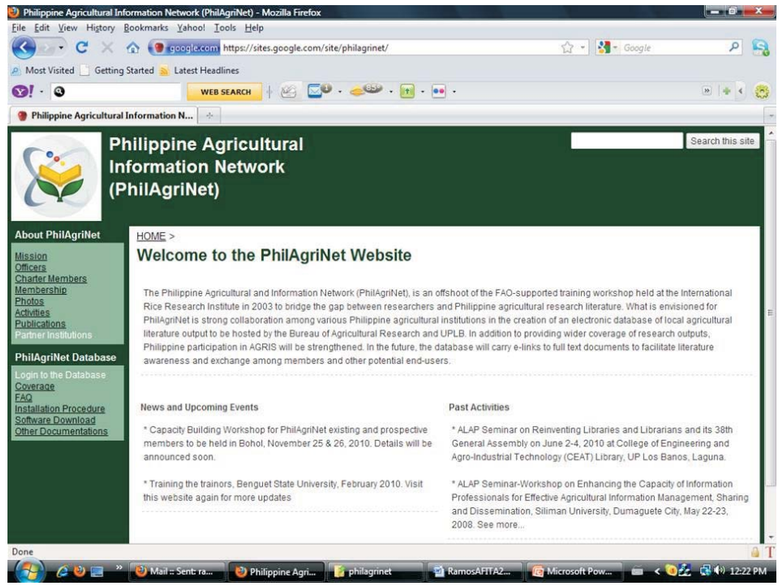
PhilAgriNet website gets a new look

An improved and updated website of PhilAgriNet will be hosted and maintained by the University of the Philippines Los Baños (UPLB) Library with the Bureau of Agricultural Research (BAR) website as the mirror site effective January 2011.

People used to lament that timely, comprehensive, and efficient access to agricultural information is lacking in developing countries such as the Philippines. Fortunately, the library people behind agricultural and academic research institutions banded together to formally resolve this drawback through PhilAgriNet, an electronic database and network that links Philippine agricultural knowledge to prospective end-users.

Ms. Concepcion Saul, project leader, recently submitted the progress report of the PhilAgriNet project for the second half of 2010. She said they are expecting to host the improved version of the PhilAgriNet website after its official launching in June 2010 during the General Assembly of the Agricultural Librarians Association of the Philippines (ALAP).

The PhilAgriNet website was made possible through the commitment of 14 charter members using freely available tools developed by the Food and Agriculture Organization (FAO) of the United Nations (UN). The members participated in several capacity-building workshops to create and manage a database of Philippine agricultural literature.



In a related development, Ms. Saul presented a paper titled, "PhilAgriNet: The Missing Link between Philippine Agricultural Knowledge and Researchers" at the AFITA International Congress 2010 held in Bogor, Indonesia on 4-7 October 2010.

"The conference was the right venue to promote the network and its information services because the participants came from our neighboring Asian countries as well as from Europe, such as Austria, Italy, and Belgium. They commended the endeavor of the PhilAgriNet as this will surely generate an impact for researchers, decision makers, and other stakeholders," she added.

Ms. Saul also proposed holding a seminar-workshop on upgrading proficiencies for information documentation and sharing in the next PhilAgriNet General Assembly scheduled on February 24-25, 2011 at the Benguet State University in La Trinidad, Benguet. ### ***(Miko Jazmine J. Mojica)***

PHILAGRINET WEBSITE WAS MADE POSSIBLE THROUGH THE COMMITMENT OF 14 CHARTER MEMBERS USING FREELY AVAILABLE TOOLS DEVELOPED BY THE FOOD AND AGRICULTURE ORGANIZATION (FAO) OF THE UNITED NATIONS (UN).

BARChronicle
BUREAU OF AGRICULTURAL RESEARCH
RDMIC Bldg., Visayas Ave.,cor. Elliptical Rd.
Diliman, Quezon City 1104
PHILIPPINES

Entered as second class mail at the Quezon City Central Post Office under permit no. 753-01 NCR

BAR Chronicle
BUREAU OF AGRICULTURAL RESEARCH
ISSN 1655-3942
Visit our official website at http://www.bar.gov.ph
BINHI AWARDEE (2009)
BINHI AWARDEE (2007)
Agricultural Newsletter of the Year
FLORENDO AWARDEE (2003)
Outstanding Information Tool for Print
Volume 11 Issue No. 11 | A monthly publication of the Bureau of Agricultural Research | NOVEMBER 2010

Dir. Eleazar reports on status of Organic Agri R&D at 7th NOAC

The Bureau of Agricultural Research (BAR), being the national coordinator for organic agriculture R&D, participated in the 7th National Organic Agriculture Conference (NOAC) held at the Queen Margaret Hotel in Lucena City, Quezon on 16-18 November 2010.

Organized by the Department of Agriculture (DA), the activity is conducted yearly to update organic agriculture practitioners/advocates on the latest technology and programs of the government, non-governmnet agencies (NGOs), and private companies.

The annual conference, which was attended by almost 800 organic farming advocates, farmers, private entrepreneurs, and representatives from various institutions, also served as a forum map out future plans in organic agriculture.

DA Secretary Proceso J. Alcala, an organic agriculture advocate himself and author of the Organic Agriculture Law (RA 10068) graced the activity as keynote speaker.

BAR Dir. Nicomedes P. Eleazar, reported on the output of the writeshop conducted by the bureau on "Gap Analysis on Organic Agriculture: Focus on Organic Fertilizer" in October 2010. This activity was participated in by representatives from the various DA-Regional Field Units (DA-RFUs), mainly the Regional Integrated Agricultural Research Centers (RIARC) managers, selected state universities and colleges (SUCs), NGOs, and other government agencies.

The result of the writeshop was held initially to review past studies and literature on organic fertilizers in the country involving partner institutions and compiled them in a compendium form for future reference of researchers, scientists, and all other organic farming practitioners/advocates. The objectives included: 1) developing an appropriate sustainable production system which could provide safe food and nutritional needs of the growing population without harming the

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Photo: from DA-AFIS

BAR Director Nicomedes P. Eleazar

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Foreign chambers see bright business prospects for Phl in 2011

The European and American Chambers of Commerce in the Philippines convened top business leaders, heads of government agencies, and the private sectors, representing various industries, in a special joint membership meeting held on 28 October 2010, Dusit Hotel, Makati City. This unusual effort was conducted to provide the Philippines with information on the businesses with the brightest prospects for the country in 2011.

The joint chambers presented the Philippine Outlook for 2011 as perceived by the so-called Seven Big Winners (sectors), as follows: 1) agribusiness, 2) Business Processing Outsourcing (BPO) and creative industries, 3) infrastructure, 4) power and ground transport, 5) manufacturing 6) mining, and 7) tourism

Mr. Hubert d' Aboville, President of the European Chamber of Commerce led the opening ceremonies and welcomed the participants and

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Asst. Dir. Solsoloy,10 DA officials sworn into office

Agriculture Secretary Proceso J. Alcala swore in 11 officials of the Department of Agriculture (DA) on 10 November 2010 at the Office of the Agriculture Secretary (OSEC) in Diliman, Quezon City. Officials included two from the DA-Staff Bureaus and nine from DA-Regional Field Units (RFUs), who were recently appointed by President Benigno S. Aquino III.

Dr. Teodoro S. Solsoloy was sworn in as re-appointed assistant director of the Bureau of Agricultural Research (BAR) along with Regional Executive Director Antonio G. Gerundio of DA-4B and Asst. Dir. of the Bureau of Soils and Water Management, Wilfredo E. Cabezon. Dr. Solsoloy was first appointed to this post in February 2005.

Other officials who were sworn into office as Assistant Regional Directors were Valentino C. Perdido (Region II), Remelyn R. Recoter and Joyce S. Wendam (Region VI), Eduardo Z. Alama and Angel C. Enriquez (Region VII), Constancio G. Alama (Region IX), Roxana H. Hojas (Region X), and Teodora Pellerin-Fiel (Region XIII).

Dr. Solsoloy is an entomologist by profession. He holds a Scientist I conferment under the Department of Science and Technology's (DOST) Scientific Career System and a Ph.D. degree in Entomology with cognates in Management and Agronomy from the University of the Philippines Los Baños (UPLB). He has held various positions in relation to this field, one of which is as Insect Pest Management (IPM) consultant at the Euroconsult Firm of the Netherlands based in Indonesia. He was once the head of the Crop Protection Department of the former Cotton Research and Development Institute (CRDI), which recognized him for his outstanding work.

DA Sec. Proceso J. Alcala (left) officiates the oathtaking of BAR Asst. Dir. Teodoro S. Solsoloy (right) of BAR. Photo: ACONSTANTINO

As a researcher, he has conducted various research works related to cropping systems and pest management on crops. One of his most significant accomplishments as a scientist is a pioneering work on the now famous *Trichogramma chilonis*, an effective biological control agent against the cotton bollworm, *Helicoverpa armigera*. He served as professor in crop production and crop protection at the Mariano Marcos State University (MMSU) during which the DA-Region I awarded him the Best Agriculture Research Paper Award in 1982. In 1998, the Batac Science Community gave him a plaque of recognition as scientist while the Department of Agriculture (DA) granted him the 1998 Outstanding DA Employee in Research award. It was also in the same year that he was awarded the *Gawad Saka Outstanding Researcher* in the country. He was recently given the Dr. Priscilla C. Sanchez Award for excellence in research by the International Society of Southeast Asian Agricultural Sciences (ISSAAS)-Philippines.

He is happily married to Dr. Aida D. Solsoloy, another DOST-conferred scientist from the Cotton Development Administration (CODA), and they are blessed with three children. ### ***(Rita T. dela Cruz)***

BAR Chronicle
BUREAU OF AGRICULTURAL RESEARCH

BAR CHRONICLE is published monthly by the Applied Communication Division of the Department of Agriculture - Bureau of Agricultural Research, RDMIC Building, Visayas Avenue, cor. Elliptical Road, Diliman, Quezon City 1104 Philippines.

This publication provides regular updates on DA-BAR's activities as the country's national coordinator for agriculture and fisheries R&D. It also highlights features and news articles concerning NaRDSAF-member institutions.

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ISSN 1655-3942
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Foreign chambers...*from page 10*

toll roads proven to be growth contributors in Central, North, and South Luzon, and the technology upgrades that were put in place.

Like the previous infrastructure sub-sectors mentioned above, the transport outlook for 2011 calls for heightened Public-Private Partnership (PPP); development and execution of expansion programs; seamless expressway travel; and improved access to tourist destinations.

Fast tracking right-of-way processing, improving access to long-term capital, and unification of standards are some of the parameters for reform of the transport sector.

Mr. John D. Forbes, Sr., Advisor of the American Chamber of Commerce, presented the 2010 accomplishments and desired reforms of the ***Manufacturing*** sector. According to Mr. Forbes, the manufacturing sector has increased actions against smuggling, recovered in exports by over 40 percent, and has been instrumental in shaping government policies to improve the business environment.

The reforms being sought by the stakeholders of the said sector include: formulation of policy to understand better and thus exploit new opportunities created by new trade agreements in Asia; manufacturing for the domestic economy; exports to have high priority using an industrial master plan; positioning the Philippines as an alternative to China (where costs are rising); and Philippine branding campaign to promote the Filipino Workers.

The ***Mining*** industry in general reported a positive 36 percent growth during the first half of 2010 from 22 percent the year before. This growth translates to over US$3B contribution to the Philippine economy. Gross Value Added (GVA) in real prices increased to US$2.04B registering a 2 percent GDP contribution. These major accomplishments were presented by Mr. Benjamin Philip G. Romualdez, President of the Chamber of Mines of the Philippines.

Mr. Romualdez was optimistic in saying that metal prices will remain strong for 2011 as global demand continues to outstrip supply. Demand comes mostly from emerging economies in Asia. In terms of investment, 19 large mining projects are in the pipeline with a total investment of US $12.92B, he concluded.

For this sector, Mr. Romualdez recommended the creation of a stable investment environment to promote local and foreign investments in the mining industry. He added that transparency and good governance shall help reduce the cost of doing business.

On ***Tourism,*** a presentation was made by Mr. Jose Clemente, Director and President of Worldwalker Destination, Inc., who reported that tourism arrivals in the Philippines remained stable despite the weak global economy. Domestic travel is now a big contributor and tourism destinations in the country have received recognition from award-giving bodies.

Mr. Clemente hopes to see more directions and clearer signals from the Department of Tourism (DOT) on tourism policies. There is also the need to allocate more resources to the tourism industry. And lastly, he pointed out that we should increase accessibility and make policies conducive to the industry in general.

After the presentations on the Seven Big Winners, an open forum followed. Mr. David Celdran, a well known veteran broadcast journalist with more than 20 years of experience in print and broadcast media, served as the moderator and panelist at the same time.

The Department of Agriculture-Bureau of Agricultural Research (DA-BAR) was one of the participating organizations. The joint chambers' meeting was attended by BAR staff namely: Mr. Anthony Obligado, OIC head of the Technology Commercialization Unit (TCU); Ms. Evelyn Juanillo, agribusiness coordinator of TCU; and Mr. Patrick R.A. Lesaca of the Applied Communication Division (ACD).

Mr. Austen Chamberlain, president of the American Chamber of Commerce, congratulated all the presenters and thanked the Philippine government and all the chambers involved for making the event a successful one. ### ***(Patrick R.A. Lesaca)***

Photo: RDELACRUZ

AGRITOURISM

...is becoming more and more recognized as a viable option both to increase revenues on farm and promote sustainable agricultural production.

Site of the CPAR-IFS in Brgy. Hornalan, Calamba City.

green corn – yellow corn + legumes, and to increase corn yield by 15 percent. Thus, farmers involved stand to benefit from the adoption of technologies learned through seminars and trainings that are provided to them.

Since the project started in the early part of 2010, its impact on the communities nearby and its economic benefits are gradually being felt by local farmers, especially those belonging to the Calamba Upland Farmers Multi Purpose Cooperative (CUFMPC). CUFMPS is composed of 50 farmers from five barangays namely, *Hornalan, Bunggo, Burol, Palo Alto,* and *Kay-Anlog*, and is currently chaired by Mr. Renato Alcantara.

Among the farmer cooperators involved in the project is the couple, Sofronio and Vicky Cabrera of Busil, Silangan, Calamba. They planted green corn on their 0.4 ha lot farm in Brgy. Bunggo on 6 September 2010 intercropped with upo. According to the couple, based on their standing crop, they could harvest around 4,000 premium cobs (class A) and 1,500 cobs (class B), the average selling price of which are P8.00 and P5.00, respectively. Additional income will be realized when they sell their vegetable produce. Mr. and Mrs. Cabrera have been corn farmers for the past 20 years and will continue to be corn farmers because of the incremental income through the IFS.

Another farmer cooperator, Mr. Remigio Villamayor, Jr., represented by Mr. Macario Atienza of Brgy Hornalan showcased their 0.6 ha farm planted to green corn and legume. Nearby, four heads of cattle and two carabaos are being raised as farm and work animals and are a component of their IFS.

One advantage behind raising livestock is that, when the livestock manure is spread on the soil, their wastes will be incorporated as a source of soil nutrients and this will improve soil fertility. Another technology used in IFS is the composting of livestock wastes with chicken dung to produce a low-quality fertilizer and the use of this compost material as soil conditioner. "Waste" from these animals possess value as it becomes an input for another part of the system which reduces costs and, therefore, improves production and income of farmers.

The Integrated Farming Systems concept developed by STIARC in this project study has enabled the proponent to develop a framework for an alternative development model that improves the viability of small-sized farming operations, particularly when ecological sustainability is considered.

In order to maximize the potential and benefits of an IFS, the project proponents and the LGUs involved conducted a Farmers' Field School in order to educate corn and vegetable farmers on the importance of selecting the best (corn and vegetable) varieties suited to their area along with the use of organic fertilizers and soil inoculants, such as *Bio N*, and the utilization of *Trichogramma* sp. and earwigs (*Euborellia annulata*) as biological means of pest control.

DA-RFU-IV-A has already conducted a 16-week seminar and field demo-training in Brgys. *Burol* and *Palo Alto*. Sixty four corn and vegetable farmers are expected to finish the program before the end of the year.

On the part of BAR, the Calamba CPAR is viewed as an effective strategy for empowering local communities. It will institutionalize the use of appropriate technologies and farming measures for the development of progressive farming communities.

The involvement and support of the Local Government, particularly the Municipality of Calamba in this endeavor is really tremendous. The provincial and city agriculturists have shown their dedication and commitment in uplifting the lives of their constituents.

The ingredients for an agricultural revolution are, perhaps, in place already needing only that if we all push the button that says *"Progress"* at the same time. ###

Sources:
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2. *STIARC Project Study*


Ms. Avelita Rosales (right) demonstrates the proper"ear tagging" of Trichogramma card to Mr. Macario Atienza, (left) one of the CPAR farmer-cooperators.Site of the CPAR-IFS in Brgy. Hornalan, Calamba City.

Light roasted coffee found to contain higher amount of antioxidants

Findings of the study conducted by Dr. Ruel M. Mojica, a grantee of the UP-NSRI/DA-BAR Post Doctoral and Senior Scientist Research Fellowship in Basic Research for Agriculture and Fisheries, show that light roasted coffee gives the highest phenolic content and antioxidant activity among coffee samples roasted to varying degrees.

In his research titled, "Influence of Roasting on the Phenolic Content and Antioxidant Activity of the Philippine Coffee," he found that degree of roasting has significant effects on the antioxidant activity of both *Coffea robusta* and *C. liberica* samples.

In his report, roasted beans generally contain less *polyphenols* than green beans, since more than 60 percent of *chlorogenic* acid present in green coffee is degraded upon roasting. However, in the research conducted, "considerable increase" in phenolic content occurred in light roast samples. Phenolic content nonetheless begins to decrease in medium roast to very dark roast samples. It is believed that other polyphenolic substances in coffee samples are being produced upon application of a sufficient amount of heat. It was also observed that antioxidant activities decrease with an increase in the degree of roast.

Antioxidant level was investigated by measuring the total phenolic content while the assay of antioxidant activities used the radical scavenging capacity and reducing power as parameters.

Photo from: http://www.oncoffeemakers.com

"Although several studies have been done on the chemical composition of crops, fewer studies have been made on the antioxidant activity of coffee in the Philippines. In fact, no studies have been reported on the chemical characteristics and antioxidant activity of Philippine coffee," claimed the researcher. "If ever there were, these would be on Robusta only. Yet we have four varieties."

According to Dr. Mojica, his study originally included only two varieties of Philippine coffee (*C. robusta* and *C. liberica*) and three degrees of roasting (light, medium, and dark roasts). Given the luxury of time, he decided to include the varieties, *C. excelsa* and *C. arabica*, to complete the four commercially-viable varieties of coffee, and very dark roast as another degree of roasting.

"With the recent changes, the study has turned into a comprehensive one. So by the time it is completed, this will serve as baseline information on the antioxidant properties and phenolic contents of the four Philippine coffee varieties," said the research fellowship grantee.

According to the Philippine Coffee Board, the Philippines is one of the few countries that produces four varieties of commercially-viable coffee: Arabica, Liberica (*Barako*), Excelsa, and Robusta.

Dr. Mojica, an assistant professor at the Cavite State University, said that by determining the antioxidant properties of each variety as affected by a certain degree of roasting, local coffee processors could use the information to produce better blends of coffee that have high antioxidant levels without sacrificing the taste, benefitting both their profit and the health of the consumers.

"Farmers, on the other hand, will be encouraged to plant coffee and will eventually regain their interest in engaging with the coffee industry," said Dr. Mojica. ### ***(Angelito A. Paguio, Jr.)***

For more information, please email Dr. Ruel M. Mojica of Cavite State University, Don Severino delas Alas Campus, Indang, Cavite at ruelmojica@yahoo.com


Dr. Ruel M. Mojica doing the procedure on determining the scavenging activity of DPPH radical to measure the antioxidant activities of the coffee samples. Photo: AAHACHERO

BAR takes part in public-private agribusiness partnership

To develop and enhance Ilocos Norte's local products such as *bagnet*, longaniza, *basi, duhat*, *sukang iloko*, *malunggay* chips and fish specialties, the Bureau of Agricultural of Research (BAR) has been tapped as one of the government agencies to help form a public-private agribusiness partnership.

Seeing the wide-array of Philippine products displayed and marketed at the DA-Agribusiness Export Showroom (AES) during a visit to the department, Ilocos Norte Governor Imee R. Marcos, requested for DA's assistance in helping the small and medium entrepreneurs bring their products to markets outside the province. She aims to have these products included in the AES as well as other places where the *Pinoy Agri-Karts* are deployed. Other possible outlets being sought are the One Town One Product (OTOP) Showroom of the Department of Trade and Industry (DTI) in Macapagal Avenue, and the Philfruits ARC Outlet of the Department of Agrarian Reform (DAR).

The AES was officially set up under the umbrella of the Philippine Agricultural Development and Commercial Corporation (PADCC), the agribusiness investments promotion and marketing corporate arm of the Department of Agriculture (DA). The showroom now showcases and displays more than a thousand products ranging from snack food to health and wellness products. The AES, through PADCC, is now in partnership with 131 emerging and established companies/suppliers all over the country.

Ilocos Norte's local products and delicacies which are being considered for product development and enhancement to penetrate the bigger market.

Photo: from DA-AFIS

Taking the lead to help Ilocos Norte entrepreneurs, the PADCC-AES has been conducting a series of meetings with the local government unit of Ilocos Norte and representatives from BAR, DTI, Department of Science and Technology (DOST), Food and Drug Administration (FDA), National Meat Inspection Service (NMIS), DA-Agribusiness and Marketing Assistance Service (AMAS), and Philippine Food Processors and Exporters Organization, Inc. (PhilFoodEx).

For the various products mentioned, there is need for effective product packaging, marketing, distribution of Ilocos products outside the region, and FDA certification. During Governor Marcos' visit, Mr. Oji Reyes of PhilFoodEx also suggested putting up of facilities like a packaging center and processing plant.

BAR, through its National Technology Commercialization Program (NTCP), has tied-up with R&D institutions (e.g. state, colleges and universities, DA-Regional Fields Units, attached agencies and bureaus), LGUs, non-government organizations and foundations, for the development of local enterprises and improvement of agriculture and fisheries related industries. The NTCP highlights R&D breakthroughs and mature technologies and gives emphasis on technology transfer, patenting, promotion, application and utilization, and commercialization.

Ilocos Norte Governor Imee Marcos (5th from left) during a photo with DA-Agribusiness Export Showroom Unit Head Minky Alba (4th from left), DA-BAR Agribusiness Coordinator Evelyn Juanillo (3rd from right) and other representatives from partner agencies.

Photo: from DA-AFIS

"BAR can provide funding assistance only to organized groups such as cooperatives or farmer associations," BAR's Agribusiness Coordinator, Evelyn Juanillo, stressed. Following this guideline, an organized group that can submit proposals to BAR to avail of its assistance shall be established in Ilocos Norte.

As part of the support for the province of Ilocos Norte, a training/lecture/workshop for Ilocos Norte food and agri processors titled, "Ilocos Norte Marketing and Entrepreneurship Enhancement (IMEE)", was held at the Provincial Convention Center in Ilocos Norte which was attended by 50 selected entrepreneurs in the province. The visitors also went to local plants to observe the manufacturers' production process flow.

At the end of the activity, the Mangantayon/Pinakbet Association was organized and formed with members coming from the processors of different agriculture products of Ilocos Norte. The manufacturers will go through product development to be assisted by the various government agencies. The group aims to improve their products for the Manila market, participate in trade fairs, and get into the *pasalubong* centers in Ilocos Norte. ### ***(Ma. Eloisa H. Aquino)***

The CPAR Way:

Igniting an agricultural revolution

Story by:
PATRICK R.A. LESACA
Photos by:
RICARDO G. BERNARDO

Calamba is a first class city in the province of Laguna. It is only 54 kilometers south of Manila and is a progressive one due to the presence of industrial plants and export processing zones --- not to mention the numerous hot springs bathhouses and resorts. Calamba is also historically significant as the birth place of the Philippines' national hero, Dr. Jose Rizal.

Calamba lies at the northern slopes of Mount Makiling. The southern terminus of the South Luzon Expressway is in Calamba and this geographic location makes the city a gateway to the southern provinces of Luzon. The highway at the end of the South Luzon Expressway leads east to the other towns of Laguna and south towards the provinces of Batangas and Quezon. Calamba City is bordered by Cabuyao to the north, Los Baños to the east, by the province of Batangas to the south, specifically the municipalities of Santo Tomas and Talisay, and by the province of Cavite to the west, with Tagaytay City and Silang. Calamba City is the 2nd largest city in Laguna province in terms of land area after San Pablo City. *(Source: Wikipedia)*

Despite being an industrial haven as a result of urbanization, much of the city remains agricultural. Unknown to many urban dwellers, Calamba's total agricultural land area is 1,991 hectares composed of 1,148 hectares (lowland) and 843 hectares (upland). According to City Agriculturist, Ms. Aurea Alcasabas, growing corn and vegetables are the primary sources of farmers' income both in the lowland and upland areas.

An agricultural revolution is taking place in Calamba and a concrete indication that it indeed exists is taking place in the upland areas of *Barangays Bunggo* and *Hornalan* in Calamba City where, through the funding support and assistance of the Bureau of Agricultural Research (DA-BAR), the project, "Community-based Participatory Action Research (CPAR) on Green Corn – Yellow Corn + Legumes Integrated Farming Systems (IFS) in the upland areas in Calamba, Laguna", is being conducted.

The Community-based Participatory Action Research (CPAR) is one of the banner programs of the DA-BAR which is designed to promote the integrated production management system in the community. The participatory nature of CPAR gives attention to holistic orientation in the overall management of production. All of the DA-Regional Field Units (RFUs) are conducting CPAR projects.

The Integrated Farming System (IFS) is an alternative approach to farming as compared to existing monoculture approaches. It refers to agricultural systems that integrate livestock and crop production and may sometimes be known as integrated biosystems. The IFS includes a range of resource-saving practices the purpose of which is to enhance the farmer's profit and achieve sustained production levels. The cropping pattern in the project area consists of green corn – vegetables – yellow corn. The integration of legumes in the cropping pattern maximizes the utilization of land during the fallow period and can supplement the soil's nutrient elements, thus increasing the farmers' income.

The CPAR project in Calamba is being implemented by the Southern Tagalog Integrated Agricultural Research Center (STIARC) of the Department of Agriculture RFU IV-A led by Ms. Avelita M. Rosales as the Project Leader, and Lucina Africa, Marissa Sanchez, Severino Caraan, Grace Legaspi as Study Leaders and Research Assistants. The project is being conducted in collaboration with the Office of the Provincial Agriculturist of Laguna Province through Ms. Cristina D. Goma and City Agriculturist Alcasabas.

The main objective of the project is to improve land productivity and increase farmers' income by at least 10 percent, through the production of

Filipino participants during IRRDB Conference in China: (L-R) Mr. Bibo Alcala, rubber consultant; Dr. Emma Sales, professor, USM; Dr. Teodoro Solsoloy, assistant director, BAR; Dr. Jesus Antonio Derije, president, USM; Mr. Jerry Gil Murao, rubber planter; Dr. Arturo Castillo, professor, UPLB; and Mr. Rodolfo Galang, rubber RDE coordinator, BAR. Photo: from RGALANG

input of fossil energy and materials in other processes for the rubber industry to develop itself into a real low-carbon green industry and make itself adapted to global climate change and, at the same time, make its own contribution to the mitigation efforts.

There were 119 technical papers and 37 poster papers presented including topics on selection and breeding of rubber, physiology of rubber tapping, cultivation and environment, pest and disease management, biotechnology, product processing, and economic management of rubber plantations.

Three of the technical papers were presented by the Filipino participants, namely: 1) "SSR Markers for Genetic Profiling and Authentication of Rubber Germplasm in the Philippines" by Dr. Emma Sales of USM; 2) "Above-ground Carbon Stock Estimates of Rubber Plantation in Makiling Forest Reserve" by Dr. Arturo Castillo of UPLB; and 3) "A Report on Current Activities on Rubber R&D in the Philippines" by Mr. Rodolfo Galang of DA-BAR.

A field trip to rubber plantations in Sanya, China was also held including a visit to the NANMAO State Farm located in Baoting County, Southeast Hainan. According to Mr. Galang, the total area of this plantation is 4,666 ha, of which 3,867 ha is already being tapped. "The rubber plantations in Hainan have fertile soil with sufficient rainfall and trees can be tapped eight years after transplanting. Typhoons are the major limiting factor of rubber production in the county. The most widespread clone planted is PR 107 because of its good performance against strong winds. Dafen 95, a local clone is also planted in a sizeable area of the plantation," he reported.

IRRDB is a research and development network that brings together natural rubber research institutes from major natural rubber producing countries in the world. Established in 1934, IRRDB covers all aspects of natural rubber production from the cultivation of *Hevea* to the development of new products. Among its major member countries are Cambodia, China, Cote d'Ivoire, France, Guatemala, India, Indonesia, Malaysia, Myanmar, Nigeria, Philippines, Sri Lanka, Thailand, and Vietnam.

Currently, the top five natural rubber producing countries according to the International Rubber Study Group (IRSG) Report (Jan/Mar, 2010) are: Thailand (3,086,000 m/t), Indonesia (2,535,000 m/t), Malaysia (1,199,000 m/t), India (811,000 m/t), and Vietnam (606,000 m/t). Other leading producers of NR are: China, Ivory Coast, Sri Lanka, Brazil, and Philippines. ### ***(Rita T. dela Cruz and Rodolfo L. Galang)***

Multinational field trip participants led by Dr. Abdul Aziz Kadir and Dr. Chen Qiubo, NANMAO State Farm, Baoting, Hainan, China Photo from: RGALANG

Given its high-impact potential to farmers and the economy, rubber is currently one of the top five priority commodities of DA. BAR is already funding projects devoted to research and development (R&D), commercialization of rubber tree production and rubber harvesting in the country which are implemented through various research facilities of the DA-RFUs), and selected SUCs.

BAR supports health and wellness campaigns; promotes natural ingredients and products

The Bureau of Agricultural Research (BAR), with its on-going initiatives to support health and wellness advocacies to increase awareness, consciousness and understanding of the importance of the industry, was invited to the 1st Health and Wellness Association of Quezon City (HAWAQC) Stakeholders Forum held at the Sulo Riviera Hotel in Quezon City.

BAR Agribusiness Coordinator, Ms. Evelyn Juanillo, made a presentation titled, "Natural ingredients and products for the health and wellness industry".

"The Department of Agriculture (DA), through BAR, the Bureau of Plant Industry (BPI) and the DA-Biotech Program, has taken the initial steps to support the natural ingredients and products industry by funding research and development on different plants that have medicinal and health values," Ms. Juanillo said.

Also, in view of Proclamation No. 1280 declaring the month of October as the "National Health and Wellness Tourism (HWT) Month", the DA, through BAR, launched the Indigenous Plants for Health and Wellness (IPHW) Program. Together with BPI and the University of the Philippines Los Baños, the bureau crafted the IPHW roadmap for 2010-2015. This is among BAR's on-going initiatives to promote health and wellness service in coordination with other government institutions, state universities and colleges (SUCs), and private sectors, taking into consideration the need to conserve Philippine biodiversity.

"This RDE program aims to do more in-depth studies of indigenous plants for various purposes such as functional food, herbal medicine, and as raw materials for pharmaceutical and cosmeceutical products," she added.

HAWAQC was formed to actively promote the integration between spa and the health and wellness facilities and providers in Quezon City. In partnership with the local government unit of Quezon City, the event showcased the state of the industry, its economic contribution, and accompanying solutions for making health and wellness a major economic driver in the city.

Also highlighting the event was the signing of the Memorandum of Understanding between the Hands on Health-Australia and the officers of HAWAQC. "We are forging partnerships with international organizations for the continuous development and upliftment of the wellness and spa industry. We would like to empower our people through a sustainable training, treatment and employment program," HAWAQC President Marjorie Lopingco said. ### ***(Ma. Eloisa H. Aquino)***

Agri growth dips by 2.6%, Jan-Sept 2010

Despite the Department of Agriculture's (DA) interventions to minimize the effects of El Niño from January to September 2010, the country's agriculture sector slowed down by 2.62 percent, even as the poultry, livestock, and fisheries subsectors posted positive growth rates.

The prolonged dry spell exacted a heavy toll on the crops subsector, as it declined by 7.2 percent. The late onset of the rainy season delayed planting of *palay* (unmilled rice) and corn to July and August. Hence, the bulk of *palay* and corn harvests will be accounted in the 4th quarter.

In terms of value, total agricultural production grossed P882.7 billion at current prices.
The poultry, livestock and fisheries subsectors—combining for about 56 percent of total agricultural output—posted positive growths of 3 percent, 1percent and 0.7 percent, respectively.

The value of production of the three subsectors amounted to P428.9 billion (B), led by fisheries (P163.6B), livestock (P152.1B), and poultry (P113.2B).

On the other hand the crops subsector, contributing 44 percent to total agricultural production, dipped by 7.24 percent. Total gross output was valued at P453.9 billion at current prices.

Production of *palay* and corn dipped by similar 15 percent - 9.27 million metric tons and 4.73 million metric tons, respectively. Total *palay* harvest amounted to P140.6B, and P51.9B for corn.

Other major crops, however, registered positive growth rates, led by tobacco (up by 11.6 percent), mango (7.6 percent), banana (1.2 percent) and abaca (1 percent).

The poultry subsector grossed P113.2B at current prices, contributing 15.5 percent to total agricultural output. Chicken production grew by 2.8 percent to P84.3B, and egg production went up by 5.9 percent to P24.8B.

The livestock subsector grossed P152.1B at current prices, accounting for 12.7 percent of total agricultural output. Production of hogs increased by 0.8 percent to P124.8B, carabao grew by 3.6 percent to P7.1B, and dairy was up by 14.6 percent to P359M.

The fisheries subsector inched up by 0.7 percent, with a total value of P163.6B, accounting for 27.4 percent of total agricultural output. Aquaculture production was up by 1.9 percent to P59.9B, municipal fisheries grew by 0.5 percent to P58.2B, and commercial fisheries went down by 1.8 percent, valued at P45.5B.

Overall, farmers once again enjoyed better prices for their products as average farmgate prices increased by 5.8 percent. ### ***(DA Information Service)***

6th National Biotech Week concluded

Opening of the NBW exhibit at SM Mall of Asia. DA Usec Segfredo Serrano(center) leads the cutting of the ribbon with (L-R) BAR Dir.Nicomedes Eleazar, DA-Biotechnology Program Dir. Candida Adalla, DTI Dir. Dennis Miralles, and DOH Dir. Nazarita Tacandong. Photo: RBERNARDO

Carrying the theme: "*Bioteknolohiya para sa Kalikasan, Kalusugan, Kagandahan, Kabuhayan at Kaunlaran*" and the tagline: "*Ok ang 5K sa Biotech: Pagyamanin, Ito ay Atin!*"- the Department of Agriculture (DA) led this year's celebration of the 6th National Biotechnology Week (NBW) held on 22-28 November 2010. With the Department of Environment and Natural Resources (DENR) as co-chair, the weeklong event was held at the Nido Fortified Science Discovery Center Events Room and IMAX 2nd Floor Lobby of the SM Mall of Asia (MOA) in Pasay City.

Featured in the celebration were educational and informative activities highlighting biotechnology as a tool toward food security and productivity. The opening ceremonies were held on November 22 highlighted by the formal opening of the exhibits led by DA Secretary Proceso J. Alcala and other government key officials from participating agencies.

Local biotech products and researches were also staged for public viewing to underscore biotechnology's important role in society particularly in the areas of nature and biodiversity, health and wellness, and livelihood and industry, and in the economy.

Other activities included scientific seminars and forums, and film showing featuring biotechnology research, development and applications.

There were also sponsored activities including the "National Biotechnology Conference for Teachers" held on November 24 and "Biotech for Kids" on November 25. There were presentations of "Promising Technologies: A Technology Presentation Contest" on November 23 and the "Jose G. Burgos Awards for Biotech Journalism" on November 25 which gives due recognition to the media for their outstanding contributions in pushing further the frontiers of scientific inquiry through their writings. The weeklong activities were officially concluded on November 28, highlighted by the turnover of the NBW celebration chairmanship to the DENR as the host for next year.

The National Biotech Week is annually celebrated in accordance with Proclamation 1414 which declares every last week of November of every year as National Biotechnology Week. The national policy was issued "to promote the safe and responsible use of modern biotechnology and its products, and to achieve and sustain food security, equitable access to health services, sustainable and safe environment, and industry development."

Secretaries of the departments that were tasked to lead the celebration include those of the Department of Agriculture (DA); Department of Science and Technology (DOST); Department of Health (DOH); Department of Environment and Natural Resources (DENR); Department of the Interior and Local Government (DILG); Department of Trade and Industry (DTI); and the Department of Education (DepEd).

Each year, two department secretaries are tasked to co-chair the National Biotechnology Week Committee. This year, it is DA Secretary Proceso J. Alcala as chair and DENR Secretary Ramon J.P. Paje as co-chair The NBW Organizing Committee is formed to ensure efficient preparations for the week-long celebration. For 2010, the National Biotechnology Week Inter-Agency Committee is chaired by DA Undersecretary Segfredo R. Serrano with close support from Dr. Candida Adalla, the Director of the DA-Biotechnology Program Implementing Unit.

The Bureau of Agricultural Research (BAR) is one of the sponsors of this year's NBW celebration. ###
(Rita T. dela Cruz)

Dir. Nicomedes Eleazar visits the BAR booth during the National Biotech Week exhibit at the SM MOA. With her is Ms. Julia Lapitan, head of BAR's Applied Com.
Photo: RDELACRUZ

International rubber con highlights impact of climate change on natural rubber industry

...there is a necessity to utilize the carbon sequestration ability of rubber plantations and the need to claim benefits from the Clean Development Mechanism (CDM) and the global carbon trading.

Photo: RGALANG

With nearly 500 attendees, 200 of which came from the member-countries of the International Rubber Research and Development Board (IRRDB), the "IRRDB Annual Meeting and International Rubber Conference 2010" was held on 18-22 October 2010 in Sanya, Hainan, China. With the theme, "Climate change, low carbon economy and sustainable natural rubber industry," this gathering of experts and stakeholders from the natural rubber (NR) industry was organized by IRRDB and sponsored by the Chinese Academy of Tropical Agricultural Sciences (CATAS). It was noted that the number of foreign participants in this meeting was said to be the highest in the 50 years' history of IRRDB.

Ten participants from the Philippines attended the conference. They came from the Department of Agriculture-Bureau of Agricultural Research (DA-BAR), University of the Philippines Los Baños (UPLB), University of Southern Mindanao (USM), and rubber planters from Mindanao.

BAR, being part of an inter-agency collaboration that initiated the DA's 10-year National Rubber Development Program (NRDP), supports the programs of DA and its partner-institutions on intensifying the development of rubber plantations nationwide. The NRDP aims to position the Philippines as a major producer in the world NR industry.

Given its high-impact potential to farmers and the economy, rubber (from *Hevea brasiliensis* or the *Para* rubber tree) is currently one of the top five priority commodities of DA. BAR is already funding projects devoted to research and development (R&D), commercialization of rubber tree production and rubber harvesting in the country which are implemented through various research facilities of the DA-Regional Field Units (RFUs), and selected state universities and colleges (SUCs).

Aside from generating employment in the rural areas and the utilization of idle hillylands and uplands, rubber cultivation enhances environmental rehabilitation being an excellent plant species in the sequestration of carbon dioxide in the air - which was the theme for this year's annual meeting and international conference.

The opening ceremony was graced by the presence of a senior official of the Ministry of Agriculture of China, the city mayor of Sanya, and the president of CATAS.

Dr Abdul Aziz B S A Kadir, secretary general of IRRDB underscored the importance of natural rubber output of IRRDB member-countries which, together, account for 99 percent of the world's total production. In connection with the theme, he relayed the importance of coping with current challenges including climate change and its impact on the NR industry. He added the necessity to utilize the carbon sequestration ability of rubber plantations and the need to claim benefits from the Clean Development Mechanism (CDM) and the global carbon trading.

Highlighting the two-day conference were presentations of three keynote papers and discussions on specialized topics, and experts and scholars' views on how the natural rubber industry could respond to global climate change, enable rubber trees to perform the carbon sequestration function and reduce greenhouse gas emissions from production and processing, and the

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guests in the prestigious gathering. He congratulated the personalities behind the Seven Big Winners and articulated the fact that the 'perceived growth' for next year will send a strong signal that the Republic is on the right track. And as a testament of support to this undertaking, leading business personalities laid down their respective outlook for 2011.

Outlook for 2011: The 7 Big Winners

On ***Agribusiness***, Mr. Roberto Amores, President of Hi-Las Marketing and Vice President for Agriculture of the Philippine Chamber of Commerce and Industry, presented his views and prospects for Philippine Agriculture using the 2010 accomplishment (Jan-Aug 2010) of the sector as reference. Mr. Amores reported that the agri-food exports reached US$ 188.42 M. in August 2010 compared to its August 2009 level of US$ 174.71 M.

As of August 2010, the agriculture sub-sectors showed good gains except for fruits and vegetables whose production declined by 19.36 percent (from US$495.36 million in 2009 to US$399.91 million in 2010). Processed food and beverages were up by 6.82 percent (from US$571.71 million in 2009 to US$610.68 million in 2010) while marine and seafood production went up slightly by 1.31 percent (from US$331.47 million in 2009 to US$335.81 million in 2010).

Mr. Amores also said that, despite increases in production due to increased public investments in agriculture and the relatively fewer incidences of typhoons in the past three quarters of 2010, the country will continue to struggle to produce a surplus across all commodities in 2011. However, for rice, annual production is forecast to reach almost 12.7 million tons by 2013-2014, surpassing the 2009 level by over 18 percent. This will be fueled by continued improvements in infrastructure and yields, as the government looks to attain self-sufficiency.

In the case of corn, 20 percent growth is forecasted by 2013-2014. Corn production is expected to recover and return to growth driven by an expected expansion of the area under harvest to be brought about by increase in demand by the growing livestock sector which uses corn as a major feed ingredient.

As for the other growth indicators (2013-2014), coffee and sugar are seen to grow at 13 and 33 percent, respectively. The livestock industry will experience a steady growth. Demand for poultry will be strong over the period, according to Mr. Amores, as poultry production will increase by roughly 13.3 percent by 2014. Pork and cattle production will both remain bullish and are expected to increase by 12 and 2.1 percent, respectively.

Mr. Amores also enumerated some of the proposed agribusiness measures. In a nutshell, these are: increase production, reduce cost, improve access to credit by small and medium enterprises, provide adequate budget to fully implement AFMA, restore the "D" Quedan sugar allocation and, for government to be more transparent in terms of policies and procedures.

For the ***BPO* and *Creative Industries***, Mr. Oscar Sañez, President and CEO of the Business Process Association of the Philippines (BPAP), claimed that the sector generated over 500,000 direct employment and roughly 1-1.5 M of indirect employment. Export revenues reached over US$9B.

Mr. Sañez also reported that the country was named Offshoring Destination of the Year for 2010 by the National Outsourcing Association of the U.K. This, he said, was already the third time in four years.

For the 2011 BPO outlook, Mr. Sañez said that over 800,000 new jobs will be created by putting more programs and resources in place. By 2016, the projected employment by this sector will reach 1.4 M jobs, he added.

Among the desired reforms the sector would like to see in 2011 are: improved legislative environment by passing bills on data piracy; creation of the Department of Information and Communications Technology (DICT); amendments to the labor code; and funding support for a global awareness campaign on the Philippines as a center of excellence for BPO and creative service, among others.

As for ***Infrastructure*: *Public-Private Partnership***, mainstreaming of Public-Private Partnership (PPP) in the Philippines was the central point of Mr. Jon D. Lindbor who serves as the current Advisor for Public-Private Partnership (PPP) in the Office of the Director General of the Southeast Asia Department of the Asian Development Bank (ADB).

Mr. Lindbor said that PPP in the country's business environment will leverage and mobilize private capital. He said that, based on ADB estimates, Asia needs roughly $8 trillion for infrastructure investments for 2010-2020. PPP can serve as a tool for improved service and delivery and can act as a catalyst for broader sector reforms.

The ADB Advisor also said that the Philippines ranked number 10 among developing countries with total value of PPPs for period 1990-2008 amounting to $45B.

Mr. Lindbor summarized his points by saying that there is a real opportunity for the Philippines to re-emerge as a robust PPP market and investment destination. The country needs to mobilize both international and domestic sponsor/ investors in order to ensure a level playing field to attract world-class technology and management.

Another vital and important industry in the country is the ***Power*** sector, which was articulated on by Mr. Daniel E. Chalmers, Chairman and CEO of GN Power. Mr. Chalmers praised the accomplishments of the Power Sector and Liabilities and Management (PSALM) of the government on its successful privatization efforts. One noteworthy accomplishment of the power sector in 2010 was the transition from a highly-monopolized industry to a more distributed one.

In terms of outlook, Mr. Chalmers raised the possibility of open access and power retail competition that will help address the looming power shortage due to increase in power demand coupled with the retirement of old power plants.

Among the desired reforms for the power sector are: government aggressiveness in promoting open access and retail competition; consumers to be more proactive and educated in contracting their power supply as a prudent measure for their power requirement; and encouragement of private investors for additional capacity to support demand growth and create stability both in the grid and in the market.

The ***Ground Transport*** Infrastructure was presented by Mr. Ramoncito S. Fernandez, President and CEO of Metro Pacific Tollways Corporation. In 2010, the major accomplishments of the transport sector included P30-B worth of investments in

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Agribiotechnology holds opportunities for Filipinos

The country's achievements in biotechnology which adhere to safety and sustainability standards have benefitted the Filipino farmers and fisherfolk, said Agriculture Secretary Proceso Alcala in his keynote address during the opening ceremonies of the 6th National Biotechnology Week (NBW) held on 22 November 2010 at the Nido Fortified Science Discovery Center of the SM Mall of Asia in Pasay City.

"The dedication of our scientists in this field has paid off early as was specifically demonstrated when we faced misfortunes in the coconut industry as well as when army worms attacked several agricultural fields in the country. I believe that we can also revive our cotton industry through the help of biotechnology," said Secretary Alcala.

Agriculture Undersecretary Segfredo Serrano concurred with Secretary Alcala's appreciation for our scientists when he opened the Forum on Modern Agricultural Biotechnology: Philippine Experience and Opportunities later in the afternoon.

"Biotechnology can enhance and help develop and improve our chances at conquering poverty and hunger in this country. Science is a resource and the Filipino is a natural scientist," he said.

During the forum, experts from the government, academe, and non-government organization presented updates on modern agri-biotechnology. Dr. Clarito Barron, director, Bureau of Plant Industry (BPI) presented the status of biotechnology and the corn industry.

Photo: RBERNARDO

DA Secretary Proceso J. Alcala

(L-R) DOST-PCARRD Executive Director Patricio Faylon, BPI Director Clarito Barron, and BAR Director Nicomedes Eleazar listen as Agriculture Secretary Alcala delivers his message for the occasion. Photo: RBERNARDO

Biotechnology can enhance and help develop and improve our chances at conquering poverty and hunger in this country. Science is a resource and the Filipino is a natural scientist.

Dr. Barron talked about DA Administrative Order No. 8 which contains the rules and regulations for the importation and release into the environment of plants and plant products derived from the use of modern biotechnology.

On the other hand, Dr. Rhodora Aldemita of the International Service for Acquisition of Agri-biotech Applications (ISAAA) discussed the developments on the halal (Arabic for lawful or legal) status of genetically-modified crops and foods adopted by Islam.

Dr. Saturnina Halos, member of the biotechnology advisory team of the DA, meanwhile talked about the co-existence of modern biotech and organic agriculture.

A farmer likewise gave an inspiring testimonial on his success in planting Bt corn in his hometown in Mexico, Pampanga. Carlos Guevarra said the DA assisted him when he decided to plant the crop in his two-hectare lot.

"I couldn't believe my good fortune when I harvested eight tons of Bt corn way back in 2004. If I had allowed myself to be discouraged by people who were against Bt corn, my family could not have reaped the fruits of this technology," he said. ### ***(Miko Jazmine J. Mojica)***

Tapping the potential of natural ingredients

Photos from: http://www.naturalingredients.com

One way that our farmers could benefit from biotechnology is through the development of the Philippine natural ingredients industry, said Dr. Candida Adalla, program director of the Department of Agriculture's Biotechnology Program Implementing Unit (PIU).

Dr. Adalla was the overall coordinator for the 6th National Biotechnology Week (NBW) in November as DA served as host for this year's celebration. One of the highlights of the event was the holding of a public forum on the potentials of natural ingredients held on 27 November 2010.

In the forum, the sourcing, processing, and stakeholder partnership in the development of the natural ingredients industry in the country were discussed by invited speakers and experts from both the public and private sector.

Citing the growing demand for plant-based products in pharmaceutical, food, and cosmetic industries, Dr. Teresita Espino of O'Mark Enterprises discussed the potential impact of expanding the essential oils production in the country.

"By expanding our own production, more farmers will have a chance to generate income by supplying the raw materials for manufacturers. The reduction of our importation of natural ingredients will also mean savings for the country and a corresponding gain if we could export these to other countries," said Espino.

She also cited local studies on the essential oils that can be sourced from *ilang-ilang*, patchouli, lemongrass, citronella, banana, *sampaguita*, *kalamansi*, and rose. Moreover, she discussed the advantages of using the aqueous enzymatic extraction method which is a simple yet economical, safe, and high-yielding alternative to heat extraction for producing essential oils from plants.

On the other hand, Dr. Marco Nemesio Montaño from the Marine Science Institute, University of the Philippines Diliman, discussed the sources of natural ingredients from marine species.

In his presentation, he identified several natural ingredients from the rich algal biodiversity in the country and their applications. These are carrageenan, agar, sargassum, alginate, fucoxanthin, fucoidan, pigments, chitin, and chitosan which have several medicinal, cosmetic, agricultural, and nutritional uses.

"The Philippines is at the apex of marine biodiversity and, hence, is also a source of a multitude of natural ingredients. A lot of these are still unutilized. If we are serious in their development, we will need more technical personnel and intensive promotional efforts," said Dr. Montaño.

Meanwhile, Mr. Lito M. Abelarde, president of the Chamber of Herbal Industries of the Philippines, Inc. (CHIPI), discussed the state of the Philippine Herbal Industry. He said that private-public partnership is crucial to carving a niche in the markets of several industries it wishes to participate in. He likewise appealed for the strengthening of government support for research and development (R&D).

"We must have one national agenda or roadmap in order for the Philippine herbal industry to succeed. We have to agree to prioritize the products that we are going to promote and identify priority R&D activities that need to be done and come up, as well, with an inventory on what has been done already," he said.

Recognizing the need to harness the potential of biotechnology, vis-à-vis, the natural ingredients industry, the DA has been in the thick of supporting incubator facilities and R&D of several sources such as rice bran to produce high value edible oil and brown seaweeds for fucoidan for medicinal purposes. Other biotech-based technologies that are being given attention include the conservation of shrimp, multi-location field trials for open-pollinated variety of Bt eggplant, commercialization of bunchy top virus-resistant high-yielding abaca, and development of animal disease diagnosis kits.

The Bureau of Agricultural Research (BAR), the research arm of DA, meanwhile continues to support the natural ingredients program by funding several R&D and technology commercialization activities on commodities such as seaweeds, *banaba*, oregano, yacon, *moringa*, and other herbal plants. BAR is likewise exploring the potential of organically-produced raw materials in line with the national organic agriculture program. ### ***(Miko Jazmine J. Mojica)***

By expanding our own production, more farmers will have a chance to generate income by supplying the raw materials for manufacturers.

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health of workers in food production and the environment, 2) enabling farmers to increase productivity and profitability at reduced cost through the use of bio-fertilizers and non-toxic pest and disease control systems, and 3) providing viable alternative options that mitigate the causes of climate change.

As a part of the results of the writeshop, various organic R&D areas were identified, gathered, and compiled including: 1) evaluation of the effects of potential organic fertilizers on the growth and yield of plants, 2) assessing the efficacy of potential pesticides against pests and diseases, 3) use of various organic material for plant propagation and breeding, 4) studies on organic livestock and poultry production, and 5) community-based assessment of the impact and adoption of organic agricultural practices.

Meanwhile, among the issues and concerns highlighted at NOAC which are relevant to organic agriculture R&D included: 1) inappropriate or insufficient technical capability on organic farming, 2) lack of capital for farm operations and inadequate support from the government, 3) lack of awareness by most of the farmers on the certifying body for organic farming, 4) lack of awareness of the technical criteria in order to qualify as an organic farm, and 4) failure of farmers to separate organic products from non-organic products in marketing the produce.

Agriculture Secretary Proceso J. Alcala (2nd from right) and Usec Bernadette Romulo-Puyat (right) lead the ribbon-cutting ceremony to officially open the 7th National Organic Agriculture Conference. Joining the ceremony is BAR Dir. Nicomedes P. Eleazar (2nd from right, back row). Photo: from DA-AFIS

Other factors inhibiting farmers from practicing organic agriculture were shared and included: 1)I nsufficiency of technical know-how, 2) labor-intensiveness of operations, 3) lack of planting materials, 4) lack of support from the local governments for continuous training on organic farming, and 4) lack of marketing support for organic products.

BAR has long been an advocate of organic agriculture. In fact, part of the bureau's presentation was a list of BAR-funded Organic Agriculture R&D projects before the Organic Agriculture Law came into being.

In his presentation, Dir. Eleazar also pointed out that the two flagship programs of the bureau, namely: the National Technology Commercialization Program (NTCP) and the Community-based Participatory Action Research (CPAR) which are effective R&D formats that can be utilized as catalysts for enhancing the implementation of Organic Agriculture technologies.

While waiting for the approval of the Implementing Rules and Regulations of RA 10068, the R&D implementers (DA RFU RIARCs / RFRDC / SUCs / NGOs and other government agencies) are encouraged to go ahead in preparing project proposals on organic agriculture for submission to BAR. ### ***(Rodolfo F. Fernandez)***

Sec. Alcala and Usec. Puyat during one of the light moments in the conference. Photo: from DA-AFIS