APAARI in developing a regional agricultural information system that could potentially serve as an example for some other regions. He reiterated GFAR's support to all regional forums for developing such systems and urged all regional forums to work together in evolving a global agricultural information system. Dr. Jean-François Giovannetti, Senior Expert of GFAR, remarked that GFAR is working with all regional forums to find commonalities and to build on agricultural information systems for ARD using inter-regional synergies. He emphasized the need for closer look at information and communication management in NARS as well as regional forums.

On behalf of the Assistant Director-General and Regional Representative for Asia and the Pacific of FAO, Mr. Hiroyuki Konuma, FAO Deputy Regional Representative for Asia and the Pacific in his special remarks cautioned that the opportunities offered by new information and communication technologies (ICTs) have yet to reach the majority of potential users in the world due to increased disparity between users who have the means to access information and those who do not. He introduced FAO's initiatives such as WAICENT and AGRIS programs and called for greater use of these tools by NARS. He praised APAARI's efforts and assured continued FAO-RAP support for APARIS and APCoAB initiatives.

Dr. Paroda invited Dr. Mutsuo Iwamoto, Chairman of APAARI to release the publication of recently revised APAARI Constitution and Mr. Hiroyuki Konuma, FAO Deputy Regional Representative for Asia and the Pacific to release the publication of Success Story on Control of Newcastle Disease in Village Chickens, the nineteenth in the success stories series by APAARI.

Dr. Mutsuo Iwamoto, delivered the Chairman's address in which he welcomed all the participants and thanked FAO for providing a base for APAARI at its regional office in Bangkok and acknowledged AIT for providing excellent facilities for the expert consultation. He hoped for more active cooperation from all partners so that APAARI can continue to strive hard for fostering regional cooperation through various networks and consortia for ARD. He stated that increasing agricultural productivity, while conserving natural resources and reducing the cost on input use, is a major challenge and biotechnology offers tremendous opportunity in this context. He concluded his address with a call for valuable inputs and support of all participating organizations to APAARI for further strengthening APARIS and APCoAB.

Mr. Somchai Charnnarongkul, Deputy Director General, DOA, the Royal Government of Thailand read the speech of H.E. Mr. Newin Chidchop, Deputy Minister for Agriculture and Cooperatives, the Royal Government of Thailand, who could not attend the inaugural session due to other out-of-town commitments. Mr. P.K. Saha, FAO Liaison Officer for APAARI, delivered the vote of thanks for the participants and the organizers.

Technical Sessions

Expert consultation was conducted through five technical sessions followed by the plenary session.

In Session I, chaired by Dr. Behzad Ghareyazie, Former Deputy Minster for Agriculture, Iran and co-chaired by Prof. H.P.M. Gunasena, Executive Director, CARP, presentations were made on global and regional initiatives for ICT in ARD. Dr. Jean-François Giovannetti, Senior Expert, GFAR outlined the approach for a global agenda for ICT and ICM in ARD. The GLOBAL RAIS initiative of GFAR and its activities were explained. Under this initiative GFAR will partially support a series of five regional and one inter-regional workshop in order to develop a global agenda for ICM in ARD. Lessons learned so far through this exercise included: identification of information providers/users in a global network of information reservoirs, decentralized nature of information production/management, and essential components of a RAIS such as a relational database of institutions, experts, projects/activities and events. The need for a regional information gateway was identified as a clearing-house function and also value addition in the RAIS at the regional level. Dr. Sahdev Singh, Assistant Executive Secretary of APAARI presented the status report on APARIS, including the background, development phases, challenges encountered, and the current activities of APARIS. The role of NINPs in the development of APARIS was highlighted and their continuous involvement was shown to be critical to its functioning. More active intervention of the APARIS Steering Committee was sought to guide and monitor the development of APARIS. Development experience of APARIS, being one of the first few regional systems, offered a significant learning value to other upcoming regional systems, particularly the participatory approach adopted in its development. Dr. Ahmed Rafea, AARINENA presented a review of RAIS strategy in the WANA Region. He discussed the historical background, framework of action to develop the WANA/RAIS on the national and regional levels, implementation plan, collaborative programs, implementation priorities, the project proposal to implement phase one of the plan, and the current

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status of the AARINENA-RAIS. Planning of AARINENA-RAIS began in 2000 and its activities accelerated after the GFAR-supported RAIS Workshop in February 2003. Currently a need-assessment is being carried out at national level under phase one of the action plan approved by the Steering Committee in July 2003. Ms. Myra Wopereis-Pura, FARA spoke about FARA's role in strengthening regional ICT for FARA Region and presented a brief background on FARA, Africa's ICT on AR4D, progress on ICT in Africa's AR4D, and FARA's approach to ICT. Since the FARA-RAIS is still in its planning stages, the need for greater cooperation from other regional RAIS and international organizations was considered important. GFAR-supported RAIS Workshop for the FARA region is planned for the early part of 2004.

The Session II deliberations were conducted in two parts. The first part, chaired by Dr. Ashraf Tanvir, Director Scientific Information, PARC and co-chaired by Dr. Paul Teng, Deputy Director General, The World Fish Center, was devoted to NARS status reports on ICT implementation policy, challenges, needs, and activities. The NINPs or NARS leaders from Bangladesh, India, Iran, Nepal, Sri Lanka, the Philippines, and Malaysia presented the country status reports. Similarly, in the second part of the session, chaired Dr. R.N. Sapkota, Executive Director, NARC and co-chaired by Dr. William Padolina, Deputy Director General, IRRI, NARS status reports from Japan, Pakistan, Republic of Korea, Taiwan, Thailand, New Caledonia, Vietnam, and Western Samoa were presented.

Dr. Paroda congratulated the NINPs and NARS leaders for their informative presentations on status of ICT in their respective NARS and hoped that these would serve a meaningful purpose of identifying strengths and weaknesses in the current implementation strategies for ICT/ICM in ARD. He urged NARS leaders to be more supportive of ICT initiatives and NINPs to be proactive as strengthened information exchanges both within and among the NARS of the region will benefit all the stakeholders. He also informed that the status reports prepared by NINPs of member NARS will help APAARI with useful data for the forthcoming APAARI publication Role of ICT in ARD: Status and Progress in the Asia-Pacific Region.

Dr. Giovannetti remarked that presentations reflected a healthy portfolio of information on ICT/ICM in NARS of the Asia-Pacific Region and considered it as a necessary exercise for further articulating a global agenda on ICM in ARD.

In Session III, chaired by Prof. Gajendra Singh, AIT and co-chaired by Dr. Jean-François Giovannetti, GFAR, demonstrations on existing ICT opportunities were made as follows:

- Mr. Michael Riggs, FAO-RAP (FAO ICT/ICM Models and Tools)
- Ms. Enrica Porcari, CGIAR (ICT-KM Program of the CGIAR)
- Dr. Ajit Maru, ISNAR (ISNAR ICM Models and Tools)
- Dr. V. Balaji, ICRISAT (Virtual Academy for Semi-Arid Tropics – VASAT)
- Dr. Seishi Ninomiya, NARO (APAN and APAN Agricultural Working Group)
- Dr. Paul Teng, The World Fish Center (Successful Global Research Databases: FishBase and ReefBase)
- Dr. Robert Raab, APRTC (APRTC – A Distance Education Initiative for ARD)
- Dr. Charoon Chirapaisarnkul, Director, IT Unit, AIT Extension (AIT's ICT Capacity Building Programs)
- Mr. Sunil Khairnar, ISAP/AgriWatch.com (Private/NGO Initiatives in India)

Session IV had four concurrent group discussions on APARIS framework and development by focusing on four different types of users. Group I, moderated by Dr. Jean-François Giovannetti, GFAR concentrated on ICT for Science and Technology Information Dissemination for ARD by reaching the students or learning community. Group II, moderated by Dr. Ajit Maru of ISNAR, discussed ways to build ICT networks for ARD professionals. Group III, moderated by Dr. Malcolm Hazelman of FAO-RAP, explored possibilities for agricultural extension through APARIS and Group IV, moderated by Dr. R.D. Ghodake of NARI, discussed ICT in research policy formulation by reaching ARD institutions.

Group discussions revolved around three relevant questions: (1) is existing APARIS framework adequate to respond to individual user groups?; (2) what new features/content/meta-content could be added to APARIS to make it responsive to individual user groups?; and (3) what role NINPs can and should play in APARIS development?

In Session V, chaired by Dr. Mangala Rai, Director General, ICAR and co-chaired by Dr. P.S. Faylon, Executive Director, PCCARD, outcomes of group discussions were presented by the moderators. These focused mainly on ICT/ICM in national, regional and global context.

Plenary Session

The plenary session was chaired by Prof. Dr. Adel El-Beltagy, Director General of ICARDA and co-chaired by Dr. Raj Paroda, Executive Secretary of APAARI. Based on the outcomes of group discussions, recommendations on strengthening APARIS were proposed as follows:

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- Agriculture is becoming more knowledge-intensive as it becomes more market-oriented in a globalized world. The use of ICT is vital in this agriculture.
- In the Asia-Pacific region, there are several hot-spots of rural poverty (dominated by smallholders), information and knowledge sharing using conventional and new ICT together has great potential for improving agricultural productivity and alleviating poverty.
- APARIS, as a RAIS and regional information intermediary, and APAARI as a regional organization, have critical roles in improving the efficiency and effectiveness of information and knowledge flows related to agriculture in the Asia-Pacific region.
- Further enhance relations between NARS represented by NINPs and APARIS for greater information exchange.
- Build capacities among NINPs in ICT/ICM.
- Improve APAARI's advocacy role in the area of ICM for ARD.
- Identify ICT indicators and status of the NARS and member institutes.

Concluding Remarks

Dr. Iwamoto, as APAARI Chairman, endorsed the recommendations made in the plenary session. He further informed that JIRCAS will consider ways to support APAARI's ICT initiative through APAN.

Dr. Paroda thanked all the participants for their active participation and stated that diverse participation is APAARI's strength and the present gathering is an evidence of that. He informed that APAARI has come a long way in its core initiatives on ICT, research networking, and agricultural biotechnology though a focused and collaborative approach. He hoped that APARIS Steering Committee and NINPs will be more active in future and the APAARI collaboration with NARS, ACIAR, JIRCAS, APAN, and CG Centers will get strengthened.

Dr. Beltagy, in his concluding remarks, expressed satisfaction over the significant contributions made by the participants. He suggested that the CG Centers will continue to work with NARS and the regional forums. He was pleased that the representatives from GFAR and other regional forums were also invited to present their valuable inputs. He reiterated continued ICARDA support to APAARI in future.

Prof. Gajendra Singh, Dean of AIT Extension, thanked all the participants for providing AIT an opportunity to host this important meeting and his staff for efficient arrangement.

APARIS Steering Committee Meeting

Following the expert consultation, the 2nd Steering Committee Meeting of APARIS was held. Dr. R.S. Paroda, Executive Secretary, APAARI chaired the meeting and Dr. A. Tanvir served as Co-Chair. Others present included Dr. P. Faylon (Philippines), Dr. J. Giovannetti (GFAR), Dr. M. Hazelman (FAO), Dr. Gajendra Singh (AIT), Dr. A. Maru (ISNAR), Dr. Sahdev Singh (APAARI). Dr. A.K. Jain (India), Mr. B.S. Basnet (Nepal), and Mrs. S. Padmini (Sri Lanka) attended the meeting as observers.

The TORs of the Steering Committee were reviewed and were found to be quite adequate. However, it was felt that the Steering Committee should be more active in its oversight role in monitoring the progress of APARIS. This was accepted by the members and they agreed to be more regular in their communication and advisory role. In view of the vacancy left by ACIAR, Australia as Chairperson and member of the Steering Committee, the Chair invited suggestions to fill the gap. After deliberations it was unanimously decided to invite Dr. Seishi Ninomiya of APAN to be the member of the Steering Committee and also to Chair the Steering Committee. Dr. Ninomiya has distinguished himself as being member-secretary of Asian Federation of Information Technology in Agriculture and as a representative of APAN. It was also agreed that the term of the Steering Committee be for two years and be approved by the General Assembly of APAARI. Since next General Assembly will take place in December, 2004, it was agreed that same Steering Committee may continue for another one year, except for the change in Chairmanship. The APARIS framework was reviewed and, based on the recommendations of the concluded expert consultation, an action plan was tentatively developed to achieve following two main objectives:

- enhance information sharing and exchange
- develop capacity for effective ICM in ARD

It was suggested that the NINPs should pursue redesign of their respective NARS web sites to include more databases on institutes, experts, projects, and publications. Also, they should identify the capacity needs for hardware, software, skills, and connectivity. At regional level, linkages with NARS web sites should be further strengthened to provide access to various NARS information resources through APARIS. APAARI should continue with the development of a brochure of useful ARD information resources and publish a report on ICT status for Asia-Pacific region. APAARI can also play a greater advocacy role for ICM in ARD and facilitate capacity building programs in this area in close cooperation with the national information officers of the region. ▮

Report on the Progress of Regional Research Networks

For the past several years, APAARI has been collaborating with various regional research networks for research information and material sharing among the ARD stakeholders. The coordinators of these networks were invited to present status reports and develop recommendations for further strengthening research networking in the region in a parallel session during the APAARI expert consultations held from 1-3 December 2003 at the Asian Institute of Technology, Bangkok, Thailand. The session was chaired by Dr. Mohammad Roozitalab, Chairman, GFAR and co-chaired by Dr. M.H. Al-Attar, Director General, ICBA.

Dr. Raj Paroda, Executive Secretary, APAARI, made a brief presentation relating to importance of research networks and the benefits being received by the member NARS. He emphasized that APAARI is laying considerable emphasis on strengthening of research networks since its establishment. It has identified priority areas and research gaps. Based on the interest of the member partners, a number of crops related Networks are making good progress mainly due to important facilitator function role played by the concerned CG centers in Asia-Pacific region. He also emphasized on the need for sustainability of such Networks, for which proactive role of NARS is highly critical. Concerned Network Coordinators made presentations relating to the progress of their Networks, a brief account of which is presented here:

CORRA: Dr. William G. Padolina, Deputy Director General for Partnerships, IRRI highlighted the achievements of the Consortium on rice research in Asia. The CORRA had been meeting regularly and discussing issues relating to sharing of information, germplasm and policy matters relating to continued collaboration in the region. He also stated that CORRA deliberated on International Treaty on Plant Genetic Resources and also role of NARS relating to their involvement in three Challenge Programs initiated by the CGIAR. CORRA would like to support the building of Global Rice Germplasm Database and would appreciate continued discussion on IPR related issues. Dr. Padolina also informed that the year 2004 is being declared as International Year of Rice by the United Nations and efforts will be made to put rice back on global agenda. He also emphasized that IRRI would continue supporting CORRA and would like to have active involvement of APAARI in future.

CLAN: Prof. CLL Gowda, Global Theme Leader – Crop Improvement, ICRISAT, made a presentation on CLAN activities and highlighted the outcome of the recent Steering Committee Meeting held in Hyderabad where formal decision was taken to expand the scope of CLAN to include lentil and mungbean through active participation of ICARDA and AVRDC, respectively. CLAN is proposing to prepare a Concept Paper jointly with ICARDA and AVRDC for getting some donor support since importance of legumes is critical both for nutritional security and sustainability of the cropping systems. Dr. Gowda also emphasized about important role of APAARI in providing support to CLAN and expected to have similar support in future. Dr. William Dar, Director General, ICRISAT also assured of his support for strengthening collaboration with NARS through CLAN and expected that required expectations of all stakeholders would be fully met.

GoFAR: Dr. Modadugu V. Gupta, Assistant Director General, World Fish Center, highlighted the important role of GoFAR and its complementarity with other Networks. He mentioned that priority areas for research collaboration have been identified by the GoFAR and efforts are also on way for genetic improvement of various fish breeds and for wide knowledge dissemination among member NARS. He highlighted the importance of international network on genetic resources of aquaculture (INGA). He also appreciated the support received from APAARI and assured that ICLARM would continue providing support to GoFAR activities since this network is serving a very useful purpose.

UTFANET: Prof. H.P.M. Gunasena, Executive Director, Sri Lankan Council for Agricultural Research Policy (CARP) made the presentation on UTFANET. He mentioned that a new Center on Tropical Fruits has been established in his Council with support of ICUC. Nine countries are partners in this initiative and crops identified accordingly priority are three, namely jackfruit, pommelo and mangosteen. In addition, lime, guava and ber will also be included in the Network. He emphasized on the important role of further research support on underutilized fruits in the region and felt that the center in future will be able to play an important role in partnership with APAARI and GFAR as well as in collaboration with Global Facilitation Unit on Underutilized Plants established recently at IPGRI. Dr. Haq informed that this new Center will be inaugurated early next year and the Board of the Center will be meeting during the course of APAARI Expert Consultation for finalizing its future work plan and activities. He also stated that the Center's Headquarters is being shifted from the Philippines to Sri Lanka and there is now assured funding support for UTFANET activities for the next five years. He desired to have more active participation of NARS and APAARI in strengthening this initiative.

PGR: Mr. L.T. Hong, Bamboo & Rattan and FGR Specialist from IPGRI made a brief presentation on strengthening Plant Genetic Resources Networks in Asia-Pacific region. He mentioned that four sub-regional networks (RECSEA – Southeast Asia, 6 countries; SANPGR – South Asia, 5 countries; EAPGR – East Asia, 5 countries; PAPGREN – Pacific, 11 countries) and five crop networks (COGENT – coconut global network, 38 countries; ASPNET – INIBAP – banana and plantains, 11 countries; AFGRN –

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tropical fruits, 10 countries; SGRN – Sesame, 7 countries, and LGRN – Lathyrus, 7 countries) are functioning in the region. He was also happy to inform that new PGR Networks have been established in 2003, such as Medicinal Plants Research Network and Asia Pacific Forest Genetic Resources Programme (APFORGEN). He also appreciated the role of APAARI as a catalyst to improve information-flow and sharing of PGR in the region. He proposed to have a meeting of IPGRI-APO Regional Director with APAARI in order to work out specific activities to be initiated during 2004 under the agreed MoU.

TAMNET: Prof. Chamnan Chutkaew made a brief presentation relating to past history of TAMNET and recent initiatives taken by FAO, APSA and APAARI jointly to revive TAMNET. He gave an account of a few trials being conducted currently in different countries and emphasized on the need for more active involvement of NARS in future. Dr. Mangala Rai, Director General, Indian Council of Agricultural Research (ICAR) emphasized the importance of disseminating single cross maize hybrid technology to the developing countries. Most of the members present in the meeting desired to strengthen the Network and assured of their support. They also appreciated the role of FAO, APSA and APAARI in moving ahead to revive TAMNET and wished that CIMMYT may be requested to play again a proactive role and become an effective partner in this initiative. APAARI may also continue facilitating the process in partnership with FAO and APSA. Role of Plant production Service of FAO, Rome was in particular appreciated.

INCANA: Dr. M.H. Roozitalab, Chairman, GFAR made a brief presentation relating to Inter-Regional Network on Cotton in Asia and North Africa (INCANA), established on the recommendation of the Inter-Regional Workshop on Cotton held in AREO/Tehran from 12-13 October, 2002 with participation of scientists from Azerbaijan, India, Iran, Pakistan, Tajikistan, Turkmenistan, Uzbekistan and Greece. The following organizations had sponsored the workshop: AREO, AARINENA, GFAR, CAC-Forum, APAARI, and ICARDA. The Network aims at fostering the inter-regional collaboration in cotton research and would address the issues of common interest through exchange of germplasm, information and expertise in major production-related topics such as breeding, irrigation management, integrated pest management, fiber quality marketing, etc. Most of the members present in the meeting desired to strengthen this new Network and assured of their support. It was felt that NARS stand to gain from INCANA network and appreciated the role of AREO, Iran in providing facilitation function. APAARI could continue supporting this initiative, which had been a long felt need identified by its members.

Biosaline Network: Prof. Faisal Taha, Director (Technical Programs) of International Centre for Biosaline Agriculture (ICBA) made a presentation on networks on biosaline agriculture. He particularly dwelt upon two networks that focus and align efforts in biosaline agriculture, namely Global Biosaline Network (GBN) and Inter-Islamic Network on Biosaline Agriculture (INBA). He was particularly appreciative of APAARI's role in ensuring needed support from NARS in the region. He opined that together APAARI and the Global Biosaline Network can extend the needed support of network to the Asia-Pacific region, including countries in the Central Asia.

ITFNet: Ms. Khoo Gaik Hong, Technical Officer, ITFNet briefed the participants on the ITFNet's role in global information system of tropical fruit industry and apprised on ITFNet activities in promoting sustainable development of the tropical fruit industry globally in relation to production, consumption, processing, marketing and international trade, etc. Ms. Hong particularly dwelt upon a Tropical Fruit Information System and ITFNet Website which are able to serve as a multimedia knowledge base, provide an easy access to updated global information on tropical fruits, i.e. to strengthen research partnership in the region.

Recommendations

There was very active and lively discussion relating to the role of Networks. Member NARS felt that these Networks were serving very useful purpose and must be further strengthened as well as supported, especially through active involvement of concerned NARS, including APAARI. It was suggested that for better funding support to these Networks, a regional level donor meeting could possibly be organized in active collaboration with FAO, GFAR and IARCs. APAARI could facilitate this process and provide need based support, wherever necessary. It was also agreed that CG centers may be pursued to continue playing their important facilitator function for the on-going Networks and member NARS may also contribute towards better sustainability of these Networks, including the responsibility in future to run their secretariats. Also involvement of private sector may be sought in future. It was also suggested that the facilitating centers/institutes may be encouraged to have an internal review of the existing Networks for much needed gap analysis and restructuring, if needed. Also, the need to have some research Networks activities in the livestock sector, involving ILRI, and agro-forestry center, involving ICRAF was felt. The initiative to establish Inter-regional Network on Cotton in Asia and North Africa (INCANA) was appreciated in particular. More such initiatives in future will strengthen NARS considerably. ▮

Establishment of Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB)

A special session, chaired by Dr. Mutsuo Iwamoto, APAARI Chairman and co-chaired by Dr. B.R. Barwale, Chairman of MAHYCO Foundation, discussed the issues related to the establishment of APCoAB, a new initiative of APAARI in collaboration with Asia-Pacific NARS, FAO, GFAR, ISNAR, and several other international and regional entities representing foundations, NGO's, and the private sector.

Dr. Raj Paroda, APAARI Executive Secretary presented a status report on APCoAB in which he elaborated the genesis of APCoAB's conceptual development through earlier APAARI consultations and meetings in collaboration with FAO and donor partners. To establish APCoAB as a neutral forum under APAARI, he urged the participants to discuss and propose solutions for issues related to Management Structure, Steering Committee, Funding Sources, Implementing Agency, Membership, Secretariat, Collaborating Partners, and Action Plan for 2004-2006.

Dr. P.S. Faylon, PCARRD, Philippines presented the recommendations of a workshop held in Philippines with partial support of APAARI on Regulatory Framework and Procedures for Promoting Agricultural Biotechnology in the Philippines. The recommendations included six major areas: R&D, Regulatory, Public Awareness and Concern, Public-Private Sector Partnership, and IPR Protection.

Dr. Raj Paroda, representing TAAS, India, reported on a brainstorming session on agricultural biotechnology held in India. The discussions included present status of biotechnological developments in India, product development through public-private sector partnerships, and enabling regulatory measures framework. The brain storming session concluded that for successful utilization of biotechnology in India, it is critical to devise a clear National Biotechnology Policy, which covers the important elements of contract sociale, science-led impact and risk analysis, information empowerment and awareness, and proper R&D support.

Dr. Kenichi Higo, Vice-President of National Institute of Agrobiological Sciences (NIAS), Japan presented biotechnology related initiatives and proposals of Japanese research institutes. Dr. Higo presented a brief description of three agricultural biotechnology related research projects carried out in Japan, namely, Rice Germ Sequence Project, Environment Impact Assessment Project, and GM Food Labeling and Detection Project.

Dr. Andrew D. Powell, a Singapore-based consultant working on APAARI mission, presented a possible road map and work plan for APCoAB covering the period 2004-2006.

Dr. B.R. Barwale, the session co-chair, shared his observations on occasional negative perceptions about the introduction of new technologies in agriculture by giving examples from 1950's when dwarf varieties of wheat were introduced in Indian agriculture. He envisioned a significant role to be played by biotechnology for bringing about a second green revolution in the region and therefore a forum like APCoAB is a necessity to counter misinformation propagated in media. He emphasized a focused approach for APCoAB to not only inform public but also the majority of agricultural scientists in the region.

Dr. Giovannetti remarked on the need for involvement of all the stakeholders, dilution of donor-emphasis of APCoAB work plan presented by the consultant, and formation of a communication strategy for two-way dialogue between the stakeholders. He suggested that APCoAB should begin with discussions within each stakeholder group and similar agricultural biotechnology initiatives in other regions should also be explored for cooperation.

Dr. Ghareyazie suggested more discussion was needed on the APCoAB work plan, the composition of its steering committee, and establishment of APCoAB secretariat, probably through a workshop in near future. He observed that the presented work plan seemed more industry-oriented with less emphasis on the needs of some developing countries of the Asia-Pacific region. He offered ABRII, Iran as a possible location for APCoAB secretariat and activities.

Dr. Malcolm Hazelman reiterated FAO's endorsement for establishing APCoAB and suggested to start on a small-scale with some doable activities, giving immediate output that can be used for gaining wider support. He suggested that duplication of efforts should be avoided through developing partnerships with appropriate initiatives taken by other organizations. He identified FAO's Japanese Government-funded biosafety project where further cooperation could be developed.

Dr. William Dar observed that APCoAB concept has come a long way and has been well received by the APAARI members. He suggested proper prioritization of the activities listed in the work plan through a meeting in early 2004. He highlighted the importance of partnerships and identification of resources within NARS of the region to carry forward APCoAB initiative. He endorsed ICRISAT's support.

Dr. Morakot Tanticharoen, Director of BIOTEC conveyed the support of the Minster of Agriculture, the Royal Thai Government, for APCoAB establishment.

Finally, the session was concluded with overall endorsement for APCoAB establishment and it was agreed that APAARI Executive Committee should take appropriate action to move ahead in this regard beginning 2004. ▮

The 7th APAARI Executive Committee Meeting

The 7th Executive Committee Meeting of APAARI was held on 4th December, 2003 at the Asian Institute of Technology. Dr. Raj Paroda, Executive Secretary, APAARI, welcomed all the members of the Executive Committee as well as those who attended as observers. He particularly welcomed the new Chairman, APAARI, Dr. Mutsuo Iwamoto for having agreed to attend the meeting and also welcomed Dr. Nurul Alam, Vice-Chairman, APAARI. He also appreciated the presence of all other members and especially Mr. Somchai Channarongkul in place of Dr. Prapaisri Pitakpaivan, Dr. Thierry Mennesson and Dr. Nguyen Van Bo for having attended the meeting for the first time. He also expressed his appreciation for the excellent support provided by all members to APAARI Secretariat.

Dr. Mutsuo Iwamoto extended his welcome to all the members of the Executive Committee meeting. He placed on record his appreciation for the leadership provided by his predecessor Dr. Takahiro Inoue. Dr. Iwamoto emphasized the importance of regional cooperation and felt that APAARI as a regional forum could play prominent role to strengthen agricultural research for development in Asia-Pacific region. The Executive Secretary briefed the members about the various activities undertaken during the last one year. He also indicated that the Proceedings of the Penang meeting were published and circulated to all the members and the Newsletter, one Success Story and the revised Constitution were also published and distributed.

The Executive Committee noted with satisfaction the action taken to have the unification of APAARI Secretariat with effect from 1st July, 2003 at FAO-RAP, Bangkok. Also members were pleased that Dr. Sahdev Singh joined as Assistant Executive Secretary so that increased workload could be shared. The members were appreciative of various activities undertaken by the APAARI Secretariat and desired to have more participation of APAARI members in relevant regional and international meetings/conferences where APAARI's presence was considered necessary. Also members felt that various networks were moving ahead well in partnership with CG Centers and the progress relating to APARIS as well as web site was commendable.

The Executive Committee members discussed in detail the pros and cons of membership of Chinese Academy of Agricultural Sciences (CAAS). After detailed discussion, the members felt that APAARI should welcome CAAS to join as a new member. Meanwhile, it was decided to approach CAAS again to become a member without imposing any specific conditions particularly with regard to membership of Council of Agriculture (COA), Taiwan. It was discussed that South-Pacific Commission (SPC) be requested to join as associate member and also help in future to ensure participation of those countries from Pacific Islands who are not yet members of APAARI. After detailed deliberation on the subject relating to participation of NGO in future APAARI meetings. The Executive Secretary apprised that all the members have been paying their dues rather regularly and hence, there is no specific concern except that of CABI. It was suggested in APAARI reports, instead of country, we should indicate institution with country in brackets in future.

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National Agricultural Research Policy of Sri Lanka

The Ministry of Agriculture and Livestock has formulated the National Agricultural Policy 2002-2010 to mobilize the state and private sector investments and to transform the domestic agriculture and livestock industry to meet the food needs of the expanding population. The broad policy goals are to bring prosperity to the farming community through enhanced incomes, sustainable food security and increased exportable commodities to earn foreign exchange. This policy identifies agricultural research as a main pillar to achieve its goals. It emphasises on the need for commercial and demand oriented cutting edge research and human resources development to conduct such research, supported by a stable funding mechanism. The Council for Agricultural Research Policy (CARP) has formulated the national agricultural research policy to address the production issues of the traditional agricultural sector. It emphasizes on the role of the private sector in agricultural development.

Prof. H.P.M. Gunasena, Executive Director CARP, Receiving the Hon. S.B. Dissanayake Minister of Agriculture and Livestock at the Agriculture Research Policy Workshop

Agricultural research has made substantial contributions to the overall productivity growth of the agriculture in Sri Lanka. Most significant is the impact with the development of high yielding rice varieties, which covers over 90% of the sown area at present reflecting the high investment made on rice research. Although no spectacular breakthroughs have been made in the other areas, agricultural research will have to play a dominant role in the future due to the increasing population, scarcity of land and water and to be competitive under the prevailing open economic policies and trade liberalization. Agricultural research has to respond to the new challenges by generating new technologies to increase the productivity of the agricultural sector.

The national agricultural research system which consists of 12 institutions/departments has not performed so well due to several constraints, mainly funding in the recent years. It has also lost its momentum, due to inadequate priority setting mechanisms and inefficient institutional management. This situation has to be corrected and the productivity of the research system has to be improved through various institutional innovations for which forward looking research policies will be required. The research policies should be able to fill the gaps in R&D that constraint agricultural production. As stated earlier funding has been the main constraint, which has been temporarily overcome. However, research intensity (R&D), investment as proportion of the agricultural GDP has been low compared with the developed countries (5%). The annual recurrent research expenditure in 2000 was Rs 905 million with a research intensity of only 0.52. Therefore, to revitalize the research system, intensity should be increased to at least 1%. The new agricultural research policy should make a difference to the commercial agriculturists and to the farming community to improve their livelihoods for which quantum jumps in innovative discoveries is a must.

The main national agricultural research policy statements include the following:

Priority Setting and Strategic Planning

The need to identify the priority thrusts areas of research is essential to achieve the best of the investment. In setting priorities national requirements such as contribution to economic development, food security, export earnings, foreign exchange savings, poverty reduction, employment generation and natural resources conservation has to be considered. The main emphasis should be on the research areas of current importance such as crop and livestock improvement using modern biotechnology, hybrid seed production, resource improvement research, food technology, post harvest processing and value addition, labour and energy saving measures, water conservation and waste utilization. The national research system has to prioritise their research portfolios in consultation with the stakeholders in order that the research will be useful to the end users. The research portfolios should match the potential and limits of the eco regions in which the crops are to grown or in other words there should be an eco regional approach in prioritising

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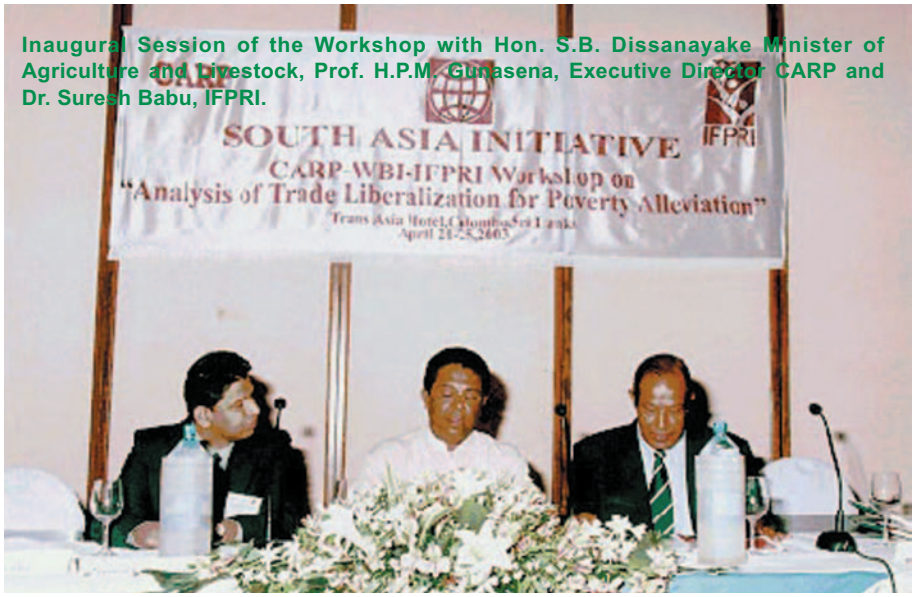
research. It is also important to realize the value of indigenous knowledge and synthesise it with modern scientific advancements for the development of sustainable agricultural systems.

Human Resources Development and Management

The efficiency of the research system will depend on the quality and skilfulness of its human resources. The research system will have to focus on the development of staff in selected fields based on changing trends of agriculture, particularly the commercialisation of agriculture amidst of inadequacies of labour. Therefore, there should be planned staff development programmes for each institute as replacement and for developing competencies in the up coming fields. The staff development plans should commence with the initial recruitment. It is very essential to recruit well-qualified scientists for research positions, preferably with a postgraduate degree. Then they could be trained further in the specific field either in local or foreign universities depending on the needs. Further training opportunities should be based on need and merit rather than as entitlements. Once recruited, the young scientists should work under an experienced staff to gain direction and experience. In some countries such as India the new recruits are given basic training in agricultural research management to get them into the main stream research, hence there should be an agricultural research management unit centrally established to train the scientists. Once recruited and trained it is necessary to retain the scientists by effectively mobilizing them giving due consideration to their fields of specialization. Most of the scientists in the state sector become frustrated and discouraged due to lack of avenues for promotion to high positions. Since there are very few high positions in many research institutions appropriate schemes should be developed for promotions based on merit. Merit promotional schemes are commonly used in the universities to motivate staff and to retain their services.



Inaugural Session of the Workshop with Hon. S.B. Dissanayake Minister of Agriculture and Livestock, Prof. H.P.M. Gunasena, Executive Director CARP and Dr. Suresh Babu, IFPRI.

Improving the Efficiency of NARS

It is necessary to improve the effectiveness and efficiency of the national agricultural research system. This is of paramount importance as some of the institutes are well developed having a cadre of qualified staff and facilities. Some of the regional research centres are poorly staffed and equipped. Those institutes that have demonstrated quality, credibility and productivity in research should be further strengthened as centres of excellence. Many of the developing countries have established centres of excellence for priority fields such as biotechnology, post harvest technology etc.; as they could play a specific role in the future for strengthening agricultural R&D and improve productivity. The research institutes have to improve client orientation in order to enhance relevance of research to its main clients, farmers and the private sector.

Role of the Private Sector

Structural adjustments and increasing role of the private sector efforts towards poverty alleviation and conserving the environment have made new dimensions in agricultural research. Others such as growing urbanization, labour migration and changing food habits have made research different from mere productivity increments as in the past, emphasising more on post harvest processing and value addition. In agricultural processing and production ventures private sector investment is rapidly increasing. The private sector is expected to play a prominent role in agricultural R&D in the future. The private sector being profit motivated requires demand driven research, hence a healthy relationship between the state and the private sector has to be fostered. At a seminar held recently organized by the Council for Agricultural Research Policy the partnership between the state and the private sector was deliberated. It was clear that the private sector investment in agriculture has increased in leaps and bounds expanding into agricultural production using

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modern techniques such as micro irrigation systems, poly tunnels and organic farming. Some private sector companies have undertaken seed production and distribution and even agricultural extension. They are also entering into agricultural research. Therefore it is necessary for the state run research institutes to recognize the emerging role of the private sector

Participants of the Workshop Included Public and Private sector, NGOs and Policy Makers.

and strengthen the R&D investments of the private sector organizations. In the past agricultural research was a monopoly of the state sector research institutions, however, this is rapidly changing and the present role of these institutions had to be understood. A change in mindset has to be made to develop effective partnerships and confidence building will be required. The state research institutes will be required to promote private sector research in priority disciplines, particularly modern techniques such as biotechnology to foster agricultural production. Although the private sector funding for agricultural research is presently limited through effective partnerships funding could be attracted to the state institutions. The state research institutions were mainly involved in catering to the subsistent level farmers, but their research has now to focus on wider clientele.

Role of the Universities

The role of the universities in agricultural development has never been assessed properly. The universities command access to well trained human resources but they have been neglected as an integral part of the national agricultural research system. The university staff undertakes both teaching and research and develop human resources for both the public and private sectors organizations. There are also postgraduate institutions for agriculture and science where students undertake advanced research related to agriculture. Unfortunately these have never come to the main steam of agricultural research. The role of the universities is critical for sustainable technology generation. The research policy proposes to integrate the universities with the national agricultural research system, by linking them to the national and provincial agricultural research centres. This will provide for maximising staff, infrastructure and other resources utilisation. It is stressed that collaborative research programmes, should improve the capacity of the universities particularly with the postgraduate students, through award of scholarships and specific staff development programmes. It is also important to improve the university teaching by utilizing scientists of the national research system and the private sector personnel. Their field experience will be of immense value to the students to understand the ground situation particularly with reference to employment. In India the agricultural research, education and extension are vested in the agricultural universities. As a result of this India has been able to muster support from all fields and increase agricultural production. It may be possible to integrate some of the universities or training units into similar structures to consolidate the available resources.

Enhanced Funding for Research

The shortage of funding for research is a serious problem for the viability of many of the national research institutions. Except for those that are funded through the cess like the tea research and sugarcane research institutes, the other agricultural research institutes and the universities have been facing severe financial crunches in the past few years. It is also noted that even global funding for agricultural research had declined over the years. The inadequacy of research funding has seriously reduced the output of technologies and the morale of the entire research system. Agricultural research has become unattractive for the funding agencies and the government due to the low output of public good research. It is necessary for the agricultural scientists to take note of this and to be more productive; they should take corrective measures to gain public confidence and political commitment.

The national research policy in order to correct this situation proposes to lobby for enhanced funding form the consolidated fund and the private sector by publicising the visible impacts and return to investment on research. The

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scientists of the universities and the government institutions also should develop research programmes attractive enough for funding by local and foreign organisations in partnership focussing on the potential research areas that could have impact in the short term. Another means of fund raising is the encouragement from agribusiness, which should be coupled with their interests so that they could influence the programme content. This source of funding will be very important in the future as the private sector is gradually entering the broad arena of agricultural research. In the western countries it is the private sector companies that fund high – tech biotechnological research. The policy makers are often reluctant to allocate funds for research due to poor managerial capabilities of the research managers. This is especially in reference to fund utilisation as unproductive investments often are made or the funds are not fully utilised. Therefore the management of the research system should be improved and close liaison should be made between the research administrators and policy makers. Such a dialogue will enable the research administrators to clarify the vital role of research in planning, organizing and implementing research for the generation of appropriate technologies. It is necessary to work closely with the farmers, private sector and other stakeholders so that the policy makers could hear their voice.

More Participants of the Workshop

Linking with Regional/International Research Centres

No research or any other organisation could work in isolation in a rapidly changing technological environment. Therefore, links with both local research institutes, universities and regional/international research centres is most essential. Linking with other institutes will avoid duplication of research, aaand avoid re-inventing the wheel, which often takes place. This will also avoid the unnecessary cost and research lag in technology development. This is more applicable to high cost biotechnologies, which are common in the developed countries. Most of the developing countries could use the applications of such technologies due to constraints of funds, highly skilled scientific personnel and sophisticated infrastructure. Therefore, applications and spill-overs of such technologies could be accessed through linkages with regional and international research centres. These linkages will also provide additional benefits such as exposure of staff to new technological developments for career advancement and staff development. The national agricultural research policy advocates the national research system to develop functional partnerships with government departments/ institutions, universities and the private sector to share resources and information. It also promotes the development of links with regional/international research centres to benefit from the advances in high cost basic research, avoid duplication and reduce the cost of technology development. There are further advantages of linking with international research centres as the local research system could position itself with the global research trends to respond to new challenges and to exploit the opportunities for improved efficiency and access to new technologies and information.

Transfer of Technology

National agricultural research policy categorically states the highly ineffective agricultural extension system in this country, which should be immediately addressed. Technology dissemination is identified as the weakest link in the research – extension system. The agricultural extension system is presently decentralised to the provincial governments and its focus has been completely disoriented. It has no dialogue with central agricultural extension system in the Department of Agriculture. The policy also notes that the traditional extension system is no more appropriate to meet the needs the farmers and the private sector investors. The agricultural extension system should be streamlined and modern information technology dissemination systems should be developed to attract investors, particularly the youth to take up to farming as commercial ventures. It is necessary to develop user-friendly software, which could be located at the

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Regional Consultation on Biosafety of GM Crops in Asia

Agriculture plays an important role in national economy and development, with most of the population residing in rural areas. Biotechnology has potentials but its development is varied among participating countries. The benefits and potentials of GMOs and GMFs are recognized among a certain percentage of the population and authorities, but they remain controversial Issues. In this context, the Regional Consultation on "Capacity Building in Biosafety of GM Crops in Asia" was held from 7 to 10 July 2003 at the Century Park Hotel, Bangkok, Thailand. The participants included participating countries in the project, namely, Bangladesh, China, India, Indonesia, Malaysia, Pakistan, the Philippines, Sri Lanka, Thailand, and Viet Nam; Japan; representatives from UN Agencies, the CGIAR and other international research centres, NGOs/INGOs and the industry sector, resource persons and other stakeholders were also present.

The meeting addressed concerns on the biosafety of GM crops, and reiterated the importance of joint efforts and building upon existing initiatives/networks, in order to reduce overlapping and reinforce coordination among participating countries. It agreed on the following major issues:

- Capacity building through national or regional workshops, networking and a roster of experts on, inter alia, human resource development on biosafety; intellectual property rights; communication; and information management. Countries are encouraged to seek resources from various sources, in addition to this project.
- Organizing four regional training workshops to address common needs and priorities, namely, RA/RM procedures including monitoring; public awareness/risk communication; detection of GMOs; and intellectual property rights. Ten national workshops, one for each country, sponsored by the project, will be held to address the specific needs of each country. Each country may hold additional workshops as the need arises but they should seek additional resources.
- Standardization of procedures and methodologies for risk assessment and risk management, including double verification and GMO detection. A regional consultation on this subject will be organized. Laboratory networking will be facilitated.
- Public awareness on GMOs, including materials for public outreach; and methodologies for effective outreach.

The meeting also agreed on the establishment of the Asian BioNet, which will contribute to the coordination of stakeholders and information sharing. The secretariat will prepare the proposal for further consideration by the Steering Committee and Technical Expert Group to facilitate the nomination of the Second Meeting. It was also agreed that the Project Secretariat should formulate the TORs to be sent to the countries so they can express their preferences as to the designation of the representatives of both the Steering Committee and the Technical Expert Group. In this connection, the meeting recommended the inclusion of UNEP-GEF, BIOTROP, ISNAR and JIRCAS, NGOs and private sector representatives.

Scientists for Bigger ICAR Role

New Delhi: Agriculture scientists are lobbying with the government to streamline testing and evaluation procedures for genetically-modified (GM) crops and give a bigger role in all this to the Indian Council of Agricultural Research (ICAR).

A year-old think-tank termed the Trust for Advancement of Agricultural Sciences, has come up with a series of recommendations given to, or discussed with, the ministries of agriculture, science and technology and environment, the Planning Commission and the ICAR director-general. Trust chairman R.S. Paroda, himself a former ICAR DG, on Thursday said he had also sought an appointment with the agriculture minister.

Several items, he said, need immediate attention. These include revising the Seed Act, encouraging a public-private partnership to develop and commercially exploit transgenics at a faster pace, examining intellectual property rights issues and bringing the testing procedures for GM crops under one roof.

There should, said Paroda, be "a competent body of technical people to test results ad release". Logically, he indicated, ICAR should have this responsibility, in partnership with the department of biotechnology. Paroda said the Union environment ministry which presently houses the interdepartmental apex body called the Genetic Engineering Approval Committee, is key but its concern is the environment, not production and benefits to the farmer. "Hasn't ICAR delivered so far?" he asked.

The Trust's recommendation on the way ahead in GM crop research and development have been finalized after an October session with about a hundred experts from research institutes, government organizations, international centres, the private sector and NGOs.

On the board of trustees for TAAS are scientists within the ICAR system, the National Academy of Agricultural Sciences and two representatives from the private sector – the chief of Venkateswara Hatcheries and the chairman of Mahyco, the only company legally permitted to sell transgenic hybrids of cotton.

The Times of India, 17 January 2004

New ACIAR Corporate Plan

The Australian Centre for International Agricultural Research (ACIAR) is an Australian Government statutory authority that operates as part of the Australian Aid Program within the portfolio of Foreign Affairs and Trade. It was established in 1982 to assist and encourage Australia's agricultural scientists to use their skills for the benefit of developing countries. It contributes to the aid program objectives of advancing Australia's national interest, poverty alleviation and sustainability. ACIAR plans, funds and manages projects in fields under the broad category of agricultural research and development-crop and livestock sciences, fisheries, forestry, land and water resources and postharvest technology. ACIAR also commissions studies of the economic and policy issues concerned with management of agricultural systems and natural resources, and helps partner countries build their capacity to engage with the increasingly global market economy. ACIAR provides support to international agricultural research centres, and links them to Australian research organisations. Under the new corporate plan for the period 2001-2006, ACIAR will continue to operate largely in the dynamic arena of the Asia-Pacific region. The box below summarizes the major issues identified in the Centre's operating environment and the implications that must be taken into account in formulating plans and program objectives.

Major issues	Operating environment	Implications for ACIAR
Socioeconomic and political trends	1. Change in the role of agriculture in economic development: increased emphasis on livelihood improvement and ecologically sustainable development	Need to balance project portfolio in response to changing mix of developmental and environmental drivers
	2. Growing emphasis on trade in the global environment	Increased need for research involving those with expertise in agricultural policy, product quality, quarantine and food safety issues
	3. Market demand within and between partner countries leading to increased demand for higher quality animal and crop products	Shift in investment portfolio to reflect this change, with greater emphasis on wealth creation
	4. Large population increases in many partner countries	Research needed to underpin increased demand for food and fibre
	5. Concerns about the application of biotechnology and genetically modified organisms in agriculture	Consider ethics and bio-safety issues for all parties in project development; inform and involve partner-country collaborators
	6. Potential for continued political and social instability in the Asia-Pacific region	Project management systems must remain flexible and responsive
	7. Growing private sector involvement in agricultural research and the implementation of research results	New opportunities to involve private sector in ACIAR projects
	8. Some countries will become less reliant on assistance from ACIAR, while others in great need may be added to the portfolio	ACIAR must have the capacity to respond rapidly to changing Australian Government priorities, and to match research collaboration to the capabilities of new partners
	9. Climate change, involving seasonal variability and extreme climatic events, may adversely impact on terrestrial and coastal agriculture and natural systems	Identify ways in which smallholder agriculture is affected, and develop appropriate management strategies
Changes in operating modality	10. Greater emphasis placed on impacts in project selection and design	Increase interactions with development agencies, including NGOs
	11. Capitalisation of knowledge	Increased emphasis in managing the public and private benefits of intellectual property
	12. Pressure for ACIAR to become less risk-averse in undertaking its project development and internal business	Simplification and streamlining of procedures without compromising quality and accountability
	13. Change in focus of research conducted by the CGIAR centres	The relationship of ACIAR to the centres, and the nature of its engagement, may change
	14. Revolution in electronic communications	Need to develop systems to enable new ways of managing and delivering information consistent with infrastructure in partner countries, Australia and other industrialised countries
	15. Increasing competition for government funding for RD&E and innovation	Full costs of research need to be quantified, and ACIAR needs a coherent position on its share of the investment

PCARRD Hosts Brainstorming Session on Agricultural Biotechnology

Background

The Food and Agriculture Organization and APAARI organized an expert consultation on agricultural biotechnology in March 2002. The expert consultation recommended that an assessment of the regulatory framework and procedures for promoting agricultural biotechnology developments in selected countries in South and South-East Asia be initiated. The Philippines was one of the selected countries, together with India and Thailand. Their selection was based on their significant progress in the field of agricultural biotechnology.

As an initial step to this assessment and under the sponsorship of organizations shown above, a brainstorming session entitled *Enabling Regulatory Framework and Procedures for Promoting Agricultural Biotechnology Developments in the Philippines* was conducted on November 19, 2003, at PCARRD, Los Banos, Laguna. It was participated by the experts from different stakeholders of agricultural biotechnology, particularly scientists, regulators, farmer representatives, and non-government representatives. As agreed upon by the service agreement between APAARI and PCARRD, the session discussed and assessed the status of the R&D, regulatory framework, intellectual property, public and private sector partnership, and public awareness and acceptance of biotechnology. The results of the brainstorming were also presented during the December 3 APAARI meeting on APCoAB.

Objectives

The session had two main objectvies:

- To review the existing regulatory framework and procedures for promoting agricultural biotechnology in the Philippines, and
- To develop an action plan for the successful integration of modern biotechnology in national development.

Recommendations

During the session, the main issue that came up was the need to continually promote agricultural biotechnology through a sustained and coordinated advocacy and awareness campaign. Since different groups conduct their respective information, education, and communication (lEC) campaign targeting different stakeholders, it was agreed that there should be a unified framework and coordinating body to oversee all these efforts to conserve resources and reach out to the most number of target audience as possible.

Detailed recommendations were made on issues including R&D, public-private partnership, regulatory mechanisms, public awareness and concerns, IPR protection. A logical framework to promote agricultural biotechnology was also proposed.

Future Plan

Using the outcome of the brainstorming, PCARRD has drafted a concept note for a proposed project entitled "Strengthening Philippine Initiatives on Biotechnology Advocacy and Awareness Campaign" for possible co-funding by the DA, DOST, DENR, ISAM and APAARI. With PCARRD at the helm and the different agencies in the National Agriculture Research System (NARS) as co-implementers, the proposal's main objective is to continuously advocate for a clear and strong government policy in support of a responsible biotechnology activities to ensure food safety, sensitize and heighten awareness of various stakeholders on the major issues related to biotechnology as well as generate support for the biotechnology agenda. It has four main components: policy advocacy and awareness, production and dissemination of IEC materials, database and biotechnology link, capacity building for advocates, trainers and regulators, and generating support for the country's biotechnology agenda. The proposal seeks US$200,000 for the two year duration.

i-NARS Initiative and its Outcome

The potential of information and communications technologies (ICT), such as radio, television, telephone, computers, and the Internet, to accelerate agricultural development is widely recognized. The effective use of ICT can also contribute significantly to accelerating institutional change and innovation that benefits stakeholders of agricultural research.

A framework to use ICT effectively for agricultural research and development in developing countries is missing, however. This Briefing Paper identifies a generic framework, developed through the i-NARS initiative of ISNAR, the International Institute for Communications Development (IICD), and developing country professionals and stakeholders. The Briefing Paper discusses two "spaces" of ICT use in agricultural development: (1) that of the users, especially smallholder farmers, of agricultural technologies, and (2) that of the researchers and research institutions in a national agricultural research system (NARS).

Experience gained in Asia, Africa, and Latin America indicates that a bottom-up, participatory approach to using ICT to enhance the users' existing "community information spaces" is most fruitful and sustainable. The enhancement and enlargement of this space should help the community use information for learning and joint negotiating for action. This approach also helps bridge the communication gap for information sharing and exchange between users of research outputs and agricultural researchers, as the user community's information space develops in the context of the community and fuses seamlessly with the research space of a NARS or an agricultural innovation system using appropriate ICT.

The i-NARS initiative identified four phases in increasing the effectiveness of ICT use in the agricultural research space: (1) innovations in building the infrastructure, (2) operationalizing information systems using ICT, (3) the coordination and control mechanisms of these systems, and (4) the ability to use information strategically for strengthening research to benefit the stakeholders of agricultural research. To achieve this, Agricultural Research and Development (ARD) organizations of the NARS will have to participate with other stakeholders of rural development, such as those providing telecommunications, health care, finance, education, governance, and support for participating in markets in satisfying the information needs of user communities. The NARS will also have to intensify their advocacy role for improved access to telecommunications and useful information for rural communities and their development.

Ajit Maru and Peter Ballantyne, ISNAR

AFITA and its Activities

The Asian Federation for Information Technology in Agriculture, AFITA was founded in January 24, 1998 in Wakayama-City, Japan when the First Asian Conference for Information Technology in Agriculture was held. The motto of the first conference was as follows:

> *Though the population on the earth has not been really exploded yet, we can see clues of food crisis; that is, the lack of food in some of the developing countries is chronic and even major powers are facing the difficulties to balance the productivity and the environmental requirement. As the balance of the food supply and demand is now inevitably under the strategy of the world trading mechanism and the control of the power, it is almost meaningless to solve the crisis within a country. Only the international sharing and cooperation for sustainable food productivity on the basis of information sharing and mutual understanding could bring the solution.*

AFITA believes that the information technology can surely contribute to the solution. First, the information communication technology such as the Internet provides us the best tool for the information sharing and mutual communication. Second, we should explore the possible contribution of information science to agriculture production using several models such as crop growth prediction and decision support. Thus, the importance of the studies on agroinformatics is undoubtedly beneficial.

The Asian countries are keeping the highest growth rate in the world and the requirement of food is rapidly changing from quantity to quality. In addition, the Asian countries have their individual agricultural features that are not common in the USA or EU countries. The rice-dependency and the farming scale are the typical examples. Through AFITA conferences, researchers, engineers, administrators and farmers who are interested in the "informatization" of the Asian and the world agriculture, join together to exchange information and discuss about agro-informatics.

AFITA Members: China; India, Indian Society of Agricultural Information Technology; Indonesia, Indonesian Society for Agricultural Information; Japan, Japanese Society of Agricultural Informatics; Korea, Korean Society for Agricultural Information; Thailand, Thai Agricultural Information Network; Vietnam; Philippines; Bangladesh; Malaysia; and Mongolia.

AFITA Activities: Just after AFITA was founded, AFITA organized the First Asian Conference for Information Technology in Agriculture. It was held between January 24 and 27, 1998 in Wakayama-city, which is close to Osaka in Japan. About 120 people from thirteen countries attended the conference to discuss several aspects of agroinformatics. The fourth conference is scheduled to be held at Bangkok, Thailand in August 2004.

AFITA Web Site

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Various matters relating to administration and audited accounts were then discussed.

The Executive Committee members expressed their satisfaction relating to the efforts made by the Secretariat, especially the Executive Secretary, Dr. Raj Paroda, to accelerate the process of establishing APCoAB. In view of general endorsement in the special session organized on 3rd December afternoon, it was decided to move ahead and establish APCoAB effective 1st January, 2004. The following decisions were taken in this regard:

- To start APCoAB through APAARI office in Bangkok and explore the possibilities of having a Secretariat located either with some member NARS or with some CG Center.
- APAARI to contribute US$30,000 for the year 2004.
- Establish Steering Committee of APCoAB and have its meeting convened during the 1st half of 2004.
- Initiate some selected activities based on a well-planned Road Map and Work Plan to be finalized in consultation with APAARI members.

The Work Plan for 2004, as proposed by the Secretariat, was considered appropriate and hence approved. It was also decided to have the next meeting of General Assembly organized in the first week of December 2004 in Taipei, Taiwan. Members were pleased with the generous offer by COA to provide support facilities, etc. The subject on Post Harvest Technology was considered appropriate from the next Expert Consultation. It was agreed that APAARI should co-sponsor the 15th AAACU Biennial Convention and participate in its meeting to be held at Nagoya University, Japan from 27-30 September, 2004.

Dr. Mutsuo Iwamoto expressed his great satisfaction with regard to functioning of APAARI Secretariat under the able leadership of Dr. Raj Paroda. He also assured of his best possible support to APAARI activities in future. Dr. Nurul Alam, Vice-Chairman, proposed the vote of thanks to all the members for their active participation and desired to have continued services of Dr. Paroda in the best possible interest of APAARI. He felt that his valuable contributions have raised the stature of APAARI to its present level. He also expressed his satisfaction of being closely associated with APAARI activities and requested all Executive Committee members to continue providing their support in future as well. Dr. R.N. Sapkota, ex-Chairman, also expressed his appreciation for the excellent progress made by APAARI during the last few years and thanked Dr. Paroda for his leadership and valuable guidance. The meeting ended with a vote of thanks to both Chairman and Vice-Chairman. ▮

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agricultural centres (govijana kendras) in the districts with easy access to farmers and the commercial agriculturists. This information system should provide updates on pricing of produce seasonally so that farmers could decide to grow the crops that has the best market demand in that season.

Regulatory Mechanisms

As the private sector is more involved in agricultural exports, the existing regulatory mechanisms for import/export of planting materials and other agricultural produce should be re-examined. There are several regulatory mechanisms such as the Plant Quarantine Act and its regulations, Seed Act etc. that are designed to prevent the introduction of alien plants materials, animals and other biological materials as precautions to protect the environment. Presently there is a growing demand by the private sector to have less strict procedures for imports of plant materials. Ministry of Agriculture and Livestock, considering these requests have begun to amend the Plat Quarantine Regulations to make it more flexible to assist the private sector investments in agriculture, in keeping with the global conventions and bio-safety regulations. The Cabinet has approved the Seed Act, but its regulations have to be drawn up soon. In addition to the above there are other important regulations, which should be formulated quickly. These include the regulatory procedures on bio-safety, which include the import of genetically modified materials, and the Plant Breeder's Rights, which allows the plant breeders to retain the right to their innovations. These have to be formulated to enable the private sector to use such innovations, like the improved varieties of crop plants or improved livestock breeds without any problems. These issues directly affect R&D of the agricultural sector.

Policy Research

Policy research is another aspect that the research system should be concerned about as it requires a favourable and enabling policy environment to meet the challenging trends of agricultural research. This is particularly important due to trade liberalization and open economic policies currently implemented by the Government. These policies affect both domestic agricultural production and exports. The national agricultural research policy proposes to undertake policy research in relation to economic and social impacts of the past research, trade policies and international conventions in order to advice the national agricultural research system and the policy makers. This will facilitate making demand forecasting projections for agricultural produce on short, medium and long term basis in the context of progressive deregulation of economic activities. ▮

TRUST FOR ADVANCEMENT OF AGRICULTURAL SCIENCES (TAAS)

GOAL

An accelerated movement for harnessing agricultural sciences for the welfare of the people.

MISSION

To promote growth and advancement of agriculture through scientific interactions and partnerships.

OBJECTIVES

- Sponsoring seminars and special lectures on emerging issues and new developments in agricultural sciences in different regions of India.
- Promoting local lecture tours and visits to institutions within country of the eminent scientists from international organizations abroad and of the academicians of foreign agricultural academies visiting India.
- Facilitating the partnership with non-resident Indian agricultural scientists visiting India on sabbatical or short leave.
- Instituting awards for outstanding contributions to Indian agriculture by the scientists of Indian origin abroad.
- Arranging special lectures of eminent agricultural scientists in various schools in different parts of the country.
- Providing support to agricultural scientists for participation in conferences/seminars, in India and abroad, for oral presentation of their research work.
- To act as think tank on key policy issues relating to agricultural research for development (ARD).

TRUSTEES

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	Dr. S. Nagarajan
	Dr. R.K. Arora
	Dr. Narendra Gupta

RECENT ACTIVITIES

A foundation day lecture by Dr. Manju Sharma, Secretary, Department of Biotechnology, Government of India, was organized on the subject entitled "Regulatory Measures for Utilizing Biotechnological Developments in Different Countries" by TAAS on 17 October 2003, which was well attended.

On October 18, 2003, TAAS organized a brainstorming session on "Enabling Regulatory Mechanisms for Release of Transgenic Crops" at the Indian Agricultural Research Institute (IARI), New Delhi, India to discuss relevant issues on the subject. The session, attended by more than 100 participants from various organizations, discussed the present status of biotechnological developments in India, product development through public-private sector partnership, and enabling regulatory measures framework. It made several recommendations to further promote agricultural biotechnology in the national context, especially in view of the new opportunities that biotech products offer to both resource-poor farmers and the consumers.

The highlights of the session have been published in a booklet form and interested persons can obtain a copy by writing or sending an e-mail to APAARI or to TAAS directly.

On 15 February 2004, a apecial lecture on "Improving household nutrition security through quality improvement in maize" was delivered by the World Food Laureate Dr. S.K. Vasal of CIMMYT, Mexico before a select audience of 300 scientists and students at the Indian Agriculture Research Institute, New Delhi.

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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 Thammasiri

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

Resource Conserving Technologies: Transforming the Rice-Wheat Systems of the Indo-Gangetic Plains (2002/1) by Dr. Raj K. Gupta et al.

Success Story on Control of New Castle Disease in Village Chickens (2003/1) by Dr. Robyn Alders.

OTHER PUBLICATIONS

- Proceedings – The Seventh General Assembly of APAARI and Expert Consultation on Strengthening Research Partnerships Through Networks and Consortia, 2-4 December 2002, Penang, Malaysia.
- APAARI – A Decade of Progress, reprinted in 2001.
- APAARI – Vision 2025.
- Proceedings – Expert Consultation on Regional Priority Setting for Agricultural Research for Development in the Asia-Pacific Region and Sixth Executive Committee Meeting of APAARI, 12-14 November 2001, Bangkok, Thailand.
- FAO-APAARI Expert Consultation on the Status of Biotechnology in Agriculture in Asia and the Pacific, 21-23 March 2002.
- Agricultural Research Priorities for Asia and the Pacific – A Synthesis.
- ICT Expert Consultation on Development of Second Phase of APARIS, 24-25 October 2002.

Upcoming Meetings and Conferences

4th International Crop Science Congress (4ICSC) in conjunction with the 5th Asian Crop Science Conference (5ACSC) and the 12th Australian Agronomy Conference (12AAC)

26 September – 1 October 2004, Brisbane, Australia

http://www.cropscience2004.com/

International Congress of Entomology 2004

15-21 August 2004, Brisbane, Queensland, Australia

http://www.ice2004.org

18th International Conference of Plant Growth Substances

20-24 September 2004, Canberra, ACT, Australia

http://www.conlog.au/ipgsa2004

AFITA/WCCA2004: The 4th International Conference of The Asian Federation of Information Technology in Agriculture and The 2nd World Congress on Computers in Agriculture and Natural Resources

August 9-12, 2004, Bangkok, Thailand

http://www.afitaandwcca2004.net/

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