



APAARI

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Editorial

The impact of agricultural biotechnology has become quite evident over the last one decade, providing far greater options addressing the Millennium Development Goals (MDGs), especially the food security and poverty alleviation in the developing countries. Both the conventional and modern biotechnology have been used effectively depending on the infrastructure and expertise available with NARS in the region.

To keep pace with all these exciting developments and to ensure benefits to the society from biotechnological developments, the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) was established in 2003, as a regional program under the umbrella of APAARI. As a neutral forum, APCoAB thrust is to address strategic areas of relevance to the NARS of Asia-Pacific, such as: (i) promoting dialogue with policy makers, (ii) greater stakeholders participation, (iii) stress on capacity building, and (iv) emphasis on public awareness. Its activities currently focus on harmonizing biosafety, regulatory regime and benefit sharing- issues of national and regional concerns.

APCoAB has initiated a number of activities to address above objectives. It has held national dialogues with key stakeholders, including public, NGOs, farmers and private sector; organized a 'High Level Policy Dialogue on Biotechnology for Food Security and Poverty Alleviation – Opportunities and Challenges', jointly with FAO, APAARI and GFAR at Bangkok (see details inside). To keep abreast with new findings on GM crops, it has published a status report on commercialization of Bt corn in the Philippines and is bringing out similar reports on Bt cotton in India and China. Also to highlight the role of conventional biotechnology- tissue culture application, micropropagation techniques, among others – it intends to bring out specific case studies on crops such as potato, sugarcane and date palm. The main purpose is to disseminate unbiased relevant information for the benefit of concerned NARS. APCoAB has also developed its own web site (www.apcoab.org), which provides information on APCoAB activities, and news on possible benefits of biotechnology in the Asia-Pacific region.

In future, APCoAB would also address policy harmonization, training/ capacity building, public awareness, and information dissemination needs. APCoAB/APAARI with ICRISAT will undertake some of these activities such as jointly organizing a public awareness workshop, capacity building, policy framework in subregional/regional context, and harmonizing biosafety regulations. APCoAB will also initiate inventorizing information on existing models of public-private partnerships and work out possible alternatives for strengthening such partnerships.

Editors

High Level Policy Dialogue on Biotechnology for Food Security and Poverty Alleviation: Opportunities and Challenges



This policy dialogue was jointly organized by APAARI, FAO and GFAR and was successfully held from 7-9 November 2005 in Bangkok, Thailand. It was well attended by 83 participants including Ministers/Secretaries of agriculture, Heads of NARS and CGIAR Centers, distinguished scientists and leaders of several regional and international organizations, representatives of Private Sector, NGO and farmer organizations. The objective was to bring together different stakeholders for better understanding of the issues related to biotechnology, sharing of knowledge on new developments and findings, and raise awareness of their potential benefits and risks and the implications in terms of needed regulatory framework, institutional capacity building and human resources development. It was expected to facilitate appropriate policy decisions by the developing countries of Asia and the Pacific region with respect to application of both conventional and modern biotechnologies in their food and agriculture sector so as to address the issues of poverty and hunger, in accord with the World Food Summit and Millennium Development Goals.

In their opening messages, APAARI Chairperson Dr. Herath Gunasena and Executive Secretary Dr. Raj Paroda, pointed out the emerging concerns in the Asia-Pacific region such as rapid population increase, food and nutritional security, expanding urbanization and industrialization, conservation of natural resources, and the opportunities available through conventional and modern biotechnologies. They acknowledged that this dialogue is part of the policy advocacy mandate of the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), an initiative of APAARI and FAO. Vice- Minister Charal Trinvuthipong, Thailand Ministry of Agriculture and Cooperatives,

indicated that the Royal Thai Government has taken many initiatives towards the use of biotechnology in agriculture for sustained growth of the sector and has undertaken measures to build national research and regulatory capacity. GFAR Executive Secretary Dr. Ola Smith emphasized that the development and effective utilization of biotechnologies would require some form of partnership among several stakeholders and especially public-private partnerships. The challenge is to find ways of promoting such partnerships for mutual benefits without crippling conditionality. The FAO Assistant Director General and Regional Representative for Asia and the Pacific Dr. He Changchui emphasized in his inaugural address the need to establish national legal and regulatory framework in harmony with the international instruments available and to build the necessary infrastructure including human resource to efficiently implement these systems. He encouraged the participants to pay attention to the expected three major outcomes of this meeting: (i) identification of the major priorities in biotechnology that FAO and its partners like APAARI should focus on to enhance its contribution to food security and poverty reduction, (ii) recommended roles for different stakeholders in meeting these priorities and (iii) mechanisms and modalities of enhanced cooperation and partnership amongst the stakeholders.

The dialogue consisted of 21 paper presentations in five sessions on the following topics: status of agricultural biotechnology at the global and regional levels; issues such as IPR, biosafety, regulatory; ministerial roundtable on national developments (Philippines, Iran, Sri Lanka and Thailand); biotechnology for international public goods; and global and regional partnership

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initiatives. Brainstorming sessions discussed future strategy for (a) countries in the early stage of biotechnology development which includes Cambodia, Laos, Myanmar, Nepal, Vietnam, Sri Lanka, and Iran and (b) countries in advanced stage of biotechnology development such as China, India, Japan, Philippines, South Korea, Singapore, and Thailand. A publication on “Commercialization of Bt Corn in the Philippines: A Status Report”, published by APCoAB and prepared by Philippine scientists led by Dr. Reynaldo Ebora was released by the Philippine Agriculture Secretary Domingo Panganiban during the inaugural session.

The following were the highlights and recommendations of the dialogue:

There is a promising development of agricultural biotechnology in the Asia-Pacific region. However, countries are faced with the challenge of creating an enabling environment within which biotechnology activities will operate. Some countries lack the component of the legal framework; others lack the capacity to implement them. The higher goals of biotechnology R & D are good health, equity and security. Biotechnology can contribute to achieve these goals through utilization of its products and technologies. However, consumer and commercial confidence must be gained before utilization can occur. To create a critical level of trust, public awareness and education should be emerged regarding the safety and benefits of biotech products, biosafety regulations and IPR protection.

The development and effective utilization of biotechnologies (or products of biotechnology) would require some form of partnership among several stakeholders at the national, regional and



Dr. He Changchui, ADG, FAO delivering Inaugural Address

international levels. Such partnerships may involve sharing of information and experiences among NARS regarding “best practice” in developing a national policy and legal framework on biotechnology which could serve as inputs to a country’s coordinated/Integrated National Program on Biotechnology. Available advanced technologies could be shared among NARS and capacities could be developed through existing networks within the region and across the regions. There is a strong need to develop private-public partnership for sharing information, expertise, infrastructure and materials under specific material transfer agreements, and delivery of the products. It is recommended that APAARI-APCoAB needs to be strengthened so that it plays a key role in arranging active partnerships for achieving the common goals. The challenge is to find ways of promoting such

partnerships so that expected benefits are reaped by the farming community at the national, regional and global levels. FAO, APAARI-APCoAB and GFAR can assist the developing countries in the region by taking proactive role in policy advocacy, increased public understanding, putting up the necessary legal framework, capacity building, and mobilizing resources for the promotion of biotechnology so as to address the needs of the poor people in the region. The above recommendations should be presented by APAARI to the policy makers during the Regional Conference of the FAO and other fora such as ASEAN, SAARC and APEC, to draw attention of donors so that investments in R & D could be increased to a desired level of 1% of GDP for all NARS in the Asia-Pacific region.



Release of Bt Corn Status report by Philippines Agriculture Secretary Domingo Panganiban

APAARI Executive Committee Meeting

The Executive Committee Meeting of APAARI was held on 6 November 2005 at the Rama Gardens Hotel, Bangkok, Thailand, under the Chairmanship of Prof. H.P.M. Gunasena. The Chairman welcomed the members of the Executive Committee and expressed his happiness regarding excellent activities of APAARI during 2005. Dr. Raj Paroda, Executive Secretary, APAARI, informed about the appointment of Dr. M.E. Tusneem as Chairman, PARC on retirement of Dr. Badaruddin Soomro in August 2005. Dr. Paroda was pleased to welcome Dr. Ola Smith, Executive Secretary, GFAR as a special invitee since it was his first visit to participate in APAARI organized meetings.

Dr. Paroda presented a brief report on the following publications brought out since last meeting held on 16 May 2005.

- (a) Publication and distribution of APAARI Newsletter (June 2005 issue) and also the revised APAARI brochure.
- (b) Updated version of APAARI on CD.
- (c) Some posters in the scroll format giving the background of APAARI vision and mission have also been published for display in APAARI related meetings.

Regarding the APARIS and APCoAB programs, following activities were conducted:

- (a) Training Workshop on Integrating National Agricultural Information Systems (NAIS) held from 1-5 November 2005, at AIT, Bangkok, Thailand. Fourteen senior officers representing National Agricultural Information System of 10 NARS members participated in this Training workshop, which was convened by Dr. Sahdev Singh, Ex-Assistant Executive Secretary and now Director at AIT.
- (b) Third Steering Committee Meeting of APCoAB was held on 25 June 2005 at ICRISAT office in New Delhi, India.
- (c) Workshop on Research Need Assessment for the Pacific Sub-region was held at SPC Headquarter in Noumea, New Caledonia, from 6-7 October 2005.
- (d) Workshop on Research Need Assessment for South-East Asia Sub-region was held at IRRI, Los Banos, Philippines, from 27-29 October 2005.

Dr. Betty P. del Rosario, Assistant Executive Secretary, APAARI, represented APAARI in the workshop on Research Need Assessment for South-East Asia Sub-region held at IRRI, Los Banos, Philippines, from 27-29 October 2005.

With regard to Membership Status, it was decided that APAARI would pursue the efforts for the resumption of membership by CAAS, MARDI and New Zealand, and follow-up the request to CIP and ICRAF for their associate membership. Also IAARD, Indonesia will be again approached. It was suggested to explore the possibility of new membership of Agricultural Universities and other Institutions from the Asia-Pacific Countries,

with a view to enhance the professional capacity building. Dr. Solsoloy of BAR suggested that APAARI could approach the Association of Agricultural Universities in different countries to become members of APAARI.

Dr. Paroda informed about the payment of membership fee by most of the members on regular basis. He further informed that the contributions of Rockefeller Foundation, MONSANTO Ltd., and Mahyco (India), for the APCoAB activities during 2005 have been received. He also acknowledged the support received from GFAR for a number of activities.

The Audited Statement of Accounts for January to September 2005 was placed before the members of the Executive Committee for scrutiny and approval. After deliberations, the Executive Committee approved the accounts and the fixed deposit increased to US\$ 800,000 with Siam Commercial Bank, Bangkok. It was felt that in future, possibilities for donor funding from organizations such as ADB and some Foundations should be explored.

Dr. Ola Smith, Executive Secretary, GFAR, expressed his thanks to the Executive Committee for the opportunity to attend this meeting and appreciated the achievements of APAARI under the matured leadership of Dr. Raj Paroda. He also assured continued support of GFAR, for carrying out the jointly agreed priority programs of APAARI.

Dr. Paroda informed that the Expert Consultation on a subject similar to the main theme of Global Forum 2006 would be most appropriate such as: "Innovations for Linking Farmers to Markets". Hence, the 9th General Assembly Meeting of APAARI can be organized just prior to the GFAR Conference 2006, being hosted by ICAR, Government of India in November 2006 in New Delhi. He indicated that a concept note on the theme of APAARI Expert Consultation would be circulated in advance for the suggestions of APAARI members.

Dr. Ola Smith also briefed on the status of preparations for Global Forum 2006. He mentioned that the theme is being discussed and would be finalized in the GFAR Steering Committee meeting in December 2005. He stated that hosting of APAARI General Assembly prior to GFAR conference would enable all members to also attend the GFAR meeting, since same is being held in Asia for the first time at the invitation APAARI and ICAR. He also informed about the formation of a "Working Group" to develop the program for the Global Conference. Dr. Paroda has been requested to serve on this Group.

While discussing the secretariat matters, Dr. Paroda informed the members about joining of Dr. Betty del Rosario as Assistant Executive Secretary of APAARI effective 1st September 2005. He mentioned that Dr. Rosario brings rich experience of working with Philippines NARS (PCARRD) and is familiar with the role and objectives of APAARI.

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With regard to the expansion of membership of Executive Committee, it was decided that the Secretariat should circulate appropriate amendment to the members in view of earlier decision taken to extend the membership to two important constituencies i.e. CGIAR and GFAR, so that same is considered for endorsement in the next APAARI General Assembly. About representation of CSOs, present efforts to invite them in APAARI meetings be continued to ensure their active participation and ownership of APAARI.

Prof. Gunasena and the members were highly appreciative of the proposed High Level Policy Dialogue on Biotechnology. It will give good visibility to APAARI. Prof. Gunasena felt that it would be good to have the Training Workshops on Biotechnology, in addition to APARIS IT Training Program for HRD, for the benefit of developing NARS.

Dr. Ola Smith expressed the need for developing linkages with other Regional Fora for strengthening inter-regional partnership. It was agreed that with the support of GFAR, APAARI would like to develop such linkages that had already been created through the establishment of an Inter-regional Network on Cotton (INCANA) in partnership with AARINENA, Iran (as host NARS) and ICARDA.

In their closing remarks, Prof. Gunasena and Dr. Thierry Mennesson also expressed their appreciation for efficiently carrying out the program of APAARI by the Secretariat under the able guidance of Dr. Raj Paroda. They also thanked the participants for their constructive comments on various issues during the meeting and the support extended to APAARI to emerge as an important regional organization.



APCoAB Steering Committee Meeting

The Fourth Steering Committee meeting of APCoAB was held on 6 November 2005 at Rama Gardens Hotel, Bangkok under the Chairmanship of Prof. H.P.M. Gunasena, Chairman APAARI. He welcomed all the participants and apprised them about APCoAB as a program functioning under the umbrella of APAARI and expressed concern on the role of biotechnology vis-à-vis its application to meet particularly the needs of small farmers, and to mitigate poverty and malnutrition with emphasis on food security and biosafety aspects. He stressed on capacity building needs of NARS at various levels in diverse disciplines of biotechnology. He appreciated the thrust provided by Dr. R.S. Paroda to push this program further.

Dr. Paroda while welcoming the Steering Committee members, thanked Dr. Andrew Bennett and Dr. Behzad Ghareyazie, special invitees, and Dr. Jerry Flint to attend the meeting for the first time. He thanked Dr. William Dar for the Secretarial support provided by ICRISAT at its Delhi Office and appreciated the support from FAO and GFAR.

Dr. Paroda presented the progress by APCoAB since the last meeting held on 28 June 2005 at New Delhi. The main achievements were:

1. APCoAB has been actively facilitating APAARI in executing the program and logistics for holding the High Level Policy Dialogue on Biotechnology being organized by APAARI, FAO and GFAR.
2. A revised Flyer has been published for information dissemination and wider distribution as public awareness material.
3. The publication entitled "Commercialization of Bt Corn in the Philippines: A Status Report" has been brought out and is being distributed widely in the region for information and technology transfer.
4. A status report on "Bt Cotton in India" is being finalized and a similar one is to be prepared soon by a Chinese expert.
5. The APCoAB web site is operational (www.apcoab.org) and is periodically updated by APCoAB Office, New Delhi.

6. A brief report on the recent APCoAB activities has been included in GFAR newsletter, APAARI newsletter and also sent to APSA upon request to be included in their bulletin.
7. Efforts are being made to get information synthesized on conventional biotechnology applications in a number of crops by NARS experts.
8. APCoAB budget and funding position were explained, and concern expressed as APCoAB has meager funds and limited support. Presently, APAARI has assured of its support to APCoAB activities for the year 2006. To make APCoAB a sustainable program, suitable strengthening of the Secretariat and long-term commitment for funding are critical.

During the deliberations, following views were expressed:

Work plan and prioritizing activities:

- (1) The work plan needs to be modified and fewer activities be taken up in line with the reality of the resource situation; also activities need to be prioritized. The highest priority be given to public awareness and capacity building.
- (2) Some of the concerns of NARS are common to those of the regional context. The activities to be coordinated at the regional and sub-regional levels are as follows:
 - (a) Biosafety and regulatory aspects
 - (b) Training needs assessment/capacity building
 - (c) Conventional biotechnology and its application
- (3) To enable attention for the above activities, there is need to assess requirements of the less developed NARS and work out cost effective approaches to meet their needs by utilizing/tapping the expertise available with the well-developed NARS in the Asia-Pacific region.

Needs for Collaboration:

- (4) It was emphasized that to meet the needs identified above, specific collaboration with international and regional organizations will be required. It was suggested that APCoAB collaborates with ICRISAT in media

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awareness workshop and undertakes other activities such as workshop on Biosafety- regulatory needs at regional /sub-regional levels. Also APCoAB needs to have collaboration with relevant organizations such as with ISAAA for Public Awareness and ICGEB for capacity building needs.

(5) For enabling public-private-partnership (PPP), more effective participation of the private sector was stressed. It was felt that efforts be made to document the existing PPP studies undertaken by the NARS of the Asia-Pacific region involving National programs, regional and/or international partnerships. Also, some specific case studies /models on such partnerships be documented and published by APCoAB.

Other Suggestions:

(6) There is need to disseminate a clear message to the NARS that application of biotechnology is related both to GM technology and non-GM/conventional biotechnology.

(7) There is need to identify suitable nodal institutes within NARS to facilitate coordination/networking of activities on agricultural biotechnology.

(8) Apart from the publications planned, APCoAB needs to inventorize the existing available information on biosafety and regulatory aspects and policy issues for different NARS/countries in Asia-Pacific, and to look into possible mechanisms to harmonize these guidelines for NARS in regional/sub-regional context drawing on existing information as appropriate.

(9) Dr. William Dar recommended that Iran need to be included as a member of APCoAB Steering Committee representing the West-Asia and CWANA region. This was agreed to by all participants.

(10) UNEP/GEF may be approached for assistance/support on activities such as developing biosafety framework/ associated training/workshop needs in collaboration with ICRISAT, ICGEB and other selected centers as required.

(11) Concern was expressed to have the position of APCoAB Coordinator filled up soon.

The participants appreciated the overall progress achieved by APCoAB, despite staff constraint. Steering Committee members also examined the Audited Account Statement of Expenditures for APCoAB activities up to 30 September 2005 and appreciated the efficient handling of Accounts by ICRISAT and APAARI. Also for more support for future activities, the Chairperson appealed to the members and special invitees, especially to Dr. Bennett, Dr. Flint, Dr. Ola Smith and Dr. Ghareyazie to consider providing additional support. Also Dr. Dar was requested to extend institutional support for joint activities during 2006.



Agricultural Research in Asia and the Pacific: Recent Investment Trends in Nine Countries

During 2003-2005, the International Food Policy Research Institute (IFPRI), in close collaboration with APAARI, conducted an Agricultural Science and Technology Indicators (ASTI) survey round in 15 Asian and Pacific countries. APAARI assisted IFPRI in providing contact information of the various national partnering research agencies. It also assisted in setting up the in-country collaboration.

The findings for the nine Asia-Pacific countries sampled (Bangladesh, Laos, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, and Vietnam) showed that during the 1990's, total agricultural R & D spending grew at an average of 3.2 percent per year. This was considerably higher than experienced in other regions in the world such as sub-Saharan Africa (0.8 percent), Latin America and the Caribbean (2.0 percent), and OECD countries combined (1.2 percent) during the same period (Pardey et al. 2006). But this average growth rate masks considerable variances among the nine countries which comprise only about half of the agricultural R & D investments in the region (excluding China and India). The findings also showed that

agricultural research conducted by the government agencies in Asia is mainly funded through contributions by the government, whereas investments by the private sector are quite limited. In most countries these funds were provided through direct budget allocations, but some countries received additional government funding through competitive funding mechanisms.

The findings of the complete ASTI survey round in all 15 Asia-Pacific countries will be published around mid-2006 and will be made available through both the ASTI and APAARI web sites. APAARI will also work with the ASTI team to disseminate the country briefs, regional reports and datasets within the region.

The ASTI initiative involves a network of various national, regional and international partners. It has been the most authoritative source of internationally comparable data and analyses. These up-to-date and reliable data are required by the policy makers to make informed decisions to improve the efficiency and impact of agricultural research.

(Source: N.M. Beintema, IFPRI, Washington D.C., U.S.A., 2005)

Training Workshop on Integrating National Agricultural Information Systems (NAIS)
1-5 November 2005, AIT, Thailand



During 2004, APAARI conducted a detailed study entitled “Information and Communication Technologies in Agricultural Research for Development in the Asia-Pacific region: A Status Report”, which has revealed the significant heterogeneity in implementation of ICT/ICM in ARD in the region, primarily due to a serious lack of human capacity in many of the developing NARS of the region. Therefore, capacity development in weaker NARS (Groups B, C and D shown in table 1) was recommended to be the top most priority to improve ICT/ICM in ARD in the region.

In continuation of APAARI efforts to build further capacity for improved information exchange and communication in agricultural research in the region, a training workshop on “Integrating National Agricultural Information Systems (NAIS)” was organized on 1-5 November 2005 at the Asian Institute of Technology, Bangkok, Thailand. In all, 15 national agricultural information officers of 10 countries represented in groups B and C, participated in the workshop. The program was designed in such a way that participants first get an exposure to global and regional ARD information resources and then explore opportunities of creating better linkages between such resources and their respective NAIS. Internet tools/applications developed by APAARI to integrate decentralized global, regional and national information resources and databases were demonstrated and participants had hands-on exercises to become familiar with such applications.

The training workshop successfully achieved its objectives, such as (i) participants were exposed to several global and regional developments in the area of ICT/ICM in ARD; (ii) participants strengthened APARIS as a human network of national agricultural

information officers to improve information and knowledge sharing mechanisms among NARS; and (iii) participants developed NAIS-RAIS action plans for 2006-2007 and identified activities where APARIS framework and tools/application can further help develop and strengthen the linkages between NAIS, RAIS and global networks.

The workshop recommendations were as follows:

- (i) Further development of APARIS integration tools
 - ◆ Regional Agricultural Expert Locator (RAEL) is an application through which shareable research output information can be entered in APARIS web site by any interested researcher after a brief registration process. This makes possible data entry from any location. It also provides a significant motivation to agricultural researchers to instantly disseminate their outcome to a regional audience, creating an opportunity for increased research cooperation at the regional level.
 - ◆ Regional Agricultural Information Gateway (RAIG) providing an access to agricultural research information stored on thousands of different computers/servers in the region. This simple, user-friendly interface available on APARIS web site will provide both guided and keyword-based search of databases created and maintained by NARS, APARIS, FAO, CGIAR centers, and individual researchers.
- (ii) Development of publications entitled “Selected Success Stories on Implementation of Information and Communication Technologies in Agricultural Research in the Asia-Pacific region.” These case studies will be selected from three

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Table 1. Grouping of NARS in descending order of NAIS development

Group A	Group B	Group C	Group D	
Australia	China	Bangladesh	Papua New Guinea	Laos
Chinese Taipei	India	Fiji	Sri Lanka	Mongolia
Japan	Pakistan	Indonesia	Vietnam	Cambodia
Malaysia	Philippines	Iran		E. Timor
South Korea	Thailand			New Caledonia

sub-regions, namely, South Asia, Southeast Asia and the Pacific. NAIS officers are expected to play an important role in the selection of case studies and their review for accuracy of information.

- (iii) Publication of *NARS on CD*. Based on the success of the mode of information dissemination used for “*APAARI on CD*”, APAARI plans to bring out a new CD-based publication entitled “*NARS on CD*” that will provide NARS databases and publications in a searchable form. NAIS officers have provided some information about their NARS and more will be requested for the compilation of this publication.
- (iv) Organization of an Inter-regional Workshop for Developing a Common Strategy under the Framework of ICM4ARD, based on the recommendations of the Inter-RAIS workshop

held at CLAES, Cairo. APAARI plans to host this third inter-RAIS workshop, of which the theme and program details will be finalized in consultation with GFAR, representatives of other regional fora and APAARI NAIS officers.

- (v) Organization of Sub-regional and National Training and e-Training Workshops for Capacity Building in the Region. It is proposed in 2006 to have three sub-regional workshops conducted in the three sub-regions to train the trainers in ICM4ARD framework for national level workshops in 2007. It is envisaged that at least one session (1/2 day) in the national level training workshop will be conducted using e-training or distance training platform to provide a regional perspective. This session will be facilitated by APARIS experts.

CARP-PGRC Joint Workshop on Conservation Management of PGR

A training workshop on “Conservation and Utilization of Plant Genetic Resources” was conducted from 30 June to 1 July 2005 at the Plant Genetic Resources Centre (PGRC), Gannoruwa, Sri Lanka. Twenty five scientists of the national agricultural research system in Sri Lanka participated. The major objective of the workshop was to provide training on biodiversity, germplasm collection, herbarium activities, identification, conservation methods, evaluation, utilization and database management. The course comprised of theory and practical classes; field visit to natural habitats for exploration and

collection of wild rice, yams and fruit crops. There were practical exercises on conservation of wild rice, in vitro conservation, genebank activities on viability and moisture testing, and on database management. The application of novel techniques in conservation and utilization of PGR were discussed. The participants visited the Knuckles Range and observed ecosystem diversity, agricultural ecosystems, cardamom plantations, tropical montane forests, patna grasslands and tropical dry mixed evergreen forest.

Stakeholder Consultation on Value Addition to Agricultural Products

Sri Lanka Council for Agricultural Research Policy (CARP) sponsored a stakeholder consultation on 5 September 2005, at its Secretariat, on post harvest processing and value addition of vegetables, fruits, cut flowers and foliage. This consultation had a mixed gathering of scientists from the public sector research institutes and private sector organizations and NGOs involved in the processing industry. The objective of this meeting was to provide a forum for the stakeholders of the processing industry to interact and identify various issues that should be addressed by the research institutes.

Prof. H.P.M. Gunasena, Executive Director, CARP and Chairman, APAARI stated that the production of local fruits and vegetables are seasonal; hence gluts occur and the farmers have to dispose them due to lack of storage facilities and ineffective marketing systems. He further stated that the potential for

increasing production of these value added products are immense and the main constraint is the lack of appropriate post harvest technologies which deserves immediate attention from research institutions. In this regard, partnerships with the private sector is essential as they could mobilize both production and processing. Dr. Shanthi Wilson, Chair, CARP National Committee on Post Harvest Technology, said that plenty of research information is available which unfortunately has not reached the stakeholders and from that point of view this consultation is very timely. The consultation attempted to develop research priorities in the food processing area. The need to identify research in demand with the involvement of the stakeholders and working in partnership from the design stage and in implementing the research programs was suggested.

(Source: CARP Agricultural Research News, Vol. 6, No. 2 July-September, 2005)



The Papua New Guinea University of Technology



Department of Agriculture A Profile

Papua New Guinea University of Technology (PNG Unitech) was established in 1965 as the Papua New Guinea Institute of Higher education and was located in Port Moresby. In 1968, it was moved to its present place in Lae and in 1970 it became the Papua New Guinea Institute of Higher Education. Its present status as the Papua New Guinea University of Technology was established in 1973. There are 13 teaching departments and 3 affiliated colleges. The total number of teachers and scientists are over 700 with a student's capacity of 3,000.

The Department of Agriculture (DOA) at the PNG Unitech is the leading academic department providing agricultural science training in the country. Currently, the Department has about 150 students enrolled in its four year degree program and 10 postgraduate students. It has 12 academic staff covering all major areas of agricultural science and who are very active in research and community outreach activities.

The DOA was originally established in 1971 at the University of Papua New Guinea in Port Moresby and then transferred to Unitech in Lae in 1985. The major advantage of the

current location is its proximity to the agriculturally rich Highland Provinces, and also for the huge potential for agriculture in the Morobe Province. Unitech itself is centrally located with respect to the whole nation. Another advantage of the DOA's relocation to Lae is the complementary nature and synergism provided by other applied and natural sciences, engineering and business studies departments at Unitech.

The DOA, is therefore strategically located and has had a proven track record for producing quality graduates and postgraduates in agriculture who are now leaders in the industry, government and the community at large. The highly qualified teaching staff most of whom are Ph.D. holders representing different disciplines of agricultural sciences are assets of this DOA and is a major advantage compared with other research and educational institutions in the country.

The DOA has a proud record for its Bachelors, Masters and Ph.D. degree programs which not only has benefited PNG nationals, but also students from overseas, especially from South Pacific Island countries.

Teaching and Research Farm

The Department has a farm of approximately 40 ha located on the University campus. Main functions of the farm are to provide:

1. Physical and financial data from a known and reliable source for teaching, demonstration and research;
2. Materials (e.g., land, crops, livestock, machinery) for demonstration and practical training in agricultural techniques;
3. Facilities for research and development work by the University staff and students, and for outside bodies;
4. The opportunity for the students to have an active and intimate association over a period of farming situation;
5. Produce food for sale;
6. Land for staff and student gardens; and
7. An annual physical and financial report to the Agriculture Department.

The DOA has also established a Biotechnology Centre in 1998 which currently perform advisory, research and academic level programs. It has developed working link-up with relevant national and international institutions.

The South Pacific Institute of Sustainable Agriculture and Rural Development (SPISARD) is the new initiative by the DOA to meaningfully contribute towards the agriculture and rural developments. The institute will provide a conduit for the DOA,

and the University as a whole, to deliver appropriate technology and professional advice to about 85 percent of the rural population in PNG. SPISARD, as a knowledge and technology delivery model, accommodates the concept of model villages that will become the focal point for onsite activities and demonstration of the new farming and community development initiatives. Third year students in the new curriculum will live and work in the model villages for a period of six months, as part of their industrial training attachment.

Model villages in different agro-ecological zones of the country will be sourced and evaluated for their suitability. These villages in the zones will benefit from transfer of technologies and research information, and aid to the community development through farmer to farmer extension, and for students to learn from these processes and real-time experiences. Where possible farmer-training centers could be established in collaboration with other field service providers for effective transfer of information and technology and ensure adequate feedback to fine tune research and the teaching curriculum at the University.

Post-Graduate Degree Program

The DOA offers post-Graduate studies for Masters in Agriculture by coursework and research, and Master of Philosophy (MPhil) and Doctor of Philosophy (Ph.D.) by research provided they meet the requirements prescribed by the PNG University of Technology.

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The DOA also offers courses leading to a Post-Graduate Diploma (PGD) in Agriculture in which students can further knowledge in professional areas like Crop Production, Animal Production, Crop Protection, Agricultural Economics, Soil Sciences, and Agricultural Engineering.

Students Industrial Training

All students enrolled in the degree program are required to undertake field training during second and third years. Industrial training in second year involves working in the University Farm one day each week in both semesters; fieldwork in third year is undertaken in a block of eight weeks. In the revised curriculum, students will undergo industrial training for a six month period in the second semester of third year.

Students Computer Laboratory

The DOA houses a students' computer laboratory, which contains an average 20 desktop computers primarily for students' use.

Research

The Department has concentrated research on areas including selected food crops, small animals, policy analysis, agricultural extension and training, and farming systems. This is in line with the national government's goal to attain a status of food self-sufficiency by 2012. To meet the demands of expanded research work on crops and livestock, a MOU was recently signed between the National Agricultural Research Institute (NARI) and the PNG Unitech. This presents opportunities for more collaborative research amongst scientists in these institutions. Furthermore, since 2000, the DOA has continued to conduct multidisciplinary research on rice in collaboration with the Trukai Rice Industries Inc.

General objectives of the research program

1. To understand existing systems of production in the subsistence or traditional sector and to derive viable production technologies, which will improve the traditional production systems in PNG. Such an approach entails interdisciplinary teams.
2. To identify problems of production and aim for goal-oriented research for specific sites with on-the-farm adaptive trials. Based on the locality of the DOA, research priority is towards the lowland systems.

3. To look at intensification potential with a view to encouraging commercial production.

Contract Training and Research

The DOA conducts training on request by different stakeholders as industries, companies, donor agencies and NGOs. The training is provided on modular basis consistent with the need of clients. Research on demand is also conducted by the academic staff and post-graduate students of the DOA. The DOA also accommodates requests from companies, industries, NGOs, national and provincial governments to give advice and do specific need-oriented research.

Degree Program

The DOA offers a four-year course, which leads to the Degree of Bachelor of Science in Agriculture. Entry to the course is at the Grade 12 School Certificate (or equivalent) level only.

The program prepares the students for a wide variety of Agricultural and Agriculture-related occupations in PNG. These include teaching, research, advisory and technical positions both in government and private industry as well as in numerous other areas for which basic preparation in agriculture and related sciences is valuable.

Recently, the DOA reviewed the undergraduate curriculum in consultation with the stakeholders in industry, government and the community. The 2003 first year students have been enrolled on the new curriculum, and the old curriculum will phase out by 2006.

Academic and Technical Staff

There are about 16 academic and 9 technical staff of the DOA of the PNG Unitech.

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Participation in GCHERA Conference



On behalf of APAARI, Dr. Raj Paroda, Executive Secretary, participated in the meeting organized by Global Consortium for Higher Education and Research in Agriculture (GCHERA) from 12-15 September 2005 in Hangzhou, The People Republic of China. He was invited to make a special presentation before the Executive Committee of GCHERA regarding the activities of APAARI and expected future cooperation between APAARI and GCHERA. He was also requested to present a plenary paper on "Reforming institutional systems in higher education and research in agriculture in India".

Dr. Paroda has also been elected a member of the Executive Committee of GCHERA representing South Asia region.

8th CLAN Steering Committee Meeting Held in the Philippines

The Eighth Cereals and Legumes Asia Network (CLAN) Steering Committee Meeting was held at the Central Luzon State University (CLSU), Science City of Munoz, Nueva Ecija, Philippines during 4-6 November 2005. It was co-sponsored by ICRISAT, ICARDA, AVRDC and APAARI, and co-hosted by Philippine institutions, namely, CLSU, Philippine Council for Agriculture, Forestry and

Natural Resources Research and Development (PCARRD) and the Bureau of Agricultural Research (BAR), Philippines. All CLAN Country Coordinators (except India and Yemen) participated along with representatives of AVRDC, ICARDA, ILRI, IRRI, ICRISAT and APAARI. In addition, there were 20 observers from Philippines national program.

Dr. J.E. Eusebio, Director, Crops Research Division, PCARRD, Philippines was elected as Chairperson of CLAN Steering Committee for 2006-2007. Dr. S.H. Sabaghpoor (Iran) was elected Deputy Chair.

The Steering Committee reviewed the 2004-2005 accomplishments of the network in the areas of germplasm exchange, varieties released, capacity building, exchange of scientists, and adoption and impact of technology. The meeting noted substantial progress in the number of germplasm samples, breeding lines and sets of trials/nurseries on CLAN mandated crops supplied by ICRISAT (sorghum, pearl millet, chickpea, pigeon pea, and groundnut), AVRDC (mungbean) and ICARDA (lentils) to member countries. During 2004-2005 (up to September), one sorghum, two pearl millet, one chickpea, six pigeon pea, four groundnut, one mungbean, and one lentil varieties were released in four Asian countries. A total of 405 NARS research staff and research scholars were trained in ICRISAT (345), AVRDC (35) and ICARDA (25). A total of 81 scientists from ICRISAT (64), AVRDC (9) and ICARDA (8) visited and provided assistance to member countries. Conversely, a total of 137 NARS scientists visited ICRISAT (60), AVRDC (60) and ICARDA (17) for research and development activities/workshops and meetings. Some of the impacts facilitated by the network in member countries are: (a) adoption of improved, early-maturing chickpea varieties in Andhra Pradesh, India leading to 5-fold increase in area and 13-fold increase in production due to 3-fold increase in productivity, (b) five improved short-duration chickpea varieties adopted by more than 60% farmers in Myanmar, (c) improved variety of groundnut and crop management using low cost inputs adopted in Vietnam leading to increase in groundnut area 259,000 ha in 2004,



(d) improved lentil varieties (Barimasur-2, Barimasur-3 and Barimasur-4) and better agronomic practices adopted by small holder Bangladeshi farmers, and (e) AVRDC mungbean varieties grown in Myanmar (more than 1 million ha), China (more than 0.8 million ha), and in the Indo-Gangetic Plains of India (adding mungbean in rice-wheat rotation). CLAN has established a viable

mechanism for interaction and exchange of information, materials and technologies among member countries.

Considering the role of crop-livestock systems for sustainable agriculture in Asia, the Steering Committee requested ILRI to join the network, as one of the co-facilitators along with ICRISAT, ICARDA and AVRDC. CLAN membership consists of 13 countries in Asia, namely, Bangladesh, China, India, Iran, Indonesia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, Vietnam, and Yemen. ICRISAT, AVRDC, ICARDA and other regional and international institutes in the Asia-Pacific region are a part of the network, providing genetic material, technology and research information and training input.

The expanded CLAN is now co-facilitated by ICRISAT, ICARDA and AVRDC. The coordination unit is located at and supported by ICRISAT-Patancheru. APAARI has committed support to help sustain the network activities. A joint proposal for ensuring funding support to CLAN has been prepared for submission to IFAD.

(Source: CLL Gowda, ICRISAT, 2005)



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IPGRI and APAARI Collaborate to Develop South-Southeast-East Asia (SSEEA) Regional Conservation Strategy

The South-Southeast-East Asia (SSEEA) Regional Conservation Strategy aims to promote and assist in the development of an effective and efficient arrangement for the conservation of the most important crop diversity collections in the SSEEA region, those identified in Annex 1 of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). The Global Crop Diversity Trust (or the Trust), an independent and internationally funded body established in 2003 to support the ITPGRFA by raising an endowment fund of US\$ 260 million generating approximately US\$ 12 million per year, shall provide funding support, in perpetuity, to conserve the most important ex situ collections of the most important food crops listed in Annex 1 of the Treaty.

The SSEEA regional conservation strategy was developed through a consultative process which started in October 2004 in Beijing, PROC and the second consultation was held in Kuala Lumpur, Malaysia during September 2005. In between these two major consultations, IPGRI-APO facilitated the inputs of the national programs through the three PGR Networks and consolidated the outputs into a SSEEA Strategy draft documents. The process involved the participation of the major stakeholders at the national, regional and international levels: East Asia PGR Network (5 countries), South Asia PGR Network (6 countries but only 5 were active) and Regional Cooperation for Plant Genetic Resources Network (RECSEA-PGR) for Southeast Asia (5 countries as Papua New Guinea was decided to be included in the Pacific Regional Strategy which is being developed separately), APAARI, FAO-RAP, Asia Pacific Association of Forest Research Institutions (APAFRI) and other CGIAR Centers (IRRI and ICRISAT). A Steering Committee composed of representatives of the three Regional PGR Networks, APAARI, FAO-RAP, IPGRI, IRRI, and ICRISAT guides the development and finalization of the SSEEA regional strategy.

The following are the most important aspects of the SSEEA Strategy:

1. **Identification of the most important crops in the region-** this is mostly the crops covered in Annex 1 of the ITPGRFA (Rice, Citrus, Vigna, Eggplant, Wheat, Maize, Banana, Barley, Sorghum, Coconut, Potato, Sweet potato, Cassava, and Yams). The criteria are: a) center of diversity (primary or secondary), b) level of sub-regional, regional and global importance as food and nutritional crop (including feeds and fodder for animals), c) presence of regional and/or international collections, d) usefulness as crops for marginal areas and subsistence agriculture, e) livelihood security for smallholders, f) threat to the genetic diversity in situ/on farm, and g) crop with unique advantage to the sub-region or region.
2. **Collections of greatest importance and first priority for support-** the criteria are as follows; a) collections in public domain, b) distinct collections (landraces and wild relatives), c) collections with no safety duplication, d) collections under threat, e) collections with specific traits and from specific ecologies, f) collections that meet all the eligibility criteria, g) collections with sufficient eco-geographical representation such as size of collections, h) collections from institutions where regional and international collaborations are on-going, i) collections representing interdependence for germplasm at

regional and global levels in support of food and nutritional security, j) collections represented by materials which are readily available for exchange as determined by plant health and quarantine requirements, and k) collections having at least the minimum passport data.

Details of crop species, current holders, factors or indicators for assigning priority and access level information for these collections were also documented. The partially completed documentation of number of accessions for the most important crops in SSEEA is 850,977 with India, China, Japan and Philippines as having the most number of accessions.

3. **Coordination-** the main areas of collaboration identified were as follows; a) documentation, b) maintenance, c) regeneration, d) safety duplicates, e) quarantine, f) distribution, and g) characterization.

The coordination and facilitation of the strategy at the national level in the countries in the SSEEA region is done by the Country Coordinators who deal with plant genetic resources in their respective countries. The coordination at the sub-regional levels is done by the Chair of the three PGR sub-regional networks to be assisted by the IPGRI-sub-regional secretariats.

For a regional system of conservation to be efficient and to ensure links to users, the system has to be under the aegis of a formal regional inter-governmental organizations such as the ASEAN and FAO, or a regional forum such as APAARI, with existing crop networks such as INGER for rice, BAPNet for banana, COGENT for coconut, SAVERNet for vegetables, ANSWER for sweet potato, TaroGen for taro, and CLAN for legumes and other similar global and regional crop networks. CGIAR Centers with its base in the region or Centers which have the mandate for the priority crops such as IRRI, ICRISAT and others will have to play both a lead and supportive role in these various collaborative activities.

The target completion of the SSEEA regional conservation strategy document is by the end of December 2005 after receiving comments and endorsement from APAARI. As it is difficult to put it into the agenda of the ASEAN Ministerial meeting in 2006, an attempt will be made to bring it into this platform by 2007 if it is still needed.

(Source: P. Sajise and R. Rao, IPGRI, 2005)

Dr. Betty del Rosario Joins APAARI



Dr. Betty del Rosario has recently joined APAARI as Assistant Executive Secretary. She has more than 30 years of research management experience of working with Philippines NARS (PCARRD). Dr. del Rosario has served as the Chair of the PROLINNOVA Oversight Group, representing GFAR. She has been a member of the CGIAR Science Council Standing Panel on Monitoring and Evaluation. Dr. del Rosario spearheaded the gender and development initiatives in the NARS and has rich experience in working with scientists, policy makers as well as civil society organizations.

APAARI Members welcome Dr. del Rosario and wish her every success in this new assignment.

Regional Roundtable on Implementation of the International Treaty for Plant Genetic Resources for Food and Agriculture

IPGRI, in collaboration with APAARI, held a roundtable meeting of NARS leaders and other stakeholders in Asia-Pacific on 10 December 2005, in Bangkok, specifically to: (a) heighten awareness among the participants of the Treaty implementation process at international and national levels; (b) recommend activities to develop harmonized regional approaches to outstanding implementation issues; and (c) identify modalities for the delivery of technical assistance to countries in the implementation of the International Treaty (IT). There were 24 participants representing APAARI member institutions (NARS and CGIAR centers), FAO and NGO.

The meeting emphasized the importance of countries' participation in the implementation of the Treaty. The Treaty provides a supportive framework for PGRFA-related research and conservation efforts and ultimately to improving the livelihoods of the poor farmers. It was part of a larger package of complementary activities that should be pursued jointly, including the implementation of the Global Plan of Action, the finalization of the regional conservation strategy being developed for the Global Crop Diversity Trust and the strengthening of regional genetic resources and crop networks.

Participants were encouraged to work hard on identifying ways to proactively engage in these activities. It was also noted that the Agreements with the Governing Body under Article 15 of the Treaty would supersede the 1994 In Trust Agreements between FAO and the Future Harvest (FH) Centers of the CGIAR and provide a permanent legal status for the ex situ collections held by the FH Centers. The Treaty creates a 'multiplier effect' for state parties; by placing their national collections of listed Annex 1 materials in the multilateral system for access and benefit sharing they gain access to the entire international pool of Annex 1 materials from all other parties (as well as other collections, like those of the FH Centers).

The meeting clarified that countries that have already signed the Treaty may become Contracting Parties to the IT through a process called "ratification", "acceptance", or "approval". The name of the process followed is different for different countries. Ratification" is the most usual term). Countries that have not

signed the IT (the cut-off date for signature was 4 November 2002) can become party to the Treaty through a one-step process called "accession". Neither process is significantly harder than the other; nor is there any difference in terms of the rights or obligations of Contracting Parties as a result of what process they actually follow to become a party. For the country to participate in the important session of the Governing Body of the Treaty in June 2006, it was recommended that the country ratify the Treaty before the end of February 2006.

Participants acknowledged the constraints faced by governments in implementing the Treaty, namely (1) lack of awareness of the Treaty across the different relevant ministries and other stakeholders, (2) lack of understanding of ongoing negotiations to develop the Standard Material Transfer Agreement, (3) uncertainty about the role of the Governing Body in dispute resolution (and how that interfaces with national options to pursue cases of non-compliance), (4) some uncertainty about what is considered as being in the public domain, and (5) uncertainty about processes for ratification, acceptance, approval, or accession processes.

Participants from the NARS recognized the need to push for more constructive engagement concerning the ongoing processes within their own organizations. Where appropriate, they will contact their national representatives for the further implementation of the Treaty and the regional representatives attending the Contact Group meetings. Participants will get in touch with IPGRI if they need further clarification about the generic ratification and accession documents provided during the meeting.

The meeting recommended that APAARI and IPGRI jointly provide a forum for Asian National Negotiators, preferably before the next meeting of the Contact Group to Develop the Standard Material Transfer Agreement (Contact Group), by April 2006. The Regional Chair of the Asian Group, Dr. Anwar of Pakistan, shall be consulted regarding this meeting.

The participants highlighted the need for national level technical legal assistance for the implementation of the Treaty; to that end, they endorsed the joint program for technical assistance to countries being developed by FAO and IPGRI.

(Source: M. Halewood, G. Moore and P. Sajise, IPGRI, 2005)

INCANA Traveling Workshop on Hybrid and Bt Cotton in India

With active involvement of ICAR, a Traveling workshop on Hybrid and Bt Cotton was organized for the participants of four countries that are members of the Inter-regional Network on Cotton in Asia and North Africa (INCANA) from 21-26 November 2005. The participants included: Dr. Ali Jafari, Head, Cotton Research Institute, Iran; Dr. Hakimjon Saydaliev, Head of Cotton Germplasm Department, Cotton Breeding Institute, Uzbekistan; Dr. M. Amir Helali,



Participants visiting Bt Cotton Field

Administration of Cotton Research, General Commission for Scientific Agricultural Research, Syria and Dr. Bayramgeldi Gurtgeldiyev, Principal Cotton Specialist, Ministry of Agriculture, Turkmenistan. Dr. O.M. Bambawale, Principal Scientist and Mr. U.R. Sangle, Research Associate, National Center for Integrated Pest Management, ICAR accompanied the participants during the Traveling Workshop and interacted with them technically on IPM in hybrid and Bt

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cotton and facilitated their visit to different institutions. Mr. Sanjay Deshpande, AGM (Public Relations & Coordination), Mahyco Seeds Ltd, New Delhi also accompanied the participants to achieve harmonious interactions.

The visit of Dr. Ali Jafari from Iran was facilitated and supported by APAARI, whereas that of representatives from Uzbekistan and Turkmenistan was sponsored by GFAR.

The travel-study itinerary was chalked out by Dr. C.D. Mayee, President, Indian Society for Cotton Improvement (ISCI) with the objective to expose the participants to all the three major cotton growing zones of India with respect to the hybrids and Bt cotton scenario. During their travel the Group visited the following centers/stations/field sites:

- ◆ Central Institute for Cotton Research (CICR) Regional Station, Sirsa and experimental fields including Bt cotton, for the north zone;

- ◆ CICR Regional Station, Coimbatore and experimental fields for the south zone including Bt cotton trials and IPM and IRM sites; and
- ◆ Research Facility of Mahyco Life Sciences Research Center in Jalna, Maharashtra with orientation given by Dr. Brent Zehr, Director of Research Maharashtra Hybrid Seeds Co. Ltd. (Mahyco), followed by visit to performance trials of Bt cotton in farmers fields.

These visits to selected centers/stations and opportunity provided to observe field performance of hybrid and Bt cotton enabled the participants to interact with the expert scientist, field managers and farmers. The team also attended the National Dialogue on Resurgence of Cotton held at Central Institute for Research on Cotton Technology, Mumbai on 26 November 2005.

The participants were highly impressed by the scientific achievements of cotton scientists in India in the field of hybrid and Bt cotton and considered their visit to be highly rewarding.

ISCI/ISAAA Organized National Dialogue on Resurgence of Cotton in India



A one day National Dialogue on 'Resurgence of Cotton' was held on 26 November 2005 at the Central Institute for Research on Cotton Technology (CIRCOT) in Mumbai, India. It was jointly organized by the Indian Society for Cotton Improvement (ISCI) and International Service for the Acquisition of Agrobiotech Applications (ISAAA). In the inaugural session, Dr. C.D. Mayee, President ISCI and several other dignitaries expressed their views and concerns on cotton development in India. Also, during the Inaugural Session, a Documentary Film on Bt Cotton titled 'The Story of Bt Cotton in India' produced by ISAAA and an ISCI publication on 'Cotton Production, Technology Mission and Need for Paradigm Shift' were released.

The Scientific program was conducted in three sessions wherein experts/invited speakers from the public and private sector deliberated on diverse topics. Session I on "Indian cotton outlook" dealt with the Indian cotton scenario and the future trend in cotton production, the state of import/export of cotton, marketing of cotton and improving the competitiveness of cotton fibre. The deliberations of Session II on "Role of Government in Stimulating Growth and Investment Opportunities for Cotton/Cotton Textiles" and Session III on "Expanding Trade Prospects in Cotton Textiles"

were combined and covered presentations on the role of Technology Mission on Cotton and its impact on cotton production and quality in the country, broad industrial perspective of biotechnology in cotton, emerging concept of contract farming in cotton, and expanding trade prospects in cotton textile.

The Dialogue concluded with an open interactive discussion with panelists wherein the following important issues/viewpoints emerged:

- Planned production of agricultural commodities may have to be resorted in future in the interests of farmers and to control the price line.
- On the issue of expansion of Bt cotton cultivation, it was felt that based on the past experience with hybrid cotton, Bt cotton may not expand beyond a certain limit of the total area.
- Appropriate government intervention was stressed to check the proliferation of illegal Bt cotton.
- Need for branding of Indian cotton as a marketing tool to promote export of Indian cotton was acknowledged by one and all.
- On the issue of contract farming, it emerged that corporatisation and not cooperation is the need of the hour for the sustenance of the existing productivity, lowering of cost of cultivation and ensuring the availability of quality raw material to the industry and
- Panel also opined that thrust would have to come from the industry to farmers to forge an irreversible and stable partnership to make a beginning in Contract Farming.

(Source: Mr. B. Choudhary, ISAAA, E-mail: b.choudhary@isaaa.org)

Dr. Borlaug Award to Dr. Raj Paroda

Dr. A.P.J. Abdul Kalam, President of India, presented the prestigious Norman E. Borlaug Award to Dr. Raj Paroda, Regional Coordinator, ICARDA-CAC and Head, PFU-CGIAR. The award was presented before an impressive gathering of about 5,000 scientists attending the 93rd session of the Indian Science Congress held in Hyderabad on 5 January 2006.

Instituted by Coromandel Fertilisers and named after eminent agricultural scientist and Nobel Laureate, Dr. Norman E. Borlaug, the award carries a gold medal, a cash prize and a citation. The citation reads:

“The 2006 Norman E. Borlaug Award for significant contributions to agricultural research and development is awarded to Dr. Rajendra Singh Paroda in recognition of his life long contributions to Indian and global agriculture. As a scientist, research administrator and policy-maker, Dr. Paroda has been making important contributions since 1970 to crop improvement and to strengthening the national agricultural systems in India as well as of countries of Central Asia and the Caucasus. He helped to establish an Asia-Pacific Seed Association and an Asia-Pacific Association of Agricultural Research Institutions. He served as Chairman of the Global Forum on Agricultural Research from 1998 to 2002. He headed the Indian Council of Agricultural Research with great distinction during 1994 to 2001. He was also General President of the Indian Science Congress Association in 2000-2001.

In recognizing Dr. R.S. Paroda for the Norman E. Borlaug Award, Coromandel Fertilisers salutes this great son of India who has

dedicated himself to the cause of promoting excellence and relevance in agricultural research on the lines of the great traditions set up by Dr. Norman E. Borlaug”, said the citation read by the eminent agricultural scientist Dr. M.S. Swaminathan.

“I am honored by this recognition. India has come a long way from a food deficit country to a food surplus country which could be possible through linking science to society. We must now go for an Evergreen Revolution,” Dr. Paroda mentioned in his response.



Vegetable Seed Donation for Tsunami Affected Farmers

Sri Lanka Council for Agricultural Research Policy (CARP), Department of Agriculture and AVRDC (World Vegetable Center), Chinese Taipei distributed vegetable seeds, fertilizers and agricultural implements to the tsunami affected farmers in the coastal belt of the south, north and northeast areas of the country. The objective of the distribution was to provide immediate relief and encourage the farmers to commence agricultural activities in the tsunami affected areas.



The crop varieties selected were those that could be grown by the farmers of these areas and many of them were resistant to stress conditions such as saline soils caused by the tsunami. The crop varieties included 14 different types of vegetables such as cabbage, cucumber, brinjal, chillies, kankun and squash. These are all fast growing vegetables and many leafy types, which can provide nutrition in about 30-35 days after planting. The farmers were also provided with growing instructions by the Extension and Training Division of the Department of Agriculture to enable them to start planting with the commencement of the rains. AVRDC had made arrangement to test the seeds for their viability and also to certify that they are free of any diseases and pests, prior to dispatch to

Sri Lanka and other destinations. A total of 12,500 seed kits were received with packets of fertilizer. As some of the farmers have lost their agricultural implements in the tsunami disaster, a mammoth was also included in this package. The cost of the total consignment was Rs. 35 million.

The Extension and Training Division of the Department of Agriculture undertook a survey of the farmers who were affected by the tsunami and identified the most deserving individuals in the Galle, Batticaloa, Ampara, Trincomalee and Mullaitive districts. The officials of the Division undertook the distribution of seeds with the assistance of the Provincial Directors of Agriculture.

The inauguration of the seed kit distribution program took place on 7 July 2005 at the In-service Training Institute, Gannoruwa. Prof. H.P.M. Gunasena, Executive Director, CARP Dr. C. Kudagamage, Director General, Department of Agriculture, Dr. Markus Keiser, Grant Development Coordinator, AVRDC, Mr. H.M.G. Samarasinghe, Director and Mr. Shanta Emithiyagoda, Deputy Director, Extension and Training Division and the Provincial Directors of Agriculture participated in the handing over ceremony.

APAARI Members

MEMBERS

- ◆ ACIAR-Australian Center for International Agricultural Research
- ◆ AREO-Agricultural Research and Education Organization (Iran)
- ◆ BAR-Bureau of Agricultural Research (Philippines)
- ◆ BARC-Bangladesh Agricultural Research Council
- ◆ CARP-Sri Lanka Council for Agricultural Research Policy
- ◆ COA-Council of Agriculture (Chinese Taipei)
- ◆ DOA-Department of Agriculture (Thailand)
- ◆ IAC-Institut Agronomique Neo-Caledonien (New Caledonia)
- ◆ ICAR-Indian Council of Agricultural Research
- ◆ JIRCAS-Japan International Research Center for Agricultural Sciences
- ◆ MAFF-Koroniva Research Station, Ministry of Agriculture, Forestry and Fishery (Fiji)
- ◆ MARD-Ministry of Agriculture and Rural Development (Vietnam)
- ◆ MARDI-Malaysian Agricultural Research and Development Institute
- ◆ MCFF-Ministry of Commerce, Forests and Fisheries (Western Samoa)
- ◆ NARC-Nepal Agricultural Research Council
- ◆ NARI-National Agricultural Research Institute (Papua New Guinea)
- ◆ PARC-Pakistan Agricultural Research Council
- ◆ PCARRD-Philippine Council for Agriculture, Forestry and Natural Resources Research and Development
- ◆ RDA-Rural Development Administration (Republic of Korea)

ASSOCIATE MEMBERS

- ◆ AVRDC-World Vegetable Center
- ◆ CIMMYT-International Maize and Wheat Improvement Center
- ◆ ICARDA-International Center for Agricultural Research in the Dry Areas
- ◆ ICBA-International Center for Biosaline Agriculture
- ◆ ICIMOD-International Center for Integrated Mountain Development
- ◆ ICRISAT-International Crops Research Institute for the Semi-Arid Tropics
- ◆ IFPRI-International Food Policy Research Institute
- ◆ ILRI-International Livestock Research Institute
- ◆ IPGRI-International Plant Genetic Resources Institute
- ◆ IRRI-International Rice Research Institute
- ◆ IWMI-International Water Management Institute
- ◆ UNESCAP-CAPSA-Center for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (Indonesia)
- ◆ The World Fish Center

RECIPROCAL MEMBERS

- ◆ AARINENA-Association of Agricultural Research Institutions in the Near East and North Africa
- ◆ AIT-Asian Institute of Technology (Thailand)
- ◆ APAFRI-Asia-Pacific Association for Forestry Research Institutions (Malaysia)
- ◆ APSA-The Asia and Pacific Seed Association (Thailand)
- ◆ NACA-Network of Aquaculture Centers in Asia-Pacific (Thailand)

Recent APAARI Publications

Commercialization of Bt Corn in the Philippines. A Status Report (2005) by Dr. R.V. Ebora, A.C. Ampil, M.B. Palacpac and C.C. Custodio Jr. APCoAB, New Delhi, India.

APAARI Flyer

APCoAB Flyer

APAARI on CD

GFAR 2006 Conference and APAARI General Assembly

The Indian Government has agreed to host the third GFAR General Conference to be held in New Delhi, from 9-11 November 2006 at the National Agricultural Science Center of the Indian Council of Agricultural Research (ICAR). The GFAR conference will follow immediately the 2006 APAARI General Assembly meeting to be held at the same venue from 6-8 November 2006.

The GFAR and APAARI Secretariats with the support of Dr. Mangala Rai, Director General, ICAR and the officials of the Department of Agricultural Research and Education (DARE), Ministry of Agriculture, Government of India have started preparing for the two conferences, and will soon provide information on various aspects of the proposed events including the themes, structure and draft program. Updates will be provided on the web sites of both GFAR and APAARI as preparations move forward.

2nd International Rice Congress in India

The 2nd International Rice Congress will be held from 9-13 October 2006 in New Delhi, India. It will be jointly organized by the Government of India (Department of Agricultural Research and Education and the Indian Council of Agricultural Research) and the International Rice Research Institute (IRRI). For more information, please contact Dr. Pramod K. Aggarwal at: rice2006@gmail.com

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