



APAARI

Newsletter

Asia-Pacific Association of Agricultural Research Institutions

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Editorial

The second Global Conference on Agricultural Research for Development (GCARD2) was successfully organized on 28 October–1 November 2012 at Punta del Este, Uruguay by GFAR in partnership with the CGIAR and the Government of Uruguay. A total of 660 stakeholders from 101 countries engaged in promoting agricultural research for development participated in the conference. The pre-conference sessions enabled organizations such as the CGIAR, Regional Fora and FAO to discuss their programs in detail and shape their inputs to the conference. During the conference, 220 speakers from all sectors and regions presented their work and its implications, enabling meaningful discussions on 20 themes of global importance. The parallel sessions were based on the existing programs, finding synergies and connections that can lead to large-scale and tangible outcomes.

The Conference has set out an exciting agenda for change and begun to mobilize the partnerships and commitments required to deliver this around some of the biggest challenges including a number of key agendas such as gender, nutrition and other issues that have received far too little attention in the past. The CGIAR Research Programs (CRPs) have formed the core framework for discussion on partnership. The open discussion, in the pre-event meetings organized with NGOs, CSOs and farmers' organizations and in the GCARD2 itself focused on how large investments can be linked with the work of others and embedded in support of national commitments. The message of *change* was strong and persistent throughout the Conference and explicitly focused on better meeting the needs of smallholder farmers.

APAARI shared its experiences on putting the GCARD Roadmap relating to foresight exercises, capacity building and innovative partnerships into practice in the Asia-Pacific region during 2011-2012. The significant achievements of APAARI through several initiatives, viz. Prioritization of demand-driven agricultural research; Agrobiodiversity framework; Expert consultations on climate-smart agriculture and improving wheat productivity; Global conference on women in agriculture; Capacity development programs in agricultural biotechnology and bridging knowledge gaps in sharing agricultural information and knowledge were well appreciated by all. Forty five participants representing national agricultural research systems, CGIAR centers, civil society organizations, and farmers' representatives from the Asia-Pacific region attended the conference and presented their experiences and insights into their respective achievements.

The GCARD2 has strongly emphasized the need for better foresight in guiding AR4D investments and processes and to achieve this, the need to bring together diverse approaches to understand better future needs. The GFAR Global Foresight Hub provided a common framework. Regional Fora highlighted their strong desire to learn, exchange lessons for foresight regionally and globally through GFAR and to work with national AR4D systems in order to ensure that improved foresight guides research prioritization. CGIAR is now committed to continue the development of a foresight capacity in the CGIAR, building on the diversity of analysis debated in the context of the GFAR Foresight Hub. Civil society organizations present in the sessions now aim to facilitate and build grassroots foresight and empower their leaders with the capacities to conduct this process at local level.

Effective partnership requires capacities, knowledge sharing and collective actions at all levels and the GCARD process and its multi-partner processes enabled exciting new initiatives to be catalyzed addressing key barriers to the generation, uptake and scaling out of agricultural innovation. The initiatives included: advocating and tracking increased AR4D investments, new models of public-private partnership, launching new collective actions in the Tropical Agriculture Platform, attracting young professionals into agriculture through initiatives such as AWARD and YPARD, fostering Gender in Agriculture Partnership, strengthening CIARD for opening access to agricultural information and strengthening of advisory services and relevant education and policy activities through GFRAS.

The GCARD2 was highly successful and evoked an overwhelming response from diverse stakeholders for *Delivering the Change Together*. It has pioneered a new approach to partnership. Each institution has also set out: immediate actions that they can undertake with existing resources; key gaps identified where complementary partners/further resources are required; and solid steps required towards large scale impacts or scaling out elsewhere. These actions will form the strong base for further efforts together to transform and strengthen AR4D systems in the Asia-Pacific region and elsewhere in the world.

Editors

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Executive Committee

Chairman	: Dr. S. Ayyappan
Vice-Chairman	: Mr. Mason Smith
Members	: Dr. Abd. Shukor Abd. Rahman Dr. Simon Hearn Dr. Su-San Chang Dr. Tashi Samdup Dr. Colin Chartres Dr. Mark Holderness
Executive Secretary	: Dr. Raj Paroda

Editorial Committee

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|---------------|------------------|
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APAARI General Assembly Meeting Held



Participants of the APAARI General Assembly Meeting

The APAARI General Assembly Meeting was held at the National Agriculture Science Center (NASC) Complex, Pusa, New Delhi, India on 12 October, 2012 under the chairmanship of Dr. S. Ayyappan, Secretary, DARE & Director General, ICAR and Chairman, APAARI. The meeting was attended by 38 participants including Executive Committee members, special invitees and observers. At the outset, Dr. Raj Paroda, Executive Secretary, APAARI welcomed the Chairman and other APAARI members, special invitees and observers for their participation. He specifically thanked Dr. S. Ayyappan, Chairman, APAARI, for his help and guidance, and expressed his appreciation for all Executive Committee members, CG Centers and other stakeholders for their support.

Dr. S. Ayyappan, in his Chairman's address, appreciated the remarkable progress made by APAARI in collaboration with its member organizations and with the support of GFAR, FAO, ACIAR, COA, and CG Centers. He mentioned that APAARI, through regional and inter-regional partnerships with FAO, GFAR, IFPRI, ASTI and SPC, organized several collaborative activities. ICAR was privileged to co-organize with APAARI the Global Conference on Women in Agriculture. He felt confident that APAARI would strive to fulfill its commitment of assisting NARS to reap the benefits of AR4D in the region. Dr. S. Ayyappan, Chairman, APAARI welcomed the participants on behalf of APAARI and also on behalf of ICAR, as the host organization. He emphasized that APAARI today is recognized as one of the most vibrant regional fora, providing neutral platform for scientific partnership among NARS and facilitating the participation of CSOs (NGOs and FOs) and farmers in its activities. He further mentioned that APAARI has been pursuing a paradigm shift from NARI to NARS and the progress made by APAARI over the last 20 years, under the dynamic leadership of Dr. Raj Paroda, Executive Secretary, is indeed commendable and praiseworthy. In true sense, APAARI is acting today as a Think Tank for the AR4D related issues for the NARS of the region. It has also succeeded in forging strong linkages among the stakeholders and has provided an important neutral platform for all.

Dr. Ayyappan further mentioned that in order to address the challenges, the role of APAARI as a facilitator for strengthening partnership among agricultural research institutions is critical to move forward. APAARI today is a self-sustaining organization, with some regular support

for its two main programs: APCoAB and APARIS coming from COA, Chinese Taipei and ACIAR, Australia besides funding support for specific activities from GFAR, FAO, ADB, JIRCAS, and CGIAR Centers. He appreciated the support of CG Centers especially in facilitating some networks. He also thanked all the members for their regular payment of membership fee.

Dr. Raj Paroda, Executive Secretary welcomed the APAARI members and expressed his appreciation for their excellent support in carrying out the programs and activities during the biennium 2011–2012. Dr. Paroda highlighted the progress made by APAARI relating to: (i) review of the progress on agricultural biotechnology related activities undertaken by the Asia-Pacific Consortium on Agricultural Biotechnology (APCoAB), (ii) review of the progress of activities relating to Asia-Pacific Agricultural Research Information System (APARIS), (iii) regional workshops/consultations on conservation agriculture, implementation of Suwon Agrobiodiversity Framework, improving wheat productivity in Asia, climate-smart agriculture, global conference on women in agriculture, biosafety and biosecurity, reproductive management of animal production, and communication management and knowledge sharing. In addition, policy dialogues on need assessment for prioritizing AR4D were organized in Bangladesh, India and Nepal and based on these policy dialogues, a regional synthesis report for South Asia was developed and presented in GCARD 2 held at Punta del Este (Uruguay) on 28 October-1 November, 2012. APAARI in collaboration with Asian Farmers Association (AFA) also organized a workshop at Bangkok to address the problems of small holder farmers, and the outcome of this was presented in GCARD 2.

Dr. Paroda also highlighted APAARI's efforts in facilitating CGIAR Networks such as CORRA, CLAN, PGR Networks – SANPGR, EAPGR, RECSEA-PGR, PAPGREN, strengthening partnerships and collaboration and the efforts made for implementing GCARD Road Map. Most of the members were highly appreciative of the significant achievements of APAARI and the commendable role of Dr. Raj Paroda.

Concerning the shifting of office in Bangkok, Dr. Su-San Chang, Director General, Department of International Affairs, COA, Chinese Taipei announced a contribution of US \$ 15,000 for renovation of new office of APAARI in FAO Annex Building, Bangkok. All members were highly appreciative of this support and thanked her.

It was emphasized that APAARI should now scale-up its activities for research education and extension, undertake impact analysis for its initiatives and develop success stories on various aspects such as investment trends in R&D, etc.

The Executive Secretary, APAARI informed that APAARI has been striving to increase its membership in different categories (Regular, Associate, Affiliate, and Reciprocal membership). Members found it encouraging that during the current biennium (2011-2012), different Agricultural Universities and some of the developing NARS joined APAARI as new members. In all, 4 new members joined APAARI, which indeed was an encouraging development.

Regarding payment of membership fee, General Assembly noted with satisfaction that almost all the members have been paying regularly.

The Accounts of APAARI for the period January-December, 2011 and January-August, 2012 audited by the M/s A Group of Persons Propulus, Bangkok, were approved. The audited statements were circulated to all members present in order to apprise them of the current status of accounts and expenditure as against the approved budget by APAARI in the 11th APAARI GAM held in Suwon, Korea in 2010.

Dr. Raj Paroda informed the GAM that an amount of US\$ 500,000 was invested through ICRISAT in India for taking the benefit of higher interest rate. The value of this investment on maturity date (2/2/2012) was US\$ 520,164 after premium payment to Bank and ICRISAT's charge of 10 per cent on the interest return. Hence, a total of US\$ 20,164 was earned after one year of investment i.e. on 2 February, 2012 with approximately 4.05 per cent interest gained. This was much higher than what was earned as interest (US \$ 3948) for the same amount and period with Siam Commercial Bank, Bangkok. As per approval in the last Executive Committee Meeting, this amount of US\$ 520,164 was further reinvested through ICRISAT for one more year (upto February, 2013).

The work plan and budget for 2013-2014 were presented by Dr. Raj Paroda. The work plan covered all the prioritized activities such as: (i) publications, (ii) meetings/expert consultations/symposia etc., (iii) APARIS activities, (iv) APCoAB activities, and (v) Inter-regional cooperation. Dr. Paroda mentioned that GAM is always linked with an expert consultation/workshop. It was emphasized that APAARI should also lay focus on role of youth in agriculture, establish formal linkage with Association of Southeast Asian Nations (ASEAN) with a seat for

APAARI, revise the guidelines for biosafety regulations, convince the policy makers through policy advocacy for higher investment in AR4D, small farm mechanization, and publish success stories in the fields of fishery and livestock.

Regarding budget, Dr. Paroda explained that there was only a marginal increase in the budget as compared to the previous biennium.

Following the main principle, a balanced representation of two NARS each from three sub-regions (South & West Asia, South-East Asia, and the Pacific), rotation of Chairman and Vice-Chairman coming from different sub-regions and the outgoing Chairman continuing as a member, the 12th General Assembly of APAARI unanimously endorsed the formation of new Executive Committee for the biennium 2013-2014 as under:

Executive Committee for 2013-2014

Chairman	: Dr. Simon Hearn, ACIAR, Australia
Vice-Chairman	: Dr. Masa Iwanaga, JIRCAS, Japan
Members	: Dr. S. Ayyappan, ICAR, India
	Dr. Iftikhar Ahmad, PARC, Pakistan
	Dr. Sang-Jae Lee, RDA, Republic of Korea
	Mr. Misa Konelio, MAFFM, Samoa
	Dr. Mark Holderness, GFAR, Italy
	Dr. Thomas Lumpkin, CIMMYT, Mexico
Executive Secretary	: Dr. Raj Paroda, APAARI

Dr. S. Ayyappan, Chairman, APAARI apprised the members that nine applications were received for the post of Executive Secretary, APAARI which were considered by the Search-cum-Selection Committee comprising Dr. S. Ayyappan (Chairman), Dr. Simon Hearn and Dr. Abd. Shukor Abd. Rahman. Based on the qualifications, experience of working with NARS in the region as well as being closely associated with functioning of APAARI, Dr. Raghunath Ghodake, Director General, NARI, Papua New Guinea was short listed, interviewed and selected for the position of Executive Secretary, APAARI.

However, in view of bigger challenges before APAARI due to CGIAR change management and donor perceptions as well as the continuity of programs and activities, the Search-cum-Selection Committee felt the need for continuation of Dr. Raj Paroda as Executive Secretary for the next 2 years. The Committee also felt that Dr. Ghodake, Executive Secretary (Designate) will in the mean time initiate the process for gradual succession of his current position as Director General, NARI,



APAARI General Assembly Meeting in Progress

(Continued on Page 11.....)

Policy Dialogue on Prioritizing Demand-driven Agricultural Research for Development in India



Participants of the Policy Dialogue

A policy dialogue on prioritizing demand-driven agricultural research for development was organized by APAARI in collaboration with IFPRI on 2 July, 2012 at NASC Complex, New Delhi. The dialogue was attended by 32 participants from India, Nepal and Bangladesh which included various stakeholders including policy makers, researchers farmers, NGOs and private sector.

As a result of in-depth discussions, the following priorities relating to research, structures and institutions, funding and technology delivery were identified:

i. Research priorities

The priority commodities identified for research were rice, maize, wheat, milk, pulses, oilseeds. The commodity group priorities included cereals, horticulture, livestock including poultry, fishery, high value agriculture. The resource management and other priorities identified were: NRM including adaptation to climate change, resource conservation; water use efficiency; value chain and market integration, genetic resource management; biotechnology; farm mechanization; processing, value addition; rural energy use and management; trans-boundary diseases

ii. Structural and institutional priorities

The structural and institutional priorities identified were: i) find the political will to adequately fund AR4D and support the NARS, ii) cast ICAR as mainly a policymaking organization—a brain trust or think tank, iii) address women and youth issues and their involvement in research, iv) strengthen the consortium mode of conducting research, v) promote greater autonomy in the NARS, vi) balance investments in research, education, and extension; strengthen basic, strategic, and socioeconomic and policy research; fund research on harsh ecosystems; fund research on rural non-farm enterprises; strengthen

public–private partnerships, vii) focus research; build centers of excellence; build more IARI-type institutes, viii) ensure that the university system deals directly with farmers to bridge the knowledge gap, ix) redefine the ultimate beneficiary of research to include farmers, farmer organizations, GOs and NGOs, processors, traders, and the private sector, x) promote effective science communication and policy dialogue

iii. Funding priorities

The funding priorities identified were: i) provide timely funding, ii) maintain transparency in funding, iii) enhance funding, iv) provide funding for technology dissemination, v) provide funding for HRD, vi) create long-term plan for AR4D, vii) ensure that funding criteria are broad-based and balanced to cover all aspects of AR4D, viii) provide funding for advocacy of research results, ix) involve stakeholders in funding decisions, and x) extend equity in funding to all potential research providers

iv. Technology delivery priorities

The technology delivery priorities included were: i) pursue technology breakthroughs for yield improvement, ii) promote technology commercialization, iii) recognize innovative farmers and promote innovations, iv) promote technology extension through partnerships, v) have a stable policy for adopting technology by dispelling myths about the benefits of new technologies and other policy and institutional innovations, vi) institute an open-door policy for the import of foreign technology, vii) promote producer companies, viii) promote role players in upstream research and downstream work in extension, ix) dovetail recommendations of research and extension agencies in technology dissemination and x) promote innovations in developing high-yield and pest resistant seeds.

Policy Dialogue on Prioritizing Demand-driven Agricultural Research for Development in Nepal



Participants of the Policy Dialogue

A policy dialogue on prioritizing demand-driven agricultural research for development in Nepal was organized by APAARI in collaboration with IFPRI on 26 July, 2012 at Kathmandu, Nepal. The dialogue was attended by 47 participants from Nepal including researchers, planners, development officials, NGOs, farmers from Nepal and resource persons from IFPRI and APAARI.

As a result of in-depth discussions, the following priorities for research institutions, funding and technology delivery were identified for Nepal:

i. Research priorities

The priority commodities identified were: rice, maize, wheat, small millets, oilseeds, legumes, jute, milk and meat. The commodity group priorities included: crops horticulture and commercial crops (fruits, vegetables, flowers, large cardamom, ginger); livestock (milk and milk products, buffalo meat, poultry, small livestock like sheep and goats, feed and fodder, livestock health and nutrition); aquaculture and fisheries. The priorities identified for resource management were: NRM including adaptation to climate change; biotechnology; farm mechanization and processing, post-harvest management and food and biosafety.

ii. Structural and institutional priorities

The structural and institutional priorities identified were: i) recruit through an independent commission, ii) dissolve NARC's executive board, iii) ensure NARC's functional autonomy with no political interference, iv) evolve NARC as a NARS, v) make the linkage between NARDF and technology delivery system mandatory; pursue collaborative projects; and institutionalize training, vi) mandate linkages with the private sector, NGOs, academic institutions, and other stakeholders, vii) make ARIs to Deemed Universities, viii) establish technical advisory committees, ix) have professionals to lead the NARC, and x) recruit the Executive Director of NARC in a transparent manner using defined criteria.

iii. Funding priorities

The funding priorities identified were: i) gear priority setting and funding to a needs-based research agenda, ii) raise investment in AR4D from 0.39 per cent to 2 per cent of AgGDP, iii) strengthen the NARS with a firm political commitment, iv) strengthen HRD and retain talent and motivate women and youth in AR4D, v) create pressure groups and mobilize people and stakeholders to plead for more resources for AR4D, vi) attract corporate funding to AR4D, vii) improve salary, service rules, and incentives to attract and retain youth in AR4D, viii) make research an attractive profession versus other professions by creating a suitable work environment and providing incentives, ix) mega donor projects should aim at integrating research with development, and x) enhance budget to cover the risk of crop failure.

iv. Technology delivery priorities

The technology delivery priorities included were: i) promote private sector, NGOs, cooperatives, agrovets, and other service providers in technology dissemination, ii) involve scientists more in technology dissemination, iii) documentation and extensive use of IT in technology delivery systems, iv) strengthen the technology marketing system, v) use ICT extensively for promotion of and access to inputs and outputs, vi) make a provision into projects for communication and technology dissemination, vii) use NARS communications strength for technology dissemination, follow a policy of accessing technology from the globe, ix) bridge the knowledge and information gap between researchers and end users through effective delivery and supply of inputs and services, and x) dialogue effectively with the political system, policymakers, activists, and the general public to dispel myths about the benefits of new technologies and other policy and institutional innovations.

Farmers' Regional Consultation on Agricultural Research for Development



Representatives of the Farmers' Organizations sharing the Experiences in the Consultation

The Asian Farmers' Association for Sustainable Rural Development (AFA), in collaboration with the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and support of the Global Forum on Agricultural Research (GFAR), organized a "Regional Consultation on Agricultural Research for Development" on 10-11 September, 2012, at Bangkok, Thailand. The consultation was attended by 22 participants (16 men and 6 women) representing 10 national farmers' organizations in 9 countries, whose combined membership is about 12 million small scale women and men farmers, fishers, and producers. The main objectives of the consultation were:

- To build and strengthen the capacities of farmers and their organizations in the areas of information and database management and analysis business planning, organizational management, food processing and value addition, marketing and policy advocacy.
- To develop *in-situ* model farms and identify, train and support model farmers/farmer technicians/extensionists;
- To provide platform for farmer-to-farmer learning exchanges, study visits and knowledge learning-sharing activities at national, regional and international levels.
- Make available and accessible appropriate tools, equipments and machines to farmers.
- To enhance support to build the capacities of women farmers to and make available and accessible appropriate tools, equipments and machines to farmers.
- To provide institutionalized mechanism within CGIAR/GFAR for meaningful participation of representatives of small-scale farmers, fishers and indigenous peoples in planning, evaluation and monitoring of and development initiatives.

Major recommendations:

- Investing in agricultural research and development that is geared towards sustainable, resilient, integrated, diversified, organic and economically viable agriculture for and with small-scale women and men farmers.
- Intensifying research in the following areas i) understanding the situation and issues on access and control of basic production resources mainly land, water, forests and seeds; as well as policy options to address and resolve these issues, ii) soil fertility management, crop growth and health, habitat management, weed competition, on pest and disease tolerance; improved plant protection techniques and compounds from natural sources; breeding strategies and programs for adaptability to management and environmental stress situations; reduced tillage organic systems, efficient water-use / community-based irrigation, participatory plant breeding and community-based genetic resource conservation efforts, proper transition from chemical to organic agriculture, iii) use of various traditional, local knowledge and practices on crop breeding, seed banking, pest management, organic fertilizers, energy-efficient mechanisms, iv) marketing, market information, value addition and meeting certification requirements, v) quantification of impact of sustainable agricultural approaches, vi) developing tools, equipment and machines that reduce drudgery, especially in women's farmers' work, vii) economically viable farming systems integrating crops, livestock, aquaculture on small plots of land, viii) attracting young people to adopt farming.

- Providing technical assistance in monitoring the climate variations and information on early warning systems well in advance, in order to have better planning ahead of time.
- Strengthening links between research, advisory and extension services; strengthening partnerships between research institutions, extension workers and organizations of smallholder farmers.
- Developing strategies to empower women farmers as they participate in collective farming and marketing, cooperatives information dissemination/ICT.
- Building and strengthening the capacities of farmers and their organizations in the areas of information and database management and analysis (encouraging the young people in the field of ICT), business planning, organizational management, food processing and value addition, marketing, negotiation, policy advocacy, organizing the farmer constituency along geographical and crop lines.
- Developing *in-situ* model farms and identify, train and support model farmers/ farmer technicians-extensionists; ideally one farmer -extensionists in every village.
- Supporting farmer-to-farmer learning exchanges, study visits, knowledge learning -sharing activities, and solidarity exchanges, both at national, regional and international levels.
- Making available and accessible appropriate tools, equipments and machines to farmers.
- Enhancing support to build the capacities of women farmers to organize, build solidarity and initiate their own activities.
- Providing institutionalized mechanism within CGIAR/ GFAR for meaningful participation of representatives of small-scale farmers, fishers and indigenous peoples in the designing, implementation, evaluation and monitoring of research and development initiatives.

Consultation on Collective Actions for Opening Access to Agricultural Information and Knowledge



Participants of the Expert Consultation

A regional consultation on “Collective Actions for Opening Access to Agricultural Information and Knowledge in the Asia-Pacific Region” was jointly organized by APAARI, FAO, GFAR, CoRRB, ICS and SAARC Agriculture Center at Thimpu, Bhutan on 13-15 December, 2012.

The Minister for Agriculture and Forests, His Excellency Lyonpo (Dr.) Pema Gyamtsho inaugurated the consultation meeting. In his inaugural address, he highlighted that the primary factor that interacts with and influences agricultural productivity is the “agricultural information”. The Hon’ble Minister stressed that it can help inform decisions regarding land, labour, livestock, capital and management. Above all, he emphasized that agricultural productivity can be improved through use of relevant and useful information and knowledge.

The Director of Council of RNR Research of Bhutan (CoRRB), Dr. Tashi Samdup said that there is no dearth of RNR knowledge and information. However, the utilization and management of RNR information and knowledge is should be improved to have good impact on the farmers. Dr. Raj Paroda, Executive Secretary, APAARI noted that collective action is all the more important to enable smallholder resource-poor farmers and producers to effectively share and use information and knowledge for agricultural innovation, especially in smaller and economically weaker countries of the region. Dr. Ajit Maru, GFAR, Mr. Gerard Sylvester, FAO RAP; Mr. Gulam Mustafa, SAC spoke on the occasion. Inaugural session ended with vote of thanks by Mrs. Singye Wangmo, ICS.

The main objectives of convening of the regional consultation were:

- To identify collective actions that can be taken by various actors at national, regional and international levels in opening and sharing useful and relevant agricultural data, information and knowledge.
- To suggest and share good practices to guide national organizations to generate and open access to relevant and useful agricultural information for smallholder resource-poor farmers and producers in small and weak countries of the region
- To strengthen institutional commitment, partnerships and networks in support of opening access to agricultural information and knowledge in the region.

Twenty five senior ICM managers responsible for managing agricultural information and knowledge systems from Bangladesh, Bhutan, Cambodia, India, Nepal, Pakistan, Papua New Guinea, the Philippines, Sri Lanka, and Thailand and the experts from ICRISAT, UNESCAP-CAPSA, GFAR, FAO, SAC and APAARI attended the meeting. The SAARC Agriculture Center’s focal point experts presented six country reports on the status of ICT/ICM in agriculture followed by presentation by experts of APAARI, GFAR, FAO and SAC. More opportunity was provided to participants to discuss on issues related to collective action through panel discussions and group works. The consultation process was highly participatory and interactive with active contribution of every participant in identifying and prioritizing the collective action for opening access to agricultural information and knowledge in the region. The following collective actions were identified to be undertaken by different organizations:

- **Sensitization of SAARC Agricultural Ministers and Senior Policy Makers:** SAARC Agriculture Center will schedule a session to sensitize the Agricultural Ministers on the importance of ICT/ICM for AR4D during the next SAARC Agricultural Ministerial meeting which will possibly be held in the first half of 2013. GFAR/FAO and APAARI will provide technical support and jointly organize the event. It was suggested that the ADG and RR of FAO RAP may be approached to include discussion and presentation on ICM for agricultural development in the agenda of FAO APRC 2014. ASEAN and APEC may be approached to organize such a special session in their Ministerial Meetings. Sensitization on ICM for agricultural development at national, sub-regional and regional levels should be taken up through appropriate platforms and events.
- **Compilation of ICM projects and experts in the Asia-Pacific region and testing AgriVIVO with the dataset:** APAARI will prepare a database of ICM projects in the Asia-Pacific region with the contribution from ICM managers in the NARS by the end of 2013, share it on the website and test with AgriVIVO. It was suggested to form a group comprising experts from APAARI, FAO RAP and ICRISAT to finalize the matter regarding database development.

- **Need-based training programs to ICM managers in the developing NARS:** Indian Council of Agricultural Research (ICAR) should offer training programs to ICM managers of the developing NARS in the region free of registration cost in 2013. FAO, SAARC and APAARI should support suitable candidates for need-based training programs. It was suggested that APAARI and FAO/GFAR should provide technical support to national level training and capacity development programs and also approach other developed NARS for such training opportunities. PCAARRD and ICRISAT were asked to circulate the training opportunities to all countries.
- **Policies and strategies on open access to agricultural research articles:** ICRISAT should share its open access policies, strategies and procedures with NARS through APAARI/APARIS by January 2013. ICRISAT will also support through technical assistance/ help desk.
- **Catalogue of e-extension initiatives in India with critical analysis on their impact on agricultural development:** Indian Council of Agricultural Research (ICAR) should prepare the catalogue of e-extension initiatives in India with the technical support of APAARI by December, 2013. Drs. S. Attaluri, P. Adhiguru, Rameshwar Singh, Gerard Sylvester and Madhan will prepare a format for the catalogue by March, 2013 and share it with other countries also to develop catalogue of e-extension initiatives in those countries.
- **Development of AGROVOC in the countries:** FAO should initiate development of AGROVOC in Bangladesh- with the collaboration of Bangladesh Agricultural Research Council (BARC); Pakistan – with the collaboration of Pakistan Agricultural Research Council (PARC); Sri Lanka – with Council for Agricultural Research Policy (SL CARP); and Bhutan – Information and Communication Services (ICS), Ministry of Agriculture and Forests.
- **Development of Handbook of Agriculture on Wiki through**

collaborative contribution: Indian Council of Agricultural Research (ICAR) should initiate publishing of handbook of agriculture on Wiki platform. Technical support needs to be provided by ICRISAT.

- **Joining AgriFeeds by the NARS for effective sharing of information and news to global users:** All NARS to immediately generate RSS feeds and join the AgriFeed for effective sharing of information and news. APAARI and FAO should coordinate this action.
- **Joining CIARD RING:** APAARI and FAO should pursue the SAARC Agriculture Center, Bangladesh Agricultural Research Council (BARC), Pakistan Agricultural Research Council (PARC) to join the CIARD RING immediately and also initiate follow-up with other NARS in Loa PDR, Cambodia, Sri Lanka, Bhutan and the Philippines to join the CIARD by February, 2013.
- **Developing Agricultural Information Repositories:** ICRISAT should provide necessary technical support and help to BARC, PARC, CoRRB/ICS and NARC who showed interest to develop institutional repositories.
- **Open Access to Agricultural Journals:** Indian Council of Agricultural Research (ICAR) should impart capacities to make the following research journals as open access journals: SAARC Journal of Agriculture by the SAC; Bangladesh Journal of Agricultural Research by BARC; Journal of RNR Bhutan by the CoRRB; and Annals of the Sri Lanka Department of Agriculture (ADSA) by Dept. of Agriculture, Peradeniya University.
- **e-learning module on opening access to agricultural information as part of IMARK:** FAO should develop e-learning module through the IMARK initiative on the principles and elements of open access, tools and institutional issues.
- **Strengthening APARIS:** APAARI, GFAR and FAO should develop a proposal to strengthen APARIS program to undertake the collective actions and to improve management and sharing of agricultural contents in the region.

APARIS Steering Committee Meeting

The eleventh meeting of the APARIS Steering Committee was held on 13 October, 2012 at the Bioversity International, NASC Complex in New Delhi, India under the chairmanship of Dr. Simon Hearn, Chairman APARIS and Principal Adviser, Australian Center for International Agricultural Research (ACIAR). Five members of the committee and special invitee Dr. Bhag Mal, Consultant, APAARI attended the meeting.

Dr. Raj Paroda, Executive Secretary, APAARI in his address welcomed all the members and appreciated the support by ACIAR, GFAR and FAO to the APARIS program for improving agricultural information and knowledge sharing in the region. He thanked the Bioversity International for hosting the meeting.

Dr. Simon Hearn, Chairman welcomed all the members of the APARIS Steering Committee and appreciated their contributions in taking forward the APARIS activities in the region. He highlighted that there is immense opportunity for communications in support of GFAR activities, CGIAR programs, policy-decisions to address ever increasing challenges in agriculture. He opined that APAARI has a crucial role in communicating agricultural information and knowledge in the region through APARIS program. Dr. Simon Hearn observed that communicating with the community is vital for better impact of agricultural research and it needs different approaches for different sub-regions.



Members of the APARIS Steering Committee

Dr. Ajit Maru, Senior Knowledge Officer, GFAR and Co-Chair, APARIS Steering Committee welcomed the members on behalf of GFAR and appreciated the significant achievements made by APARIS program that included development of websites by all NARS in the region, strong networking of people for sharing information and knowledge and capacities to build and manage agricultural contents.

(Continued on Page 10....)

Expert Consultation on Managing Trans-Boundary Diseases of Agricultural Importance



Participants of the Expert Consultation

The expert consultation was co-organized by APAARI and Indian Council of Agricultural Research (ICAR) in New Delhi on 10-12 October 2012 as a follow up of the decision taken in APAARI Executive and APCoAB Steering Committee meetings recognizing the adverse impacts of trans-boundary diseases (TBDs) on agriculture. TBDs not only threaten agricultural productivity but also contribute to poverty, hunger, particularly of small holder farmers, and act as to trade. In recent years, diseases like UG-99, plant viral diseases, barrier avian influenza, NIPAH virus and foot and mouth disease have adversely affected agriculture and associated communities in the Asia-Pacific region.

The expert consultation was widely attended by about 140 participants comprising international experts on plant, animal and fish TBDs, APAARI members, CG centres, FAO, CABI and other international and local organizations. The program was inaugurated by the Indian Union Minister of State for Agriculture, Food Processing Industries and Parliamentary Affairs. The proceedings were held under seven technical sessions: i) Status and Management of Plant Trans-Boundary Diseases, ii) Status and Management of Animal Trans-Boundary Diseases iii) Status and Management of Fish Trans-Boundary Diseases, iv) Breakout Group Discussions for Identifying Key Issues in Plant, Animal and Fish Trans-Boundary Diseases, v) Priorities for Policies, Research and Regional Management of Plant Trans-Boundary Diseases, iv) Priorities for Policies, Research and Regional Management of Animal Trans-Boundary Diseases, vii) Priorities for Policies, Research and Regional Management of Fish Trans-Boundary Diseases, and a Plenary Session on presentation of group recommendations and general discussion.

Following important recommendations were made in different sessions of the consultation:

- Documentation of potential TBDs of Asia-Pacific region and prioritization based on risk analysis. Among the trans-boundary animal diseases, there is a need to focus on high priority diseases such as FMD, HPAI, PPR and CSF.
- Strengthening epidemiological and disease reporting with improved communication system.
- Risk analysis and modeling capacity strengthening.

- Identification of working groups for surveillance of emerging TBD threats and their vectors at regional level to map hot-spots.
- Creation of rapid response teams and developing appropriate human resources to deal with emergency situations, like locust attacks.
- Establish antisera banks/vaccine banks for exotic pests/pathogens as well as new emerging pests/diseases.
- Invest in setting up local fish breeding centers to avoid risk of import of pathogens along with SPF stocks.
- Strengthening of quarantine and certification framework
- Establishment of national strategies and institutional mechanism for managing disease risks (National Biosecurity Authority)

Stakeholders' Interface on Genetically Modified Crops

An interface meeting to discuss the status of GM crops in the Asia-Pacific countries and issues related to their adoption, environment and health safety, and agricultural sustainability was held in the Philippines on 27 September, 2012 in collaboration with the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD). The meeting followed a similar event held in New Delhi on 19 May, 2011. For further details, please see page 14.



APAARI wishes its Members and ARD Stakeholders
a Happy and Prosperous
New Year 2013

International Symposium on Epidemiology and Disease Management of Citrus

An International Symposium on Epidemiology and Disease Management of Citrus Huanglongbin Disease for Sustainable Citrus Production in the ASPAC Region was organized by Food and Fertilizer Technology Center for Asia and Pacific Region, Chinese Taipei at Taipei on 5-10 November, 2012. The Symposium was sponsored, among others, by APAARI under Council of Agriculture (COA)-APAARI collaborative project.

Citrus Huanglongbin (HLB) or greening is a serious constraint to citrus industry in Asia-Pacific region, requiring frequent injection of antibiotic to affected plants for control of the casual organism and repeated sprays of insecticide for insect vector control. The symposium was attended by reputed experts on the subject from USA, Japan, Australia, Chinese Taipei and other countries to present and discuss technological advances on HLB control and management. Eighty participants including invited speakers and observers from 18 countries participated in the symposium. The program was divided into five sessions, viz., Session 1- Keynote Speeches, Session 2- The Current Status of HLB Epidemic in Asia and Other Areas, Session 3- Molecular Characterization and Identification of Pathogen and Strains of HLB Bacterium, Session 4- Disease Management of Citrus Orchards Suffered from Serious Epidemic of HLB and Virus Diseases and, Session 5- Field Trip to Seed Improvement and Propagation Station, Mandarin & Tangerine Farm & Packing House, Chiayi Agricultural Research Station, Douliou Pummelo Farm, and Meishan Pathogen-free Orange Farm. Based on the objective of the symposium to identify region-based strategy for the control HLB, the following specific recommendations emerged during the discussions:



Participants of the Symposium

- Initiate sub-group or bilateral meetings on HLB on Asian sub-regions. For example, Thailand citrus experts can initiate meetings with experts in nearby Myanmar, Cambodia and Laos countries;
- Encourage governments to seek ways to have disease free regions and convince government officials of Asian countries about the importance of good quarantine;
- Make citrus HLB research results available on the FFTC, APAARI or other partner regional websites;
- Organize another symposium on insect vectors and invite international entomologists to share their ideas and research results; and
- Formulate a proposal for an ASEAN network for the control of HLB and initiate tie-up talks with the senior officials of the ASEAN Ministers on Agriculture and Forestry (AMAF).

APARIS Steering Committee Meeting.....continued from page 8

He pointed out that the new challenge is to integrate agricultural data and information on all aspects for the benefit of users. He stressed that there is a need for agricultural information management standardization and trust organizations for opening access to agricultural information and knowledge and highlighted the role of CIARD in the days to come. There is a deep need for champions to take forward the knowledge management issues in the global agenda, he said.

Dr. Malcolm Hazelman, Senior Extension, Education and Communications Officer, FAO RAP expressed his appreciation for the progress made in APARIS activities in collaboration with FAO and assured support of FAO in the future programs. Dr. Bhag Mal mentioned that knowledge management is an essential component for better agricultural research management and highlighted need to link APARIS with initiatives like GFRAS and APIRAS for efficient sharing of information, capacity development and networking.

Dr. S. Attaluri, APARIS Coordinator presented the Action Taken Report on the decisions taken in the Tenth Meeting of the APARIS Steering Committee held on 29th September, 2011 at Bangkok. The Committee appreciated the progress made in the different programs and approved both the minutes and the action taken report.

APARIS Work Plan 2013

The following work plan for 2013 along with budget was approved:

- Success Stories on Agricultural Information and Learning Systems in the Asia-Pacific Region

- Regional Workshop on ICM for Agricultural Development in the Asia-Pacific Region
- Implementation of APAARI Communication Strategy, maintenance of APARIS web space and improvement and updation of ARD databases
- APAARI Newsletter and APAARI on CD 2013
- Establishment of linkages with global, regional and sub-regional fora enabling their partnerships in the APAARI activities.

During the discussion, Dr. Raj Paroda suggested that electronic platforms on various themes would be necessary to share and exchange information and knowledge among different stakeholders. He emphasized need for catalyzing NARS leaders on the importance of ICM for agricultural research for development and focus on policy advocacy and capacity development. Collective actions are necessary for opening access to agricultural information and knowledge, he said. He thanked all the members and especially the ACIAR and GFAR for their support to APARIS program on continuous basis. Dr. Malcolm Hazelman, who will be retiring from the service in March 2013, was facilitated with a plaque of appreciation for his invaluable contribution and support to APARIS program for more than a decade. Dr. Simon Hearn in his concluding remarks reiterated that APAARI has an important role to play in the changing agricultural environment to empower all communities with communications and assured the support of ACIAR to APARIS program. He thanked all the members for their valuable contributions to strengthen APARIS activities in the region.

PNG and may start getting associated partially with APAARI activities in collaboration with Dr. Raj Paroda effective January, 2014 and plan to take over as full time Executive Secretary w.e.f. 1 January, 2015 to be stationed in Bangkok. These recommendations of the Search-cum-Selection Committee were discussed in informal meeting of the members of Executive Committee present during the expert consultation. The Chairman, placed the decision of Search-cum-Selection Committee, duly endorsed by the Executive Committee, before the GAM which was unanimously approved.

The Chairman also formally requested Dr. Paroda to accept the offer to continue till December, 2014 which he has agreed in the interest of APAARI. Dr. Ghodake also accepted the decision of GAM to serve as Executive Secretary, APAARI effective 1 January, 2015.

GAM also agreed that Executive Secretary may decide to recruit a consultant in Bangkok by mid-2013 to look after the office work and APARIS activities in case Dr. S. Attaluri decides to return back to his parent department due to personal reasons. GAM also unanimously approved further extension of 2 years for Dr. J.L. Karihaloo as Coordinator, APCoAB in view of his valuable services.

The members of APAARI were informed by Dr. Raj Paroda that Vietnam is willing to host the Thirteenth General Assembly Meeting of APAARI to be held in October, 2014. However, Vietnam has indicated that it is an ODA receiving country and hence it will not be possible to allocate budget for air fare and hotel accommodation for the 10 NARS leaders as per existing practice. However, the authorities in Vietnam are willing to meet the expenses for conference room, local transportation, reception dinner and other logistic support including the human resource to organize the meeting. The General Assembly agreed to accept the offer and have the next GAM in Vietnam in October, 2014. Also, as per previous practice, APAARI shall also organize an Expert Consultation on some important theme alongwith the next GAM. The choice of the topic will be finalized by the new Executive Committee when it meets in April, 2013 in Bangkok.

Dr. Iftikhar Ahmad offered to host the next Executive Committee Meeting alongwith an Expert Consultation in October, 2013 in Pakistan on some important theme. All members accepted the proposal and thanked Dr. Ahmad for his kind offer.

The following important items were also discussed:

(i) GCARD2: Revisiting the Road Map and its Implementation:

Dr. Mark Holderness, Executive Secretary, GFAR briefed about GCARD 2 and highlighted the six-point plan for transforming agricultural research for development around the world. These included: i) need for collective focus on key priorities, ii) effective partnership, iii) increased investments, iv) greater capacity to generate, share, and make use of agricultural knowledge, v) effective linkages, and vi) better demonstration and awareness of development impact and returns. He also highlighted the challenges and opportunities in transforming AR4D, role of private sectors, focus on gender and youth, governance, sharing the resources. Dr. Holderness also briefed about the GCARD 2 program structure and was pleased to know that a good participation of leaders from NARS, CG Centres, donors, CSOs, farmers and other stakeholders from the Asia-Pacific region was expected.

(ii) Gender in Partnership Program (GAP): Dr. Mark Holderness mentioned that the 1st Global Conference on Women in Agriculture, organized by APAARI and ICAR with support from GFAR and several other co-sponsors was a great success. The conference adopted Gender in Agriculture Partnership Program (GAP). He mentioned that there is a renewed thinking now about looking at agriculture through women's eyes. The issues relating to drudgery, time and energy spent by women in house management

and upkeep of children, and poor nutrition will be addressed through GAP. He also mentioned that GCWA will be held every 3 years and the next GCWA will be hosted by FARA in Africa in 2015.

(iii) APAARI Joining the Tropical Agriculture Platform (TAP):

Dr. Raj Paroda informed the members that Tropical Agriculture Platform (TAP) is in the process of establishment which will be facilitated by FAO. He informed the members about the letter received from Dr. Ann Tutwiler, DDC, FAO requesting APAARI to join the TAP. The members felt that there is a need to seek further clarification about the responsibility of APAARI and the likely benefits. GFAR could possibly advise further in this regard.

(iv) Filling of Vacant Seats

- **Representation of NGOs and Farmers Associations on Executive Committee:** Dr. Paroda informed the General Assembly that earlier, representatives/nominees of NGO Association for Agriculture Research in Asia-Pacific (NAARAP) and International Federation of Agricultural Producers (IFAP) were on the Executive Committee of APAARI but now both the organizations stand dissolved. Currently, both the seats are vacant and hence a decision is to be taken as to how we should fill these. The General Assembly authorized the Executive Committee to deliberate further and take appropriate decision.
- The two year term of Dr. Colin Chartres representing CG Center on the Executive Committee is over and hence the vacancy has to be filled. As per the established practice, GAM has a representative of CGIAR on rotation basis on the Executive Committee. Hence, it was decided that CGIAR Consortium Director be requested to nominate a Director General of CG Centers on the APAARI Executive Committee for the biennium 2013-2014.

(v) APAARI collaboration with Southern Emerging Economies Advisory Group (SEAG):

Dr. Paroda informed the members that APAARI had earlier established linkage with SEAG of ERA-ARD. Ms. Nerlie Manalili, an NGO from Philippines represented APAARI on SEAG during the first phase. He further mentioned that in order to continue collaboration with SEAG in its second phase, a person is to be nominated by APAARI for which GAM has to take a decision. The members felt that there is not much clarity about the role of APAARI and benefits of joining SEAG. Hence, it was suggested to better seek required clarity before nominating/joining this forum.

Dr. S. Ayyappan, Chairman, APAARI made his concluding remarks highlighting the future challenges and specific role of APAARI in strengthening AR4D related initiatives in the Asia-Pacific region. He expressed great satisfaction on the outstanding achievements of APAARI under the dynamic leadership of Dr. Raj Paroda as its Executive Secretary. He also congratulated Dr. Paroda for accepting the decision of GAM for continuation as Executive Secretary for the next two years. He also congratulated Dr. Raghunath Ghodake for his selection as Executive Secretary (Designate) and to all the new members of Executive Committee elected for the biennium 2013-2014.

Dr. Raj Paroda, Executive Secretary, APAARI proposed a vote of thanks and expressed his gratitude to Dr. S. Ayyappan, Secretary, DARE and DG, ICAR for Chairing the APAARI Executive Committee and hosting the 12th GAM in New Delhi, India. He also expressed his sincere thanks to Mr. Mason Smith and Mr. Ropate Ligairi who served as Vice-Chair and to all the members of Executive Committee for their outstanding contributions and full support for efficient and effective functioning of APAARI.

Agricultural Research Priorities for Development in South Asia

South Asia is the home of 1.6 billion people and most of them live in rural areas. Notwithstanding significant economic progress in recent years, the region has the highest concentration of the world's hungry and poor, more than Sub-Saharan Africa. Agriculture dominated by small holders is very important to the economies and livelihoods of region's people. Although the agricultural growth rate has improved in the last few years, it has widely fluctuated and been less than the target fixed by the respective countries. The vast majority of South Asia's rural poor depend on the production of rain fed crops, livestock, forestry, and/or casual, informal employment for their livelihoods. To provide a pathway out of poverty of the rural poor and to reduce widening rural-urban income gap, a revival of the agricultural sector is urgently needed.

Agricultural research as part of the green revolution was a major contributor to agricultural productivity increases across the globe including South Asia. The green revolution has now waned, and new and more complex challenges like adaptation to climate change, price volatility, etc., have emerged in recent years to slow or stagnating agricultural production. There is a widespread feeling that agricultural research is being neglected in terms of greater and stable investment in the region. Realizing this, the Global Conference on Agricultural Research for Development (GCARD1) has conducted this study to analyse the situation and form an AR4D strategic plan for the region. The study uses demand-driven approach by wide stakeholder consultations as well as the results of the recent studies in the region pioneered by APAARI and ICAR.

The Study

The study covers three South Asian countries, namely, Bangladesh, India and Nepal -which together form nearly 90 per cent of the region's population. These countries share some common and some unique concerns that hinder them to optimizing returns from investments and attaining higher and inclusive agricultural growth trajectory. The present study analyses the structural, institutional, funding and technology delivery concerns particularly in ARD and suggests a strategic plan for accelerated and inclusive growth within and among the countries through increased regional cooperation and collaboration. It prioritizes agricultural research investments on the basis of felt needs of farmers and other stakeholders for the study countries and South Asia as a whole.

The country reports were prepared first after a detailed review of agriculture and its sub-sectors, formal and informal discussions with all the concerned including specially organized well attended individual country dialogue meetings inviting representatives of all the stakeholder categories (34% from government/public sector, 31% from CSOs/NGOs, 15% from private sector, 12% from farmers and 8% from academia). Based on the country reports, the synthesis report was prepared. When the synthesis report was presented in GCARD2, it was suggested that it would have been more participatory by involving more number of farmers and CSOs. The highlights of the synthesis report along with identified top 10 research priorities are provided below.

Major Highlights of the Study

Specific agricultural policies covering various sub-sectors of agriculture including agricultural research along with policy areas having bearings on agriculture were formulated in these countries around

1990s. They are generally compatible, and synergistic while planning with little coordination and convergence during implementation. These plans are also highly ambitious and well envisioned but there is large gap between plans/policies and implementation on account of weaknesses in institutional capacity, irregular and inadequate funding, highly depleted human resources with limited skills, weak accountability in the system and weak monitoring and evaluation practice.

Agricultural policies in these countries while stressing on ARD, mandate the NARS on increasing productivity, profitability, sustainability, employment, poverty alleviation and livelihood security of small farmers particularly located in harsh ecologies and empowerment of women and youth. But, the budgetary support to ARD is always considered inadequate and variable/uncertain, particularly in Bangladesh and Nepal. The involvement of the private sector is less particularly in Bangladesh and Nepal. The agricultural research intensity ratios are much below the ratios prevailing even in some of the developing countries. Apart from budget/funding concerns, the NARS have expressed major structural and institutional, HRD and technology delivery concerns/weaknesses.

Although the national agricultural research councils (NARCs) of these countries are independent with autonomous status, they are facing varieties of hassles and stresses relating to budget making, resource allocation, rules for expenditure, recruitment/selection/assessment, personnel policy, political interference, no centralised/uniform act and rules covering all agricultural research institutes, etc. The institutional issues faced by NARS include weak PME mechanisms and practices, limited decentralization of power, declining human resources both in number and quality, lack of good leadership, lack of manpower planning, creating new institutions without additional manpower and infrastructure support, restrictions in recruitment, inadequate faculty development/training programs, less emphasis on agricultural education, weak communication and publicity skills, limited national and international linkages and partnerships/cooperation/collaboration, and lack of progressive policy including IPR policy to actively engage private sector in ARD.

The funding issues faced by NARS include inadequate and uncertain/erratic funding, no systematic planning and prioritization, limited innovations in mobilizing new sources of funding, not being able to follow best fund use practices like use of online FMS, simplified rules and procedures, timely release of funds, outdated procedures, limited core funding from the government, and very low budgetary support to research contingencies/operational cost.

The major technology delivery issues confronting NARS include, near collapse of the public extension system, inadequate funding to technology delivery activities, not linking donor funding with development activities, serious manpower shortage and mobility constraints to reach the unreached particularly to support new sub-sectors of agriculture like horticulture, livestock, fishery, agricultural engineering, PHM, NRM issues particularly adaptation to climate change, marketing, prices, agri-business and trade, IPR, food quality and safety, etc. The use of ICTs is also not sufficient on account of knowledge and infrastructure bottlenecks. The technology delivery issues become further complicated to transfer the technologies generated from modern biotechnologies where technology regulatory issues relating to human and environmental safety are important.

The Strategic Plan with Top Ten Research Priorities

The strategic plan in terms of identified demand driven commodity, resource focus, structure and institutional, funding and technology delivery priorities for accelerated and inclusive growth in the region as well as different countries in the region are spelt out. The strategic plan emphasizes diversification in farming system perspective with focus on small and marginal farmers, women and youth located in harsh ecologies fully integrated with market. For South Asia as a whole, the top ten priorities include the following:

1. Since South Asia is the hot spot of global hunger and poverty, AR4D spending would need to triple or quadruple in the coming years from the current level with the liberal funding from the countries and the donors. This would also require greater political will and strong public lobby of farming, scientific and other communities; exploring innovative funding and fund use mechanisms, linking donor funding with national development plans, best financial and procurement practices, etc.
2. Intensify agricultural research by building consortiums, partnerships by attracting all knowledge providers including private sector. There should be emphasis on both staple crops and fodder crops in marginal ecologies where the interest of the private sector is minimum so far, and higher value horticulture, livestock, poultry and fishery with active partnership with private sector, which is already a leading or fast emerging sector in these areas.
3. Place higher priority on research on NRM including adaptation to climate change, resource conservation and efficient input use particularly with respect to soil and water; and genetic resources management to sustainably raise yield ceilings, enhance biotic and abiotic stress resistance, and improve food quality and nutritional content.
4. Ensure functional autonomy to NARS through de-bureaucratization. There is a need to professionalize NARS as policy making bodies, think tanks/brain trusts with science friendly, flexible financial and administrative rules and procedures. Competitive service conditions, incentives to merit and performance and other mechanisms and structures contributing to excellence in science for development need to be introduced.
5. Strengthen HRD nationally, regionally and internationally with liberal funding and progressive training policies.
6. Strengthen agricultural education systems to continuously supply quality human capital to the agricultural sector and agricultural research system.
7. Strengthen technology delivery systems and agro-advisory services to contribute to increased linkage, synergy and convergence with the stakeholders, which include scientists, extension workers, champion farmers including women, farm innovators, farmers' organizations, development agencies, private sector and CSOs/NGOs. Extensive use of ICT should be promoted by institutions like KVVs. ATMA Centers, etc.
8. Strengthen soft skills of the stakeholders, with respect to research policy, long-term planning and visioning, PME, IPR, technology management and agri-business planning and development, documentation, communication and publicity to contribute to better implementation of programs for greater impact.

9. Strengthen research on value chain systems, engaging private sector and all other potential players and market integration with efficient and dependable input and services delivery system.
10. Strengthen agricultural engineering research inputs and services covering primary processing, value addition, farm and rural storage, grading, rural energy use, small farmer mechanization, precision farming to improve efficiency, add value, remove drudgery and overcome increasing labour scarcity.

The Way Forward

The research priorities identified above need to be implemented with required changes and the impacts assessed in the region. GFAR, APAARI along with NARS have to continuously, periodically mentor and popularize foresight and research prioritization works to motivate the national governments to demand such studies to aid investment planning. Further, such exercises need to be initiated in the countries where they have not been undertaken or undertaken less systematically so far. A commitment from the NARS to institutionalize these best practices in the system by setting up dedicated technology foresight centres is necessary. Such exercises at the disaggregated lower levels would need to be undertaken involving more and more farmers, NGOs, and other stakeholders to really identify local concerns, gaps and priorities. It is desirable that there should be convergence of micro level (disaggregated level) priorities with the macro level (higher/national level) priorities.

All these need strengthening of research and education in foresight methodology and standardization to build a cadre of practioners and well informed users. In fact, there is dearth of skills and interest to undertake such exercises in many NARS. More importantly, there is an urgent need to build a comprehensive, robust, data base to undertake such studies systematically.

Dr. Raj Paroda being Honoured

Honorary D.Sc. by PAU

Dr. Raj Paroda was conferred with an honorary doctorate by the Punjab Agricultural University (PAU), Ludhiana, India on 8th December, 2012 with a citation for his outstanding contributions to agricultural development in India. The Hon'ble Prime



Minister Dr. Manmohan Singh and the Hon'ble Chief Minister of Punjab, Shri Parkash Singh Badal, also received the D.Sc. degrees.

Medal from Vietnam Government



Dr. Raj Paroda received Vietnam Government Medal along with a certificate for his contributions for the Agriculture and Rural Development of Vietnam by the Hon'ble Minister Cap Duc Phat on 5th September, 2012.

Philippines

Stakeholders' Interface on Genetically Modified Crops

A Stakeholders' Interface on Genetically Modified Crops, was co-organized by the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD) and the Asia-Pacific Consortium on Agricultural Biotechnology – Asia-Pacific Association of Agricultural Research Institutions (APCoAB-APAARI) on 27 September, 2012 at the Traders Hotel, Manila, the Philippines. The objective of the interface was to discuss issues and concerns governing the potential of GM crops in alleviating hunger and poverty, achieving food security, and ensuring environmental sustainability in the Philippines and the Asia-Pacific Region.

Foreign and local experts in agricultural biotechnology research and development (R&D) and policy advocacy, and representatives from government agencies, non-government organizations (NGOs), private sector, and farmers' associations actively shared their knowledge, experiences, and perceptions through the eleven papers presented, focusing on the status of GM crops, R&D, and on the regulatory system. The papers presented were: i) Global status of adoption of biotechnology crops by Dr. Randy A. Hautea, Director and Global Coordinator of the International Service for the Acquisition of Agri-Biotech Applications (ISAAA) - Southeast Asia Center; ii) Status of GM crops in India by Dr. J.L. Karihaloo, Coordinator of APCoAB-APAARI; iii) Commercialization of GM crops in the Philippines: Industry perspective by Mr. Simeon A. Cuyson, Executive Director of CropLife Philippines, Inc.; iv) NGO initiatives on GM crops: Stakeholder partnership for biotechnology and agricultural modernization by Dr. Nina G. Gloriani, President and Chief Executive Officer of the Biotechnology Coalition of the Philippines (BCP); v) Benefits of biotech corn to farmers" by Ms. Rosalie M. Ellasus, Chair of the San Jacinto KASAKALIKASAN Multi-purpose Cooperative; vi) The Philippine regulatory system by USec. Fortunato T. De La Peña, Undersecretary for Scientific and Technological Services, Department of Science and Technology (DOST), and Dr. Clarito M. Barron, Director of the Department of Agriculture - Bureau of Plant Industry (DA-BPI); vii) The DOST biotechnology R&D roadmap" by Dr. Cristina L. Guevara, Executive Director of the Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD), and presented by Engr. Nelson P. Beniabon also from PCIEERD; viii) The DA biotechnology roadmap" by Dr. Candida B. Adalla, Officer-in-Charge, DA-Biotech Program Implementation Unit; x) ABSP II project on Bt eggplant" by Dr. Desiree M. Hautea, Regional Coordinator, Agricultural Biotechnology Support Project II (ABSP II) - Southeast Asia, Institute of Plant Breeding, University of the Philippines Los

Baños; xi) Golden rice: A potential food-based strategy to address vitamin A deficiency by Dr. Antonio A. Alfonso, Director of the DA-Crop Biotechnology Center, Philippine Rice Research Institute; and xii) Communication initiatives and challenges in crop biotechnology: The Asian experience by Dr. Mariechel J. Navarro, Manager of Global Knowledge Center on Crop Biotechnology, ISAAA-Southeast Asia Center.

Among the advantages of using GM crops discussed by speakers were the increase in yield of Bt cotton and brinjal in India, decrease in pesticide use in India, and the relative improvement in the economic status of Bt corn farmers in the Philippines, making them proud to be called "farmers".

The issues raised, on the other hand were:

- Farmers' need for access to resources and marketing/marketing information
- Need to accelerate transfer of technologies
- Acceptability, especially for food crops
- Important role of media in advocacy
- Need for the public to be communicators for biotechnology for the local/lay people to easily understand what biotechnology and its products are
- Legal challenges despite the S&T-based proof on safety
- Need to improve the Philippine regulatory system such that approval can be event-based or be based on results from other countries, hence maximize utilization of meager resources
- Affordability of GM products
- Need to discuss targets of the DA Biotechnology Roadmap vis-à-vis time and several priorities
- Need to have a unified direction
- Need for partnership, and
- Ownership of technologies/products especially for those generated from partnerships (among countries and institutions).

Based on the discussions, the bigger/encompassing issues on biotechnology and GM crops in the Asia Pacific Region can be summarized as "POLE" - Public perception, Ownership, and Legal and Ethical hurdles. These, however, could be addressed by "PAIR" - partnership in all initiatives; advocate and inform regarding rules and processes for intellectual property and licensing; and the Regulatory system.

(Source: Dr. Patricio S. Faylon, Executive Director, PCAARRD; email: p.faylon@pcarrd.dost.gov.ph)



Participants of the consultation-meeting.

Papua New Guinea

NARI and Unitech Renew Partnership

Two premier institutions in Papua New Guinea (PNG) have formalized instruments to foster greater partnership in agricultural research and training.

The National Agricultural Research Institute (NARI) and University of Technology (Unitech) signed a Memorandum of Understanding

(MOU) on 2 August, 2012 to strengthen their partnership for the next 10 years in sharing of resources and expertise in order to improve their programs.

The MOU was signed by NARI Director General, Dr. Raghunath Ghodake, and Unitech Vice Chancellor Dr. Albert Scharm at the NARI Headquarters in Lae. The occasion was witnessed by heads of departments, senior management and staff of both the institutions.

Dr. Ghodake said that both institutions now have comparative advantages through the partnership via sharing of resources and knowledge through their training and research initiatives to enhance the development of human resources and research capacity. Dr. Scharm said that the partnership has created an opportunity for both the institutes to strengthen their research and training support towards agriculture in PNG, given that the sector is the mainstay of the country with over 80 per cent of its seven million people depending on it directly or indirectly.



NARI Director General Dr. Raghunath Ghodake (left) and Unitech Vice Chancellor Dr. Albert Scharm signing the MOU

Through the MOU, both the institutes have agreed to implement academic, technical and professional cooperation and collaboration through research, study and training in furthering the advancement of learning, knowledge, science and technology, and professional development. This will be done through specific objectives which include:

- Visits by academics/scientists to share expertise and engage in collaborative research, teaching, training and extension activities,
- Unitech students to undertake industrial training at NARI,
- NARI staff to pursue advanced graduate studies at Unitech,
- Sharing of and access to research laboratories, specialized instrumentation and equipment, and farm or field facilities for joint and collaborative research, teaching, training and extension activities, and
- Exchange of academic publications and scholarly information.

NARI and Unitech have also agreed to provide the necessary resources to facilitate any collaborative work that falls within the MOU. The understanding was a renewal of an initial MOU signed in 2003 which had allowed both institutions to enjoy cordial partnership and collaboration in many areas of agricultural teaching, research and knowledge sharing.

Unitech is one of PNG's oldest tertiary institutions whose School of Agriculture offers teaching programs in agricultural science both at undergraduate and postgraduate levels.

(Source: Senior Anzu, NARI, PNG; email: seniorl.anzu@nari.org.pg)

Sri Lanka

SLCARP Celebrated 25 Years of Service

On 11 December, 2012, The Sri Lanka Council for Agricultural Research Policy (SLCARP) celebrated 25 years of service to the agriculture sector of Sri Lanka. SLCARP was established on the 22 December, 1987 with the enactment of the CARP Act No. 47 of 1987. Since its inception, it has been active in ensuring that agricultural research, development and innovations are directed towards national development. In addressing the several aspects of the agriculture sector, SLCARP has in the past played a key role in infrastructure development, research funding and human resources development. Several research outputs were delivered as a result of research funds released by SLCARP, the major outcome of which has been the increase in the yield and productivity of rice.



Hon'ble. Mahinda Yapa Abeywardena, Minister of Agriculture (center) accompanied by Dr. Jayantha Dias Samarasinghe, Chairman, SLCARP (left) and Mr. Prabath Wimal Kumara, Secretary/Director, SLCARP (right)

Hon. Mahinda Yapa Abeywardena, Minister of Agriculture graced the celebrations as the chief guest and appreciated the contributions of SLCARP to the national agricultural sector in Sri Lanka. A publication entitled "Reflection on SLCARP" has been handed over to the Minister in the ceremony by Dr. Jayantha Dias Samarasinghe, Chairman, SLCARP.

(Source: Mr. Prabhat Wimal Kumara, Director, SLCARP; email: prabathwk@gmail.com; carps@slcarp.lk)

New APAARI Member

APAARI welcomes the CAB International, United Kingdom as the new Associate Member from 1 January, 2013.

ICARDA

Review Workshop on ICAR-ICARDA Collaboration



Participants of the Review Workshop

A Review Workshop on ICAR-ICARDA collaborative program was held at NASC Complex, New Delhi, India on 29 Nov 2012. The collaborative research program is in operation for the last 4 years involving six ICAR Institutes and 12 State Agricultural Universities on food legumes, barley and wheat, rangeland and crop-livestock systems, improving water productivity, and on socio-economics & policy research.

Fifty participants comprising ICAR dignitaries, Senior Management, directors and Scientists from partner institutions participated in the Workshop including Dr. Kamel Shideed, S K Agrawal, V. Nangia and L. Mounir from headquarters. Dr. S. Ayyappan, Secretary-DARE & DG-ICAR was the Chief Guest and Dr. K. Shideed was the guest of honour in the event. Dr. S. Ayyappan, in his inaugural address, expressed his satisfaction and appreciation on ICARDA's productive partnership and highlighted the importance of the workshop at right time. He stressed on the need for in-depth research in enhancing productivity in crops like lentil, grasspea and chickpea for eastern India, where these crops have huge potential in the existing/prevalent cropping systems. He also highlighted the targeted research on high quality fodder production, pre-breeding, water productivity, rangeland management and crop-livestock integration socio-economic and policy issues in this region. He also emphasized on demonstration of improved technologies through KrishiVigyan Kendras (KVK's) of ICAR.

Dr. K. Shideed, ADG-ICC-ICARDA in his opening remarks as Guest of Honour thanked ICAR for its strong support and long relationships with ICARDA. He informed the house about the ICARDA's present situation and he elaborated the ICARDA's research program and stressed the importance of these programs in India. He also appraised ICARDA's interventions in South Asia and particularly in India which is going to increase with the implementation of CRP 1.1 (Dryland Systems) which is a big domain for dryland systems.

Dr. S. K. Datta, DDG (CS), ICAR in his introductory remarks congratulated ICARDA- South Asia and China Regional Program (SACRP) for establishing strong linkages with various Indian institutions. While addressing, on the various researchable issues in India, he mentioned that barley network can be improved with the introduction of wild species and genomic sequencing which is important for this programme as these species may extinct if

not carefully managed. Chickpea phenotypes also need more improvement with good yield potential so that post-harvest losses can be reduced. While welcoming the distinguished participants, Dr. N. Nadarajan, Director, IIPR highlighted the importance and scope of ICAR-ICARDA a collaboration, which is moving in right direction. Dr. A. Sarker, Regional Coordinator-SACRP-ICARDA gave a brief presentation on ICAR-ICARDA collaborative projects which was well-received by participants. Dr. R. P. Dua, ADG (FFC) ICAR extended vote of thanks on this occasion. The workshop was organized under two Technical Sessions: (i) Crop Improvement (ii) Natural Resource Management which was followed by Steering Committee Meeting. Scientists from ICAR and ICARDA presented their work, outcome and future strategy in these technical sessions.

The workshop was also graced by the presence of Dr. M. C. Saxena and Dr. Sanjay Rajaram; Dr. Balram Sharma; Dr. Mohan Kumar, ADG (NRM) ICAR; Dr. K. C. Bansal, Director, NBPGR, New Delhi; Dr. M.M. Roy, Director, CAZRI, Jodhpur; Dr. Indu Sharma, Director, DWR, Karnal; Dr. R. P. Singh, Director, IAS, BHU, Varanasi; Dr. M. Dadlani, Joint Director (Research), IARI, New Delhi. Their interaction and suggestions helped in developing recommendations and future directions several eminent experts of national and international repute.

The Steering Committee comprised of Dr. S K Datta (DDG-Crop Science, ICAR); K. Shideed (ADG-ICC, ICARDA); M. Kumar (ADG-ICAR); I. Sharma (Director-DWR), M.M. Roy (Director-CAZRI), N. Nadarajan (Director-IIPR), L. Mounir (DSIPS, ICARDA), S.K. Agrawal (BIGM, ICARDA) and A. Sarker (ICARDA Coordinator-SACRP) reviewed the outcome of joint research, and expressed appreciation to all partners. It was opined that the on-going work-plan (up to 2013/14) will be continued as per signed agreement between DG, ICAR and DG, ICARDA, and a new work-plan will be developed beyond this period based on recommendations and changed directions. The Committee felt that the on-going bilateral program should receive full financial support from ICAR to carry out research on the current nine projects.



The Meeting in Progress

Dr. Shideed mentioned about ICARDA's decentralization plan of its food legume program to shift in India, and details of its modalities will be discussed with ICAR. It was decided that the Committee will meet on yearly basis in November/December and venue will be decided later. On behalf of ICARDA Management and on his own behalf, Dr. Shideed thanked ICAR management, all collaborating partners for their strong support to India-ICARDA program.

(Source: Dr. Ashutosh Sarker, Regional Coordinator, SACRP-ICARDA; email: a.sarker@cgiar.org)

ILRI

ILRI - ICAR Partnership Dialogue on “Livestock, Research and Development”



Participants at the Dialogue

A high level partnership dialogue was organized by ILRI and ICAR on 7 November, 2012 at New Delhi. A total of 130 participants representing different departments of Government of India, Directors of 13 ICAR animal sciences national institutes, Vice Chancellor of 11 state agricultural universities, Deans of veterinary universities, senior representatives of leading NGOs, farmers cooperatives, private sector, international agencies including World Bank, FAO, Bill and Melinda Gates Foundation, ILRI’s board of trustees and officials of different CGIAR bodies contributed to the dialogue.

The dialogue was inaugurated by Hon’ble Member of Parliament Prof. M.S. Swaminathan. Dr. Purvi Mehta-Bhatt, Head, ILRI- Asia informed that the partnership dialogue aimed at joint learning, knowledge exchange and future partnership cultivation exercise. He stressed on urgent need for research and development partnerships to maintain the right momentum for the Indian livestock growth. He identified animal nutrition genetic resources conservation, climate change and human resource development as some of the key potential areas of collaboration between ILRI and ICAR. Dr. J. Smith, Director



MoU between ILRI-ICAR Signed

General, ILRI pointed out that the possibilities of a high growth of livestock sector is huge in India. He emphasized on ILRI’s growing focus on perusing the agenda of animal genetic resources and different dimensions of nutritional security. Dr. K. M. L. Pathak, DDG (Animal Sciences), ICAR stressed on the potential that the livestock sector has for creating huge amount of rural employment with least investment as compared to other sectors. Dr. S. Tarawali, Director of Institutional Planning, ILRI briefed the audience about new ILRI strategy and its relevance to the region. She informed that the current strategies were aimed at further strengthening ILRI’s mandate to develop, test, adapt and promote science based practices in a way that is sustainable and scalable to achieve better lives through livestock. The inaugural session was followed by three thematic sessions: i) Smallholder Dairy

and Small Ruminant Value Chains in India, ii) Animal Health and iii) Animal Nutrition/ Feeds and Fodder.

The valedictory session concluded with several key messages most of which highlighted the growing need of targeted research and development partnership in the livelihood sector. Concluding the talks got to a close with ILRI and ICAR signing a Memorandum of Understanding (MoU) to foster the dialogue mechanism level where research and technologies from laboratories will reach the to fields and in the process well transform lives.

Other ILRI News

Dr. Purvi Mehta-Bhatt, ILRI’s Head of Asia has been elected on the board of International Association for Ecology and Health (IAEH) a premium international organization dedicated to work on environment and health issues. The organization is based in Canada and works with a global mandate.

(Source: Roma Oli, ILRI, New Delhi; e-mail: r.oli@cgiar.org)

WorldFish

CRP 1.3 Roll-out in the Philippines



Participants in a Group Discussion

The Philippines is one of CGIAR’s focal countries in its CGIAR Research Program (CRP) on Aquatic Agricultural Systems (AAS). CRP 1.3. WorldFish - Philippines has initiated preparatory activities beginning June, 2012, with an anticipated roll-out in 2013. At present, WorldFish is at its planning phase, aiming to arrive at a mutually agreed and prioritized work plan that captures the research-in-development priorities of stakeholders and achieves a degree of coordination among existing efforts and activities of the CRP team and its partners.

WorldFish-Philippines has initially identified the Visayas-Mindanao area as its AAS Hub, simply known as VisMin Hub. The sites in the Hub were selected based on the number of people dependent on aquatic agricultural systems, poverty incidence and vulnerability to climate change, and accessibility to government and international programs. The VisMin Hub include selected provinces in the Visayas and Mindanao island groups specifically Bohol, Cebu, Leyte, Negros Oriental, Southern Leyte and Western Samar in the Visayas; and Agusan del Norte, Lanao del Norte, Misamis Occidental, Misamis Oriental, and Zamboanga del Norte in Mindanao.

Pre-scoping activities started off with two studies which focused on lessons from past development initiatives in the country and the development and environmental trends and drivers in the VisMin Hub. Results of the studies served as discussion points during the regional consultations conducted between October and November, 2012 in the five regions covered by the VisMin Hub.

Consultations were held in: Dipolog (Region 9) and Cebu (Region 7) in October; and Tacloban (Region 8), Cagayan de Oro (Region 10) and Butuan (Region 13/Caraga) in November, 2012. These were organized to set the tone for the alignment of development challenges, opportunities, priorities for action and tentative theory of change that will be pursued in each of the regions comprising the Hub. Potential partners at the regional level were invited as participants to the consultations to ensure that the AAS program is not only carried out by a single organization but is supported by influential institutions in the specific regions. The participants identified the development challenges/barriers, opportunities and interventions based on income and asset, marginalization and vulnerability within the VisMin Hub. Before proceeding to the next step of diagnosis and design workshop and to community level visioning and action planning, actual scoping will be done in the first quarter of 2013. AAS program pre-scoping activities in the Philippines are being conducted in partnership with Bioversity International, the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (PCAARRD), Department of Agriculture Bureau of Agricultural Research (DA-BAR), Bureau of Fisheries and Aquatic Resources (BFAR), National Fisheries and Development Institute (NFRDI), Department of Science and Technology (DOST) Regional Offices, and Catholic Relief Services.

(Source: Dr. Maripaz Perez, Regional Director for Asia, WorldFish; e-mail: ma.perez@cgiar.org)

AVRDC

Savoring Vegetable Soybean in India

Although grain soybean grown for oil and meal is the largest legume crop in India, until recently vegetable soybean was virtually unknown in the country. The situation began to change when AVRDC – The World Vegetable Center, the Indian Council of Agricultural Research (ICAR) and six NGO partners in Ranchi and Khunti districts of Jharkhand encouraged farmers to expand production of the crop as part of a Sir Ratan Tata Trust (SRTT)-funded project to improve vegetable production and consumption in the region.

In East Asia, this large seeded, sweet type of soybean has been consumed as a fresh vegetable for centuries. Immature pods are boiled and the extracted seeds serve as a nutritious snack food. Vegetable soybean seed has up to 38 per cent protein and high levels of healthy mono-unsaturated fatty acids, and vitamins C and E; it is also one of the few natural sources of anti-cancer isoflavones. Vegetable soybean has almost double the protein and six times the energy content of green peas, India's most commonly consumed fresh legume, with 60 per cent more calcium and twice the phosphorus and potassium levels. While green peas are available only in the cool season, vegetable soybeans are picked in October—a festival month in Eastern India when a few other legumes are available and prices are high.

Mr. Khudiram Munda, a 31-year old farmer from the tribal village of Uludih near Ranchi in Jharkhand is typical of many new vegetable

soybean growers. He sowed 4 kg of seed provided by AVRDC in July 2010 in a 400 m² field. He harvested 250 kg of green pods about 80 days later and sold them in four nearby local markets for INR 20/kg (US\$0.37/kg).

Mr. Munda's family consumed the green vegetable soybean seeds boiled like green peas. They found that the dry seeds could be very tasty if soaked overnight to remove the seed coat, then fried with ginger, garlic, turmeric and other spices and eaten with rice. Vegetable soybean has become an important source of income and food for his family. Vegetable soybean seed also can be cooked as *dhal*—a staple legume porridge.



Khudiram Munda, Vegetable Soybean Farmer in Uludih village in Jharkhand State

The first vegetable soybean varieties suited to local conditions were identified in 2001. The introduction of improved AVRDC lines led to the release of the variety 'Swarna Vasundhra' in 2008 by the ICAR research station in Jharkhand. The hardy crop has low labor requirements and is well suited to the sandy and often shallow soils of Jharkhand. This new variety was distributed to 60 farmers in 2008, and promoted through field days and training events. The following year, 470 farmers grew the crop; by the third year more than 3,000 farmers were growing vegetable soybean and by the fourth year demand from 50,000 farmers for seed greatly outstripped available supplies.

A SRTT survey found that more than 70 per cent of farmers were impressed with yields of 'Swarna Vasundhra.' The nitrogen fixed in the soil by the crop also benefits subsequent crops. Taking these factors and the value of seed sales into account, SRTT estimated that net income can be increased by around INR1700/kg (US\$31.5/kg) of seed planted in a 400 m² field.

AVRDC is testing 16 new vegetable soybean lines with a wide range of seed colours and qualities in trials across India. Some lines have a "basmati rice" flavour—a popular taste that commands a high price. Two new high yielding varieties are ready for official release. The main effort now is to increase vegetable soybean production to a level beyond that which can be absorbed by local markets, and to promote it in the wider community to create a strong and permanent demand for this new crop.

(Source: Maureen Mecozzi, Head, Communications and Information, AVRDC - The World Vegetable Center; e-mail: maureen.mecozzi@worldveg.org)

APAARI Secretariat moves to new office in Bangkok

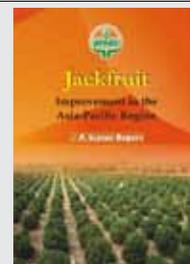
Mr. Hiroyuki Konuma, Assistant Director-General and Regional Representative FAO Regional Office for Asia and the Pacific will inaugurate the new premises of APAARI office on Friday, 18th January, 2013 at 11:30 a.m. The new address of APAARI Secretariat is as follows:

APAARI Secretariat
C/o. Food and Agriculture Organization of the United Nations
Regional Office for Asia and the Pacific
4th Floor, FAO Annex Building
202/1 Larn Laung Road, Klong Mahanak Sub-District
Pomprab Sattrupai District, Bangkok 10100, Thailand
Tel: +662-282 2918; Fax: +662-282 2919.

New Publications of APAARI

• *Jackfruit Improvement in the Asia-Pacific Region – A Status Report*

The publication entitled “Jackfruit Improvement in the Asia-Pacific Region – A Status Report” comprises various sections: (i) Production status of jackfruit in the Asia-Pacific region, (ii) Germplasm collection, characterization, conservation and utilization, (iii) Varietal improvement, (iv) Package of practices, (v) Diversified uses and value added products (vi) Economics and marketing of jackfruit, (vii) Future prospects and strategy for jackfruit production and utilization. This status report is a selective case study on jackfruit which is an underutilized fruit species but has a vast potential and usefulness in jackfruit growing area in Asia-Pacific region and is a good attempt to draw the attention of researchers, growers and policy makers.



• *First Global Conference on Women in Agriculture: Proceedings*

This publication details the proceedings of the first “Global Conference on Women in Agriculture” held on 13-15 March, 2012 at NASC Complex, New Delhi, India. The publication covers proceedings of Policy Forum I : Reports in empowering women in agriculture and Policy Forum II: Institutional changes for capacity building and partnerships and various Technical Sessions and Sub-Sessions. The parallel Sub-Sessions of Technical Session I include i) Assessing women’s empowerment in agriculture; ii) agricultural innovations for reducing drudgery; iii) Linking women to markets; iv) Role of women in household food and nutrition security; v) Access to assets, resources and knowledge : policies and services; vi) Climate change related risks and uncertainties: their impact, Session II deals with recommendations of the parallel sessions; while Session III covers strengthening capacity building and partnerships; Session IV - Need assessment and future strategies – Research, education and extension and Session V - Towards joint effective actions, etc.

• *Workshop on Climate-Smart Agriculture in Asia: Research and Development Priorities : Proceedings and Recommendations*

The proceedings of regional workshop on “Climate-smart Agriculture in Asia : Research and Development Priorities” organized at Bangkok, Thailand on 11-12 April, 2012 were published. It includes different sections on (i) Climate services to agriculture, adaptation to progressive climate change and mitigation in agriculture, (ii) Agriculture in UNFCCC (iii) Adaptation to climate change, (iv) Mitigation in agriculture, (v) Country reports on current state or research and development climate-smart agriculture, (vi) Adapting to current state of research and development on climate smart agriculture, (vii) Adapting to current weather variability and knowledge to action and policies for climate-smart agriculture, (viii) Adapting to current weather variability, (ix) Knowledge to action and policies for climate smart agriculture.



• *Regional Consultation on Improving Wheat Productivity in Asia : Proceedings and Recommendations*

A regional consultation on “Improving Wheat Productivity in Asia” was organized on 26-27 April, 2012 and proceedings have been published. It includes various sections, namely, i) Strategy for Increasing Wheat at Bangkok, Thailand Productivity, ii) National/Regional Wheat Scenario, iii) Managing Wheat Disease, iv) Stakeholders Dialogue on CRP 3.1 (Wheat), v) Addressing Emerging Challenges, Research Priorities and Need Assessment; vi) Development Initiative for Inclusive Growth, vii) Plenary Session, Recommendations, and viii) Conclusion and ix) Future Road Map.

• *Prioritization of Demand-driven Agricultural Research for Development in South Asia*

Three regional policy dialogues on prioritization of “Demand Driven Agricultural Research for Development” were organized in Bangladesh, India and Nepal and a Synthesis Report based on the outcomes of these dialogues has been published. The publication includes : (i) Introduction - Economy, agriculture, agricultural research for development, the study, methodology, outline of synthesis report, (ii) Key National Policies and Institutions that Influence AR4D Priority Setting, Financing and Extension – Key national policies, agricultural R&D, funding for AR4D, HRD for AR4D, technology delivery in AR4D, (iii) Structure, Processes, Funding and Technology Delivery in the NARS of South Asia – Structural issues, institutional process/issues, organization and management issues, communications and publicity, partnership and linkages, balancing competing agendas, funding for AR4D, technology delivery system, (iv) Synthesis Study and Stakeholders Views on AR4D Priority Setting, Financing and Execution – Commodity priorities, commodity group priorities, overarching priorities, agricultural research prioritization : the way forward, (v) Analysis of Potential of New Technologies – Nanotechnology, biotechnology, advanced processing and packaging technologies, resource conservation technologies, ICT and remote sensing, biorisk management, mechanical technologies, (vi) A Strategic Plan for Enhancing AR4D Terms of Improved Research Prioritization, Expanded Sources of Funding and Investment and Innovative Delivery and Dissemination of AR4D – Research priorities, structural and institutional process priorities, funding priorities, technology delivery prioritie, (vii) Summing up, and (ix) Works cited.



• *Micropropagation of Date Palms*

This publication authored by Dr. Nasser S. Al-Khalifah and Dr. Shanavaskhan A. E. of National Center for Agriculture Technologies, King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia has been published jointly by Asia-Pacific Association of Agricultural Research Institutions (APAARI) and Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA). It describes regeneration methods of date palm with details of micropropagation using somatic embryogenesis, organogenesis, and micropropagation from flower explants. Different media supplements and their effect on date palm tissue culture are described. The publication also includes information on achievements of Saudi Arabia in date palm tissue culture and suggestions for application of tissue culture techniques in development of date palm farming in Arab world. The publication is organized into five chapters: (i) Introduction, (ii) Different pathways of regeneration, (iii) Date palm micropropagation, (iv) Problems and prospects of date palm tissue culture, and (v) References.

The publications are available for free download at: www.apaari.org and www.apcoab.org. Contact APAARI Secretariat, Bangkok for hard copies.

Forthcoming Events

Forthcoming APAARI Meetings/Workshops

- APAARI Executive Committee Meeting will be held on 15 April, 2013 at Bangkok, Thailand
- Stakeholders' Dialogue on Biosafety Regulations in Asia-Pacific at Bangkok, Thailand, April, 2013
- National Workshop on Out-scaling Farmer-led Innovations, New Delhi, India, April 2013

International Conferences / Events

PAG ASIA 2013, March 17-19, 2013, Singapore, Plant and Animal Genome Conference (PAG) has been dedicated to the mission of fostering development of genomic analysis of agricultural products to sustain the world. BGI, a major sponsor of PAG ASIA 2013, and the Bill & Melinda Gates Foundation have inked an MOU to collaborate on applying genomic tools to improving global health and agricultural development. For more details, visit: <http://intlpagasia.org/2013/>

International Conference on Conservation Agriculture in South Asia and Beyond, March 26-27, 2013 in Kathmandu, Nepal. The University of Hawaii at Manoa (UHM), along with co-organizers LI-BIRD, the Institute of Agriculture and Animal Science (IAAS), and the Nepal Agriculture and Forestry University will jointly organize the conference. The conference will highlight recent findings and current research on conservation agriculture in South Asia and beyond, with an emphasis on presenting interdisciplinary scientific knowledge that incorporates the agricultural, economic and social sciences. For more details, visit: <http://www.forestrynepal.org/event/5760>

3rd International Conference on Asia Agriculture and Animal (ICAAA 2013), July 27-28, 2013, Moscow, Russia. The aim of the ICAAA conference series is to provide a forum for laying the foundations of a new principled approach to Asia Agriculture and Animal. The meeting aims to attract participants with different backgrounds, to foster cross-pollination between different research fields, and to expose and discuss innovative theories, frameworks, methodologies, tools, and applications. The ICAAA 2013 is sponsored by Asia-Pacific Chemical, Biological & Environmental Engineering Society (APCBEEES). For more details, visit: <http://apsafe2013.wordpress.com/>

The First International Conference of the Asia-Pacific Society for Agricultural and Food Ethics, November 28-30, 2013, Chulalongkorn University, Bangkok, Thailand. The conference will be a forum for exchange of research findings and networking among academics in various disciplines, as well as policymakers and other stakeholders on the topic of ethical implications of food and agriculture, broadly construed. The conference is jointly organized by the Center for Ethics of Science and Technology and the Office of the Commission on Agricultural Resource Education (OCARE) at Chulalongkorn University. The Office of the UNESCO in Bangkok is also providing close collaboration. For more details, visit: <http://apsafe2013.wordpress.com/>

APAARI Participation in other Fora/Meetings

1. Dr. Raj Paroda, Executive Secretary, APAARI

- Priority Setting Workshop for the Asia-Pacific Region - CGIAR Research Program on Policies, Institutions and Markets organized by IFPRI on 3 July, 2012 at NASC Complex, New Delhi, India.
- Synthesis meeting on Prioritizing Demand-driven Agricultural Research for Development in South Asia, organized by IFPRI and APAARI on July 4, 2012 at NASC, Complex, New Delhi, India.
- Global Conference on Agricultural Research for Development 2012, from 28 October to 1 November, 2012 organized by Global Forum for Agricultural Research (GFAR) at Punta del Este, Uruguay.
- International Conference on Innovative Approaches for Agricultural Knowledge Management, 9 November, 2012 at Vigyan Bhawan, New Delhi, India
- Expert Consultation on Collective Actions for Opening Access to Agricultural Information and Knowledge in the Asia-Pacific Region, held at Thimpu, Bhutan from 13-15 December, 2012.

2. Dr. S. Attaluri, APARIS Coordinator

- Global Conference on Agricultural Research for Development 2012, from 28 October to 1 November, 2012 organized by Global Forum for Agricultural Research (GFAR) at Punta del Este, Uruguay.
- Expert Consultation on Collective Actions for Opening Access to Agricultural Information and Knowledge in the Asia-Pacific Region, held at Thimpu, Bhutan from 13-15 December, 2012.

3. Dr. J.L.Karihaloo, APCoAB Coordinator

- Global Conference on Agricultural Research for Development 2012, from 28 October to 1 November, 2012 organized by Global Forum for Agricultural Research (GFAR) at Punta del Este, Uruguay.

4. Dr. Bhag Mal, Consultant, APAARI

- Policy Dialogue on Prioritizing Demand-driven Agricultural Research for Development in India on 2 July, 2012 at NASC Complex, New Delhi, India.
- Synthesis meeting on Prioritizing Demand-driven Agricultural Research for Development in South Asia, organized by IFPRI and APAARI on 4 July, 2012 at NASC, Complex, New Delhi, India.
- Policy Dialogue on Prioritizing Demand-driven Agricultural Research for Development in Nepal on 26 July, 2012, Kathmandu, Nepal

All queries relating to APAARI Newsletter be addressed to:
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