BAR conducts gap analysis on organic agri; Region 1, CAR, Visayas results validated

The Bureau of Agricultural Research (BAR) collected and consolidated regional researches on organic agriculture as part of activities under the project titled, "Gap Analysis on the R&D of Organic Agriculture: Focus on Organic Fertilizer".

The project, which began in June 2009, aims to review previous studies on organic agriculture conducted in the Philippines and to conduct a gap analysis on the present condition of organic agriculture R&D in the country.

As an output, the project seeks to compile all available literature on organic agriculture and to formulate a compendium that will serve as reference material for future R&D initiatives. Data on current organic farming practices in different regions were also collected through interviews with organic farmers and farmer organizations.

Specific focal persons from BAR were identified to facilitate the implementation and monitor developments under the project in Luzon, Visayas, and Mindanao. Each worked in close coordination with the Regional Technical Directors (RTDs), Regional Integrated Agricultural Research Centers (RIARCs) managers, and research directors of selected state universities and colleges (SUCs) involved in organic agriculture production management systems. Also, 16 research assistants, each representing a region in the country, were identified to consolidate all the available locally-conducted studies related to organic agriculture. BAR also developed a documentation research method which was used in the collection of research studies from SUCs, local government units (LGUs) and other local research institutions.

To date, the group has already consolidated information from CAR, Region 1, and Visayas.

For CAR, 102 studies were identified and 39 organic farmers were interviewed. The collected literature and information were evaluated at the Cordillera Integrated Agricultural Research Center (CIARC) in Baguio City with BAR Assistant Director Teodoro Solsoloy leading the group. The collected literatures in CAR covered areas on crop production, soil fertilization, pest and disease control, plant propagation and breeding, storage and processing, animal husbandry, socio-economics and market development. Present during the evaluation meeting were Dr. Magdalena Wanawan, CIARC manager; Karryl Ngina, RA for CAR; and Jude Ray Laguna and Rene Cris Rivera, BAR project focal persons.

For Region I, 54 studies on organic agriculture were collected while four organic farmers were interviewed. The studies collected covered areas on crop production, soil fertilization, socio-economics, and market development. The data for Region I were collected and were evaluated at the Ilocos Integrated Agricultural Research Center (ILIARC) in Bacnotan, La Union. Asst. Dir. Solsoloy discussed the outputs with Dr. Paz Mones, RTD of DA-RFU 1; Dr. Jovita Datuin, ILIARC manager; Consuelo Belarmino, ILIARC technical staff; and the two BAR project focal persons for Luzon.

For the Visayas, the validation meeting for the initial results was held at the Eastern Visayas Integrated Agricultural Research Center (EVIARC) in Babatngon, Leyte. It was participated in by Joyce Wendam, RTD of DA-RFU 8; Eduardo Alama, RTD of DA-RFU 7; Rufino Ayaso III, EVIARC manager; Elvira Torres, assistant EVIARC manger; Luisa Fulgeras of DA-RFU 6; Dr. Leonarda Londina and Engr. Glaire Cabantac of DA-RFU 8. Also present were Dr. Rodel Maghirang of UPLB; and Ms. Josefina Lantican, BAR adviser; and Ethyl Bulao, BAR focal person who evaluated the initial results and provided inputs to further improve the outputs of the study.

The initial results show that the local governments in the Visayas are now geared towards going organic while the SUCs are also deeply engaged in studies on organic agriculture. It was observed that, even with the efforts being exerted and the information awareness on organic certification, farmer and farmers' organization are yet to be certified. Hence, an intensified effort of both the national government and the SUCs is needed to give the region the much needed boost.

Other regions are still continuing with the activities on organic agriculture. It is expected that before the year ends all the results would be consolidated and a national symposium is set. ***(Rene Cris P. Rivera and Ethyl G. Bulao)***

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Sec. Yap launches "The Art of Agribusiness"

DA Secretary Arthur C. Yap and BAR Director Nicomedes P. Eleazar pose with the entire team involved in the production of the book, "The Art of Agribusiness" which was launched on 24 November at The Podium in Mandaluyong City. PHOTO: DOCO

In a bid to promote agribusiness in the Philippines, the Department of Agriculture (DA) and the Bureau of Agricultural Research (BAR) launched the book, "The Art of Agribusiness: 111 and More Success Stories in Agri-Entrepreneurship" on 24 November 2009 at The Podium, Ortigas in Mandaluyong City.

The book, which is the brainchild of Agriculture Secretary Arthur C. Yap, aims to promote agribusiness and agri-entrepreneurship and inspire Filipinos to engage in agriculture and fisheries as a profitable business venture.

It features 124 successful stories of agri-entrepreneurs from all over the country who either have benefited from the assistance provided by DA and other government agencies or grew largely through the honest hard work of their owners.

"Real and sustainable economic growth would not happen if the agriculture sector would be left behind. In this book, we feature some of the trailblazing experts in the many fields of agriculture and their life stories which are as varied as the industries, products, people and organizations they represent. All of them proved that truly, there is wealth in agriculture," said Secretary Yap.

"The inspiration for this book has always been the people I've met in my work, the agri-entrepreneurs who went into value-adding activities and proved that there is more to agriculture than the proverbial carabao. We are now modernizing Philippine agriculture and this is all because of you," he added.

Secretary Yap likewise thanked BAR under the leadership of Dr. Nicomedes P. Eleazar for spearheading the project.

Originally, the book was intended to feature success stories of 111 agri-entrepreneurs in celebration of the 111th anniversary of DA. However, the abundance of agri-entrepreneurs worthy of getting featured in the book exceeded the targeted number of success stories.

The book is the first of its kind in the country and in the history of DA. According to Secretary Yap, the second volume of the book is already on the drawing board.

The successful agri-entrepreneurs featured in the book come from different parts of the country and are engaged in diverse agricultural sectors including crops, livestock and poultry, and fisheries. Among them are Philfoodex President Roberto Amores (Hi-Las Marketing, mango and okra export), Lyndon Tan

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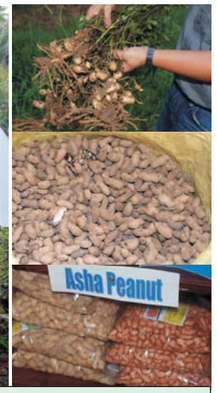
More Pinoy farmers embrace *Asha* peanut farming



Sorsogon ROS Superintendent Dolores Ricafranca (2nd from left) and Mayor Olivia M. Bermillo (3rd from left) of Castilla, Sorsogon are holding freshly harvested Asha peanuts. On-going in the area is a BAR-supported project titled "Technology Promotion of Promising Varieties of Peanut Under Coco-based Areas in the Province of Sorsogon". Also in the photo is ACD Head Julia A. Lapitan (right) during the documentation of the project. PHOTOS: DLEJANO

> ***"We are very glad with the initial result of this project. We hope that we could encourage more farmers here in Sorsogon to plant Asha peanut because it has very high potentials to compete in the market.***
>
> ***- Dolores Ricafranca***
> ***ROS-Sorsogon superintendent***

Before it's Cagayan Valley; now it's Bicol Region. The *Asha* peanut variety originating from India is already gaining acceptance among Filipino farmers. After being tried and cultivated in Isabela, it has now reached the province of Sorsogon in Region 5. In fact, there is an on-going project called – "Technology Promotion of Promising Varieties of Peanut Under Coco-based Areas in the Province of Sorsogon" – which is supported by the Bureau of Agricultural Research (BAR).

The three components of this project per specific area are as follows: 1) Varietal Evaluation at the Sorsogon Dairy Farm, 2) Improved Cropping System in Bacon, Sorsogon and 3) Livestock Integration in Castilla, Sorsogon.

In the first component, three varieties are being evaluated – *Asha, Namnama* and a local peanut variety. Based on the evaluation trial of confectionary peanuts at the Research Outreach Station (ROS) in Sorsogon, *Asha* and *Namnama* were found promising. These two varieties were also tested at the Cagayan Valley Integrated Agriculture Research Center (CVIARC) and were found to be high-yielding.

The area covered for the second component of this research project is in Bacon, Sorsogon wherein *Asha* peanut is planted under coconut trees with vegetables on the side. This improved cropping system is being used so that farmers could have added source of income while waiting for the *Asha* peanuts and the coconuts to be ready for harvest.

The third component of the ROS-initiated project integrates livestock with peanut farming system under the coconut. The goal is the same as the second component's which is to provide the farmers with an alternative source of income. While waiting for the peanuts and coconuts to mature, farmers herd goats which they can also sell in the future.

Halfway through the project (2008-2010), these three areas in Sorsogon have already finished harvesting. According to Dolores Ricafranca, ROS Superintendent, "We are very glad with the initial result of this project. We hope that we could encourage more farmers here in Sorsogon to plant *Asha* peanut because it has very high potentials to compete in the market. This could also be a complementary crop to the more popular *pili* nut here in Bicol."

The research team, headed by Ricafranca, is now focusing on another component of the project which is processing, value-adding and marketing. They are currently conducting trainings for post-harvest practices and value-adding schemes. They are also focused on creating linkages with other entrepreneurs in the area for marketing. ***(Don P. Lejano)***

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(Left photo) Three varieties of sweet sorghum which are found as good raw material for handmade papermaking. (Above photo) The 13 steps in making handmade paper from sweet sorghum pulp developed by researchers from ISU, Cecilia Mangabat and Jouel Taggueg. PHOTOS: HLAYAOEN

papermaking because they collapse easily and form papers which are flexible and with high tensile strength.

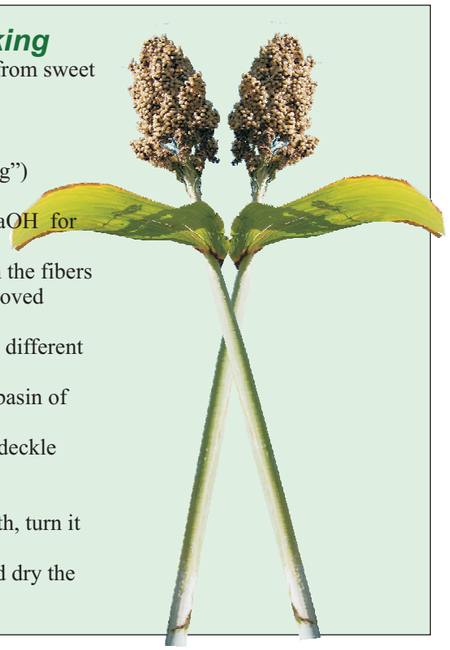
The *cell wall thickness* is also an important fiber characteristic. Thin-walled fibers are preferred since they produce dense and well formed sheets. Meanwhile, thick-walled fibers produce papers which are bulky and coarse.

Given these characteristics as bases, three varieties of sweet sorghum, *NTJ2, SPV422,* and *ICSR93024* were found suitable as raw materials for pulp and paper production.

13 Easy steps to producing handmade papermaking

Mangabat and Taggueg developed 13 easy steps in making handmade paper from sweet sorghum bagasse.

1. collect sweet sorghum bagasse
2. remove the soft inner portion of the bagasse (referred to as "depithing")
3. cut the bagasse into one-inch lengths
4. dissolve sodium hydroxide (NaOH) flakes in water (200 grams of NaOH for every 1 kilogram of chopped bagasse)
5. cook the bagasse in the NaOH solution for at least 4 hours to soften the fibers
6. wash the cooked bagasse thoroughly until the slippery texture is removed
7. pound/blend the softened fibers until desired texture is obtained
8. bleach pulp using sodium hypochlorite (pulp can be dyed to produce different colors of handmade paper)
9. prepare the pulp slurry by distributing the beaten pulp evenly into a basin of water (don't add more water if thin paper is preferred)
10. dip the mould and deckle into the basin of slurry (tilt the mould and deckle back and forth until water is drained through the screen)
11. remove excess water using sponge
12. separate the mould from the deckle (cover the formed sheet with cloth, turn it upside down and then separate the mould from the sheet)
13. transfer the sheet to formica/ plywood/ glass panel (remove cloth and dry the sheet under room temperature)



This article was based on a BAR-funded study titled, "Suitability of Sweet Sorghum Varieties for Pulp and Paper based on Fiber Morphology" by Cecilia B. Mangabat and Jouel B. Taggueg of the Isabela State University, Cabagan, Isabela.

Fore more information please contact, the lead researchers, Cecilia B. Mangabat and Jouel B. Taggueg, through their email addresses: cecillemangabat@yahoo.com and jbt121271@yahoo.com

SWEET SORGHUM BAGASSE:

Excellent nonwood source for handmade papermaking

By Rita T. dela Cruz

Since its introduction into the country in 2005, sweet sorghum (*Sorghum bicolor* L. Moench) has become an important crop for research and development (R&D) given its potential as a feedstock for bio-ethanol production. Aside from being a biofuel source, sweet sorghum was further discovered for its other equally important uses—food for humans, feeds and forage for animals, and environment-friendly soil enhancer (bio-organic fertilizer). The list of benefits doesn't seem to end as researchers continue to discover valuable uses for this so-called, "smart crop".

One of its most recently found uses is in the handmade paper industry wherein sweet sorghum was found to be an effective fiber source for papermaking. And since this technology uses a nonwood source, it saves trees therefore reducing the need for non-sustainable clear-cutting. It also emits less green house gasses (GHGs) because nonwood source contain less *lignin* (glues or sugars in all plant matter) resulting in less chemicals and/or energy demands for pulping.

The development of this technology was funded by the Bureau of Agricultural Research (BAR) and was implemented by researchers, Cecilia B. Mangabat and Jouel B. Taggueg, of the Isabela State University (ISU) in Cabagan, Isabela wherein sweet sorghum bagasse was used as the main fiber source for papermaking.

Bagasse is the pulp or dry refuse left after the juice is extracted from sweet sorghum stalks during the process of producing ethanol and other sweet sorghum products. They are usually treated as farm waste in sweet sorghum plantations growing the crop for biofuel production.

(Left photos) Stalks of sweet sorghum after the juice was extracted. (Right photo) Handmade paper products from sweet sorghum bagasse. PHOTOS: RDELACRUZ

Suitable sweet sorghum variety for papermaking

According to Mangabat and Taggueg, generally, all cellulosic materials can be used in paper production but the properties of paper products vary depending on the morphological characteristics of the fibers used. The length, cell wall thickness, and lumen diameter of the fiber used can greatly affect the quality of handmade paper that will be produced.

To specifically determine what varieties of sweet sorghum are suitable raw materials for pulp and paper production, the ISU researchers investigated the suitability of five varieties of sweet sorghum. The five varieties, namely: *ICSV700, NTJ2, SPV422, ICSR93024,* and *ICSV93046* were analyzed based on the morphological characteristics of their stillage.

The *fiber length* is an important characteristic as it affects the paper's tearing strength; the longer the fiber the higher the tearing strength of the paper. In the study of Mangabat and Taggueg, all varieties showed moderately short fibers with cell wall thickness ranging from moderately thin to very thin. But the length of sweet sorghum fibers is comparable to that of eucalyptus species and paper mulberry that are suitable for papermaking.

Another important characteristic is the *lumen diameter*. Fibers with wide lumen are favored for

> ***"...since this technology uses a nonwood source, it saves trees therefore reducing the need for non-sustainable clear-cutting. It also emits less green house gasses (GHGs) because nonwood source contain less lignin (glues or sugars in all plant matter) resulting in less chemicals and/or energy demands for pulping."***

Stakeholders convene for collaborative RDE ACTION PLANNING on rice

The objective of the project is to forge and strengthen partnership between multi-stakeholders in the rice industry sector, in particular, SUCs and LGUs, DA-RFUs, civil society organizations, and farmers to attain rice self-sufficiency at the provincial level.

BAR Director Nicomedes Eleazar (center) delivers his keynote address during the CRDES meeting. Beside him are UPLB Chancellor Luis Rey Velasco (left) and Bicol University President Fay Lauraya. PHOTO: AVELASCO

Attending the CRDES meeting are representatives from SUCs, LGUs, DA-RFUs, civil society organizations, and farmers from Regions 4A, 4B, and 5 who are involved in the project. Also present are technical staff from BAR, the agency that is funding this UPLB-led project. PHOTO: AVELASCO

To facilitate the implementation of the BAR-supported program titled, **"***Collaborative Research, Development and Extension Services (CRDES) for Food Security: The Case of Region 4A, 4B and 5***"**, the University of the Philippines Los Baños (UPLB) led a partnering and action planning meeting at the Operations Room, Abelardo Samonte Hall, Administration Building of UP Los Banos on 10 November 2009.

The objective of the project is to forge and strengthen partnership between multi-stakeholders in the rice industry sector, in particular, the state universities and colleges (SUCs) and local government units (LGUs), Department of Agriculture-Regional Field Units (DA-RFUs), civil society organizations (CSOs), and farmers to attain rice self-sufficiency at the provincial level. This UPLB-led project received its funding from DA through the Bureau of Agricultural Research (BAR) amounting to PhP 30million.

UPLB Chancellor Luis Rey Velasco welcomed the guests from BAR, headed by Director Nicomedes P. Eleazar; representatives from the LGUs consisting of mayors, and provincial and municipal agriculturists; SUC presidents and research and extension directors; and partners from RFUs. Representatives from the Agricultural Training Institute (ATI) and the Philippine Rice Research Institute (PhilRice) also attended the event.

To jumpstart the activity, BAR Director Nicomedes Eleazar gave a message expressing the need to develop a more dynamic framework of action. "It is through this project that we are developing a more cost effective support system that will surely enable us to use the experience in developing a new modality of action that would enable us to reach our goal for rice self-sufficiency," he said.

Dr. Agnes C. Rola, CRDES program leader, presented the concepts and methodologies of the program. It was followed by an open forum where concerns from each participating region were brought out. BAR Technical advisers, Dr. Santiago R. Obien and Dr. Manuel Bonifacio, actively guided the body on how this collaboration can make agriculture a business by using a simple strategy that emphasizes making the different sectors involved sensitive to information needed to achieve rice sufficiency.

Also highlighted during the meeting was the signing of the Memorandum of Understanding (MOU) between UPLB and its partners, namely, the presidents of the SUCs, and mayors of the municipalities involved in the study. In the afternoon, the presentations of rice security programs and R&E programs on rice were presented by provincial agriculturists and representatives from the SUCs, respectively. At the end of the session, Dr. Rola thanked all the presenters and advised the audience to process all the information gathered in the meeting to complement whatever they already had at the time. As an end note, she expressed the wish for a fruitful collaborative project with the support of everyone who attended the activity.

The event concluded with the closing remarks of Dr. Enrico P. Supangco, UPLB vice chancellor for Research and Extension, reminding everyone about the most critical part in the activity – it is time to take action.

(Jonas Brian C. Almendrala)

4 STIARC projects featured in NBN's agri program

To highlight the important role of agriculture in addressing health and food security in the country, the Bureau of Agricultural Research (BAR) partnered with the Foundation for Agriculture Related Missions (FARM) to produce video documentaries on agriculture and fishery projects that promote agribusiness development.

On 24-27 November 2009, a team composed of staff members from NBN's Mag-Agri Tayo and BAR's Applied Communication Division (ACD) visited and documented four BAR-funded projects in various sites in Region IVA being implemented by the Department of Agriculture-Southern Tagalog Integrated Agricultural Research Center (DA-STIARC).

The projects include: 1) Community-based Participatory Action Research (CPAR) on Improved Arrowroot Production Technologies in Catanauan, Quezon; 2) Technology Commercialization (TechCom) Project on the Enhancement of Tamarind Industry in Lobo, Batangas; 3) TechCom Project on Oregano in Tiaong, Quezon; and 4) Agribusiness Development Project (ADP) for Sustainable Cacao Production System in DA-Quezon Agriculture Experimental Station (QAES).

STIARC Asst. Manager Rosemarie Bautista-Olfato, project leader of CPAR on Improved Arrowroot Production, discusses various interventions introduced through the project during her on-cam interview. PHOTOS: EAGRON

CPAR on arrowroot production

The rhizome of the arrowroot plant (*Maranta arundinacea)* is the source of the arrowroot flour which is the major ingredient in making "uraro" cookies. Although not indigenous to the Philippines, local farmers have been cultivating arrowroot since 1918. The crop is abundant and is cultivated in Catanauan, Quezon—the site for the CPAR project.

According to Rosemarie Bautista-Olfato, assistant STIARC manager and project leader, the project was borne out of a need to increase the production of arrowroot in Catanuan through the introduction of improved cultural practices and proper fertilization using organic farming technology. The project also hopes that with the introduced interventions on potharvest and processing techniques, the quality of flour is improved thereby making possible other processed products from arrowroots aside from cookies.

The local government of Catanuan is in full support of this CPAR project given the huge potential of arrowroot in terms of its economic importance and livelihood opportunities for its community. Currently, Catanauan has 200 hectares planted to arrowroot plants producing approximately 1,200 metric tons of tubers in a year as material for 301.7 tons of flour. Valued at PhP75/kg, this translates to a gross income of PhP 22.6M/year income for Catanauan.

Dr. Virgilia Arellano, project leader of the NTCP on the Enhancement of Tamarind Industry in Lobo, Batangas, cites the various products that can be processed and packaged from tamarind. PHOTOS: EAGRON

NTCP on enhancing tamarind industry

"There is a continuous and increasing demand for tamarind (*Tamarindus indica*) unfortunately, given existing constraints to effective marketing strategies and proper promotion, our good ol' sampalok can not penetrate the big market," averred Dr. Virgilia D. Arellano, researcher from STIARC and project leader. The TechCom project on sweet tamarind was implemented out of a need to develop improved processed products from tamarind as a potential source of income for smallhold farmers and rural

2 BAR-funded projects on by-products utilization at BIOTECH reviewed

A review of two projects funded by the Bureau of Agricultural Research was held at the National Institute of Molecular Biology and Biotechnology (BIOTECH) at the University of the Philippines Los Baños (UPLB) on 20 November 2009.

The first project, "Biotechnological Production of High Value Products from Wastes of Mango Processing Industry" was in its final phase. Project Leader Arsenia Sapin presented six studies under the said project and these are: 1) Enzymatic extraction of essential oils from mango peels, 2) Bioethanol production fro mango peel, 3) Extraction and characterization of phenolic antioxidant (mangiferin) from mango seed/ peel, 4) Development of health drinks from mango peel, 5) Utilization of mango kernel flour as bakery ingredient, and 6) Sensory, chemical, microbiological and stability testing of biotechnologically-produced food and non-food products from mango peel/ seed.

The peel and seed of the mango comprise 50 percent of the fruit and these are usually just discarded after separating the flesh. According to the study, "utilization of mango peel and seeds in the development of new and high value products is a rational approach of solving the waste disposal problem of the mango processing industry. These products, in turn, may find a wide range of applications in agro-industrial processing, food and feed, health and beauty, and renewable energy."

The project which ran for a year showed that products from mango wastes are generally acceptable. The technology developed in the processing of mango wastes can provide employment and investment opportunities for the country. Further research was recommended on this project and preparations for its next phase are now under way.

Meanwhile, the second project, "Utilization of Virgin Coconut Oil Industry By-Products for the Biotechnological Production of High Value Food Products" was presented by Project Leader Teresita Ramirez.

This project started in March 2009 and will run for one year. To date,

PHOTO: JBENAVENTE

the project team was able to develop different dairy-like products and blended beverages-- high value food products from the virgin coconut oil industry by-products.

Coconut cream, yoghurt, yoghurt ice cream, sour cream, cream cheese, chocolate-coconut spread, chocolate bar, coconut ice cream and coconut butter/ butter blends are some of the possible food products initially being developed.

In its semi-annual report, further testing and research on food safety and acceptability of the developed food products were recommended. Another review is scheduled after six months of project implementation or when the project ends on March 2010. ***(Johanna B. Benavente)***

Storytelling sessions lead to conduct of librarianship seminar

After conducting several storytelling sessions in public elementary schools in Los Baños and Bay as part of the promotional activities for the book, "Popong Eats Brown Rice", the International Rice Research Institute (IRRI) sponsored a librarianship seminar this time to address the call of public school librarians for an update on best library practices.

More than sixty public school teachers, librarians and principals from Bay, Los Baños, Pila, Rizal, Pangil and Pakil attended the Practical School Librarianship Seminar held at the Khush Hall, IRRI, Los Baños on 18 November 2009.

Mila Ramos, IRRI's chief librarian served as the resource person for the seminar. Among the topics which Ms. Ramos discussed were organizing a library's collection, marketing a library, content development in school libraries, and services expected of librarians. Ms. Ramos also provided the participants a list of free sources of e-Books as well as web sites offering free resources/ books.

Furthermore, Ms. Ramos offered free tutorials to the attendees on cataloguing and best library practices. The participants were later given a tour of the IRRI Library.

The seminar was co-sponsored by the Department of Education, Region IV. Meantime, the book, "Popong Eats Brown Rice" was published by the Bureau of Agricultural Research (BAR). IRRI is scheduled to conduct story-telling sessions until the end of this year. ***(Press Release)***

Over 200 farmers participate in DA Reg 11
GULAY-PALAYAMANAN FIELD DAY

More than 200 participants, mostly farmers and agriculture technicians from Davao City and other provinces of Region 11, attended and participated in the "Gulay-Palayamanan Field Day" in Manambulan Farm Station of the Department of Agriculture (DA) Region 11 held on 26 November 2009.

The field day was held to provide farmers and agricultural technicians the modern trends and techniques in producing market-driven and organically-grown vegetables and to showcase new projects specific on upland hybrid rice.

In his welcome message, Dr. Alfredo M. Cayabyab, chief of the DA-Southern Mindanao Integrated Agricultural Research (DA-SMIARC), stressed the importance of updating farmers on new skills and technology that they will be able to adopt to improve their farm production and eventually to increase their incomes.

Gracing the occasion in behalf of Davao City Mayor Rodrigo Duterte was City Agriculturist Rocelio S. Tabay, who said that "it is through the sharing and not the shelving of technologies that we find essence in the conduct of field days such as the Gulay-Palayamanan."

PHOTOS: SMIARC

Rodolfo L. Galang, DA-BAR regional coordinator for Region 11, also expressed his appreciation in the various Research, Development and Extension (RDE) projects of DA-SMIARC which are implemented in close coordination and partnership with the local government units (LGUs) of Davao City through BAR's Community-based Participatory Action Research (CPAR) program.

Meanwhile, Juanito C. Lupiba, chief of the Manambulan Experiment Station, emphasized the importance of growing organically-grown farm products mentioning that they are now in demand. "This is the kind of farming that does not use synthetic fertilizers and pesticides. It entails minimal use of off-farm inputs and on management practices that restore, maintain, and enhance ecological harmony. And we are proud to note that it is now being practiced in our station," he said. He added that, most vegetable production projects in the station have been applied with vermicasts, or using the vermicomposting technology.

The field day consisted of field tour to the different projects/standing crops wherein participants were allowed to interact with project coordinators with regards to the technology, field problems and concerns on specific commodities. Participants were exposed to various farming production techniques, including greenhouse models for vegetables and fruits, upland rice production, rootcrops and cereals, organic fertilizer projects on vermiculture and bio-organic, field crops, and forage pasture development projects.

The activity also featured a lecture series, hands-on processing on cassava and sweet sorghum, and demonstrations on using new farm equipment and implements. Participants were given free vegetable seeds and planting materials, apart from the raffle draws conducted, where seeds, plastic seedling trays and sacks of white corn grits were given as prizes.

Notedly, the Manambulan Station of DA Region 11 has already become a farmers' point of destination during fieldtrips, cross-visits, and *lakbay-aral* of farmers and LGUs. The station has also been hosting student-practicumers from various agricultural colleges and universities in Mindanao.

The Gulay-Palayamanan activity was organized by the Manambulan Farm Station, DA-SMIARC in partnership with the City Government of Davao and Harbest Agribusiness Corporation who donated plastic seedling trays during the raffle draw. ***(Anecita I. Telabangco, DA-SMIARC)***

households in Lobo, Batangas.

In partnership with the local government units and concerned agencies, the project tapped Big A Cooperative as cooperator for the project. The members underwent capability building through the conduct of trainings on processing, postharvest handling, good manufacturing practices (GMP), and hazard analysis and critical control points (HACCP). The project also provided technical assistance to improve the productivity of the business in terms of quality and production volume of tamarind products.

NTCP on developing products from oregano

With the aim of opening a market niche for oregano (*Coleus aromaticus*) and its products, Dr. Estela C. Taño of DA-QAES initiated the development of promising product lines from oregano as an agribusiness endeavor. Oregano is mostly known for its medicinal value particularly in relieving children's coughs as claimed by earlier generations through indigenous knowledge. But given nutraceutical and pharmaceutical components of this wonder plant, Dr. Taño believes that there's more to oregano than just a remedy for cough.

The project is the result of an indigenous technology documentation and research effort that aims to develop innovative products from indigenous plants, increase awareness and promotions, and help communities and entrepreneurs market them to generate income and sustainable community-based livelihood.

Dr. Estela Taño, project leader of the NTCP on Developing Special Product Lines from Philippine Oregano, explains the various healthful benefits from consuming oregano juice and oregano wine.

In cooperation with the Green Rescue Organic Products (GROP), an agricultural enterprise comprised mostly of women and housewives, new product lines from oregano have been developed by the local community and are now available in the market. The products developed from oregano include wine, vinegar, tea, soap, juice for humans and juice for poultry. These are sold in more than 20 outlets in Quezon Province and surrounding towns, Bicol and Metro Manila.

Dr. Concepcion Amat, chief of DA-QAES and project leader of the ADP for Sustainable Cacao Production System, talks on the reasons why cacao is a dying industry and the urgent need to revive it. PHOTOS: EAGRON

ADP for cacao production

"Occurrence of pest and diseases, lack of quality planting materials and the decreasing land area for cacao plantation are some of the major reasons why the production of cacao in the country has declined over the years," said Dr. Concepcion I. Amat, superintendent of DA-QAES and project leader. In a bid to revive the dying industry of cacao, a project promoting a sustainable cacao production system is being implemented with the aim of increasing crop productivity and farmers' income.

Cacao is one of the commodities prioritized by the DA's High-Value Commercial Crops (DA-HVCC) program because of its great demand in the local and international market. To boost cacao production, the DA through the project established a technology demonstration site showcasing appropriate culture and management techniques including clean culture, proper fertilizer application, pruning, and pest and disease control.

By the end of this project, hopes are high that cacao productions in the target areas have increased by at least 30 percent with the introduction of improved management techniques, developing at least 50 hectares land area planted to cacao.

These documentaries may be seen in the NBN's Mag-Agri Tayo program aired every Saturday, 9-10 AM hosted by Mr. Philip "Ka Ipe" Daffon. ***(Rita T. dela Cruz)***

BAR observes Global Warming and Climate Change Consciousness Week

To cap this year's celebration of "Global Warming and Climate Change Consciousness Week" on 19-24 November, the Bureau of Agricultural Research (BAR) organized several activities related to the occasion. This is BAR's contribution to the observance of Presidential Proclamation No. 1667, that aims to "create awareness on global warming and climate change by pursuing broad and intense information and education campaign to inform the general public the awesome and terrifying consequences of this phenomenon and to secure the collective cooperation of the citizens, as well as the collective action of public and private sectors at all levels in finding solutions to this worldwide concern."

The documentary, "An Inconvenient Truth" was shown in the afternoon of 20 November. Even if many of the employees had already watched this film narrated by former US Vice President Al Gore, it never fails to move the audience and leave a challenge to everyone. At the BAR grounds, employees were taught about urban gardening as one way to ease the effects of global warming and climate change.

Meanwhile, BAR employees visited the exhibit on proper waste management located at SM North Edsa. Various groups such as the local government of Sta. Cruz, Laguna, University of the Philippines Diliman, the Presidential Task Force on Climate Change and other organizations participated in this activity. Information materials on climate change and global warming were distributed and products made from recycling of waste materials were showcased. This exhibit ran from 19 to 24 November 2009 and was also participated in by other government agencies as well.

Starting this year, expect that activities tackling climate change and global warming will be organized by the government, non-government organizations and other private groups to increase the awareness of the public on these two critical phenomena. ***(Johanna B. Benavente)***

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(Basic Necessity, fresh culinary herbs and vegetables), Ruben See (See's International, banana chips export), Edgar Sia II (Mang Inasal), Lolita Hizon (Pampanga's Best), Tennyson Chen (Bounty Fresh), and Roger Rivera (RDEX, tuna processing) just to name a few.

The book is edited by award-winning journalist Tina Arceo-Dumlao, business editor of the Philippine Daily Inquirer. It is distributed in partnership with Anvil Publishing and is initially available in the top 50 National Bookstore, Bestsellers, and Powerbooks outlets in the National Capital Region.

Joey Concepcion of Go Negosyo and the Philippine Center for Entrepreneurship gave the foreword in the book, as Go Negosyo shares in the DA's vision to promote entrepreneurship in the Philippines. He was likewise present during the book launching and gave a short message to encourage more enterprising Filipinos to become *negosyantes*.

During the event, the DA Agribusiness Exports Showroom displayed the DA Agri-Kart, another brainchild of Secretary Yap. The agri-kart carries the various export-quality processed products of agri-entrepreneurs which the DA helps to promote through trade fairs and exhibits not only locally but internationally as well.

Secretary Yap (left) formally presents the book to the public. With him is Mr. Joey Concepcion of Go Negosyo (2nd from left). PHOTO: RSANTIAGO

BAR Director Nicomedes P. Eleazar (left) and GMA HVCC Program Director Rafael Espino (4th from left) pose with the guests during the book launch. PHOTO: DOCO

Head writers Miko Mojica and Eloisa Hernandez (center) with Mr. Joey Concepcion (left) and Mr. Ramon Lopez (right). PHOTO: RSANTIAGO

Among other special guests who graced the book launching were Planters Development Bank CEO and President Amb. Jesus P. Tambunting, named Entrepreneur of the Year Philippines 2009; National Book Store Founder and Chairman Socorro Ramos, Entrepreneur of the Year Philippines 2004; and former Senator Kit Tatad. Also present in the event were DA officials led by Usec. Bernie Fondevilla, Usec. Bernadette Puyat, and Asec. Salvador Salacup. ***(Jose Ira Archimedes D. Borromeo)***

SMIARC inaugurates rubber training center for Southern Mindanao

BAR Regional Coordinator for Reg 11 Rodolfo Galang (left), SMIARC Chief Alfredo Cayabyab (3rd from left), and City Agriculturist Rocelio Tabay (2nd from right) lead the ribbon-cutting ceremony during the inauguration of the Rubber Training Center in Marilog, Davao City. PHOTOS: SMIARC

In support to the development of the rubber industry and its stakeholders in Mindanao, the Department of Agriculture Regional Office XI inaugurated on 18 November 2009 its new Rubber Training Center at the RIARC Satellite Station for Hillyland Farming Systems in Marahan, Marilog District, Davao City. The Center is envisioned to serve as the regional center for the transfer of rubber production technologies in the southern Mindanao region through Information, Education, and Communication (IEC). It complements the RDE activities on rubber in the area which are funded by the Bureau of Agricultural Research (BAR) and the High Value Commercial Crops (HVCC). The construction of the training center was funded through the HVCC program for Region 11.

"The center will be a useful facility for skills development primarily on rubber technology", said Dr. Alfredo M. Cayabyab, manager, Southern Mindanao Integrated Agricultural Research Center (SMIARC). He also said, it will cater trainings for rubber-based crops such as high value vegetables, rootcrops, fruits, and field crops.

Rodolfo Galang, BAR regional research coordinator, emphasized the need for continued support to various research, development and extension (RDE) projects on rubber in Mindanao.

Isagani Basco, who represented OIC-Director, Dr. Carlos Mendoza of DA-XI, underscored the region's fast track development efforts in its projects at Marahan for the good of indigenous peoples as prime stakeholders. City Agriculturist Rocelio Tabay, representing Davao City Mayor Rodrigo Duterte, said the blessing s an opportune time to renew the government's commitment for environmental preservation to avert radical effects brought by climate change.

The blessing was officiated by Rev. Fr. Stanley assisted by Rev. Fr. Joares of Marahan Parish Church.In behalf of the project staff from SMIARC, Noel Estellena who led various initiatives in the area expressed gratitude to the different support groups and individuals for making the project possible. The DA Reg 11 HVCC program for financial support, the Regional Engineering Division for the infrastructure.

The blessing and inauguration was participated in by barangay officials, tribal chieftains, and guests from the National Commission on Indigenous People (NCIP) and personnel from the DA RFU 11. It was highlighted with a tree planting activity as a mitigating measure on the ill effects of climate change towards the environment.***(Anecita Telabangco, and Jessel Cardines, DA-SMIARC and Rodolfo Galang, DA-BAR)***

PHOTO: SMIARC

Rodolfo Galang of BAR (3rd from left) and Dr. Alfredo Cayabyab of SMIARC (2nd from right) join the attendees and participants during the opening program of the inauguration of the Rubber Training Center. PHOTO: SMIARC