

BAR holds year-end review and planning workshop



Key officials and staff of BAR pose for a photo op during the CY 2010 BAR Annual Review and Planning Workshop in Tagaytay City.

PHOTO: NDELROSARIO III

Key officials of the Bureau of Agricultural Research (BAR) conducted its “Year-End Review and Planning Workshop” to effectively address the most critical challenges and issues in the agriculture-fishery sector and to come up with strategic plans for the year. The activity was held on 28-29 January 2010 in Tagaytay City.

The two-day event was specifically anchored on three important undertakings: to review and examine accomplishments in 2009 in relation to the bureau's performance targets; to plan major activities critical to the implementation of programs for year 2010; and to identify adjustments or corrective measures in organizational policies and systems that are needed to enhance and achieve BAR's overall productivity.

“I believe BAR was able to deliver its expected outputs. While we are still a

small institution, we were able to work on major initiatives and activities that are equivalent to what bigger organizations were able to accomplish.” These were the words of Dr. Nicomedes P. Eleazar, director of BAR, as he summarized the bureau's performance in 2009.

The Director emphasized how year 2009 could be taken as a milestone for BAR's overall organization and management of research and development (R&D). “BAR effectively responded to the Medium Term Philippine Development Plan (MTPDP) pronouncement of agribusiness development as the main thrust of agriculture and fisheries development. It also took advantage of the positive AFMA evaluation of R&D especially in the adoption of its Community-based Participatory Action Research (CPAR)

projects as model farms and its National Technology Commercialization Program (NTCP) as the key to ensure the technology support to agricultural development,” he stressed.

Dr. Eleazar added that like other organizations, BAR is confronted with burgeoning challenges that would shake and possibly undermine the stability of the sector. This is best seen in the challenges of mitigating the negative effects of climate change. It is against this backdrop that he underscored the importance of executing proper visioning and careful planning.

After hearing the opening remarks and marching orders from the director, heads and technical staff members of various divisions and units of BAR presented their 2009 accomplishments and plans for 2010. *(Rita T. dela Cruz)*



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PHOTO: RDELACRUZ

The Philippines has the right tools, proper environment, motivated entrepreneurs, and knowledgeable scientists to advance biotechnology, said a high-ranking official of the Department of Agriculture (DA).

DA Undersecretary Segfredo Serrano said that biotechnology or technology based on biology, agriculture, food science, and medicine, remains an “uncharted territory” which the country should cash in on. “We should exploit biotechnology. It's the big market of the future,” he said before an audience of biotechnology stakeholders convened by the DA Biotech on 28 January 2010.

The problem, however, said Undersecretary Serrano, lies on the propensity of many Filipinos to show great enthusiasm on the beginning of a project followed by an abrupt loss of interest or follow-through later. “The truth is, we need political will to support our resources, no matter how meager it may be,” he said.

“The DA Biotech Project Implementation Unit (PIU) convened its stakeholders for a consultation meeting to thresh out priority R&D projects it will support this year and seek out possible

collaborations with their institutions,” said Dr. Candida Adalla, director of DA Biotech.

These stakeholders include agencies within the DA such as the Bureau of Agricultural Research (BAR), Bureau of Fisheries and Aquatic Resources (BFAR), Philippine Rice Research Institute (PhilRice), Philippine Carabao Center (PCC), Bureau of Animal Industry (BAI); National Academy of Science and Technology (NAST), state universities and colleges (SUCs), and private organizations such as the SPA Association of the Philippines, Biotechnology Coalition of the Philippines, and Chamber of Herbal Industries of the Philippines (CHIPI), among others.

“For 2010, one of the things we want to do is to harness biotech in developing the bio-industry for natural ingredients. We will also support applied biotech projects for improving yield, resistance to pests, and adaptation to climate change,” said Dr. Adalla.

Consistent with the DA's agenda, some of the R&D and capacity enhancement efforts that the DA Biotech will prioritize for 2010 include

the strengthening of the DA Biotech Incubation Facility for natural ingredients, processing of rice bran to produce high value edible oil, bench-scale production of *fucoidan* from brown seaweeds for medicinal purposes, biotech-based technologies for conservation of shrimp, multi-location field trial for open-pollinated variety Bt eggplant, commercialization of bunchy top virus-resistant high-yielding abaca, and development of animal disease diagnosis kits.

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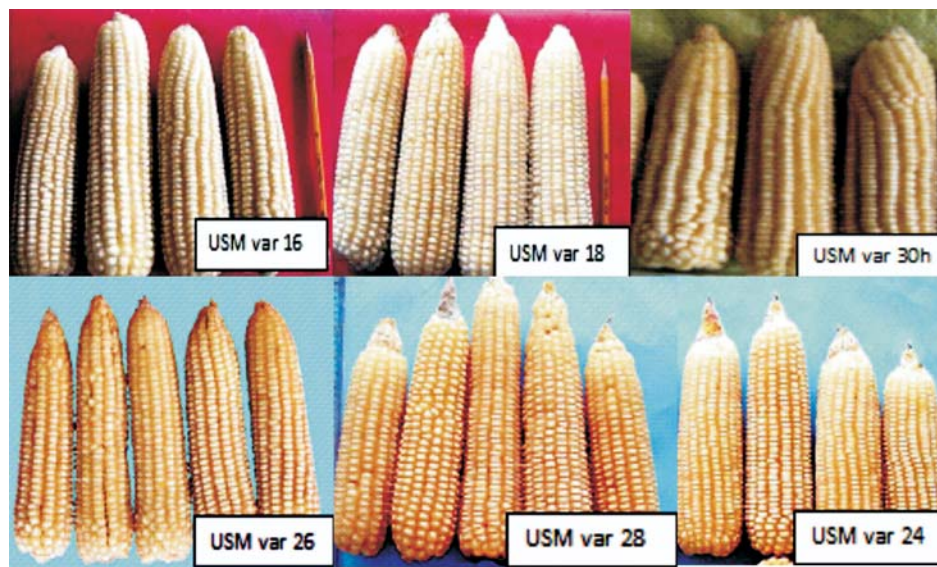
6 new high-yielding corn varieties resistant to corn diseases developed

Researchers from the University of Southern Mindanao (USM) have developed six new high yielding white corn varieties resistant to stalk rot and ear rot diseases.

Stalk rot and ear rot are the most serious and widespread corn diseases that can cause severe crop damage and yield losses to farmers. Stalk rot, manifested by premature plant death and plant lodging, is caused by two species, *Stenocarpella* and *Pectobacterium*. Ear rot is characterized by the appearance of salmon pink to reddish-brown discoloration on the caps of individual kernels and is caused by *Fusarium* species.

USM researchers and plant breeders, namely, Fabiola Alejandro, Efren Magulama, Milagros Malinao, and Dr. Naomi Tangonan, reported that there is no effective control yet (pesticide/fungicide) for stalk rot and ear rot. However, breeding strategies, such as combined plant genetic resistance with high yielding trait, could be a logical approach for achieving long-term control of these major diseases. Thus, the study, "High Yielding White Maize Varieties Resistant to Bacterial Stalk Rot and *Fusarium* Ear Rot," was conducted. This aimed to develop high yielding white maize varieties resistant to bacterial stalk rot and *Fusarium* ear rot.

In the study, the researchers diligently screened thousands of corn germplasm materials to identify genetic materials with resistance to the Bacterial Stalk Rot (BSR) and *Fusarium* Ear Rot (FER) diseases and to be used in the



PHOTOS: COURTESY OF USM

development of the desired corn varieties.

After four years of rigorous breeding works, six new maize varieties were developed - three composite varieties (USM Var 16, 18, 28), two synthetic varieties (USM Var 24, 26), and one hybrid variety (USM Var 30h). These varieties have already passed the evaluation and were approved for commercial release by the National Seed Industry Council (NSIC).

Researchers say that the use of these new varieties is a more reliable, economical, effective, and environment-friendly disease control measure for bacterial stalk rot and *Fusarium* ear rot diseases. It was therefore recommended that these varieties be promoted and disseminated to all corn growers in the country.

A paper entry based on this research won the second best paper (research category) in the 2009 National Symposium on Agricultural Resources Research and Development (NSARRD) of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD). This annual activity aims to recognize the significant contributions of individuals and institutions in the agriculture, forestry, and natural resources sectors.

The project was funded by the Bureau of Agricultural Research (BAR) under the leadership of Dr. Nicomedes P. Eleazar through its research and development grant program which aims at to address the current needs and problems of the agri-fisheries sector. (Edmon B. Agron)

NOGROCOMA: Making RP self-sufficient in onions

by Ma. Eloisa E. Hernandez

For 50 years, one cooperative has stood fast to its mission of making the Philippines self-sufficient in onions. The National Onion Growers Cooperative Marketing Association (NOGROCOMA) is one of the longest-lived cooperatives in the country, renowned even abroad. In fact, it is among the 24 locally-owned food businesses that got included in the US business book titled "Community Food Enterprise: Local Success in a Global Marketplace".

The publication was a project of the Wallace Center at Winrock International and the Business Alliance for Local Living Economies funded by the Bill and Melinda Gates Foundation and the W.K. Kellogg Foundation. The 24 case studies discussed the strategies, challenges, triple bottom line performance, and replicability of the community food enterprises in the United States and other countries in the world.

In 1954, NOGROCOMA was born, through which the Gozon family's concern for the onion industry grew even more. Then Congressman Jesus Ilagan organized the NOGROCOMA and sponsored the law banning the importation of onions. This law created the climate of growth for the onion industry. At present, Dulce Gozon serves as the cooperative's Chairman and CEO.

The coop has 206 members in the town of Bongabon, Nueva Ecija where most of the area is planted with onions. Besides producing red creole and yellow

granex, members of the cooperative have also learned to intercrop. Onion, a seasonal crop, is intercropped with rice and corn. The cooperative's members have also diversified into pepper, cucumber, shallots, and indigenous vegetables.

As published in the book, NOGROCOMA offers an array of services from seed purchasing at a reduced price to loan access to cold storage facilities to political advocacy and technical assistance, among others.

The first two decades saw a lot of success for the cooperative. Domestic sales grew steadily, hence, improving the lives of its farmer-members. Domestic sufficiency was achieved by the country. Philippine onions even reached as far as Japan, Singapore, and United States.

But triumphs do have accompanying challenges. In the case of NOGROCOMA, onion production, high cost of inputs, labor costs, technological improvements, global competition, make up the list of constraints. However, the coop has been able to manage and face these challenges. As a way to address these pressing issues, Gozon thought of innovations such as Integrated Pest Management (IPM). This is a technique wherein soil nutrients are built up without the use of expensive chemicals.

True enough, they were able to boost onion production in the country and the lives of its farmer-members. Gozon

observes that as her economic status grew stable, the finances of her fellow cooperative members became stable as well. A majority of the members were able to send their children to college and are now proud parents of doctors and other professionals, have a decent house to live in, and a car of their own.

Some of the active members of the cooperative were sent to Japan, Taiwan, and United States to learn techniques on onion production to be globally-competitive.

The Department of Agriculture (DA) provided NOGROCOMA a financial grant for the establishment of nurseries. This helped the cooperative meet the requirements of Japan. Over the last 25 years, the volume of onion exports to Japan has increased, reaching as much as 2,000 tons. Globalization stopped exports as China offered lower prices. Now NOGROCOMA is on the threshold of reviving the exports to Japan.

DA, through the Bureau of Agricultural Research (BAR), has also helped the cooperative in marketing and branding. The support is through the project, "Onion Technology Utilization and Dissemination" aimed at establishing techno-demonstration areas in selected sites.

For more information on the book, "Community Food Enterprise: Local Success in a Global Marketplace" log on to <http://www.communityfoodenterprise.org>



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PCC on its quest for vibrant Philippine dairy buffalo enterprise development

After the successful implementation of the Philippine Carabao Center (PCC) – National Impact Zone (NIZ) project in Nueva Ecija for the past 10 years, it is time to expand operation to benefit other local carabao farmers in the country. Gradually, PCC is utilizing the gains and lessons learned from the NIZ project for application in other provinces like Pampanga, Tarlac, Aurora and later on in Laguna, Cavite, and Pangasinan.

Approved in 2008, the KR2-funded project shall bring to fore the release of 2,000 purebred Murrah buffaloes from Brazil to qualified cooperative members of the above-cited provinces. Quality breeder buffaloes shall be selected from the batch to comprise the elite herd as source of superior genetic material. This latest infusion arrived on 15 January 2010 and is currently undergoing quarantine and acclimatization at the Lomboy Farm, the newly developed quarantine facility of PCC. This component forms part of the overall goal of enhancing dairy buffalo entrepreneurship. Establishment of milk collection facilities at the village level that shall encourage quality milk production is one of the relevant aspects of the project complementary to the continuing capability and organizational development of existing dairy cooperatives within the impact zones.

Qualified cooperatives and individual farmer-trustees have been identified and those have undergone social preparation and technical training on dairy production management. Final evaluation of



PHOTO: ACONSTANTINO

requirements that shall serve as farmers' equity is currently underway with partner LGUs. The dairy buffaloes from Brazil are scheduled to be turned-over to farmer-trustees after a 45-day quarantine period. This is in time for PCC's 17th anniversary celebration on 22-26 March 2010.

In addition, initial social research studies will be simultaneously conducted to understand better the social factors that affect the members of dairy communities and program carriers, and the realm of the dairy buffalo industry. These shall harness NIZ as it models the various facets of dairy enterprise development.

KR2 is a Japanese Government assistance in the form of farm inputs, such

as fertilizers, that are monetized by the Philippine Government to finance agricultural projects.

PCC, as it journeys further afield with its commitment of establishing viable dairy enterprises in dairy communities shall bring with it the technologies that will sustain the vibrant strokes in the dairy buffalo industry. As it strides towards this goal, PCC is strongly supported by various partners from varied spheres of R&D. In its own capacity, BAR has signified its support through institutional development and technology commercialization. (*Liza G. Battad, PhD and Marlowe U. Aquino, PhD*)

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technology freely available but you just can't take an insect-resistant corn from the US, for example, and bring it to the Philippines. There should be a regulatory review and approval for these things," Bobo explained. He likewise gave importance to having access to private sector investments in R&D and technology. He said that a system should be in place for private-public sector partnerships to make it work.

Then again, Bobo's belief is that when technology is available, farmers will be willing to pay for it. Thus the government eventually does not need to spend for it since it is likely to be challenged particularly in a developing

country such as ours.

Citing the previously widely-circulated Stern Review on the economics of climate change, the International Assessment of Agricultural Science and Technology for Development (IAASTD) highlighted the fact that while there is a range of activities that could be undertaken to reduce agricultural emissions, it is not necessarily the case that they will be adopted simply by virtue of the fact that they appear to make sense.

"Farmers are unlikely to adopt practices that will benefit society as a whole if they alone have to bear the cost. Even low cost mitigation options will not be adopted if the farmer must pay to

undertake work from which wider society gains most of the benefit. Government must intervene to overcome this 'market failure' and to encourage adoption of mitigation options and introduce wider measures to help reduce emissions."

The Climate Change Act recently signed by President Gloria Arroyo on the other hand, is only focused on crafting and implementing "a national adaptation plan to help Philippine agriculture and other vulnerable sectors cope with the worst effects of altered weathered patterns triggered by global warming". (*Miko Jazmine J. Mojica*)

BAR and Optiserve prepare to fully activate e-Pinoy FARMS for fisheries

To efficiently attain the goals of agribusiness development and improve the national performance of agriculture and fisheries in the country, the Bureau of Agricultural Research (BAR) has adopted and is promoting a computer-based decision support system (DSS) known as e-Pinoy FARMS to systematize the management and coordination of rural development projects anchored on research, development and extension (RDE).

The e-Pinoy FARMS is a web-based system used to generate, send, receive, store, and process electronic data. It allows farmers, researchers, and extension workers to interact with each other to identify farm-specific production problems and solutions, document practical knowledge, access market-related data, and share relevant information to support decision-making.

Through this computer-based DSS, BAR can build-up its information-driven, knowledge-based resource management to effectively address R&D needs, hence, enabling BAR and the DA's research system to meet the challenges of innovation and technology commercialization in agribusiness for the present and for the future.

In its development as a vital resource, the first phase of the project, which is e-Pinoy FARMS for agriculture, was implemented in 2006 under the leadership of Dr. Nicomedes P. Eleazar of the Bureau of Agricultural Research (BAR) in partnership with Optiserve Technologies, Inc., the program developer of e-Pinoy FARMS.

The e-Pinoy FARMS for agriculture was deployed nationwide in 16 Regional Integrated Agricultural Research Centers (RIARCs) to complement the coordination, monitoring and evaluation requirements of the Community-based Participatory Action Research (CPAR) and the National Technology Commercialization Program (NTCP) of BAR for agriculture-related projects.

"With advances in its development and an improved database system, the e-Pinoy FARMS is about to take-off on its second phase this time for fisheries," said Cheryl Marie Natividad, CEO of Optiserve during a seminar-workshop conducted at BAR on 19 January 2010.

Melissa Resma, head of Information Management Unit of BAR



BAR Dir. Nicomedes P. Eleazar highlights the importance of information-base system in the decision making of BAR to develop more research-driven agribusiness and sustainable development initiatives in the future.

PHOTOS: EAGRON

CEO of Optiserve Technologies Cheryl Marie Natividad presents the e-Pinoy FARMS® Model establishing the DSS for information-driven agriculture and fisheries management.



said that software applications for e-Pinoy FARMS on fisheries have been installed in almost all Regional Fisheries Research and Development Centers (RFRDCs) nationwide except for five regions, namely: Calabarzon, Bicol, Western Visayas, Central Visayas, and Western Mindanao.

Optiserve, as the technology provider and consultant of this project, is currently conducting a systems roll-out in all regions, including the remaining five regions, to enhance their technical capability and to delineate functional roles and complementation between and among partners to ensure effective implementation of e-Pinoy FARMS for fisheries.

The e-Pinoy FARMS for fisheries aims to operationalize research-extension linkages among the major stakeholders - fisherfolk, local government units (LGUs), private sector, and the non-government organization (NGO) - through an active partnership between RFRDC and the Regional Fisheries Training Center (RFTC). It shall also enable RFRDC to document and process CPAR project management including fisherfolk/cooperators' registration into the development of research program; to keep track of their technology application and production practices; to monitor the progress/

implementation throughout the project life cycle; to keep a record of transactions every quarter to determine to enterprise/agribusiness development; and to store all sorts of information related to community-based resource management.

Among the key result areas (KRAs) for e-Pinoy FARMS in fisheries are: establish a data repository of community-based coastal and inland resources, and fisherfolk production-related activities that will be available to organizations, community-based associations, LGUs, field workers, and other government agencies in support of result-oriented decisions; facilitate the collection and submission of accurate data at ground level to aid BAR and partners in planning and budgeting; and improve the data gathering methodologies and processes of BAR by establishing electronic communication protocols and standards to allow verification of information anytime.

In the seminar-workshop, BAR Dir. Eleazar said that the information-based system is very important for BAR to develop more research-driven agribusiness and sustainable development initiatives in the future. "We need to fully operationalize this project for the implementation of CPAR this year. We need to improve our databases for us to upgrade to the next level," Eleazar said. (*Edmon B. Agron*)

BAR funds new CPAR project in Laguna

The Community-based Participatory Action Research (CPAR) has reached the city. This time, it's Calamba City in Laguna.

The Bureau of Agricultural Research (BAR) funded a new project titled, "CPAR on Green Corn-Yellow Corn + Legumes Integrated Farming Systems in Barangay Bunggo, Calamba City". Although Calamba is one of the urbanized city in Region IVa (CALABARZON), large areas in its uplands are still devoted to agriculture and are mostly planted with corn and vegetables.

Project Leader Avelita M. Rosales of the Department of Agriculture-Southern Tagalog Integrated Agricultural Research Center (DA-STIARC) said that the project aims to integrate legumes with corn for greater production. "The

integration of legumes with two kinds of corn will be like shooting three birds with one stone. The upland area is dependent on rain and is only being planted from February to May. Planting of legumes can increase the farmer's income, maximize the utilization of the land during the fallow period and will add nutrients in the soil," Rosales said.

The main goal of the project is to improve the land productivity and increase the farmers' income through low-cost technologies. The project is expected to boost the farmers' income by at least 15 percent after two years of implementation.

"But it does not end there since the project has an environmental principle behind its conceptualization," Rosales added. Integrated farming, according to her, promotes biodiversity and boosts ecosystem productivity. "In an integrated

system, residues are recycled, the way nature works. The total farming system will be enhanced by this recycling of nutrients, leading to interdependence within the system and becoming more ecologically sustainable."

STIARC is implementing the project in collaboration with the Office of the City Agriculturist in Calamba City and the Office of the Provincial Agriculturist of Laguna.

Intended beneficiaries of the project are the members of the Calamba Upland Farmers Multipurpose Cooperative.

STIARC has another ongoing CPAR project in Polilio, an island municipality in Quezon located thirty kilometers off the north-eastern coast of the province. *(Amavel A. Velasco)*

RP is ideal... from page1

CHIFI President Lito Abelarde praised government agencies and private institutions alike that are doing their own researches with regard to natural health products but noted a lack of consensus of what researches to prioritize.

"We are proposing for the crafting of a national research agenda for this particular sector so we could see it to its early commercialization. We think that the problem is in the supply chain. For example, we need a lot of natural ingredients that we mostly import at present because we cannot just simply buy directly from farmers. The missing link is the supply chain," he said.

Abelarde called for a strong link between researchers and the industry to fill the gap in the timely commercialization of new technologies. He, likewise, specifically advocated for research on ampalaya, glucosamine, and polycosinol for its significance in the health industry.

According to Abelarde, only the active ingredient charantine from ampalaya known to help blood sugar control has standards set for its use. He said there are other active ingredients from ampalaya that have not been fully explored. On the other hand, glucosamine, naturally present in the shells of shrimp, draws a significant attention from the medical community for evidence of its effectiveness against osteoarthritis while polycosinol comes from a natural mixture of sugar cane wax that has cholesterol-lowering effects.



In line with these recommendations and several others from the biotech stakeholders, Dr. Adalla mentioned the pending enactment of the Bioindustry Development Act of 2009 that will push for stronger policies on biotech development and its growth in the country.

According to this bill (SB 3140), "the Philippine Bioindustry Research and Development Center will be established to ensure innovative and competitive bio-based technologies. It will hold contract research and provide technical services to the public, manage a bio-tech research fund to support off-site research and will be equipped with state-of-the-art facilities."

Dr. Adalla also mentioned the recent meeting of Agriculture Secretary Arthur Yap with the heads of Commission on Higher Education (CHED) and DOST

about strengthening the capability of science and technology in the country. "When the discussion went to upgrading laboratory equipment and services, one of the suggestions that were supported strongly by these leaders was to make an inventory of all the equipment available particularly those which were given as grants to national and academic research institutions.

"If we pool them together, who knows that maybe we already have it all around. Nonetheless, we still need to come up with a critical mass of scientists and technology developers who are capable of using this equipment and who are willing to stay in the country to see the industry through these developments," Dr. Adalla said. *(Miko Jazmine J. Mojica)*

US biotech advisor says climate change is the next big thing in agriculture

At a special presentation to an audience composed of some officials and staff from the Department of Agriculture (DA), US Senior Advisor for Biotechnology Jack A. Bobo drew attention to the role of agriculture in climate change.

"Climate change is the next big thing in agriculture," said Bobo during his brief lecture when he visited the DA office on 21 January 2010 to meet with its officials.

In his presentation, he cited some of the most recent studies undertaken by recognized international organizations related to agriculture and climate change such as the UN Food and Agriculture Organization (FAO), Inter-governmental Panel on Climate Change (IPCC), International Food Policy Research Institute (IFPRI), and World Bank.

"If the IFPRI is saying that weather variability due to climate change will result in 27 percent decline in global productivity by 2050, this means that we have to double or triple our current production by that time in order to meet the demands of a ballooning world population," said Bobo.

Accelerating agricultural productivity, however, means high costs of adaptation. Bobo cited IFPRI's report that said, "aggressive agricultural productivity investments of US\$7.1-7.3 billion are needed to raise calorie consumption enough to offset the negative impacts of climate change on the health and well-being of children." Out of this figure, at least \$1 billion for research and irrigation efficiency is required for South Asia alone.

Impact of climate change on agriculture

Bobo cited reports that said agriculture and land-change emit 31 percent of greenhouse gas (GHG) emissions, most notable of which are carbon dioxide, nitrous oxide, and methane. "Tree burning and decomposition contribute to GHG emissions. Deforestation contributes to soil erosion, which reduces agricultural productivity," he said. According to recent reports on deforestation, more than 80 percent of the world's forests, where 80 percent of life on Earth can be found, have been destroyed.

Bobo likewise pointed to soil erosion and degradation as major



US Senior Advisor for Biotechnology Jack A. Bobo stressing the role of agriculture in climate change.

PHOTO: COURTESY OF <http://photos.state.gov>

contributing factors to the decline of agricultural productivity. "Soil degradation has reduced agricultural productivity by 13 percent in the past 50 years especially in Central America and Africa. Each year, 12 million hectares – enough land to grow 20 million tons of grain and an area the size of Greece – are lost to desertification which leads to accelerated soil erosion."

Moreover, Bobo brought up the impending water crisis concern as agriculture accounts for 70 percent of freshwater use worldwide. "Competition with cities and other sectors such as mining for water will grow over time. In 20 years, about two-thirds of global population will live in cities."

Sensible solutions

In order to address the impact of climate change on agriculture, Bobo advocated for appropriate climate policy, investment in R&D and technology from both the private and public sectors.

"Issues such as food safety, food security, and drought surround every major policy issue when tackling climate change but, if we will notice, 90 percent of policy on climate change is about energy. Climate policy should take into account the need to support global food security by promoting synergy between food security research and climate mitigation and adaptation research," he said.

Bobo quoted the IPCC when he emphasized the role of technology in climate change mitigation. "Recent trends in both public and private energy funding indicate that the role of 'technology push' in reducing GHG emissions is often

overvalued and may not be fully understood. Ultimately, it is only by creating a demand-pull market rather than supply-push that technological development, learning from experience, can develop advantageous economies of scale in production and related cost reductions can result."

Bobo stood by funding for agricultural technology for reducing inputs that contribute to GHGs as a way that benefits the farmer and the consumer at the same time. "Farmers want, and are willing to pay for new technologies that reduce inputs as this increases income or lead to reduce cost. As a result, the environment and the public receive a benefit at no additional cost, he said."

Moreover, Bobo stressed the importance of investments in agricultural research which will deliver high rates return in all regions of the world. He said that agricultural technologies are available today should begin making a difference with respect to mitigation and adaptation. Some of the areas of R&D and technology development he identified as crucial included reduced fertilizer use, drought tolerance, increasing yield gains, plant variety protection and patents.

Some caveats

Although positive about addressing the impact of climate change to agriculture, Bobo cautioned that not all climate mitigation and adaptation strategies, and technologies will enhance global food security. According to him, this is where appropriate climate policy should come into play.

"There are a lot of calls to make

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ISU grad students visit BAR for Lakbay Aral



Heads of PDD, RCD and ACD orient the ISU graduate students on the R&D programs and priorities of BAR during a brief orientation meeting held at BAR. PHOTO: EHERNANDEZ

Students of the College of Agriculture and Graduate School of the Isabela State University (ISU) - Echague Campus, Isabela went on a three-day learning enrichment through study tour or *lakbay aral* wherein the Bureau of Agricultural Research (BAR) was one of the agencies visited on 20 January 2010.

The activity was intended to enrich instructional/teaching methods and techniques where both the graduate students and faculty members could acquire and exchange scientific knowledge, teaching strategies towards the stimulation and development of the students' analytical ability, critical thinking and independent learning.

The visiting graduate students from ISU composed of Agricultural Training Institute (ATI) scholars and faculty members. ATI offers scholarships for degree and non-degree training in agriculture and fisheries under its Expanded Human Resource Development Program (EHRDP) which aims to accelerate social progress and promote total human development.

The ATI scholars visited the various institutions and research agencies that have state-of-the-art facilities that are crucial for advanced research studies in agriculture and related fields.

On behalf of BAR, Julia A. Lapitan and Rita T. dela Cruz of the Applied Communication Division (ACD) welcomed the participants. They were joined in by Program Development Division chief, Dr. Carmencita V. Kagaoan and Research Coordination Division chief, Salvacion M. Ritual. They briefed the attendees on the R&D thrusts and the priority programs of BAR in line with the bureau's vision to provide a stable and progressive future for the Filipinos through excellence in research and development in agriculture and fisheries. They emphasized that BAR seeks to transform the agriculture and fishery industries into technologically-based enterprises that place value on information development and management.

The scholars also visited the R&D Technology Commercialization Center that showcases R&D generated technologies and breakthroughs supported by DA, through BAR, under its two banner programs, the Community-based Participatory Action Research (CPAR) and the National Technology Commercialization Program (NTCP). (Ma. Eloisa E. Hernandez)



Don Lejano of ACD and Ira Olivia Garcia of TCU brief the visitors from ISU about BAR's R&D TechCom Center. PHOTO: EHERNANDEZ

Info material on sustained implementation of Marine Reserves published

The Marine Science Institute (MSI) of the University of the Philippines (UP) Diliman has developed an information material on Philippine Marine Sanctuary Strategy (PhilMarSaSt). This is a result of a program, "Enhancing Sustainable Fisheries through Improved Marine Fishery Reserves (MFRs)" in collaboration with UP Los Baños, UP Visayas and the Zamboanga State College of Marine Sciences and Technology.

The publication presents the vision, goal, objectives of the PhilMarSaSt. Also, the strategies, programs and action agenda were laid down. As published in the book, the strategy is based on the principle of community-based participation matched with the political will of good governance of local governments with the support of national agencies and non-government organizations.

The Bureau of Agricultural Research (BAR) provided support in the publication of the material under its Scientific Publication Grant (SPG) program which aims to promote excellence in research and development by providing financial support to different scientific and professional societies, researchers and editors of organizations under the National Research and Development System for Agriculture and Fisheries (NaRDSAF). Through SPG, it enables them to publish their research outputs that are relevant to the agri-fishery sector. The United Nations Environment Programme/Global Environment Facility-South China Sea Project likewise provided support to the project.

Through a series of nationwide consultations, PhilMarSaSt was formulated in 2002-2003. Participatory research initiatives with a range of stakeholders around the country were also conducted using the concept.

PhilMarSaSt was proposed in response to the need to manage the marine ecosystems, sustain fisheries utilization, and assure the equitable allocation of its benefits in perpetuity. Also, it shall provide a policy framework for the improvement of the effective and sustained implementation of Marine Reserves.

PhilMarSaSt envisions a sustainable development of the coastal and marine ecosystems in the Philippines, equitably providing the life-giving benefits of marine resources to the community. (Ma. Eloisa E. Hernandez)

BAR and UPLB forge ties with Regions 4A, 4B for CRDES Program for food security



BAR Dir. Nicomedes P. Eleazar (fourth from left) and UPLB Chancellor Luis Rey I. Velasco (third from left) sign the Memorandum of Understanding with partners from Regions IVA and IVB for the project, "Collaborative Research, Development and Extension Services (CRDES) for Food Security: The Case of Region 4A, 4B and 5". PHOTO: PCABRERA

The University of the Philippines Los Baños (UPLB) conducted a "Regional Partnership Action Planning for Regions IVA and IVB" under the Bureau of Agricultural Research (BAR)-funded program titled, "Collaborative Research, Development and Extension Services (CRDES) for Food Security: The Case of Region 4A, 4B and 5". The activity, which served as the occasion for UPLB resource persons to explain the whole concept of the CRDES program and formalize RDE collaboration among the involved institutions, was held on 21 January 2010 at LIMA Park Hotel, Lima Technology Center in Malvar, Batangas.

Fostering a collaborative framework, the UPLB CRDES Program Management Unit also initiated during the activity two regional MOU signings among BAR, the two DA-Regional Field Units (Rregions IVA and IVB), the Provincial Local Government Units (PLGUs), and State Universities and Colleges (SUCs) in Region IV. The heads of the partnering agencies/institutions as signatories to the undertaking promised to ensure their utmost cooperation in conducting the extension services and related action research of the program, and to focus on building and sustaining collaborative relationships among the different stakeholders of the rice industry.

Chancellor Luis Rey I. Velasco of UPLB opened the activity with a message highlighting the conceptualization of the program and the importance of extension service delivery and technology transfer to farmers as keys to addressing food security, specifically, rice self sufficiency. He hoped that, through the program, a strong

partnership and exchange of knowledge and information for the rice industry's success will be generated. Meanwhile, BAR Director Nicomedes P. Eleazar emphasized that the role of UPLB and the project should be focused on four concerns which are to: provide technical assistance to the regions, to work with BAR in the implementation of its Community-based Participatory Action Research (CPAR) Program (rice-based farming system), implement capacity building programs for the LGUs and SUCs, and provide areas to be used for seed production activities.

Dr. Agnes C. Rola provided an overview of the CRDES program, she explained the program framework while Dr. Jose E. Hernandez reported the initial activities it has accomplished since the start of implementation in August 2009. With the main objective of ensuring and sustaining food self-sufficiency through collaborative RDE partnership and capacity building, they explained that the program is anchored on four major components: 1) Quick Response Studies, 2) Capacity building of and partnerships with LGUs, SUCs and CSOs, 3) Functional FIELDS support services such as diagnostics, seeds and soil fertility, and 4) Collaborative field researches (Socio-economics, policy and governance research). These components are expected to enhance the study sites' geophysical aspect, resources, access to technologies, institutional arrangements and governance which will contribute in achieving provincial rice self sufficiency. They noted that the project functions as a catalyst for collaboration and that the LGUs and SUCs are the main implementers.

Two separate regional partnership action planning were conducted. An open discussion was facilitated by the UPLB CRDES Program Management Unit, the participating DA RFUs, LGU representatives of Quezon, Laguna, and Mindoro and the SUCs such as Occidental Mindoro State College and Quezon National Agricultural School shared their agricultural activities and their impact on their respective provinces. These were considered by UPLB as important input to strategically assessing and identifying the needs of the provinces and in preparing their appropriate action plans. Also derived from the discussion was the identification of the training needs of the SUCs and LGUs in agricultural development planning, database management, and monitoring and evaluation.

After the action planning, Dr. Rola, as the CRDES program leader, acknowledged and thanked all the participants from the DA RFUs, LGUs and SUCs for their participation. She encouraged the participants to continuously support the program and work together towards achieving food self-sufficiency. In closing the activity, Dr. Domingo E. Angeles described the project as having an enlarging effect because the collaboration will empower and capacitate the partnering institutions. He reminded the participants not to neglect the farmers as partners in the collaboration since after all, they are the main beneficiaries of the initiative.

The MOU signing and action planning for Region V next and is tentatively scheduled on 9 February 2010 in Naga City. Arrangements are still being finalized by the UPLB CRDES Program Management Unit. (Raymond Patrick L. Cabrera)

PCA-implemented project on coco technologies to reduce poverty and address climate change

The Philippine Coconut Authority (PCA) has developed new coconut-based products to reduce poverty incidence in coconut-growing communities. According to Erlin Manohar, project leader of the Bioversity International project titled, "Coconut-based Product Diversification to Reduce Poverty in Coconut-Growing Communities in Selected Areas," this research endeavor hopes to develop innovative and relevant local technologies that highlight the uses of the different parts of the coconut tree such as kernel, shell, husks, water, sap, wood, and leaves. "Each part provides an alternative livelihood to farmers to augment their unstable production and insufficient income from basic coconut farming," she said.

The project is funded by the Bureau of Agricultural Research (BAR) under a restricted fund to Bioversity International for the International Coconut Genetic Resources Network (COGENT) and implemented by PCA.

Based on the action research conducted, before the start of the project, farmers relied on copra production alone. After four years of intensive project

facilitation and coordination, PCA succeeded in bringing about product diversification from coconut wine (*lambanog*), coconut sap sugar, organic fertilizer and mats made of coco coir to control soil erosion in some denuded and eroded areas of the country. These coconut products passed extensive technologically advanced procedures and processes which are important in terms of product quality, standards and operating procedures. Their promotion could now be expanded further for technology commercialization to increase the coconut farmer's productivity and profitability.

PCA

has also improved the existing coconut-based cropping system of farming communities through the integration of livestock (goat and native chicken) and forage crops using free-range and open system, and the intercropping of high value crops, such as vegetables, rootcrops, other forage crops, legumes and corn. Farmers have established coconut nurseries in key areas as source of quality planting materials which will be distributed to the expanding coconut areas projected to support the on-farm agro diversity conservation strategy of PCA, local government units, and coconut farmers' organizations.

In relation to the adverse effects of climate change in most coconut growing areas in the country, PCA is optimistic that the results of the project will optimize the operation of

coconut farming and, thus, see the coconut farmers through difficult times. Technologically-driven initiatives developed, the project lessons learned and experiences gained will aid the different stakeholders in working closely and address the ill effects of climate change while utilizing available community resources. With the entry of these new coconut technologies that have made a difference in the livelihoods of resource-poor coconut communities, the coconut farmers are further expected to become socially motivated and economically stable to improve their living conditions.

Given these accomplishments and research outputs, PCA is positive about the state of the coconut industry in 2010. The new products, approaches and strategies to be shared with more farmers and communities make possible more effective and efficient coconut farming and sustainable development of coconut communities in the country. (Marlowe U. Aquino, PhD)



PHOTO: RIVERWOO

PHOTO: RDELACRUZ



MALUNGgay LEAF STALKS are nutritious too – study

PHOTO: EAGRON

More often than not, when we refer to malunggay (*Moringa oleifera*), we only mean the leaves or immature green pods which we use for cooking and other nutritional and medicinal purposes. Leaf stalks are often thrown away. But did you know that the stalk has just as much nutrition as the leaves?

According to a Technology-Advisory Notes produced and disseminated by the Crop Agronomy, Nutrition and Farming Systems of the Philippine Coconut Authority (CANFARMS-PCA), the stalks, like the malunggay leaves, also contain substantial amounts of valuable macro- and micro-nutrients.

In terms of macronutrients, potassium (K) is highest in malunggay stalks. In fact, for every 10kg of dried malunggay stalks, there are 293 g of potassium. Other macronutrients present are calcium (191g/10kg), nitrogen (185g/10kg), chloride (65g/10kg), sulphur (45 g/10kg), magnesium (23g/10kg), phosphorus (19 g/10kg), and sodium (7g/10kg).

Meanwhile, for its micronutrient contents, the stalk was found to be rich in iron, boron, zinc, manganese, and copper. For every 10kg of dried malunggay stalks, there are 436 mg of iron, 170 mg of boron, 112 mg of zinc, 100 mg of manganese, and 37 mg of copper.

These results were revealed in a study titled, "Mineral Macronutrients, Micronutrients and Other Elements in Leaves of Malunggay Plant Sampled in Some Locations in the Philippines" conducted by Severino S. Magat, Ma. Cecilia M. Raquipo, and Carmencita D. Pabustan of CANFARMS-PCA. The group separately analyzed the nutrient contents of the leaves (leaf blades) and leaf stalks of the malunggay for the purpose of optimizing its nutritional and medicinal uses and also to understand the other elements present in malunggay which may be beneficial or toxic at high concentrations.

According to Dr. Magat, malunggay has been well recognized as a practical and highly nutritional plant and food source and yet vital information on its macro- and micro-nutrient contents is scarcely found and identified in current IEC

materials.

With the Technology-Advisory Notes, consumers and other interested stakeholders can now be provided with a more updated data and information on the elemental and nutrient contents of the *Moringa* plant. "To some extent, this initiative confirmed and strengthened earlier reports on the high-nutrient content of malunggay. More so, we are being reminded that before we throw away the leaf stalk of malunggay, let's consider that it still contains substantial amounts of nutrients." Magat concluded. (Rita T. dela Cruz)

For more information or for a copy of the Technology-Advisory Notes, please email Dr. Severino S. Magat, program leader of the Crop Agronomy, Nutrition and Farming Systems of the Philippine Coconut Authority (CANFARMS-PCA) at sev_magat@yahoo.com

Did you know that the stalk has just as much nutrition as the leaves?

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Technoguide on rubber diseases and management now in print



The publication was made possible through a funding support from the Bureau of Agricultural Research (BAR) through its Scientific Publication Grant (SPG).

Rubber tree (*Hevea brasiliensis*) was introduced to Southeast Asia, including the Philippines, as early as 1900's. But it was only in the 1950's when local private corporations started establishing rubber processing plants in Mindanao. Currently, Cotabato is one of the major rubber producing provinces in the Philippines.

Given its high-impact potential to farmers and the economy, rubber is currently one of the top five priority commodities of the Department of Agriculture (DA). Aside from generating employment in the rural areas and planting rubber in idle hillylands and

uplands, rubber cultivation enhances environmental rehabilitation being an excellent plant species in the sequestration of carbon dioxide in the air.

Dr. Eugenio A. Alcala, rubber expert and executive director of the Philippine Rubber Board, Inc. (PRBI), expressed his enthusiasm for the timely publication of the book. "This technoguide is about the various diseases and maladies affecting the rubber industry is a timely effort in providing the rubber smallholders or planters of the latest approaches combined with the fundamental principles essential to better understanding of disease management," he said.

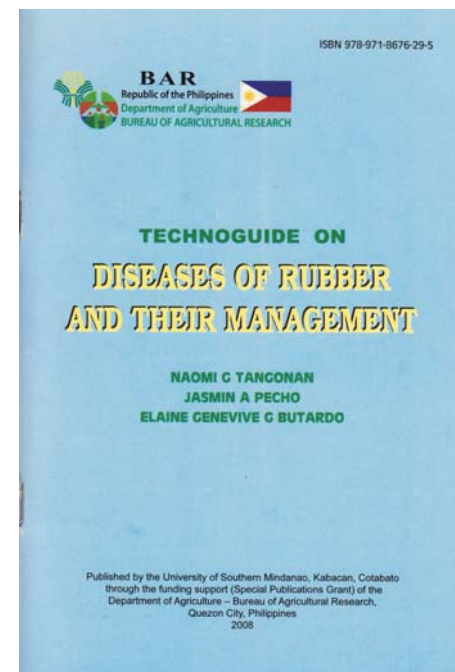
He added that Dr. Tangonan and her group have made a "monumental contribution" in helping the growth and development of the Philippine rubber industry.

According to Dr. Tangonan, the publication which is a 54-page book-type technoguide, features commonly encountered rubber diseases found in the leaves (bird's eyespot, anthracnose, leafspot, powdery mildew, *Fusarium* and *Phytophthora* leaf blights), in the stems or tapping panel (black stripe, pink disease,

and knob gall/stem bleeding), and in the roots (white root rot). The book also includes diseases of rubber reported for the first time such as the *Phytophthora palmivora* causing shoot tip blight in budded seedlings, stem canker, and bark splitting in mature rubber trees, and recently, leaf spot/leaf fall caused by *Corynespora cassiicola* affecting the foliage. More important, aside from the enumeration of diseases, incidences and severity, the publication also provide management options through disease control interventions as an integrated approach to the management of these diseases.

The book can be acquired from USM or from BAR for free. The USM is also providing an e-copy of the book through their website at <http://www.usm.edu.ph/rdpo/download/rubber-dcss-technoguide.pdf>. The authors and publishers are only requiring that acknowledgement of the source be properly attributed. (Rita T. dela Cruz)

For more information, please contact Dr. Naomi G. Tangonan of USM, Kabacan, Cotabato through telefax no. (63-64) 2482610 or email at: ngtangonan@gmail.com or ngtangonan@yahoo.com



Stakeholders' Workshop on "Partnerships for Biodiversity Conservation" conducted

The first stakeholders' workshop to develop the project, "Partnerships for Biodiversity Conservation: Mainstreaming in Local Agricultural Landscape" for Global Environment Facility (GEF) funding was held on 14-15 January 2010 in Quezon City. Representatives from the Department of Agriculture (DA), Bureau of Agricultural Research (BAR), Department of Environment Natural Resources Regional Offices, UP Los Baños, Department of Internal Local Government, Haribon Foundation, PhilConserve, CI Philippines, Flora and Fauna International, and other national conservation NGOs gathered to level-off on the project concept, confirm baseline situation, and agree on the project strategy.

The proposed project aims to assist local government units (LGUs) in critical biodiversity areas of the Philippines to better incorporate the conservation and sustainable use of biodiversity resources in their development planning. Three project outcomes that are expected are: 1) national systems and policies support the

conservation of biodiversity in local development planning, particularly for key sectors such as agriculture; 2) local government units encompassing at least 800,000 hectares in five key ecosystems have the tools and capacities to integrate sustainable management into decentralized government structures; and 3) threats to biodiversity reduced across at least 10,000 sq. km of landscape in five key biodiversity areas. The identified sites are in Luzon, Palawan, Negros-Panay, Mindoro, and Mindanao.

Through a series of sub-workshops and discussions, the group proposed several revisions on the project document. To enhance the standards and certification schemes to promote biodiversity-friendly production systems focusing on agricultural production, wildlife breeding, and minor forest products, several agencies were proposed to be included such as the Bureau of Food and Products Standard. BAR, on the other hand, plans to focus on the development, promotion and utilization of indigenous agricultural products such as indigenous vegetables, tropical fruits, indigenous rice, and local herbs and spices. An

operational community-based seed supply system and protocols for product development and effective marketing system will help develop commercially-acceptable indigenous agricultural products. In each of the seven pilot demonstration sites, the expected outputs, sub outputs, indicators and the means of verification have been substantiated including the endemic plants and animals that need to be conserved. Improving the capacities, not only of the LGUs but the national agencies as well for conservation and natural resource management, plays a big role in accomplishing the objective of the project.

The next workshop is scheduled on 11 February 2010 to develop implementation arrangements, budget and activity schedules. By June 2010, the project document will be submitted for GEF Council approval.

The Protected Areas and Wildlife Bureau organized the activity and were guided by UNDP consultants led by Ms. Floradema C. Eleazar, Dr. Candido Cabrido, and Dr. Chito Miranda. (Mariko M. Ramos)

Ubi Festival staged anew in Bohol

It's festival time! Various festivals in the month of January were held in key provinces in the Visayas like the *Ati-Atihan* in Aklan, *Sinulog* in Cebu, and *Dinagyang* in Iloilo. Not to be left out, Bohol also celebrated the 10th edition of its very own Ubi Festival which was held in Dao, Tagbilaran City on 20-22 January 2010.

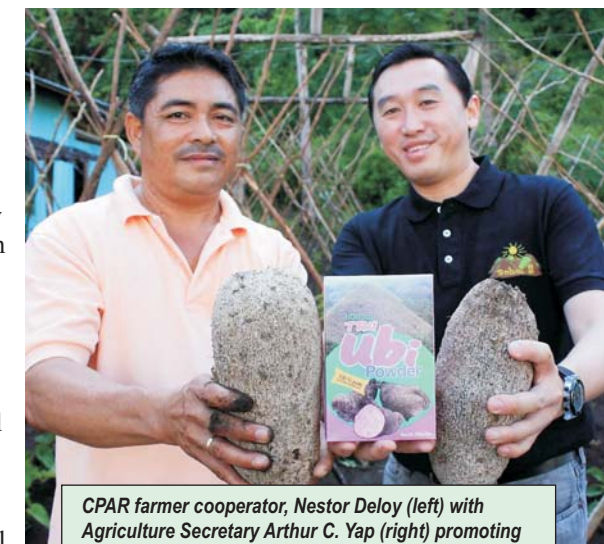
The festival was held in relation to the project, "Ubi Commodity Chain Information System (CIS) in the Province of Bohol," which is being implemented by Optiserve Technologies, Inc. and supported by the Bureau of Agricultural Research (BAR).

Department of Agriculture (DA) Sec. Arthur C. Yap was present during the festival, which carried the theme "*Industriya sa Ubi Palambuan, Hagit sa mga Bolanon*," as guest speaker during the opening program. He also facilitated the ribbon-cutting ceremony at the Dao Satellite Market.

Meanwhile, BAR Director Nicomedes P. Eleazar said that "BAR is happy to see the output of the Optiserve project in Bohol in line with the promotion of ubi as an important commodity in the country. It only proves that the Chain Information System (CIS) is a effective method to use in developing a sustainable agribusiness venture in the province of Bohol."

Highlighting the festivity were the literary musical contest, poster-making contest, most promising ubi processed product contest, and a motorcade which kicked off at the Provincial Agricultural Office (PAO) of Bohol. Also, ubi products were sold at low prices for the duration of the event.

The staging of this 10th Ubi Festival is aimed at promoting Bohol as



CPAR farmer cooperators, Nestor Deloy (left) with Agriculture Secretary Arthur C. Yap (right) promoting ubi crop and ubi powder.

an agri-tourism province and to create market linkages between the ubi farmers/processors and consumers. (Don P. Lejano)

Experts convene at BAR for Biofuel Consultative Workshop



(L-R) Dr. Denyse Snelder of Leiden University, The Netherlands, Dr. Raquel Lopez of World Agroforestry Centre (ICRAF), Ira Garcia of BAR, and Ms. Racquel Utdo of ISU discuss the potential field work sites for biofuel research and development in the country. PHOTO: LEJANO

The Isabela State University (ISU) and the Cagayan Valley Programme on Environment and Development (CVPED), in cooperation with the Bureau of Agricultural Research (BAR), held the WOTRO Biofuel Consultative Workshop on 18 January 2010 at the 2F BAR Conference Room, Visayas Avenue in Diliman, Quezon City.

“WOTRO is the Netherlands Organization for Scientific Research in the Tropics. They are interested in finding out which biofuel feedstock crops have the greatest potentials for marginal land development. Pursuing biofuel development projects such as this one is a significant response to the global call to mitigate climate change,” explained Dr. Mercedes Masipiquena of the Isabela State University (ISU), co-applicant of the WOTRO project.

The workshop participants, spearheaded by Dr. Denyse Snelder of Leiden University (The Netherlands), discussed the current direct and indirect effects of feedstock production for biofuels and tried to identify potential field work sites for biofuel research and development.

The group also discussed the current investment set up, roles of national and foreign investors, and contracts with labor regime of local farmers. The potentials of biofuel crops in agro forestry systems and the current local policies on biofuel production and land use planning were also tackled in the workshop.

Experts from Gadjah Mada University in Indonesia and representatives from local state universities and colleges (SUCs) and the Department of Agriculture's (DA) attached bureaus and agencies also participated in this one-day affair.

“This project is still in the planning stage, hence, the consultative workshop. We are very lucky to be receiving support from the Dutch government, and if this WOTRO project pushes through, the marginal lands here in the Philippines and Indonesia may be utilized into becoming productive biofuel crops plantation,” said Ira Olivia Garcia, BAR's Biofuels Coordinator.

Meanwhile BAR Director Nicomedes P. Eleazar, expressed his support for the project. “We are glad to be hosting activities such as this. BAR, being the focal agency of the research and development (R&D) component of DA's biofuels program, will continue to coordinate and channel efforts of key players and stakeholders for unified biofuels plans, programs and activities in the country.”

BAR is supporting R&D activities to improve a biofuel production management system and processing or raw materials as source of biofuel and work with prospective businessmen and investors who are willing to contribute their share in the development of the biofuels sector.

Since its launch in the country in 2005, BAR has supported R&D activities in the initial production of sweet sorghum as feedstock for bioethanol production. Currently, the bureau is coordinating and funding 16 projects all over the country 13 of which are on varietal adaptability trials of sweet sorghum implemented by the Regional Integrated Agricultural Research Centers (RIARCs).

Other crops being studied in the Philippines as biofuel feedstocks are jatropha, coconut, cassava, sugarcane and malunggay while for Indonesia it is jatropha and oil palm. (Don P. Lejano)

BFAR pushes... from page 9

“The aim should not be to impose organic aquaculture for the whole nation but to go into niche production since organic products are now gaining a strong following among the increasingly health-conscious markets around the world. It would be best, however, that the Philippines come up with its own standards for certification,” he added.

Ferdouse supported the idea and said that the Philippines should learn from Thailand which decided not to depend on private firms and created its own national organic certification bureau. A national certification bureau will also ease the burden of the farmers from the expensive certification process usually charged by private firms.

Although Europe remains to be the largest producer of organic products in the world and has the most number of private certification firms, Thailand has one of the most advanced technologies and capabilities in developing its organic aquaculture industry besides having its own certification bureau.

During the workshop, senior advisors from Thailand's fisheries department gave lectures on organic aquaculture. One of them was Dr. Lila Ruangpan who was recognized by INFOFISH as the mother of aquaculture in Thailand. Dr. Ruangpan gave three lectures, namely, organic farming techniques, organic feed and feeding, and techno-economic feasibility of organic aquaculture production. Moreover, Niracha Wongchinda gave a lecture on postharvest handling, processing, and traceability of organic fishery product.

INFOFISH was originally launched in 1981 as a project of the Food and Agriculture Organization (FAO) of the United Nations. Since 1987, it is an Intergovernmental Organization providing marketing information and technical advisory services to the fishery industry of the Asia-Pacific region and beyond from its headquarters in Kuala Lumpur, Malaysia. Fourteen countries are currently members of INFOFISH which are Bangladesh, Cambodia, India, Indonesia, Iran, Korea, Malaysia, Maldives, Sri Lanka, Pakistan, Philippines, Papua New Guinea, Solomon Islands, and Thailand. (Miko Jazmine J. Mojica)

BFAR pushes organic aquaculture industry in RP

Hoping to reap the benefits from the multi-million dollar organic aquaculture industry, the Bureau of Fisheries and Aquatic Resources (BFAR) of the Department of Agriculture (DA) hosted the “National Workshop on Organic Aquaculture Production and Product Marketing” in cooperation with INFOFISH at Dusit Thani Hotel, Makati City on 29 January 2010.

BFAR Director Malcolm I. Sarmiento said BFAR is now working on the development of the organic aquaculture industry in the country in line with the opportunities presented by the national and international markets as well as DA's long-term objective of achieving national food security.

“We have long pushed for a national policy to switch from capture fisheries to fish farming or aquaculture because of its proven profitability and sustainability,” said Sarmiento. According to him, to advance the aquaculture industry in the country, an aquaculture master development plan, which includes organic aquaculture, is underway.

“The master development plan on aquaculture includes provisions for broodstock, technology transfer, credits, new farming systems, and new strains that will thrive in specific environments and resist diseases, among others.”

Sarmiento said that they intend to consult with various stakeholders from the government and private sectors on the plan in order to come up with a well-packaged development plan for organic aquaculture as well as to expedite its acceptance by the industry.

Salmon, shrimp, and carp are considered to be among the most important aquaculture species in the world today. Black tiger prawn, catfish, milkfish, and tilapia are some of the species farmed in the country which are seen to have strong market demand as organic products. Fishfin species, however, are reported to command a higher demand than crustaceans, shellfish, or mollusks because it is considered more healthful and safer for human consumption.

Sarmiento further said that, although aquaculture represents 47 percent of the total fisheries production in the country, organic aquaculture has yet to be given the priority it deserves. “We need a conscious and deliberate effort to develop organic aquaculture in the country which



INFOFISH Director S. Subasinghe (left) gives his welcome address to participants during the National Workshop on Organic Aquaculture Production and Product Marketing at the Dusit Thani Hotel, Makati City. Listening are: (L-R) BFAR Director Malcolm I. Sarmiento, representative from the US Embassy, and Dr. Joebert D. Toledo, SEAFDEC AQD chief. PHOTO: MMQJICA

will stimulate the growth of the local economy due to the stable demand and high price that organic products command nowadays.”

He identified the country's long coastlines and high production capacity as the country's best assets over other aquaculture-oriented countries. Some of the countries that have started to gain headways on organic aquaculture are Thailand, Vietnam, China, India, Malaysia, and Myanmar.

In line with this, Sarmiento called for champions of organic aquaculture from both the private and public sectors who will push for its advancement and who are willing to comply with policy guidelines and standards for competitiveness.

Meanwhile, in his welcome address, INFOFISH Director S. Subasinghe said aquaculture production nowadays account for 50 percent of global fish production. “However, this continues to be a challenge for the developing world because of several forces at work especially with regard to the organic aquaculture industry. Problems can be as simple as knowing how many fish you must stock in an area and how you make them survive, to record-keeping, certification of organic, price structure, and marketing,” he said.

He cited Thailand as a country which has taken a lead role in organic aquaculture and the development of its own standards for organic certification.

He also cited the experience of INFOFISH on promoting organic aquaculture in Myanmar, Thailand, and Malaysia. “The reason why we chose Myanmar was because of its status as a least developed country, Thailand for its existing technology, and Malaysia for its big market.”

With regard to organic certification, the resource persons from INFOFISH and Thailand's Department of Fisheries (DoF) who were invited to talk about organic aquaculture acknowledged the complicated process of certification and the high cost attached to it.

“In most cases, if you want to export organic products, you need more than one certification for different target markets. That is what actually makes the product expensive, not its production cost,” explained Fatima Ferdouse, chief, Trade Promotion Division, INFOFISH. Ferdouse gave a lecture on the global trade in fish and fishery products and another on the global market prospects for organic fishery products.

“Since organic certification is extremely expensive, fishfarmers should do away with chemicals or practice using less chemicals first,” said Taclochan Singh, chief, Technical Advisory Services, INFOFISH. Singh lectured about the global status of aquaculture and organic certification and eco-labeling.

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