BAR leads synergy meeting on sweet sorghum initiatives

The Bureau of Agricultural Research (BAR) held the 2nd Leveling-off and Synergy Meeting for the Sweet Sorghum Initiatives in the Philippines on 22 May 2007 at the BAR Conference Room., Visayas Ave., Diliman, Quezon City. Dr. William D. Dar, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) director general, presided the meeting. With him were BAR Director Nicomedes P. Eleazar, Mariano Marcos State University (MMSU) Vice President for Administration, Planning and External Linkages Heraldo L. Layaoen, and University of the Philippines Los Banos (UPLB) Vice Chancellor for Research and Extension Enrico P. Supangco.

photo by Nicanor B. Del Rosario III

The activity underscored the creation of a Technical Working Group (TWG) for the Philippine Sweet Sorghum Initiatives (PSSI).

Other attendees were Dr. Artemio M. Salazar of the Institute of Plant Breeding-UPLB, Engr. Ari Luis dC. Halos of the College of Engineering And Agro-industrial Technology-UPLB, Prof. Rex Demafelis of UPLB, President Zosimo Battad of the Pampanga Agricultural Colleges (PAC), Dr. Jocelyn E. Eusebio of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Dr. Santiago Obien of BAR, Mr. Leonardo Q. Montemayor of the Federation of Free Farmers, and Ms. Cheryl Marie Natividad of Optiserve.

Among the specific topics discussed during the meeting were: 1) Updates on Sweet Sorghum Initiatives, 2) Sweet Sorghum presentation, 3) UPLB Biofuels Updates, 4) Draft Terms of Reference (TOR) of the Technical and Oversight Committees, and 5) Comprehensive Monitoring and Evaluation System for Sweet Sorghum.

Dr. Layaoen reported that MMSU is currently experiencing overproduction of sweet sorghum seeds and added that the establishment of seed storage facility which costs around Php 5M is urgently needed. He said that credit institutions are averse to extending financial assistance to private investors wiling to set up distillery plant utilizing sweet sorghum as biofuel feedstock.

Dr. Dar requested that more data should be made available to encourage both farmers and private investor participation.

On the other hand, Halos updated the upscaling project of sweet sorghum in the Philippines. He showed the Philippine map indicating areas where the projects will be implemented.

Dr. Dar was keen on the development of downstream processing and equipment system for anhydrous ethanol from sweet sorghum as part of the UPLB Biofuel Program, which Demafelis has presented. Dr. Dar suggested that UPLB repackage the proposal on ethanol research and training plant.

The group also commented on the draft TOR presented by Dr. Eusebio. Director Eleazar suggested the involvement of Mr. Marriz Agbon, DA Biofuels Program focal person, in the Oversight Committee and Mr. Rainier Pantua, rural infrastructure engineer, in the Technical Committee, respectively.

Lastly, the TWG was tasked with preparing the guidelines on the Comprehensive Monitoring and Evaluation System which will be further discussed in succeeding meetings.

(Maria Noriza Q. Herrera)

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BAR celebrates Farmers and Fisherfolk Month; showcases 5 commerciable R&D technologies

photo by Ricardo Bernardo

(L-R) NBN's Mag-Agri Tayo Host Philip J. Daffon, BAR Director Nicomedes P. Eleazar, UP-NCPAG Consultant Marideth R. Bravo, PADCC President Marriz B. Agbon, BAR Asst. Director Teodoro S. Solsoloy, and PCA-RDEB Deputy Administrator Carlos B. Carpio lead the ribbon cutting ceremony to officially open the fair exhibit.

The Bureau of Agricultural Research (BAR) showcased five commerciable technologies during the 2007 Agriculture and Fisheries Technology Forum, a first for this year. The five featured commerciable technologies were 1) localized two-row pneumatic corn planter, 2) hatchery technology for mudcrab, 3) waxing emulsion for 'Queen' pineapple, 4) sweet sorghum production for ethanol, and 5) coco sugar for health and wealth.

The forum, held on 24 May 2007 at the RDMIC Building, Visayas Avenue, Diliman, Quezon City, coincided with the Farmer and Fisherfolk Month, wherein the Department of Agriculture (DA) leads in its annual celebration.

This year's theme, "Stronger Technology-Investment Linkage for Competitive Agriculture and Fisheries," underscores BAR's commitment to the challenging role of modernizing the country's agriculture and fisheries industry, particularly on investing technologies with great impact at the grassroot level. The Bureau makes it a great concern that all R&D results are optimally used and do not remain in the confines of laboratories but to let these significant technologies adopted and used by farmers and fisherfolk to improve and increase their production.

The activity kicked off with the opening ceremony with Philippine Agricultural Development and Commercial Corporation (PADCC)

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2nd Regional Techno Forum head starts in Luzon B Cluster

The first of a series of four regional technology forums has been conducted.

Spearheaded by the Technology Commercialization Unit (TCU) of the Bureau of Agricultural Research (BAR), the Regional Technology Commercialization Forum for Agriculture Fisheries commenced for Luzon B Cluster which covers Regions III, IVa, IVb, and V. It was hosted by the Regional Field Unit (RFU) of the Department of Agriculture (DA) in Region V at the Starmark Royale in Naga City, 30 May 2007.

The one day event was graced by BAR Director Nicomedes P. Eleazar who led the ribbon cutting for the opening of the exhibit together with Naga City Mayor Jesse M. Robredo. Dir. Eleazar also served as the keynote speaker for the event.

In his speech, he mentioned that linking technologies through

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DEPARTMENT OF AGRICULTURE
BAR Chronicle
The official monthly publication of DA-BAR

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BAR Chronicle is the official monthly publication of the Bureau of Agricultural Research (BAR) of the Department of Agriculture (DA), which is mandated to ensure that all agricultural research is coordinated and undertaken for maximum utility to agriculture.

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

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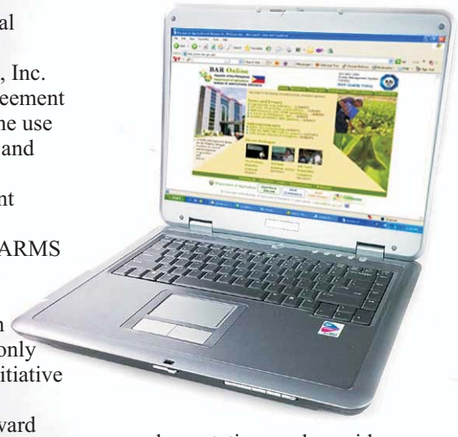
BAR and OptiServe collaborate for ICT community-based initiatives



The Bureau of Agricultural Research (BAR) and OptiServe Technologies, Inc. (OptiServe) have forged an agreement to support DA programs with the use of information communication and technology.

The agreement is a joint collaborative project titled Establishment of the e-Pinoy FARMS for a sustainable and Profitable Agriculture and Fisheries Community-based Initiatives in Selected Pilot Regions. Commonly called e-Pinoy FARMS is an initiative to direct the mainstream of community-based activities toward agriculture and fisheries development. e-Pinoy FARMS stands for electronic farm resource management systems, an Enterprise Resource Planning (ERP) solution with built-in capability to integrate all data and processes of an organization into a unified system. The key ingredient of e-Pinoy FARMS is the use of unified database to store data for the various systems modules which include Farmer/Fisherfolk Organization Module (e.g., Daily Operations Management and Production Scheduling); Local Government Unit (LGU) Module (Farmer/Fisherfolk Profile, Organization/Association Profile), Regional Integrated Agricultural Research Center (RIARC) Module (Community-based Participatory Action Research (CPAR) Project Monitoring and Evaluation Module) and BAR Module (Information Consolidation, Integration and Analysis Module).

The modules have unique features that support and enhance decision-making process of specific community-based activities, including operation and management.
More specifically, the project enables stakeholders to effectively monitor the value-chain management, value-adding and rise in agri-enterprise development and more diverse means for household income; provides mechanism for process documentation of community-based initiatives; strengthens linkage and network with local government units and research institutions through participation and complementation; and provides access to information/technologies, including possible market linkages to farmer/fisherfolk associations and cooperatives for informed decision-making.

In addition, the project will make use of community information exchange strategies to be well managed by the key players and stakeholders in order that agriculture and fishery products will be produced, processed, distributed, and channeled where they are most needed for markets and consumers.

After two months of project conceptualization and approval, its implementation is now in full swing in Regions IX and V in support of the Community-based Participatory Action Research (CPAR) modality of the identified poorest provinces in the country. The provinces of Zamboanga Sibugay, Zamboanga del Norte, and Camarines Norte will have the initial run of the system and modules to make sure agriculture and fisheries is a real business enterprise.

Regular monitoring and evaluation feedback mechanism and process documentation are included in the project's entirety in order that key processes, lessons, and experiences will be recorded for the next expanded area coverage. This will be further operationalized and institutionalized in all DA and DA-BAR community-based initiatives at the regional, provincial, municipal, and barangay levels. *(Marlowe U. Aquino, PhD)*

RITA T. DELA CRUZ

Every time the ducks quack, it means that something or someone is bothering them. Either they are being warded off from their place or they stood on a shaky ground.

This anecdote holds true for the current situation of the duck industry in the country.

Duck, although ranked second only to chicken for egg and meat production, is also a crucial subsector of the Philippine poultry industry. It provides employment and income-generating opportunities for Filipinos, particularly those in the rural areas.

Among the avian species, duck is considered the most adaptable because it can survive under a wide range of climatic and nutritional conditions. Duck raising is inexpensive, requires non-elaborate housing facilities, and needs very minimal space for rearing compared to chickens. Ducks are also shown to be relatively hardy, resistant to common diseases, and subsist on a variety of feeds.

Over the years, the duck industry has been hounded by various quandaries and constraints both in its production and marketing aspects. But since this industry is a local resource-based, it slowly gained its phase. Even importation seems not to be a serious threat to the domestic supply since a large portion of the demand for duck meat and eggs is still being met by current domestic production.

However, with the recent threat of the bird flu disease with rumors and speculations of its entry into the country, the industry is once again alarmed. This threat comes with other related series of problems such as high costs and poor quality of feed materials, high variability in the quality of stocks, erratic prices of duck products, and high possibility of the entry of imported duck egg products.

With these scenarios in mind, the Duck Industry Association of the Philippines (DIAPI), together with the Australian Center for International Agricultural Research (ACIAR), the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Livestock Development Council (LDC), the Bureau of Agricultural Research (BAR), and University of the Philippines Los Baños (UPLB) convened major stakeholders both from the government and private sectors to embark on a discussion and address issues and concerns that hound the duck industry in the Philippines. The forum was held on 31 May- 1 June 2007 in Angeles City, Pampanga, with the theme, "Philippine duck industry: Coping with the Changing Production Systems."

Specifically, the industry forum was conducted to disseminate recent information and technologies to duck raisers, egg processors, and distributors and equip them on how to improve and increase their production. With the presence of key players from the industry, the activity aimed to discuss current problems confronting the local duck industry, particularly on the issue of bird flu and how to abate this threat.

Ultimately, it is expected that a dynamic and effective partnership is forged between and among private players with appropriate support from the government.

Topics of papers presented during the forum included 1) Status and concerns of the Philippine duck industry; 2) Prospect for duck producers in the Philippines; 3) Duck anger; 4) Raising ducks in confinement, 5) Impact of avian influenza and other health-related issues on the duck industry, 6) Feedmilling and feeding of ducks, 7) Duck breeds and breeding, 8) Product development and value adding of duck products, and 9)

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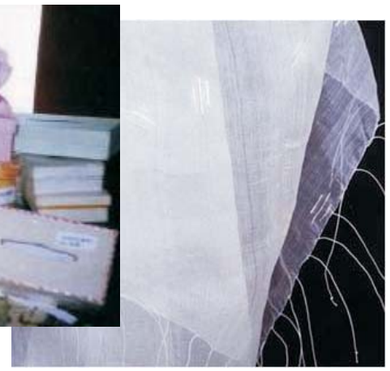
photos courtesy of PCARRD



paper. In turn, the handmade paper can be made into handicrafts, novelty items, paper thread and paper fabric.

Market potential

The use of pineapple fiber in the textile industry has long been recognized and the demand is continually increasing. Together with abaca and banana, fiber from the 'Queen' pineapple is now being developed as substitutes for cellulose fibers. Its considerable volume of production is being eyed to supplement the limited production of cotton.

In the case of LPMCP, the cooperatives' fiber-based products are marketed locally and internationally. Currently, the cooperative supplies its handwoven Formosa pineapple cloth to Laguna-based embroiders, garments manufacturers, boutique, and department stores. With the demand in foreign markets for good piña cloth that can meet the preference of high end consumers, the cooperative has also targeted to export its handwoven products to Japan, Hong Kong, USA, Canada, France, Denmark, Germany, Switzerland, Italy, The Netherlands, and other countries in Asia.

Meanwhile, the signing of Republic Act 9242, otherwise known as "An Act of Prescribing the Use of the Philippine Tropical Fabrics for Uniforms of Public Officials and Employees and for Other Purpose," will eventually call for the commercialization of the decorticated piña fiber which is needed in the fabrication of *polypiña* cloth. The demand for the *polypiña* cloth will soon increase pursuant to RA 9242. This will eventually require increase in the market production of the tropical fiber to meet future demands.

Aside from the manufacturers of school and office uniforms, the machine decorticated fiber can also target manufacturers of carpets, bags, and handicrafts, spinning mills, and foreign companies.

The handmade paper from the machine decorticated fiber commands good price in the market due to its distinct overall quality. This product is very popular in foreign countries such as Japan, USA, and Australia, and in Europe. Potential markets for this product would be easy to find as crafts and novelty items made from the handwoven paper are always in demand in the local market.

BAR's endeavor

The Bureau of Agricultural Research (BAR) is mandated to coordinate agriculture research and development activities. More so, it defines its role in the modernization of agriculture through the commercialization of mature technologies that would be of great help to our Filipino farmers and fisherfolk. The extraction of fiber from the leaves of the 'Queen' pineapple and its fabrication into cloth or paper is just another among the many mature technologies ready for commercialization that will be benefitted by the farmers and of those in the marginalized and business sectors.

Being among the flagship crops of Camarines Norte, whether as a fruit crop or a fiber crop, the 'Queen' pineapple has marked its contribution to at least alleviate poverty in one of the poorest provinces in the country.

Sources:
1. The official website of regional development council V. 13 June 2007. <http://www.rdc5.gov.ph/lindgcp_320/camarines_norte.htm>
2. The official website of the Labo Progressive Mutt-Purpose Cooperative. 13 June 2007. <http://www.labocoop.org/index.html>
3. Morton, J. Pineapple. 1987. Fruits of warm climates. 14 June 2007. <http://www.hort.purdue.edu/newcrop/morton/pineapple.html>

2nd Regional...*from page 1*

commercialization is the solution on how to disseminate the results of the efforts that were invested in research and development. Moreover, Dir. Eleazar stated that BAR is taking a role that goes beyond coordinating and funding researches by supporting the critical step of making new technologies available to the public as products or services.

Adopting the theme of the National Technology Forum "Stronger Technology-Investment Linkage for Competitive Agriculture and Fisheries", nine mature technologies ready for promotion and commercialization were presented. These includes: (1) Machine decorticated fiber, hand-woven piña cloth, and handmade paper production from Formosa 'Queen' pineapple, (2) Environmentally sound aquaculture techniques: Use of tobacco dust in milkfish pond culture, (3) Village- level Cashew Apple processing, (4) Improved technologies for the enhancement of lanzones production in CALABARZON, (5) Tamarind wine production, (6) Oil-based wax formulation and protocol for 'Queen' pineapple and 'Satsuma' mandarin, (7) Dehydrated 'Queen' pineapple production, (8) Socorro-Claveron-Velarde (SCV) fish eggs artificial incubator for intensive tilapia hatchery system, and (9) Community-based mushroom laboratory.

The conduct of the regional technology forum aims to establish more partnerships to make the channel of mature technologies more efficient. The remaining regional technology forums for Luzon A Cluster (Regions I, II, and CAR), Mindanao Cluster, and Visayas Cluster will be held in June, August, and September, respectively. *(Ellaine Grace L. Nagpala)*

Rillo wins 2007 *Gawad Saka* outstanding agricultural scientist

Erlinda P. Rillo

Erlinda P. Rillo of the Philippine Coconut Authority (PCA)-Albay, an expert in *makapuno* embryo culture, is this year's awardee for the *Gawad Saka* outstanding agricultural scientist.

Rillo was chosen out of the three finalists who made it in the category. She will receive the award during a simple ceremony at the Malacañang Palace in June.

Rillo is division chief III and a Career Scientist IV as conferred by the Department of Science and Technology (DOST). Her fields of specializations include coconut crop protection, tissue and embryo culture, and plant micropropagation, which she continually improves at her base at the PCA-Albay Research Station in Banao, Guinobatan, Albay.

One of her greatest contributions in this field is the rehabilitation of *makapuno* farms in the country despite the minimal funding given to her to pursue her research. Her research work paid off when she developed media formulations that enabled the commercial production of *makapuno* seedlings. This eventually led to the improvement of the Philippine coconut gene pool and revival of *makapuno* plantations in the country. Currently, an additional 100 hectares have been planted to *makapuno* or a 25 percent increase in area planted. Her work has uplifted the lives of coconut farmers in the Bicol region.

Rillo's significant accomplishment have made her as one of the most sought after scientists/experts in the field of *makapuno* tissue culture.

Other two finalists for this award were Dr. Lutgarda S. Palomar of the Leyte State University (LSU) and Dr. Louella Rowena A. De Jesus of the Southern Tagalog Integrated Agricultural Research Center (STIARC).

Dr. Palomar, head of the Department of Food Science and Technology of LSU, is an expert in the fields of food science and technology, product development, and nutrition and dietetics. Despite the limited funding from the state university, Dr. Palomar managed to source out and generate funds for her research and extension activities.

She collaborated with both national and international agencies and helped various agriculture communities by providing them with alternative sources of livelihood, from food processing to packaging and getting their products to the market.

A number of her technologies have been submitted for patenting. Her latest achievement involves enhancing food processing techniques by optimizing the formulation of ingredients using the response surface methodology. This statistical methodology explores the relationship between several explanatory variables and one or more response variables.

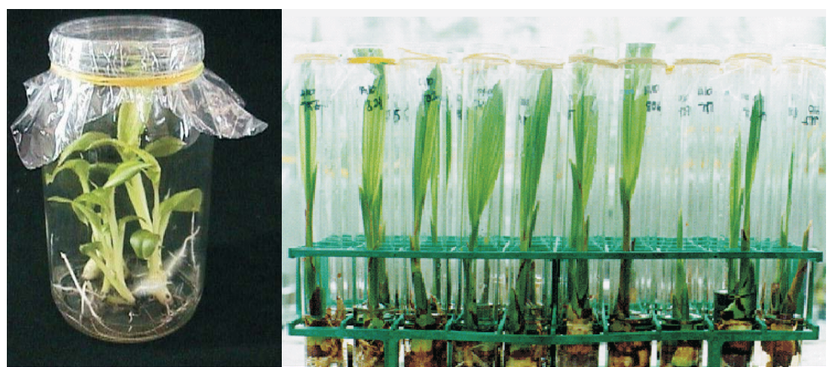
Put it this way, you conduct a number of experiments to come up with the optimal or the most favorable conditions to come up with better tasting, more nutritional food with minimal waste of ingredients. Also, her achievements have been recognized by the science community and rural farmers.

The other finalist, Dr. De Jesus, a senior agriculturist of DA Region IV-B, is known for her pioneering work on controlling the spread of mango pulp weevil. Her research work on mango pulp weevil and the technologies developed are being applied by mango growers to control the spread of the pest in Palawan.

While working closely with the Philippine Nuclear Research Institute (PNRI), her initial findings showed the potential of irradiation treatment to quarantine the infestation of the mango pulp weevil. Her research has been mostly in the Southern part of Palawan, specifically the town of Brooke' Point, where the pest was first found and identified.

Currently, Dr. De Jesus is studying the morphology of the mango pulp weevil, which will lead to more methods of how to control, if not eradicate, the pest, which has been a bane to mango producers of Palawan and the mango export industry as a whole.

This year's winner was judged based on a prudent evaluation and field validation conducted by the National Technical Search Committee (NTC) that later came up with a recommendation to the National Executive Committee and the Board of Judges of the 2007 Gawad Saka Search for Outstanding Achievers in Agriculture and Fisheries. *(Jude Ray P. Laguna)*



Makapuno embryo culture, Dr. Rillo's pioneering work and contribution in R&D.

BAR links with DLSU-Manila on ITMSI program

The Bureau of Agricultural Research (BAR) commitment to serve its partners and clientele has extended beyond research and development institutions.

Now, BAR is closely working with a well-established academic institution in Metro Manila, De La Salle University-Taft particularly the College of Computer Science (CCS). The partnership is BAR's outreach program for students.

The BAR and DLSU-Taft agreement is the Information Technology Management Student Internship (ITMSI) Program. The program was initiated by Dr. Caslon Chua, dean of CCS and Ms. Lorna Magpantay, CCS Student Internship coordinator, and Dr. Marlowe U. Aquino, head of BAR-MISD.

The agreement was formally signed by BAR Director Nicomedes P. Eleazar and Dr. Carmelita Quebengco, DLSU-Manila executive vice president on 18 May 2007.

The ITMSI program's goal is to establish a strong partnership on an information communication and technology (ICT) management program and services that encourage holistic and development-oriented learning strategy between the two agencies. The program will provide areas of collaborative activities between the faculty and students of DLSU and the staff of BAR-MISD on ICT.

Furthermore, the program will assist in the establishment of a learning laboratory of ICT management for individuals and agencies; develop capabilities of individuals on ICT management, including research methodologies applicable in areas of agriculture, fisheries, computer science, and related fields; and provide an avenue for information and communication exchange programs of stakeholders and key players.

The identified program services which both parties could work on will focus and complement on are the following areas: systems analysis and design, systems development, module or component development, complete software development, website or web application development, information systems support activities, technical writing, user technical support activities, technology research, technology management and planning, research management including planning, implementation, monitoring and evaluation focusing on agriculture and fisheries development.

The program will start this school year 2007-2008 during the June opening term of DLSU. Both agencies envisioned that the new initiative will provide a very good pool of ICT experts and professional in the area of agriculture and fisheries information technology management which utilizes the ICT in making agriculture and fisheries a business activity. *(Marlowe U. Aquino, PhD)*

BAR celebrate...*from page 1*

Photo by Rita T. dela Cruz

BAR Dir Eleazar (right, standing) delivers his welcome message to the participants and attendees. In his message he emphasizes the importance role of farmers and fisherfolk and the role of BAR, particularly R&D, in making their lives better.

President and DA-Biofuels Program Focal Person Marriz B. Agbon reading the keynote address in behalf of DA Undersecretary Emmanuel M. Paras who was unable to attend the occasion.

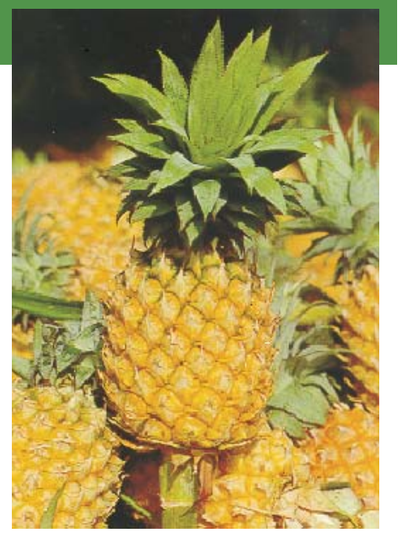
In his message, Udersecretary Paras emphasized the significance of technology commercialization in uplifting the lives of the marginalized Filipino farmers and fisherfolk. He also underlined the importance of government-industry link up in every technology commercialization effort. “Linkages and networking are natural processes in technology commercialization; the success rests solely on the ability of both the government and the industry to devise such link up strategically,” he stressed.

The opening ceremony was followed by the ceremonial ribbon cutting and viewing of exhibits led by PADCC President Agbon and BAR Director Nicomedes P. Eleazar. They were assisted by NBN's Mag-Agri Tayo Host Philip J. Daffon , University of the Philippines-National College of Public Administration and Governance (UP-NCPAG) Consultant Marideth R. Bravo, BAR Assistant Director Teodoro S. Solsoloy, and Philippine Coconut Authority- Research Development and Extension Branch (PCA-RDEB) Deputy Administrator Carlos B. Carpio.

The afternoon activities were capped by the paper presentations of the five featured commerciable technologies, the purpose of which was to provide a venue for inquiries and comments for interested investors and entrepreneurs from the private sector.

Farmer and Fisherfolk Month is annually celebrated every May as declared by Proclamation No. 33 in 1989 by then President Corazon Aquino. The activity honors the invaluable contributions and importance of farmers and fisherfolk in nation building. *(Rita T. dela Cruz)*

Benefits from the ‘Queen’



ELLAINE GRACE L. NAGPALA

Camarines Norte takes pride in being the fourth largest pineapple-producing province in the country. In 2006, it devoted a total land area of 2,400 hectares for the production of the 'Queen' pineapple (*Ananas comusus* cv. 'Queen'). The 'Queen' or Formosa cultivar has been found to be very adaptable to the soil and climate of Camarines Norte where it is usually intercropped with coconut.

The 'Queen' is among the three cultivars of pineapple cultivated in the country; the two others are 'Smooth Cayene' and 'Red Spanish'. It is a small variety whose weight does not exceed two kilograms. As compared to 'Smooth Cayene', ‘Queen’ is more resistant to disease infection. 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.

But the pineapple is more than a source of nutritious fruit for snack or dessert.

In all the 12 towns of Camarines Norte where an average of 25,000 'Queen' pineapple is planted every hectare, a batch of 875,000 leaves can be derived. Such number of leaves can be considered as a farm waste. However, instead of totally discarding the pineapple leaves, the residents of Camarines Norte have thought of something where they could develop the waste product into something useful and beneficial.

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. Among its missions is to provide more employment and create more innovative products that will respond to the needs of its members and the international market.

During the recently held regional technology forum for Luzon B Cluster in Naga City, the general manager of the LPMCP, Mr. Mario M. Espeso, presented products that can be derived from the Formosa pineapple, specifically from its leaves. The production of handwoven and machine- decorticated fibers is among the livelihood programs of the LPMPC for its members, the majority of whom are farmers.

Handwoven piña cloth

The *Barong Tagalog* became famous for the use of handwoven cloth from the fibers of the pineapple leaves aside from being the national costume of the Filipinos.

The LPMPC has adopted the method of producing fibers form the leaves of the pineapple through manual scraping from the Philippine Textile Research Institute (PTRI). Contrary to the fibers produced using a machine, the manual scraping method produces good quality fiber since it allows the separation of the white, fine, and low in strength fibers from the coarse, brownish, strong fibers. The fibers extracted from the leaves of the 'Queen' pineapple are suited for the manufacture of piña cloth since it has passed the test on fineness, tensile strength, and the required quality standard by the PTRI.

The fibers derived from the leaves of the 'Queen' pineapple undergo the punctilious task of weaving to achieve a piña cloth. Sometimes, the fibers are interwoven with silk to come up with piña silk, which is later made to *Barong Tagalog*, *camisas*, or *kimona.*

Fabric and paper from machine decorticated fiber

The LPMCP pioneered the use of machine decorticator in Camarines Norte in extracting the fiber from the leaves of 'Queen' pineapple. With the use of the machine, the time spent on the extraction of fibers from the pineapple leaves became shorter, and the job became relatively easier as compared to the manual extraction method.

Generally, the fiber extracted through this method is strong and silky in appearance, hence, can be manufactured either into fabric or paper.

The *polypiña* cloth is a fine, translucent fabric composed of 20 percent decorticated fiber blended with 80 percent polyester. The cloth is used as a textile material for office and school uniforms. Due to its good quality, the *polypiña* cloth was launched as one of the tropical fabrics along with banana and abaca fabrics in the 1st International Manila FAME Market Week in 1997.

The decorticated fiber is also an excellent material in making a handmade piña paper as it produces a fine, smooth, thin paper. This can be mixed with other materials such as *cogon* or rice straw to make the paper stronger at the same time yield a different quality of handmade



ICT to boost DA programs and services

The Department of Agriculture's (DA) response to the cyberspace era is getting its momentum by making information and communication technology (ICT) a part of its program implementation and delivery of services. This was reported in a recent DA Management Committee meeting that includes the appropriate utilization, application, and management of ICT systems and activities.

The DA move is envisioned to utilize all aspects of ICT to boost the *Ginintuang Masaganang Ani* (GMA) banner programs for rice, corn, high value commercial crops, livestock and poultry, and fisheries in making agriculture and fisheries a business activity toward development.

The use of ICT is seen as another strategy to propel the agriculture and fisheries sectors responsive to the growing global trend. Today, ICT is considered as the "in thing" for development because business is the primary objective of the sectors.

Given this, the e-commerce modality will accelerate the different agri-fishery businesses of quality Philippine produce. At the same time, it also encourages the use of e-learning modules that will use electronic information and technology training materials to improve the production management systems of major DA commodities.

The DA-Philippine Rice Research Institute (PhilRice) experience specifically on rice, the initial e-learning module is now nationally utilized to improve the hybrid rice program. Other DA agencies involved in the process of developing other commodity e-learning modules will address the needs of farmers and fisherfolk, including agri-fishery technicians, in the coming months.

Furthermore, e-extension modality will boost the technology transfer system of agriculture and fishery for better local interaction and collaboration between and among research and development institutions, extension workers, development-oriented practitioners, and local government units.

The initial four agencies involved in the e-Agriculture program using ICT for DA programs and services are the Bureau of Agricultural Research (BAR), Agricultural Training Institute (ATI), PhilRice, and DA-Information Technology Center for Agriculture and Fisheries (ITCAF). Other agencies supporting this initiative are the Association of Colleges of Agriculture in the Philippines (ACAP) headed by its president, Dr. Zosimo M. Battad of the Pampanga Agricultural College (PAC), Commission on Higher Education (CHED), and Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development (PCARRD).

All non-DA agencies signified support through technical assistance, program management, and capability-building activities.

Through this activity, DA believes that its programs and services will be known not only in the Philippines but in the rest of the world. Agriculture and fisheries development is now a global playground of people in the cyber network. Notwithstanding, ICT will surely make Philippine agriculture a business-- a business so dynamic that it encourages key players to respond to the challenging and growing trend of quality Philippine agri-fishery products as competitive as those of the rest of the world. *(Marlowe Aquino, PhD)*

Securing...*from page 11*

Presentation on the Candaba Swamp.

Presentations were followed by open forums, enjoining participants to inquire, comment, and suggest on the topics discussed. Information gathered from the discussions served as outputs for an industry resolution or position paper for submission to the DA Secretary with emphasis on the current industry situationer and what the government can do to support the duck industry.

Major discussions led to the identification of current problems confronting the local duck industry and production management options and innovative marketing strategies to ensure sustainability of the local duck industry.

Eggs are the most important products of the duck industry due to the increasing demand for duck eggs (fresh, *balut*, *penoy*, salted eggs, and century eggs).

One key issue brought up in the forum, duck producers association identified the need for government to intercede in elevating the duck industry to greater heights given that duck products such as salted eggs and balut as exotic products have immense potential in penetrating export markets. The need to consider organic production of ducks and duck products was also identified.

Although key issues, problems, and concerns were identified in the forum, stakeholders need to be always on the lookout as threats will continue to hound the duck industry unless these are immediately addressed and abated.

The newly inaugurated SMIARC Central Experiment Station in Manambulan, Tugbok District, Davao City.

SMIARC intensifies RDE for all commodities

In celebration of this year's Farmer and Fisherfolk Month, the Southern Mindanao Integrated Agricultural Research Center (SMIARC) conducted a Livestock and Research Week on 21-25 May 2007.

This year's theme was "*Pagkaing Sapat at Masustansiya Para sa Lahat*".

One of the highlights of the event was the inauguration of the Central Experiment Station in Manambulan, Tugbok District, Davao City on 25 May. Mr. Tito Z. Arevalo, OIC-head of the Research Coordination Division (RCD) of the Bureau of Agricultural Research (BAR), led the ribbon cutting ceremony which officially opened the station to the public.

The station has a nursery net house, vegetable packing house, improved pressurized irrigation system (PIS), and farmer training center. This also led to the improvement of the farm- to market- roads in the region.

A field day was held for the participants to visit the different vegetable projects, one of which is the "Agapito Regulation Allied Botanicals". The sweet sorghum and the fruits and vegetable agribusiness development projects were likewise launched.

One of the promising features of the station is its research and development and extension components for all commodities. The station covers the GMA banner programs on rice, corn, livestock, and high-value commercial crops.

The development aspect covers networking and interagency linkages, institutional development projects, and agribusiness development. On the other hand, extension works involve technology transfer, promotion and commercialization. The station also provides electronic sourcing and retrieval of information, education, and communication (IEC) materials.

BAR, through its Community-based Participatory Approach Research (CPAR) program, covers agribusiness development projects (ADPs). Some of these are on hog fattening and breeding, cattle breeding, goat production, cardaba banana and mango processing and production. It also has a diversified crop/livestock farming system.

To date, there are 20 BAR-funded projects. Areas covered are rubber development; studies on corn, potato, vegetables, tomato, sweet pepper, dragon fruit and durian; and research on the characterization of expansion areas for priority crops in Southern Mindanao. *(Ma. Eloisa E. Hernandez)*

photos courtesy of SMIARC

(L-R) SMIARC Chief of Livestock Division Rafael Mercado, SMIARC Chief of Crops Division Norlito Agdoyeon, BAR-RCD Head Tito Z. Arevalo, and SMIARC Manager Alfredo Cayabyab lead the ribbon cutting ceremony.

Blessing of the SMIARC-Central Experiment Station and new station projects.

BAR conducts IP awareness and training workshop

photo by Nicanor B. Del Rosario III

BAR Assistant Director Teodoro S. Solsoloy welcomes the participants of the IP Awareness Training Workshop held at the Bureau.

The Intellectual Property Rights Office (IPRO) of the Bureau of Agricultural Research (BAR) held a training workshop on 30-31 May 2007 at the RDMIC Conference Room, Diliman, Quezon City to increase the intellectual property (IP) awareness of various attached agencies of the Department of Agriculture (DA).

The activity started with a welcome message from BAR Assistant Director Teodoro S. Solsoloy. Dr. Andrea B. Agillon, BAR IPRO head, discussed topics on: (1) IP management in agriculture: relevance of IP in economic development and in encouraging creative talents; and (2) patent documents as a source of technological information.

IPs include patents, copyright, trademarks, trade secrets, utility model, industrial design plant variety protection, and the plant breeders' rights. Main creators for these IPs are the R&D institutions, inventors, innovators, state colleges and universities (SCUs), and business enterprises.

Engr. Merito J. Carag, chief of the Bureau of Patents of the Intellectual Property Philippines, discussed the concept of patents. He equipped the participants with the basic knowledge on the benefits of seeking patent protection and enumerated steps and the requirements on patent application.

One of the overlapping terms on IP protection is the utility model (UM) or industrial design. Engr. Carag enlightened the participants on the difference of patents from utility model as regarded as an enhanced indigenous creativity.

Inventions must pass the test of novelty, inventiveness, and industrial applicability to get a patent while registration for UM requires novelty and industrial applicability. Patent and UM are protected for 20 years and seven years from the date of filing, respectively.

Atty. James Dennis C. Gumpal, IPR and legal counsel of BAR, also served as one of the resource speakers in the training workshop. He lectured topics on copyright and presented the BAR IP Policy.

Copyrightable works are literary, artistic, musical, and scientific works or production. Copyright holders have the right to reproduce, produce derivative works, and distribute to the public through selling, rental, and public performance and display.

The DA-BAR intellectual property management system covers all directly-assisted and contracted agricultural research and development activities of the bureau. One of the principles of the IP Management System encourages agricultural innovation and creativity through promotion of a healthy and conducive environment resulting in the creation of intellectual property and technology. BAR also provides services on prior art search, claim drafting, finalization of paper for submission, and legal counsel.

The second day marked the workshop proper with Atty. Gumpal and Engr. Carag giving an overview on the guidelines on drafting an IPR policy and claim, respectively. The participants were later grouped and asked to report their respective IP policies and claims. The workshop on IP Policy Drafting gave a very good opportunity for all the bureaus and attached agencies that attended and have no IPR Policy yet, to have their policy drafted and commented during the training.

Representatives from the agencies expressed their appreciation and thankfulness for having attended the training workshop. Dr. Relicardo Coloso of the Southeast Asian Fisheries Development Center Southeast Asian Fisheries Development Center (SEAFDEC/AQD) acknowledged BAR's efforts in creating awareness for the different agencies and bureaus. On his prompting, a proposal for the conduct of IPR seminars in SEAFDEC/AQD inviting the workshop speakers was drafted.

Agencies that participated in the training workshop were SEAFDEC/AQD, Philippine Coconut Authority (PCA), Sugar Regulatory Administration (SRA), Philippine Fisheries Development Authority (PFDA), National Dairy Authority (NDA), and National Tobacco Administration (NTA).

A follow-up training workshop will be conducted for the attached bureau on 7-8 June 2007. *(Ma. Eloisa E. Hernandez)*

Inventions must pass the test of novelty, inventiveness and industrial applicability to get a patent while registration for UM requires novelty and industrial applicability.

BAR spearheads pre-implementation meetings on *ludong* and abaca

The Bureau of Agricultural Research (BAR), mandated to ensure that all agricultural researches are coordinated and undertaken for maximum utility to agriculture, conducted Pre-implementation meetings (PIMs) for newly funded projects under the Diversified Farm Income and Market Development Project (DFIMDP).

The bureau's Project Development Division-Project Evaluation Section (PDD-PES), in coordination with the Research Coordination Division (RCD), spearheaded the PIMs on 1) Research and Development Studies for the Sustainable Management and Conservation of *Cestraeus plicatilis* (ludong) in Cagayan Valley" of the Bureau of Fisheries and Aquatic Resources (BFAR)-Region II; and 2) "Development of Virus-Resistant Abaca Cultivars Using Modern Biotechnology" of the Fiber Industry Development Authority (FIDA).

PIMs were conducted before the implementation of the newly funded projects to fine-tune the methodology, logical framework, work plan, budget, and other important details of the projects. Also, the parameters for monitoring and evaluation of the project were identified.

FIDA's five-year project aims to develop abaca varieties resistant to abaca bunchytop virus (ABTV) using modern biotechnology. This results in enhanced productivity and profitability, increased farmer's income, and a protected environment and natural resources.

BFAR's study on the reproductive biology of *ludong* of BFAR likewise aims to determine the other conditions and parameters affecting the population dynamics of the species, geared toward its conservation and protection.

BAR, one of the attached bureaus of the Department of Agriculture (DA), serves as the coordinating and funding agency for the two projects.

As stated in the Agriculture and Fisheries Modernization Act (AFMA) of 1997, BAR shall undertake the planning, integration, monitoring, and managing of fund-sourcing activities of all agriculture and fisheries research and development activities of the government in coordination with other agencies and the private sector.

The project is under the DFIMDP of BAR acquiring foreign-funding source. DFIMDP consists of activities that rationalize and give proper direction, a time-bound implementation plan for the transition of the Department into a service-oriented agency, as envisioned by AFMA and as articulated by the DA's own strategic plans.

DFIMDP aims to stimulate rural growth and farmer income by enhancing the competitiveness of Philippine agriculture and fisheries through market-oriented private sector-led investments. *(Ma. Eloisa E. Hernandez)*