

Who's new at BAR ?



(L-R) Patrick Raymund A. Lesaca, Eloisa C. Abundo, Marilou A. Guiang, Shyr Lynn D. Albao, and Maria Christina F. Francisco

Eloisa C. Abundo, fondly called as "Aisa," is the new staff member under the General Services Unit of the Bureau of Agricultural Research (BAR). She joined BAR in April first as a technical staff worker at the Project Development Division (PDD) and was later transferred at the Administrative Unit. At 28, she is an academic achiever having finished two BS degrees in Food Technology at Central Luzon State University and in Nursing at the MV Gallego Foundation College in Cabanatuan City. She also finished her MA Nursing from the same college. She enjoys reading and is a music- and movie-lover. Her working principle is to "Work like you don't need the money, love like you've never been hurt, and dance like nobody's watching."

Shyr Lynn D. Albao or

simply "Shale" is the latest addition to the Technology Commercialization Unit (TCU) in May. She is 23 years old and a graduate of BS Chemical Engineering at the University of the Philippines Los Baños. Her interests include writing short stories, photography, scriptwriting, and film making. She also loves reading novels, listening to music, and traveling. When asked about her aspirations, she said that she dreams of back-packing to India with little or no cash and immersing in its diversified culture. She believes that achievement is never sought; it is a requirement from oneself. That is why she tries to see as much, hear as much, and learn as much as she can everyday.

Also hired in May was **Maria Christina F. Francisco** or Tina, the new staff member at the Accounting Section of

the bureau's Finance Unit. She is 20 years old, graduated BS in Nursing from Our Lady of Fatima University. Her hobbies include reading books related to psychiatric nursing, cooking, and listening to music. She is now looking forward to being a certified nurse as she prepares herself for the nursing licensure examination in December. "To accomplish great things, we must not only dream, but also act," says Tina.

Patrick Raymund A. Lesaca or "PR" was assigned at TCU. He graduated BS Management at the Technological Institute of the Philippines. Before joining BAR, he was an information officer in a government financial institution for four years. His interests consist of writing, photography, and video editing. A Gawad Kalinga (GK) volunteer and a member of the Couples for Christ-Singles for Christ (CFC-SFC), he is married and has two kids, both boys, aged 9 and 13. For him, "selflessness leads to great ambition."

Marilou A. Guiang or "Malou" joined BAR in April and is a graduate of BS Business Administration (major in financial and managerial accounting) from Tarlac State University. She is 25 years old and works as a cashiering assistant under the Administration Unit. She loves cross-stitching, reading novels, and listening to romantic songs as her pastime. She enjoys cooking Filipino dishes such as the popular *sinigang* and *adobo*. When asked about her career philosophy, she said that having a productive outcome of work requires love and perseverance in the job. (Christmas B. de Guzman)



DA eyes 450,000 metric tons rubber production in 2008

The Department of Agriculture (DA) targets to expand the country's natural rubber production to 450,000 metric tons this year as part of its 15-year plan to make the Philippines a major player worldwide.

This was announced by Agriculture Secretary Arthur C. Yap during a press conference prior to the 4th ASEAN Rubber Conference which the Philippines hosted this year at the Crowne Plaza, Galleria, Ortigas, Pasig City on 5-7 June 2008.

Natural rubber is a lucrative market in the global rubber industry and is expected to sustain price increases in the next 20 years, according to the Philippine Rubber Industries Association (PRIA) which co-organized the event with DA.

"To meet the requirements of the future, as global consumption for natural rubber is expected to reach 31.8 million tons by 2020, the DA is focused on its the National Rubber Development Program (NRDP) to expand the current area planted to rubber totaling 92,000 hectares to one million

hectares, and increase production and exports to \$960 million all by 2020," Yap said.

The goal of DA is to replant 36,000 hectares to rubber this year. Among the provinces identified as viable areas for rubber production are Sultan Kudarat, Isabela, Maguindanao, Benguet, Camarines Sur, Palawan, Antique, Negros Oriental, Negros Occidental, and Mindoro Occidental.

The Philippines has about 92,000 hectares planted to rubber that yielded more than 380,000 mt of natural rubber last year. Current farm gate price for locally unprocessed and processed rubber are P100 and P150 per kilo, respectively.

While the DA has earmarked P70 million this year to boost NRDP, it is mindful of challenges that the Philippine rubber industry



DA Usec. Jesus Emmanuel M. Paras delivers the keynote speech on behalf of Sec. Arthur C. Yap.



BAR Director Nicomedes P. Eleazar (front row, third from left), poses with DA Undersecretary Jesus Emmanuel M. Paras (front row, center), other government officials, heads of private sector-led rubber industries, and heads of delegations from other countries who receive plaques of appreciation for taking part in the 4th ASEAN Rubber Conference.

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The WorldFish Center, BAR link up for a capacity building program



BAR Director Nicomedes P. Eleazar (left) and WorldFish Center Regional Director for East and Southeast Asia Maripaz L. Perez (right) discuss collaborative efforts during the meeting.

WorldFish Center Regional Director for East and Southeast Asia Maripaz L. Perez and Assistant Scientist for Coastal and Marine Resource Program Len R. Garces visited the Bureau of Agricultural Research (BAR) on 1 July 2008 for a possible collaborative effort particularly in strengthening the competence of fishery R&D system. The WorldFish Center and BAR officials met at the bureau's Conference Room, RDMIC Building, Visayas Avenue, Diliman, Quezon City.

The WorldFish Center is an international, non-profit organization with a mission of reducing poverty and hunger through research-for-development initiatives to improve the small-scale fisheries and aquaculture sector.

BAR's initiatives are focused on eight priority programs, one of which is the Institutional Development Program. The bureau envisions to develop the core competence in fishery R&D system,

through Human Resource Development Program.

With this, BAR, under the leadership of Director Nicomedes P. Eleazar, has linked up with WorldFish Center for a capacity building program intended for BAR staff and Regional Fisheries Research and Development Centers (RFDRC) managers. This will cover retooling, training, and study tours to successful WorldFish projects in Penang, Malaysia and its regional sites.

Perez presented the WorldFish Center portfolio and its three key areas of competencies. On the natural resource management, Dir. Eleazar noted some of the post-disaster livelihood recovery and management programs in fisheries-dependent

regions as one of the recent major concerns of the Department. In this area, DA, together with The WorldFish Center, could develop management programs and projects before, during, and after disasters for the fisheries sector.

Meanwhile, Garces presented the proposal on *"Strengthening Governance and Sustainability of Small-Scale Fisheries Management in the Philippines: An Ecosystem-based Fisheries Management Approach."* This is to identify successful governance arrangement for small-scale fisheries using an ecosystem-based management approach, Garces said.

Dir. Eleazar committed to support the conduct of stakeholder consultations and provision of technical assistance of The WorldFish Center to the RDRFC, and other key partners. This will also cover the supply chain analysis and management for fish and fish-based products.

Other areas of interest for possible collaborative work are on country adaptation of vulnerability assessment, which includes setting up of suitability maps and an information system development on invasive species. (Ma. Eloisa E. Hernandez)



WorldFish Center and BAR officials



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Citrus, which includes oranges, lemons, and mandarins, ranks fourth among the national priority fruit crops in the Philippines, next to banana, pineapple and mango in terms of production, volume and value.

Nueva Vizcaya is one of the leading producers of fruits and vegetables in Cagayan Valley. The high and medium elevated municipalities of the province are favored with climate and soil suitable for the commercial production of various species of crops. Citrus is one of the fruit crops commercially grown in the province and is now contributing significantly to its economic development.

Citrus production in Nueva Vizcaya is concentrated in the highlands of Kasibu particularly in Muta and Malabing Valleys where more than a thousand hectares of land are planted with a range of citrus species and are still expanding. Orchards in these areas are bounded by mountains with thick forest cover that influences prolonged periods of rains that augment better fruiting of trees. Likewise, fruiting and fruit development are also enhanced by cool night and hot day temperature in the valley.

The barangays of Tadjie, Malabing, Binugawan, Wangal, Papaya, and Capissaan represent the main production area in Malabing Valley. Majority of its citrus growers are members of the Malabing

suitable rootstock. Grafting and marcotting also give satisfactory results, but these methods are wasteful for propagating materials. Thus, these are recommended only for small-scale propagation.

The problem on the gradually declining productivity of citrus trees in Nueva Vizcaya is due to graft-transmissible diseases, which primarily, is a consequence of the multiplication of infected scions and buds from infected mother trees.

In July 2007, citrus growers in Kasibu were alarmed over the spread of a viral disease wreaking havoc on their produce. The actual situation of the province's citrus plantations was reportedly affected with viral infestation.

Huang Long Bing, also known as citrus greening disease, is capable of destroying harvestable citrus fruits by around 50 percent. It causes the sudden yellowing of their leaves which results in low yield. To date, the disease and its insect vector, *Diaphorina citri*, are found in all growing areas in the country, resulting to low productivity and loss of trees.

To control the spread of citrus diseases, the Malabing Valley Farmers Cooperative, Nueva Vizcaya State University (NVSU) and the Kasibu municipal government created "Task Force Sagip Citrus." Among the solutions agreed was to cut down the infected trees and their immediate replacement by disease-free

seedlings. Other mitigating measures included prohibiting farmers to do self-propagate citrus and preventive spraying of citrus plants which were identified as most prone to the disease. Proper management of citrus to maintain its marketability was given major attention. It is said that if the infestation remained unattended, the critical predicament might have lead to the eventual death of the citrus industry in the province. As of the present, the members of the task force serve as key persons in implementing citrus disease eradication plans.

Thousands of farming families within the Kasibu area, especially in Malabing Valley, depend on the citrus industry in the province which has grown to a huge money earner in the span of around 15 years. Still today, many small growers are dependent on it despite problems affecting its marketability. Due to the government's goal of increasing agricultural land and crop productivity, there has been a renewed interest in citrus growing as evidenced by increasing demand for planting materials. What the Malabing Valley Farmers Cooperative wants to achieve now, along with sufficient support from the research authorities, is a citrus nursery with sufficient supply of quality planting materials to meet the demand of the local growers for their orchard production.

Savoring sweet-profit from Nueva Vizcaya's citrus industry

Christmas B. de Guzman

Valley Farmers Cooperative. The cooperative aims to facilitate not only access of members to training and available technologies on citrus production and postharvest operations but also access to capital and trading.

Generally, several species of citrus are highly adaptive to the country. The most important are calamondin (locally known as *kalamansi*), mandarin, sweet orange, pummelo, navel, lime, and lemon.

Citrus can be propagated by budding, grafting, and marcotting. For commercial production, propagation can be done asexually through shield or chip budding. Shield and chip budding are the union of a desired scion variety and a



WHEN IT RAINS, IT POURS

Harvesting water as a conservation technique

Christmas B. de Guzman



Dr. Murli M. Sharma, scientist from ICRISAT, lectures on rainwater harvesting during the BAR Seminar Series.



Dr. Sharma's house featuring the rainwater harvesting system that he developed.

In this country, we have so much rain that every year we see flooded cities and towns featured on TV news reports. Yet there are times when we turn on our faucet and find out we don't have a drop of water. The Philippine archipelago, made up of 7,107 islands, is located in southeastern Asia, between the Philippine Sea and the South China Sea, east of Vietnam. It has a population of 91,077,287 and an adult literacy rate of 92.6 percent. Only about 85 percent has access to safe drinking water, the remaining 15 percent, which constitutes the 40 percent who are under the line of poverty, does not.

Admittedly, water is a scarce resource in the tropics. It is a fact that our country, the Philippines, has a clearly defined rainy or wet season in which there is much precipitation in the form of rain. Since we do not have an efficient water management system, this rainwater is typically "wasted" by its flowing into underground sewers (and maybe even flooding) while during summer there is a shortage of water.

An environment-friendly system that would be beneficial in the Philippines is the rainwater harvesting system. Such a system has the objective of collecting and storing rainwater for domestic uses at a later time. This is particularly useful in lowering water bills during times of water shortage. It also lowers the volume of rainwater that passes through sewage systems, while also reaping the environmental advantages of efficient water use.

Additionally, community-based rainwater harvesting - the paradigm of the past - has in it as much significance as it ever offered before. Studies revealed that those which had undertaken rainwater harvesting in earlier years had no drinking water problem and even had some water to irrigate their crops.

The mechanism to harvest rainwater is easy and doable in every independent house and some high-rise buildings as well. It starts with rainwater being collected from the hard surface of a flat or slanted roof. The rainwater is, in turn, stored in an underground reservoir. The harvested water can be drawn manually or by using an electric pump.

This basically was the idea presented by Dr. Murli M. Sharma, a scientist from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) based in India, during a seminar series at the Bureau of Agricultural Research (BAR) on 13 June 2008.

BAR Assistant Director Teodoro S. Solsoloy, in his opening speech during the seminar series, said that rainwater harvesting has been practiced in arid and semi-arid areas, and has provided drinking water, domestic water, water for livestock, water for small irrigation and a way to replenish ground water levels.

Presently, China and Brazil practice rooftop rainwater harvesting for use for all the purposes aforementioned. Gansu province in China and semi-arid northeast Brazil have the largest ongoing rooftop rainwater harvesting projects.

Dr. Sharma said, the government's water supply system in India meets only a

part of the household requirement while the remaining part is addressed by water from dug wells, bore wells, or purchases from uncertain sources. The latter poses an important concern, specifically on the quality of water and the delivery system.

In the Philippines, a water crisis is already a reality and a nightmare among 15 percent of families that do not have access to safe drinking water. Twenty-eight percent of them also do not have sanitary toilets. As a consequence, waterborne illness is a major cause of infections, or worse, prolonged diseases.

Rainwater management and conservation, Dr. Sharma emphasized, is a solution to unabated population growth coupled with high demand for dependable and safe water supply. As suggested, every household needs to become part of the rainwater conservation system. Developing reliable sources of water is technically difficult, time-consuming, often not environmentally sound and may not be efficient. In relation, assistance from the government may have some limitations.

Rainwater harvesting system has several salient features such as: 1) high quality crystal clear water; 2) absence of chemical treatment; 3) minor maintenance, no running cost; 4) easy in design and construction; and 5) sustainability.

People generally need water for everyday living - for drinking, cooking, laundrying, bathing, etc. Justifiably, water quality and water quantity affect our living. Through rainwater harvesting system, water can be conserved and wisely utilized. Water indeed is life; rightfully so, no water means no life on earth.



Researchers from IAARD visit BAR

The Bureau of Agricultural Research (BAR) led by Director Nicomedes P. Eleazar welcomed a team of researchers from the Indonesian Agency for Agricultural Research and Development (IAARD) for a briefing on 29 June 2008. The activity was part of the exchange study visit between Indonesia and the Philippines.

IAARD is the R&D arm of the Indonesian Ministry of Agriculture which aims to generate responsive agricultural innovation suited to the dynamic of rural areas and the needs of their beneficiaries. One of its missions is to create, engineer, and develop strategic and location-specific technologies and make policy recommendations for the agricultural sector.

Likewise, the IAARD hopes to hasten the dissemination of technology and information to the beneficiaries, strengthen national and international collaborations in science and technology, and improve the Institution's role in the agribusiness sector and overall agricultural development of the country.

Heading the Indonesian delegation was Dr. I Made Mahardika, research manager and project finance officer of IAARD. He was joined by Mr. Ir Sumanto, senior researcher and project officer; Mr. Ir Subagio, head of economics; and Ms. Ir Roni Nurhastuti, head of agricultural services.

The Indonesian visitors were

presented the BAR Story, a documentary about BAR's history, mandate, and R&D directions and priority programs, including Dir. Eleazar's eight-point strategy.

BAR key officials who were present during the briefing were BAR Asst. Dir. Teodoro S. Solsoloy, Program Development Division (PDD) Head Carmencita V. Kagaoan, Research Coordination Division Head Tito Z. Arevalo, Management Information Systems Division Head Marlowe U. Aquino, International Relations Unit (IRU) Head Victoriano B. Guiam, and technical staff members, namely: Rudyard R. Roxas of IRU and Rene Cris P. Rivera of PDD.

The study visit was conducted to improve the R&D activities of both countries specific on food crops, vegetables, fruits, ornamental, and estate crops which are the focused commodities of IAARD.

The Indonesian researchers stayed in the country for a week, visiting primary research institutions in the Philippines to help them gain information and familiarize themselves with various activities and priority programs of Philippine agriculture.

After visiting BAR, the Indonesian delegation visited the Agricultural Training Institute (ATI) and the Optiserve Technologies, Inc. for a briefing on e-Learning. They also proceeded to the University of the Philippines Los Baños (UPLB), National Institute of Molecular Biology and Biotechnology (BIOTECH), Institute of Plant Breeding (IPB), Science and Technology Park, Philippine Rice Research Institute (PhilRice), Sino Center for Agricultural Technology (PhilSCAT), Philippine Carabao Center (PCC), Bureau of Postharvest Research and Extension (BPRE), and Central Luzon State University (CLSU).

The group also visited Mr. Lito M. Arenas' Pangasinan Tropical Fruit Multi-purpose Cooperative (PTF-MPC) in Manaoag, Pangasinan; and interviewed successful goat farmers in Balungao and Sta. Maria, Pangasinan with the technical support from Dr. Jovita Datuin, manager of the Ilocos Integrated Agricultural Research Center. (Rita T. dela Cruz)

Korean journalist visits BAR

Mr. Yoo Ryong, broadcast journalist at MBC, a Korean broadcasting company, and his cameraman visited the Philippines to conduct a documentary on "Global food crisis in relation to global warming" for its current affairs program. Ryong dropped by BAR to interview an expert on the biofuels program.

Prof. Rex Demafelis, a technical consultant tapped by BAR on its biofuels program, was chosen by the bureau as subject matter expert for the interview. Prof. Demafelis is the concurrent convenor of the University of the Philippines Los Baños (UPLB) Alternative Energy RDE and chair of the Department of Chemical Engineering in the College of Engineering and Agro-industrial Technology (CEAT).

Ryong, who conducted the interview with the assistance of interpreter Kate Jong, asked about the current biofuel program of the government, the situation of the industry, potential investors, and the social issues linked to the development of biofuels in the Philippines.

BAR's Technology Commercialization Unit (TCU) head Anthony Obligado and his staff were also present to provide policy and technical information. (Miko Jazmine J. Mojica)



MBC journalist, Yoo Ryong (left) interviews Prof. Rex Demafelis on biofuel program, with him is Kate Jong.

CLSU teams up with local government for quality seeds

Since the joint establishment of the Fruit and Vegetable Seed Center (FVSC) of the Central Luzon State University (CLSU) and the Nueva Ecija provincial local government (LGU) in the late 1990s, the FVSC has supported and continued to provide products and services to farmers and opportunities to engage in alternative activities.

One of the strongest contributions of the FVSC is the provision of quality seeds and planting materials on fruits and vegetables which supports the programs of the DA's *Ginintuang Masaganang Ani*. In line with this, the CLSU-LGU-FVSC continues to address issues on provincial food security and sustainability, production management systems, alternative activities as processing of new products out of the raw materials which were extracted for seed production.

Dr. Nenita dela Cruz, FVSC manager, said her team decided to come up with other products aside from quality seeds because of the issue on food

security, especially for LGUs and programs of elementary and secondary schools on health and nutrition.

Also, the FVSC team processed products derived from the raw materials prior to seed production. Unless these are put into good use, they will just be there as farm waste and made into organic fertilizer. Among the crops processed into value-added products are hot chili, squash, and tomatoes.

Through these alternative product processing activities, it is viewed that the FVSC will not only address the requirements of farmers for quality seeds but also the women's group and educational institutions that turn these crops into a more nutritious and profitable alternative livelihood.

CLSU and the Nueva Ecija LGU as the frontrunners of this activity can now share their experiences to other organizations and institutions that are willing to establish collaborative and complementary activities with local partnership (Marlowe U. Aquino, PhD).



Dr. Nenita dela Cruz, FVSC manager, conducts quality inspection of stringbeans for seed production at FVSC, Science City of Muñoz, Nueva Ecija.

“One of the strongest contributions of the FVSC is the provision of quality seeds and planting materials on fruits and vegetables which supports the programs of the DA's *Ginintuang Masaganang Ani*.”

DA-SUC-LGU to systematize efforts on collaborative extension service

After the two major consultative meetings conducted by the Department of Agriculture (DA) in separate occasions with local government units (LGU) and state universities and colleges (SUC) in May 2008, they are now ready to drumbeat all efforts to unify and systematize the collaborative extension service to address the issue of food security and sustainability.

Responding to the rice crisis early this year, the DA-SUC-LGU view that the best way to put an end to the rice crisis is to work closely and establish strong partnership at the local, provincial, regional, and national levels.

Given the different DA *Ginintuang Masaganang Ani* (GMA) Banner Programs, this new agricultural development strategy will support the different activities vis-à-vis the FIELDS

program of the government. **FIELDS** — which stands for Fertilizer, Irrigation, Education, Extension and Training, Loan or credit, Dryers or Postharvest facilities, and Seeds — will address food sufficiency, competitiveness, enterprise development, and stable industries.

The DA, through the Bureau of Agricultural Research (BAR), started the groundwork to send the message of hope and vision for a progressive agricultural sector. DA's vision is to make the country rice-sufficient in 2010 and simultaneously working on export commodities that support different enterprises and industries.

The work will focus on the provision of collaborative extension service (CES) which will be visualized and operationalized through a group of experts headed by Dr. Emil Q. Javier, president of the National Academy of

Science and Technology (NAST), Drs. Rogelio Cuyno, Santiago Obien, Rolando Dy, Manuel Bonifacio, Leonardo Gonzales, Luis Rey Velasco, Leocadio Sebastian, Fernando Bernardo, and Sergio Francisco.

The expert's group activities include regional consultation-meetings and briefings to SUCs with strong extension service experiences and LGU partnerships highlighting rice production management system and regional priority commodities. With this in hand, the DA-SUC-LGU collaborative extension effort should now incorporate the results of research by looking at the changes happening to the end-users of technology and their communities, modalities of information sharing and exchange to bring about change through the proper management of resources (Marlowe U. Aquino, PhD).



“We must implement enterprise development in a manner that it encourages partnership between the villagers and the government or implementers.”

~ Dr. Battad ~

Battad lectures on village-based enterprises development

Dr. Liza G. Battad of the Philippine Carabao Center (PCC) was the speaker at the BAR 8th Seminar Series with topic on “Village-based Enterprises Development” held at BAR RDMIC Building, Visayas Avenue, Diliman, Quezon City on 13 June 2008.

The Bureau of Agricultural Research regularly conducts the seminar series to provide venue for exchange of information and knowledge, trends, challenges, and opportunities in the agriculture and fisheries R&D sector.

According to Dr. Battad, village-based enterprise can be defined as a system, a program, and a developmentalist.

As a system, village-based enterprise development is intertwined into four aspects: social, economic, technology, and political. Considered as a program, this provides partnership between villagers and the government within a definite time frame. “We must implement enterprise development in a manner that it encourages partnership between the villagers and the government or implementers,” Dr. Battad said.

She explained how the village-based enterprise works for PCC. PCC created a National Impact Zone (NIZ), a development model which puts in place all the necessary elements to establish viable buffalo-based village dairy enterprises. This piloted dairy buffalo enterprise operation is anchored on primary cooperatives.

The established NIZ is aimed at sustaining the diffusion of viable dairy buffalo enterprises which are anchored on a development goal of improving the social and economic condition of smallhold

farming families through carabao-based enterprises.

Attending the seminar were PCC, Bureau of Plant Industry representatives from the DA Family, which included the Bureau of Postharvest Research and Extension, Bureau of Agriculture and Fisheries Product Standards, Bureau of Soils and Water Management, National

Agriculture and Fisheries Council, National Anti-Poverty Commission, National Tobacco Administration, Philippine Rice Research Institute, and National Dairy Authority.

Also, represented were partners from the State Universities and Colleges such as the Isabela State University, Tarlac College of Agriculture, and Cavite State University. (Ma. Eloisa E. Hernandez)



Inquiries from the audience during the open forum session.

Audience during the 8th BAR Seminar Series.

e-Pinoy FARMS® Scoping Session and Hands-on Training for Luzon Cluster held

Members of the Luzon Zonal Research Center for Agriculture (ZRCA) gathered on 11 June 2008 at the Bureau of Agricultural Research (BAR) for e-Pinoy Farm Resource Management System (e-Pinoy FARMS®) Scoping Session and Hands-on Training.

This is to arrive at consensus on the details of utilization and application of the e-Pinoy FARMS® for Community-based Participatory Action Research (CPAR) and to make easy the subsequent hands-on training for data encoders and process documenters representing the regions (Luzon Cluster).

e-Pinoy FARMS® is a unified database program designed to support and improve the decision-making process of specific community-based activities. It also intends to enable farmers' organization, cooperatives, and agribusiness enterprises to record their transactions and operations.

Data that will be infused within the database program of the e-Pinoy FARMS® are activities documented from the CPAR program of BAR.

Dr. Marlowe U. Aquino, head of the Management Information Systems Division (MISD) discussed making agriculture business during the scoping



Dr. Marlowe U. Aquino discusses the objectives of the e-Pinoy FARMS® scoping session.

session. He emphasized the development and advantages of CPAR and NTCP as banner programs of BAR.

Dr. Aquino's presentation was followed by Optiserve Technologies, Inc. CEO Cheryl Marie Natividad who explained the operating framework for CPAR Monitoring and Evaluation (M&E) and performance indicators.

Meanwhile, Research Coordinator

Rolando V. Labios shared his experiences with CPAR and his insights in integrating e-Pinoy FARMS® with CPAR implementation.

The e-Pinoy FARMS® was launched operationally and introduced to the assigned encoders and process documenters in each region. Participants in the hands-on training were assisted by regional coordinators from RCD. (Christmas B. de Guzman)

BAR to conduct agri and fisheries forum and exhibit at SM Megamall

About 70 exhibitors from regions all over the Philippines will feature loads of exotic and exciting product lines derived from the bounty of the islands' natural assets at the Agriculture and Fisheries (A&F) Technology Commercialization Forum and Product Exhibit 2008 at the SM Megatrade Hall, SM Megamall on 21-24 August 2008.

The Bureau of Agricultural Research (BAR) is spearheading the event coinciding its 21st Anniversary celebration. BAR has been promoting the commercialization of emerging and appropriate technologies related to agriculture and fisheries to boost the growth of this sector. The technologies and products made out of them are results of research and development efforts of the DA's attached offices, state colleges and

universities, local government units, non-government organization, and the private sector which collaborate with the bureau.

The agriculture and fisheries sector, which remains as the major driving force towards improving the economy, is positioning itself as a market-driven and profitable venture that can compete in terms of quality and accessibility in the global market. Through the National Technology Commercialization Program (NTCP) initiated by BAR, farmers and fisherfolk are empowered to sustain quality production, processing, and marketing of high-value and indigenous commodities which is attractive to today's discriminating and health-conscious market.

The event will highlight the sale and exhibit of a variety of fresh, processed, and manufactured goods from fruits and vegetables to meat, poultry, and seafood, to organic

products and striking handicrafts made of high-grade indigenous fibers sourced from the different regions nationwide. Another highlight is the conduct of informative and practical seminar-workshops and forum open to all for free that will focus on agribusiness, organic agriculture, and health and wellness. Since 2005, the DA-BAR has been regularly conducting technology commercialization exhibits and forums at the national and regional levels with a limited audience. This year, the bureau is showcasing the bright prospect of the agriculture and fisheries sector to reach a much bigger audience from all walks of life.

For interested exhibitors and sponsors, please contact the Technology Commercialization Unit at (02) 928-8505 locals 2626, 2627, 2621; email tcu@bar.gov.ph. You may also visit www.bar.gov.ph for more information about the bureau.

Collaborative RDE projects on banana reviewed



activity serves as a venue to update researchers and extension workers on the current banana R&D trends and activities and to facilitate a network of experts on banana R&D.

Attending for BAR Director Nicomedes P. Eleazar was Mr. Victoriano B. Guiam, head of the International

Relations Unit (IRU), who also delivered a message during the meeting.

In the message read by Mr. Guiam, Director Eleazar noted the significance of the banana R&D review and planning activity. It corresponds to the Department of Agriculture's (DA) efforts, particularly in the "acquisition, development and promotion of mature and appropriate technologies, from pre-production to production and to postharvest technologies, including the results of research into banana processing and marketing, for our banana smallholders." He affirmed DA's support in terms of technology demonstrations of

banana R&D projects, particularly those that are supported by BAR.

As a future direction for the banana industry, BAR is looking at the expansion of the banana hectareage, particularly with the growing demand for table and processed bananas contributing to the livelihood of smallholder banana farmers, Eleazar also reported.

Although the future of the banana industry is promising, Eleazar noted that there are problems that needed to be resolved.

From the papers presented during the review, banana R&D is now addressing the following issues: 1) lack of appropriate and quality planting/genetic materials; 2) high postharvest losses owing to incorrect postharvest handling practices and facilities; 3) need to address old and emerging banana diseases, including the fusarium wilt – Race; and 4) availability of appropriate technology for smallholder farmers.

Other attendees in the banana review were Bioversity International Regional Coordinator for Asia and the Pacific Dr. Agustin B. Molina Jr. and PCARRD Executive Director Patricio S. Faylon, who each gave their messages during the opening ceremony of the activity. (Rita T. dela Cruz with reports from Mr. Victoriano B. Guiam)

DA eyes...from page 1

must overcome in order to sustain its profit. Some of the most pressing challenges identified by DA are the issues on the nearing maximum productive years of existing rubber trees, high production cost because of rising prices of farm inputs, and difficulty for rubber farmers to access sustainable credits because of the long gestation period of rubber trees.

Moreover, the DA identified the need to strengthen the national research, development, and extension system to further develop the industry. The Bureau of Agricultural Research (BAR), which is specifically tasked with leading the research and development component of NRDP and giving support to its extension activities, is currently supporting the technology commercialization of 10 recommended rubber clones in the country through technology promotion and demonstration in suitable rubber areas nationwide.

Given the lucrative market offered by the global rubber industry (unprocessed and processed), DA asserts that the local rubber industry must overcome the challenges to sustain its profitability.



DA Undersecretary Jesus Emmanuel M. Paras enumerated some of these. He pointed out that most of the existing trees in the country are now either senile or nearing their maximum productive years; most rubber plantations are in Mindanao, which are burdened with security and peace and order issues; growers are

burdened by high production expenditures owing to rising costs of labor and other inputs; sustainable credit and loans are difficult to access and; there is a need to strengthen the national research, development, and extension system from which future advances and development must be anchored. (Miko Jazmine M. Mojica)

BAR to continue supporting basic research; traditional and modern biotech prioritized



With the new direction and priorities set by the Department of Agriculture, the bureau has strengthened its support in the conduct of basic research aimed at addressing the emerging issues and concerns that beset the agriculture and fishery R&D. In particular, researches on agricultural biotechnology covering both modern and traditional biotech.

We need to continue the funding of basic research, particularly on traditional and modern biotechnology,” said BAR Director Nicomedes P. Eleazar at the recently concluded “BAR Midyear Review and Planning Workshop” held in Lucban, Quezon.

Inasmuch as BAR recognizes the importance of applied researches given its direct impact on the lives of the farmers and fisherfolk, the bureau is not overlooking the importance of basic or upstream research in contributing new knowledge that may lead to breakthroughs and generate new technologies.

Basic researches are any experimental or theoretical work

undertaken primarily to acquire new insights on the underlying foundations of physical and biological phenomena and observable events, without any predetermined application or use in view.

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Although basic research results may not immediately find their way to adoption and utilization, Eleazar stressed that “conducting basic and strategic research

is an investment for the future.” The underlying principles will later serve fundamental uses to research applications that are vital to technology generation.

Eleazar encouraged state universities and colleges (SUCs), through the bureau's regional coordinators, to submit quality proposals on basic research for funding support.

In 2007, BAR funded the conduct of five basic researches, most of them implemented by SUCs, namely: University of the Philippines Los Baños, UP Mindanao, and UP Visayas. The other two were implemented by a DA staff bureau (Bureau of Postharvest Research and Extension) and a non-government office (STRIVE/SIKAP Foundation). (Rita T. dela Cruz)

Book on tree planting launched

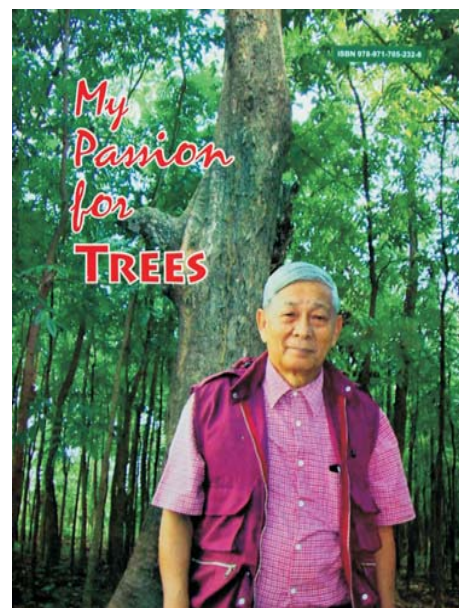
Dr. Fortunato A. Battad, president emeritus, Central Luzon State University (CLSU), and chairman, Board of Agriculture, Professional Regulation Commission, launched his new book, “My Passion for Trees” on 11 June 2008 at the RET Amphitheater, CLSU, Science City of Muñoz, Nueva Ecija.

“This book is a documentation of my advocacy for tree planting. In this book, our collaboration with educational institutions, national government, local government units, and non-government organizations are highlighted,” said Battad, who wrote the book with his wife, Dr. Teodora Battad.

Besides CLSU, Dr. Fortunato Battad was president of numerous agricultural colleges and universities in the Philippines, namely: Benguet State University, Nueva Vizcaya State University (formerly Nueva Vizcaya State Institute of Technology), Pampanga Agricultural College, and West Visayas State University.

To write the book, Dr. Battad and his wife revisited and explored several agricultural colleges and universities in the country in which he, in one way or another, had influenced to develop an affinity towards planting trees. To emphasize his noble advocacy, he has phrased and practiced the adage, “Even if I die tomorrow, I will still plant trees today.”

Dr. Battad's book-writing project was supported by the Bureau of Agricultural Research, PhilRice, and CLSU Foundation, Inc. (Miko Jazmine J. Mojica)



BAR to launch 5 books and an e-book under SPG

The Bureau of Agricultural Research (BAR) will launch five books and a fishery publication in e-book format funded under the Special Publication Grant (SPG) during its 21st Anniversary celebration on 21-22 August 2008 at the SM Megamall.

The six books include a review publication, two technical books, a production manual, and a recipe book. These are: 1) An External Review of PhilRice Impact by Tess V. Rola (ed.); 2) Philippine Rats: Ecology and Management by Grant R. Singleton, Ravindra C. Joshi, and Leocadio S. Sebastian (eds.); 3) Rice Black Bugs: Taxonomy, Ecology, and Management of Invasive Species by Ravindra C. Joshi, Alberto T. Barrion, and Leocadio S. Sebastian (eds.); 4) Pagpapaunlad ng Industriya ng Lanzones sa Timog Katagalugan by Avelita M. Rosales, Virgilia D. Arellano, Elizabeth R. Gregorio, and Thelma M. Lambio (authors); and 5) O! May Gulay Recipe Book by DA-BAR.

An External Review of PhilRice Impact is a review publication that discusses the impact of the Philippine Rice Research Institute from 1997 to 2007 in the scientific and development work. It serves as a reference materials for the PhilRice Board of Trustees and its clientele. The external review was commissioned by BAR while the publication was prepared in partnership with the Conservation and Development Specialists Foundation, Inc. (CDSFI).

Philippine Rats: Ecology and Management features current knowledge on the Philippine rodents, their ecology, systematics, diseases, and management. The book covers a wide array of topics from the historical perspective of the development of rodent pest management from 1968 to 1988, to biology and management in complex agroecosystems, to ecology of pest and native rodent species, and to their impact on farming communities.

Rice Black Bugs: Taxonomy, Ecology, and Management of Invasive Species is a book comprising of an extensive literature on the taxonomy, ecology, and sustainable management of rice black bug (RBB). The 800-page book provides a lengthy discussion on some of the old problems and introduces new ecological techniques for the management RBB. It consists of four sections covering clarifications on the confusing taxonomy using traditional and modern taxonomic tools, country reports of RBB experiences of other rice-growing countries, aside from approaches to management of RBB pest species.

Pagpapaunlad ng Industriya ng Lanzones sa Timog Katagalugan is a user's manual on lanzones (*Lansium domesticum* Correa) production. The manual specifically discusses topics on the rehabilitation of lanzones, planting different varieties, production of quality planting materials, harvesting, and marketing.

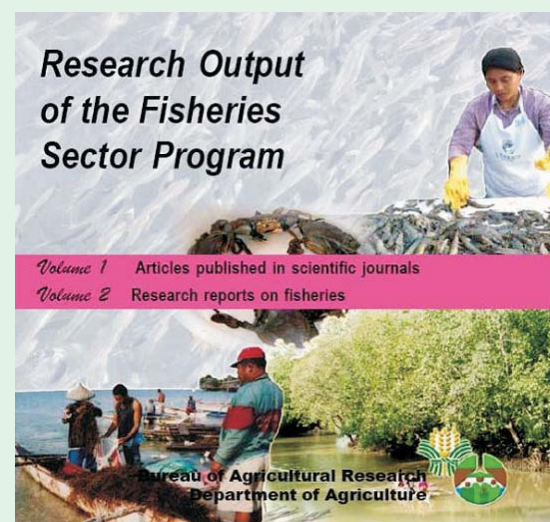
O! May Gulay Recipe Book features the winning recipes from students of public high school in the National Capital Region (NCR) who joined the O! May Gulay Cooking Contest held and exhibited during the 2007 Agrilink/Aqualink/Foodlink on 4-6 October 2007 at the World Trade Center, Pasay City. The activity was designed to develop vegetable recipes that are easy to prepare, affordable, and delicious in support of DA's efforts in promoting local agriculture products.

BAR will also launch two volumes of the **Research Output of the Fisheries Sector Program** (FSP) in e-book format for easy access and dissemination to the fisheries R&D sector and other concerned institutions. The two volumes of FSP books was packaged into a user-friendly CD booklet by the Aquaculture

Department of the Southeast Asian Fisheries Development Center (SEAFDEC/AQD). FSP Volume 1 contains 34 research papers published in scientific journals and other publications and has a printed version released in November 2002 while Volume 2 consists of 32 BAR-funded researches on fisheries R&D reflecting the Department of Agriculture's (DA) directions and priority programs on fisheries.

SPG is one of the services given by BAR to support the government initiatives in modernizing the agriculture and fisheries sectors of the country. SPG is awarded to an organization/institution or scientific/professional societies to cover the cost of publications of scientific proceedings/symposia, refereed scientific journals, manuals on research methodologies, and books that can be availed of by members of the National Research and Development System of Agriculture and Fisheries (NaRDSAF).

Managed by BAR's Management Information Systems Division (MISD), requests for publication grants are reviewed by the SPG Committee to ensure that policies are being observed and to recommend appropriate action to the bureau director. (Rita T. dela Cruz)



VSU supports CPAR intensification drive



Farmer consultation-briefings with VSU staff members prior to CPAR project implementation.

Our motivation to utilize the Community-based Participatory Action Research (CPAR) is to have greater participation, enhance people's empowerment, and maintain sustainability in the different programs of the university," said Dr. Julieta Roa, director of the Philippine Rootcrops Research and Training Center (PRCRTC) of the Visayas State University (VSU) in Baybay, Leyte.

Through the university-led CPAR project on Gabi Chips Processing in Liloan, Southern Leyte, several local, regional, and national government organizations and non-government organizations helped in its successful implementation through interactive, dynamic, and strong partnership of the stakeholders.

Farmers of Barangay Liloan have been producing quality and sustainable gabi

chips because of the processing technology of PRCRTC, not to mention the continuous production of raw materials by the farmers.

The project is jointly implemented by BAR through the DA-Regional Field Unit VIII – Eastern Visayas Integrated Agricultural Research Center, Techno-Gabay of the Visayas Consortium for Agricultural Research Program, Department of Trade and Industry and Department of Science and Technology of Southern Leyte, and the local government of Liloan, farmers' groups of Liloan.

All involved actors provide technical, financial, and political leadership to the overall success of the project. This could be attributed to the added innovative process in the holistic developmental modality of CPAR.

Accordingly, VSU-PRCRTC

introduced the continuing improvement and innovation process (CIIP) in the CPAR methodology as they encouraged community participation in the different activities.

The CIIP focused on six important strategies, namely: community analysis, understanding desired impacts and outcomes, systematic action designing, participatory implementation, community performance assessment including technology utilization and application, and creation of innovative enterprises and synthesis of relevant information. These strategies contributed in the attainment of the project's objectives on community's capacity, improved profitability through improved product quality, presentation and establishment of a facility for skills development, and improved the enterprise monitoring using participatory approaches.

The CPAR project was directed on a vision of productive and sustainable enterprise development because of the strict adherence to the concept of CPAR and CIIP, utilization of the introduced technology for development, partnerships of different key actors and stakeholders and requirements of the different markets using standard protocol of processing and manufacturing procedures. Incidentally, the project standardized processing procedures and established the Community's Good Manufacturing Practice Facility which will house the training center and processing activities of the community.

With the end view of utilizing the CPAR modality and innovative process approach, the efforts of BAR and its partners will not only be in paper but also in action as reality unfolds in making agriculture business one step at a time towards enterprise development (Marlowe U. Aquino, PhD)



Locally packaged gabi chips



Ormoc holds 6th National Vegetable Congress

With the theme, *Commercializing Small hold Vegetable Production for Global Competitiveness*, the Ormoc City Federation of Vegetable Producers, through President Edgardo C. Codilla hosted the 6th National Vegetable Congress on 24-26 June 2008 at the Sabin Resort Hotel in Ormoc City.

The congress strategically aimed to inform stakeholders on the current developments on the vegetable industry; revisit experiences particularly on modern production and postharvest technologies; strengthen the linkages among vegetable stakeholders and attract investors; and address issues on food security.

Welcoming the participants was Ormoc Mayor Eric C. Codilla. In his remarks, he cited the implementation of vegetable production program in the city as a supplement to the rice program under the

GMA-Rice Program.

Giving the overview of the event was President Edgardo Codilla. He said, "Vegetable industry in the Philippines is characterized by a mixture of small, medium, and large farms. With this kind of structure, there is a need for our vegetable growers to unite their efforts in order to create an impact on food security and poverty alleviation."

In behalf of Agriculture Secretary Arthur C. Yap, Assistant Secretary Salvador S. Salacup attended the event. In his speech, he cited various government interventions to increase production and consumption. "We at the DA, through the GMA-High Value Commercial Crop (HVCC) Program, are addressing major concerns throughout the entire vegetable chain supply from production, postharvest, processing, transport and marketing," ASec Salacup said.

These include distribution of subsidized seeds and planting materials, provision of farming equipment, and construction of needed facilities for production and postharvest. In addition, he enumerated DA's initiatives in encouraging vegetable consumption: 1) increase off-season production; 2) conduct training and technology demonstration on vegetable production, and organic farming; 3) organize production clusters; 4) establish barangay food terminals; and 5) establish cold chain facilities.

A total of 418 participants from national government agencies, provincial and municipal local government units, state universities and colleges (SUCs), farmers/farmers associations, Regional Agricultural and Fishery Council (RAFC), Provincial Agricultural and Fishery Council (PAFC), input suppliers, and product exhibitors attended the congress. The topics included the following: 1) Philippine vegetable industry situationer; 2) vegetable

research and development; 3) *Programang Gulayan para sa Masa*; 4) organic agriculture; 5) Israel modern vegetable farming; 6) Good Agricultural Practices; 7) Postharvest Technologies; 8) marketing strategies; 9) Updates on ACEF and project preparation; and 10) lending programs.

For the Vegetable R&D, Bureau of Agricultural Research Assistant Director Teodoro S. Solsoloy presented the Research, Development and Extension Program on Vegetables 2006-2010.

Dr. Solsoloy discussed five issues with corresponding recommendations anchored on increasing production through adoption of location-specific technologies and reduction of costs of wage goods.

The common activities and projects to be integrated as programs include analysis of the efficiency of production of selected wage crops such as *pinakbet*. Also, cost-reduction technologies on priority wage goods such as *pinakbet* and salad that can be achieved by substitution (use of cheaper inputs) or more efficient use of inputs (like fertilizer and pesticide use).

Some of BAR-funded projects on organic agriculture are: 1) commercialization of organically-grown vegetables in Region III; 2) LaTOP (high-quality, organically-grown culinary herbs produced by a cooperative in La Trinidad, Benguet); 3) protective structures for organic high value vegetables production as an approach to urban agriculture (UPLB) and; 4) CPAR organic vegetable farming (banana + coffee integration, integration of vegetables in rice-based farming system, etc.).

On indigenous vegetables, BAR supported the indigenous plants for health and wellness (SPA Association of the Philippines) and the promotion of indigenous vegetables for poverty alleviation and nutrition improvement of rural households in the Philippines (AVRDC/World Vegetable Center). (Ma. Eloisa E. Hernandez)



Dr. Teodoro S. Solsoloy presents the Research, Development and Extension Program on Vegetables 2006-2010.

BAR participates in 7th Agraryo Trade Fair; showcases commercialized products from NTCP



Carrying this year's theme, *Celebrating Agrarian Reform Beneficiaries' (ARBs) Growth and Success*, the Bureau of Agricultural Research (BAR) participated in the *Agraryo Trade Fair* held on 4-8 June 2008 at the SM Megamall Megatrade Hall. BAR showcased in its booth some of the regions' commercialized products funded under the National Technology Commercialization Program (NTCP).

Now on its seventh year, the trade fair is an annual activity of the Department of Agrarian Reform (DAR) in celebration of the Comprehensive Agrarian Reform Program's (CARP) 20th Anniversary.

Welcoming the participants was

DAR Secretary Nasser C. Pangandaman. In his speech he stressed that celebrating ARBs' growth and success is a fitting description of DAR's intent to drumbeat the victories and advances in terms of ARB product promotion in the mainstream market while taking on the challenge to meet food security goals.

In the same manner, Honorable Speaker of the House Prospero C. Nograles who was the affair's guest speaker said that "The theme amply describes the upliftment of the lives of the beneficiaries of CARP". He committed to do whatever he can to pass the extension of the CARP for the next five years before the Congress adjourns on 13 June 2008.

The five-day trade fair showcased

an array of products from fresh and processed products, processed poultry and meat products, food ingredients and additives to packaging materials, furniture and handicrafts, natural and organic products, and agrarian reform and rural development programs/projects.

To spice up the event, 10 selected lectures/seminars on product development, market trends, and product demonstrations were presented.

NTCP is one of BAR's flagship programs under the leadership of Director Nicomedes P. Eleazar. The NTCP envisions to strategically place technologies where they are needed while transforming the agriculture and fisheries landscape-based sectors through a market-driven approach.



BAR Assistant Director Teodoro S. Solsoloy (right) receives the Gawad Agraryo plaque on behalf of BAR, being one of this year's sponsors. Giving the awards are DAR Secretary Nasser C. Pangandaman (center) and Philippine Fruits and Vegetable Industries, Inc. President Solomon D. Badoy (left).



MISD Assistant Head Julia A Lapitan (right) shows to Director Eleazar the BAR's exhibits during the Agraryo Trade Fair featuring products and technologies funded under the National Technology Commercialization Program (NTCP) and the Community-based Participatory Action Research (CPAR).

Seven products and technologies were showcased at the BAR's booth. These were:

Special products lines from Oregano. The Department of Agriculture Regional Field Unit IV-A - Southern Tagalog Integrated Agricultural Research Center-Quezon Agricultural Experiment Station developed different product lines from the Philippine *Oregano* which include oregano wine, oregano tea, oregano vinegar, oregano juice, and oregano juice for poultry.

Mango drying facilities. The cabinet drying facilities is now being utilized by the Pangasinan Tropical Fruits Multi-Purpose Cooperative (PTFMP) in Brgy. Matulong, Manaoag, Pangasinan. The facilities are developed for the improvement and enhancement of the country's fresh mango export to China and Europe.

Queen pineapple production. The Labo Progressive Multi-Purpose Cooperative (LPMCP) is among the institutions in Labo, Camarines Norte, that promotes livelihood projects on pineapple production and integrated leaves processing.

Salted duck eggs projects. The Community-based Participatory Action Research (CPAR) program of BAR is in response to the twin goals of the Department that gives priority to the agribusiness development of communities. Brgy. Hibago, Ocampo, Camarines Sur established a micro-enterprise on duck egg production and salted egg processing.

Carabao's milk. The Philippine Carabao Center (PCC) developed the National Impact Zone (NIZ) model for the improvement of the socio-economic situation of carabao farmers involved in dairy production from production, processing, and marketing activities supported by technical and financial services. The Nueva Ecija Federation of Carabao Cooperative (NEFEDCCO) now produces milk, *kesong puti*, carabao mozzarella, *pastillas de leche*, and others.

Garlic technology commercialization. To sustain the role of Region I as the major supplier of garlic in the country, DA-Research Outreach Station II in Batac, Ilocos Norte, developed the garlic technology commercialization in Region I. The project purposely conducted to increase production and post-production technologies and address efficient marketing to attain food security.

Indian and Piko mango products. DA-Regional Field Unit IV-Quezon Agricultural Experiment Station developed special product line from Indian mango, now being commercialized into mango-based tart. This will address the problems of oversupply of these mango varieties during peak season and assess the potential of utilizing *Indian* and *Piko* varieties as an added ingredient for tart.

The trade fair was organized by DAR, Bureau of Agrarian Reform Beneficiaries Development (BARBD), and ARB Agribusiness Entrepreneurship Development (AREDP), in partnership with the Philippine Fruits and Vegetable Industries, Inc. (PhilFruits).

Receiving the *Gawad Agraryo* for being this year's sponsors were BAR, DA, Department of Tourism (DoT), Land Bank of the Philippines (LBP), San Miguel Corporation (SMC), First Asia Realty Development Corporation, Office of the Speaker of the House of Representatives, and the National Historical Institute (NHI).

In behalf of Dir. Eleazar, Assistant Director Teodoro S. Solsoloy received the plaque. Meanwhile, Information Systems Division Assistant Head Julia A. Lapitan served as overall coordinator and facilitator for the BAR's exhibits. (Ma. Eloisa E. Hernandez)

7th Agraryo Trade Fair

"Celebrating ARBs' Growth and Success"

photos by NDELROSARIO and MEHERNANDEZ

