

BAR gears up for 7th Agri & Fishery Technology Forum and Exhibit

Highlighting Filipino ingenuity in developing new technologies to improve the lives of farmers and fisherfolk, the Bureau of Agricultural Research (BAR) is now preparing for the 7th Agriculture and Fisheries Technology Forum & Product Exhibition with the theme “*Galing ng Makabagong Teknolohiya Para sa Pag-unlad ng Magsasaka at Mangangisdaang Pinoy.*” The annual event is scheduled this year on 11-14 August 2011 at the SM Megatrade Hall 2, SM Megamall in Mandaluyong City.

The four-day event aims to identify, disseminate, and promote mature technologies in the fields of agriculture and fisheries, and to establish and strengthen linkages and networks with private sector, non-government organizations, local government units, and other government agencies in terms of product marketing.

The activity includes: 1) technical presentations/technology demonstrations, 2) business matching opportunities, 3) documentation and knowledge exchange, and 4) a national technology commercialization exhibition.

The technology forum and product exhibit is organized by BAR and highlights some of the important technologies generated under its National Technology Commercialization Program (NTCP). The NTCP is one of BAR's banner programs that serves as a vital tool for the development of enterprises

and the improvement of agriculture- and fisheries-related industries.

Around 90 exhibitors are expected to participate in the technoforum showcasing various products, services, and commercially developed by BAR partner R&D institutions including Department of Agriculture (DA) attached agencies, staff bureaus, Regional Field Units (RFUs), Regional Integrated Agricultural Research Centers (RIARCs), Regional Fisheries Research and Development Center (RFRDCs), State Universities and Colleges (SUCs), and private sector.

The product exhibit also brings together manufacturers, distributors, dealers, and buyers and serves as a platform that creates business opportunities for agribusiness companies and opens up new doors for entrepreneurship.

Gracing the opening program and leading in the ribbon-cutting and

opening of the product exhibits shall be DA Secretary Proceso J. Alcala. To join him are BAR Dir. Nicomedes P. Eleazar and Asst. Dir. Teodoro S. Solsoloy who will launch three books on climate change, rainfed agriculture, and sweet sorghum as biofuel which are featured parts of BAR's priority RDE programs. ### (Ma. Eloisa H. Aquino)



BAR, SLSU-JGE collaborate to boost the Philippine herbs and spices



BAR Director Nicomedes P. Eleazar (right) signing the MOA with SLSU-JGE College Administrator Cesar L. Nazareno (left).

PHOTO: MVALDEABELLA

Realizing the importance and the income-generating possibilities that herbs and spices have to offer, researchers from the Southern Luzon State University-Judge Guillermo Eleazar (SLSU-JGE), based in Tagkawayan, Quezon, proposed a research development and extension (RDE) project optimizing the agribusiness potentials of the Philippine herbs and spices.

The project, “Production, Processing, and Marketing of Herbs and Spices,” which will be carried out with support from the National Technology Commercialization Program (NTCP), one of the banner programs of the Bureau of Agricultural Research (BAR), was formally initiated with the signing of the Memorandum of Agreement (MOA) between BAR Director Nicomedes Eleazar, and SLSU-JGE College Administrator Cesar Nazareno. Serving as witnesses to the

agreement were representatives from the Local Government Unit (LGU) of Tagkawayan, Quezon headed by Hon. Jose Jonas A. Frondoso, municipal mayor, and Mr. Rolando Mendoza, municipal agricultural officer, together with Ms. Evelyn Juanillo, BAR research coordinator.

The highlight of the event was the handing over of BAR's initial funding support to the new SLSU-JGE project to Mr. Cesar Nazareno of SLSU-JGE. In the same venue, SLSU-JGE also received the second release of the budget for their two continuing projects, namely: “Dilis-Fortified Malunggay Powder” and “Herb-Enhanced Smoked Tamban.”

In return, SLSU-JGE College Administrator Cesar Nazareno, on behalf of the faculty members of SLSU-JGE, expressed his gratitude to the bureau for its continuous support to their RDE projects. Likewise, Mayor

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CABI officials visit BAR

Key officials from the Center for Agricultural and Bioscience International (CABI) paid a visit to the Bureau of Agricultural Research (BAR) as part of their regional tour and to appraise the bureau on CABI's current programs and initiatives on research and development that might lead to future R&D collaboration. The Philippines is a member of this inter-governmental organization.

The CABI officials were led by Dr. Qiaoqiao Zhang, director for membership; Dr. Loke Wai-Hong, regional director for East and Southeast Asia; and Dr. Philip Abrahams, Business Development Director. On the part of BAR, assistant director Teodoro S. Solsoloy, who welcomed the visiting dignitaries, said their visit to the Philippines will open windows of opportunities for BAR and CABI to collaborate on enhancing agriculture and fisheries R&D.

Other BAR officials include Dr. Carmencita Kagaon, division head, Institutional Development Division (IDD); Mr. Victoriano Guiam, section chief of the Institutional Linkages and Enhancement Section of IDD; and BAR technical staff that included Jennifer Alianza, Maylen Villareal, Cynthia Remedios de Guia, Ryan Joseph Abrigo, and Patrick R.A. Lesaca.

The visit of CABI officials focused on the presentation of Mr. Philip Abrahams on CABI's PlantWise, a global initiative to improve food security and



Officials from the Center for Agricultural and Bioscience International (CABI) visit BAR for an orientation of CABI's current programs and initiatives on research and development (R&D) leading to potential future R&D collaborations. PHOTOS: PLESACA

the lives of the rural poor by reducing crop losses. PlantWise was conceptualized in 2009 and is currently being implemented in 15 countries worldwide. According to Mr. Abrahams, through PlantWise, a country can reduce crop losses by collecting and sharing vital information about plant health. With the right knowledge we can identify plant health problems, slow down the spread of plant pests and diseases, and provide the correct treatments before yields are

significantly affected. CABI PlantWise is also the center's biggest database which is still undergoing prototype testing with launching targeted for 2012. Its information comes from content providers and contributors which can be shared while retaining Intellectual Property (IP) ownership. It has 2 components: the Plant Clinics and the Knowledge Bank.

The CABI helps developing countries set up and run independent

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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.

Innovation and entrepreneurship highlight PhilDev Forum; BAR joins more than 400 participants



DOST Secretary Mario G. Montejo keynotes the opening program of the PhilDev Forum with more than 400 participants in attendance including those from the government, academe, and business sector.

PHOTOS: RDELACRUZ



Technical staff from the Bureau of Agricultural Research (BAR) joined the more than 400 participants in the first ever "PhilDev Forum: Innovation and Entrepreneurship for Globally Competitive Philippines" held at the Hotel InterContinental Manila on 14 June 2011. Participants from BAR were: Rita T. dela Cruz of the Applied Communication Division (ACD), Alexander G. Arizabal, Jr. of the Technology Commercialization Division (TCD), and Mara Shyn M. Valdeabella of the Office of the Director (OD).

Organized by the Philippine Development Foundation (PhilDev), the forum discussed practical ways to achieve economic growth, particularly through entrepreneurship and innovation. The forum presented the challenges and opportunities in innovation as well as the

capacity of the Philippines to build and strengthen its entrepreneurial potential.

PhilDev, formerly Ayala Foundation USA, is a public charitable organization that focuses on building an ecosystem of science & technology-based entrepreneurship and innovation for social and economic development in the Philippines. It also collaborates with the private sector, the government, and the academe to create a network of support for its initiatives on education, innovation, research, training, and build the entrepreneurial ecosystem, as well as initiatives aimed at helping the Philippines achieve a position in the top 50 nations as measured by the World Economic Forum Global Competitiveness Index.

Attending the opening program was Science and Technology Secretary Mario G. Montejo, who read a message from President Benigno Aquino III affirming his commitment to the mission of PhilDev and emphasizing the importance of S&T as a driving force in fulfilling the social contract of the government with the Filipino people. "A

proper focus on S&T promises key results in poverty reduction, economic growth and climate change adaptation. We have to be innovative. And innovation means a new, better way of doing things in our country," Montejo quoted the President.

Culminating the one-day activity were several panels and sessions discussing topics on Philippine global competitiveness, human capital development, entrepreneurship success models, strategic areas for development, and developing the ecosystem for innovation and entrepreneurship.

A roster of important figures from the government and the academe, and some of the country's distinguished experts in science, technology, and entrepreneurship comprised the resource speakers and panellists. This included: Sec. Armin A. Luistro of the Department of Education; Sec. Jose Rene D. Almendras of the Department of Energy; Dr. Patricia B. Licuanan of the Commission on Higher Education; Usec. Cristino L. Panlilio of the Department of Trade and Industry; Dr. Paco SA Sandejas, founder of the Brain Gain Network; Country Manager James G. Velasquez of IBM Philippines; Sr. Vice President Luis Miguel O. Aboitiz of Aboitiz Power Group; and Deputy Director General Andrew Michael S. Ong of IP Philippines, to name a few. ###

(Rita T. dela Cruz)



Participants from BAR: (L-R) Mara Shyn M. Valdeabella, Rita T. dela Cruz, and Alexander G. Arizabal, Jr.

Progress..from page 13



Participants during the "Performance Assessment and Planning Workshop" on the Japanese Government 2KR-assisted projects held in Clarkfield, Pampanga.

of each project and the strategies being made to promote the activities at the national and regional levels. The presenters were also asked to present the problems encountered during the period of implementation and to prepare the necessary catch-up plans to warrant successful conduct of the projects. At the end of each presentation, an open forum or question and answer portion followed.

Presenting for BAR was Mr. Anthony B. Obligado, head of BAR's Technology Commercialization Division (TCD) wherein he reported on the salient accomplishments of the Technology Management for Competitive Agriculture and Fisheries Sector (TMCAF). According to Mr. Obligado, TMCAF is a vehicle identified by BAR to speed up the transfer of mature technologies for farmers' and fishers' use for increased productivity and income by commercializing these technologies, thus, transforming agriculture and fisheries into market-driven sectors under the 2KR program. To date, 27 TMCAF-supported projects have already been implemented in various parts of the country since the project started in January 2010.

Mr. Hiroshi Kodama, an expert from the Japan International Cooperation Agency (JICA), was invited to share his experiences particularly on the developmental technology aspects of the 2KR projects. He is currently working at the DA as Policy and Planning Advisor for Agribusiness. Mr. Kodama also worked as an expert for a regional rural

development program in FAO from 2006 to 2010. He was involved in the planning and implementation of rural development projects in Indonesia, the Maldives, Sri Lanka and Thailand. He started his stint in the DA in July 2010 and been engaged in micro and macro agribusiness investment programming and supply chain management. Mr. Kodama is currently working closely with NAFC on 2KR.

After the presentations were completed, Ms. Avellana presented before the group the consolidated agreements and recommendations reached during the deliberations. She

reminded the project proponents to be mindful of the early submission of accomplishment reports and the audited financial statement required by National Economic Development Authority (NEDA) and the Department of Budget Management (DBM).

The 2KR Planning and Assessment concluded with the distribution of certificates among the participants and a closing message from Mr. Kodama who said that he learned a lot during the presentations and gained a better perspective on the dynamics of Philippine agriculture. ### (Patrick RA Lesaca)

BAR, SLSU-JGE..from page 1

Frondoso, in his message of support to the project, also thanked the bureau, specifically Dr. Eleazar, for the continuous assistance being rendered to the municipality.

Serving as the event's guest speaker, BAR Dir. Nicomedes P. Eleazar, mentioned the importance of the indigenous herbs and spices not only for domestic but also for commercial purposes. In his speech, he also presented other BAR-funded projects on indigenous crops that, after being properly packaged and commercialized, proved to be highly marketable and profitable.

"Let us not forget the very purpose of why we are doing R&D—that is to do research, not for research's sake alone, but also to spread the good news from research so that others can benefit from it," explained Dr. Eleazar. ### (Mara Shyn M. Valdeabella)



2 promising peanut lines from ICRISAT recommended as NCT entries



BAR Director Nicomedes P. Eleazar shows the two promising peanut lines from ICRISAT: ICGV 00350 and ICGV 99046, which were found to be consistent high yielders and were recommended as official entries for National Cooperative Testing (NCT). PHOTOS: RDELACRUZ

Two promising lines of peanut from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), ICGV 00350 and ICGV 99046, were found to be consistent high yielders and were therefore selected and recommended as official entries for National Cooperative Testing (NCT), reported Ms. Rosie G. Aquino, breeder and researcher of the Department of Agriculture-Cagayan Valley Integrated Agricultural Research Center (DA-CVIARC) and focal person for peanut, during the semi-annual review of the BAR-ICRISAT project, "Field Testing of ICRISAT Legume Varieties and Technologies in Selected Regions in the Philippines" held on 27-29 June 2011 at the PHINMA Training Center in Tagaytay City. The BAR-ICRISAT project is currently on its second phase with focus on the on-farm trial cum seed production for commercialization.

Four other peanut lines from

ICRISAT (ICGV 00350, ICGV 01376, ICGV 91114, and ICGV 99046) were subjected to adaptability yield trials to determine performance under different agro-climatic conditions (wet and dry seasons) in seven regions of the country (Regions 1, 5, 6, 7, 8, 9, and 10). These peanut lines were compared to the existing national varieties (check variety) like *Namnama 1* and 2, *Ilocos Pink*, *Asha* peanut, and farmers' variety. Among the parameters used were bean yield (kg/ha), pod yield (kg/ha), and percentage of yield advantage over check varieties.

ICGV 00350 and ICGV 99046 consistently performed well under the two seasons compared to other peanut lines. Given this promising result, the Field Legume Technical Working Group (FLTWG) recommended the two top lines of peanut as entries for the conduct of 11 NCTs.

The conduct of NCT is required before seeds are certified by

the National Seed Industry Council (NSIC). Seed certification is important as it ensures varietal purity, genetic identity, and the overall quality of the seeds which effect production, processing, storage, and distribution.

ICGV 99046, which is the first entry for NCT, is red in color, large seeded, moderately sweet in taste, and with medium duration, while ICGV 0035, the second NCT entry, is rose tan in color, has medium to long seeds, and sweet in taste (similar to BP Pn9 variety), and also with medium duration.

According to Mr. Elmer E. Enicola, researcher from the Institute of Plant Breeding of the University of the Philippines Los Baños (UPLB) and one of the experts tapped for the BAR-ICRISAT legume project, the Philippines requires 60,000-70,000 tons of peanut every year of which more

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Sagada farmers look into the potential of *Adlai*

Travelling around the Cordillera Administrative Region (CAR), staff of the Bureau of Agricultural Research (BAR) aimed to document reports of other varieties of the *adlai*, as well as try to piece together its possible origin, and perhaps introduce the Department of Agriculture (DA)–BAR's efforts to promote said crop to the locals.

In Sagada, Mt. Province, farmers and other municipal agricultural officers (MAOs) were intrigued by the BAR representatives' reports, and were most interested when presented with seed samples provided by Region 4A. Ms. Evelyn Pulon, a local farmer, reported that an individual by the name of Cesar Sawadan, from Malibcong, Abra, was the one who handed her two varieties of *adlai* and encouraged them to try out the crop. She disclosed that one of these two varieties was, in fact, edible.

Ms. Pulon took the time to show the DA-BAR team the other variety, which grew in the wild akin to

a weed. She added that most locals took its presence for granted as it grew mostly near abandoned rice fields, merely treating it as a source of materials for beads, curtains, trays, and necklaces.

In Kiangnan, after holding a presentation on DA-BAR's efforts in promoting *adlai*, the information proffered by the residents was that farmers and MAOs are aware of *adlai* only as a weed that grows by the waysides and creeks, often ignored unless intended to be used as accessories or playthings—much like the testimonies from Sagada. Again, farmers were surprised when presented with the variety of *adlai* that is edible, more so when it was brought up that the said crop is considered to be a staple food, an alternative to rice and corn, by another region.

At the same time, the DA-BAR



PHOTO: MAGUMAPAC

CABI officials..from page 2

plant clinics and build plant health networks. These facilities, staffed by trained “plant doctors” with expertise on pests and diseases, help farmers find solutions to their crop health problems. These clinics can help prevent farmers from suffering devastating crop losses. A present task is the production of an interactive plant disease map in which one can see where diseases are prevalent (only where plant clinics are operating). The maps can be a means of anticipating disease problems before they spread.

Dr. Solsoloy asked CABI officials, that being a member country of CABI, what benefits the country can possibly avail of. Dr. Qiaoqiao Zhang explained that as a member country -- the Philippines is eligible to limited free access to CABI's information products, compendium of pest and diseases, and limited access to databases. Specific to this is the

availability of an in-house expertise for free identifications of microbial samples, Dr. Zhang concluded.

Another feature or benefit is the consultancy services where members can avail up to three-day consultancy per year to support the development of policy papers pertaining to Philippine agriculture.

Meanwhile, Dr. Loke also explained the role of CABI in agricultural research and expounded on the activities that their institution does to help alleviate poverty worldwide. CABI is also in the medical field and BAR can nominate a Philippine medical research institution to avail of CABI information in medical research.

CABI and BAR officials further discussed the roles of both institutions in dealing with major issues in agriculture today such as food security and climate change. ### (Patrick RA Lesaca)

representatives asked the locals from both aforementioned areas to fill out questionnaires in trying to piece together a tangible history of *adlai* in the Philippines. Differing responses and stories were shared but the most common thread is that this crop has been thriving in our land for as long as they can remember.

Treated as an accessory or as a toy, Mr. Jimmy Cabigat from Banaue shared that they even resorted to selling necklaces made from *adlai* back in the old days for 5 pesos a piece. This particular variety of *adlai* is observed to be growing mostly in low-lying areas such as riverbanks, and seldom in upland areas. Until now, what is mostly referred to as the “wild” variety of *adlai*, has been the only kind that the majority of the locals of CAR know.

Even with a slew of new learnings such as different names for *adlai*, e.g., *gistakyan*, *agle*, *makabuhay*, and even *kabbaong*, BAR's documentation of how and where this crop came to be remains a continuing effort. ### (Maria Anna M. Gumapac)

Progress of 2KR-funded projects assessed



Mr. Anthony Obligado, BAR-TC head (top, right) and Mr. Patrick Lesaca of BAR-ACD (left) present the 27 projects that are being coordinated by BAR which are funded under 2KR.

PHOTOS: AOBLIGADO/PLESACA

The Bureau of Agricultural Research (BAR) participated in a three-day “Performance Assessment and Planning Workshop” on the Japanese Government 2KR-assisted projects being administered by the National Agricultural and Fishery Council (NAFC). This was held on 15-17 June 2011 at Montevista Villas, Mimosa, Clarkfield in Pampanga.

The planning workshop was called to assess the progress and development of the 2KR-funded projects and how such undertakings are being implemented across the country. The activity is aimed at firming up plans, targets and resolving issues and problems pertaining to the projects' activities. Synthesizing the various modes of project implementation by the proponents themselves will address the economic and social impacts of the projects to individual farmers and fisherfolk, and to the communities as well.

The 2KR (Kennedy Round 2), now known as the Japan Grant Assistance for Underprivileged Farmers,

is a grant facility designed to assist developing countries, like the Philippines, in achieving food sufficiency through food augmentation plans and program. The assistance comes in the form of grants-in-aid, which is used to procure farm inputs such as fertilizers, pesticides, farm machinery and other agricultural equipment. The recipient country monetizes (sells) these farm inputs and the peso proceeds are used to finance agricultural projects.

The Philippine Government, for the past two decades, has availed of the 2KR Program under the supervision and administration of NAFC, which is an attached agency of the Department of Agriculture (DA), that assists the government in generating resources to support the implementation of policies, programs and projects which are geared toward the development of the agriculture and fisheries sector.

Ms. Elgie Namia, division chief of NAFC's Special Projects Divisions (SPD) welcomed the

participants and expressed her appreciation to all the delegates for coming and being part of the planning workshop. Ms. Floreliz Avellana of SPD presented the workshop overview and the mechanics of the activities while Mr. Braulio Castro, Jr. enumerated the necessary reportorial requirements for each of the 2KR projects. According to Ms. Avellana, convening selected agencies of DA in the conference was the first of its kind.

Eight on-going and two newly-approved projects under the 2KR are currently being facilitated by NAFC. These included: 1) Fisheries Grassroots Outreach (FishGrO) of the Bureau of Fisheries and Aquatic Resources - National Integrated Fisheries Technology Development Center (BFAR-NIFTDC); 2) Technology Management for Competitive Agriculture and Fisheries Sector of the Bureau of Agricultural Research - Technology Commercialization Division (BAR-TC); 3) Regional Freshwater Fisheries Center's Continuing Capability Building for Integrated Development of Bicol Freshwater Fisheries of the Bureau of Fisheries and Aquatic Resources-Region 5; 4) Agrikultura: Kaagapay ng Bayang Pinoy Program of the National Agricultural and Fishery Council (NAFC); 5) Barangay Food Terminal of the Philippine Center for Postharvest Development and Mechanization (PhilMech); 6) Enhancing Rural Employment Through Promotion of Village-Based Dairy Enterprise of the Philippine Carabao Center; 7) Enhancing Farmers' Capacity to Access, Analyze and Utilize Statistical Information of the Bureau of Agricultural Statistics; 8) Rehabilitation and Modernization of Livestock “Oksyon” Markets in the Philippines of the Bureau of Animal Industry.

The presentations centered on highlighting the major accomplishments

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BAR lays out priority programs at 1st Int'l Agri-Tourism Expo



Dr. Teodoro S. Solsoloy, assistant director of BAR, presents the bureau's priority R&D programs during the 1st International Agriculture and Tourism Expo. PHOTO: MEAQUINO

In order to drumbeat the government's efforts to provide a better life for Filipinos through agricultural research and development (R&D), Dr. Teodoro S. Solsoloy, assistant director of the Bureau of Agricultural Research (BAR), presented the bureau's priority R&D programs during the 1st International Agriculture and Tourism Expo held at the World Trade Center in Pasay City on 30 June 2011.

As part of the participation of the BAR in the international expo, Dr. Solsoloy laid out the programs and agenda of BAR during the plenary session following the event's opening program.

In his presentation, he said that the overarching perspective of the various projects and activities of BAR are in harmony with the Department of Agriculture's (DA) *Agri-Pinoy* strategic framework to promote agriculture's role "from farm to table."

With its mandate to fund agriculture- and fisheries-related R&D undertaken by researchers and scientists in the government, academe, and non-government research institutions, BAR serves as the country's focal agency coordinating all agricultural R&D

programs and projects, including their monitoring and evaluation.

Dr. Solsoloy highlighted BAR's nationwide programs that include the Community-based Participatory Action Research (CPAR) which aims to empower farmers and fisherfolk in adopting appropriate and location-specific technologies as well as assist them in learning practical skills in farm management such as basic record keeping. Another priority mentioned was the National Technology Commercialization Program (NTCP) where R&D results generated by project proponents are utilized in the development and promotion of products and other innovations which have market potential in both local and international markets.

In line with BAR's banner programs on CPAR and NTCP, Dr. Solsoloy likewise educated the audience about BAR's support to organic agriculture, climate change, and biotechnology including exploring the potentials of indigenous plants for health and wellness. He also mentioned BAR's support to basic, strategic, and on-farm research.

Moreover, he put forward

BAR's continuous support to human resource and R&D facilities development through scholarships and institutional grants to partner agencies in agriculture and fisheries in order to create a critical mass of competent researchers and scientists, and make available updated and conducive facilities for undertaking R&D.

To ensure that R&D results are communicated to stakeholders including farmers and fisherfolk, BAR also invests in ICT and knowledge products development and packaging, said Dr. Solsoloy.

Dr. Solsoloy described some of the major and regular activities of BAR such as the annual National Research Symposium (NRS) where scientists and researchers are recognized and given a venue to communicate R&D results; the National Technology Forum (NTF) where innovative products and technologies generated through agriculture R&D are showcased to bring them closer to the market; and the free monthly BAR Seminar Series to promote greater awareness on agriculture and fisheries R&D.

During the open forum, Dr. Solsoloy answered several queries from interested farmers, entrepreneurs, researchers and private individuals from a diverse background who showed eagerness in exploring opportunities to avail of the services and assistance being offered by the DA through BAR.

In prioritizing which projects or commodities to support, BAR is guided by the Research, Development, and Extension Agenda and Programs (RDEAP) for 2011-2016. Dr. Solsoloy mentioned that other information related to BAR programs, activities, and useful resources on agriculture and fisheries can be freely obtained at www.bar.gov.ph. ### (Miko Jazmine J. Mojica)

Adaptability trials of *Adlai* in Region 2 in progress

The Bureau of Agricultural Research (BAR) visited the province of Isabela in order to document the latest updates in the project that aims to promote *adlai* as traditional staple food. The two revisited sites are located in Isabela State University (ISU) and the DA's Cagayan Valley Integrated Agricultural Research Center (CVIARC).

In Cabagan, Isabela, Dr. Edwin Macaballug, a professor of the Agriculture College and the one spearheading the *adlai* project at ISU, met with the BAR representatives on 23 June 2011. Troubled by problems he has personally encountered in his province during times when rice actually became scarce for him and his people, he was most interested in looking for any alternative that could help alleviate this concern. He believes he has found this alternative in *adlai*.

Dr. Macaballug allotted 400 sq m for the project, planting the three varieties proposed by the indigenous people (IP): *tapul*, *ginampay*, and *gullian*. Keeping to the practice defined in the program for a planting distance of 60×90 cm and two seeds per hill, he initiated planting on January 10 of this year. On the same week of the BAR team's visit, Dr. Macaballug reported their plans of carrying out the first harvesting, adding that maturity among the grains do not occur at the same time. He noted that the *adlai* crop is ready for harvesting once at least 80% of the grains are of a certain brownish color.

Not without problems of course, the professor enumerated the difficulties they met along the way that include leaf blight and the coccinellid beetle, and the occurrence of rosetting that is rampant regardless of the variety. He also indicated that he remains optimistic on *adlai* and does have future plans for the crop, having already offered another 14 hectares intended for planting *adlai* in order to help out CVIARC with the objective of producing 37 tons worth of the said crop for Region 2 alone.

Initiating an exploration of *adlai*'s potential beyond that of the IP's,

Dr. Macaballug reserved another separate 1,500 sq m of land, and discovered that he did not need to conduct seed preparation involving soaking the seeds in water prior to planting. With a planting distance of 60 × 60 cm and one seed per hill, he further observed that this separate set of *adlai* took the same number of days to germinate as compared with that of the original plot. In this experimental plot, Dr. Macaballug claims that germination reached approximately 90 percent, needing no replanting. He noted that as long as the soil's moisture is satisfactory and relatively wet, the results are promising. Sharing his findings, Dr. Macaballug is enthusiastic about *adlai*'s potential.

In Ilagan, Isabela, Mr. Roynic Aquino, one of the focal persons of *adlai* in CVIARC, briefed the team on the latest efforts they've expended on said crop, including the latest developments since BAR's last visit back in May. Mr. Aquino reported that the first harvest did not fare so well. Setting aside the previously reported difficulty with the Asiatic corn borer, another issue that has risen—a prominent one that any other crop might encounter—has to do with temperature. In one hill, nearly 50 percent of the grains were unfilled, leaving Mr. Aquino's team to theorize that temperature may be an imposing factor. Unlike corn, *adlai*'s silk is very much exposed to the sun. It dries easily when the day is hot and windy, thus temperature affects fertilization, resulting in unfilled grains. Proof of this dismal result is the sight of numerous unfilled grains littering the pathway, as the team observed the site.

Mr. Aquino does add his observation that once watered by rain, *adlai* seems to recover quickly enough.

Similar to Dr. Macaballug's



observations, Mr. Aquino found that maturity does not occur at the same time as some grains remain green while others are already brown in color—the color change he takes to indicate that a grain has matured. In a similar effort of exploring what measures can be taken with the problems with *adlai*, Mr. Aquino shared their threshing attempts with said crop. In one instance, they attempted to feed the whole harvested plant—stalks, leaves, and all—into a corn thresher and ended up with a lot of impurities. Discarding the stalks proved more promising, with much lesser impurities, although this particular attempt proved more time consuming. Suffice to say, they are hoping for a thresher to be developed that is more suited to handling *adlai*.

Similar to the enthusiasm and persistence that the two focal persons share as they relate their respective findings and observations, *adlai* appears to be thriving just as well in spite of the trials and the difficulties encountered. ### (Maria Anna M. Gumapac)



Dr. Nicomedes P. Eleazar
BAR Director



Dr. Victoria D. Espaldon
Climate Change Technical Expert



Dr. Oscar B. Zamora
Climate Change Technical Expert

BAR Dir. Nicomedes P. Eleazar leads the finalization of the Climate Change RDE Agenda and Program together with tapped technical experts from UPLB, Drs. Victoria Espaldon and Oscar Zamora. PHOTOS: RDELACRUZ



BAR finalizes climate change RDE agenda and program

The Climate Change R&D Team of the Bureau of Agricultural Research (BAR) led by its chair, Dr. Nicomedes P. Eleazar, and experts tapped from the University of the Philippines Los Baños (UPLB), convened to finalize the Climate Change Research, Development and Extension Agenda and Program (RDEAP) for Agriculture and Fisheries. The RDEAP shall be packaged and published as a reference material to be distributed to partner institutions and stakeholders. The activity, "Climate Change R&D Team Agenda Review and Planning Workshop," which was held on 23-25 June 2011 in Baguio City, also aimed to revisit and review previous plans and programs for climate change, and to update emerging issues related to climate change and incorporate them

into the current program.

"The challenge to us in the R&D sector is to arrive at a consensus or a common scope on climate change mitigation and adaptation policies and have this integrated into our national development programs. Although climate change as an area for RDE attention is still considered marginal compared to poverty alleviation and economic growth, there is a great opportunity to improve the connection and relevance between climate variability and development," stressed Dr. Eleazar in his opening message. He also mentioned the need to better equip the R&D sector in light of the climate change challenge and to enhance R&D strategies and activities that would specifically address climate change adaptation and mitigation issues.

Dr. Ma. Victoria D. Espaldon,

dean of the UPLB-School of Environmental Science and Management (SESAM) and one of the tapped experts for climate change, led the review of the Climate Change Action Plan - an output of a previous small group meeting of the BAR Climate Change Team. The Climate Change Action Plan lays out specific R&D priorities, start of implementation, and the possible implementing agencies.

Meanwhile, another technical expert, Dr. Oscar B. Zamora, dean of the UPLB-Graduate School and a professor of the UPLB College of Agriculture, discussed some of the key points that must be considered and included in the finalization of the Action Plan and the RDE Agenda and Program for Climate Change.

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BAR Asst. Director Teodoro Solsoloy (2nd from right) poses with partners from the regions and BAR staff at the exhibit of the International Agri-Tourism Expo. PHOTO: NDELROSARIO III

Promotion of locally available botanical plants

Researchers from Department of Agriculture-Regional Food Processing and Preservation Center and Western Mindanao Integrated Agricultural Research Center (WESMIARC) in Zamboanga Sibugay developed the project to increase utilization of locally

available botanical plants in the country. The study made use of *malunggay* leaf and combines it with lemon grass, calamansi, and yacon to prepare juice concentrate, and consume yerba buena, miracle leaf, *lagundi*, gota kola, *banaba*, and *malunggay* for tea preparations. Based on the study, the used botanical plants were

scientifically proven to have medicinal and therapeutic properties. Researchers conduct seminars and trainings to farmers, their housewives, and out-of-school youth for information dissemination on botanical plants utilization and processing (juice and medicine). This package is intended to subsequently be passed on to the region's farmers to expand crop production and eventually address consumer demand for health products in the area.

Sweet sorghum processing and marketing

The project aims to promote and commercialize sweet sorghum-based food products from seed grains, specifically for feed and flour, vinegar and syrup, to provide livelihood opportunities to farmers. For the past two years, about 25 hectares have been planted with sweet sorghum in Ilocos Norte. The Bungon Seed Producers supply seeds to BAPAMIN Farmers Cooperative. This has encouraged more farmers to plant sweet sorghum, gaining yield of 20 tons from 8 tons. As the demand for feed increases, production increases resulting to more income for farmers. ### (Ma. Eloisa H. Aquino)

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but it's good to note that our local peanut production areas have slowly increased after it declined in the 90s," said Enicola.

Given the need to increase local production of peanut in the country, Dr. Nicomedes P. Eleazar, director of BAR, emphasized the need to increase and expand the production areas for peanut during the semi-annual review. "Given that our country is importing more than 50 percent of its local consumption, this only proves that there is a great demand for peanut and, at our end of the R&D sector, we see that there is a need to immediately address this," Eleazar stressed.

Dr. Eleazar also mentioned opportunities for marketing and linkage with the private industries since "there is a large demand for peanut butter and other processed products." ### (Rita T. dela Cruz)



BAR Director Nicomedes Eleazar (2nd from right) hands over the high-yielding peanut lines to WESVIARC Manager Corazon Arroyo (2nd from left) for national cooperative testing in Region 6. Also in the photo are: BAR-PMED Head Salvacion Ritual (left) and Ms. Rosie Aquino of CVIARC and focal person for peanut. PHOTO: RDELACRUZ

BAR-supported commerciable products showcased in Int'l Agri-Tourism Expo



BAR Exhibit during the Int'l Agri-Tourism Expo held at World Trade Center. PHOTOS: NDELROSARIO III

The Bureau of Agricultural Research (BAR) participated and served as one of the sponsors during the 1st International Agriculture and Tourism Expo on 30 June - 2 July 2011 at the World Trade Center, Pasay City. The three-day event showcased the agri-tourism programs of the Department of Agriculture (DA) and the Department of Tourism (DOT).

"Agri-tourism will directly benefit the people as this creates additional employment, livelihood, and incomes to local farmers, residents, workers and entrepreneurs. As a rule of thumb, every tourist that comes can generate jobs for five people for every one direct hire in the tourism industry," said DA Undersecretary Joel Rudinas who delivered a message in behalf of President Benigno S. Aquino III.

BAR showcased projects/products supported through its National Technology Commercialization Program (NTCP), and the National Agricultural and Fishery Council (NAFC) through the Japan Official Development Assistance's (ODA) - 2KR Program Grant Assistance for Underprivileged Farmers.

NTCP is one of BAR's banner programs that serves as a vital tool for the development of enterprises and the improvement of agriculture- and fisheries-related industries.

Among the BAR-supported projects featured were on mango wine and dried mango products, abaca fiber and products, botanical juices from

indigenous plants, and sweet sorghum products.

Promotion of mango wine and dried mango

The project was developed by the Ramon Magsaysay Technological University in Zambales which aimed to boost the production and enhance the quality of its processed mango products. At present, 10 *kaings* or 220 kgs of fresh mangoes are being processed daily with a net production of 132 kgs of dried mango and about 400L of Spence syrup that will undergo processing to mango wine. The project not only offers livelihood programs but also provides foods that are readily available.

Enhancing the productivity of abaca farms

The program emphasizes the active participation of abaca farmers as partners in adaption and further improvement of integrated farming systems to increase abaca farm productivity. These sought to increase the productivity of abaca (*Musa textiles*) and improve the socio-economic condition of the smallscale abaca farmers through diversified and integrated abaca-based farming systems and through value-adding activities. With this project, production of abaca fibers in Sorsogon and Albay, has increased.

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AMAS Director Leandro Gazmin discusses with Dr. Edith Lomerio, OIC regional director of FIDA V and Abakayamanan project leader which was one of the featured technologies at the BAR booth. PHOTOS: NDELROSARIO III

Seminar on climate change tackles access to technology and information



Dr. Esteban Godilano, an environmental science expert lectures on Climate Change and Geographic Information System (GIS) during a BAR-organized seminar series. PHOTOS: RDELACRUZ

Access to base maps generated through modern technology and shared responsibility in managing our resources are both necessary and practical solutions in coping with the threats of climate change. This summarizes the seminar on climate change using the geographic information system (GIS) technology given by Dr. Esteban Godilano at the Bureau of Agricultural Research (BAR).

Dr. Godilano, an environmental science expert connected with the Department of Agriculture (DA), said that the Philippines, currently on the top three most vulnerable countries in the world, is in the forefront in terms of awareness to climate change, particularly after the unexpected wrath of Typhoons

Ondoy and Pepeng in 2009.

However, Dr. Godilano showed in his presentation why awareness is only the first step; it must be followed through by concrete actions.

Citing major scientific data generated from international studies about the reality of climate change, he showed the predicted impacts of La Niña events in the country that would cause massive landslides, soil erosion, and flooding due to heavy rainfall. According to the GIS maps generated, he said that the impact of La Niña is expected to affect 69 out of 81 provinces in the Philippines.

"Today, GIS is no longer a luxury for the academe, scientists, and policy makers. It now becomes a

necessity. Access to these maps should be available to the public especially to local government units, farmers, and fisherfolk," he stated.

"It is not true that farmers couldn't understand how remote sensing or GIS works. If you explain to them in plain language why it's useful, they could even help you in getting the correct data you need to provide accurate results in generating the maps," he added.

Dr. Godilano showed some of the local maps generated through GIS, including suitability maps of planting crops such as peanut, banana, sugarcane, and coconut.

Moreover, on agriculture and fisheries alone, Dr. Godilano discussed the adverse impacts of climate change including changes in yield and growing season patterns, onslaught of pest and diseases, salinization of irrigation water, loss of fertile lands caused by rising sea levels, and more unpredictable farming conditions.

"With uncertainties in climate becoming the norm rather than the exception, public access to maps and information is one of the critical factors towards saving lives and properties," he stressed.

Dr. Godilano also emphasized the necessary concerted and integrated effort on watershed management and planning.

"Landslide and flooding do not respect administrative boundaries or local jurisdictions," he quipped on why watershed management is a shared responsibility.

This shared responsibility could also be extended on the individual level. Dr. Godilano explained that while the country's contribution to greenhouse gas emissions is insignificant compared to industrialized countries such as China and the US, Filipinos could easily make valuable contribution to climate change mitigation by saving on energy.

"On the individual level, unplugging our appliances at home or switching off the lights when it is not being used are simple acts of responsible energy consumption that could help in mitigating climate change," he said. ### (Miko Jazmine J. Mojica)

BAR finalizes..from page 6

BAR's initiatives to address climate change started in 2009 when it convened experts from UPLB, UP Diliman, DOST-PAGASA, DA-BSWM and other concerned agencies to discuss the potential impacts and effects of climate change on agriculture and fisheries in the country and to identify priority R&D initiatives that would help address or mitigate its effects on the agriculture sector, in general, and the farmers and fisherfolk, in particular. This was followed by other meetings until the RDEAP for Climate Change was hammered out.

The Climate Change RDEAP is composed of four components: 1)

short-term adaptation strategies; 2) long-term adaptation strategies; 3) other adaptation strategies (from the DA Climate Change Program); and 4) mitigation strategies.

Priority is given to studies for developing adaptation strategies to address the potential damage, to take advantage of opportunities, or to cope with the consequences of climate change. Other adaptation strategies from the Department of Agriculture - Policy and Implementation Program on Climate Change (DA-PIPCC) were also included in the framework. ### (Rita T. dela Cruz)

BAR joins 1st Agrikultura Trade Fair; Sen. Pangilinan keynotes opening



We have to make farming and fisheries viable. Modern farming, modern fishing is the way to go. We have to turn our farmers and fisherfolk into entrepreneurs. ~ Sen. Pangilinan

PHOTO: NDELROSARIO III

Senator Francis Pangilinan, chairman of the Senate Committee on Agriculture and Food and co-chairman of the Congressional Oversight Committee on Agriculture and Fisheries Modernization, keynoted the opening program of the 1st Agrikultura Trade Fair on 24 June 2011. In his speech, he stressed the need to make farming and fisheries viable and promote modern farming and fishing as the way to go. The fair ran from 24-26 June 2011 at the SM Megatrade Halls 2 and 3 in Mandaluyong.

Bearing the theme "Agraryo, Agrikultura at Kalikasan: A Convergence Towards Sustainable Rural Development," the activity is the first of its kind that three national government agencies, the Departments of Agriculture, Environment and Natural Resources, and Agrarian Reform, are collaborating on under the National Convergence Initiative (NCI) Program of the government. The activity featured new trends, technologies, and agricultural produce from the country's very own farmers, fisherfolk, agrarian reform beneficiaries, and upland dwellers, and establish linkages among and possible markets. The Bureau of Agricultural Research (BAR) served as

one of the sponsors. Accordingly, selected bureau staff participated in various committees of the said activity.

"NCI is an undertaking that is not just special but pivotal for our economy and important for the protection of the environment, the success of our people," President Benigno S. Aquino said in his message which was delivered by Department of Environment and Natural Resources Secretary Ramon J. P. Paje. His Excellency added that the NCI of the administration will be a better, well-delivered, strong, and plausible result that will stimulate more partners from the private sector and international organizations, agencies, and benefactors to join.

The activity aimed to encourage farmers/fisherfolk to develop and sustain the quality of their produce. It also served as a venue for identifying products with great potential in the local market and determining which need technical assistance.

The three-day exhibit showcased: 1) fresh produce and traditional crops, 2) organic and wellness products, 3) juices, wines and beverages, 4) sweets, jams and delicacies, 5) condiments and spices, 6) other processed products, 7) bags,

clothing and personal accessories, 8) furniture; and 9) institutional/regional displays.

The event also featured an agribusiness investment forum, lecture and product demonstrations, a fashion show, a performance by the Teatro Kalikasan, and a photo exhibit.

Ms. Evarista Ronquillo, manager of the Big A Multi-Purpose Cooperative, who served as one of the panelists in the Focused Dialogue on Experiences, talked about the success story of the said Coop. On the third day, Ms. Ma. Elena M. Garces of the BAR-Technology Commercialization Division (TCD) gave an overview of the Bureau as an institution and as the research coordinating agency of the Department of Agriculture (DA). This was followed by a viewing of the BAR Video Primer.

Serving as resource speakers in the product packaging segment, Dr. Elena B. de los Santos, regional technical director for Operations and Extension of the DA-Regional Field Unit 5, and Mr. Dennis Bihis of DA-Southern Tagalog Integrated Agricultural Research Center (DA-STIARC) delivered presentations on *adlai* and *sapinit* (wild raspberry), respectively, which are two of the

non-traditional crops now being promoted by the DA.

The BAR-supported projects/products showcased both *adlai* and *sapinit*, and included tamarind. The bureau's efforts for these crops are described below.

Adlai

BAR is now taking steps to explore the potentials of *adlai* as an alternative or a complementary crop to rice and corn in the Philippines. In collaboration with selected Regional Integrated Agricultural Research Centers, Research Centers, State Colleges and Universities, and non-government organizations, BAR is implementing a project, titled, "Development and Promotion of *Adlai* as an Alternative Staple Food" in different regions. This includes activities for the development, promotion, and utilization of *adlai*. To date, seed production activities and adaptability tests are being conducted

in various regions in the country.

Sapinit

The Quezon Agricultural Experiment Station (QAES) of DA-Region 4 is processing *sapinit* into jam, juice, and wine to provide income opportunities for rural households. Supported by BAR and the National Agricultural and Fishery Council (NAFC), through the Japan Official Development Assistance's (ODA) - 2KR Program Grant Assistance for Underprivileged Farmers, the "Sapinit Production and Utilization Project" involves the conservation and development of the economic potentials of *sapinit*, a "pioneer" crop that grows in Mt. Banahaw, Quezon Province. It aims to develop a package of technology to enhance *sapinit* production and utilization that would help broaden household income-earning opportunities for the communities in the target areas.

Based on the terminal report

submitted by QAES, propagation trials using cuttings and suckers have proved successful. Fruit size, fruit weight, and yield were found to increase after the application of organic fertilizer.

Tamarind

The STIARC collaborated with the Big A Multipurpose Cooperative in Biga, Lobo, Batangas for the project, "Enhancement of the Tamarind Industry in Lobo Batangas." The project aims to fully enhance the tamarind industry in Lobo and the incomes of farm families in the locality.

Products developed under the project include tamarind wine, tamarind balls, and sweetened tamarind. Information on the marketing of the products show increases in Returns on Investment by 40 percent, 42 percent, and 50 percent for tamarind balls, sweetened tamarind, and tamarind wine, respectively, and annual sales of about P118,000.00 in 2007-2009. ### (Ma. Eloisa H. Aquino)



Sec. Proceso J. Alcala during his visit at the BAR booth.

PHOTOS: NDELROSARIO III