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has momentarily lost its momentum in cacao production, he is positive that "given the efforts of our stakeholders and the keen involvement of the industry, such as what the CocoaPhil is doing right now, we will be able to revive what was once our crowning glory."

The Philippines is well placed to be a future supplier of quality cocoa beans for the local, regional and international trade markets. Some 100,000 hectares of cocoa producing 100,000 tons of cocoa by 2015, valued at $300 million can be attained, and would position cocoa as one of the country's top three agricultural products. Currently, Indonesia (approx. 0.43 million metric tons per year) is the leading producer of cocoa beans in Asia and is third in the world, following Cote d'Ivoire (approx. 1.3 million metric tons per year) and Ghana (approx 0.74 million metric tons per year). Moreover, the quality of Philippine cocoa can equal or even surpass those of other countries.

"It is our hope at BAR that, given our mandate as the national coordinator for agriculture Research and Development (R&D), we can establish strong and durable links and partnerships with various organizations and the global market, and together undertake the task of giving back life to this industry. With cocoa bean quality standards in place, Filipino farmers will be guaranteed a market for their product, both domestically and internationally, thus presenting a significant opportunity for government to generate revenues on a new export item, as well as improve the agricultural trade balance," added Asst. Dir. Solsoloy. ### ***(Rita T. dela Cruz)***

Source:
World Cocoa Supplier Information
http://www.kissner.com/cocoa-powder.html

R&D initiatives...from page 3

photo: EGARCES

undersecretary for Policy and Planning, Project Development and R&D; Ms. Bernadette Romulo-Puyat, Undersecretary for Special Concerns; and Atty. Emerson Palad, vice-chair of the National Agribusiness Corporation (NABCOR).

After the meeting, the group, assisted by staff from BAR and the Office of the DA Secretary, proceeded to the Northern Mindanao Integrated Agricultural Research Center (NOMIARC) the center's research facilities and to visit the soybean plantation in the region.

The group also toured the research facilities of the University of the Philippines Los Baños (UPLB) and UPLB-Biotech, continuing on to Quezon Province to the Earthkeepers' Farm and the Bureau of Animal Industry (BAI) in Tiaong, the Dalahican Fishport in Lucena, Sentrong Pamilihan in Sariaya, and Sec. Alcala's Organic Farm in Pagbilao, Quezon.

BAR serves as the focal agency in the conduct of various R&D activities of the soybean program. ### ***(Amavel A. Velasco)***

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Eleazar visits BAR-funded agri and fisheries projects in CAR

***(Left photo)*: BAR Dir. Nicomedes P. Eleazar with CIARC Manager Maggie Wanawan during the project on organic production of strawberries in Baguio City. (*Right photos*): Dir. Eleazar also visited R&D projects on comparative performance and community-based production of native chicken implemented by CIARC and verification trial performance of cold-tolerant tilapia, FAC-selected tilapia and GET-EXCEL tilapia strains implemented by BFAR-CAR.** photos: ACONSTANTINO

Bureau of Agricultural Research (BAR) Dir. Nicomedes P. Eleazar visited BAR-funded agriculture and fisheries R&D projects in the Cordillera Administrative Region (CAR) on 24 February 2011. Joining him were key staff of the bureau's Project Monitoring and Evaluation Division (PMED), led by its OIC-head, Ms. Salvacion M. Ritual, to conduct on-site monitoring and evaluation of R&D projects in CAR and Region 1.

The group visited the Ilocos Integrated Agricultural Research Center (ILIARC) in Region 1 in Bacnotan, La Union to take a look at their projects particularly those supported through BAR's Institutional Development Grant (IDG). ILIARC Asst. Manager Ma. Cristina A. Orine and Dr. Aida Solsoloy toured the group at the ILIARC Technology Showcase building and its renovated greenhouse facility. On-going agriculture R&D projects that the group visited included one of the Community-based Participatory Action Research (CPAR) projects, the "Integrated Rice-Rice-Rice+Duck Raising" in San Gabriel, La Union and ILIARC Goat Demonstration Project.

For fisheries R&D, the group met with Ms. Dina Gaerlan, manager of the Regional Fisheries Research and Development Center (RFRDC) and asst. regional director of the Bureau of Fisheries and Aquatic Resources (BFAR) Region 1, also in La Union, for updates on its sea urchin technology commercialization project.

Dir. Eleazar also visited R&D projects implemented at the CAR Integrated Agricultural Research Center (CIARC) including: 1) Organic Production of Strawberries, 2) Comparative Performance and Community-based Production of Native Chickens in Luzon, 3) Integrated Growing of Native Pigs and Sheep, and 4) Vermiculture Production for Organically-Produced Vegetables. The group was met by CIARC Manager Maggie Wanawan for the updates and

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What's inside...

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status of these projects in Baguio City.

Dr. Lilibeth Signey, OIC-asst regional director for BFAR-CAR and RFRDC researcher Marx Garcia met with Dr. Eleazar to visit the project on tilapia production in Ampukao, Itogon, Benguet. Specifically, the group conducted an on-site visit to the verification trial on the performance of three tilapia strains: cold-tolerant t, FAC-selected, and GET-Excel.

The visit was also part of BAR's activity to orient and brief the regional partners on the new policies, directions, and priority plans of the bureau in sync with that of the DA's *AgriPinoy* framework and overall goals.

Part of orientation and briefing were presentations on BAR's corporate plan outline and its internal ad hoc organogram; R&D project status, scholarship programs, updating of the monitoring and evaluation (M&E) system for CPAR projects through the e-Pinoy Farms M&E; and the fast tracking of liquidation of funds.

Meanwhile, Dir. Eleazar, in his discussions with the officials from the regions, enjoined them to submit new proposals to BAR for funding. He encouraged them to refer to the Research and Development Agenda and Program (RDEAP) for 2011-2016 to ensure that all R&D proposals that they will submit are in line with the current priorities of DA and also to avoid duplications of research initiatives.

Successful R&D projects are documented so that other farmers and concerned stakeholders could also adopt and implement. ### ***(Rita T. dela Cruz)***

BAR Dir. Nicomedes Eleazar (2nd from left), Dr. Maggie Wanawan of CIARC (left) and staff from BAR are happy in picking and eating the strawberries. The "Organic Production of Strawberries" is one of the CIARC-implemented projects visited by Dir. Eleazar and the PMED Monitoring and Evaluation Team. photo: ACONSTANTINO

BAR Dir. Eleazar (right) discusses with Marx Garcia (center) of BFAR-CAR and the project coordinator of the project on "Verification Trial Performance of Cold-Tolerant Tilapia, FAC-Selected Tilapia and GET-EXCEL Tilapia Strains" implemented by BFAR-CAR in Itogon, Benguet. photo: ACONSTANTINO

BAR Chronicle
BUREAU OF AGRICULTURAL RESEARCH

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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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biomass and the soil are the main carbon sinks of atmospheric CO_2. These "sinks" could be regulated and managed to a great extent by following proper cropping practices, Dr. Magat explained.

Under the 1997 Kyoto Protocol, industrialized countries committed to reduce their emissions of carbon dioxide and other green house gases (GHGs) or engage in emissions trading if they maintain or unable to decrease their emission of gases. These countries can meet part of their target in reducing global CO_2 emission by purchasing emission reduction credits from developing countries like the Philippines in the form of planted forest which is achievable in the country due to its vast tracts of open land for the establishment of plantations.

Co_2 is reported to be the most significant "greenhouse" gas among the GHGs produced by human activities primarily as it arises from the combustion of fossil fuels. It is also used as the reference "greenhouse" gas. Excess in CO_2 can cause the earth's temperature to increase, hence, erratic changes in climate. In fact, the Intergovernmental Panel on Climate Change (IPCC) in 2002 reported that the precipitation (rainfall) in the Philippines for the past century (1901-2000) had decrease of 10-20 percent resulting an annual temperature trend to decrease at 0.20 ^{0}C. IPCC added that the higher maximum and minimum temperatures will lead to more hot days in most land masses; likewise, the amplitude and frequency of extreme rainfall are expected to increase over many years.

Dr. Magat noted that there are three key strategies being considered globally to lower CO_2 gas emissions: 1) reduce global energy use, 2) develop low or carbonless fuel, and 3) sequester CO_2 from point source or the atmosphere through natural or engineering techniques. His recommendation of productive and sustainable coconut farming ecosystems falls under the third strategy.

He noted that coconut plantations or farm ecosystems could be used to reduce CO_2 emissions via C capture or sequestration in the crop-soil system through: 1) substitution of fossil fuels with biodiesel or biomass from coconut oil, 2) sequestration of C in coconut plantation as a mono-crop or with intercrops, 3) enhancing C sequestration through coconut plantation management, and 4) conserving the C sink in coconut farms.

Dr. Severino Magat of PCA reports on how coconut farming farming ecosystems can serve as "Carbon sinks" and mitigate the effect of climate change.

Although the review and advisory notes of Dr. Magat are already considered extensive, he recommended that more formal and scientific collaborative studies be done by coconut-producing countries and the agencies concerned. These are needed in order to take the best advantage of the desirable attribute of coconut production and its ecosystem, not only for judicious environmental management but, more importantly, to generate acceptable methodologies and empirical data for certified emission credits. ###

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Coconut trees can abate effect of climate change - expert

Story and photos by: RITA T. DELA CRUZ

Productive and sustainable coconut farming ecosystems are potential "carbon sinks" that can minimize the effect of climate change, reported Dr. Severino S. Magat of Philippine Coconut Authority (PCA) in the series of seminars held at BAR, "Coconut: Its Mitigation and Adaptation to Climate Change", which was sponsored by the Bureau of Agricultural Research (BAR) and PCA on 2 February 2011 at the BAR building in Quezon City. The seminar series was attended by key stakeholders from the coconut industry including experts and representatives from research and development and extension (RDE), and the production and marketing sectors.

In his paper presentation titled, *"Productive and Sustainable Coconut Farming Ecosystems as Potential Carbon Sinks in Climate Change Minimization: A Review and Advisory Notes"*— Dr. Magat mentioned how planting more coconuts and increasing the adoption of coconut farming systems could help ease the effects of climate change.

According to him, the Philippines, with its extensive coconut lands (about 3.2M ha) which are planted with at least 325M coconut fruit-bearing trees, has a high potential to mitigate carbon emissions. "These coconut lands could be developed for income-generating carbon sequestration projects and the carbon credit market," Dr. Magat reported.

This claim was affirmed by previous studies (Lales, *et.al* in 2001) that have looked into the carbon storage capacities (CSC) of agricultural ecosystems in the country. It was found that among the crops studied, coconut had an average C storage capacity of 24.1t C/ha per year. The crop was also found to have the most stable C storage, being a perennial crop with almost nil burning of crop residues in place at the farm compared to other agricultural crops such as rice and sugarcane.

Positive values of actual ecosystem C balance, according to Dr. Magat, "indicates that carbon is sequestered from the atmosphere and stored in the plantation." And with more refinements on the variability in findings, Dr. Magat said that these positive values on carbon sequestration in coconut-based agro-ecosystems could provide accurate and objective information and data for the carbon/market.

The CO_2 intake of plants is considered as carbon sequestered which for the trees are stored in various parts of their body. Carbon stored in plants other than the stem wood or trunk are generally decomposable biomass which eventually becomes part of the soil organic matter (SOM) of which the more stable component is the 50 percent soil organic carbon (SOC).

In coconut, in common with most tree crops, carbon is stored or sequestered both by the biomass and the soil of the ecosystem, indicating that the

In coconut...carbon is stored or sequestered both by the biomass and the soil of the ecosystem, indicating that the biomass and the soil are the main carbon sinks of atmospheric CO_2.

R&D initiatives on soybean presented to AgritecnoYazaki

Dir. Nicomedes P. Eleazar of the Bureau of Agricultural Research (BAR), presented the status and updates on the soybean industry in the country that included what has been done as well as current DA R&D initiatives to a visiting Japanese delegation on 3 February 2011 at the Office of the Secretary, Department of Agriculture, Diliman, Quezon City.

The meeting was organized by the High Value Crops Development Program (HVCDP) headed by Dir. Dante S. Delima, national coordinator of HVCDP and concurrent assistant director of the Bureau of Plant Industry (BPI).

The Japanese delegation consisted of Mr. Koji Fukumitsu, president of Agritecno Yazaki; Mr. Shigemitsu Miyaki, manager of the Seed Technology Research Division of the Agritecno Yazaki; Mr. Sato Kenji of the Corporate Planning and Finance Division, New Business Management Department of Yazaki Corporation; Ms. Junku Ogawara, the group's interpreter; Mr. Feliciano L. Torres, president of the Yazaki Torres Corporation; and Atty. Ruel Canobas of the Yazaki Torres Corporation.

Agritecno Yazaki, one of the companies under the Yazaki Corporation, was established in 1996 and concentrates on the development of seed technologies.

Dr. Nicomedes Eleazar (2nd from left) presents the R&D initiatives of BAR on soybean production in the country to the Japanese delegation from Agritechno Yazaki group. photo: EGARCES

The Japanese were especially interested in the soybean industry in the country. Japan is one of the biggest importers of soybean in the world. In fact, in 2005, they were among the top three importers, accounting for about 4M tons of soybeans. The group wished to explore the possibility of a collaborative research, such as applications of their Gel-Covered Seed Technology or Tanemaru, the gel-coated seeds, on soybeans and perhaps for other crops as well.

According to Agritecno Yazaki, Tanemaru is an entirely new seed form in which individual seeds are wrapped in natural polymer gel full of water making them easier to handle. Wrapping the seed in the gel will draw the best potential of the seeds and will also prevent early spoilage and drying.

In attendance during the meeting were Department of Agriculture (DA) officials led by Secretary Proceso Alcala. Other DA staff present in the meeting were: Dr. Segfredo Serrano, DA

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DA key officials led by Secretary Proceso Alcala (3rd from left), Usec Bernadette Romulo-Puyat (5th from right), Usec Segfredo Serrano (4th from right), HVDCP Director Dante Delima (3rd from right) and BAR Director Nicomedes Eleazar (2nd from right) pose with the officials from the Agritecno Yazaki group at DA-OSEC. photo: EGARCES

Farmers, IRRI support gov't rice self-sufficiency program

Agriculture Secretary Proceso J. Alcala delivers his keynote address. Relying on the full support from IRRI and the positive affirmation of farmers, Sec. Alcala's conviction towards attaining rice self-sufficiency in the near future gained an even stronger momentum.
photos: MMOJICA

Attending the IRRI Farmers' Field Day are more than 600 farmers and LGU officials.

Sitting at the front row from the audience are (R-L): BSWM Dir. Silvino Tejada, UPLB-CA Dean Domingo Angeles, IRRI Deputy Dir. Gen. William Padolina, BAR Dir. Nicomedes Eleazar, National Scientist Gelia Castillo, Former UP President Emerlinda Roman, IRRI Dir. Gen. Robert Zeigler, and DA Asst. Sec. Dennis Araullo.

With full support coming from the International Rice Research Institute (IRRI) and the more than 600 farmers who flocked to the Farmers' Field Day at IRRI, Agriculture Secretary Alcala's fearless forecast of attaining rice self-sufficiency in the near future came closer to reality as it gathered an even stronger momentum.

"We were told to stop dreaming about rice self-sufficiency, but I digress. It is like saying we just slump and beg," he said in his message during the opening program of the Farmers' Field Day at the DL Umali Hall, IRRI, Los Baños, Laguna, on 28 February 2011.

IRRI organized this rare occasion in their headquarters in line with its long-standing partnership with the Department of Agriculture (DA) to achieve rice self-sufficiency in the Philippines. Farmers were provided a proper venue to directly communicate with the top officials of IRRI and DA regarding their concerns in rice production. They also received IRRI-bred high-yielding varieties including Tubigan 18, also called NSIC Rc222 or IRRI 154, which was released in 2010 with the support of DA.

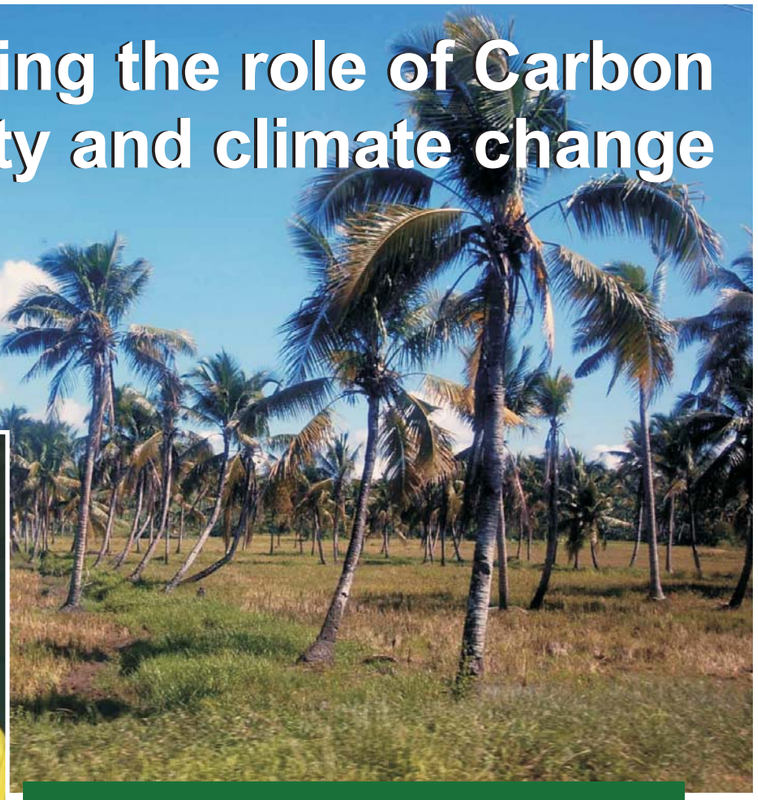
In national experimental trials, Tubigan 18 yields up to 10 tons per hectare and, on average, 6 tons per hectare or 12 to 13 percent more than the popular and widely-used Philippine rice variety, PSB Rc82, which was also bred by IRRI and is known globally as IRRI 123 according to Dr. Robert Zeigler, IRRI's director general.

Ziegler said that, although IRRI recommends Tubigan varieties for irrigated lowland areas, it has also proven to be one of the best performers in the rainfed areas especially during the wet season, in effect making it suitable for all rice-growing areas in the country.

Meanwhile, Atty. Ronilo Beronio, PhilRice executive director, said in his welcome remarks that based on their computation, it would need each farmer in the country to increase his production to six cavans per year or up to 18 cavans n the next three years in order for the Philippines to regain self-sufficiency.

Understanding the role of Carbon in soil quality and climate change

Story by: MIKO JAZMINE J. MOJICA



Ms. Ma. Cecilia Raquepo (left photo, inset) of PCA, explains the role of Carbon in soil quality and its effect in climate change. Her study suggests the way to enhance soil quality to promote better management of soil organic matter (SOM).
photos: RDELACRUZ & RBERNARDO

One of the most significant factors that sustain long-term agricultural productivity is the quality of soil. It is widely known that healthy soil does not only promote plant growth, it also protects watersheds, and prevents water and air pollution. How then do you enhance soil quality and what impact does it have on today's relevant issue on climate change?

Scientists suggest that the way to enhance soil quality is to promote better management of soil organic matter (SOM) or soil carbon (C). While there are several soil properties that affect soil quality, researchers assert that SOM deserves special attention for several reasons including reducing atmospheric CO_2 levels, one of the most dominant greenhouse gases (GHGs) that contribute to climate change.

To demonstrate this, Ma. Cecilia M. Raquepo, senior science research specialist at the Philippine Coconut Authority (PCA), presented her on-going study on the carbon levels of SOM in selected fertilized and unfertilized coconut ecosystems in relation with coconut farm productivity and climate change impact.

"Coconut plantations can sequester tremendous amount of CO_2 on account of biomass density and SOM," said Raquepo during the presentation of her study at the free seminar organized by the Bureau of Agricultural Research (BAR) at its office in Diliman, Quezon City on 03 March 2011.

Looking at SOM's increasing popularity as a source or sink of GHGs particularly CO_2, Raquepo's study aims to establish soil C levels in SOM and develop spatial variability maps of soil physico-chemical properties in selected coconut ecosystems.

"The study looks at fertilized and unfertilized coconut ecosystem with emphasis on carbon sequestration and integrated soil fertility management," she said.

Raquepo believes that measurements of C levels in SOM and other nutritional parameters may eventually supply the missing link and total accounting of C sequestration in coconut ecosystems.

"Understanding the fate of C is central in the question of soil fertility and carbon sequestration, the measurement and development of spatial variability maps would provide concrete information in precision agriculture," she further explained.

Besides helping reduce CO_2 levels, a related report of USDA's Soil Quality Institute shows that because organic matter enhances water and nutrient holding capacity and improves soil structure, managing for soil carbon

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BAR seminar series highlights coconut and climate change

(Right Photo) Dr. Liberty Canja discusses how the agriculture sector is threatened by climate change and how the coconut agroecosystems can be adopted as one of the effective mitigating measures. *(Left Photo)* Dr. Erlene Manohar of PCA sits in the audience during the BAR-PCA Seminar. photos: RDELACRUZ & RBERNARDO

Climate change is a reality". This was the concluding statement of Dr. Liberty H. Canja, science research specialist at the Agronomy and Soils Division of the Philippine Coconut Authority (PCA) in her lecture which was part of a series of seminars titled, "Coconut: Its Mitigation and Adaptation to Climate Change", on 2 February 2011. The seminar series is a special arrangement and was co-sponsored by the Bureau of Agricultural Research (BAR) and PCA, making it part of the former's monthly educational seminars.

In Dr. Canja's seminar, " Climate Change Mitigation Measures in the Coconut Agroecosystems", she described the coconut industry as having roughly 3.3 million hectares, or 30 percent of the country's farmlands, which offers the highest potential for diversification among the major crops.

The concern on climate change is by far considered one of the biggest issues confronting humanity in the 21st century. It has been observed through the years that heat-trapping gases emitted by human activities are effecting significant changes in the climate. Temperature is expected to increase by 1.1 to 6.4°C (1990-2100) and sea level may rise to 22-34 cm (1990 & 2080s).

The agriculture sector is not spared from the threat. In fact, the sector is among the vulnerable sectors being watched by the government. Among the impacts already being felt in the countryside, specifically in the agricultural sector, is heat stress that could lead to crop and yield reduction due to higher temperature. Droughts and flood occurences reported in some parts of the country that have caused widespread damage are said to be due to changes in the precipitation patterns.

Dr. Canja presented mitigation and adaptation strategies currently being adopted by PCA for coconut that include: 1) soil organic matter (SOM) management, 2) development of drought tolerance, 3) crop protection, 4) land use change control, and 5) development of biomass energy.

In closing, the resource person said that both adaptation and mitigation efforts are a must. She added that integrated approaches involving multiple players will create the needed awareness to combat or, at least, minimize the harmful effects of climate change. ### ***(Patrick RA Lesaca)***

The concern on climate change is by far considered one of the biggest issues confronting humanity in the 21st century. It has been observed through the years that heat-trapping gases emitted by human activities are effecting significant changes in the climate.

Dr. Emerlinda Roman, former president of the University of the Philippines, who was also present in the event expressed support to the DA's rice self-sufficiency program (RSSP). She encouraged farmers to share their experiences and problems in rice production so that they could help the government achieve its goal for the country and its people's benefit. UPLB Chancellor Luis Rey Velasco was also present to show his support.

Farmers, who came from different provinces in Southern Tagalog, such as Laguna, Cavite, Batangas, Rizal, and Mindoro, were given ample chance to voice out their concerns on rice production. Mr. Julian Lapitan, IRRI project coordinator of the RSSP and IRRI's National Program Relations senior manager, moderated the open forum in the morning and afternoon sessions dedicated for this purpose.

Many of the farmers who spoke expressed concerns over production technologies, pests and diseases, irrigation projects, and the buying and selling of palay. Present to answer their concerns were the top officials and scientists of IRRI as well as DA key officials, namely, Asst. Sec. Dennis Araullo, concurrent rice and corn program director; Dir. Beronio, PhilRice; Dir. Nicomedes Eleazar, Bureau of Agricultural Research (BAR); Dir. Clarito Barron, Bureau of Plant Industry (BPI); Dir. Silvino Tejada, Bureau of Soils and Water Management (BSWM); Dir. Ricardo Cachuela, Phil. Center for Postharvest Dev't and Mechanization (PhilMech); and Mr. Ramoncito Padilla, National Food Authority (NFA) Region IV representative.

The farmers, along with IRRI scientists and DA officials, were toured around six field stations within IRRI to learn about the latest high-performing rice varieties. photo: MMOJICA

For his part, Secretary Alcala assured farmers that their concerns were well-noted and actions will be sought for them in the soonest possible time. He reiterated the three interventions of DA to address rice self-sufficiency, namely, 1) increase production by prioritizing irrigation, 2) diversify staple food sources to ease the demand pressure on rice, and 3) manage rice consumption to prevent wastage.

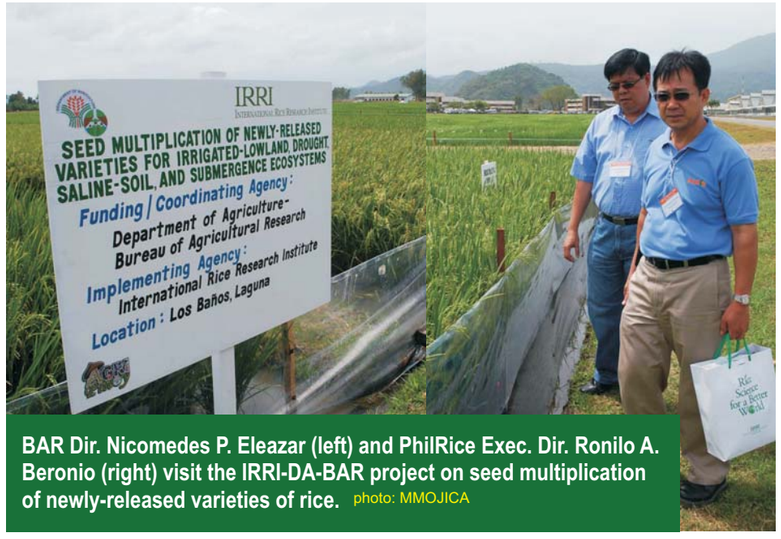
He said that the DA hopes to increase rice production in a sustainable manner through effective irrigation systems, seed banking for an assured supply of high-quality seeds, efficient drying facilities and grains terminals to address postharvest concerns, farmers' access to credit particularly from the Land Bank of the Philippines, and appropriate technology, education, and extension services.

He likewise appealed to officials of local government units (LGUs) who were present in the event to work closely with the DA in mobilizing their resources and extension force towards this purpose.

"Let's all be partners in this program. This challenge is not only ours to face but more so by the coming generations. What we need is one roadmap and constant communication to pull this through. We only need to look at our neighbors such as China, Taiwan, and Thailand whose economies boomed because of agriculture. Agriculture is still our best bet," he said.

The farmers, accompanied by IRRI scientists and DA officials, were toured around six field stations within IRRI to learn about the latest high-performing rice varieties. The tour included a visit to the seed multiplication site of newly-released rice varieties for different ecosystems (irrigated-lowland, drought, saline-soil, and submergence) which is a project of IRRI with support from DA-BAR. Other sites showcased a rice-maize cropping system, rice varieties for submergence-prone ecosystems, hybrid rice, soil problem amelioration, and postharvest technologies.

In his closing remarks, Dr. William Padolina, IRRI deputy director general for operations, acknowledged the success of the event and said that they will try to make it happen more often in the future for the benefit of more farmers in the country. ### ***(Miko Jazmine J. Mojica)***



BAR Dir. Nicomedes P. Eleazar (left) and PhilRice Exec. Dir. Ronilo A. Beronio (right) visit the IRRI-DA-BAR project on seed multiplication of newly-released varieties of rice. photo: MMOJICA

First int'l cocoa conference-exhibit looks at global market opportunities

Proudly Philippine-made products from cacao exhibited during the 1st International Cacao Conference and Exposition held at WTC, Pasay.

photos: RDELACRUZ

BAR Asst. Dir. Teodoro S. Solsoloy delivers his welcome address during the technical session on Cacao Production Sustainability. photo: NDELROSARIO III

In an effort to revive and regain the status of the Philippines as one of Asia's leading suppliers of cocoa beans, the Cocoa Foundation of the Philippines, Inc. (CocoaPhil) together with the Department of Agriculture-Agribusiness and Marketing Assistance Service (DA-AMAS) held the "Philippines' International Cocoa Conference and Exposition (PICCE)" on 24-27 February 2011 at the World Trade Center in Manila coinciding with the 10th Philippine Food Expo.

With the theme, "*Working Together Towards Sustainable Cocoa Economy,"* the conference-exhibit featured three major activities: exhibits on cocoa, an investments and donors' forum, and technical sessions on production sustainability.

According to Edward F. David, president of CocoaPhil, the PICCE was conducted to provide an appropriate venue for dialogues on the challenges and opportunties in the global cocoa market as well as to address the growing interest in ethical sourcing, food safety standards and legislation in the cosumer markets. He added that the exhibits were specifically set up to showcase investment opportunties to potential investors as well as to develop partnerships and extended networks to benefit, not only the cocoa producers/farmers, but the whole industry as well.

President David, Ilocos Norte Governor Imee Marcos, and PhilFoodEx President Roberto Amores led the opening of exhibits of products and services for sustainable cacao development held at the 'Cocoa Center Pavillion'. Showcased in the exhibits were various products developed from cocoa.

The 2nd Cacao Investments and Donors' Forum, which was followed by the Technical Session on Production Sustainability, featured discussions on management, postharvest, and marketing aspects of cacao. Dr. Teodoro S. Solsoloy, assistant of the Bureau of Agricultural Research (BAR) graced the event as one of the speakers.

The DA, through BAR, has been working on a collaborative effort with CocoaPhil to empower the farmers to plunge into cacao farming by making good quality planting materials accessible to them as well as providing them assistance on proper crop management up to postharvest operations to ensure that our cacao would meet the quality standards required by the market. Likewise, the collaboration is providing opportunities for market linkage and applicable credit schemes which are seen as critical in re-establishing the industry in which small farmers could benefit from.

Cacao is, in fact, part of the priority crops in the newly-crafted National Research and Development Extension Agenda and Programs (NRDEAP) for 2011 to 2016, which serves as a reference for BAR in setting the priorities in the funding of research. Researchable areas for cacao include: integrated pest management, package of technologies, good agricultural practices, identification of location-specific clones, and drying and other postharvest technologies. These expand the range of oppurtunities available to researchers to pursue the R&D required by a sustainable cacao industry in the Philippines.

Asst. Dir. Solsoloy, in his speech, said that although the country

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Computer and Multimedia Section of UPLB. He reported that exchanges happening in the import-export data interface indicates viable and stable source of information.

Meanwhile, Ms. Julia Lapitan, head of BAR's Applied Communication Division (ACD), presented the current status and plans of PhilAgrinet in the years to come. She concluded with a premise that a strong information highway generated through this endeavor will certainly create a desired impact in the entire agricultural information sphere.

Also highlighting the activity was the election of new set of officers of PhilAgriNet held during its 2nd General Assembly.

BAR Dir. Nicomedes Eleazar (right) discusses with BSU President Rogelio Colting (left) and BAR-ACD Head Julia Lapitan (center) after the opening program. photo: ACONSTANTINO

The newly elected officials were:

Honorary Chair	Dr. Nicomedes Eleazar, *DA-BAR*
Vice Chair	Concepcion Saul, *UPLB*
Project coordinator	Julia Lapitan, *DA-BAR*
Secretary	Andriette Valdez, *UPLB*
Treasurer	Imelda Veluz, *UPLB*
Auditor	Sonia Isip, *DMMMSU*
PRO	Elaine Joshi, *PhilRice*
Directors	Rhodora Vargas, *UPLB*
	Rolando Oloteo, *CSSAC*
	Tess Marquez, *BSU*

PhilAgriNet is a collaborative initiative among major agricultural institutions in the Philippines which aimed to bridge the gap between products of Philippine agricultural research and agricultural scientists worldwide. The network is engaged in activities geared toward the development of the central database and the professional advancement of information providers in member and non-member institutions.

The charter members of PhilAgriNet include: BAR, BSU, IRRI, Philippine Rice Research Institute, UPLB, Camarines Sur State University, Cavite State University, Central Luzon State University, Don Mariano Marcos State University, Isabela State University, Leyte State University, Nueva Vizcaya State University, Silliman University, and Agricultural Librarians Association of the Philippines. ### ***(Patrick Raymund A. Lesaca)***

PhilAgriNet participants in a group photo with Dir. Eleazar and Pres. Colting. photo: ACONSTANTINO

BAR highlights role of ICT in PhilAgriNet's info drive

Director Nicomedes P. Eleazar of the Bureau of Agricultural Research (BAR), in his keynote speech, stressed the importance and relevance of Information Communication and Technology (ICT) in the overall function of the bureau. “Being the research arm of the Department of Agriculture (DA), the use of information technology is considered one of BAR's effective tools in the delivery of its function and mandate. The importance and usefulness of communication in our present time is gradually changing the way we communicate and do business,” he emphasized.

Dir. Eleazar served as guest of honor and keynote speaker during the “2nd General Assembly of the Philippine Agricultural Information Services Network (PhilAgriNet) and Seminar-Workshop on Upgrading Proficiencies for Information Documentation and Sharing” held at the National Training Center-Agricultural Training Institute, Benguest State University (BSU) in La Trinidad, Benguet.

The seminar-workshop focused on the documentation and sharing of available information resources and the dissemination of PhilAgrinet activities particularly its information advocacy.

Dr. Rogelio Colting, BSU president, welcomed PhilAgriNet members and participants to the two-day training exercise wherein he underscored the needed collaboration and cooperation among government agencies like BAR, state universities and colleges and members of the international community such as the International Rice Research Institute (IRRI) and the Food and Agriculture Organization (FAO) in perfecting the information highway needed by these institutions in their quest for reliable and updated information.

The seminar-workshop was focused on the documentation and sharing of available information resources as well as the dissemination of PhilAgrinet's activities. First to talk was Dr. Jose Ma. Pangilinan, director of the Net Office of Saint Louis University (SLU) who discussed the impact of Web 2.0 version on information services. Dr. Gerard Sylvester, Knowledge and Information Management Officer of FAO, followed in with insights on FAO's Information Services.

Ms. Mila Ramos, member of the Board for Librarian-Philippine Regulatory Commission (BFL-PRC), briefed the participants on “On-Line Databases and other Tools for Agricultural Research” and expounded on the necessity for strengthening agricultural researches through reliable databases. The information library (InfoLib) of BAR was introduced in the lecture/ presentation of Mr. Ryan Joseph Abrigo of BAR's Scientific Library Service.

BAR Dir. Nicomedes Eleazar and PhilAgriNet Vice-Chair Connie Saul.Vice Chair
photo: ACONSTANTINO

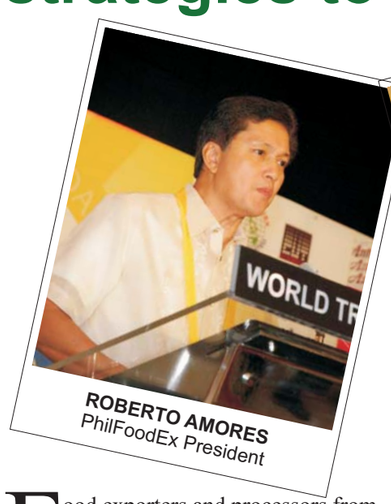
First day of the activity was concluded with a final demonstration on the Web-AGRIS installation by Ms. Lea De los Reyes, Officer-in-Charge of the IRRI Library.

The second day kicked-off with a lecture from Ms. Concepcion Saul on “Data Encoding on Agricultural Literature Output for PhilAgriNet and AGRIS Database”. This blueprint, according to her, serves as the information hub for agricultural researchers seeking relevant information on agri-fishery news and development. Ms. Saul is the vice chair of PhilAgriNet and is currently the university librarian of the University of the Philippines Los Baños (UPLB). On the part of IRRI, a related presentation was also delivered by Ms. Carmelita Austria of the IRRI Library.

The rudiments and significance of “Importing and Exporting Data”, in the realm of data exchanges, was the piece of Mr. Bernardo A. Navallo of the

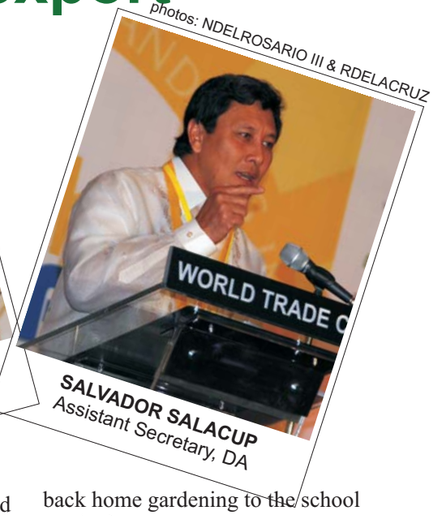
Safety standards, unified public-private strategies to boost food export

photos: NDELROSARIO III & RDELACRUZ



ROBERTO AMORES
PhilFoodEx President

ADRIAN CRISTOBAL
Undersecretary, DTI



SALVADOR SALACUP
Assistant Secretary, DA

Food exporters and processors from the private sector have joined hands with key government agencies such as the Department of Agriculture (DA) and the Department of Trade and Industry (DTI) in responding to one of the most pressing challenges food exporters face today—new and stricter rules of food safety standards that the global market now imposes.

With the pressing need to comply with more stringent rules of the importing countries, particularly the US and the European states which are two of the Philippines' biggest markets for its food exports, private and government organizations made food safety management standards as the central theme of discussions during the 10th Philippine Food Expo held at the World Trade Center, Manila, 24-27 February 2011.

“The approach we are taking right now is the proper education of food processors and exporters on safety management standards for both export and domestic markets. We also want to expose students this early to the importance of this sector so they could be well-equipped to lead the industry in the future,” said Roberto Amores, president, Philippine Food Processors and Exporters Organization, Inc. (PhilFoodex), on behalf of food exporters.

Relatedly, both the DA and DTI support the advocacy of a one brand, one strategy approach to unify the efforts of the government and private sectors in maintaining and expanding the country's share of the global market for fresh and processed food products.

“We can't simply go on with a shotgun approach of holding too many trade fairs locally or joining every trade fair abroad just to get exposure and attract some buyers. We believe in attending and organizing fewer but bigger and better trade fairs where buyers from different international markets will be enticed to come over and buy our products,” Atty. Adrian Cristobal, DTI Undersecretary for International Trade, said during the opening program of the 10th Philippine Food Expo.

Cristobal proposed one big trade fair to be organized and held next year by pooling the resources of key government agencies and private sector organizations under a unified strategy. He likewise said that, while promotion is relatively easy through our commercial attaches abroad, exporters should improve their capacity to deliver the goods in the required quantity and schedule.

Meanwhile, DA Asst. Secretary Salacup said in his message in the same event that the DA is actively promoting the “Team Philippines” efforts in promoting its agricultural exporst.

In a speech he delivered for Secretary Alcala, he said that the efforts of the DA to promote agribusiness exports complement its aim to encourage farmers to become farmer-entrepreneurs. He added that the DA is now collaborating with DepEd to bring back home gardening to the school curriculum.

“We have to imbue students with the right attitude towards agriculture while they are still young. In this way, we are helping put food safety standards and our agriculture competitiveness in their consciousness,” he said.

Salacup also challenged the private sector to complement the efforts of the government to bring Philippine agriculture exports to greater heights.

He mentioned that the country's total agricultural exports amounted to $3.8B only in the recent year which is low compared to that of our neighboring ASEAN countries such as Thailand ($31B), Indonesia ($27B), and Malaysia ($24B).

Sergio Ortiz-Luis Jr., Philexport president and chairman of the Philippine Chamber of Commerce and Industries, who was also present in the event, appealed for support from both the government and private sectors.

“I call on industry players to sharpen our edge as important suppliers of food products in the global market. Likewise, the government could support us on establishing common service facilities to address buyer requirements. For example, in Region 12, the fish center established by Philexport for this purpose proved to be successful after three years of operation. Our dynamic interaction would certainly help boost the industry,” he said. ### ***(Miko Jazmine J. Mojica)***

BAR joins FoodExpo, showcases 5 NTCP-funded products

(Left) BAR Booth featuring products from Regions 4A and 5. (right, top) Dr. Elena delos Santos of BIARC discusses the potential of Adlai to a walk-in booth visitor. (right, bottom) BAR Asst. Dir. Teodoro Solsoloy and TCU Asst. Head Digna Sandoval pose with exhibitors from the regions.
photos: RDELACRUZ

The Bureau of Agricultural Research (BAR) joined and participated at the 10th Philippine Food Expo 2011, the only all-Filipino consumer event in the country showcasing the best of home-grown processed and fresh products in one venue, on 24-27 February 2011 at the World Trade Center, Manila. With this year's theme, "*Food safety management standards in the global market*", the food expo also conducted technical and business seminars, and product demonstrations to ensure an atmosphere fitting to both the causal consumer and the serious trade visitor.

As one of the exhibitors, BAR showcased five products funded under its banner program, the National Technology Commercialization Program (NTCP). These included products from Region 4A: *arrowroot* and *tamarind* and from Region 5: *pineapple*, sesame, and *adlai*.

These products which were the results of R&D technologies developed by BAR's partners from the regions were chosen specifically for their benefits in the agribusiness sector particularly in enhancing and strengthening market potentials of these not yet well-known products.

Products from arrowroot and tamarind were developed through a project implemented by the Southern Tagalog Integrated Agricultural Research Center (STIARC), Department of Agriculture-Regional Field Unit 4A (DA-RFU 4A).

For the arrowroot, the product showcased is the arrowroot flour taken from the rhizome of the arrowroot *(Maranta arundinacea)*, which is the main ingredient in making "uraro" cookies. Although not indigenous to the Philippines, local farmers have been cultivating arrowroot since 1918. The crop is abundant and is cultivated in Catanauan, Quezon, the project site. According to Ms. Rosemarie Bautista-Olfato, assistant STIARC manager and project leader, the project was borne out of a need to increase the production of arrowroot by introducing improved cultural practices and proper fertilization using organic farming technology. The project hopes that with the introduced interventions on potharvest and processing techniques, the quality of flour is improved thereby making possible other processed products from arrowroots aside from cookies.

There is a continuous and increasing demand for tamarind *(Tamarindus indica)* unfortunately, given existing constraints to effective marketing strategies and proper promotion, it could not penetrate a bigger market. Ms. Virgilia D. Arellano, researcher from STIARC and project leader said that project on sweet tamarind was implemented out of a need to develop improved processed products from tamarind as a potential source of income for smallhold farmers and rural households in Lobo, Batangas. In partnership with the Big A Cooperative as cooperator for the project, among the products that they have developed were tamarind balls, sweetened tamarind, and tamarind wine.

The other three products showcased were pineapple, sesame, and *adlai*, developed through projects implemented by the Bicol Integrated Agricultural Research Center (BIARC), DA-RFU 5.

Queench natural pineapple juice and dried pineapple candies are some of the products showcased at the exhibit. This was made possible through a product development project with the Labo Progressive Multi-Purpose Cooperative (LPMCP) and DA-RFU5. The 'Queen' or Formosa (*Ananas comusus*) is among the three cultivars of pineapple cultivated in the country together with 'Smooth Cayene' and 'Red Spanish'. It is a small variety whose weight does not exceed two kilograms and has been found to be very adaptable in the soil and climate of Camarines Norte where it is usually intercropped with coconut. The 'Queen' pineapple is also renowned for its golden yellow flesh, crisp texture and mild delicate flavor which made it very suitable for fresh consumption.

Sesame (*Sesamum indicum*) is an annual crop that grows from 50 to 100 cm and is said to have been first domesticated in India. It is one of the first crops processed for oil as well as one of the earliest condiments. Since sesame was not one of the major/priority crops, where it was only planted after corn, upland rice, legumes, and other upland crops, and not to mention that there were no proper production technologies, the number of available seeds was not sustained until time came that the commodity slowly disappeared from the market. After a decade, the sesame industry was revived through a BAR project to enhance its production. The project is a collaborative project of LGU Nabua and BIARC which seeks to address the critical problems of many upland farmers such as low income, few livelihood activities, lack of capital, low productivity, lack of farm equipment and lack of irrigation supply.

Not yet known to many, adlai (*Coix lacryma-jobi* L.) is promoted by DA as an alternative or supplement food crop to rice. It is a freely branching upright herb that grows as tall as three feet and propagates through seeds. It belongs to the family Poaceae or the grasses, the same family to which wheat, corn and rice belong. Looking into the potential of this food crop, BAR crafted the R&D roadmap for adlai particularly its development, promotion, and utilization to sustainably nurture and enhance it as an alternative food source for the Filipinos. Together with BIARC, BAR has embarked on a project to field test varieties of adlai for production and commercialization.

The food expo is annually organized and led by Philippine Food Processors and Exporters Organization, Inc. (PHILFOODEX), the leading food association composed of around 300 members including micro, small, medium and large scale food manufacturers and exporters in the Philippines. The activity was sponsored by DA and the Department of Trade in Industry. BAR is one of this year's partners and sponsors. ### ***(Rita T. dela Cruz)***

photos: RDELACRUZ

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can enhance productivity and environmental quality, and can reduce the severity and costs of natural phenomena, such as drought, flood, and disease.

"We can achieve a new level of soil conservation by focusing on building soil organic matter or soil carbon," the report stated.

The lecture of Raquepo is just one of three free seminars organized by BAR and PCA on the mitigation and adaptation to climate change with focus on coconut, one of the most important high-value plantation crops in the country. According to Raquepo, at present, there are 3.2M hectares planted to coconut in the country.

BAR regularly holds monthly free public seminars in its office on relevant and emerging issues and concerns on the latest agriculture and fisheries R&D results and technologies. ### ***(Miko Jazmine J. Mojica)***