

DA teams up with private firm to speed up delivery of new technologies to farmers



Farmer's partner card to access the e-Pinoy software and avail of technical assistance.

The Department of Agriculture (DA) has teamed-up with a private agribusiness company to speed up the delivery of new technologies to farmers through the e-Pinoy Farm Resource Management System (e-Pinoy FARMS®), in support of President Arroyo's goal to rapidly raise farm productivity and rural incomes.

According to the DA-Bureau of Agricultural Research (BAR), e-Pinoy FARMS® is a proprietary integrated farm resource management system designed and developed by Optiserve Technologies, Inc. for agribusiness.

An interactive software-based system, e-Pinoy FARMS® helps farmers and their organizations effectively organize, allocate, and manage vital resources for sustainability, increase profitability and achieve agribusiness development, said BAR Director Nicomedes Eleazar in a report to

Agriculture Secretary Arthur Yap.

"Furthermore, it is customized to automate information management and feedback mechanism between the BAR and Regional Integrated Agricultural Research Centers (RIARCs)," he said.

"The e-Pinoy FARMS® platform helps planners and decision-makers compile useful information from raw data, documents, personal knowledge, and business models to identify and solve problems and make decisions," he said.

The project, Eleazar said, highlights the value of community participation and strategic management of resources as it encourages proactive and multi-stakeholder participation in research, development, and extension.

To flesh out the vision of DA "to make agriculture business," he said BAR is coming up with a unified information

system that is vital to meeting the needs of multi-level decisions.

BAR's e-Pinoy FARMS® project is among DA's initiatives to carry out President Arroyo's FIELDS program for agriculture. FIELDS stands for Fertilizer, Irrigation and other rural infrastructure, Extension, training and farmers' education, Loans, Dryers and other postharvest facilities, and Seeds.

The BAR project is part of the Extension component of the FIELDS program, which so far has received funding from the DA in the amount of P694.74 million.

FIELDS is being implemented by DA in the palay subsector through its five-harvest self-sufficiency program that aims to make the country 98% sufficient in the grain in two years' time by targeting much higher harvests of 18.55 million MT next year and 19.77 million MT in 2010.

Improving the country's rice self-sufficiency level and bringing food on the table of every Filipino family have been President Arroyo's commitments since her first State of the Nation Address in 2001.

As a result of higher farm spending under the Arroyo presidency, palay production grew by 4.07% over the 2001-2007 period as against the national population growth of 2.04%. While the government is raising the national rice sufficiency level in the medium term, President Arroyo has tapped into her "Katas ng VAT (Value Added Tax)" subsidy program to subsidize rice prices in order to stabilize the cost of this food staple, especially for low-income families, at this time of an unprecedented global rice price shock. (DA Press Office)



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BAR drafts national commercialization program for high-yielding peanut varieties



In a bid to resuscitate the dying local peanut industry in the Philippines, the Bureau of Agricultural Research (BAR) has initiated the drafting of a national commercialization program for high-yielding peanut varieties.

"The sad reality is our major peanut processors are greatly dependent on imported peanut. In fact, we are importing 80 percent of our peanut from China. In the early 1990s, Region 2 used to maintain an average yield of 0.65 ton/ha on about 22,000 hectares planted with peanut. This production hectareage dropped to almost 70 percent when the hybrid yellow corn was heavily promoted," reported Rose Mary Aquino during the consultation-meeting at BAR on 28 October 2008.

Aquino is the focal person for peanut at the Cagayan Valley Integrated Agricultural Research Center (CVIARC) in Region 2. CVIARC Manager Orlando Lorenzana was also present in the meeting to provide updates on the status of the

peanut industry in Region 2 which is one of the largest peanut-producing regions in the country.

BAR Director Nicomedes P. Eleazar called the meeting with the bureau's Technology Commercialization Unit (TCU) after peanut was identified in the Philippine Agriculture (PA) 2020 as an important crop that needs a good boost.

Since 2006, BAR has supported the commercialization of high-yielding varieties of peanuts such as India's *Asha* and Region 2's *Namnama*.

"The problem with the commercialization of these high-yielding varieties is that the existing grading and screening machine used for the local small-seeded peanut is not suited for the grading and screening of the newly introduced variety such as *Asha* which are large-seeded," Lorenzana explained.

CVIARC officers also pointed out that the upgrading of the existing machines for peanut's grading and screening to accommodate the

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Law on Organic Agriculture is underway

The concern of the Philippines to be globally competitive in terms of its production and processing agricultural practices and assured quality products has again taken center stage by key players and stakeholders in agriculture and fisheries development. This time, the Organic Agriculture is now being formulated by the Committee on Agriculture and Food of the Philippine Senate.

Five Philippine senators, namely: Jose "Jinggoy" P. Ejercito, Rodolfo G. Biazon, Loren Regina B. Legarda, Juan Miguel F. Zubiri, and Manuel B. Villar have signified support

for and authored Senate Bills on the promotion and application of Organic Agriculture in the Philippines. In order that the proposed law will be formulated, approved, and implemented properly, the Committee on Agriculture and Food is coordinating the Technical Working Group (TWG) preparing the law.

Overall, it is envisioned to address the appropriate, effective, and efficient use of organic agricultural practices and the production and processing of organic products by farmers, manufacturers, and producers. It will also encourage stakeholders to adhere

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DA celebrates World Food Day; Yap leads candlelight vigil



BAR staff members join the 2008 World Food Day celebration.

In celebration of 2008 World Food Day, Department of Agriculture (DA) Secretary Arthur C. Yap led the delegates from the DA attached agencies and staff bureaus during the worldwide candlelight vigil at the Liwasang Aurora, Quezon Memorial Park, Quezon City, on 21 October 2008.

With the theme, "World Food Security: the Challenges of Climate Change and Food Security," the ceremony signified DA's commitment to fight hunger and malnutrition.

In his speech, Sec. Yap said that for 2009, DA programs will be simplified highlighting and implementing its key programs.

DA Assistant Secretary Salvador S. Salacup, chair of the World Food Day National Steering Committee, shared the different activities conducted in commemoration of World Food Day.

These included a kick-off activity for this year's World Food Day celebration attended by Sec. Yap in Bohol highlighting President Gloria Macapagal-Arroyo's FIELDS program. FIELDS stands for Fertilizer, Irrigation and other rural infrastructure, Extension, training and farmers' education, Loans, Dryers and other postharvest facilities, and Seeds.

Other activities included the launch of the Organic Fertilizer Production-Tamang Abono Program, 2008 Agrilink, signing of the DA-Food and Agriculture Organization (FAO) food security initiative, turnover of irrigation rehabilitation projects, multipurpose drying pavements, rice and vegetable seeds, poster-making contest, tree planting activity, and FIELDS information caravan.

In an inspirational talk, Kristina

Cassandra "KC" Concepcion shared her knowledge and experiences as the national ambassadress against hunger of the United Nation's World Food Programme. The UN-WFP is the world's largest humanitarian organization tasked with feeding the hungry on a daily basis.

"I hope to make a difference, to reach out to as many people as I can and send a loud message as the concern for food production and security has become more pronounced than ever before," she said. She expressed the hope that more people, especially the youth, would be inspired to make a stand for what they believe in and make a difference for the country. She mentioned the world leaders' pledge to half the number of hungry people, especially the youth by 2015 through the Millennium Development Goals (MDG).

Kazuyuki Tsurumi, FAO representative to the Philippines, commended the winners in the postermaking contest, reminding the importance of food security and effects of climate change.

BAR Assistant Director Teodoro S. Solsoloy led the BAR contingent during the event. Also present were UN Food Program Country Director Stephen Anderson, DA Assistant Secretary Clayton Olalia, and DA Undersecretary for Operations Jesus Emmanuel M. Paras. (Ma. Eloisa E. Hernandez)



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Pangasius creates fish waves

Marlowe U. Aquino, PhD



Pangasius hypophthalmus

The introduction of a new fish species in a new condition has always been a question to many environmentalists, bio-conservationists, and development specialists, especially if this stirs controversy on the natural habitat, including ecological balance and biodiversity. However, the Cordillera inland fishery was all out during the launch of its newest program on Pangasius (*Pangasius hypophthalmus*) on 30 September 2008 at the Bureau of Fisheries and Aquatic Resources (BFAR) – Cordillera Regional Office in Guisad, Baguio City.

Pangasius is a freshwater fish inhabiting the Mekong River in Southeast Asia. It was introduced in the country from Thailand in 1978 but did not gain recognition and importance because of its physical characteristics not common to producers and consumers.

However, in 1982, it was reintroduced and was given support because it highlighted its nutritional relevance and as an alternative livelihood for emerging freshwater fish industry in north central Luzon.

Owing to the production

potential in freshwater of Pangasius, the Cordillera believes it can sustain the needed impetus in the mainstream Cordillera Fisheries Program; the activity has drawn support from all sectors, particularly research and development, tourism, hotel and restaurant businesses, fish farmers, and educational institutions.

This was noted by Lois June Fermin, BFAR-CAR regional fisheries R&D center manager and overall coordinator of the Pangasius project, who shared brief discussions during the launch of the program.

The launch included display on the physical characteristics of Pangasius, discussions on the market potential and prospects for competitiveness, and technology on hatchery management and grow-out operation specifically for Cordillera waters. Its regional acceptance and operation will be supported in the provinces of Benguet, Kalinga, and Ifugao.

To highlight its potential in the domestic and global market, the activity was enhanced by food

preparations and demonstrations on Pangasius-based dishes by Cordilleran Chef Pio de Guzman of the Baguio Country Club.

During the demonstration, Chef de Guzman prepared five original and delectable dishes such as breaded fillet with tartar sauce, steamed and poached fillet with dill and rice wine sauce, pan fried fillet with lemongrass teriyaki sauce, herb crusted fillet with basil tomato sauce, and fillet adobo.

Through this initiative, the fisheries development in the Cordilleras will take a major shift with the new commodity which will boost a lot of industries and create jobs for inland fishing families. With the right attitude, skills, and knowledge of fish farmers and their communities, including production and processing technologies provided by BFAR CAR, and strong support coming from provincial and municipal local government units and other sectors, the Pangasius is here to stay for a more secure and sustainable fishery development.



“Owing to the production potential in freshwater of Pangasius, Cordillera believes it can sustain the needed impetus in the mainstream Cordillera Fisheries Program...”

being conducted by the various agencies and the issues and concerns of the stakeholders were discussed.

For the Loans component, the module was explained by the Agricultural Credit Policy Center, Land Bank of the Philippines, and Philippine Crop Insurance Corporation (PCIC). The presentation covered the agricultural credit and loan guarantee component in the overall FIELDS Program and its importance to rice farmers. The functions and responsibilities of the financing institutions and their different credit programs and services that are focused on rice and corn production were also discussed. Moreover, the guarantee and insurance assistance and services that can be availed of by rice farmers were determined.

With regard to the Dryers and other postharvest facilities component, the Bureau of Postharvest and Research Extension (BPRE) described the gaps and problems of postharvest industry,

particularly in rice production, the roles and responsibilities of the implementing agencies, and identified programs of dryers and postharvest facilities in support of FIELDS Program.

As for the Seeds component, the Bureau of Plant Industry (BPI) discussed the importance of quality seeds in the implementation of FIELDS Program, described the status of rice seed program in the country, and identified the specific targets, policies, and implementation strategies of the Seeds component of the FIELDS Program for dry season 2008-2009.

Before the summary and integration of the technical briefing, ATI Director Asterio P. Saliot gave the closing message. He said that the FIELDS Info Rice Caravan will be terminated at the end of October and what will take its place is the series of nationwide FIELDS technical briefings complemented with trainings. He also said that the nationwide briefing is a

prelude to coming up with *e*-database (subject to more improvement) for farmers.

“The Agriculture Secretary asked us to, at least, include the validation of farmers and AEWs in the list of activities for this series of technical briefing,” stated Dir. Saliot. “We will be looking forward on the possibility of translating this FIELDS Program manual into four dialects,” he added.

According to Dir. Saliot, inter-agency representatives shall compose the National Action Teams that will conduct the FIELDS Technical Briefing Series to be spearheaded by the ATI. The teams shall undertake Cluster Technical Briefings for Provincial Action Teams. The team leaders shall oversee the smooth conduct of the technical briefings. They may also serve as resource persons to clarify issues that may arise during the briefings. (Christmas B. de Guzman)

Gov't to produce export-quality coco wine

The government, in tandem with a private company, is planning to develop and produce wine of export-quality from coconut sap or nectar, which it expects to be in the league of popular spirits like Russian vodka and the Japanese *sake*, in support of President Arroyo's vow to rev up the coconut industry.

One of the farm-friendly commitments by President Arroyo was her pledge in her 2004 State of the Nation Address (SONA) to help revitalize the coconut industry by, among others, making sure that coconut farmers benefit from the multibillion-peso coconut levy fund. To date, P786 million had been allotted for the Coconut Industry Investment Fund Safety-Net Program (CSNP) and another P86 million for the upgraded insurance program benefitting 1.02 million coconut farmers.

Given the sustained, higher farm spending by the government in support of the President's SONA promises, the agriculture sector grew by a high 4.7% in the year's first semester as against 3.74% in the same period in 2007.

The main engine of growth for Philippine agriculture during the January-June period was the crops subsector, with *palay* output soaring 5.84% or 7.12 million metric tons (MT) and corn yields

rising 19.62% or 3.292 million MT. The coconut subsector also posted a turnaround in growing by 6.49% during the semester after contracting minus 4.48% during the same six-month period in 2007.

In his report to Agriculture Secretary Arthur Yap, Administrator Oscar Garin of the Philippine Coconut Authority said the PCA has entered into a memorandum of agreement with Nilak Research and Development Services, represented by Marius Diaz, to develop this type of wine that will meet international standards and make this product uniquely Filipino.

The alcoholic beverage, which will come from the sap or nectar of coconut inflorescence (flower clusters), is expected to elevate the status of the lowly tuba by upgrading it to a conventional wine category, Garin said.

Garin reported to Yap that the PCA expects this new kind of coconut-based wine to be identified with the Philippines, just as *sake* is known to originate from Japan, and vodka from Russia.

He said the technology to produce the wine, which will be developed by Nilak's Diaz, a local wine maker, will be transferred to coconut-based areas and preferably to viable farmer-owned cooperatives or equally

viable enterprises taking into consideration the intellectual property rights generated by the project.

Under the law, all intellectual property rights are deemed assigned, transferred and conveyed to the PCA, which will commission the project for P5.5 million.

Garin said the coconut wine project would include a survey and examination of sap availability and yield, preferably of the dwarf coconut variety from the various coconut-producing regions in the country, which will be jointly identified by the PCA and Nilak.

Both the PCA and Nilak will have to evaluate, he said, the fresh coconut sap with respect to its physical and chemical characteristics and contents and assess the appropriate methods of harvesting to ensure the safety of the product in accordance with international standards.

PCA expects the project to produce approximately 1,200 liters a month of quality coconut sap or about 7,200 liters over a six-month period.

The end product—coconut wine—which will be aged for four months, will be equivalent to 9,600 bottles of 750 ml content with 12%-13% of alcohol content per volume. (DA-Press Office)

BAR participates in 2008 AGRILINK; draws more than 5,000 booth visitors



Attendees watch President Macapagal-Arroyo on the big screen while she delivers her keynote address during the opening ceremony of the 2008 Agrilink/Foodlink/Aqualink at WTC.

More than 5,000 guests visited the Bureau of Agricultural Research (BAR) booth during the 2008 Agrilink/Foodlink/Aqualink celebration at the World Trade Center in Pasay City on 9-11 October 2008.

Dubbed as the country's biggest and most prestigious annual international trade show on agribusiness, food and aquaculture, the 2008 Agrilink was co-organized by the Foundation for Resource Linkage and Development (FRLD) and supported by the Department of Agriculture (DA), National Agricultural and Fishery Council (NAFC), Bureau of Fisheries and Aquatic Resources (BFAR), and French Chamber of Commerce in the Philippines.

President Gloria Macapagal-Arroyo served as keynote speaker during the event. She was joined by Senator Edgardo J. Angara, DA Secretary Arthur C. Yap, Agrilink 2008 Chair Lyndon Tan, and FRLD President Antonio Roces.

“Sustaining agricultural growth through niche markets is indeed the way to go in a globally competitive world,” President Arroyo said. She mentioned that almost seven million jobs were generated in seven years, many of which were in agribusiness.

The Chief Executive mentioned the array of non-mainstream products displayed at the different booths, the recently launched organic fertilizer

called “Nutrisphere”, and the use of nutritious and indigenous vegetables such as *malunggay* which are now being utilized in feeding programs of the government. “All of these will appeal to different segments of local and foreign markets,” she stressed.

As part of the FIELDS (Fertilizer, Irrigation and infrastructure, Extension, training and farmers’ education, Loans and insurance, Dryers and other postharvest facilities, and Seeds) program of the Department, BAR took charge of the extension component. BAR showcased during the three-day exhibit different publications supported under the Scientific Publication Grant (SPG), *malunggay* products, salted eggs, and the e-Pinoy FARMS®, in collaboration with Optiserve Technologies, Inc.

Among the invited speakers during the seminar and product demonstrations on the second day were Bicol Integrated Agricultural Research Center (BIARC) Manager Elena B. delos Santos and Ilocos Integrated Agricultural Research Center (ILIARC) Manager Jovita M. Datuin on different product lines from *malunggay* and salted-egg production, respectively.

In collaboration with the Office of the Presidential Adviser for Job Creation, BAR handled the Search for Pinaka-Best Agricultural Harvets in the country and the O! May Gulay Cooking Contest which was actively participated in by public high schools in Metro Manila. (Ma. Eloisa E. Hernandez)



BAR booth is always filled with visitors from all walks of life on a queue to get free copies of BAR publications and SPG-supported books.

8 'Pinaka-Best' winners awarded



Sec. Arthur C. Yap presents this year's 'Pinaka-Best Bangus' to President Arroyo during her booth visits at the 2008 Agrilink. With them is NVIC President Lyndon Tan.

The Department of Agriculture (DA), through the Bureau of Agricultural Research (BAR), announced the eight winners in the 2008 Pinaka-Best Agricultural Harvest on 11 October 2008 during the celebration of the AgriLink/FoodLink/AquaLink at the World Trade Center in Pasay City.

The "Pinaka-Best" competition is on its second year. Initial screening was conducted in 16 regions of the country with one entry per commodity selected for every region. Facilitating the regional selection were the DA-Regional Field Units (RFU) and the Bureau of Fisheries and Aquatic Resources (BFAR).

This year's entries totaled 38 commodities from which the eight 'Pinaka-Best' winners were chosen. The champion harvests were *papaya*, *sweet potato*, *cabbage*, and *corn* (for crops) and; *bangus*, *carp*, *sugpo*, and *ulang* (for fisheries). Winners were judged based on weight, length, and physical appearance. They were also compared to the usual size of the commodity that was grown under usual crop production management practices or cultured under enclosed aquaculture facility.

Pinaka-Best for crops

The heaviest entry was the papaya (*Carica papaya* L.) grown by a farmer, Mercedes Rosalita from Valencia, Bukidnon (Region 10), weighing 7.25 kg and 52 cm long. Meanwhile, the entry of Lucio Amondoron of Dalaguete, Cebu (Region 7) could have been the largest sweet potato (*Ipomoea batatas*) the audience have ever seen; it weighed 2.50 kg and was 20 cm long.

The other two 'Pinaka-Best' winners were Oliver Britiller of Liliw,

Laguna (Region IVA) for growing the biggest cabbage (*Brassica oleracea*) (1.90 kg.) and Alfredo Taipan of Maddela, Quirino (Region II) for growing the Pinaka-Best corn (*Zea mays*) (0.40 kg and 23 cm long).

Pinaka-Best for fisheries

Four Pinaka-Best fishery harvests emerged as winners. The heaviest was the carp (*Hypophthalmichthys nobilis*) entry of Francisco Ceremonia of Binangonan,

Rizal (Region IVA). It tilted the scale at 8.02 kg and 62.12 cm in length. The winning bangus (*Chanos chanos*) raised by Marcelino Fernandez of Dagupan City (Region I) weighed 6.70 kg and measured 98 cm.

The other two Pinaka-Best winners were the *sugpo* (black tiger shrimp, *Penaeus monodon*) of Chrisanto Cantong of Binmaley, Pangasinan (Region I) and the *ulang* (freshwater shrimp, *Palaemonetes paludosus*) of Leonardo Matienzo of Tanay, Rizal (Region IVA). The *sugpo* measured at 0.17 kg and 24 cm long while the *ulang* weighed 0.50 kg and measured 29 cm.

Special awards

Not beating last year's records but emerged as the "Pinaka-best" for their specific category, special awards were given to the growers of banana (*Cardaba*), pineapple, eggplant, and grouper (*lapu-lapu*).

The largest banana (0.37 kg, 19

cm) was grown by Reggie Mallari of Mexico, Pampanga while the pineapple (4.50 kg, 25.10 cm) was an entry of Dominador Gonzales of Malilipot, Albay. From Region 2, the eggplant (0.50 kg, 35 cm) entry of Vicman Duque of Rizal, Cagayan, also won a special citation. A good contender for fishery was the *lapu-lapu* of Alexander Amorin of Mauban, Quezon. The *lapu-lapu* weighed 6.30 kg and measured 62.23 cm long.

The Pinaka-Best winners received P15,000 each and a trophy. A consolation prize of P5,000 each was given to the special awardees.

The national screening judges were Dr. Teodoro S. Solsoloy, assistant director of BAR; Dr. Carmencita V. Kagaoan, head of BAR's Program Development Division; Dr. Mary Ann P. Sayoc, general manager of East West Seed Company; Ms. Jennifer E. Remoquillo of the GMA High-Value Commercial Crops Program; and Ms. Irma F. Ortiz of BFAR.

The winning commodities were displayed at the DA booth during the 2008 Agrilink/Aqualink/Foodlink Celebration.

The Pinaka-Best Agricultural Harvest is a nationwide contest that aims to recognize the farmers and fisherfolk who raise and produce commodities in their maximum capability and good quality. This annual activity of DA is conducted in cooperation with the Office of the Presidential Adviser for Job Creation and the National Vegetable Industry Council. (Rita T. dela Cruz)



Secretary Arthur C. Yap (right) awards this year's 'Pinaka-Best Corn' to farmer, Alfredo N. Taipan (2nd from right) of Maddela, Quirino. With Sec. Yap are (L-R) BAR Dir. Nicomedes P. Eleazar, BFAR Dir. Malcolm I. Sarmiento Jr., and Dr. Mary Ann P. Sayoc of East West Seed Company.

BAR participates in the FIELDS Technical Briefing for National Action Teams

A technical briefing on Fertilizer, Irrigation and other rural infrastructure, Extension, training and farmers' education, Loans, Dryers and other postharvest facilities, and Seeds (FIELDS) for National Action Teams was conducted on 20 October 2008 at the Serrano Hall, Agricultural Training Institute (ATI), Diliman, Quezon City.

Participants in the briefing were from the Department of Agriculture's (DA) attached agencies and staff bureaus and various regional ATI training centers. The activity started with the welcome remarks given by ATI Assistant Director Alberto B. Maningding. ATI senior agriculturist, Evelyn D. Tagud served as the master of ceremony.

ATI Assistant Director Evelyn Aro-Esquejo discussed the overview of the FIELDS technical briefing. According to her, the objectives of the briefing were: 1) Brief the National Action Teams; 2) Clarify issues that may arise in the series of FIELDS Technical Briefing at all levels; 3) Strategize how to reach out to the 2.4 million rice farmers nationwide; 4) Validate schedules, venues, resource persons, and participants.

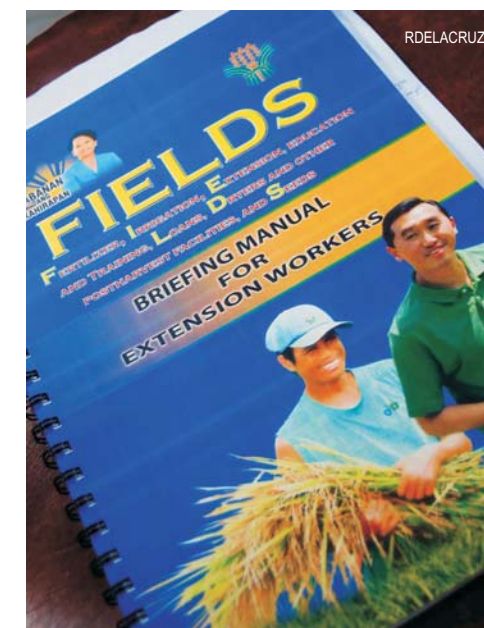
Executive Director of Philippine Rice Research Institute (PhilRice) Atty. Ronilo A. Beronio explained the Philippine/Regional/Provincial Self-Sufficiency Plan in line with the FIELDS Program initiatives of the government.

Ensuring the uniformity and accuracy of information that will be disseminated during the planned series of FIELDS technical briefing, a briefing manual for agricultural extension workers (AEWs) was developed as a result of inter-agency efforts spearheaded by ATI.

Representing the Bureau of Agricultural Research (BAR) were Dr. Marlowe U. Aquino, head of BAR's Applied Communication Division (ACD), and Rita dela Cruz, head of Publications Section of ACD.

The activity was capped by the presentation of modules in the afternoon. Different components of the FIELDS Program were highlighted by the designated module presenters. It was done in a lecture-discussion manner with open forum at the end of each presentation to level-off conflicting ideas or inconsistencies.

In terms of the Fertilizer component, PhilRice, Bureau of Soils and Water Management (BSWM), and the Fertilizer and Pesticide Authority (FPA) discussed the relevance of organic and inorganic fertilizers and its impact on agriculture production and productivity; various fertilizer programs of the DA in support of the FIELDS Program; and Fertilizer Subsidy Program coverage, funding, and mechanisms of implementation.



The module on the Irrigation component was discussed by the DA-Field Operation Service (DA-FOS), National Irrigation Authority (NIA), and BSWM. The importance of irrigation and infrastructure support to rice production in the country was emphasized. Likewise, various programs of government agencies involved in irrigation and infrastructure support and the roles and responsibilities of the implementing agencies and other stakeholders of the irrigation and infrastructure component were explained.

The Extension, training and farmers' education module was handled by ATI and BAR. The need for extension support in all FIELDS components was articulated as well as the role of key coordinating and implementing agencies in support of the FIELDS Program. Extension activities

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ATI Assistant Director Alberto B. Maningding welcomes the members of participating agencies during the opening program.

10th BAR Seminar Series highlights organic agriculture and certification



Mr. Pablito Villegas of the Villegas Organic and Hobby Farms lectures on organic agriculture in the Philippines.

The Bureau of Agricultural Research (BAR) conducted the 10th of its seminar series for this year featuring the lecture of Mr. Pablito Villegas of the Villegas Organic and Hobby Farms on “Organic Agriculture in the Philippines: Issues and Concerns” at the 4th floor of RDMIC Building, Visayas Avenue, Diliman, Quezon City.

The activity was attended by various representatives from Department of Agriculture (DA) attached agencies and staff bureaus. The event was hosted by Julia A. Lapitan, head of the Education Communication Section of the Applied Communication Division (ACD). Assistant Director Teodoro S. Solsoloy delivered the welcome remarks.

Mr. Villegas lectured on organic agriculture and certification. According to him, only 16 farms have been certified, with annual renewals on the decline. He also said that there are organic exporters certified by foreign certifying bodies not recognized nationally.

Organic agriculture, as defined by International Federation of Organic Agriculture Movements (IFOAM), includes all agricultural systems that promote the environmentally, socially, and economically sound production of food and fibers. These systems take local soil fertility as the key to successful production.

Organic agriculture dramatically reduces external inputs by refraining from

the use of chemo-synthetic fertilizers, pesticides, and pharmaceuticals. Instead, it allows the powerful laws of nature to increase both agricultural yield and pest resistance. Consequently, organic agriculture adheres to globally accepted principles, which are implemented within local socio-economic, geo-climatic, and cultural settings.

According to the Organic Certification Center of the Philippines (OCCP), the sole organic certification body by the Bureau of Agriculture and Fisheries Product Standards (BAFPS),

organic agriculture has relied since 2005 on locally available resources. Organic farmers have proven that their farming system is distinguishable, and competitive, and provides products of good quality. Organic agriculture can contribute to an ecologically sound future for all.

Despite the advantages of organic agriculture and certification, many stakeholders oppose organic agriculture, Mr. Villegas pointed out. He said that the increased cost of inspection, verification and certification, voluminous paperwork and burgeoning bureaucracy is one of the factors why many still stand up against organic agriculture and certification.

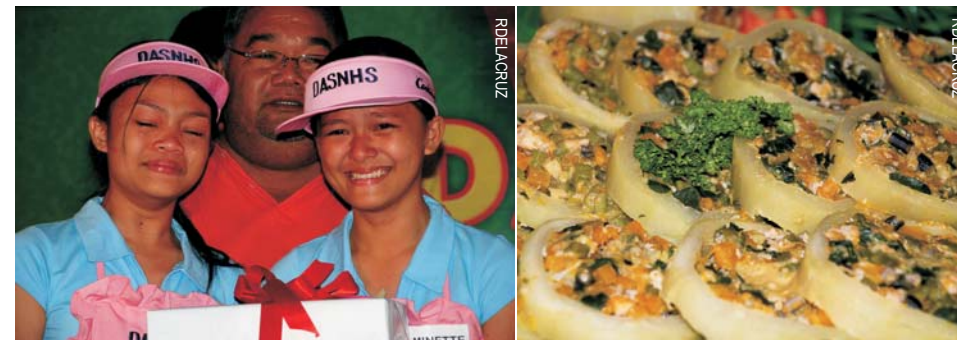
Also, many perceive that it favors large-scale organic producers and is discriminatory to small producers. The concern for possible manipulation of certification regulations and product misrepresentation and anomalous misclassification to the detriment and misleading of consumers is also an issue.

The resource person enumerated other concerns on organic agriculture, as follows: 1) High cost of inspection and certification; 2) Need for a system of equivalency between international and national standards and certification; 3) Lack of knowledge and information on certification among some organic producers/consumers/stakeholders; 4) National Organic Agriculture Board does not convene often enough although private-sector stakeholders are very keen on meeting the development of the organic industry in the Philippines; 5) The implementation of rules and regulations on certification is not monitored; 6) There is only one locally recognized system (third party) and one accredited certifier in the Philippines; 7) Issues regarding internal control system; 8) Problems encountered when moving from conventional to organic farming or during the conversion process; 9) Claim that organic farming is a risky business because market is not assured; and 10) Need for production protocol according to standards. (Christmas B. de Guzman)



Audience during the seminar at BAR

Papaya and malunggay recipe wins 2nd O! May Gulay Cooking Contest



Students Stephanie Joy Oliveros and Minette Delacerna of Dr. Arcadio Santos National Highschool win the 2nd O! May Gulay Cooking Contest with their recipe 'Imbutidong Papaya at Malunggay'.

The “Imbutidong Papaya at Malunggay” recipe prepared by two students of Dr. Arcadio Santos National High School in Parañaque City bagged this year's grand prize in the 2nd O! May Gulay Cooking Contest held during the 2008 AgriLink/FoodLink/AquaLink celebration at the World Trade Center in Pasay City on 11 October 2008.

The Department of Agriculture (DA), through the Bureau of Agricultural Research (BAR), conducted the cooking contest as a vegetable consumption awareness initiative for public schools in Metro Manila.

Out of 18 schools, six entered the final round which conducted cooking demonstration as part of the activities at the AgriLink. Recipes were judged based on the following set of criteria: palatability, nutritional value, visual appeal, creativity and originality, and affordability.

Agriculture Secretary Arthur C.

Yap welcomed the participating schools and guests during the event. The panel of judges during this year's search was composed of *Cook Magazine* Editor Nancy Reyes-Lumen, Chef JL Cang, Philippine Star Columnist Christine Dayrit, Singer and Sexy Chef Restaurant Owner Rachel



Agriculture Secretary Arthur C. Yap (center) poses with the winners and highschool students during the culmination activity of the 2nd O! May Gulay Cooking Contest.

Law on Organic...from page 1

to international standards and practices in order that Philippine agricultural and fishery products will be globally competitive.

Technical inputs and supports from the Department of Agriculture (DA), Department of Agrarian Reform (DAR), Department of Trade and Industry (DTI), Department of Health (DOH), Department of Interior and Local Government (DILG), Department of Education (DepEd), Department of Science and Technology (DOST), including their respective units and attached agencies as well as

representatives from non-governmental organizations, civil societies, industries, and private sector are provided to the Committee to come up with a comprehensive and integrated law.

To date, the Committee and the TWG in charge of the drafting and preparing of the law will be presented during zonal public consultations and forums and to solicit pertinent inputs for better policy development and implementation. Strategic plans for zonal consultations are now being prepared with commitments coming from key players and stakeholders as hosts and sponsors of the activities.

The draft law will cover among other things, regulation, certification, and accreditation; research, development, and extension (RDE); information dissemination and promotion; and marketing of organic agriculture.

Hopefully, the approval and implementation of the Organic Agriculture law will ensure that Philippine farms, manufacturers, producers, and consumers will be consciously aware of the organic production and processing management for local agricultural produce to be domestically and globally competitive. (Marlowe U. Aquino, PhD)

Seminars on *malunggay* and salted egg draw big audience in 2008 Agrilink

People from all walks of life came pouring in at the Seminar Room B, as the Bureau of Agricultural Research (BAR) sponsored two seminars on *malunggay* and salted egg production during the 2008 Agrilink/Foodlink/Aqualink celebration at the World Trade Center on 10 October 2008.

Dubbed as the country's biggest and most prestigious annual international trade show on agribusiness, food, and aquaculture, this year's theme focused on "Sustaining Agricultural Growth through Niche Markets".

Following the theme of niche market, BAR highlighted "Food Products from *Malunggay*" presented by Dr. Elena B. delos Santos, manager of the Bicol Integrated Agricultural Research Center (BIARC). The presentation was part of the results of a BAR-supported project on *Moringa oleifera* or *malunggay* starting from the conduct of field trials to promotional activities of the developed technologies. The project is a follow-up to the massive campaign of the Department of Agriculture (DA) on the several health benefits from *malunggay*, thus a line of *malunggay*-based products have been released in the market. Among these products are moringa powder, moringa cookies, moringa polvoron, moringa surprise, and the bestseller—*malunggay* tea. BIARC is currently improving these products by developing new postharvest



ILIARC's salted egg



BIARC's malunggay tea

processes and waste-reducing technologies.

Another seminar sponsored by BAR was the "Salted Egg Production and Value Adding" conducted by Dr. Jovita M. Datuin, manager of the Ilocos Integrated Agricultural Research Center (ILIARC).

The technology came from the results of a study titled "Shelf-life Evaluation of Salted Eggs Cured by Different Processing Methods". The technology that was derived from the study deviates from the usual "*itlog na maalat*" that most Filipinos know as it uses the heated clay method.

"The heated clay method is a treatment similar to the ordinary clay method, except that clay is heated for one hour before mixing with salt," explained Dr. Datuin. The value-adding

aspect of the salted eggs developed by ILIARC comes with the packaging.

"We do not use dye to color the eggshell, thus protecting it from potential bacteria. Instead we use corn stovers to package and adorn them," Dr. Datuin said.

For better appreciation, BIARC's developed products from *malunggay* and ILIARC's packaged salted eggs were displayed at the BAR booth during the 2008 Agrilink celebration. Free taste and samples were also partly done to enable visitors to appreciate the technology more.

The projects on *malunggay* and salted eggs were supported by BAR through its National Technology Commercialization Program (NTCP). NTCP is one of the flagship programs of DA in meeting its goals for the modernization of agriculture, jobs creation, and building profitable enterprises. (Rita T. dela Cruz)



Dr. Jovita M. Datuin of ILIARC (left) lectures on salted egg while Dr. Elena B. delos Santos (right) introduces products from *malunggay*.

Members of the audience are engrossed listening to the lectures.



Veterinary and animal science confab highlights climate change

Animal development and climate change posted an intellectual discourse during the 45th Philippine Society on Animal Science (PSAS) Annual Scientific Seminar and National Convention on 22-24 October 2008 at the PCC Headquarters, Science City of Munoz, Nueva Ecija. The convention's theme, "Climate Change and Animal Productivity: New Challenges for the Animal Industry," stirred controversies and called for immediate actions to be done, especially the dramatic social, economic, and ecological changes happening to people, communities, and the whole world.

Believing that the animal sector plays an important role in development, the PSAS did not limit its responsibility and accountability in sharing its concern with key issues in the environment, particularly on animal and climate change. Specifically, it has considered the threats, challenges, and opportunities of the livestock and poultry sector vis-à-vis the climatic changes.

Dr. Arnel del Barrio, PSAS President (2007-2008), and Dr. Mildred Padilla, Vice-President and chair of the Scientific Papers Committee, said that

the decision to have the two important topics on climate change and animal development into one holistic scientific debate is timely and fitting on the issues and concerns being encountered by key players working on development.

This was complemented by the plenary topics shared by Dr. Maria Victoria Espaldon and Dr. Felino Lansigan, chair and co-chair, respectively, of the Climate Change Task Force of the University of the Philippines Los Banos which highlighted the effects and actions to be taken in relation to animal productivity and sustainable development.

The occurrence of climate change has severe impacts in many parts of the tropics and subtropics, including the Philippines. Despite the importance of animals (livestock and poultry) to poor people and the magnitude of the changes that are likely to befall livestock systems, the intersection of climate change and livestock is relatively neglected research and development (R&D) area. There is very minimal understanding and knowledge about the interactions of climate and increasing climate variability with other drivers of change in livestock systems and in broader

development trends.

The need to document all of these in Philippine context is now addressed by the animal sector in order that the temporal and spatial heterogeneity of household responses be recorded and used for R&D. While opportunities may exist for some families and their communities to take advantage of more conducive pasture areas and cropping conditions, for example, the changes projected will pose very serious problems for many other communities.

Furthermore, ruminant livestock has an important impact on climate, through the emission of methane and through the land-use change that may be brought about by livestock raisers, especially on a commercial scale.

Given these concerns, the PSAS officers and their members committed their efforts to be responsive and supportive of the development work on climate change with veterinary and animal R&D programs, especially on proper and appropriate animal waste management and continuous animal production and resource management. (Marlowe U. Aquino, PhD)

BAR drafts...from page 1

large-seeded ones requires a big investment that even private investors are reluctant to incur.

With regards to the local demand for peanuts, Aquino and Lorenzana said that there are currently five major peanut processors in the country, namely: Newborn Food Products Inc., Tobi Marketing Inc., Growers Food Industries Ent. Inc., Marigold Commodities Inc., and California Manufacturing Co. Inc. which require a total of 343 metric tons of peanuts monthly.

"From what we gathered, these major processors are more than willing to source their peanut requirements locally which are fresh unlike those coming from China which have been stocked for several months to years in some cases," Aquino

said.

Aquino added that, a big opportunity for peanut producers is the selling of shelled and pre-graded peanuts which is a value-adding activity. Processors usually require shelled and pre-graded peanut which local producers do not meet.

CVIARC proposes the establishment of a Peanut Service Station that could cater to the needs of both peanut producers and processors. Aquino and Lorenzana mentioned that the investment that would be used for the service station is worth the benefit it will provide for the local peanut industry.

"The service station would serve as a facility that would house different equipment that will be used for stripping, drying, shelling,

sorting/grading, packaging, and storing peanut produce. Provisions for farmer dividends and other benefits such as training and market assistance could also be provided by the station," Aquino added.

The proposed national program for the commercialization of different varieties of peanut drafted by TCU and CVIARC officers during the meeting will be refined and furnished to other government agencies within and outside the Department of Agriculture (DA) which will be tapped partners for its planning and implementation. The drafted proposal likewise emphasizes the important role of local government units (LGUs) in the successful commercialization and revitalization of the peanut industry in the country. (Miko Jazmine J. Mojica)

photos from aseanipm.da.gov.ph



Gov't agencies make *Brontispa* information awareness a priority

Instituting a community-based integrated pest management action program for the control of *Brontispa* (*Brontispa longissima* Gestro), commonly called Coconut Leaf Beetle (CLB), affecting the growth and development of coconut plantations is now the major activity of the Philippine Coconut Authority (PCA) in collaboration with the National Crop Protection Center – University of the Philippines Los Banos (NCP-C-UPLB), the Bureau of Plant Industry (BPI), and Bureau of Agricultural Research (BAR).

Recorded historical documentation traces the appearance of *Brontispa* as early as 1885 in Aru Islands, Maluku and Papua provinces of Indonesia. Over a period of 120 years, it has spread widely in more than 25 countries in Asia, Australia, and Asia Pacific Islands, attacking not only coconut palm but also several other cultivated and wild palms.

It has spread very fast in China, Indonesia, Malaysia, Maldives, Myanmar, Cambodia, Laos, Singapore, Taiwan, Thailand, Vietnam, American Samoa, Australia, French Polynesian, New Caledonia, New Hebrides, North Mariana Islands, Papua New Guinea, the Philippines, Republic of Nauru, Samoa, Solomon Islands, Tahiti, Vanuatu, Wallis, and Futuna.

In the Philippines, *B. longissima* infestation was first sighted among coconut trees along Airport Road, NAIA and Roxas Boulevard in Pasay City in April 2005. The pest was believed to have been introduced via importation of ornamental palms. Since then, infestation has been reported in nearby provinces.

According to PCA, to date, recorded and verified reports show that the pest has affected 374,413 coconut trees in 38 provinces of nine regions of the country.

Considering that coconut plays a major role in the economy and as one of the top export agricultural commodities, *Brontispa*'s present status as a serious devastating pest, emergency and immediate pest management operations are necessary. Also, at the rate it is going which is very alarming, preventive actions must be instituted in order to increase farmers' awareness and knowledge, particularly on its control measures and management. If this infestation is not contained, the damage inflicted by pest and its increasing population, it can devastate the country's US\$ 800 M dollar worth coconut industry.

In view of the high risk of spread of the beetle and its damage threat, documentation and pest awareness for sustainable management

are necessary to understand the pest's morphology, distribution, and pest control approaches to combat the further spread and pest outbreaks in coconut-growing provinces.

A biological control method, chemical control, and utilization of predators have been developed and implemented to bring down the CLB population. While adopting the biological control measures, it is also necessary to prevent the entry of the pest in the 40 non-infested provinces in the country.

This will enable the PCA and its partners to ensure the reduction of crop losses owing to CLB infestation and prevent environmental harm by utilizing biological control methods as alternative to synthetic pesticide and to establish a natural balance between the pest and its natural enemies.

As these initiatives are being implemented with the use of participatory approach, in coconut-growing areas where farmers' skills and knowledge are vital in farming operations, massive awareness campaign and proper pest management promotion will lead farmers to be technically equipped for productivity, profitability, and sustainable coconut development. (Marlowe U. Aquino, PhD)

Escudero and Yap discuss Heart-Mind-Hands agriculture



Agriculture Secretary Arthur C. Yap



Congressman Salvador H. Escudero III

It was a fitting occasion when two prominent personalities spoke their ideas, experiences, and desires to strengthen the agriculture and fisheries sector.

The guest speakers, Representative Salvador H. Escudero III of the First District of Sorsogon and incumbent Secretary Arthur C. Yap, shared their passion on agriculture and fisheries through dedication, responsibility, open-mindedness, and development orientation. Both speakers emphasized on action, responsiveness, and efficient management of programs to improve the lives and conditions of the farmers and fisherfolk.

This was observed during the awarding ceremony of the 20th National Research Symposium of the Department of Agriculture - Bureau of Agricultural Research (DA-BAR) on 3 October 2008 at the Fernando Hall, BSWM, Diliman, Quezon City.

Escudero's message was drawn from his vast experiences as an advocate and practitioner during his incumbency as head of the DA. He pointed out that his message is coming from the heart because he is one with the key players in agriculture – knowing the plight and conditions affecting agriculture stakeholders is the reason why he wanted to share light in his cause of more personal dealings with the agriculture and fisheries sectors.

In addition, Escudero highlighted the services provided by the sector through timely and appropriate strategies such as human resource development to technicians, as well as local government officials, who set the direction for immediate response to local development. Continuing education to technical personnel and farmers in the delivery of services and technologies is the main factor that needs to be done to improve the production and processing management systems of crops, animal, and fishery commodities.

Also, these must be supported by continual sharing of lessons learned by farmers, fisherfolk, researchers, extension workers, and even policymakers. Knowing what is in the hearts of farmers and fisherfolk will guide them to be skillful in the

production and processing of goods with quality assurance.

On the other hand, Yap's message focused on the challenges faced by the farmers and fisherfolk in this time of technology revolution. Although several technologies are available, the Department of Agriculture's FIELDS program must ensure that these will be given to farmers and fisherfolk where they most need them. FIELDS stands for Fertilizer, Irrigation and other rural infrastructure, Extension, training and farmers' education, Loans, Dryers and other postharvest facilities, and Seeds.

The challenges are here to stay but DA's response must be quick and appropriate, said Yap. Key players' positive experiences must be used to address the challenges today. Those that have negative attributes must be changed for the betterment of the farmers and fisherfolk. "It is up for the sector then to be on top of the situation and use the gains from the output of research and development to institute the changes and address new challenges. We have a role to play – that is responsive, reflective and proactive," Yap concluded.

Based on the speakers' views, the so-called "Heart-Mind-Hands" Agriculture would not only start from where the farmer or action is, but will also draw the formulation and implementation of programs anchored on the needs and conditions of the farmers with effective and efficient application of resource management strategies. (Marlowe U. Aquino, PhD)



BAR announces 2008 Best AFMA R&D papers and posters in 20th NRS



Winner for the applied research (TG/IG), agriculture division is the group of Severino S. Magat of PCA.



Winner of the applied research (TA/TV), agriculture division goes to Teresita K. Mangili of BPI-BNCRDC.



The group of Edgardo E. Tulin of VSU takes home the first prize for the basic research category.



Melinda G. Calumpit of DA-ILIARC wins first prize for the development research (agriculture).



The study of Manolito C. Bulaong of BPRE is this year's winner of AFMA Best Poster.

photos by RDELACRUZ

Winners in the 20th National Research Symposium were officially announced during the awarding ceremony held on 3 October 2008 at the Fernando Hall of the Bureau of Soils and Water Management (BSWM) Bldg., Visayas Avenue, Diliman, Quezon City.

Representative Salvador H. Escudero III of Sorsogon's first district, Director Nicomedes P. Eleazar and Asst. Director Teodoro S. Solsoloy of the Bureau of Agricultural Research (BAR) presented the awards to the 18 winners.

BAR holds the yearly NRS wherein various researchers and scientists from state universities and colleges (SUCs), attached agencies and staff bureaus of the Department of Agriculture (DA), and local government units (LGUs) gather to present recent researches in the field and compete for the title of Best AFMA R&D Paper Award.

This year's competition focused on the theme, "*Mula sa kahan patungong hapagkainan*: Bringing the benefits of agricultural and fisheries R&D closer to the people," defining the important role of R&D in meeting the challenges of poverty and food security, particularly in the rural areas.

Entries totaled 79 R&D papers from which 42 qualified. Of these, 20 were invited to present to a panel of experts for the final evaluation on 2 October 2008. The winners were ranked based on the garnered average point scores.

Paper entries were divided into categories, agriculture and fisheries, competing based on the four subcategories: *basic*, *applied*, *socio-economics*, and *development* research.

Applied research was further divided into two: *technology generation/information generation* (TG/IG) and *technology adaptation/technology verification* (TA/TV).

Winners who garnered an average point score of 85 percent or higher were conferred the Best AFMA R&D Paper Award receiving a plaque and cash prize of P50,000. The first and second runners-up received P30, 000 and P20, 000, respectively.

Applied research (TG/IG) – agriculture and fisheries

The applied research category (TG/IG) is strategic in nature and is usually conducted on-station. This type of research is directed toward contributing to a body of information with immediate application of findings.

For the agriculture division, the study titled "Integrated Soil Fertility Management (ISFM) on Coconut + Lanzones (*Lansium domesticum* Corr.) Agro-ecosystem in Southern Mindanao, Philippines (1993-2007): With Emphasis on the Multi-nutrient Coconut-specific Mineral Fertilizer" by Severino S. Magat, Millicent I. Secretaria, Junaldo A. Mantiquilla, and Rogaciano Z. Margate of the Philippine Coconut Authority (PCA) emerged as the first prize winner.

First runner-up went to Manolito C. Bulaong and Crestituto C. Mangaoang of the Bureau of Postharvest Research and Extension (BPRE) and Tessie Q. Ramirez and Elito V. Circa of the National Food Authority (NFA) for their study, "Development of a Machine Vision System for Corn Quality Analysis". The second runner-up prize was awarded to Algerico M. Mariscal, Reynaldo V. Bergantin, and Anita D. Troyo of the

Visayas State University (VSU) for the study, "New Cassava Varieties for Industrial Use".

For the fisheries category, the study on "Immune Responses of Vaccinated and Probiotics-Fed Nile Tilapia *Oreochromis Niloticus* Challenged with *Aeromonas Hydrophila*" by Apolinario V. Yambot, Carolyn C. Cabcic, Ma. Neda A. Catalma, Isagani P. Angeles, Jr. of the Central Luzon State University (CLSU), and Ichihiro Ohhira, Yasuyoshi Miyake of the Biobank Group, Japan won the first runner-up.

Applied research (TA/TV) – agriculture

This type of research may be on-station or on-farm with specific focus on technology commercialization projects and technology enhancement-related concerns. This research is geared toward fine-tuning of newly-developed technologies necessary for determining their technical feasibility in solving specific needs related to agricultural and fisheries production and postproduction.

Taking home the grand prize was the study, "Trichoderma-Based Management of Clubroot Disease of Crucifers" by Teresita K. Mangili, Trenesie M. Lorezco, and Rhonda M. Oloan of the DA-Bureau of Plant Industry-Baguio National Crops Research and Development Center (BPI-BNCRDC).

The second placer was the study on "Field Application of Common Salt (*Sodium chloride*) on Cooking Banana Cultivar "Cardaba" (*Musa balbisiana*) grown under a Coconut + Banana Agro-ecosystem: A Techno-demonstration Trial in Southern Mindanao, Philippines" by Millicent I. Secretaria, Severino S.

Magat, and Marianita N. Eroy of PCA-Davao Research Center. Third was "Mass Production and Utilization of Earwig (*Euborellia Annulata*) for the Control of Corn Borer" by Marivic G. Begonia, et al. of DA-Ilocos Integrated Agricultural Research Center (DA-ILIARC).

Socio-economics research

The socio-economics research category deals with people and institutions, specifically on methods of participatory action research, monitoring, and evaluation of technological packages with regard to adoption and impact, and contributions to policy-related concerns in agriculture and fisheries development. This type of research focuses more on the outputs of the project.

No first prize winner was announced for this category.

The second placer came from the University of the Philippines Los Baños (UPLB) with its study titled, "Technical Efficiency and Profitability of Tilapia and Milkfish Grow-out Cage Operations in Taal Lake, Talisay, Batangas, Philippines" by Reynaldo L. Tan, Yolanda T. Garcia, and Isabel Mildred Tan. Third was the study titled "Supply Chain Improvement of Locally Produced Organic Fertilizer in Selected Areas of the Philippines" by Clarita P. Aganon, Luzviminda M. Galang, and Rex S. Parayno, all of the Central Luzon State University (CLSU).

Basic research

Basic research refers to experimental or theoretical work undertaken primarily to acquire new insights on the underlying foundations of physical and biological phenomena and observable events, without any particular or specific application or use in view.

It usually takes supplementary

research/activities before a specific application or use can be identified. Attention is given on processes, methods, techniques, protocols, and chemical composition.

Taking home the first prize was the study of Edgardo E. Tulin, Zenaida T. Ecleo of VSU titled, "Genetic Approach and Phenotype-based Complementation Screening for Selection of Yam Resistant to Anthracnose".

The second prize went to Rubigilda C. Paraguison, Ma. Pia P. Faylon, Ester B. Flores, and Libertado C. Cruz of the Philippine Carabao Center (PCC) for their study, "Random Amplification of Polymorphic DNA (RAPD) Markers to Distinguish the Philippine Carabao and Indian Murrah Buffaloes".

Also from PCC, the study, "One-step Reverse Transcription-PCR Method for Rapid and Safe Detection of FMD Virus Applied on Inactivated Vaccine" by Rubigilda C. Paraguison, Darlene Fe P. Castro, Ester B. Flores, and Libertado C. Cruz won the third prize.

Development research (agriculture)

Development research is an output of systematic work, drawing on existing knowledge gained from research and/or practical experience and directed toward introducing/producing new materials, installing new processes, and improving substantially those already produced and installed for more effective use by the intended clients. The focus of this research is on innovation studies, piloting, fine-tuning, improvement of the system, linkages with the LGUs, and support services. Its main concern is on achieving the desired outcome of the project.

Getting the grand prize was the study, "Community-based Participatory Action Research (CPAR) Goat Agribusiness Development Project in Region I" by Melinda G. Calumpit of DA-ILIARC.

The second prize went to Rose Mary G. Aquino, Orlando J. Lorenzana, Rolando D. Pedro, Violeta A. Peralta, and Vanessa Joy Fortin, Norma E. Nerona of DA-Cagayan Valley Integrated Agricultural Research Center (CVIARC) for their study, "Introduction, Promotion and Efficient Seed Support System of ICRISAT 'Asha' Peanut Variety in Region 2, Philippines".

Also from DA-ILIARC is the study, "Garlic Technology Commercialization in Region I: Production, Processing, Enterprise Development and Market Strategies" by Wilhelmina P. Castaneda, Sharon A. Viloria, Aida D. Solsoloy, and Leonardo T. Pascua securing the third spot.

Nobody won in the fisheries category.

AFMA Best Poster

The AFMA Best poster winners were chosen from the submitted posters of the R&D papers presented during the NRS.

This year's winner went to the study, "Development of a Machine Vision System for Corn Quality Analysis" by Manolito C. Bulaong, Crestituto C. Mangaoang both of BPRE; and Tessie Q. Ramirez and Elito V. Circa of National Food Authority (NFA). They received P7,000 cash prize and a plaque.

The first and second runners-up went to the R&D posters, "Community-based Participatory Action Research (CPAR) Goat Agribusiness Development Project in Region I" of DA RFU I – ILIARC; and "Trichoderma-Based Management of Clubroot Disease of Crucifers" of BPI-Baguio National Crops Research and Development Center. They received P5,000 and P3,000 cash prizes and trophies, respectively. (Rita T. dela Cruz)