



APAARI

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Editorial

Concern for bioenergy has assumed a global dimension and currently receiving far greater attention especially in view of new opportunities offered by the agricultural sector. The major focus is now on the potential of biofuel production which is renewable such as bioethanol, biodiesel, and biomass for energy production using diverse crops/plants providing food, feedstock, oil, sugar and starch. The obvious challenge, therefore, is regarding economic feasibility of new options vis-à-vis existing concern of food security.

On one side, biofuels offer new opportunities for increased income for the farmers through value addition/product development etc., on the other there are concerns for an excessive use of chemicals, pesticides, water, as well as loss of soil fertility. Hence, biofuel related agribusiness issues need to be critically analysed before undertaking this enterprise on an extensive scale. It would also demand efficient land use planning, use of wastelands, degraded lands, arable crop lands, selective choice of crops/varieties to produce desired feedstock, other produce/product required for efficient biofuel production. Also there will be need for new technology development, infrastructure for storage, processing, transportation, market, information and communication links. Also, effective team work and participatory role of scientists, extension workers, private sector and farmers involved would be required.

Among the crops grown for biofuel in the developing countries, more successful examples are of sugarcane for conversion of ethanol and oil palm for conversion of biodiesel. New potential plants are: Jatropha, sweet sorghum, and Karanj/Pongamia pinnata with considerable promise.

However, several gray areas still exist which need to be addressed before considering biofuel as an energy-efficient option. We have to clearly understand as to where the proposed biofuel farming can be more beneficial without compromise on food security.

In recent past, this topic has been well-debated by the International Fora such as those organized by the Food and Agriculture Organization (FAO) in Rome, by the Gates Foundation in Seattle, USA and more recently by an international conference on 'Bioenergy Outlook 2007- Issues, Advances and Opportunities in Biomass Energy' by the Institute of Environmental Science and Engineering (IESE) based in Singapore. In August, 2006, APAARI had also prioritized Biofuels as an area of great importance requiring anticipatory research and development related efforts globally. Subsequently, CIMMYT, in association with APAARI and GFAR, organized an expert consultation on Biofuels in October, 2006 in New Delhi which generated considerable interest to deliberate all issues related to pros and cons of biofuel production using cereals, especially in the developing countries of Asia Pacific region such as India, China, Philippines, Indonesia, Malaysia, Vietnam, etc. As a next step, APAARI with IRRI, CIMMYT and ICRISAT will be holding an expert consultation to deliberate further the cross-cutting issues on biofuels from 27-29 August 2007 at IRRI, Los Banos. APAARI is quite mindful that a conscious pro-poor decision will determine clearly the pace of biofuel-farming enterprise. APAARI looks forward to have a very effective dialogue among NARS, international centers, private sector and the NGOs to arrive at some strategic planning through which agriculture could emerge a vibrant sector for the renewable energy production in future.

Editors

APAARI Executive Committee Meeting

The newly elected APAARI Executive Committee (2007-2008) under the Chairmanship of Dr. Raghunath Ghodake, Director General, NARI, PNG held its first meeting on 17 March 2007 in Rama Gardens Hotel, Bangkok, Thailand. The Committee resolved a number of issues to move forward; carry out many important activities of the Association for the year including organizing expert consultations/workshops, expansion of membership and a more pro-active, aggressive and collective fund generation by Committee members.

APAARI was also represented in several international meetings. Dr. Raghunath Ghodake, APAARI Chairman, Dr.



Executive Committee Members of APAARI

the meeting can be found at the GFAR web site <http://www.egfar.org>.



APCoAB-TAAS Jointly Organized Brainstorming Session on Models of Public-Private Partnership

The Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) in collaboration with Trust for Advancement of Agricultural Sciences (TAAS) organized a brainstorming session on "Models of Public-Private Partnership (PPP) in Agricultural Biotechnology" on 7 April 2007 at the National Agricultural Science Centre Complex, Pusa Campus, New Delhi, India. The objective was to revisit the various intersectoral partnerships in agricultural biotechnology that have been in operation since the last few years and identify appropriate models of PPP so that the benefits of agricultural biotechnology reach the resource poor farmers, consumers and other stakeholders in the region.

The event was well attended with 46 participants comprising researchers, research managers and experts in biotechnology related issues from public and private sectors and NGOs. Dr. S. A. Patil, Director, Indian Agricultural Research Institute, New Delhi inaugurated the session and Dr. Wayne Freeman, Member, Board of Directors, Barwale Foundation, Dr.



Participants of the Meeting

Mruthyunjaya, National Director, National Agricultural Innovation Project (NAIP), ICAR and Dr. Raj Paroda, Executive Secretary, APAARI gave special remarks. Presentations and discussions were held on three main themes: Existing Models of Public-Private Partnership, Issues in Public-Private Partnership, and The Way Ahead. The participants deliberated on the status of various PPP partnerships in agricultural

biotechnology, factors contributing to their success or otherwise, and regulatory, IPR and other issues impacting intersectoral partnerships. In the Plenary Session, unanimous opinion was expressed about the need for fostering PPP so as to ensure an expeditious transfer of very useful technologies available in research laboratories to the farmers' fields. The speakers also suggested ways of accelerating PPP and overcoming barriers that impede such partnerships.

(J.L. Karihaloo, APCoAB 2007, www.apcoab.org)



APCoAB Holds its Seventh Steering Committee Meeting

The Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) held its VII Steering Committee Meeting on 6 June 2007 at National Agricultural Science Centre Complex, New Delhi. The meeting chaired by Dr. Raghunath Ghodake, Chairman, APAARI was attended by Dr. Raj Paroda, Executive Secretary, APAARI, Dr. Mangala Rai, Secretary, DARE and DG, ICAR; Dr. William Dar, DG, ICRISAT; Dr. (Ms.) Supranee Impithuksa, DDG, DOA, Thailand representing Dr. Adisak Sreesunpagit, DG, DOA; Mr. Gopi Ghosh, FAO, India representing Mr. Malcolm Hazelman, Senior Extension, Education and Communication Officer, FAO-RAP, and Mr. Raju Barwale, MD, Mahyco.

The meeting began with welcome address by the Chairman followed by adoption of Proceedings of VI Steering Committee Meeting. After brief comments by the participants, Dr. J.L. Karihaloo, Coordinator APCoAB presented the Action Taken Report, Progress Report for the period November 2006 to June 2007, Work Plan for June to November 2007, and Resource Generation Activities. Audited Accounts for the year 2006 were put up to the Steering Committee and the same were approved. Estimated income and expenditure of 2007 was also presented and discussed during the meeting. During the period under report, the compilation on "Micropropagation for Production of Quality Potato Seed in Asia-Pacific" was published. Training Workshop on "Low-cost gene-based technologies for MAS application in rice and maize" was held at Barwale Knowledge and Study Centre, Jalna, India in



APCoAB Steering Committee Members

collaboration with IRRI, CIMMYT, GCP and Barwale Foundation. In addition, Brainstorming Session on "Models of Public-Private Partnership in Agricultural Biotechnology" was held in April 2007. The compilation on Biosafety Regulations of Asia-Pacific countries was reported to be nearing completion and so also was the database on Agricultural Biotechnology Institutes of the Asia-Pacific Region.

The Steering Committee expressed its appreciation of the

progress made by APCoAB and felt that all the important issues relating to promotion of agricultural biotechnology in the Asia-Pacific region were being appropriately addressed by the Consortium. The members were appreciative of the high quality of publications and expressed happiness over the decision of FAO to provide funding support for two future publications of APCoAB. Some of the recommendations made by the Steering Committee were: 1) Compilation of more success stories on topics like Tissue Culture Production of Orchids in Thailand, and Production of Virus Resistant Papaya; 2) Finalization of compilation on Biosafety Regulations with tabulated information and a brief synthesis; 3) Organization of training programs in collaboration with relevant institutions in the region; 4) Exploring more options for revenue generation; and 5) Preparing budget for 2008 based on committed and expected funding support and expenditures.

(J.L. Karihaloo, APCoAB. 2007. www.apcoab.org)



ICRISAT's Efforts on Biofuel

ICRISAT's (International Crops Research Institute for the Semi-Arid Tropics; www.icrisat.org) interest in biofuels relates mainly to their possible benefits, and risks that the biofuel revolution might bring to the rural poor who live in the dryland areas of the tropical latitudes across the developing world. Some 600 million poor live in these drylands in Asia, Africa and Latin America, and are mainly engaged in farming or farming-related activities (processing, marketing, etc.)

Over the past decade, ICRISAT has been conducting research on a promising option for biofuel development for the dry tropics, namely the cultivation of sweet sorghum as a feedstock for producing bioethanol in India. More recently this work expanded to include biodiesel crops, especially *Jatropha* and *Pongamia* (but potentially others as well). In recent years this work has grown considerably through innovative partnerships with private sector enterprises, and received

strong encouragement and tangible support from government agencies as well.

Most of ICRISAT's biofuels research is currently in India. It has however, initiated biofuel research in Africa, and believes that many lessons learned in India will be of value there although they will need to be adapted to African conditions.

For a quick, illustrated summary of ICRISAT's perspective, please refer to a four-page brief entitled 'What ICRISAT Thinks: Biofuel Crops: Power to the Poor' available for download: html access at <http://www.icrisat.org/eneWSletter.htm>. A short video clip on ICRISAT's global biofuels work is also available on the website at <http://www.icrisat.org/Investors/Video.htm>.

Also refer *ICRISAT happenings*. In-house newsletter of the International Crops Research Institute for the Semi-Arid Tropics, No. 1250, 23 March 2007



Asia-Pacific Agricultural Research Information System (APAARI) – An Update

After a highly successful organization of the Inter-regional Workshop on Advocacy and Inter-regional Collaboration for ICT/ICM in ARD in July 2006, in which representatives of all RFs, GFAR, FAO and other global agricultural information systems participated, APAARIS focused its attention on issues related to advocacy and integration of information resources. The following activities need to be highlighted:

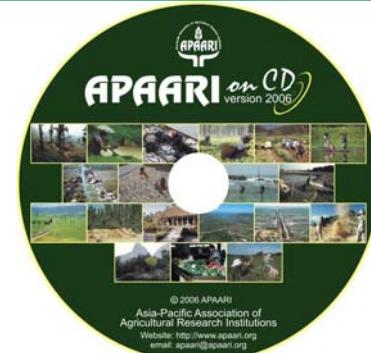
APAARIS published a collection of success stories and best practices of ICT and ICM in ARD. In addition to a descriptive list of several current initiatives on agricultural information systems, the publication provides two different case studies – one on linking farmers with the researchers (RDA, South Korea's Agricultural Information Service) and the other on linking farmers with the markets (India's e-Chopal initiative). The publication was formally released and presented during the APAARI Expert Consultation on 'Agricultural Innovations: Linking Farmers to Markets', held from 6-7 November 2006 at New Delhi, India, just prior to the GFAR 2006 Triennial Conference. More than 100 copies of the publication were distributed to senior NARS leaders and managers. The publication was also presented and distributed to more than 150 participants at two other workshops – the Regional Meeting on Central Asia and Caucasus – Regional Agricultural Information System (CAC-RAIS), held from 15-16 January 2007 at Tashkent and National Workshop on ICT for Rural Finances, held from 5-6 February 2007, organized by College of Agricultural Banking, Reserve Bank of India, at New Delhi. Lately, internationally renowned Indian School of Business (ISB) requested APAARI to grant permission to reprint the above collection of success stories in their upcoming book entitled "ICT in the Rural Development: Opportunities and Challenges."

In other major developments, APAARIS team continued its efforts on integrating information resources for the benefit of ARD stakeholders and published the following CD-ROMs for wider distribution through APAARI (please see images):

- APAARI on CD, version 2006
- NARS on CD – Directory of Agricultural Research Institutions of the Asia-Pacific Region
- Proceedings of APAARI-GFAR Workshop on Regional Synthesis of Research Needs, 18-19 August 2006, Bangkok, Thailand
- Proceedings of the APAARI-GFAR Meeting of the Regional Ad hoc Working Group on Linking Farmers to Markets, 6-7 June 2006 Bangkok, Thailand.

APAARIS team plans to undertake a major revision of APAARI web site (www.apaari.org) using newly available web technologies for a better content management system and linkages to other ARD web sites. The revised web site will also make it easier to directly upload information from decentralized input sources such as National Information Nodal Points (NINPs), spread across the Asia-Pacific Region and also globally. So, APAARIS requests concerned partners/scientists to keep visiting the site for continuous updates.

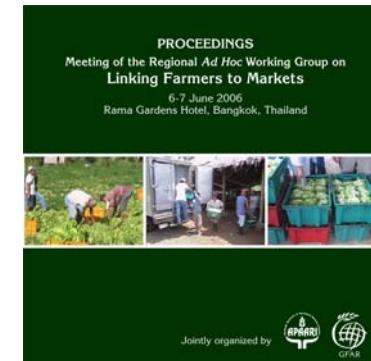
(Sahdev Singh)



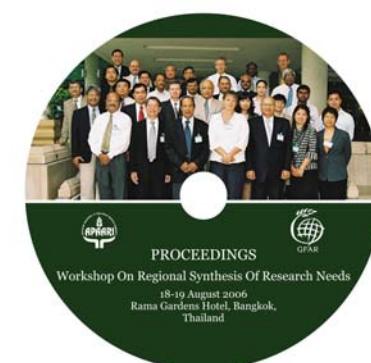
APAARI on CD, version 2006



NARS on CD – Directory of Agricultural Research Institutions of the Asia-Pacific Region



Proceedings of the APAARI-GFAR Meeting of the Regional Ad hoc Working Group on Linking Farmers to Markets, 6-7 June, 2006 Bangkok, Thailand



Proceedings of the APAARI-GFAR Workshop on Regional Synthesis of Research Needs, 18-19 August, 2006, Bangkok, Thailand

Workshop on 'Low-cost Gene-based Technologies for MAS Application in Rice and Maize' Organized

The Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB) participated in this workshop held from 25 – 27 April 2007 in collaboration with IRRI, Generation Challenge Program, CIMMYT and Barwale Foundation, at Barwale Knowledge and Study Center at Jalna, Maharashtra, India to update the scientists from NARS of the developing countries on new low-cost technologies for molecular aided selection. High cost of the molecular technologies has been a concern particularly for developing countries, restricting the application of these powerful tools by only a few of their NARS. Hence, the present workshop was quite appropriate and tailored to meet the needs of developing NARS.

Eighteen participants from six countries, namely, Africa, China, India, Indonesia, Philippines, Thailand and Vietnam besides the faculty and local invitees, attended the workshop.



Workshop Participants

The three-day program comprised lectures and laboratory exercises on techniques like, PCR-ELISA, Dot Blot, FRET and Microarray-based Genotyping. Special lectures were delivered by experts on, Marker Assisted Plant Breeding: from Publication to Practice, Single Seed-based MAS, Abiotic Stress, Bacterial Blight, and Allele Mining. Towards the end of the workshop, the participants made

presentations on their ongoing programs and how they would utilize the experience gained during the workshop in their MAS projects. The participants expressed great satisfaction with the organization and the content of the program and suggested that similar workshops of longer durations be held at regular intervals.

(J.L. Karihaloo, APCoAB. 2007. www.apcoab.org)



APARIS Represented at the Regional Meeting of CAC-RAIS

The second meeting of Central Asia and Caucasus (CAC) on Regional Agricultural Information System (RAIS) was held from January 15-16 2007 at Tashkent, Uzbekistan. The meeting was organized by CACAARI in close collaboration with CGIAR-PFU. The representatives of the CAC NARS, GFAR, CGIAR-ICARDA, FAO, APAARI and AARINENA participated in the meeting to discuss the development and establishment of CAC-RAIS. Dr. Raj Paroda represented both PFU-ICARDA and APAARI. Dr. Sahdev Singh was invited to make a presentation on the activities of the Asia-Pacific Agricultural Research Information System (APARIS), a program under APAARI. The CAC participants showed special interest in the APARIS governance structure and activities. The role of Regional Fora and Regional Agricultural Information Systems in knowledge sharing among NARS and others, strengthening collaboration among ARD institutions and Capacity Building is critical. In this regard, CAC participants felt that learning from the experiences of APARIS could be quite useful for building the CAC-RAIS. APARIS Governance is comprised of APARIS Steering Committee, National



Participants of CAC-RAIS Meeting

Information Nodal Points (NINPs), APAARI Secretariat and APARIS Coordinator. NINPs are the main drivers of APARIS. They help APARIS in identifying the information needs of NARS and link APARIS with NARS. The NINPs also provide success stories and country reports on ICT use in ARD. APARIS activities focus on Capacity building, Advocacy for ICT/ICM in ARD, Integration of Information Resources and Inter-regional Cooperation through GFAR. The NARS institutions produce information through their various

activities and provide it locally, while the APARIS plays an important role in facilitating the regional sharing of this information. APARIS is also actively engaged in capacity building and advocacy for ICT and ICM in ARD. Other important APARIS functions include user-friendly access to de-centralized information resources, continuous update of APAARI web site, Regional Agricultural Expert Locator Service and ARD Information Gateway.

(Sahdev Singh)



ICAR Initiatives to Strengthen Collaborative Agricultural Research

India-US Agree on Collaborative Agricultural Research Projects

India and US have a long association of cooperation in the field of agricultural research and education, said Dr. Mangala Rai, Director-General, ICAR & Secretary, DARE, Government of India in the Fourth Board Meeting of India-US Agriculture Knowledge Initiative (AKI) held in New Delhi on 17 November 2006. Dr. Rai expressed satisfaction that the AKI has made significant progress since its inception a year ago. The meeting was co-chaired by Dr. Mangala Rai and Ms. Eellen Terpstra, Dy Under Secretary, USDA, USA and attended by Board Members and experts from the two sides. Dr. Rai expressed confidence that following the successful conclusion of this meeting, the cooperation will get further impetus.

The Board agreed on a number of deliverables including collaborative research projects on capacity building, curriculum development, water management and biotechnology, which would be taken up during 2007. Under human resources and institutional building, the Borlaug fellowship program is to be continued and the Fellowship will be named Indo-US Borlaug Fellowships. About 12 Borlaug Fellows will be identified by June 2007 for training in the US during 2007-08. Under Human Resource and Institutional Capacity Building, collaborative research projects will be identified and operationalized.

Under Food Processing and Marketing, the proposals will be developed for Cold Chain for food and vegetables by involving Central Institute of Post-harvest Engineering and Technology, Ludhiana and Cold Chain for fish and marine produce with Central Institute of Fisheries Technology, Kochi, under ICAR during 2007. Also, joint food processing research in identified areas will be initiated.

Under the Pigeonpea Genomics Initiative, the activities on genomics using ESTs, SNPs, QLTs, SSRs, BAC library etc. will be carried out in active collaboration of Indian partners with the UC Davis, California in 2007. Development of collaborative research projects on drought/salinity tolerance in crops will be undertaken next year.

Collaborative research project in Water Management would

be put in place as concurrent activities matching the four NASULGC-mediated projects in specified areas with specified job to be performed on a time scale.

The private sector has an important role to play to supplement the efforts of public sector and in the long-term their greater participation will have to be explored, according to Mr. A.K. Upadhyay, Additional Secretary (DARE) and Secretary, ICAR. As a part of the continued commitment of the two sides, the Board will hold its next meeting in Washington D C in June 2007.

Indo-China Cooperation in Agriculture

India and China signed a Memorandum of Understanding on cooperation in the field of agriculture at Hyderabad House, New Delhi made between the Indian Council of Agricultural Research (ICAR) and the Chinese Academy of Agricultural Sciences (CAAS), People's Republic of China. The MoU was signed by the Chinese Ambassador in India, Mr. Sun Yuxi and Dr. Mangala Rai, DG, ICAR. Signing the agreement, Dr. Mangala Rai said that the MoU will be implemented through development of biennial Work Plans to be developed jointly, which describe specifically the activities to be carried out under this Cooperative Program and which set forth the intended contributions of each party. He further added that the pact shall be effective from 21 November 2006 and the validity will be extended automatically for the period of succeeding 5 years at a time.

Both countries will cooperate with common objectives to promote and accelerate the progress of research and training in various fields of agricultural research such as exchange of scientists and technologists, germplasm and breeding material, and program of common interest as may be mutually agreed upon. Such cooperation shall be implemented by establishment of mutual relation between the scientific and technical divisions of the organizations of the ICAR and CAAS. Both will establish inter-institutional links between their respective similar scientific agricultural research institutes and centres.

(ICAR Reporter October-December 2006)

National Agricultural Innovation Project (NAIP) : An Update

The National Agricultural Innovation Project was launched in July, 2006 to facilitate the accelerated and sustainable transformation of Indian agriculture by collaborative development and application of agriculture technologies in the form of consortium by the public research organizations in partnership with farmer's groups, Panchayat institutions, private sector and other stakeholders. The project comprises four components: (i) ICAR as the catalyzing agent for management of change in the Indian NARS; (ii) research on production to consumption systems; (iii) research on sustainable rural livelihood security and (iv) basic and strategic research in the frontier areas of agricultural sciences.

Call for concept notes under competitive mode was made during October, 2006 and 992 concept notes were received. These concept notes are in the final stages of processing. Six projects (one under Component-1, three under Component-

3 and two under Component-4) have been sanctioned. About 20-25 concept notes are being developed into full project proposals. It is proposed to go for the second competitive call soon to fill in the identified gaps as per the agreed project implementation plan.

A sub project on ICAR-Net has been approved to further strengthen information and communication dissemination system in the NARS. Finalization of the proposals on e-thesis, e-courses and e-journals is being done. A proposal on learning and capacity building is also being considered. Help desk has become functional at NAARM, Hyderabad. Consultancies on M&E, communication and visibility, legal dimensions of IPR have been approved. For more details, visit the website <http://www.naip.icar.org.in>

(Source: Dr. Mruthyunjaya, National Director, NAIP)

International Traveling Workshop on Lentil held in Bangladesh

An international traveling workshop on lentil in Bangladesh was jointly organized by the Bangladesh Agricultural Research Institute (BARI) and ICARDA from 12 - 20 February 2007 under the Cereal and Legume Asia Network (CLAN) umbrella. About 40 lentil researchers including 5 from Canada, 2 from USA, 2 from Pakistan, 3 from India and 4 from Nepal, participated. The national participants included a multidisciplinary team of pulses crop researchers from various research institutions, extension department, NGOs and farmers. The workshop was opened by Dr. M.M. Rahman, Director General BARI. Dr. Ashutosh Sarker from ICARDA and Dr. Albert Vandenberg (on behalf of foreign participants) were the special guests at the opening session. Dr. Rahman pointed out the need of lentil in the diet of the people of Bangladesh and its role in sustainable rice-based cropping systems. He mentioned that though with the development of improved varieties in collaboration with ICARDA, the country has progressed in lentil production, still there is need for research to combat some of the emerging constraints like diseases, insect pests and terminal drought. On behalf of the Government of Bangladesh, he thanked ICARDA for its strong support to the farmers of Bangladesh. Mr Harun-Ur-Rashid, Director of Training and Communication lauded the role of ICARDA in human resources development. Dr. Albert Vandenberg spoke on the role of advanced research institutes in basic research and their application in applied and adaptive research through international collaboration. On behalf of Dr. M. B. Solh, DG, ICARDA and on his own behalf, Dr. Sarker thanked BARI authorities for organizing this international workshop and assured ICARDA's continuous support to nutritional and food security of the people of Bangladesh.

During the deliberations of the workshop, 13 papers were presented by the participants to appraise on lentil research and development in respective countries. The group then moved to the main lentil-growing areas, visited research stations,



Participants of the Workshop

farmers' field demonstrations and attended field days and farmers' rallies. At the main Pulses Research Station, Ishurdi all the participants evaluated on-station experiments and interacted with the researchers. They observed the zero-tillage practice to grow lentil as a relay crop in rice field. The most interesting observation was that all local varieties were severely affected by *Stemphylium* blight and rust diseases, but the improved varieties Barimasur-4, Barimasur-5 and Barimasur-6

developed through selection from ICARDA supplied genetic materials showed high level of resistance to these diseases.

The foreign participants were very much impressed with these varieties and emphasized on their distribution/ dissemination to farmers. During field days, participants had lot of interaction with the farmers. A farmer Mr Shirajul Islam pointed out "we kept lentil cultivation because of high yield and disease free traits of the improved lentil varieties." The participants were informed by the Director of Pulses & Oilseeds Research Center that Barimasur-4 has covered more than 60,000 ha and that the recently released varieties Barimasur-5 and Barimasur-6 are under seed multiplication for distribution to farmers. The participants also visited the saline zone (non-traditional lentil areas) of Bangladesh and found potential of expanding lentil cultivation in these areas, as a means of horizontal expansion.

In a wrap-up meeting, Mr. M. Abdullah, Director (Pulses & Oilseeds), BARI, Dr. M. Jalaluddin, Deputy Director, (P & O), and DG, BARI thanked ICARDA, CLAN and also the international participants for their contribution to the workshop, which will help the national scientists to develop a demand driven research program. Dr. M.M. Rahman specifically thanked Dr. M.B. Solh, Dr. Willie Erskine, Dr. S.Rajaram and Dr. Ashutosh Sarker of ICARDA and Dr. C.L.L. Gowda of CLAN for their strong support to the Bangladeshi farmers.

(C.L.L Gowda, ICRISAT)

BAR Intensifies Community Participatory Action Research

The Philippines Bureau of Agricultural Research (BAR) intensified its Community-based Participatory Action Research (CPAR) project in order to fast track technology promotion and adoption among farmers by following the on-farm research (OFR) approach. The ultimate goal is to increase the total farm productivity and income of farmers within the context of sustainable production system. A component of the CPAR project is agribusiness development which provides and strengthens market linkage. The project hopes to enable the farmers to undertake direct marketing of produce to buyers so that they benefit from higher prices and increase in market share.

The impact of CPAR project is exemplified in the case of

an important root crop yam, locally known as ubi, grown in marginal and hilly areas, which is in high demand both in domestic and export markets in the form of puree, as powder, dried chips, cubes in syrup, ice cream, local delicacy halaya and in many other ways. Research institutions such as the Central Visayas Integrated Agricultural Research Center (CENVIARC) in partnership with the local government have promoted high yielding varieties of yam kinampay and VU2, and linked the farmers to processors (such as women associations) for value addition and to increase income. Through the BAR, more farmers are now encouraged to go into profitable yam farming as an alternate crop to planting corn and peanut.

Pigeonpea – an important legume crop

Pigeonpea [*Cajanus cajan* (L.) Millsp.] is an important crop of Asia, Africa, Caribbean region, and Latin America. This crop has diverse uses and besides its main use as dhal/pulse (dehulled split peas), its immature green seeds and pods are consumed as vegetable. The crushed dry seeds are fed to animals while green leaves form a quality fodder. The dry stems of pigeonpea make an excellent fuel wood. Pigeonpea is also grown on mountain slopes to reduce soil erosion.

The global area of pigeonpea is 4.58 million hectares with an annual production of 3.27 million tonnes and productivity of 714 kg ha⁻¹. India is the major pigeonpea growing country with 3.5 million hectares area and 2.4 million tonnes of production. The other important pigeonpea growing countries are Myanmar (500,000 ha), China (100,000 ha) and Nepal (30,000 ha). The pigeonpea area, production, and productivity trends in India in the last five decades show that there was about 2% annual increase in the area but the yield levels have remained stagnated around 600 –700 kg ha⁻¹. The major reason for decline in the per capita availability of pigeonpea is the widening of demand and supply gap caused by the mismatch in the growth of human population and production of this protein-rich pulse crop. There are various technical and socio-economic reasons for the reduced productivity. These include non-availability of quality seeds of improved varieties in adequate quantities, crop losses due to biotic and abiotic stresses, low inputs, and poor crop management. Pigeonpea is partially out-crossed species and to break the yield barrier, ICRISAT launched a hybrid breeding program in 1974. In the past 30 years significant gains have been recorded and its overview is given here.

Early research in hybrid pigeonpea

Male-sterility in conjunction with natural out-crossing is essential to make any hybrid program a success. In pigeonpea, the first systematic effort to search a stable male-sterile system was made in 1974 and a translucent anther type male-sterility that is controlled by a single recessive gene was identified. The identification of this system helped in the development of some heterotic cross combinations, which exhibited 30-100% standard heterosis (superiority over the control). ICPH 8 was the first genetic male-sterility based pigeonpea hybrid released jointly by ICRISAT and Indian Council of Agricultural Research (ICAR). Besides this, other five hybrids were also released by ICAR centers and Universities in India. The major advantages of hybrids recorded were (i) enhanced biomass and yield, (ii) reduced seed rate, (iii) greater disease resistance, (iv) greater drought tolerance, and (v) greater adaptability.

Development of Cytoplasmic-Nuclear Male-Sterility (CMS) systems

Considering the limitations in large-scale hybrid seed production using genetic male-sterility system, the development of an efficient CMS system became essential.

The first attempt to develop a stable CMS system was made by crossing a wild relative of pigeonpea (*Cajanus scarabaeoides*) with a cultivated type. The male-sterile plants derived from this cross were found to have female-sterility also. Later, another wild relative of pigeonpea (*Cajanus sericeus*) was crossed with an advanced breeding line of pigeonpea. The F1 was partially male-sterile and the backcross populations were found segregating for male-sterility. The reversion of some male-sterile plants to male-fertility or partial male-fertility further complicated the selection and stabilization of this trait. Subsequently, various ICAR research centres also joined the efforts to develop CMS systems. So far five primary CMS systems derived from various inter-specific crosses have been reported in pigeonpea. These are designated as (i) A1 cytoplasm, derived from *C. sericeus*; (ii) A2 cytoplasm, derived from *C. scarabaeoides*; (iii) A3 cytoplasm, derived from *C. volubilis*, (iv) A4 cytoplasm derived from *C. cajanifolius*, and (v) A5 cytoplasm derived from cultivated pigeonpea. Of these, the A2 and A4 CMS systems have been found to be stable and are being used in the hybrid breeding programs in India. A5 CMS system is still being purified at ICRISAT. Among these, the A4 CMS system, developed by ICRISAT is considered as boon to the hybrid breeding program. This is the most stable CMS system across the environments and the frequency of fertility restoration in this CMS source is also high which helps in developing high-yielding hybrids. This CMS has a great potential for use in commercial hybrid pigeonpea breeding programs.

Performance of A4 Cytoplasm based hybrids

During 2005-06 rainy seasons over 300 hybrids were evaluated and some of the promising hybrids identified in the Maruti maturity (160 days) group were ICPH 3467 (3131 kg ha⁻¹, 63% superiority over the control), ICPH 3340 (2952 kg ha⁻¹, 54% superiority) and ICPH 2671 (2660 kg ha⁻¹, 61 % superiority). In Asha maturity (180 days) group ICPH 3371 (3013 kg ha⁻¹, 62% superiority) and ICPH 3491 (2919 kg ha⁻¹, 57% superiority) were the best.

In the multilocational trials, hybrid ICPH 2671 was found the best. This hybrid has high level of resistance to fusarium wilt and sterility mosaic diseases. The trials conducted over ten locations in two years revealed that this hybrid was 61% superior to the control cultivar Maruti. It is planned to multiply about 200 tonnes of hybrid seed in 2007 with the partners. This seed is expected to cover about 40,000-50,000 ha area in 2008. In addition to this, one short-duration (130 days) hybrid ICPH 2438 was also found outstanding with 101% yield gain over the control. One public and one private seed company have developed plans to multiply the seed of ICPH 2438 on large scale.

Seed production technology

At ICRISAT, the seed production technology has been perfected and it is recommended that a row ratio of 1 male: 4 female be used for the production of A-lines and hybrids. There

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A New Vision for CoA, Taipei

The Minister of the Council of Agriculture (CoA), Mr. Su Jia-chyuan set forth the blueprint for the master plan on agricultural development which is a continuation of current agricultural policy with the added benefit of needed reforms further accompanied by a creative flair. The spirit of the policy calls for a spirit of “creative agriculture, vibrant farmers, and charming villages” as a means to develop the previously identified three “productive directives” (production, life and ecology, all of which begin with the Mandarin character for “life”) and the three “strengths” of the agriculture sector (creative strength, the strength to live and the power of charms—all of which end with the Mandarin character for “power”) to further the nation’s sustainable agricultural development objectives. Su’s vision is that this movement should more acutely define the importance of Taiwan’s agricultural sector to society and reassert its value to it, thereby getting free from outmoded thinking. This in turn can change traditional concepts and thereby modify subsequent behaviour, and transform traditional agriculture into a modern highly valued industry. Mr. Su made it his mission to hammer home the idea that the agricultural sector is not a weak industry by any means. He stressed on the improvement in the quality of Taiwanese agricultural products to the international standards, and thus induce strengthening viability and competitiveness. Through this “New Agricultural Movement” for the first time, the CoA has set forth such a clear vision for the sector’s measured pace toward new vistas. Policy implementation under the movement lays emphasis on six specific directions to move ahead, namely:

- from research and development to product sale,
- from the farmers to the consumers,
- from domestic to international markets,
- from tradition to innovation,
- from our young to our elders, and
- from primary to tertiary production

as a means to integrate the three “productive directives” of the agricultural sector: productivity, life and ecology, to create a complete sector of an integrated Taiwanese economy.

Mr. Su has emphasized a necessity to improve marketing of agricultural products and to give the public an opportunity not only to participate but also to share in its growth. He emphasizes the importance of the promotion activities and suggests using the people, the land and the resources, and the new policies to achieve this purpose. Activities such as awarding the “Top ten marketable agricultural products,” the “Top ten outstanding farms,” and the “Top ten hotspots of agri-tourism,” can serve democratically, to carry out “Traceability of agricultural products,” “Wandervogel project,” “Development of energy crops on land,” “Decoupling direct payment for rice,” “Construction of green corridor” and many other new policies.

The “New Agricultural Movement” is not just a bunch of slogans. It has clearly defined new policy and implementation measures with specific goals that indicate timeframe for agricultural products production and sale. For example, the milestones and goals of agricultural products’ Traceability

System are: “to implement the agricultural product Traceability System comprehensively by 2015” and “to synchronize the Traceability System with the EU, the USA and Japan for exporting agricultural products” and to carry out their promise to consumers that within three years there will be products with production information on the shelves of major outlets and chain stores. Su said that he is confident in his ability to carry out the plans, to convince Taiwanese to rely on the local products and in Taiwan’s agricultural sector to continually revive and innovate over time.

(Source: *Council of Agriculture, Taipei*)



From page 8 ...

Hybrid Pigeonpea ...

should be a minimum of 500 m isolation distance for pure seed production. Two years (2005-06) experience of large scale seed production at ICRISAT revealed that one hectare of A-line seed production block can yield up to 1135 kg ha^{-1} where as in the hybrid seed production block the yield goes up to 975 kg ha^{-1} . These yield levels are quite encouraging and are considered commercially viable.

Public – Private Partnerships

ICRISAT works with public sector NARS institutions and also with private sector seed companies. The Hybrid Parents Research Consortium in pigeonpea was formally started in 2002 with public and private sector institutions. ICRISAT provides training and breeding materials to the partners to enhance their capacity for research and development on pigeonpea hybrids. Now there are three public sector and 14 private sector seed companies working with ICRISAT, apart from ICAR and State Agricultural Universities.

Conclusions

To achieve quantum jumps in the productivity level, which has remained unchanged and low over decades, a good beginning has been made by ushering an era of pigeonpea hybrids. The results obtained so far have clearly demonstrated that exploitation of hybrid vigor is feasible and advantageous in pigeonpea. This technology has given us hope that the barrier of stagnated yield could be broken. The development of stable CMS system in pigeonpea is a real boon to the breeders. To enhance the pace of research and development of hybrid pigeonpea, ICRISAT is actively involved in technology transfer to national research system and public and private seed sector. A good beginning has already been made with CMS-based hybrid pigeonpea technology and now it is just a few steps more when the commercialization of pigeonpea hybrids would be a reality.

(K.B. Saxena and C.L.L. Gowda, ICRISAT, Patancheru, India)



Short Communications / News

ADB 40th Annual Meeting held in Kyoto, Japan

ADB held its 40th Annual Meeting in Kyoto, Japan during the first week of May 2007. It has attracted a record participation from 100 civil society organizations, with more than 240 participants registered. In a special program for civil society groups, ADB President Haruhiko Kuroda, emphasized that development cannot benefit the people unless they play a role in that development. He acknowledged that "as Asia has grown, civil society has taken on an increasingly important dimension as the voice and conscience of the people, including the marginalized and those living in poverty." He mentioned that ADB has made important changes to engage civil society and communities themselves in the process of development. Mr. Kuroda pointed out that ADB's Country Partnership Strategies emphasize the importance of stakeholder consultation, and thus would be seeking civil society participation in the development of ADB's Energy Strategy over the coming months, as well as the update of its Safeguards policies. He added that an important lesson learned from Asia's rapid development is that we must all be more diligent about the impact of development on the environment. Meeting Asia's energy needs is going to be a tough challenge.

(Source: <http://www.adb.org/media/article , May 5, 2007>)



ILRI Appoints New Regional Representative for Asia

The International Livestock Research Institute (ILRI) has appointed Dr. Iain Wright as its new Regional Representative for Asia. Dr. Wright was earlier at Macaulay Institute in Aberdeen, United Kingdom where he managed various research programs including managing a team of researchers exploring the interactions between livestock systems and their environmental impact. His most recent role was as Chief Executive of the Macaulay Institute's consultancy company. Dr. Wright has been active in research in Asia since 1997, having managed a series of research projects in Central and South Asia, including working on livestock production, rangeland management, rural development and marketing of livestock products. Dr. Wright who is based in New Delhi, replaces Dr Bill Thorpe, who has been ILRI's Representative in Asia for the past three years.

(Source. ILRI. 2006)



Bioenergy for Rural Development

Top international experts in bioenergy, food security and the environment met in Rome to discuss the impact of the rapidly-expanding bioenergy industry, and agreed that governments could use bioenergy to push for rural development. Alexander Müller, Head of the Food and Agriculture Organization (FAO)'s Natural Resources Management and Environment Department said that "in food security terms, bioenergy only makes sense if we know where the food-

insecure populations are located and what they need to improve their livelihoods. Environmentally, we must make sure that both large- and small-scale producers of bioenergy fully take into account both the negative and positive impacts." The experts agreed to accelerate development of tools for analyzing the food security and environmental impacts of bioenergy production as well as to strengthen data and information needed by countries to assess their bioenergy potential and identify hot spots for development. They also emphasized that bioenergy crops that compete with land and water for food production should not be grown in areas facing food security challenges. "The objective is bioenergy that is environmentally sustainable and socially equitable...It is a challenge that can and must be faced."

(For more info read <http://www.fao.org/newsroom/en/news/2007/1000540/index.html>)



Farmers Struggle to Penetrate Supermarkets in Vietnam

The supermarket sector has grown rapidly in Vietnam. In 1990, Vietnam did not have a single supermarket but by 2005, there were 71 supermarkets in Ho Chi Minh City alone. According to the results of a recent study into the relationship between market and agriculture in Asian cities, farmers can increase their income by selling their products to supermarkets, especially those who take part in co-operatives and farmers associations. For example, farmers in the Anh Dao Co-operatives, Da Lat city, can make 400 per cent more profit from selling a kilo of tomatoes to Coop Mart than to traditional markets. Farmers always want to have stable outlets for their products, but there are barriers to selling to domestic supermarkets, let alone international markets. These barriers are often related to their small scale of production and include strict requirements for food hygiene and safety, quantity and timeliness. Most farmers grow trees based on traditional experience. Unless they change their growing techniques it will be difficult for their agricultural products to penetrate supermarkets. Government assistance could remedy the situation. For example, an agricultural support and consultant centre in Ho Chi Minh City provides a link between farmers and supermarkets. In the long term, farmers could merge into co-operatives or collective groups strong enough to compete in international markets.

(Source: http://uncapsa.org/Flash_Detail.asp)



Vietnam Tackles GM Biosafety Regulations

Any delay in implementing the regulation for risk assessment and field trials for genetically modified crops in Vietnam will affect the country's opportunity to benefit from the gains that can be derived biotechnology. This was stressed by Dr. Le Huy Ham, Director of the Agricultural Genetics Institute, Vietnam, during the workshop on 'Implementing biosafety regulations to release and commercialize in Vietnam', held in Hanoi, Vietnam.

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Le Huy Ham warned that GM crops, such as corn, soybean and cotton, are already introduced illegally in Vietnam, which may damage biodiversity and may result in production problems for farmers for lack of supervision. The adoption of biosafety legislation is therefore an urgent concern. Vietnam plans to conduct field trials of selected GM crops on over 30% of the land under cultivation in the near future.

Over 50 participants from the Ministry of Agriculture and Rural Development, Ministry of Environment, Ministry of Health, as well as academics and scientists, attended the workshop. The event aimed a detailed understanding of issues in regulation, food safety, biosafety, IP and public awareness. The workshop was sponsored by Vietnam's Ministry of Agriculture, Rural Development and by the International Service for the Acquisition of Agri-biotech Applications (ISAAA).

(For more information contact Dr. Randy Hautea at r.hautea@isaaa.org)



e-Agriculture week: a week-long dialogue focusing on the use of information, communication, and associated technologies in sustainable agricultural development and food security.

“e-Agriculture” is an emerging field comprising the enhancement of agriculture and rural development through improved information exchange, communication and learning processes, based on the use of internet and other digital technologies by actors in agriculture locally, regionally and worldwide.

The international Community at the World Summit on the Information Society (WSIS) identified e-Agriculture as a priority in its Plan of Action. **E-Agriculture Week** has been designed as part of the follow-up to WSIS, and is being organized by a number of international organizations, led by FAO. This week-long event was developed based on results from a global survey on e-Agriculture in which over 3,400 stakeholders in 135 countries participated.

E-Agriculture Week allows a wide range of stakeholders to describe their experiences while learning from others. Major areas of focus include:

- **Practice: - Technologies and Methodologies:** a combination of discussion and hands on activities, looking at different approaches to the use of recently-developed methodologies and tools, focusing on good practices and on determining criteria by which success can be measured.
- **Policy:** An opportunity for participants to debate how different policies can impact e-agriculture activities and their enabling – or disabling – effect.

The week of meetings and activities will coincide with and contribute to the launching of the e-Agriculture Community of Expertise.

For more information, contact: info@e-agriculture.org



Project for Sharing Information about Agricultural Organizations

Will your organization collaborate in a project for easily sharing and updating information on organizations?

All agricultural research and development organizations need updated and reliable information on other organizations and institutions, their expertise, projects and projects outputs.

Some organizations store these data in their own databases, which are difficult and costly to keep up to date.

Other organizations use external information systems but they cannot rely on just one system to comprehensively provide all information, because each information system differs in subject coverage, type coverage and quantity and quality of information. Besides, only a few of these systems share data among themselves.

Organizations also cannot be sure that their own information in other databases is correct and up to date.

The Global Forum on Agricultural Research (GFAR), in collaboration with FAO and Wageningen International, is now launching a **Collaborative Project for Managing Decentralized Information on ARD Organizations**

What the steps are and what the benefits will be for all the parties involved:

- Each organization only has to create one description record about itself and provide the url of that description to a central Registry; from that moment onwards, all information systems can use information in that record.
- GFAR will facilitate the process of creating the record and registering the url by providing web tools that will create the record in the standard format based on a web form and will send the url to the central Registry.
- Each organization owns its own record and can update it when necessary, with no need to notify anyone.
- Information systems can easily update their databases by harvesting all url registered in the central Registry of GFAR.
- Information systems can easily read and process the records as they are all in the same format.
- The central Registry File itself will be a Global Public Good on which everyone can leverage.

The project will start on July 2007.

Comments and early adhesions are welcome: EGFAR-webmaster@fao.org



Recent Activities of APSA

APSA holds Asian Seed Congress at Kuala Lumpur

The Asia and Pacific Seed Association (APSA) held a successful Asian Seed Congress in Kuala Lumpur, Malaysia from 12 - 16 November 2006. More than 700 delegates participated. It was the first time that APSA organized this event in Malaysia, with the Malaysian Agricultural Research and Development Institute (MARDI) leading the local organizing committee in co-hosting the Congress. With Malaysia's Agriculture and Agro-based Industries Minister Muhyiddin Yassin as guest of honour at its inaugural ceremony, the annual seed conference attracted a large gathering of business executives, scientists and academicians, policy-makers and government officials involved in the seed industry from 39 countries around the world.

Among the highlights of the event was a pre-Congress UPOV workshop. Technical sessions deliberated on topics about Malaysian seed industry, the corn seed industry in Asia, partnerships between the public and private sectors and the latest trends in seed technology. This was followed by discussion led by distinguished experts in each particular field.

APSA has new President and an Acting Director

The event also saw the turnover of APSA leadership from past President Mr. Kazuo Hatsuda to the new President Mr. Mengyu Zhang from China. Mr. Zhang promised an even more successful Asian Seed Congress in 2007 which will be held in Manila, Philippines.

Meanwhile, APSA Executive Committee has appointed Dr. Sampan Campiranon as Acting Director of the Association. Dr. Sampan would now be taking full responsibility in managing APSA Secretariat in its implementation of all the programs and policies. Dr. Sampan brings with him an extensive experience in agriculture and biotechnology, both as an academician and a business executive involved in the private sector. His professional experience includes being the Senior Product Development Manager at Monsanto—a multinational seed, biotechnological and agrochemical company. He was also the Associate Dean of Khon Kaen University's Faculty of Science and taught plant physiology and botany at Kasetsart University.

(Source: Beth Arlano, APSA 2007)

IFAP Signed a Grant Agreement on “Empower Farmers in the Access to Markets”

The International Fund for Agriculture and Development (IFAD), the European Consortium for Agricultural Research in the Tropics (ECART) and the International Federation of Agricultural Producers (IFAP) signed a grant agreement on March 2007 for a collaborative research on “**empower farmers in the access to markets**”. For a number of years, IFAP and its member organizations have been concerned about the position of family farmers and their organizations within agrifood markets. Farmer's empowerment is crucial to face markets characterized by increasing industrial concentration, restructuring, and shifts in market governance.

The IFAP-ECART-IFAD program aims to help family farmers and their representative organizations to be better able to adapt and respond to dynamic global and local change today and in the future. Shared learned lessons from IFAP members will be a key part of collaboration. This partnership will also allow IFAP membership to strengthen the “farmers centered approach” in the sense that farmers will be involved from proposal development to implementation of activities on the ground.

ECART-IFAP – IFAD partnership (Source: <http://www.ifap.org>)



Fifteen Years of APAARI - A Retrospective



Asia-Pacific Association of Agricultural Research Institutions
c/o FAO Regional Office for Asia and the Pacific
Bangkok, Thailand

To receive a copy of this publication, please send e-mail to apaari@apaari.org

IFAD Supported Program: Making a Difference in Asia and the Pacific

The special issue of the IFAD newsletter-Issue 15 (April 2007) includes articles that describe the value of country grants in Asia and the Pacific region, as well as the results that they have produced in the past three years. The newsletter also presents some examples of the benefits deriving from supplementary funds for gender mainstreaming activities and from the linkages between regional grants and investment projects. The role of country grants in country programs – message from Carla De Gregorio, Grants Coordinator, Asia and the Pacific Division, IFAD.

These grants/country programs include:

- Supporting policy dialogue and institutional changes in Vietnam.
- Partnership for self-help development in rural Pakistan.
- Rural microcredit in China: model for sustainability and replication.
- Building the capacity of national partners in monitoring and evaluation.

- Supporting the emerging organic partners in monitoring and evaluation.
- Supporting corridor development in Nepal.
- Testing innovative market approaches in Vietnam.
- Creating new partnerships to improve the livelihoods of vulnerable communities in the Pacific.
- Rice landscapes management: improving livelihoods and the environment in Asia's uplands.
- Building the sustainability of rural poor organizations.
- Financing capacity building in gender mainstreaming in Lao People's Democratic Republic.
- Activating gender mainstreaming processes in village and communes in Cambodia.

(For details see IFAD Newsletter No. 15, April 2007/Special Issue)



National Dialogue on Farmer-led Innovations towards Plant Variety Improvement and Conservation

A two-day national dialogue on “Farmer-led Innovations towards Plant Variety Improvement and Conservation: Protecting Farmers’ Rights, Geographic Indication, Appellation of Origin etc. in the National Context” was held on 12-13 November 2006 at the National Agricultural Science Centre Complex, New Delhi. It was jointly organized by the Trust for Advancement of Agricultural Sciences (TAAS) and Protection of Plant Varieties and Farmers’ Rights Authority (PPVFRA); and was co-sponsored by Agricultural and Processed Foods Export Development Authority (APEDA) and Asia-Pacific Association of Agricultural Research Institutions (APAARI). The participants represented included Government/Public sector agencies, ICAR, SAUs, international organizations, and other stakeholders representing academies, attorney firms, NGOs, private sector and farmers.

The focus of the Dialogue was on farmer-led innovations, their art and science of growing and managing crop agriculture, design of farm implements to reduce drudgery and increase farm efficiency and their contributions to value addition in agriculture produce. A specific focus in the Dialogue was given to IPR related national laws to understand the various dimensions of benefit-sharing requirements with the farmers to ensure continued innovations by the farming communities. A lack of understanding on protection of Farmers’ Rights for their own varieties as well the requirement of programs to encourage other farmer-led innovations were the important areas of concern in the Dialogue.

The inaugural session was chaired by Dr. R.S. Paroda, Chairman, TAAS and the Head, CGIAR Regional Program for Central Asia and the Caucasus, ICARDA, Tashkent, Uzbekistan. The opening remarks were delivered by Dr. S.

Nagarajan, Chairman, Protection of Plant Varieties and Farmers’ Rights Authority (PPVFRA) in India. The deliberations of the meeting was conducted in three technical sessions namely, Session-I Farmer-led Plant Diversity Conservations- Case Studies; Session-II Farmers’ Variety Protection – National and International Efforts; Session-III Site Specific Variety, Crops and their Reputation; followed by the Plenary Session chaired by Dr. R.S. Paroda. Several recommendations emerged out of the discussions held among the participants. These broadly focused on the following aspects:

- Need to Accelerate the Pace of National Seed Regulatory Reforms
- Importance of ‘Extant’ Crop Varieties as a Vital National Resource
- A National Program on Farmers’ Varieties and Innovations Needed
- Urgency for the Accreditation of Laboratories and Institutions for Crop Variety Testing
- A System for Quality Saplings, Planting Materials and Organic Agriculture Needed
- Innovative Use of Various Legal IPR Tools for Economic Gains
- Need for Continued Germplasm Exchange
- Inter-Departmental Coordination Required for Reforms in the Indian Seed Sector

The proceedings of the dialogue are under publication. For further details, contact taasiari@yahoo.co.in



Forthcoming Meetings

With APAARI collaboration

APAARI, IRRI, CIMMYT, and ICRISAT will cosponsor an Expert Consultation on Biofuels scheduled from 27-29 August 2007 in IRRI, Los Banos, Laguna, Philippines.. The consultation will look at the current status of research on biofuels, future options and constraints relating to technical, developmental and policy related aspects. It is hoped that the consultation will also generate a clearer understanding on the role of cereals for food security and bioenergy and define appropriate strategies for strengthening research on potential crops. About 35 participants will be invited representing the NARS, CGIAR centers, private sector, farmer organizations, NGOs, the youth and donor institutions. For details, contact Dr. Raj Paroda, Executive Secretary, APAARI E-mail: raj.paroda@cgiar.org



APAARI and ANGOC jointly plan to convene a regional workshop of Asia-Pacific NGOs from 5-6 October 2007 in Hyderabad, India to establish an NGO Consortium for Asia-Pacific. The meeting is being supported by GFAR. The meeting will collectively design a framework, plan of action and mode of operation of such a consortium. The participants will be those interested NGOs in Asia-Pacific, who are actively involved in agricultural research for development activities.



APAARI shall conduct a regional workshop on "Strengthening Research Collaboration in Asia-Pacific: Progress of Networks and Consortia Approach and Building on Inter-regional Collaboration" from 8-10 October 2007 in ICRISAT, Patancheru, India. The participants will include selected Network coordinators and partners from those ARD networks associated with APAARI including NARS leaders and other stakeholders. The workshop will be held back-to-back with the 2nd APAARI Executive Committee meeting for 2007 to be hosted by ICRISAT. Also CLAN steering committee meeting will be held during this period to review the progress and decide future strategy.



Sensitization and Awareness Building Workshop for NARS Leaders and Senior Managers on Information and Communication Technologies and Management (ICT/ICM)

30 August, 2007, PCARRD, Philippines.

APAARI in collaboration with GFAR-FAO, is organizing the above workshop for the leaders and senior managers of member NARS, under its Asia-Pacific Agricultural Research Information System (APARIS) initiative. The workshop theme was agreed in several ICT/ICM consultations and inter-regional meetings organized by APAARI and GFAR in recent years.

NARS of many developing countries of the region need to develop and advocate appropriate policies to enable and promote effective use of information and communication technologies in agricultural research for development through improved communication among various stakeholders,

Others of regional interest

The European Association for Southeast Asian Studies (EUROSEAS) will hold an International Conference at Naples, Italy from 12-15 September 2007. Among other agenda, the conference will cover 'New interactions, exchanges and experimentation of genetic resources among small scale societies in Southeast Asia'. In Southeast Asia, population pressure and environmental transformations continue to represent an important factor of change for small scale societies. New economic development occurring across the region provide a rich context in which to examine emerging patterns of people, plant and animal interactions. The conference will explore/deliberate on these interrelated issues. It is intended to present/discuss some case studies focusing on the exchange, experimentation, and transmission of plant/animal resources and knowledge by indigenous societies and rural communities in contemporary Southeast Asia. For details contact: Dr. Dario Novellino or Dr. Simon Platten, Dept. of Anthropology, University of Kent, Canterbury, Kent CT27NR, UK; email: darionovellino@libro.it or s.s.platten@kent.ac.uk; www.kent.ac.uk/anthropology/.



The 5th International Crop Science Congress will be held in Korea in April 2008. It is being hosted by the Korea's Society of Crop Science and will be held in Jeju Island from 13-18 April 2008 with the theme: Recognizing Past achievements, Meeting Future Needs! Five topics to be featured are: 1) Recognizing past achievements, meeting future needs!; 2) crop science for agroecosystem sustainability; 3) genetics and molecular breeding; 4) interdisciplinary approaches and technologies; and 5) emerging biotechnologies and social issues. For details visit the congress website www.cropscience2008.com or contact Dr. Suk-Ha Lee, Department of Plant Science, Seoul National University at email address icsc2008@snu.ac.kr.



including researchers and farmers. It is also observed that most NARS leaders and senior managers have initiated projects and programs on ICT/ICM in their organizations. Therefore, this workshop will provide a good opportunity to discuss progress and share experiences. APAARI is inviting senior experts to make presentations on effective use of ICT/ICM for better agricultural research management and dissemination. A general discussion session will follow the presentations. The workshop outcome will also help APAARI in developing collaborative activities on ICT/ICM.



APAARI 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



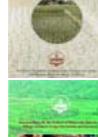
Bivalve Mariculture in India (2000/1) by Dr. V.N. Pillai et. al.



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.



Success Story on the Lentil Improvement in Bangladesh (2004/1) Ashutosh Sarker, William Erskine, M. Abu Bakr, M. Matiur Rahman, M. Ali Afzal and Mohan C. Saxena



Success Story in Classical Biological Control of Agricultural Pests in India (2004/2) by Dr. S.P. Singh



Success Story on the Sustaining the Green Revolution in India (2004/3) by Dr S. Nagarajan



Success Story on the Rainbow Trout (ONCORHYNCHUS MYKISS) Culture In The Himalayan Kingdom of Nepal (2005/1) by Dr. Ash Kumar Rai and Dr. Ram C. Bhujel



Success Story on the Commercialization of Bt Corn in the Philippines (2005/2) by Reynaldo V. Ebora, Amparo C. Ampil, Merle B. Palacpac and Carlo G. Custodio Jr.



Selected Success Stories on Agricultural Information System (2006/1) by Dr. Sahdev Singh.



APAARI Members

MEMBERS

- ACIAR-Australian Center for International Agricultural Research (Australia)
- AREO-Agricultural Research and Education Organization (Iran)
- BAR-Bureau of Agricultural Research (Philippines)
- BARC-Bangladesh Agricultural Research Council (Bangladesh)
- CARP-Sri Lanka Council for Agricultural Research Policy (Sri Lanka)
- COA-Council of Agriculture (Taipei)
- DOA-Department of Agriculture (Thailand)
- IAC-Institut Agronomique Neo-Caledonien (New Caledonia)
- ICAR-Indian Council of Agricultural Research (India)
- JIRCAS-Japan International Research Center for Agricultural Sciences (Japan)
- 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 (Malaysia)
- MCFF-Ministry of Commerce, Forests and Fisheries (Samoa)
- NARC-Nepal Agricultural Research Council (Nepal)
- NARI-National Agricultural Research Institute (Papua New Guinea)
- PARC-Pakistan Agricultural Research Council (Pakistan)
- PCARRD-Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (Philippines)
- PNG UniTech - Papua New Guinea University of Technology (Papua New Guinea)
- RDA-Rural Development Administration (Republic of Korea)

ASSOCIATE MEMBERS

- AVRDC-World Vegetable Center (Taipei)
- CIMMYT-International Maize and Wheat Improvement Center (Mexico)
- ICARDA-International Center for Agricultural Research in the Dry Areas (Syria)
- ICBA-International Center for Biosaline Agriculture (United Arab Emirates)
- ICIMOD-International Center for Integrated Mountain Development (Nepal)
- ICRISAT-International Crops Research Institute for the Semi-Arid Tropics (India)
- IFPRI-International Food Policy Research Institute (U.S.A.)
- ILRI-International Livestock Research Institute (Kenya)
- IPGRI-International Plant Genetic Resources Institute (Italy)
- IRRI-International Rice Research Institute (Philippines)
- IWMI-International Water Management Institute (Sri Lanka)
- UNESCAP-CAPSA-Center for Alleviation of Poverty through Secondary Crops' Development in Asia and the Pacific (Indonesia)

APAARI Members (continued)

- The World Fish Center (Malaysia)

RECIPROCAL MEMBERS

- AARINENA-Association of Agricultural Research Institutions in the Near East and North Africa (Jordan)
- 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

- Proceedings of the Expert Consultation on Agricultural Innovations: Linking Farmers to Market
- Fifteen Years of APAARI: A Retrospective.
- Selected Success Stories on Agricultural Information Systems.
- Success Story on the Commercialization of Bt Corn in the Philippines: A Status Report.
- Biosafety Regulations for Transgenic Crops and the Need for Harmonizing Them in the Asia-Pacific Region.
- Proceedings of Regional *Ad Hoc* Working Group on Linking Farmers to Markets.
- Proceedings of Regional Synthesis of Research Needs.
- APAARI and APARIS Poster.
- APAARI on CD 2006.
- NARS on CD: Directory of Agricultural Research Institutions in Asia and the Pacific.

APCoAB's New Publication

APCoAB has brought out a publication entitled "Micropropagation for Production of Quality Potato Seed in Asia-Pacific." The publication provides detailed information on production of virus-free potato plants, their rapid multiplication, and microtuber and minituber production. Methods of integration of micropropagation with conventional potato seed production are suggested. Success stories of quality potato seed production using micropropagation in some Asia-Pacific countries have been detailed. The publication, available on www.apcoab.org, will be useful to researchers and seed producers interested in production of healthy, disease-free potato planting material.

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