R&D stakeholders tackle CGIAR's Mega Program on roots, tubers, and bananas

Ms. Salvacion Ritual (2nd from left, front row) of RCD and Ms. Maylen Villareal (left, backrow) of PDD represent BAR during the "Stakeholders' Consultation Workshop on CGIAR Research Programs on Roots, Tubers, and Bananas" held at PCARRD, Los Baños, Laguna.
Photo: CIP-MANILA Secretariat

To address world challenges on food security and increasing farmers' income the International Potato Center (CIP) conducted a "Stakeholders' Consultation Workshop on the Consultative Group on International Agricultural Research's (CGIAR) Research Programs on Roots, Tubers, and Bananas". The Bureau of Agricultural Research (BAR), being the national coordinator of agriculture R&D, took part in the workshop which was held on 12 August 2010 at the Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD) in Los Baños, Laguna.

Representatives from various government and private sectors, local government units, academe, and research institutions attended and contributed their ideas and proposed strategies to improve the proposal design that will align and complement those of the Southeast Asia partners. Attending the activity from BAR were Salvacion M. Ritual of the Research Coordination Division and Maylen D. Villareal of the Program Development Division.

"MP3: Roots, Tubers, and Bananas for Food Security and Income Mega Program" (RTB MP) is one of the seven thematic mega programs of CGIAR that is being developed to provide CGIAR scientists and partners with the new means to deliver international public goods that will address major global issues toward development. This is part of the radical reforms in the CGIAR system which aimed at unifying all the CGIAR centers to attract more funding for research.

RTB MP has an integrated food approach on food, fuel, and fiber which is focused on a key group of crops to efficiently and globally address the challenges of increasing rates of persistent hunger, continuing population growth, and accelerating climate change— that threaten the stability of world food systems.

Under MP3 is MP3.5 that covers crops on roots, tubers, bananas and plantains with four CGIAR centers leading this initiative, namely: Bioversity International on livelihood programs for bananas and plantains; International Center for Tropical Agriculture (CIAT) on cassava; Agricultural Research for Development in Africa (IITA) on yams; and CIP on sweet potato, potato, and *Andean* roots and tubers.

The collaboration of participating stakeholders contributed new areas on R&D focusing on priority research themes of RTB MP specifically on: 1) conserving and accessing genetic resources; 2) accelerating the development, delivery, and adoption of varieties with stable yields, stress resistance, and high nutritional value; 3) managing priority pests and diseases and beneficial microbial communities; 4) promoting sustainable systems for clean planting materials for farmers; 5) developing tools for more productive and ecologically robust crops; and 6) enhancing postharvest technologies and adding market value.

Key program strategies in capacity strengthening and communication and new modes in exploring partnerships for development impact were also identified during the workshop.

The inputs contributed by the participating stakeholders were expected to help develop a responsive and relevant RTB mega program in strengthening research and development capacities, reinforcing of current partnerships, promoting communication and information sharing to satisfy diverse users and needs, and enhancing women and youth participation in achieving CGIAR's research-for-development goals in RTB crops leading to greater development impact. ### **(*Maylen D. Villareal)***

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AMAS, BAR link up to mainstream R&D-generated technologies

BAR Dir. Nicomedes Eleazar (left) shows a bottle of sweet sorghum syrup to AMAS Dir. Leandro Gazmin (right) which is now being commercialized and packaged by the BAPAMIN Farmers Cooperative based in Batac, Ilocos Norte through a BAR-funded project. *Photo: NDELROSARIO III*

Director Leandro Gazmin of the Department of Agriculture-Agribusiness and Marketing Assistance Service (DA-AMAS), together with Chief Teresita Matias of the AMAS Agribusiness Feasibility Studies Division, visited the Bureau of Agricultural Research (BAR) R&D Technology Commercialization (TechCom) Center on 13 August 2010 to work on enhancing and strengthening market potentials of R&D-generated technologies developed by BAR particularly, innovative products that are not yet in the mainstream market but have the potential to grow as an industry.

"The TechCom Center complements the function of the DA Agribusiness Exports Showroom," said Dir. Eleazar while touring Dir. Gazmin inside the Center. "Being the national coordinating and funding agency for agriculture and fisheries research and development (R&D) focusing on technology development, we, at BAR, thought of establishing this facility to assist our partner-institutions in commercializing R&D-generated technologies," Dir. Eleazar explained.

Launched in 2009, the R&D TechCom Center serves as a venue to showcase and disseminate R&D-generated technologies and breakthroughs supported by DA through BAR's flagship programs: the Community-based Participatory Action Research (CPAR) and the National Technology Commercialization Program (NTCP). This facility also serves as a viable base for networking of business clients and interested individuals with the technology generators and product suppliers.

The Center presents an array of products including food, liquor, wine, tea, coffee, concentrates, cosmetics, among others which were developed by researchers and scientists from the DA-Regional Field Units (RFUs), state universities and colleges (SUCs), Regional Integrated Agricultural Research Centers (RIARCs), Regional Fisheries Research and Development Centers (RFRDCs), and cooperating private institutions.

Dir. Eleazar showed to Dir. Gazmin a bottle of *bignay* wine developed and packaged by the Food Science Cluster (FSC) of the University of the Philippines Los Baños (UPLB). This was made possible through a project funded by BAR under NTCP titled, "Technology Commercialization and Packaging Development of Wine from Selected Local Fruits".

BAR's Technology Commercialization Unit (TCU) Head Anthony B. Obligado briefed Dir. Gazmin on BAR's support to R&D activities on sweet sorghum, another crop which BAR has recently been promoting for its fuel, food, feed and fertilizer uses.

Dir. Eleazar also presented BAR's R&D Plans and Programs for the medium-term. Joining him were Joell H. Lales, head of BAR's Planning Unit (PU) and Leoncia B. del Mar,

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What's inside...

Quezon Rep. Irvin Alcala visits BAR; current R&D initiatives presented

BAR Dir. Nicomedes P. Eleazar (center) and Asst. Dir. Teodoro S. Solsoloy (right) welcome Rep. Irvin M. Alcala (left) of the 2nd District of Quezon during his visit at BAR wherein he was toured around the R&D Technology Commercialization Center. Photo: NDELROSARIO III

Rep. Irvin M. Alcala of the 2nd District of Quezon visited the Bureau of Agricultural Research (BAR) on 27 August 2010 with BAR Director Nicomedes P. Eleazar and Assistant Director Teodoro S. Solsoloy welcoming him.

He was toured at BAR's R&D Technology Commercialization (TechCom) Center—a mini showroom featuring R&D generated technologies and breakthroughs supported by the Department of Agriculture (DA), through BAR's flagship programs: Community-based Participatory Action Research (CPAR) and National Technology Commercialization Program (NTCP). The facility provides a base of information for the networking of business clients and interested individuals with the technology generators and product suppliers.

Dir. Eleazar presented the displayed products which were developed by researchers and scientists from the DA-Regional Field Units (RFUs), state colleges and universities (SUCs), Regional Integrated Agricultural Research Centers (RIARCs), Regional Fisheries Research and Development Centers (RFRDCs), and cooperating private institutions.

Sweet sorghum production and products

Dir. Eleazar presented to Rep. Alcala the various products developed from sweet sorghum particularly those which are now being produced by the BAPAMIN Farmers Cooperative, a private sector based in Ilocos Norte. The commercialization and packaging of sweet sorghum products was made possible through a BAR-funded project titled, "Sweet Sorghum Processing and Marketing Towards Commercialization in Ilocos Norte" that aims to provide livelihood opportunities to farmers through the promotion and commercialization of sweet sorghum-based food products from seed grains specifically for feed and flour, vinegar and syrup.

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TechCom Center is a mini showroom featuring R&D-generated technologies and breakthroughs supported by the DA, through BAR's flagship programs: CPAR and NTCP.

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This publication provides regular updates on DA-BAR's activities as the country's national coordinator for agriculture and fisheries R&D. It also highlights features and news articles concerning NaRDSAF-member institutions.

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Quezon Rep...*from page 2*

To provide an overview on BAR's initiatives on sweet sorghum, Dir. Eleazar presented a video on sweet sorghum production featuring Dr. Heraldo Layaoen of the Mariano Marcos State University who is also the focal person for BAR's sweet sorghum project.

"Sweet sorghum is now being promoted for the marginal areas. We hope that there will be enough private-government partnerships that will invest and establish distillery facilities in the country for the production of ethanol from sweet sorghum," Dir. Eleazar said.

Rep. Alcala showed enthusiasm in the initiatives of BAR particularly its effort on establishing sweet sorghum into the mainstream market as this will create livelihood opportunities. He also stated his interest in the project particularly on how he may be able to assist his farmer-constituents to become more productive and self-sufficient in this field. "I could ask local officials to go with the plans and support the endeavors of the Department of Agriculture," he affirmed.

Product lines from *oregano*

Another product that Dir. Eleazar introduced to Rep. Alacala was *oregano* tea. The technology was developed by Dr. Estela C. Taño of the DA-Quezon Agricultural Experimental Station (QAES), Research Outreach Station (ROS), DA-RFU IVA. The technology is now being adopted by the Green Rescue Organic Products Enterprise (GROPE) composed mainly of OFW women based in Tiaong, Quezon. Other product lines developed from *oregano* were: oregano wine, oregano juice (for human consumption), oregano juice (for poultry known as Oregchick), oregano vinegar, and oregano soap.

Initiatives on *Asha* peanut

Rep. Alcala was also briefed on BAR's initiative on *Asha* peanut, which originally came from India through the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). It is now being widely-cultivated in Regions 2 and 5 through a BAR-assisted project, "Production and Promotion of *Asha* Peanut" implemented by the DA-Cagayan Valley Integrated Agricultural Research Center (CVIARC).

"Together with Ms. Rose Aquino, our focal person on *Asha* peanut production, we have conducted trainings for the farmers from six municipalities of the 2nd district of Quezon. We have also distributed 15 sacks of *Asha* peanut seeds to 15 marginal farmers of the said municipalities for cultivation," said Dir. Eleazar.

The R&D Plans and Programs was also presented to Rep. Alcala highlighting the two CPAR projects on lanzones and arrowroot implemented in Region IVA.

"Through the CPAR/ Agribusiness Development Project on Lanzones, farmers in the provinces of Laguna, Batangas, and Quezon were able to increase their incomes by following the package of technologies (POTs) learned during the five years implementation of the project. The number of adopters increased by 142 in 2009 and the number of rehabilitated trees reached 4200 in Laguna, 8900 in Batangas, and 100 in Quezon," Dir. Eleazar reported.

Meanwhile, "the CPAR project on Improved Arrowroot Production Technologies in Catanauan, Quezon was borne out of a need to increase the production of arrowroot in the area through the introduction of improved cultural practices and proper fertilization using organic farming technology. In 2009, 20 farmer-cooperators have already planted arrowroot in their five hectares area," he added. ### ***(Ma. Eloisa H. Aquino)***

Clockwise: (1) Facade of the Techno Center located at the lobby of BAR's building (2) Rep. Alcala and Dir. Eleazar during the presentation of R&D Plans and Programs (3) A video presentation on sweet sorghum production featuring Dr. Heraldo Layaoen of MMSU (4) Dir. Eleazar with the staff from TCU and OD during a presentation of success stories from CPAR projects. Photos: NDELROSARIO III

Photos: NDELROSARIO III & RDELACRUZ

Participants discuss with the deputy director for life sciences at the Indonesian Institute of Sciences of the Lembaga Ilmu Pengetahuan Indonesia (LIPI). Photo courtesy of: AVELASCO

A researcher from the Southeast Asian Regional Centre for Tropical Biology (BIOTROP), shows his invented machine that can make bioethanol from sweet sorghum.
Photo courtesy of: AVELASCO

Southeast Asian Regional Centre for Tropical Biology (BIOTROP), Center for Climate Risk and Opportunity Management in Southeast Asia and the Pacific (CCROM SEAP) and the Agroclimate and Hydrology Research Institute, and the Indonesian Agency for Agricultural Research and Development (IAARD).

Some of the lessons learned by the group were the: 1) need to capitalize and enhance the Philippine's bargaining power (based on the amount of foreign funding for research that Indonesian institutes have, their government diplomats have good bargaining power); 2) proper orientation of the issues of climate change particularly for the provincial and municipal governments, since they implement the projects initiated by the national government in the regions; 3) enhance Filipino sense of nationalism so that "great minds" stay in the country and help in the improvement and development; 4) create awareness and concern for nature among the youth; 5) inventory of projects related to climate change; 6) consider existing indigenous information/technologies and not just focus on developing new ones; 7) develop technologies that are easily understood and adopted by farmers; and 8) availability and accessibility of information about climate change for the farmers.

The study visit, held on 22-28 August 2010, was organized and facilitated by SEARCA. ### ***(Amavel A. Velasco)***

*AMAS, BAR...*from page 1

BAR Dir. Nicomedes P. Eleazar explains to Dir. Leandro Gazmin the various R&D-generated products and technologies on display at the BAR R&D Techno Center. TCU Head Anthony Obligado (center) looks on.
Photo: NDELROSARIO

senior technical staff at the Office of the BAR Director (OD). A list of commerciable technologies developed through projects funded by BAR under NTCP were also presented by the group to Dir. Gazmin.

In response, Dir. Gazmin showed interest and enthusiasm at BAR's endeavors and initiatives on technology commercialization and enjoined Dir. Eleazar to work closely with AMAS particularly in sharing information on existing and new technologies as well as databases of suppliers and producers. He also advised BAR to expand the linking of technology developers with various marketing arms and potential investors. ###
(Ma. Eloisa H. Aquino)

BAR brings *Asha* to Quezon farmers

Asha peanut *(Arachis hypogaea)*, which is now a certified peanut variety and is being widely cultivated in Isabela (Region 2) and Sorsogon (Region 5), has now reached the province of Quezon in Region 4A through a project funded by the Bureau of Agricultural Research (BAR) of the Department of Agriculture (DA).

Asha, which means 'hope' in the Hindi language, was introduced in the Philippines in 2005 by the International Crops Research Institute for Semi-Arid Tropic (ICRISAT), an international agricultural research center based in India, and was initially field-tested and evaluated to determine and compare its adaptability and agronomic performance with the commercially grown peanut varieties in Region 2. The big-seeded peanut variety is known to produce nuts much larger than those traditionally grown in the country. Given its size and high-yielding qualities, *Asha* has shown great potential for increasing the harvest and incomes of local peanut farmers in the country.

BAR, under the leadership of Dr. Nicomedes P. Eleazar, supported this R&D initiative with initial tests indicating that *Asha* could be commercially viable in the Philippines. Meanwhile, the package of technology (POT) was developed by the DA- Cagayan Valley Integrated Agricultural Research Center (CVIARC) through a three-year project on the production and promotion of *Asha* peanut.

Just recently, BAR, led by Dr. Eleazar and CVIARC staff, distributed 15 sacks of *Asha* peanut seeds to 15 marginal farmers representing six municipalities of the second district of Quezon for trial cultivation in the province.

A project on *Asha* peanut production will be implemented by the Earthkeepers, a non-government organization (NGO) active in promoting organic farming which is based in Tiaong, Quezon, in cooperation with the Cagayan Valley Integrated Agricultural Research Center (CVIARC) which shall provide technical assistance to the farmer cooperators and beneficiaries.

According to Dr. Eleazar, "with *Asha* peanut adapting well in the Philippine soil and the developed POT, peanut yield has increased dramatically from 600 to 1,100 kg/ha." This, according to experts from CVIARC, can translate to a PhP 15,000-27,000/ha increase in farmers' income."

Each farmer-cooperator has allotted an area of 1,000 square meters to plant their *Asha*. As cooperators of the project, farmers were provided a one-day hands-on training last August 3, 2010 to technically equip them with the appropriate package of technologies (POT) on the production and management of *Asha* peanut. Ms. Rose Aquino of CVIARC, who is the lead person for promoting *Asha* peanut production in the Philippines, served as the resource person during the training. The training was attended by 15 farmer-beneficiaries and community organizers of the Earthkeepers.

As part of the repayment scheme

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Rose Aquino of DA-CVIARC and focal person for Asha peanut, teaches farmers of Quezon how to plant Asha peanut. Photo: AVELASCO

RP is suitable for growing and producing quality cacao beans

Ms. Josephine Ramos, operations chief of the Cacao Foundation of the Philippines, Inc., presents the prospects of the cacao industry in the Philippines during the 6th A/F Technology Forum at SM Megamall.
Photo: ACONSTANTINO

The country is relatively suitable for growing and producing quality cacao beans and can be a lucrative agri-business enterprise considering the strong domestic market and established access to export markets, explained Josephine Ramos, operations chief of the Cacao Foundation of the Philippines, Inc., in a presentation during the 6th Agriculture and Fisheries Technology Forum and Product Exhibition held on 6 August 2010 at the SM Megatrade Hall. The activity is a yearly activity of the Bureau of Agricultural Research (BAR) showcasing the latest technologies in the fields of agriculture and fisheries.

In her presentation, Ms. Ramos gave an overview/situationer of the cacao industry and its potential and impact to the farming community. According to her, cacao production in the Philippines produced an estimated 5,000 metric tons (MT) of cacao beans in 2007 and could possibly reach 100,000 MT in 2020, provided that good and quality beans are produced.

In 2010 world grindings of cocoa beans is projected at 3.6 million tons, reflecting an average annual increase of 2.1 percent. Consumption will continue to be concentrated in developed countries, which are expected to account for 64 percent of world cocoa consumption. In Japan, for example, imports are expected to increase from an annual average at 48,000 tons in 1998 - 2000 to 56,000 tons in 2010. The continuing demand for good quality fermented beans is an opportunity for local farmers to snatch some of the global demand, she concluded.

Given the right technology and government intervention, the country would be able to export, potentially, at least 100,000 MT exportable cacao beans and thus would increase farmers' income roughly by 60,000 pesos more per hectare. The challenge therefore is to ensure that high quality fermented beans are produced in large quantities.

The Cacao Roadmap of the Philippines, which is being pushed by cacao stakeholders, runs parallel to the domestic agenda of the Department of Agriculture-High Value Commercial Crops (DA-HVCC) and BAR's Medium-Term Research and Development Plan, wherein cacao is seen as an important industrial crop with huge potential in terms of domestic and export demands. The plan cites pressing problems and concerns besetting the industry such as, pests and diseases, lack of quality materials, development of value-adding products and the need for production technologies as targets for attention.

One strategy being developed or proposed under the Cacao Road Map is to plant at least 50M cacao trees in areas with initial cacao intervention like, for example, some areas in Northern Luzon, Bicol Region, Panay, Palawan, Southern and Western Mindanao, Zamboanga Peninsula, Aurora, Quezon Province and the ARMM. These can initially form part of the proposed Cacao Agribusiness Zones.

The prospect of producing quality cacao beans for the local and foreign markets will certainly help the government and the private sector, particularly the agribusiness communities, in the effort to promote premier class cacao beans and its culture. ### ***(Patrick Raymund A. Lesaca)***

Photos: RDELACRUZ & RBERNARDO

BAR capacitates researchers and research managers to fight CLIMATE CHANGE

Researchers from the Philippines pose with Ir. Rachmat Witoelar (3rd from left, front row), presidential special envoy on climate change of the National Council for Climate Change (Dewan Nasional Perubahan Iklim or DNPI) and his staff. DNPI is the counterpart of the Philippine Climate Change Commission.
Photo courtesy of: AVELASCO

Today, the manifestations of climate change are slowly emerging and without a doubt, the earth is bearing its presence in the drying fields and melting glaciers. And so with all these distress signals, the world is now focusing its attention to climate change concerns and issues.

The Bureau of Agricultural Research (BAR) recognizes the urgency to take action and so early in 2009, it conducted a consultation meeting to address climate change and crafted the Climate Change (CC) RDE Agenda. This is a collaborative effort participated in by the University of the Philippines Diliman (UPD), UP-Marine Science Institute (MSI), UP Los Baños (UPLB), School of Environmental Science and Management (SESAM), UPLB-Graduate School (GS), Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), Bureau of Soils and Water Management (BSWM) and the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA).

To improve the Climate Change RDE Agenda, BAR has been sending representatives to various Asian nations to observe and learn different climate change RDE programs, policies, adaptation and mitigation strategies that can also be applied in the Philippines. One of the recent Asian countries visited was Indonesia.

BAR sent six researchers/research managers mostly from the regional office of the Department of Agriculture (DA). They were: Dr. Francisco Geromo, RIARC manager of DA-RFU 9; Marissa Luna, RIARC manager of DA-RFU IVB; Wilfreda Maslog, RIARC manager of DA-RFU CARAGA; Lea Tumabiene, RFRDC manager of DA-BFAR 8; Amavel Velasco of DA-BAR; and Julienne Bariuan of SEARCA.

The exposure visit is one of the components of the BAR-SEARCA project titled, "Capability Building on Responding to Climate Change through Research and Development in Agriculture" which aims to enhance the capacity of DA R&D managers and researchers in addressing RDE issues and concerns related to climate change.

Both the Philippines and Indonesia are considered biodiversity hot spots. Indonesia, like the Philippines, is also archipelagic and is in danger of vanishing once a drastic sea level rise occurred due to the melting of the polar ice cap in the North due to increasing global temperature.

"Fighting climate change is a Herculean task. With the increasing number of mouths to feed, climate change threatens food security. Farmers and fisherfolk, and the agricultural sector as a whole, are the most likely affected, hence the most vulnerable to climate change for they are usually under the mercy of the climate and the weather. Skills, knowledge and technologies are therefore needed in order for the researchers to help the farmers face the challenges of climate change," said BAR Dir. Nicomedes P. Eleazar.

He added that, since climate change is a global challenge, it has to be addressed by each and every nation. BAR believes in the multi-agency initiatives to address climate. This is why another objective of the exposure visit was to explore and strengthen partnerships and collaboration between and among DA and other RDE institutions in other countries to work together.

The group visited various institutions in Indonesia that are engaged in climate change RDE. Among these included the: Ministry of National Education, Indonesian Institute of Sciences, National Council for Climate Change, Ministry of Agriculture, Bogor Agricultural University, Ministry of Marine Affairs and Fisheries (MMAF),

next page

WorldFish conducts consultation writeshop for RP component of CGIAR Mega Program

Photo: WORLDFISH CENTER

The WorldFish Center was tasked to lead the development of one of the mega programs of the Consultative Group on International Agricultural Research's (CGIAR) titled, *"Harnessing the development potential of aquatic agricultural systems for the poor and vulnerable"*, also known as Mega Program 1.3. This was brought about by the change process in the CGIAR system wherein there is now 15 Mega Programs that the consortium will focus on for the next 12 years.

In preparation to this, the WorldFish Center Philippine Office, under the supervision of Dr. Maripaz L. Perez, regional director for Asia and country manager, organized a "Program Consultation Writeshop" on 12-13 August 2010 at the WorldFish Country Office in SEARCA, College, Los Baños, Laguna.

Attending the activity were Philippine partners/stakeholders including the Bureau of Agricultural Research (BAR), Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Philippine Council for Aquatic and Marine Research and Development (PCAMRD), Southeast Asian Fisheries Development Center (SEAFDEC), Department of Science and Technology (DOST), and the University of the Philippines Visayas (UPV).

The Philippines was selected as one of the components of the program that includes the Asia mega deltas, the Coral triangle region of Asia Pacific, and the African freshwater.

According to CGIAR Consortium Board Chair Carlos Perez de Castillo, this change process is a long-term, convincing strategy of international agricultural research since it is result-oriented and will have impact on the ground. He added that the change process aims to firmly engage and defend the interests of the CGIAR System as a whole since there will now be a consortium for the 15 independent centers and the old practice of working with the narrow interests of individual centers or individual donors will be abandoned.

The Mega Program 1.3, which addresses the aquatic agricultural systems for the poor and vulnerable, is envisioned to focus on improving the lives of 50 million people through development pathways that harness the full potential of aquatic agricultural systems by strengthening the capacity of smallholder producers and landless poor and harnessing other development benefits from these systems. In addition, partnerships will be built in support of producer-led agricultural innovation to improve the impact of this research.

During the two-day writeshop, the Philippine component of the mega program proposal was discussed and fine-tuned by identifying the key issues and concerns in the aquatic agricultural systems in the country that could be addressed by the program, and by identifying and agreeing on the potential sites, activities, and strategies of implementation to be included in the program proposal. As guide for the discussion, the national and regional programs of the Philippines were revisited to assess how Mega Program 1.3 can align with them.

The concept of the Mega Program 1.3, initially presented by Dr. Maripaz L. Perez to BAR Dir. Nicomedes P. Eleazar and to several BAR officials and staff on 3 August 2010, has already obtained the support of the bureau since it is in line with its R&D thrusts and agenda through its two banner programs: Community-based Participatory Action Research (CPAR) and the National Technology Commercialization Program (NTCP). ### ***(Raymond Patrick L. Cabrera)***

Photo: WORLDFISH CENTER

Handbook on pigeonpea pests and diseases hot off the press

A handbook that documents and puts together relevant information and significant findings on the common insect pests and diseases of pigeonpea in the Philippines is now off the press. The publication, "*Handbook on the Identification and Control of Insect Pests and Diseases of Pigeonpea"* is authored by Mariano Marcos State University-based researchers, Dr. Thelma Z. Layaoen, Mr. Odilon V. Caraan, and Dr. Heraldo L. Layaoen and was launched during the 6th National Agriculture and Fisheries Technology Forum and Product Exhibition and 23rd Anniversary Celebration of the Bureau of Agricultural Research (BAR).

The handbook consists of three sections that provide significant information on pigeonpea including its 1) importance as a crop and production, 2) pests according to the plant parts being attacked or damaged, and 3) common diseases. It discusses specific characteristics of the pests and diseases and recommends important strategies or control measures to prevent, reduce, or suppress the damage caused by each disease and pest group.

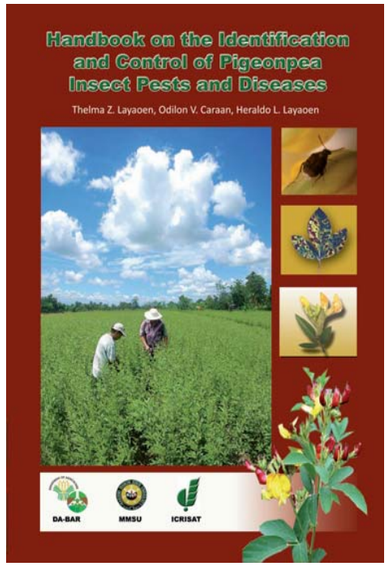
The publication aims to help not only local pigeonpea growers but also provide agriculture technicians and researchers the needed information to effectively determine pest problems that may occur in their crop and immediately reduce if not totally suppress them.

BAR Dir. Nicomedes P. Eleazar expressed his enthusiasm in the publication of the book. "We funded the publication of this handbook, which is a result of a collaborative initiative among MMSU, BAR and ICRISAT, to serve as our humble effort to contribute to the emerging pigeonpea industry in the Philippines," said Dir. Eleazar.

The printing of the book was funded through BAR's Scientific Publication Grant (SPG) which is one of the services provided by the bureau to its partner R&D institutions.

Pigeonpea *(Cajanus cajan)* is a nutritionally important crop. Although it originated in India, pigeonpea is slowly gaining popularity among Filipino farmers with its benefits as both food and forage crop. Pigeonpea is resistant to drought and is very suitable for small farms. Often, it is grown as an intercrop with other row crops such as corn and sorghum and thrives well as a hedge crop which may be found along the bunds of rice fields.

In 2006, varieties of pigeonpea were introduced to the Philippines through the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). These varieties were tested for local adaptation through a BAR-funded project, "Pigeon Pea Commercial Production and Utilization Program", led by Dr. Heraldo Layaoen of MMSU.



The program, which lasted for over a year, selected two varieties from six varieties obtained from ICRISAT. The two varieties are ICPL 88039, a short duration variety that is a good crop after rainfed rice; and ICP 7035, a medium maturity variety, which is good in marginal and rolling areas.

Products from pigeopea have also been developed, packaged and commercialized. Pigeonpea seeds are milled into flour which is used to fortify cookies and biscuits with protein. Pigeopea seed are also roasted, milled, and used in making a beverage similar to coffee. ### ***(Rita T. dela Cruz)***

Drs. Heraldo and Thelma Layaoen (center) of MMSU, authors of the "Handbook on the Identification and Control of Insect Pests & Diseases of Pigeopea" during the book launch at SM Megamall. With them are: (L-R) UPLB Chancellor Luis Rey Velasco, BAR Dir. Nicomedes Eleazar, AMAS Dir. Leandro Gazmin, and BAR Asst. Dir. Teodoro S. Solsoloy. Photo: NDELROSARIO III

The publication aims to help not only local pigeonpea growers but also provide agriculture technicians and researchers the needed information to effectively determine pest problems that may occur in their crop and immediately reduce if not totally suppress them.

Look for globally-competitive solutions — Solsoloy

BAR Assistant Director Teodoro Solsoloy challenged agriculture faculty and students to strive for global competitiveness in his speech during the 55th Foundation Anniversary of the University of Southern Mindanao-College of Agriculture (USM-CA) on 16 August 2010.

Solsoloy said that we must look for "globally-competitive solutions" as the world is going downhill with adversities of poverty, food insecurity, and climate change along with the strong tension between feeding the world, preserving the environment and providing energy.

"Agriculture is one of the keys to these global challenges," he stressed. "However, agriculture today fails to address these at the same time."

To offset these challenges, he suggested that the first thing to do is to increase the productivity of agriculture in a sustainable manner and address the needs of smallscale farmers especially in areas where effects of climate change may be worst.

The assistant director and DOST-conferred Scientist I, amid his speech, asked the faculty and students about the current status and impact of the College of Agriculture in the Philippines.

He noted with concern the continuous decline in the number of agriculture students and graduates, and labor demands; as well as the agricultural efficiency of the neighboring countries getting better than Philippines, whose pioneers were previously mentored at the University of the Philippines Los Baños (UPLB) and other Centers of Excellence (COEs) in agricultural education.

Development of strategic plan to train students and to continuously improve manpower; responsiveness to local, national, and international development of agriculture; and constant provision of excellent services to the stakeholders are among the points that every College of Agriculture must focus on, said Solsoloy.

The USM-CA, previously a COE, is currently identified by the Commission on Higher Education (CHEd) as a Center of Development for Agricultural Education and a National University/College of Agriculture (NUCA) under the National Agriculture and Fisheries Education System (NAFES). Assistant Director Solsoloy is an alumnus of the said college. ### ***(Angelito A. Pagio, Jr.)***

BAR Assistant Director Teodoro S. Solsoloy delivers his message during the 55th Foundation Day of USM-CA at the University Laboratory School Convention Hall, Kabacan, Cotabato. Photo: NDELROSARIO III

Asst. Dir. Solsoloy (left) receives his plaque of appreciation from USM President Jesus G. Derije (2nd from left). Also in the photo are USM Vice President for Research and Extension Dr. Naomi G. Tangonan (2nd from right) and USM-CA Dean Dr. Adeflor G. Garcia (right). Photo: NDELROSARIO III

...we must look for "globally-competitive solutions" as the world is going downhill with adversities of poverty, food insecurity, and climate change along with the strong tension between feeding the world, preserving the environment and providing energy.

Participants conduct a field visit at the experimental station of the National Institute of Horticultural and Herbal Science (NIHHS) located in Jangan-go, Suwon. The visit was covered by Arirang Channel for Korea's Green Television. Photo: AFACI Secretariat

socially-acceptable integrated crop and resource management technologies; and strengthen conservation and sustainable use of genetic resources. For *Farm Economy and Livelihood Improvement*, strategies that were enumerated included: develop technologies for value addition of agricultural produce; produce technologies for postharvest technologies of high value crops; initiate/upgrade new agricultural products through innovative research; and develop cost-effective technologies including mechanization for commercial agriculture.

Meanwhile, on the discussion of future regional cooperation and initiatives, the group identified four areas to further strengthen networking and linkages among AFACI project managers. These are: 1) establishing of information exchange program through creation of a database that is accessible for online sharing, conducting annual technical workshop on the progress of R&D activities, and arranging study visits/exchange of scientists; 2) implementing specific projects on: food security, sustainable agriculture, and farm economy and livelihood improvement; 3) developing capacity building including human resources, infrastructure and logistics, and 4) upgrading research management capabilities.

The weeklong activity is an offshoot of the "First AFACI Assembly Meeting" hosted by the Philippine Department of Agriculture on 15-16 April 2010 in Tagaytay City, Philippines to discuss projects geared to promote sustainable agricultural green growth in the Asian region. Specific projects are aimed at eradicating poverty and contributing to the economic development of the member-countries through technological cooperation in the agriculture and food sector.

AFACI was established through a Memorandum of Understanding (MOU) signed among member-countries on 3 November 2009. The agreement covers various pan-Asian projects including capacity-building initiatives of member-countries in the form of workshops and training programs.

AFACI's activities are geared toward the development of sustainable agriculture and food technology to help economies deal with the changes in the agricultural environment, such as climate change and technology transfer, through international collaborations. ### ***(Rita T. dela Cruz)***

BAR brings... *from page 3*

of the project, each farmer-cooperator will have to give back two sacks of seeds after harvest to ensure seed multiplication so that other farmers can also avail of the POT and benefits of cultivating *Asha* peanut.

Dr. Eleazar said, "We hope that through these seeds we will be able to help the marginal farmers in Quezon by providing them an alternative livelihood to improve their incomes. Hopefully, after Isabela, Sorsogon and now, Quezon Province, we will be able to promote the technology on *Asha* peanut production nationwide so that more farmers will be benefitted."

He added that this project on *Asha* peanut production is in line with DA Secretary Proceso J. Alcala's initiatives to promote agricultural crops and products that have potentials to improve farmers' incomes but are not yet in the mainstream market.

Asha peanut is one of the technologies highlighted at the 6th Agriculture and Fisheries Technology Forum and Product Exhibition held at the Megatrade Hall 2, SM Megamall on August 5-8, 2010. The opening of the technology forum was attended by recently-appointed Director of DA-Agribusiness and Marketing Assistance Service (AMAS), Mr. Leandro Gazmin, who commended BAR for its initiatives in bringing viable technologies that could be readily used by the farming industry. ### ***(Rita T. dela Cruz)***

Photo: AVELASCO

AFACI-member countries convene for workshop on agri and rural dev't

Representatives from 10 member-countries of the Asian Food and Agriculture Cooperation Initiative (AFACI) convened for a workshop-training on agriculture and rural development titled, “Workshop on Rural Development for High-Level Officers of AFACI Member Countries” on 7-14 August 2010 in Suwon, South Korea.

Two representatives from each of the 10 member-countries joined in the workshop for presentations and discussions on their respective National Agricultural Research System (NARS) and National Agricultural Extension System (NAES). The participating countries included Bangladesh, Cambodia, Indonesia, Laos, Mongolia, Nepal, Philippines, Sri Lanka, Thailand, and Vietnam.

Representing the Philippines were Mr. Rodel Carating of the Department of Agriculture-Bureau of Soils and Water Management (DA-BSWM) and Ms. Rita dela Cruz of the DA-Bureau of Agricultural Research (DA-BAR).

The workshop was specifically designed to capacitate high-level government officials in agriculture and rural development by: 1) providing the participants an opportunity to discuss and share current trends and relevant issues on research and development and extension (RDE) set against the Asian and global agriculture scenarios; and 2) presenting case studies on rural development and community development programs, particularly insights for improving RDE systems, through field visits to some of Korea's leading RDE institutes and industries.

Photo: AFACI Secretariat

At the end of the workshop, participants were able to 1) draw specific strategies to improve RDE system services based on the cases discussed which they hope to apply in their respective countries with appropriate policy-formation support; and 2) discuss future regional cooperation and initiatives that would further strengthen networking and linkages among AFACI project managers.

During the group discussions, strategies to strengthen R&D of AFACI-member countries were identified following the lines of major thrusts/targets that cut across priorities including food security, sustainable agriculture, and farm economy and livelihood improvement.

Under *Food Security*, among the specific strategies cited were: develop high-yielding, good quality and stress tolerant varieties of major food crops through both conventional breeding and biotechnological tools; develop associated/component production technologies for major farming systems; enhance food diversification including underutilized food crops; reduce postharvest losses; increase genetic diversity through exchange of elite germplasm; and develop technologies for the mitigation and adaptation of climate change. For *Sustainable Agriculture*, the strategies identified were: develop appropriate technologies/ interventions to conserve and manage natural resources; promote environment-friendly and


Representatives from AFACI-member countries during the opening program. Photo: AFACI Secretariat

Alcala calls for unity to attain goal on national food security

Agriculture Secretary Proceso J. Alcala enjoined the participants of the Farmers' Congress held in Tuguegarao City on 30 August 2010 to come together and renew Philippine agriculture. “Let's start by pursuing vigorously the counterparting scheme with local government units so we can implement more agricultural and fishery projects,” he said.

In response, Cagayan Governor Alvaro Antonio said he will match the DA funds.

Alcala also requested the LGUs to lend to the DA their agriculture officers and extension workers so we could effectively and efficiently implement national projects.

DA will re-train them to further upgrade their skills and knowledge as the agency under his watch will both promote conventional as well as organic system of farming

Alcala, who authored the Organic Agriculture Act of 2010, added that farmers will have the choice on what system to adopt, or may combine both to make his farm productive and sustainable.

On his first day of a 3-day field visit to Cagayan Valley in Region II, the Aggie chief touched-base with the small farmers, fishers, Governors, Congressmen, City and Municipal Mayors including DA provincial and municipal agriculture officers and extension workers.

To date, he has attended farmers' dialogues and consultations with local officials in Cebu and Davao .

During said field visits, Alcala shared his marching orders from President Benigno C. Aquino III to make the country attain self-sufficiency in rice, corn vegetables, fish and other basic food commodities.

Alcala made the following pronouncements during the open forum: government though the Land Bank of the Philippines will increase its loan portfolio to agriculture and allot more credit funds through Cooperative Rural Banks and accredited financial conduits; DA will promote massive use of good and certified rice seeds; government will put up more major trading centers and grains terminals in strategic areas of the country; DA-BFAR will set up more mariculture parks in appropriate coastal towns nationwide and make available more rent to own fish cages to benefit small marginal fishermen; and pursue renewed efforts to repair and rehabilitate irrigation systems and construct more small water impounding projects.

The Farmers' Congress was held at the Cagayan Provincial Capitol and was attended by farmers, fishers, provincial officials, municipal mayors, agricultural officers, technicians and extension workers, NGOs and agri-fishery stakeholders. ### ***(DA-Info Service)***

DA chief swears in new officials

Agriculture Secretary Proceso J. Alcala swore in three new DA officials, who were recently appointed by President Benigno S. Aquino III. They are:

- **Dr. Davinio Catbagan** as assistant secretary for livestock. He previously served as officer-in-charge of the DA-Bureau of Animal Industry (BAI), from August 2005 to June 2010;
- **Edilberto De Luna** as assistant secretary for field operations. Prior to his appointment, he served as regional manager of the DA's Philippine Coconut Authority (PCA) in Region 4A, from September 2005 to August 2010; and
- **Engr. Antonio Nangel** as administrator of the DA's National Irrigation Administration (NIA). Prior to his new post, he served as project manager of the NIA's Upper Pampanga River Integrated Irrigation Systems (UPRIIS), the country's largest national irrigation system, which operates Pantabangan Dam, serving over 100,000 hectares of farmlands in Central Luzon.

Sec. Alcala has also recently designated several DA officials to perform other tasks in addition to their current assignment and responsibilities, namely:

- **Asec. Dennis Araullo** as national program coordinator for rice and corn;
- **Asec. Salvador Salacup** as assistant secretary for fisheries, in addition to his current designation as asec for agribusiness and marketing, and DA spokesperson;
- **Dir. Romeo Recide** of the DA-Bureau of Agricultural Statistics as officer-in-charge of the Office of the Assistant Secretary for policy and planning;
- **DA-OSEC Head Exec. Asst. Arnulfo Mañalac** as program director of Agri Pinoy Trading Center project management office;
- **Marriz Agbon** as president of the DA-Phil. Agricultural Development and Commercial Corporation (PADCC).; and
- **Dr. Henry T. Carpis**o as OIC assistant director of the DA-Bureau of Plant Industry. ### ***(DA Information Service)***

BAR's 6th Agri & Fishery Tech Forum successfully concluded

The Bureau of Agricultural Research (BAR) successfully concluded the 6th Agriculture and Fisheries Technology Forum and Product Exhibition held at the SM Megatrade Hall 2, SM Megamall, Mandaluyong City on 8 August 2010. The event coincided with BAR's anniversary with BAR marking 23 years of coordinating and supporting agriculture and fisheries research and development (R&D). "Facing Global Challenges in Agriculture and Fisheries through Technology Commercialization" was the theme for the year.

The technology forum and exhibit, which was held on 5-8 August 2010, provided new perspectives on technology commercialization, highlighting R&D breakthroughs generated and developed by various R&D institutions that include state universities and colleges (SUCs), local government units (LGUs), Department of Agriculture-Regional Field Units (DA-RFUs) and its research satellite offices, the Regional Integrated Fisheries R&D Centers of the Bureau of Fisheries and Aquaculture Resources, and partner private organizations. The four-day event is in line with the activities and program of the National Technology Commercialization Program (NTCP), one of the flagship programs of BAR.

Representing DA Secretary Proceso J. Alcala was Dir. Leandro Gazmin of the Agribusiness and Marketing Assistance Service (AMAS) who led the ribbon-cutting ceremony. Joining him were BAR Dir. Nicomedes P. Eleazar and Asst. Dir. Teodoro S. Solsoloy.

In his speech, Dir. Gazmin reiterated the need to intensify government and private-sector partnership and mentioned that, in order for the research system to be effective, it must be periodically updated, reinforced, and even revised if needed. He added that, "Each of our research-implementing units should have their respective medium-term and long-term programs of development to include manpower and infrastructure. Networking and complementation should also be done to make the most use of our resources."

Meanwhile, Dir. Eleazar lauded the participation and involvement of all the exhibitors from the DA family, SUCs, private sector, and other food conglomerates belonging to the food chambers. He also affirmed that the activity opens a lot of opportunities for farmers and fisherfolk to showcase their own produce and for the private sector adopt these technologies on a commercial scale. "This is the way to go," Dr. Eleazar stressed.

Newly-elected Bohol Representative and former Agriculture Secretary Arthur C. Yap also visited the tech forum as a special guest. *"SACY"*, as fondly called by the DA family, congratulated the officers and staff of BAR for another successful event. He added that during his stint as DA Secretary, collaboration with the food industry, LGUs, SUCs and other stakeholders, has always been a major agenda in ensuring food security and sufficiency in the country. Rep. Yap received a Plaque of Recognition from Dir. Eleazar for his active involvement and wholehearted support to the NTCP program of BAR.

Other highlights of the event included the launching of three BAR-supported publications, namely: 1) *National Research and Development Extension Agenda and Program (2011-2015)*, 2) *Technoguide on Oil Palm Production and Disease Management*, and 3) *Identification and Control Guide of Pigeon Pea Insect Pests and Diseases*.

Various seminars and product demonstrations were also held during the duration of the activity featuring various topics on agriculture and livelihood opportunities. For the exhibits, more than 94 exhibitors from the public and private sectors participated in the event. ### ***(Patrick Raymund A. Lesaca)***

Highlights during the opening program of the 6th National Agriculture and Fishery Technology Forum and Product Exhhibition at the Megatrade Hall 2. AMAS Dir. Leandro Gazmin served as keynote speaker. Photos: NDELROSARIO III

BAR launches 3 books and a video primer during 23rd BAR Anniversary

BAR Dir. Nicomedes P. Eleazar hold the Nat'l RDE Agenda and Programs for 2011-2015.

Dr. Naomi G. Tangonan of USM and Technoguide on Palm Oil Production and Disease Management.

Drs. Heraldo and Thelma Layaoen, authors of the Handbook on the Identification and Control of Insect Pests & Diseases of Pigeopea.

Viewing of the 2010 BAR Primer.

Photos: NDELROSARIO III & ACONSTANTINO

The Bureau of Agricultural Research (BAR) celebrated its 23 years of service and dedication as the country's national coordinator for agriculture and fisheries R&D on 5 August 2010 at the SM Megatrade Hall 3, SM Megamall, Mandaluyong City. The celebration coincides with the 6th Agriculture and Fisheries Technology Forum & Product Exhibition which ran from 5-8 August 2010, also at SM Megamall.

Highlighting the celebration was the launching of three BAR-supported books and a video primer on the agriculture and fisheries R&D system in the Philippines.

The three books that were launched were: 1) National Research and Development Extension Agenda and Programs (NRDEAP 2011-2015); 2) Technoguide on Oil Palm Production and Disease Management by Dr. Naomi G. Tangonan (editor) of the University of Southern Mindanao (USM); and 3) Handbook on the Identification and Control of Insect Pests and Diseases of Pigeonpea by Dr. Thelma Z. Layaoen, Odilon V. Caraan, and Heraldo L. Layaoen of the Mariano Marcos State University (MMSU).

The *NRDEAP* serves as the medium-term plan for 2011-2015 of the agriculture and fisheries R&D of the country which serves as the basis of BAR on which specific research projects will be funded. This was the output of last year's consultation-workshop attended by concerned stakeholders in agriculture and fisheries sectors in Tagaytay City.

The "*Technoguide on Oil Palm Production and Disease Management*" highlights the importance of the palm oil industry which is considered as the "sunshine industry" in Mindanao as big companies and local growers are now into oil palm plantation due to its high return. The Philippines is now eyeing to further develop the local palm-oil industry, the same industry that catapulted Malaysia and Indonesia into the global oils trade. The technoguide, which consists of seven chapters, aims to provide growers and interested private sector the technical know-how in the production of oil palm, reputedly USM's highest agribusiness commodity earner. The authors hope that with the publication of this technoguide, it will inspire more growers to plant oil palm and learn its proper management as recommended in the publication.

The "*Handbook on the Identification and Control of Insect Pests and Diseases of Pigeonpea"* documents and puts together relevant information and significant findings on the common insect pests and diseases of pigeonpea in the Philippines. It discusses specific characteristics of the pests and diseases and recommends important strategies or control measures to prevent, reduce, or suppress the damage caused by each disease and pest group. The publication of this handbook aims, not only to help local pigeonpea growers, but also provide agriculture technicians and researchers the needed information to effectively determine pest problems that may occur in their crop and immediately reduce if not totally suppress them. The handbook, which is an R&D initiative of partner-researchers from the Mariano Marcos State University (MMSU), was published by BAR as part of its humble effort and contribution to the emerging pigeonpea industry in the Philippines.

The three books were funded through BAR's Scientific Publication Grant (SPG) which is one of the services provided by the bureau to its partner R&D institutions.

Meanwhile, the audio-video titled, "*BAR: Bringing Technologies to People through Responsive R&D*", is a 15-minute presentation about BAR as the lead coordinating body for agriculture and fisheries research and development in the country. The video highlights BAR's institutional profile, its R&D agenda and programs, client-oriented services, technologies funded, and institutional partners in R&D both here and abroad.

With two decades of dedicated service, BAR has gone beyond simply funding and coordinating researches. Believing in the dictum that "research not disseminated is research not done", the bureau ensures that technologies generated from its funded researches are being adopted and used at the grassroot level. Today, BAR is better equipped and more determined to meet the challenges of our time to employ modern science in addressing the problems of the agriculture sector. ### ***(Rita T. dela Cruz)***