BAR, SEARCA train researchers on marketing and entrepreneurship

After the success of the training course, "Profitability of New Production and Processing Technologies," that was conducted in May 2010, the Bureau of Agricultural Research (BAR) once again partnered with the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA), this time to conduct the training-seminar, "Market Study and Formulation of Marketing Strategies for Commercializable Agri-based Technologies" on 28-30 March 2011 at SEARCA in College, Laguna.

Participating in the training course were 28 individuals from various national and regional offices of the Department of Agriculture including BAR, Regional Field Units (RFUs), Regional Integrated Agricultural Research Centers (RIARCs), Bureau of Fisheries and Aquatic Resources (BFAR), and Quezon Agricultural Experiment Station (QAES); and state universities and colleges (SUCs) including the Pampanga Agricultural College (PAC), and Southern Luzon State University (SLSU); and BAPAMIN — a private enterprise involved in sweet sorghum production and product development funded by BAR.

The training course seeks to enhance the marketing and entrepreneurial skills of the participants, as they will eventually be engaged in the dissemination of marketing techniques obtained from the training exercises. As research workers, they bring a fresh dimension to bringing technology and other production knowledge directly to farmers and fisherfolk. This support to those who are involved in agriculture and fisheries production shall enable the sector to maximize production and eventually market produce in a competitive environment. It is foreseen that the training will result to a more vibrant agribusiness environment.

On hand to welcome the participants was SEARCA Director Gil C. Saguiguit who mentioned that the professional partnership of SEARCA with BAR has gone a long way in terms of training stakeholders in agriculture including research institutions, SUCs, scientific communities as well as the line and bureau agencies of DA, on analyzing market dynamics and in interpreting marketing trends. He also lauded the BAR management, under the helm of Director Nicomedes P. Eleazar, for honing the skills and capability of its staff and those of its R&D partner institutions.

Representing the BAR Director, Ms. Evelyn Juanillo of the Technology Management Division (TCD) delivered a message highlighting on how the activity has captured and institutionalize the effective formula of *first*, concept of market study, and *second*, technologies and products for a particular market paradigm. "These strategies are essential and crucial in becoming locally and internationally competitive," she said.

"Having a strategic market study and venturing into product development will send a strong signal to food manufacturers, industry players, business enthusiasts and NGOs, as well as local governments, that we are indeed ready to face the challenges of marketing of our agricultural produce and this is why this training is important. In terms of competitiveness, the government particularly, the DA and BAR, remains committed in creating and maintaining the right conditions for Philippine agribusiness to compete and flourish including the conduct of appropriate agricultural research," she added.

Prof. Loida E. Mojica, associate professor at the Department of Agribusiness Management, College of Economics and Management-University of the Philippines Los Baños (CEM-UPB), served as the technical coordinator and lecturer of the training. She was assisted by Prof. Nanette C. Abelilla-Aquino who presented the results of the study, "Analysis of Marketing Environment," while Dr. Agnes T. Banzon shared her expertise on understanding the "Core Concepts of Marketing as Applied to Commercializable Technologies and Products." On the other hand, Mr. Antonio Quintin Valdez, Jr. and Ms. Joan C. Uy imparted their knowledge on "Innovative Marketing Strategies." The resource speakers were mostly from the Department of Agribusiness Management (DAM), of CEM-UPLB

(Patrick R.A. Lesaca)

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BAR leads crafting of rainfed agriculture RDE program

(L-R): ICRISAT Principal Scientist, Dr. Suhas Wani; ICRISAT Principal Scientist, Dr. K.B. Saxena; ICRISAT Director for Communications, Dr. Rex L. Navarro; BAR Director, Dr. Nicomedes P. Eleazar; RTD for Research and Regulations, DA-RFU 3, Atty. Jennilyn Dawayan; UPLB VP for Research and Extension, Dr. Enrico P. Supangco; MMSU VP for Planning, Development and External Linkages, Dr. Heraldo L. Layaoen; and BSWM Head of Laboratory Services Division, Dr. Gina P. Nilo. photo: RDELCRUZ

Given the importance of rainfed agriculture in the country, which contributes 40 percent of the total food production, the Bureau of Agricultural Research (BAR), as the national coordinator for R&D in agriculture, was tasked to lead in the formulation of a unified and integrated Philippine Rainfed Agriculture Research and Development and Extension Program (PhiRARDEP). For this purpose, a consultation-workshop with researchers, experts, and project implementers from the national and regional DA agencies and other stakeholders was held on 28-29 April 2011 in Clark, Pampanga.

According to historical trends, Philippine agriculture is predominantly rainfed. Rainfed agriculture refers to the cultivation of crops without irrigation and utilizes mainly water that comes from precipitation stored in the unsaturated soil. The term also refers to the drylands which are mostly located in Northern Luzon, Central Visayas and Southern Mindanao. Important as it is, rainfed agriculture is also one of the most vulnerable sectors. Farming in rainfed areas is risky due mainly to the recurrence of droughts, pest infestation, generally poor and degraded soils, lack of physical infrastructure, and weak social services.

"We have hectares of unexplored rainfed areas that are inhabited by millions of Filipinos who are living under extreme poverty," explained BAR Director Nicomedes P. Eleazar. "And yet it is one of the most neglected sectors in terms of agricultural RDE investments. We therefore see the need to develop and utilize the potentials of rainfed agriculture in achieving food security and improving livelihoods and, most importantly, in addressing the issues of equity and poverty reduction that are characteristic of an agricultural country like ours," he added.

The unified RDE agenda and program for rainfed agriculture program, which was the major output of the workshop, stipulates specific

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BAR convenes...from page 1

photos: RDELCRUZ

Dr. Eleazar


Dr. Navarro


Dr. Wani


Dr. Saxena

policy frameworks and institutional strategies that will be used as the bases for prioritizing and funding specific projects.

Through the PhilRARDEP, the status of rainfed farming systems and practices in the country will be assessed and the findings shall be used in the generation of production technologies. The program on rainfed agriculture covers four major components: 1) rainfed farming systems innovation; 2) participatory watershed management; 3) strategic social science and policy research; and 4) capacity building, communication and social mobilization.

PhiRARDEP will be implemented by the DA's Regional Field Units (RFUs) and Regional Integrated Agricultural Research Centers (RIARCs), and selected state universities and colleges (SUCs). Experts from the India-based research institution, ICRISAT, will be tapped to provide technical assistance and expertise in the field of dryland agriculture.

The funding for the four-year program shall come mainly from the DA-High Value Commercial Development Program (HVCDP) with supplemental budget from BAR. "We are also eyeing other local and international sources like the Food and Agriculture Organization as sources of assistance," said Dr. Eleazar.

Since the program will also bolster the country's defenses against weather-related risks arising from climate change, which shall exacerbate the already dire conditions of the rainfed areas, Dr. Eleazar emphasized the need to fast track the implementation of the program and strengthen existing rainfed farming systems and farming practices. "Hopefully, after we have solicited enough workable proposals, we can already start implementation in the third quarter of 2011," he said. ###
(Rita T. dela Cruz)

Mindanao A Group consisting of representatives from Regions 9, 10, and 11 during the breakout session. Leading the group is Dr. Alfredo M. Cayabyab (2nd from left), SMIARC manager.

photo: RDELCRUZ

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PHILARM conducts 21st nat'l convention

Dr. Nicomedes P. Eleazar delivers his message to the officers and members of PHILARM during their national convention. photo: MVALDEABELLA

"Through the PPP strategy, we are able to exploit the potential for research synergies, complementarities, scale of economies and knowledge-sharing on both ends..." ~ Dr. Eleazar

In celebration of its 21 years of existence, the Philippine Association of Research Managers (PHILARM) held its annual national convention at the Cavite State University (CvSU) on 13-15 April 2011. With the theme, "Strengthening Public-Private Partnership in Research Management Amidst Climate Change," the convention emphasized the need and importance of building good network and linkages between and among public and private sectors in research management.

Co-hosted by the Southern Tagalog Agriculture and Resources Research and Development Consortium (STARRDEC) and CvSU headed by Chairperson Divinia C. Chavez, the convention was attended by research managers from public and private organizations, including research and development (R&D) agencies, academe, and rural development institutions.

Gracing the opening ceremony was Department of Agriculture (DA) Undersecretary for Field Operations Joel S. Rudinas who served as the convention's keynote speaker. In his speech he emphasized how building linkages between and among public and private sectors can jointly identify the workable and effective mitigation and adaptation strategies that will address climate change—that is, by generating shared expertise, human resource and infrastructure in the conduct of research. He also pointed out that for PPP to be successful and operative, aside from the proactive response on both ends, must be based on the principles of shared goals and complementary resources, transparency, and shared risks and benefits.

Another guest of honor was DA-Bureau of Agricultural Research (BAR) Director Nicomedes P. Eleazar who described establishing a strong and workable Public-Private Partnership (PPP) as the "lifeblood" of BAR in fulfilling its task of coordinating the national agriculture and fisheries R&D of the country. He stressed the importance of strong PPP as an essential approach in implementing R&D. He added that through the PPP strategy, even a developing country, such as the Philippines, can post a huge leap in dealing with climate change.

"Through the PPP strategy, we are able to exploit the potential for research synergies, complementarities, scale of economies and knowledge-sharing on both ends, hence partnerships can benefit R&D in greater quantities, with greater chances of success, and most probably at lower costs than when one is to act alone on a particular endeavor," he said.

Dr. Patricio S. Faylon, executive director of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) also graced the event with his equally motivating message on the matter.

Also featured in the three-day convention were the presentations of five invited R&D management papers, presentation and awarding of 12 competing R&D management papers, and the induction of new PHILARM members. ### ***(Mara Shyn M. Valdeabella)***

Dr. Reynaldo Castro (left), president of PHILARM and Dr. William Medrano (right), commissioner of CHED, hand over the plaque of appreciation to Dr. Eleazar. photo: MVALDEABELLA

Tapping the benefits from Public-Private Partnership

by: MARIA ANNA M. GUMAPAC

Relationships between public and private institutions are often strained and uncertain and, in some instances, even disruptive. Regardless of the social and cultural setting, the unstable interaction between these two sectors is pretty much consistent considering that both are situated on uneven ground.

Have we fully understood the potentials underlying a mutual and beneficial partnership between public and private institutions? When one ponders the possibilities in light of recent issues and challenges, particularly ones plaguing our country and our environment, he may ask why nobody took serious notice of the benefits of aforementioned tie-ups.

According to the Asian Development Bank (ADB), the term "public–private partnership" describes "a range of possible relationships among public and private entities in the context of infrastructure and other services." Public–Private Partnerships (PPPs) allocates tasks, obligations, and risks among the public and private partners. Non-government organizations (NGOs) and community-based organizations that represent certain individuals or groups with vested interest in — or may be directly affected by — the project can be included in PPPs. An effective partnership between the public and private institutions recognizes that each has certain advantages that can be utilized in specific tasks in order to "balance" each other out.

Thus, it is timely that the Philippine Association of Research Managers, Inc. (PHILARM) convened on 12-15 April 2011 for the 21st PHILARM National Convention at Cavite State University (Indang, Cavite), with this year's theme aptly titled, "Strengthening Public–Private Partnership in Research Management amidst Climate Change."

The 21st PHILARM National Convention was attended by 140 representatives from the Department of Agriculture (DA), state college universities (SCUs), local government units (LGUs), and private organizations. Of the two Bureau of Agricultural Research (BAR) representatives, Mr. Rolando Labios acted as Chair of the R&D Management Paper Committee while Mr. Ricarte Castro chaired the Awards and Recognition Committee.

Dr. Divinia Chavez, Cavite State University President and Dr. Reynaldo Castro, PHILARM President gave their welcome remarks. DA-BAR Director Nicomedes P. Eleazar and Dr. Patricio Faylon of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) were applauded for their inspiring and challenging messages to the participants. Hon. Joel Rudinas, the DA Undersecretary for Field Operations, was introduced by RTD Romy Palcon as the keynote speaker. It should be noted that all the speakers were one on the direction and challenges facing research management, and stated the important role of research managers toward sustainable development where PPP is one of the vital elements.

Director Eleazar stated in his message, "weather-related disasters have become significantly more frequent and more extreme in recent decades and these require not only immediate concerns but bold and proactive actions." He added that, "the urgency of the matter is more apparent for developing countries such as the Philippines given our less robust infrastructure and our vulnerabilities to health and security measures. Hence, public–private partnership (PPP) in research management is an innovative approach to agricultural research and development (R&D)."

Executive Director Dr. Patricio S. Faylon of PCARRD was enthusiastic in saying, "Good researchers do not only need capable managers; they also need a good network or linkage with the public and private sectors. The theme for this convention 'Strengthening Public–Private Partnership in Research Management amidst Climate Change' is very timely. This convention is a perfect venue for building these linkages between and among researchers and R&D managers who will help sustain productivity and development of the country through scientific and technological innovation."

During the plenary session, there were in fact two invited papers presented that focused on PPPs and its relationship with agricultural R&D: "Research in the Eyes of an Entrepreneur" and "Public–Private Partnerships for Enhancing the Demand for AFNR Graduates in the Philippines." Other highlights of the affair included the competition of 12 R&D management papers and 16 posters for best R&D Management Paper awards of which Dr. Estela Itaas and Dr. Joy Mirasol of Bukidnon State University won with their paper, "Managing Environmental Governance Capacity."

In their paper, Drs. Itaas and Mirasol described a collaborative means of managing environmental governance

turn to page 9

BAR funds 2 R&D projects in Bicol

(Left Photo) *BAR Director Nicomedes P. Eleazar (2nd from right) signs the Memorandum of Agreement (MOA) with BUCAF President Fay Lea Patria M. Lauraya (standing).* (Right Photo) *Dir. Eleazar also personally hands over the check as part of BAR's funding support to two BUCAF's projects, namely: 1) Integrated Management Systems in the Rice Production Areas of Albay Under Changing Rainfall Pattern and 2) Establishment of Indigenous Breeding and Dairy Production Facilities in BUCAF. DA-RFU 5 Director Jose Dayao (extreme right) and another BUCAF official (extreme left) serve as one of the witnesses during the MOA signing and turnover ceremony.* photos: FGRETTCHIN

The Bureau of Agricultural Research (BAR) is funding two new projects aimed at responding to the impact of climate change in rice production in Albay, as well as the conservation and upgrading of indigenous breeds of carabao for draft and for dairy production.

BAR Director Nicomedes P. Eleazar and Bicol University President Fay Lea Lauraya led the signing of the Memorandum of Agreement between BAR and Bicol University – College of Agriculture and Forestry (BUCAF) during the former's official visit as guest of honor and speaker at BUCAF's commencement exercises on 4 April 2011. Witnessing the signing were BUCAF Dean Marissa Estrella and Department of Agriculture – Regional Field Unit V Director Jose Dayao.

In the face of changing rainfall patterns, rice production in the Bicol Region is becoming more vulnerable to the impact of climate change.

Thus, BAR supported an R&D and extension project on establishing an integrated management system in the rice production areas in Albay. The project is divided into three sub-projects, which will be led by BUCAF in collaboration with the local government units (LGUs) and DA.

The project will focus on organic farming and soil conservation, control management of rice black bug, and adaptation strategies for food self-sufficiency under various ecosystems. The project adheres to the province's vision to augment rice yields by four percent annually and increase farmer's profitability from 10 to 15 percent annually.

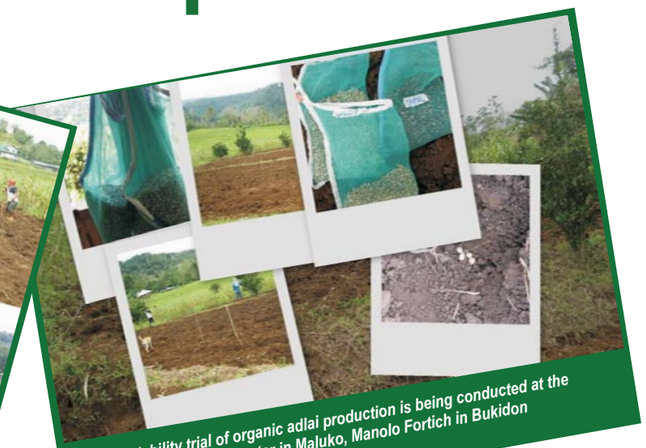
On the project for the establishment of indigenous breeding and dairy production facilities in BUCAF, the project leaders aim to develop a comprehensive plan for carabao breeding, develop milk production and processing, and offer free training programs for farmers. BUCAF expects to help increase the income of farmers' household with the project's implementation. ### ***(Miko Jazmine J. Mojica)***

BAR is funding two new projects aimed at responding to the impact of climate change in rice production in Albay as well as the conservation and upgrading of indigenous breeds of carabao for draft and for dairy production.

BAR Director Eleazar (center) accepts a coffee table book on pili from BUCAF President Lauraya (right) and Dr. Elena Delos Santos (left), Regional Technical Director for Operations and Extension of DA-RFU 5.
photo: FGRETTCHIN

BAR, MASIPAG embark on organic *adlai* production

photos: MASIPAG



The adaptability trial of organic adlai production is being conducted at the MASIPAG Biodiversity Center in Maluko, Manolo Fortich in Bukidon in a 270 sqm area (or 9 plots).

Following the intensified promotion of the Department of Agriculture (DA) of *adlai* (*Coix lacryma-jobi L.)* as one of the staple crops, the Bureau of Agricultural Research (BAR) embarked on a project titled, *"*Adaptability Trial of *Adlai* Under No Synthetic Inputs" in partnership *with the Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura* (MASIPAG, Inc.). MASIPAG, Inc. is a farmer-led network of people's organizations, non-government organizations and scientists working toward the sustainable use and management of biodiversity through farmers' control of genetic and biological resources.

This joint-endeavor on organic *adlai* production is one of 11 adaptability field trials that are being piloted in four regions of the country including Regions 2, 4A, 5, and 10 by DA research stations, state universities and colleges (SUCs), and non-government organization (NGO). Among the three *adlai* varieties that are being tested for adaptability field trials are: *tapol, ginampay,* and *gulian* (glutinous).

The adaptability trial of organic *adlai* production is being conducted at the MASIPAG Biodiversity Center in Maluko, Manolo Fortich in Bukidon in a 270 sqm area (or 9 plots).

In a report presented by Ms. Raquel Oclarit-Salingay, research and extension coordinator of MASIPAG, Inc., during the "Consultation Meeting on *Adlai* Research and Development" held on 26 April at BAR, she said that they started planting *adlai* in February 2011 and noted 100 percent seed germination.

Salingay reported that it was 15 days after planting that the occurrence of insect pests was observed causing very minimal or slight damage only. "Stem borer was observed in *gulian*, *tapol* and *ginampay* with less than 10 percent damage. Grasshoppers were observed in *gulian* with less than 2 percent damage, while beetles and grasshoppers were observed in *tapol* and *ginampay* with less than 5 percent damage. Leaf cutters were observed in all varieties with less than 20 percent damage while leaf blight was observed in *gulian* (<10 percent), and in *tapol* and *ginampay* (<15 percent damage)," she reported. ***###(Rita T. dela Cruz)***

BAR receives institutional award from PAC

photos: MMOJICA

BAR Director Nicomedes P. Eleazar receives the Institutional Award from PAC President Honorio M. Soriano, Jr. for its R&DE support to PAC on its award-winning projects on sweet sorghum and sweet tamarind. The two projects were recognized by the Civil Service Commission (CSC) PAG-ASA Award both at the regional and national levels.

The Bureau of Agricultural Research (BAR) recently received recognition for its R&D support to the advancement of agricultural research in Pampanga Agricultural College (PAC) during its 36th Recognition Rites in Magalang, Pampanga, on 11 April 2011.

PAC credited BAR for its support to its sweet tamarind and sweet sorghum R&D which both gained recognition in the regional and national levels of the Civil Service Commission's (CSC) PAG-ASA Award in the recent years.

In his acceptance speech, BAR Director Nicomedes P. Eleazar commended PAC for developing the potentials of sweet tamarind and sweet sorghum as viable crops in the province. He lauded PAC's efforts to disseminate the technology of sweet tamarind production and processing which had tremendous impact because of the support of local government units on this project. The potentials of this crop have attracted the interest of farmers and have led to the emergence of opportunities in processing sweet tamarind in the province.

Moreover, Director Eleazar applauded PAC as it eagerly explored the potential of sweet sorghum as food, feed, and fuel source, which is one of the priorities of BAR under its biofuel feedstock development program. BAR also support PAC's publication of the compendium of recipes they developed using sweet sorghum as the main ingredient. On behalf of PAC, President Honorio M. Soriano, Jr. extended their gratitude to BAR during the recognition rites for its continuing support to the R&D programs of the agricultural college. ### ***(Miko Jazmine J. Mojica)***

Tapping...from page 10

capacity-building partnership between Bukidnon State University (BukSU) and Tanggol Kalikasan (TK). TK is an NGO of lawyers and environmentalists. BukSU and TK affirmed their staunch commitment to the environment in partnership with other LGUs and national agencies like the Department of Environment and Natural Resources.

Other notable awards include this year's Outstanding Research Manager (ORMA), Ms. Juanita Salvani, Center Manager of the DA-RFU10's Northern Mindanao Integrated Agricultural Research Center (NOMIARC) in Bukidnon. In addition, Dr. Rico Supangco, Vice Chancellor for RDE of UPLB, won the Research Leadership Award. Each awardee received a cash prize of Php10,000 and a trophy.

In addition, a special presentation on environmental advocacy was made by Ms. Regina Lopez, Managing Director of ABS-CBN Foundation, Inc., that trained the spotlight on this year's PHILARM convention theme on potential PPPs and the environment. She encouraged participants to join the signature campaign for "No to Mining in Palawan." The PHILARM management signified their full support to Ms. Lopez's advocacy and signature campaign.

At present, PHILARM has organized 10 regional chapters with Regions 4B and 10 as the latest additions (made during the regional assembly meeting). The management hopes that members from regions 3, 7, 8, 11, and 12 will be organized before the 22nd National Convention tentatively scheduled on the third week of April 2012 in Dipolog.

This year's PHILARM convention can be judged a success as the organization has, once again, fulfilled one of its primary objectives which is to encourage and promote interaction among research managers in the country. If the affair is used as the yardstick, then it can be said that PHILARM is on its way to becoming the leading professional organization for research management in the Asia-Pacific Region. ###

Eleazar keynotes at BUCAF Commencement Exercises

"*There are tremendous opportunities to earn and make it big in agribusiness if one is determined.*" Thus was the message of Dr. Nicomedes P. Eleazar, director, Bureau of Agricultural Research (BAR), in his commencement speech at the 41st Bicol University-College of Agriculture and Forestry (BUCAF) Commencement Exercises held at Guinobatan, Albay on 04 April 2011.

In his speech, Dr. Eleazar addressed the graduating class by encouraging them to consider opportunities in the agriculture and forestry industries. He asked the graduates to recognize the important contribution that they could impart to the country.

"I am passionate about ensuring that we have good opportunities for young people like you in the agriculture and forestry industries. The critical role of the agriculture sector in our economic development cannot be overemphasized. Agriculture provides food and raw materials for both the national and global markets, and provides opportunities for employment and business," he said.

In 2010, the Department of Labor and Employment (DOLE) said agribusiness topped the list of key employment generators in its study of the labor market in various regions in the next 5-10 years.

To further inspire the graduates, Dr. Eleazar stirred them to do some reflection and self-examination which could help them determine the right track they will follow to realize their dreams.

"Every moment counts. What makes a difference is how you treat each moment as it unfolds. How you decide to spend your minutes, hours, days will determine where your tomorrow will bring you," he said.

BUCAF, one of BAR's partner state universities in agricultural research advancement, is the recent recipient of an institutional development grant from the bureau for the establishment of indigenous breeding and dairy production facilities and for R&D for rice production areas in Albay in response to climate change impacts. The memorandum of agreement between BAR and BUCAF was signed and witnessed by officials of BUCAF and the Department of Agriculture – Regional Field Office 5 (DA-RFU 5) during the visit of Dr. Eleazar *(see related story on page 3).*

BUCAF, based in Guinobatan, Albay, offers undergraduate programs in crop science, animal science, agricultural extension, forestry, agribusiness, and agricultural engineering. It also offers graduate programs in agronomy and animal science. As part of its services in research and extension, BUCAF also maintains its own crop pest and disease clinic as well as an animal health clinic. ### ***(Miko Jazmine J. Mojica)***

In his commencement speech, BAR Dir. Nicomedes P. Eleazar inspired the graduates to appreciate the important contribution they could impart in the country as experts in agriculture and forestry. photos: FGRETTCHIN

BAR holds seminar on vermiculture

Engr. Morrimer Daag of BPSU serves as the resource speaker for the seminar on vermiculture. photo: RDELACRUZ

The Bureau of Agricultural Research (BAR) sponsored a seminar and lecture on the subject of organic agriculture that places emphasis on vermiculture management and its applications. The primary objective of the seminar is part of the effort to create awareness among farmers and agricultural workers on the use of organic materials as the primary source of farm fertilizer.

Assistant Director Teodoro S. Solsoloy of BAR gave the opening remarks and welcomed the participants to the Bureau's 4th Seminar in its 2011 Seminar Series. Dr. Solsoloy pointed out that under Section 20 of Republic Act 10068, otherwise known as the Organic Agriculture Act of 2010, BAR is mandated to lead and coordinate the formulation and implementation of a unified and integrated organic agriculture RD & E plans and programs. With this responsibility, BAR has taken on an active role in the promotion of organic agriculture. The seminar is a clear manifestation of BAR's support to the organic agriculture movement, said Dr. Solsoloy.

Engr. Morrimer Daag, an agricultural engineering graduate from Central Luzon State University (CLSU) and a professor at the Bataan Peninsula State University (BPSU) was the resource speaker. He gave a presentation on BPSU's Vermiculture Production and Management effort. Engr. Daag said that the BAR-funded project, "Promotion of Organic Vegetable Production under Net House Condition," started it all. The project created an impact, not only economically, but also socially in the sense that the entire University got behind the promotion of chemical-free agricultural produce for a healthier lifestyle, he added.

The project generally aims to promote high-value organic vegetable production under protective structures and specifically aims to produce safe high-value organic vegetables for the target market. Moreover, the project is designed to intensify the promotion of organic agriculture through training and seminars for farmers, students, entrepreneurs, and interested individuals as well.

Compost is a key ingredient in organic farming. Specifically, vermicomposting can be a faster alternative for the treatment and decomposition of organic wastes, producing good quality fertilizer with nutrients in slow-release form (natural fertilizer will release its nutrients that over a period of time).

Vermiculture according to Engr. Daag, in its simplest definition, is the "culture of earthworms," while vermicomposting is the "process by which worms are used to convert organic materials in to rich compost called "worm castings," "vermicast" or "vermicompost," a nutrient and microbially-rich material. The process functions best when red worms, also known as "red wigglers," are used to process the waste materials.

Vermiculture (farming of earthworms) started in the Philippines in 1976 with the introduction of *Pheretima asiatica* and *Lumbricus rubellus* earthworms from Taiwan by the private sector. With the "breeder market" and use of "pyramidal scheme," the industry lasted only until the mid-'80s for lack of a sustainable market.

Here in the countryside, conventional agriculture opted to make use of inorganic fertilizers and this practice has permeated fragile soils with high inputs of soluble fertilizers and toxic chemicals aggravating an already difficult situation. Truth is, less than half of all commercial fertilizers applied to our farmland are ever utilized by the plants. The rest only contaminates the groundwater as well as other water resources (e.g., river tributaries).

The soil, after decades of damage from high input farming, may lose their fertility and the ability to support crops. Soils that are exposed in times of drought can be further degraded, becoming remarkably hard, porous, and sterile for growing crops. Clearly, interventions are needed to rehabilitate the soil in these two instances. *(see also "Rebuilding health and fertility of soil through vermicomposting" by de Guzman, C. in BAR Digest, Jan-Mar 2009, Vol 11 Issue No. 1)*

Professor Daag also disclosed to the participants that, prior to the BPSU project on vermicomposting, they had, as part of their pre-development approach, already conducted a baseline survey on the type and volume, demand, nature of production, sources of high-value vegetables, and prices which according to him are necessary in warranting success and ensure better production on a long-term basis. He added that BPSU is currently growing leaf-type vegetables such as lettuce, asparagus, bell pepper, celery, salad tomato, and green cucumber.

The project on vermiculture production and management, according to the resource speaker, is gradually turning into a subtle form of advocacy as it promotes an alternative way of farming which is through organic means. The identification of sites, stocking of vermin, the care and maintenance as well as the economic returns in venturing in vermiculture and vermicomposting were other highlights discussed by Professor Daag.

More than 70 people from various government agencies and a number of private individuals attended the BAR In-House Seminar and Lecture ### ***(Patrick R.A.Lesaca)***

IEC materials on organic agriculture including production of fermented plant juice, compost tea, and manure tea. photo: RDELACRUZ

Adaptability trials for *adlai* in 4 regions in progress

photos: RBERNARDO/AVELASCO/JLAPITAN/PLESACA

Although considered a staple crop by the tribal communities in Bukidnon Province in Region 10, a*dlai* remains unknown to many Filipinos. Realizing its potential as a staple food crop, the Department of Agriculture (DA), through the Bureau of Agricultural Research (BAR), is intensifying research and development activities on *adlai*.

In the effort to promote and utilize *adlai* as an alternative staple food to rice and corn in the country, BAR is funding 11 field adaptability trials in Regions 2, 4A, 5, and 10.

Adaptability trials are being conducted by five DA-Regional Field Units and research stations (Cagayan Valley Integrated Agricultural Research Center, Southern Tagalog Integrated Agricultural Research Center, Bicol Integrated Agricultural Research Center, Northern Mindanao Integrated Agricultural Research Center, and Quezon Agricultural Experiment Station), five state universities and colleges (Isabela State University, Southern Luzon State University, Camarines Norte State College, Central Bicol State University of Agriculture, and Central Mindanao University), and one non-government agency (Magsasaka at Siyentipiko para sa Pag-unlad ng Agrikultura, Inc.).

"Still in its initial stage, these adaptability trials hope to identify varieties of *adlai* that are high-yielding and are appropriate for seed production. Currently, we have already identified three varieties of *adlai* which are now being tested for their adaptability, namely *tapol, ginampay* and *gulian* which are glutinous-type," reported BAR Director Nicomedes P. Eleazar during a consultation-meeting on *adlai* R&D held on 26 April at BAR with the project implementers from various regions.

Aside from the identification of local varieties for adaptability trials, Dr. Eleazar added that part of the project is the development of production technologies on *adlai*. "We hope to develop a package of technology (POT) on the cultural management practices and seed production system that can be adopted nationwide by our farmers," he said. "Eventually, after we have determined the performance of each of the *adlai* varieties, we will submit recommended varieties or promising strains for National Seed Industry Council (NSIC) registration," Dr. Eleazar further said.

Aside from the varieties and production technologies, another important component of the project is seed increase and multiplication which aim to ensure the availability of *adlai* seeds for nationwide promotion and upscaling activities. ### ***(Rita T. dela Cruz)***

BAR Dir. Nicomedes P. Eleazar (inset) facilitates during the consultation-meeting on Adlai R&D at BAR. photos: RDELACRUZ

Bicol tests adaptability of *adlai*

Top photo: *BAR Dir. Nicomedes P. Eleazar (right) and RTD for DA-RFU 5 Elena B. delos Santos (left) visit one of the Adlai project sites implemented by BIARC.* Right, bottom photo: *Joining him in his visit are BIARC officials and researchers led by Ms. Dolores Ricafranca (2nd from left), superintendent, Research Outreach Station for Upland Plan Development Zone in Region 5.* Right, top photo: *Variety of Adlai grains being tested in Bicol for adaptability tirals.*
photos: FGRETTCHIN

To provide solutions in addressing the issue of food security, one of the initiatives that the government is currently undertaking is the promotion and utilization of indigenous and naturally abundant crops such as *adlai*, which can be an alternative to the Filipino staples, rice and corn.

Adlai, which comes from the same family of grass as wheat, corn, and rice, grows organically in many parts of the country. The plant is abundantly growing in the Philippines but it remains underutilized.

At present, the Bureau of Agricultural Research (BAR) is supporting adaptability trials in Regions 2, 4A, 5, and 10 through the Department of Agriculture - Regional Integrated Agricultural Research Centers (DA-RIARCs).

Simultaneous with the adaptability and technology trials, seed production will be conducted in selected stations of the DA in the regions to ensure the availability of *adlai* seeds.

"We are promoting *adlai* as one of the important staple food crops as part of the DA's self sufficiency program. But since we are only in the initial phase of its development, we are focusing our activities on its adaptability under different agro-climatic conditions nationwide," said BAR Director Nicomedes P. Eleazar.

In his recent visit to the Bicol region, Director Eleazar saw for himself the second phase of the on-going adaptability trials and seed production of *adlai* at the experiment site of Bicol Integrated Agricultural Research Center (BIARC).

BIARC planted three indigenous glutinous varieties of *adlai*, which are *gulian, ginampay,* and *tapol.*

According to Ms. Ailyn Adante, one of the BIARC project leaders, the results of their first trial showed that *tapol* variety produces the highest yield.

She said that only the hard-shelled variety of *adlai*, which is used as beads to make bracelets and rosaries, previously existed in the Bicol region. With the introduction of the glutinous varieties, she said that they will also develop food products from *adlai* after the adaptability and on-farm trials in the rural communities, particularly in Iriga, Albay.

Available literature says that *adlai* is processed into flour, coffee, tea, wine, beer, and vinegar in other countries such as South Korea, Japan, China, and Korea. It is also valued for its medicinal uses with its anti-allergic, anti-cancer, and anti-diabetic properties. ### ***(Miko Jazmine J. Mojica)***

"We are promoting adlai as one of the important staple food crops as part of the DA's self sufficiency program. But since we are only in the initial phase of its development, we are focusing our activities on its adaptability under different agro-climatic conditions nationwide." ~ Dr. Eleazar