



# WorldFish consults with RP partner-institutions for research priorities



Participants during the "Consultation Meeting between the WorldFish Center and Partner-Institutes in the Philippines" held at the Bureau of Agricultural Research (BAR). On the photo are: (L-R, front row) Dr. Nicolas Bailly, OIC WorldFish-Philippine Office; Director Nicomedes Eleazar of BAR; Dr. Rafael Guerrero III, executive director of PCAMRD; Dr. Madan Dey, WorldFish portfolio director; and Dr. Ida Siason, WorldFish BOT member.

elaborated that with this meeting, they intend to develop general guidelines as to what WorldFish would like to concentrate on in the Philippines, particularly those demand-driven type of research that will create great impact on the fisheries and aquaculture sectors. The key therefore, he added, is to find common research priorities, decide on what programs to pursue that the Philippines and the Center could implement together. This statement was in line with what BAR Director Nicomedes Eleazar earlier said in his welcome remarks on how the Bureau's priority programs are focused on

The WorldFish Center held a two-day consultation meeting with its partner-institutions in the country on 28 February-1 March 2006, BAR Conference Room, Diliman, Quezon City. The results of the consultation will serve as a guide in developing a long-term research program in partnership with the Philippines.

WorldFish Center is one of the 16 research centers of the Consultative Group on International Agricultural Research (CGIAR). It specializes in making use of living aquatic resources to contribute to food security and poverty eradication in developing countries through research, partnership, capacity building, and

policy support. The Philippines is one of the three priority countries of the Center in Asia, along with China and Indonesia, due to its dependence on fish for food and income, particularly in rural areas.

In the consultation meeting, various research priorities of the Philippine government were presented and common goals with that of WorldFish Center were identified. To develop framework for long-term partnership and establish specific, detailed topics of common research priorities for collaboration had also been one of the objectives.

In the speech of Dr. Madan Dey, East and Southeast Asia (ESEA) regional director, WorldFish Center, he

applied research, those with direct bearing to the fisherfolk.

Dr. Dey presented the WorldFish's strategies and priorities for alignment. According to him, research plays a key role in fish development, specifically

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## BAR Chronicle

The official monthly publication of DA-BAR

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It provides regular updates on the activities on BAR's activities as R&D coordinator and news and features concerning NaRDSAF-member institutions.

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## Dr. Solsoloy is new BAR assistant director



**D**r. Teodoro S. Solsoloy is appointed assistant director of the Bureau of Agricultural Research (BAR). As assistant director, he heads the research support services directorate for the smooth operations of R&D programs and assists in overseeing regional and national R&D programs particularly R&D policy concerns.

Prior to his appointment, Dr. Solsoloy was a detailed staff from the Cotton Development Administration (CODA). At BAR, he served as head of the National Programs Division (NPD) that was responsible in coordinating the implementation of the national R&D programs of the country. He was head of the Governance, Impact Evaluation and Policy Division (GIED) that was responsible for technology impact assessment and policy studies.

Dr. Solsoloy is an entomologist by profession. He is a conferred Scientist I by the Department of Science and Technology (DOST) and holds a Ph.D. degree in Entomology with cognates in Management and Agronomy from the University of the Philippines Los Baños (UPLB). He

held various positions in relation to this field, one of which is as Insect Pest Management (IPM) consultant at the Euroconsult Firm of the Netherlands based in Indonesia. He was head of the Crop Protection Department of the former Cotton Research and Development Institute (CRDI), which recognized him for his outstanding work performance.

As a researcher, he has conducted various research works related to cropping system and pest management on crops. One of his most significant accomplishments as a scientist is the pioneering of the now famous, *Trichogramma chilonis*, an effective biological control agent against the cotton bollworm, *Helicoverpa armigera*. The commercialization of this agent has contributed to the reduction in the number of chemical sprays and ultimately the cost in cotton production. He developed the IPM package of technology that is anchored on a sound monitoring system for use by cotton stakeholders. He spearheaded the development of a training manual on "*Insect Pest Management, Cotton Production and Management*" and the techno guide on "*Flower Weevil Management Strategies*."

Dr. Solsoloy served as professor in crop production and crop protection at the Mariano Marcos State University (MMSU) at which time, the DA-Region I awarded him the Best Agriculture Research Paper Award in 1982. He served as lecturer/resource person in various agricultural training programs that aim to transfer technologies in crop production and

*see Dr. Solsoloy...page 11*

# Quezon farmers hold field day

*"Ang pera ay nasa bukid."* This was the theme of the Farmers' Field Day held at Bgy. Tagbakin, Tiaong, Quezon on 7 March 2006. Quezon farmer groups trooped to the farm of Catalino Caringal, where the field day was held, and plots of tomatoes, lettuce, and pepper varieties were showcased.

The activity was an offshoot of the Asian Vegetable Research Development Center (AVRDC) training-workshop on "Conducting Trials of Promising Vegetable Varieties." The training-workshop conducted was attended by four representatives from the Philippines including DA-BAR National Technology Commercialization Program (NTCP) coordinator for crops, Ms. Digna Sandoval, who were expected to conduct trial testings after the training in their countries.

The four on-site testing were at the Department of Agriculture (DA) centers in QAES - Tiaong, Quezon; Bureau of Plant Industry - Los Baños, Laguna; DA-Regional Field Unit X-Northern Mindanao Integrated Agriculture Center (NOMIARC) - Cagayan de Oro City; and Bureau of Plant Industry - Guisad, Baguio City.

Not only did the farmers' field day presented the trial yields of promising vegetables, it also became a venue to discuss production strategies and marketing issues that could ensue once farmers plant these vegetable seedlings on their farms.

The Quezon Agricultural Extension Station (QAES) coordinated the activity with farmer groups and cooperators, from nearby towns of Candelaria and Sariaya. According to Dr. Estela Taño, QAES senior technical staff, who supervises the on-farm trial, "The transfer (sharing) of technology is faster and more efficient if it is done in the farm. The farmers can see for themselves the quality of the actual



*Tagbakin farmers display the AVRDC lettuce trial variety during the farmers' field day in Tiaong, Quezon Province.*

yield, and even gather ideas on which vegetables could potentially be grown in Quezon."

The farmers who attended the half-day activity had good words for the on-farm trial testing. Barangay Captain Tony Doñes, president of Tagbakin Farmers Association, expressed his group's optimism on this project. "It is imperative that this kind of technology for growing vegetables is shared with the farmers."

Mr. Antonio Luna, a farmer and businessman, explained that Quezon vegetables have been in demand after typhoons affected vegetable production in the northern part of the Philippines. He said that, "Quezon vegetables are slowly making their mark in supplying commercial farms that deliver vegetables to the National Capital Region's (NCR) high-end supermarkets." He added that in time Quezon vegetable farmers could go organic and supply organically grown products for the specialty markets in Metro Manila.

Dr. Taño presented the parameters that the farmers themselves identified as standards for choosing vegetables from this trial: adaptability, acceptability, disease tolerance, marketability, and yield.

The farmers expressed hope that in planting these varieties, their vegetables could compete with those from other regions, eventually proving that Quezon could be the next vegetable basket of the country. (Angela O. Obnial)

## Asian ...from page 10

technology transfer at the Daedoeck Innopolis Town Valley. The business tour featured state-of-the-art information technologies including electronics, telecommunications.

Based on the success of the event, the APCTT and the KTTC are looking forward to the next conference as more dynamic and interactive, incorporating more technologies in information technology, telecommunication and electronics, biotechnology, applied engineering, natural and physical sciences, and health and pharmaceutical fields. The next conference, to be held bi-annually, will be hosted by another Asian country dedicated to support the development of the region through state-of-the-art technologies and support systems. ■

# BAR orients North Luzon on new grant manual



Participants from SUCs in North Luzon together with BAR staff during the CRGM Orientation in San Juan, La Union.

**T**he Bureau of Agricultural Research (BAR) held the third leg of its regional dissemination of the Competitive Research Grant Manual (CRGM) in Regions 1, 2, and 3, this month. The R&D implementers should be knowledgeable and aware of the requirements and criteria for getting BAR's approval on proposals sent to this agency for funding.

The CRGM was developed by BAR to provide guidelines for effective and efficient research management in the whole DA system and is intended to strengthen the system of coordination, monitoring and evaluation of research projects in agriculture and fisheries.

The Programs Development Division (PDD) of BAR which reviews and evaluates proposals for funding

organized the CRGM orientation in Puerto de San Juan, San Juan, La Union on 23 March 2006. The participants were R&D implementers from state universities and colleges (SUCs) in North Luzon, namely: Pangasinan State University, Don Mariano Marcos State University, Mariano Marcos State University, Cagayan State University, Nueva Viscaya State University, Tarlac College of Agriculture, Central Luzon State University, Pampanga Agricultural College, and Isabela State University.

Cristy Pulido, project development officer of the Department of Agriculture (DA), was the resource speaker on logical framework preparation. The other topics discussed were: DA goals; regional priorities; RDE agenda and program; RDE grant system and its implementing guidelines; proposal evaluation process; and project monitoring and evaluation. The BAR staff that assisted in the orientation were: PDD Assistant Head Salvacion Ritual, Connie Fernanado, Almira Magcawas, and Brenda Bautista of PDD, and Alexander Arizabal of the Research Coordination Division (RCD). *(Miko Jazmine J. Mojica)*

## WorldFish...from page 1

contributing to poverty eradication, food security, and environmental conservation, all of which are the mission of WorldFish. Among the priority research areas of the Center specific for East and Southeast Asia include: improve equity benefits from fisheries catches and aquaculture, enhance livelihoods of fishing and farming households, improve access to fish at affordable prices for consumers, reduce the impact of fishers on overstressed resources, increase the number of fish farmers where resources permit, and protect aquatic environment and biodiversity.

One of the important outputs of the consultation meeting was a list

of priority-areas for research that will be used for conceptualizing specific projects that WorldFish and the Philippines will implement. Dr. Dey stressed that this consultation is just the beginning of this linkage. Among the priority-areas identified were: 1) smallscale fisheries management, 2) global databases (knowledge, products, tools and networks), 3) techniques and approaches, 4) sustainable aquaculture, 5) integrated water and fisheries resources management and, 6) regional and national analyses and synthesis. Out of these priority areas, the Philippine partner-institutions outlined specific projects for implementation.

The partner-institutions that participated in the consultation meeting

were: BAR, Bureau of Fisheries and Aquatic Resources (BFAR), Central Luzon State University (CLSU), Philippine Council for Aquatic and Marine Research and Development (PCAMRD), Southeast Asian Fisheries Development Center (SEAFDEC), University of the Philippines Los Baños (UPLB), University of the Philippines Visayas (UPV), Department of Environment and Natural Resources (DENR), and the National Fisheries Research & Development Institute (NFRDI). Facilitating the activity were: Dr. Madan Dey, Dr. Ida Siason, BOT member of WorldFish Center, and Dr. Rafael Guerrero III, executive director of PCAMRD. *(Rita T. dela Cruz)*

## BAR info system strategic plan for CY 2006-08 presented for NCC review

**K**ey staff from the Information Communication Technology Section (ICTS) of the Bureau of Agricultural Research (BAR) presented their Information Systems Strategic Plan (ISSP) for 2006-2008 to the National Computer Center (NCC) on 14 March 2006, BAR Conference Room, Diliman, Quezon City. The presentation is an initial step for BAR towards finalization of its ISSP. Information Communication Technology (ICT) is an effective strategic tool for national development. The ICT is a crucial component for BAR to successfully and smoothly operate its coordination activities.

ISSP is a long-term strategy for the deployment of information technology. It details on how a certain organization uses IT to support its critical operations and decision-making process. It specifies the databases, application hardware, software, communications, personnel and other resources needed to help an organization achieve its mission.

Present during the activity were representatives from NCC and members



*Asst. Dir. Teodoro S. Solsoloy (left) delivers his opening remarks during the ISSP Meeting.*

of the ISSP Review Group, namely: Ms. Milagros Bersamina and Ms. Nora Arreco. NCC is a government agency whose fundamental function is to provide information bases for integrated planning and implementation of development programs and operational activities in the government, and provide computer service support, integrate electronic data processing (EDP) operations in government agencies.

In the presentation of Ms. Bersamina, she emphasized that BAR's ISS plan should ensure that its IT efforts are aligned and prioritized with the organization's mission, vision, goals and strategies. In relation to this, BAR must position IT as a strategic resource in its operations and programs and be linked to plans and functional areas of the whole organization. Among its components, she added, should include: organizational strategy, information systems strategy, information technology strategy, and development and implementation strategy.

The review which the NCC group conducted mainly focused on the completeness of the whole plan that BAR-ICT prepared. The substance of the plan is scheduled for another thorough review. The NCC suggested various areas for revisions and improvements particularly on specifying IT resources since most of those indicated in the inventory are not updated.

Other key staff that attended the activity were BAR Asst. Dir. Teodoro Solsoloy, who gave the opening remarks on behalf of Director Nicomedes Eleazar. (Rita T. dela Cruz)

### *Agriculture...from page 9*

October. All technology forums will have the theme: *Enhancing Agriculture and Fishery Technologies for Sustainable Community Development*. In addition, the regional technology forums will be held in strategic areas of clustered regional centers in La Union, Batangas, Cebu, Davao, and Cotabato to make the activity successful for better commercialization.

The regional technology forums will be scheduled to coincide with farmers and fisherfolk days, harvest seasons of commercial crops

including regional activities that support research and development activities.

A special addition to all the forums is setting up the Agriculture and Fishery Service Assistance Desk (AFSAD) to provide support services required for commercialization including technical, financial, and market information assistance.

The regional schedules will be disseminated after all the lead regions have agreed on the exact date and specific venues. (Marlowe U. Aquino)

# Zambales gears for sweet tamarind commercialization



**A**gricultural technologists (ATs) and farmers in Zambales were oriented on the benefits and proper cultural management of sweet tamarind, signaling its commercialization as a result of Pampanga Agricultural College's (PAC) ten years of research and development on this minor fruit crop. The commercialization of sweet tamarind in Zambales was made possible through the efforts of Sen. Ramon Magsaysay Jr. and PAC, with funding from the Bureau of Agricultural Research (BAR).

The province of Zambales was identified as ideal for tamarind planting because of its semi-arid lands although this crop can grow well in any type of soil and agro-climatic condition. The agricultural technologists and some farmers were invited to participate in the capability-enhancement training to

equip them with the basic knowledge and skills for the production of sweet tamarind.

According to PAC, the project's lead agency for its implementation, the sweet tamarind they have developed is comparable to the Bangkok variety, which is known for its sweetness. They said that tamarind has a huge market potential in the Philippines because the country continuously imports them to meet the domestic demand. Moreover, the sweet types of tamarind are always in demand and can command a higher price than that of the sour variety.

The technical and administrative staff of the Extension and Training Office of PAC organized and led the AT's training in cooperation with BAR, Zambales Governor Vicente Magsaysay, Senator Ramon Magsaysay Jr., and the Provincial Agricultural Office (PAO) and Local Government Units (LGUs) of Zambales.

The PAC training team led by Dr. Leopoldo Reyes, PAC vice-president for research and extension, gave lectures on the tamarind's industry situationer; layouting, transplanting, and intercropping of sweet tamarind; irrigation, fertilization, and pruning; control of insect pests and diseases; the harvesting, postharvest practices, marketing of sweet tamarind; and farm budgeting and cost analysis. The training team determined the expectations and feedback of its trainees, measured their knowledge gained, and determined their willingness to adopt the project.

The sweet tamarind commercialization project is collaboratively implemented with the Department of Agriculture's Regional Field Unit 3 (DA-RFU 3) and Central Luzon Integrated Agricultural Research Center (CLIARC). (Miko Jazmine J. Mojica)

# Philippines, ACIAR forge ties for competitive agri and fisheries R&D

To assist the Philippines in increasing the productivity, marketability, and international competitiveness of its agricultural products," is the Australian Centre for International Agricultural Research (ACIAR) objective as presented at the high level policy consultation meeting on March 17, 2006 at the Dusit Hotel Nikko, Ayala Center, Makati City.

BAR Director Nicomedes P. Eleazar along with Executive Assistant Joel Lalles presented the Priority Areas of R&D for the Department of Agriculture, emphasizing on commercialization of appropriate technologies; Community-based Participatory Action Research (CPAR); intellectual property management; human resource and facilities development programs; knowledge products and services program and information communication and technology programs.

The need to be competitive in improving agricultural productivity is the consensus among top brass of officials in research and development agencies who attended the meeting. This competitiveness should also raise rural incomes through more effective extension of research results and response to market opportunities. At the same time, it should bring about higher quality

commodities produced at

a competitive cost.

ACIAR Director Peter Gore, in his welcome speech, emphasized ACIAR policy directions and how priorities and opportunities discussed during a series of consultation in Luzon, Visayas, and Mindanao would serve as collaborative mechanism between the Philippine government and ACIAR for the next three years.

Ambassador of Australia to the Philippines, HE Tony Hely discussed the long time bilateral relations between Australia and the Philippines. "There are opportunities from this relation to come up with developmental programs for the agriculture and fishery sectors in the country," he explained. He also said that the Australian government has common interest with the Philippine R&D priorities.

Dr. John Skerrit, ACIAR deputy director, presented the ACIAR-Philippines Program in which he focused on the mechanisms of collaboration with ACIAR and its research priorities. He reported that ACIAR's R&D priorities could serve as venues for the Philippines developmental projects to push through. Focusing on research partnerships, formulation of research program and policies, he explained that ACIAR invests on programs with "practical solutions for emerging issues on agricultural research and adoption of research results."

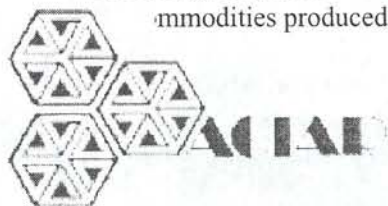
The Philippine counterparts aside from Dir. Eleazar were SEARCA



Director Arsenio Balisacan who discussed current trends and directions in agriculture; PCARRD Director Patricio Faylon on the challenges and opportunities in the agriculture sector; PCAMRD Executive Director Rafael Guerrer, III on challenges and opportunities in the fisheries sector; NCPAG-UP Diliman Dean Alex Brillantes on highlights of the ACIAR project on improving the delivery of extension service in the Philippines.

The identified specific R&D opportunities included marketing of aquaculture, horticultural, forestry, livestock products, and farmer-driven improvement in agricultural systems. Training opportunities included support for postgraduate scholarships in Australia for scientists and economists working on ACIAR projects as well as support for short training courses.

In attendance were ACIAR officials, top level officials of relevant Philippine government departments, universities, national research institutions, and the private sector. (Angela E. Obnial with reports from Mr. Joell H. Lales)



# BARSAIL, Geospatial technology for more efficient agriculture

by JERSON C. CRUZ

**G**eospatial Technology...new tools, new science, new opportunities in the governance of agriculture and natural resources," quoting Dr. Steeve Godilano of the Bureau of Agricultural Research Spatial Analysis and Information Laboratory (BARSAIL).

The gap between agriculture and information technology is evidently diminishing in a positive aspect. The demand for more efficient and sustainable farming is continuously increasing, and so is the emergence of new tools and new ideas to help people better their lives. Among these tools is the geospatial technology.

On the agriculture sector, there's the BARSAIL. It aims to establish a GIS-based management in agriculture and fishery network, create a central repository of socioeconomic, demographic, biophysical, agroclimatic, and geostatistical data for agriculture and fishery, and develop suitability and investment maps for commodities prioritized by the Department of Agriculture (DA).

In order to meet its objectives, BARSAIL established a three-project component: 1) commodity

profiling and mapping, 2) basemaps development, and 3) database mining and templates development. Commodity profiling and mapping refers to the prioritized commodities. Basemaps development contains visible surface features and boundaries, essential for locating additional layers of information. Basemaps are classified into: administrative and landscape boundaries.

Meanwhile, choropleth maps are thematic maps generated to display statistical data linked to the administrative basemap, such as investment in agriculture and fisheries, production volume of different commodities, pests and diseases infestation, population, investments, location of DA facilities and support services station and infrastructures, ports, and others. Volumes and capacities of these infrastructures could be displayed in maps.

Suitability map based on landscape boundaries is an output map from the overlay of different factors of production such as biophysical,

agroclimatic, characteristics showing what commodity is best suited in a given area. This map combined with socioeconomic and demographic characteristics (choropleth maps) will generate a tactical and strategic map.

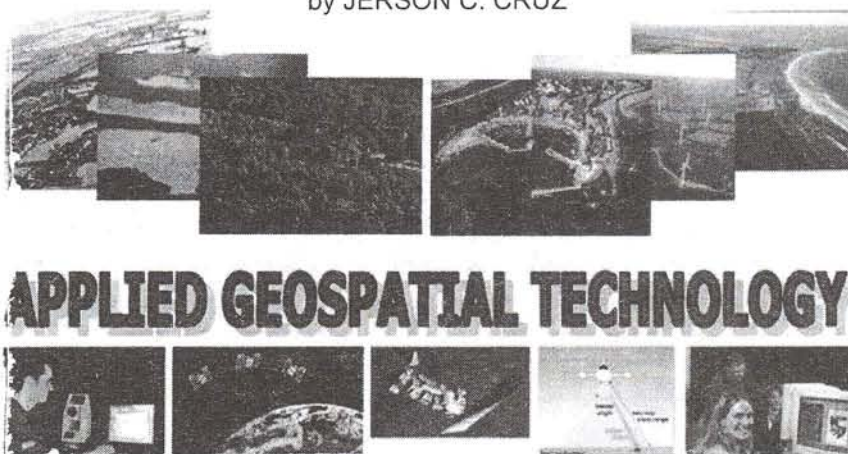
## *Database mining and template development*

Within the Bureau, database templates are characteristics of the technology generated by the R&D institutions and statistical data and information maintained by the DA implementing units.

The database template is further divided into two categories: technology profile and technology characteristics.

Technology profile refers to the biophysical, agroclimatic, demographic, socioeconomic, and policies that may influence the effective adoption of the technology. Meanwhile, technology characteristics refer to the different management strategies; i.e., planting calendar, cultural practices, pest control, variety, water management, fertilizer rate, and others that should be followed by farmers in order for the technology to succeed.

Source: <http://www.bar.gov.ph/afgisnet>



## Barroga bags best paper award in Korea

**D**r. Antonio J. Barroga, Filipino professor at the Department of Animal

Science at the Central Luzon State University (CLSU) brought honor again to the country with his winning paper titled, "Effect of Dietary Protein Manipulation on Fecal Chemical Composition and Ammonia Emission from Growing-Finishing Pigs in Enclosed Confinement." This was one of his postdoctoral experiments at the National Livestock Research Institute (NLRI), Rural Development Administration, Suwon, South Korea.

In his oral presentation, he proved that ammonia, which is a source of fecal odor, could be suppressed by protein manipulation. The award was given recently at Seoul National University during the 11<sup>th</sup> Annual Convention of the Korean Society of Livestock Housing and

Environment.

Aside from the plaque, he also received a gift certificate worth 30,000 won. Prior to his postdoctoral stint in Korea, Dr. Barroga finished his PhD in Animal Nutrition at the Kyushu Tokai University in Kumamoto, Japan. His vast experience as a livestock nutritionist contributed to the current research programs of NLRI. He proved that nutrition can complement with housing and environmental protection. Furthermore, Dr. Barroga stressed that Korea at present had adapted many workable environmental measures because of the persistent efforts of their research scientists, livestock producers, and the necessary support from its government.

This is a challenge for the Philippines especially when confronted with meager research budget. Problems can be overcome if researchers in the



country are committed and creative. He concluded that in terms of researchable ideas, the Filipino researchers are not behind their first world counterparts. The only difference, although considered very critical, is the necessary research support for the Filipino scientist. *(Press release)*

## Agriculture and fishery technology forum readied for implementation

**T**echnologies! Technologies! and more Technologies!" This is what the National Technology Commercialization Program (NTCP) envisions to address the needs of our farmers, fisherfolk, industries, processors, and other stakeholders. In order to make things work for all key players, the Bureau of Agricultural Research (BAR) through the Technology Commercialization Unit (TCU) once again spearheaded the planning of this year's Agriculture and Fishery Technology Forums at the national and regional levels. The decision to separate the national and regional level technology forum was

based on the requests and experiences last year to bring the technologies to where they are most needed. Through localized technology forums, participation is greater and more partnerships will be established making technology commercialization effective.

The objectives of the national and regional technology forum are 1) identify, disseminate and promote mature technologies with potential for commercialization; 2) encourage active participation of different stakeholders in the technology commercialization activities; and 3) establish and strengthen linkages and networks with private sector, government

organizations, non-government organizations and local government units. In these regional forums, it is expected that at that level, the identified mature technologies are promoted and commercialized, making stakeholders and key players in the area dynamic and participative.

Three national technology forums are lined-up to coincide with BAR's major events for the year. These are: Farmers and Fisherfolk Month in May, BAR 19<sup>th</sup> Anniversary in August and 8<sup>th</sup> National Agriculture and Fishery R&D Week, and 18<sup>th</sup> National Research Symposium in

*see Agriculture...page 5*

# Asian uniqueness shines during the techno transfer conference in Korea

by MARLOWE U. AQUINO, Ph.D.

Consider it the first in the Asian region, the "Technology Transfer Conference" made a great impact globally because of the bright minds and determination of Asian countries to make their technologies useful, applicable, adopted, and commercialized with competitive advantage in the world market.

The initiative of the Korean government through its Korean Technology Transfer Center (KTTC) and Ministry of Commerce, Industry and Energy (MCIE) paved way to make the event successful.

Attending the conference for the Philippines was Dr. Marlowe U. Aquino, head of the Technology Commercialization Unit (TCU) and Overall coordinator of the National Technology Commercialization Program (NTCP) of the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) on 14-18 March 2006 at the Grand Inter-Continental Hotel, Seoul, Korea.

Given the four resources, namely, relevant R&D data, information, knowledge, and technologies, it made the Asian region unique and at a great advantage. This was supported by valuable insights on what is competitive globally, which majority of Asians have in terms of technology development and transfer. This binds Asians together and make our culture easily spread throughout the world.

Technology transfer is now given a new perspective through sharing of technologies. Technology sharing becomes a two-way system that slowly integrates refinement and

internalization of in making technologies viable and feasible after utilization, application, and finally its commercialization.

The conference was a first for the Asian region. Primarily, it was intended to promote cooperation in the technology sector and build a human network among practitioners of technology transfer and commercialization for economic prosperity of the whole region.

Organizing the conference were KTTC and MCIE in cooperation with the local government center of the Daedok Innopolis, the information technology valley of Korea. Over 500 participants and 60 speakers from 20 countries attended the event.

The conference covered three main tracks, namely: technology assessment, technology transfer, and technology financing. Each track had specific sessions that addressed practical approaches to valuation, trends, and policies of technology transfer and commercialization, legal issues and negotiations, best practices and strategies, venture investment and issues on small to medium enterprise financing among others.

The sessions were supported by country experiences from Korea, China, Malaysia, Australia, USA, Germany, and Canada as well as major consulting firms that support the



*Dr. Marlowe U. Aquino, Philippine representative during the technology transfer conference in Seoul, Korea.*

implementation of technology transfer and commercialization activities in the region.

The activity also hosted the Asia-Pacific Committee on Technology Transfer (APCTT) meeting which tackled breakthroughs on technology transfer and networking issues within the Asian region and the International High-Technology Show that showcased promising and proven technologies. This meeting provided opportunities to advertise and find potential licensees from all over the world for technology transfer and commercialization.

The overseas participants were toured around to appreciate Korean

*see Asian uniqueness...page 3*

# Bamboo tiles made easy

by MARIA LIZBETH SEVERA J. BAROÑA

**R**esearchers of the Mariano Marcos State University (MMSU) in Ilocos Norte developed a simple process that converts the bamboo pole into materials that can be readily used for furniture and handicrafts. Engineered Kawayan, or E-kawayan, is an advanced form of bamboo products put together to form a whole new different product—Kawayan tiles.

The bamboo, known locally as *kawayan*, grows just about anywhere across the country. Its use can range from making houses, fences, bridges, walking sticks, furniture, chopsticks, food steamers, toys, construction scaffolding, hats, abaci, and various musical instruments. Flooring made of bamboo has become popular throughout the years. Its culms may also be cut and made into vases or tubes, or pipes to transport water or as containers.

Culms, also called the stems, can range in height from a few cm to 40 m, with stem diameters ranging from 1 mm to 30 cm. The stems are joined together by a node. Each node bears one

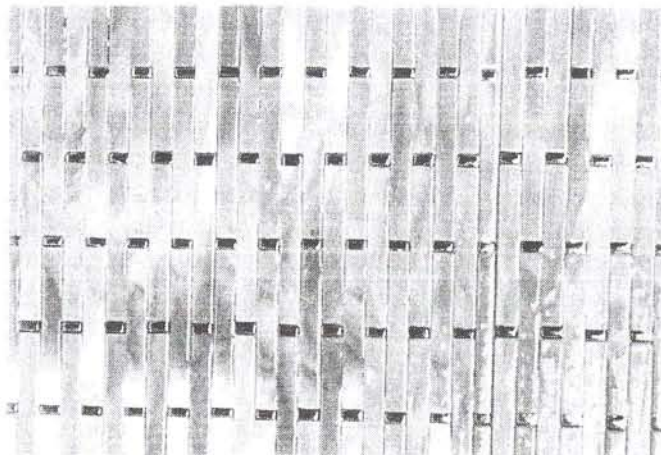
leaf, and may also have one to several side branches.

## Kawayan tiles

Dr. Stanley C. Malab and Jose A. Zafaralla of MMSU developed both the process and the machineries for the development of kawayan tiles – the basic material for manufacturing engineered kawayan products.

Tiles production starts with choosing the finest bamboo trees. The culms are harvested and cut to lengths maximizing the straight portions. The researchers noted that irregularly shaped parts of the pole are cut into not less than 18 inches.

The poles are then split manually with an approximate width of 33mm. The split parts are treated with wood preservatives, boiled, and dried



*Kawayan tiles*

in a bamboo dryer – also developed in MMSU – and are left to dry for four days. This process improves the slats' resistance to borer.

MMSU also developed the Kawayan Tile Machine, for the shaping of slats into desired width and thickness. Flooring made of bamboo pieces are steamed, flattened, glued together, finished, and cut. The bamboo slats, after they are treated and dried, are joined together in the machine to minimize gaps after gluing them together.

The laminated slats are sorted to minimize apparent color differences. The laminates are cold-pressed at 150 kg/m<sup>2</sup> vertical and 5 kg/m<sup>2</sup> side pressures. This is done for three hours. For making planks, the slats are applied with white glue commonly found in local hardwares. The semi-finished products are smoothened through a sanding machine.

The researchers noted that the process and machines they developed were able to maximize the utilization of bamboo, even its most unwanted part. ■

## Dr. Solsoloy...from page 2

pest management.

In 1998, the Batac Science Community gave him a plaque of recognition as scientist while the Department of Agriculture (DA) granted him the 1998 Outstanding DA Employee in Research. It was also in the same year that he was awarded the *Gawad Saka Outstanding Researcher* in the country.

He has various exposures to national and international trainings/

workshops on technical and leadership competence. He presented research papers and delivered lectures in various symposia and trainings both here and abroad and authored and co-authored at least 60 scientific papers in proceedings, refereed, and non-refereed journals.

He is happily married to Dr. Aida D. Solsoloy, a conferred scientist from CODA, and they are blessed with three children. (Rita T.

## Sources:

1. Production of MMSU Kawayan E- Products, Stanley C. Malab and Jose A. Zafaralla

## BAR, OSRBMJ conduct seminar for prospective young farmer entrepreneurs

The staff of the Bureau of Agricultural Research (BAR) and the Office of Senator Ramon B. Magsaysay, Jr (OSRBMJ) conducted a seminar on the National Technology Commercialization Program (NTCP) and Young Farmers Program (YFP), 30-31 March 2006 at the Strawberry Hall, Benguet State University (BSU), La Trinidad, Benguet. This is the second of a series to promote technologies while encourage young farmers and fisherfolk to be entrepreneurs.

The seminar was participated in by the graduating students of BSU and agriculture graduates interested in venturing into agribusiness. Dr. Marlowe U. Aquino, head of the Technology Commercialization Unit (TCU) of BAR and overall coordinator of NTCP, discussed the program and basics in preparing project proposal. Meanwhile, Mr. Larry Villanueva, program coordinator of YFP, discussed the program as a vehicle for fund source to jumpstart entrepreneurial activities using BSU technologies. A simple workshop was conducted to assist the participants in preparing their project proposals which they presented for critiquing. The technology presenters were Drs. Jane Avila for strawberry, Violeta Salda for *ubi* and other minor root crops, Janet Luis for mushroom, Sonwright Madull for swine and livestock production, and Vilma Alejandro and Dr. Fernando Gonzales on ornamental production.

During the seminar, NTCP and YFP programs complemented each other in the use of BSU-developed technologies as entry point of the lecture and discussions. The technologies identified were *ubi* and

other minor root crop processing, strawberry processing, mushroom production, swine production and vegetable, cutflower and ornamental production. As a start, the technologies were presented to encourage participants to choose based on their interest and capability.

Judging from the participants' response and enthusiasm, Ms. Virgie Agcopra, executive director of the Congressional Oversight Committee for Agricultural Modernization (COCAFAM) under OSRBMJ, believed that NTCP and YFP are the answers to revitalize the agriculture and fishery sectors.

In support, a comprehensive training will be held for the participants with approved project proposals using the technologies provided. The training will be composed of a two-week classroom discussion and a two-week on-the-job-training. The objective of the training is to make the prospective young entrepreneurs knowledgeable and fully-equipped with basic skills to make the technologies work and make successful businesses out of the activities done. (Marlowe U. Aquino, Ph.D)



## Web news

**From fuel to plastic, Brazil unveils future of sugarcane**

<http://www.truthabouttrade.org/article.asp?id=5481>

**Virus free tomato being developed**

<http://www.bic.searca.org>

**Technological breakthrough towards disease-resistant chickpea**

<http://www.icrisat.org>

**The green revolution comes to Laos**

<http://www.irri.org/media/press/press.asp?id=125>

**Climate change: The rice genome to the rescue**

<http://www.irri.org/media/press/press.asp?id=126>

**Desertification: Modern science helps combat a farmer's foe**

<http://www.cgiar.org>

**Boosting the returns from China's growing investment in agriculture**

<http://www.cgiar.org>

**WorldFish moves to increase its role in tackling poverty over the next decade**

<http://www.iclarm.org>

**Team firms up plan for biofuel research**

<http://www.pcarrd.dost.gov.ph>

**Strategic plan for forestry under way**

<http://www.pcarrd.dost.gov.ph>

**New PCA administrator to prioritize planting, replanting, uplifting of economic status of marginal farmers**

<http://www.da.gov.ph>

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