

DA Kambingan targets 3,600 beneficiary-families

Over 3,600 households are expected to benefit from a proposed goat dispersal project of the Department of Agriculture (DA) that forms part of the fresh stimulus initiatives of the Arroyo administration to help Filipinos in the countryside cope with the global economic slide.

In a report to DA Secretary Arthur Yap, executive director Carlos Mendoza of the Livestock Development Council (LDC) said the goat dispersal program will allocate a module consisting of one buck and 30 does per municipality covered by the project.

Each module will have 15 beneficiaries or an equivalent of 45 beneficiaries per province, Mendoza said.

"This project is one of the DA's contribution to President Arroyo's Comprehensive Livelihood and Emergency Employment Program (CLEEP), which is a component of President Arroyo's P330-billion stimulus program to energize the domestic economy and help Filipinos ride out the deepening US-induced global recession," Mendoza said.

The biggest number of beneficiaries under the goat dispersal project will come from Central Luzon with 315 low-income households being targeted to take part in this initiative, he said.

Mendoza said the Cordillera Administrative Region, Bicol, Western Visayas, Eastern Visayas, and the Autonomous Region in Muslim Mindanao will each have 270 beneficiary-families.

A total of 225 families each are being targeted in the regions of Cagayan



photo by RDELACRUZ

Valley, Cavite-Laguna-Batangas-Rizal-Quezon (Calabarzon), Mindoro-Marinduque-Romblon-Palawan (MIMAROPA), Northern Mindanao and Caraga, he added.

Mendoza said the Ilocos Region, Central Visayas, Davao and Central Mindanao will have 180 families each benefiting from the project, while the Zamboanga region will have 135 household beneficiaries.

Yap had earlier ordered DA regional directors to immediately bid out its labor-intensive, high-impact projects as part of the Arroyo government's economic resiliency program.

"The plan is for the DA to speed up the implementation of these intervention projects in the first semester of the year to create a lot of

jobs and stimulate economic activity in the countryside by the time the full brunt of the global financial crisis is expected to be felt in the Philippines," Yap said.

He had noted that expediting the bidding process would help speed up the release of funds for such projects, given that under government auditing rules, no disbursements could be made unless the bidding processes are completed and the winning bidders are named.

Yap said that DA will closely monitor the implementation of its high-impact projects to ensure the judicious disbursement of funds particularly to its program partners in the private sector.

DA created national and

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POT for Asha peanut now available

A Package of Technology (POT) for the production of Asha peanut variety is now available to farmers for improving the productivity of peanut in the country.



photos by RDELACRUZ & JILAPITAN

Asha was developed and brought to the Philippines through a collaborative effort between the India-based research institution, the International Crops Research Institute for Semi-Arid Tropic (ICRISAT) and the Bureau of Agricultural Research (BAR). The big-seeded peanut variety is known to produce nuts larger than those traditionally grown in the country. Due to its size and high-yielding nature, Asha showed great potential in increasing the harvest and income of local peanut farmers.

The POT was developed by the Department of Agriculture-Cagayan Valley Integrated Agricultural Research Center (DA-CVIARC) through a three-year project on the production and

promotion of Asha peanut. Initiated in April 2005, Asha was tested for suitability in pilot areas in Cagayan including Ilagan, Isabela, and Iguig.

The project aimed to evaluate and compare the adaptability and agronomic performance of Asha with locally-grown peanut varieties. Various varietal tests were conducted on-station and on-farm, taking into consideration plant spacing, fertilizer, lime application rates, and other technology interventions. Results of the interventions served as the bases in the development of the POT for the suitable production of Asha variety.

Following the development of the POT is the production of seeds for the promotion and commercialization of Asha. According to DA-CVIARC, they

have produced 11,353 kg of seeds, valued at Php 567,650, using its five hectare production area in Ilagan, Isabela, and in the farms of DA-assisted seed growers. The seeds were distributed for planting purposes to farmer-producers and government accredited seed centers which were initially chosen for the project.

With Asha adapting well in Philippine soil along with the developed POT, peanut yield increased dramatically from 600 to 1,100 kg/ha. This translates from Php 15,000 to 27,000/ha increase in farmers' income.

To promote the appropriate use of Asha in the country, CVIARC produced and distributed Information Education Communication (IEC)

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BAR jumpstarts project on high-value, organic veggies

BAR's partnership with the state universities and colleges (SUCs) was further strengthened through a Memorandum of Agreement (MOA) which was signed with the Bataan Peninsula State University (BPSU) for the project titled, "Promotion of Protective Cultivation Technology for High Value Organic Vegetable Production".

Signing the MOA were Dir. Nicomedes P. Eleazar of BAR and Dr. Delfin O. Magpantay, president of BPSU.

The objectives of the project include the production of off-season high value organic vegetables, and the utilization of animal waste and plant residues as sources of organic fertilizers. The project will also

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RMTU confers Eleazar honorary doctorate in agricultural science



Dir. Nicomedes P. Eleazar (right) is conferred the doctorate degree in agricultural science.

The Ramon Magsaysay Technological University (RMTU) conferred BAR Director Nicomedes P. Eleazar a doctorate degree in agricultural science (*honoris causa*) for his outstanding accomplishments and contributions in the field of agricultural sciences particularly on research and development.

The conferment was given during the RMTU South Campuses 9th

Commencement Exercises on 2 April 2009 in its San Marcelino Campus, Zambales wherein Dir. Eleazar also served as the commencement speaker.

Past recipients of RMTU honorary doctorate degrees include high-ranking and well-respected government officials such as former Agriculture Secretary Luis P. Lorenzo, Sen. Ramon B. Magsaysay Jr., Sen. Edgardo J. Angara, and Sen. Manuel B. Villar.

In his address, Director Eleazar commended RMTU for being one of the centers of excellence in the region and for producing graduates who are competitive and can deliver results in the workplace.

"RMTU is one of our able and proactive partners at BAR and I applaud this university for serving as a learning institution that actively addresses the development agenda of the government," Eleazar stressed in his speech.

Graduates from RMTU's South Campuses include degree holders from the San Marcelino and Castillejos Campuses in Zambales, and Mondriaan Aura College in Olongapo City where RMTU offers a consortium program. Other RMTU campuses in Zambales are located in Botolan, Iba, Candelaria, Masinloc, and Sta. Cruz. Dr. Feliciano S. Rosete is RMTU's current president.

Agriculture and fisheries-related degrees are offered in various RMTU campuses. In the San Marcelino Campus,

the College of Agricultural Technology offers Bachelor Degree and Diploma in Agricultural Technology while the College of Animal Science and Veterinary Medicine offers Bachelor and Doctorate degrees in Animal Science and Veterinary Medicine, respectively.

In Botolan, RMTU offers Masters Degree in Agriculture and Forestry, respectively; BS Agriculture, BS Agribusiness, BS Forestry, Bachelor of Agricultural Technology, Diploma in Agricultural Technology, and Forest Ranger Certificate from the College of Agriculture and Forestry; BS Agricultural Education and BS Extension Education from the College of Agricultural Education and Rural Development; and BS Agricultural Engineering, BS Agro-Industrial Engineering, and BS Geodetic Engineering from the College of Agro-Industrial Engineering. The curriculum of Botolan Campus likewise includes agricultural science for high school students. Furthermore, RMTU's Candelaria Campus, College of Fisheries offers BS Fishery Education and BS Fisheries.

RMTU's history dates from 1998 when the Republic Act 8498 was put into law, thereby integrating the then Western Luzon Agricultural College, Ramon Magsaysay Polytechnic College, and Candelaria School of Fisheries into one university. (Miko Jazmine J.

National review and consultation workshop on Rubber RDE held



Panel of evaluators: (L-R) Dr. Romulo Cena of USM; Dr. Eufrocino Marfori of BIOTECH-UPLB; For. Nicasio Balahadia, MCME-UPLB; Dr. Emma Sales of CHED; and Mr. Roger Bagaforo of DA-RFU 9. (Inset photo) Dir. Nicomedes P. Eleazar expresses his support in strengthening the national RDE system for rubber particularly in contributing significant shares in the global trade for natural rubber.

The Bureau of Agricultural Research (BAR), being the lead agency in coordinating the research and development component of the National Rubber Development Program of the Department of Agriculture (DA), held a national review and consultation workshop on rubber research, development and extension (RDE) agenda and programs at the Bureau of Agricultural Research (BAR), RDMIC Building, Visayas Avenue, Diliman, Quezon City. The main objective of the activity is to have a common understanding of the goals and objectives of the national RDE project planning and implementation in upholding the rubber industry.

Specifically, it aims to: 1) plan for future activities and identify better coordination/collaboration activities amongst participating agencies implementing rubber projects in selected areas in the Philippines; 2) document and assess the status and accomplishments of the BAR-funded rubber RDE projects, including benchmark data on production, processing and marketing aspects; 3) document and assess manpower factor of

the national rubber RDE program; and 4) document and assess the technical, economic and policy requirements in the implementation of rubber RDE projects.

The consultation workshop kicked off with the opening remarks given by BAR Assistant Director Teodoro Solsoloy. He emphasized the importance of conducting the consultation workshop in strengthening linkages with the various stakeholders and identifying updates and recent developments in the national as well as global rubber industry. BAR's national coordinator for rubber, Mr. Rodolfo Galang, discussed the rationale of the activity and the workshop methodology while Region 12 coordinator, Angel Morcozo, served as the master of ceremony and the moderator during the plenary sessions.

As the only commercial source of natural rubber, rubber trees (*Hevea brasiliensis* Muell. Arg) has a lucrative market in the international rubber industry. With that, DA aims to improve the country's natural rubber production through focusing on the NRDP to expand the current area planted totaling 92,000 hectares, and increase production and

exports to \$960 million all by 2020. "This is in line with the DA's 15-year plan to make the Philippines a major player globally as announced by Secretary Arthur Yap during the 4th ASEAN Rubber Conference," Galang said.

BAR supports various projects on technology commercialization of rubber and other production and processing technologies through technology promotion and demonstration in suitable rubber areas nationwide. During the second day of the consultation workshop, BAR Director Nicomedes Eleazar said that BAR recognizes the need to strengthen the national RDE system to further develop the existing rubber industry. "We are conducting this kind of consultation workshop to intensify the national RDE system from which future advances and development on rubber must be grounded," he stated. "Rest assured that we will consistently support projects related on rubber as these would aid in the success of our rubber industry," he added.

Among the problems identified in terms of rubber RDE are: high incidence of tapping panel dryness or diseases (TPD), low latex yield per tree and per hectare, lack of quality planting material, long immaturity period and long payback period, poor information system, lack of clones adaptable in dry and typhoon belt areas (Luzon and Visayas), and poor quality/odor of raw rubber.

Participants of the consultation workshop include project leaders and identified focal persons on rubber from selected Regional Integrated Agricultural Research Centers (RIARCs) and state universities and colleges (SUCs). They presented their on-going projects to assess the accomplishments and gather recommendations to better the project implementation. Additionally, presentations of new project proposals from different regional partners were highlighted in the activity.

Panel of evaluators consisted experts from the University of Southern Mindanao (USM), Makiling Center for Mountain Ecosystems (MCME), USM-based Zonal Research Center for Regions IX, XII, and CARAGA, DA-Regional Field Unit IX, and UPLB. (Christmas B. de Guzman)



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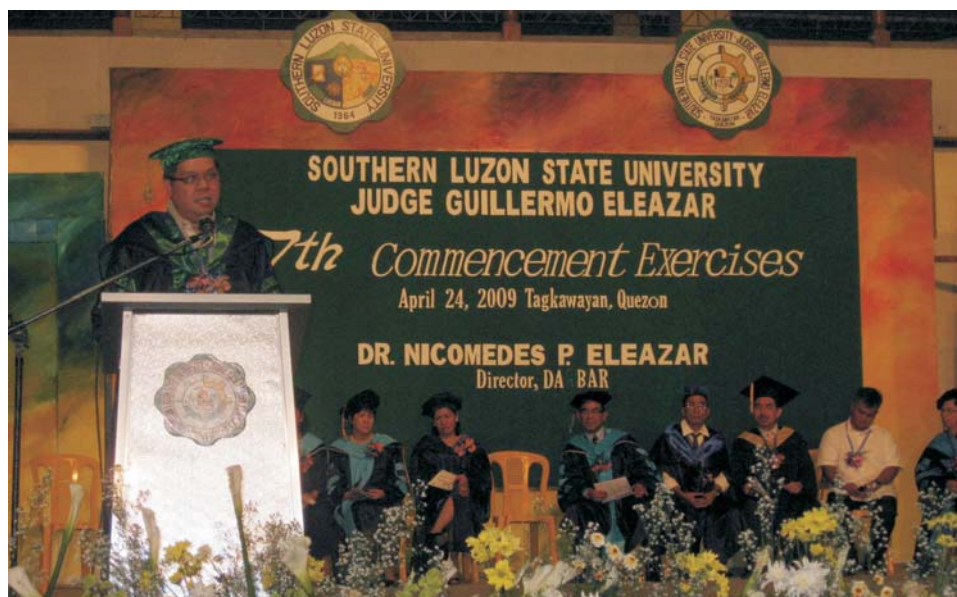
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Eleazar speaks at SLSU-JGE graduation



Dir. Nicomedes P. Eleazar (left) delivers his commencement address at SLSU-JGE campus.



Dir. Eleazar with SLSU President Cecilia N. Gascon

Bureau of Agricultural Research Director Nicomedes P. Eleazar was guest of honor during the 7th Commencement Exercises of the Southern Luzon State University-Judge Guillermo Eleazar (SLSU-JGE) held on 24 April 2009 at the Tagkawayan Municipal Covered Court, Tagkawayan, Quezon.

Prior to the event, Dir. Eleazar attended the baccalaureate mass and witnessed the candle lighting and hooding ceremonies as he witnessed the 114 proud graduates of the University. Reverend Father Celso L. Barreto of the Our Lady of Lourdes Parish Church in Tagkawayan led the celebration.

In his brief speech, Eleazar addressed the assembly with full of memories of being a true *Quezonian* himself. In his speech, Director Eleazar underscored the need for good and quality education while pointing out that the road to academic excellence is a person's sacred duty to oneself and to his country.

The SLSU-JGE's Marching Song stated, "building a better nation, making our country grand, showing the way for one's dream, serves as guiding light." This he said is the blue print for success and nationalism-- if we all want to become better individuals and citizens. He also said that the true measure of education lies in the ability to contribute to the betterment of the people as a whole.

Eleazar also honored the proud parents and guardians who made personal sacrifices to send their children to good schools and universities to obtain quality education. He then urged the graduates to look upon and pray that these sacrifices may not be put and placed in vain. He also congratulated all university professors, faculty and members of SLSU – JGE for their passion to teach and the vocation to share the gift of knowledge--well done, he said.

The director likewise pondered too on Mr. William Allin's thought when he said that "Education is not the answer to the question. Education is the means to answer the questions." And this led to the challenge he imposed upon graduates to widen their acquired knowledge and ability by being developmental oriented person. Director Eleazar stressed that while having good education is imperative to ones success, it is also equally important to use this to contribute to the

developmental process of growth and progress. He cited that individual skills are good, but collective ones are better.

SLSU-JGE boasts of 96.5% functional literacy rate, the highest in the province, if not, in the entire archipelago. The impressive rate accomplished by the university is a manifestation of one's personal commitment to make a difference in the arena of education. Dir. Eleazar applauded, praised, and congratulated all the teaching and faculty and staff of SLSU-JGE under the leadership of its University President Dr. Cecilia N. Gascon. "Job well done," he added.

Finally, Dir. Eleazar emphasized that in order to propel the nation toward prosperity amidst the threat of globalization, recession, financial crisis and the economic meltdown being experienced by first world countries, the ability to integrate individual skills into the paradigm of nationhood is a must. (Patrick A. Lesaca)

“Eleazar stressed that while having good education is imperative to ones success, it is also equally important to use this to contribute to the developmental process of growth and progress. He cited that individual skills are good, but collective ones are better.”

photos by AOBLIGADO

Planning meeting for BAR-ICRISAT project on legume varieties held



photos by CDEGUZMAN

BAR and ICRISAT meet with regional partners who will implement the project. PDD head, Dr. Carmencita V. Kagaoan (center) provides the project overview. Joining them in the meeting is Dr. CL Laxmipathi Gowda, (inset photo) global team leader on Crop Improvement of ICRISAT.

A planning meeting for the newly-approved joint project of the Bureau of Agricultural Research (BAR) and the International Crops Research Center for Semi-Arid Tropics (ICRISAT) titled, "Field Testing of ICRISAT Legume Varieties and Technologies in Selected Regions of the Philippines" was conducted to discuss major activities and determine strategic actions essential for effective implementation.

Dr. Carmencita V. Kagaoan, head of the Program Development Division of BAR, facilitated the planning meeting and explained the project overview.

The objective of the project is to test new varieties of peanut, pigeon pea, and chickpea for their suitability under local conditions. It aims to disseminate suitable technologies that will provide rural farmers higher income while addressing food inadequacy.

"This project is in line with President Gloria Macapagal-Arroyo's

Comprehensive Livelihood and Emergency Employment Program (CLEEP)," Dr. Kagaoan emphasized.

Meanwhile, Dr. CL Laxmipathi Gowda, director of ICRISAT's Information Resource Management Program and global team leader on Crop Improvement of ICRISAT, was also present during the planning meeting. He said that the adaptability of ICRISAT legume varieties under the country's climatic condition has potential for production and development. "It's a fact that increase in temperature generally reduces crop duration. When it comes to adaptability, pigeon peas are drought-resistant and can be grown in areas with minimal rainfall, similar to chick peas and peanuts," he explained.

Among the key issues discussed during the meeting were crop preference, cropping season, and areas/sites selection. A workshop followed to finalize the activities and schedules in the pilot regions with assistance from BAR regional coordinators.

The BAR-ICRISAT project, which runs for one year. With the introduction of these new crops from India, the project aims to disseminate suitable technologies that will empower Filipino farmers by providing them higher incomes while addressing food inadequacy in rural areas.

The project covers four strategies for implementation: 1) variety introduction and field testing, 2) on-station seed production, 3) technology dissemination and promotion, and 4) educational enhancement of research and development personnel through trainings and field visits at ICRISAT.

These strategies will be implemented by selected Regional Integrated Agricultural Research Centers (RIARCs) covering different pilot areas. These include: Region 1 (Ilocos), Region 5 (Bicol), Region 6 (Western Visayas), Region 7 (Central Visayas), Region 8 (Eastern Visayas), Region 9 (Western Mindanao), and Region 10 (Northern Mindanao). (Christmas B. de Guzman)

BAR promotes 'unpopular veggies' to address malnutrition and dwindling genetic resource

Bayok-bayok, himbabao, kulitis, talinum, basella, and lablab—these are just few of the many indigenous vegetables that are available in the country which are considered important due to their supplementing and nutritive values.

Despite their recognized importance, these “unpopular vegetables” continue to be underutilized. The possible reasons are inadequate information on use and importance, lack of information about their performance and input requirements, and insufficient information on how indigenous vegetables can fit into production systems. Also, traditional varieties are being replaced by high yielding commercial varieties which are more profitable and preferred by producers and farmers, thus the genetic resource of indigenous veggies is dwindling and may be at risk of extinction.

To specifically address this, the Bureau of Agricultural Research (BAR) partnered with Taiwan-based R&D institution, The World Vegetable Center, to strengthen food security, improve nutrition and the income-generating capacity of the rural poor, at the same time conserving the biodiversity of Philippine indigenous vegetables. This initiative is also in line with the Department of Agriculture's program on sustainable nutrition advocacy by promoting the production, marketing, and consumption of highly nutritious vegetables and with BAR's national RDE program on indigenous plants for health and wellness.

The project titled, “Promotion of Indigenous Vegetable for Poverty Alleviation and Nutrition Improvement of Rural Households in the Philippines,” is implemented in the country through the DA-Regional Field Units (RFUs) and the National Nutrition Council (NNC) in cooperation with the local government units (LGUs).

Through this project of



Saluyot (*Corchorus spp.*)

photo by RDELACRUZ

AVRDC-BAR, introduction and selection of indigenous vegetables is promoted through technology demonstrations on proper cultivation and utilization in selected, target rural areas in the Philippines. The priority areas include those with high prevalence of malnutrition and poverty, specifically the poorest provinces in Regions 5, 6, and 10. The project promotes the use and benefits of cultivating indigenous vegetables in home gardens and in the production of seeds.

Among the indigenous vegetables exhibited in plots for technology demonstrations during field days are: eggplants, amaranths, cucurbits, radish, bottle gourd, luffa (smooth and ridged types), wax gourd, bittergourd, snake gourd, squash, jute, basella, kangkong, ivy gourd, basil, lablab, rosella, okra, yardlong bean, winged bean, cucumber, tomato, and vegetable soybean.

Results of the study showed 10 promising indigenous veggies that are now prioritized for massive promotion. These include: alugbati (*Basella alba*), ampalaya for leaves or bayok-bayok

(*Momordica charantia*), himbabao (*Allaeanthus luzonicus*), kulitis (*Amaranthus spp.*), labong (bamboo shoot), upo or bottle gourd (*Lagenaria siceria*), malunggay (*Moringa spp.*), pako (fiddlehead), saluyot (*Corchorus spp.*), and talinum (*Talinum triangulare*).

These indigenous vegetables were chosen based on: nutrient content, medicinal and health benefits, non-food uses, and volume of production and food preparation.

They are considered “indigenous” to the Philippines because they have been growing abundantly in the rural areas since time immemorial, although not everyone is aware of their value as food and as affordable and alternative sources of essential nutrients. High-yielding vegetables as products of scientific breeding are not considered indigenous.

These types of vegetables are easier to grow, more resistant to pests, and are highly acceptable to

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Expert from ICRISAT lectures on climate change in dryland



BAR Dir. Nicomedes P. Eleazar during the open forum. With him are (L-R, sitting) Dr. Manuel F. Bonifacio, BAR consultant and Dr. William D. Dar, director general of ICRISAT. (Inset) Dr. CL Laxmipathi Gowda, director of Information Resource Management Program of ICRISAT serves as the resource speaker for the seminar.

The Bureau of Agricultural Research (BAR) conducted its fourth seminar of the 2009 series on 27 April at the 4th floor RDMIC Bldg, Visayas Avenue, Diliman, Quezon City with the topic, “Climate Change in Dryland”. Dr. CL Laxmipathi Gowda, director of Information Resource Management Program of the International Crop Research Institute for Semi-Arid Tropics (IRMP-ICRISAT), presented the topic.

Dr. Gowda discussed the effects of climate variability on farmers' productivity emphasizing that adaptation is the key to address the impacts of climate change and to mitigate the

unavoidable consequences of previous greenhouse gas (GHG) emissions. However, the cost of adaptation and other measures to address negative impacts will increase as global temperature increases. Adaptation alone cannot cope with the projected impacts of climate change, Dr Gowda said and cited mitigation as a long term and more sustainable solution.

For climate change mitigating measures in the drylands, Dr. Gowda presented and modeled the ICRISAT operational research plan (ORP) which the institute is using to manage the current climate uncertainty and adaptive measures to climate change. Among the

strategies in the ORP are short-and-medium-term projects (2008-2015), designed to help farmers cope with current rainfall variability, and the medium-to-longer-term project (2008-future) for adapting the mandate crops to grow in a warmer world.

ICRISAT is ahead in terms of breeding programs to produce crops that can tolerate drought and high temperatures. Among the crops already developed are pearl millet, sorghum, groundnut, pigeon pea, and chickpea—some of which, through a funding support from BAR, are already being tested in the Philippines for suitability.

With ORP, investors and farmers are trained to understand better how to effectively manage both the risks and the opportunities of climate variability and change, explained Dr. Gowda.

Capping the event was the message of encouragement to the participants and attendees given by Dr. William D. Dar, director general of ICRISAT. He cited the need for a collective effort in addressing the issue of climate change. “The basic mitigation measure that we can do right now is simply planting more trees to reduce carbon dioxide emission, and the time to act is now,” he said. (Edmon B. Agron)

DA convenes... from page 10

hundred thousand jobless Filipinos around the country due to the global economic crisis. Specifically, it aims to provide livelihood opportunities to Overseas Filipino Workers (OFWs) and returnees and other unemployed sectors in agriculture, such as resource-poor farmers and fisherfolk. Meanwhile, the *Barangay Bagsakan* is a barangay-based food depot and distribution system offering affordable, safe, and

quality food products like meat, poultry, fish, vegetables, and fruits. As a community-participated retail food distribution system, it directly links farmers and fisherfolks producers to the consumers.

Agriculture Sec. Arthur C. Yap attended the last day of the activity. In his speech, he enjoined the information champions of DA to be both proactive and prolific in spreading the “good news” and information that matters to

the public. “The existence of the Department,” according to Yap, “cannot be felt if its impact does not transcend the communication barriers; impact must be felt by the public.” To all the PIOs present, he instructed them to be quick and proactive in responding to the adverse issues besetting the sector and to be aware and updated on all the news that is happening around. (Rita T. dela Cruz)

Innovating institutions for food security highlights BAR 3rd Seminar Series

The third in the Bureau of Agricultural Research (BAR) 2009 seminar series was held at the RDMIC Building on 16 April with the topic “Innovating Institutions for Food Security: Some R & D Issues”.

BAR Asst. Director Dr. Teodoro S. Solosoloy gave his message to an audience mainly composed of scientists and researchers from various state universities and colleges and representatives from bureaus and attached agencies of the Department of Agriculture (DA).

According to Dr. Solosoloy, “Innovating institutions is a very timely topic given the current focus of various R&D institutions on addressing food security. We have the knowledge and the technology to do this, but, certainly, innovation and refocusing institutional strategies and policies will have to take a big part in this urgent need for transformation.

“As the breadth and speed of technological innovation increases, expect innovation to be the driving force behind economic growth and societal development. Institutional innovation is essential to managing technological change. And we, in the government, academic and educational institutions, NGOs, and private sector, must all play important roles in this institutional transformation,” he said

Dr. Agnes Rola, dean of the College of Public Affairs (CPAf) of the University of the Philippines Los Baños (UPLB), served as the resource speaker.

Prior to her lecture, Dr. Rola narrated a story about a fisherman and what happens to him when changes take place in the fishing industry. She enumerated the different institutions like the neighborhood, the local government, the academe, and the various research institutions and the roles that they play in helping the fisherfolk.

Dr. Rola later on stressed the importance of knowing how the different societal institutions can innovate to work towards a common goal which is to ensure food security especially during times when radical changes happen in both the agriculture and fisheries sector due to climate change.

“All institutions of the society must learn how to innovate and adapt to changes. Changes are inevitable and therefore cannot be stopped. But we

definitely could do something about the rate that they are going. And this is through innovation,” said Dr. Rola.

After the talk, the participants exchanged thoughts and ideas during an open forum where the speaker answered questions raised. (Dondon Carlo P. Lejano)



photo by DLEJANO

Dr. Agnes Rola, the dean of the College of Public Affairs (CPAf) of the University of the Philippines Los Baños (UPLB) is the resource person for the 3rd BAR Seminar Series.



photos by DLEJANO

A forum for discussion is opened immediately after the lecture.

Community-based production management of citrus intensified

The proliferation of imported fruits from other countries has led the Bureau of Plant Industry – Baguio National Crop Research and Development Center (BPI-BNCRDC) and the Bureau of Agricultural Research (BAR) to work together to address the entry of imported fruits coming from Taiwan, China, Japan, Thailand, Australia, and the United States in volumes among others that overwhelm the local fruits found in the local markets.

Local farmers, nursery operators and local government agencies in Kalinga and Mountain provinces together with the research center forged an agreement to intensify the production of quality planting materials. With the support provided by DA-BAR through the National Technology Commercialization Program (NTCP), the project ensures that there will be quality and disease-free planting materials for farmers engaged in citrus production in the Cordilleras. After three to five years, consumers are assured of good quality mandarin oranges, lemon and ponkans coming from the Cordilleras in local markets.

As the project continues to support the cause of BPI-Baguio, it also enhances the capability of local nursery operators empowering them to be independent entrepreneurs practicing their acquired technical information on citrus



photo by MAQUINO

production management system with community-based strategies from the center. The project is the first in the highlands on technology commercialization, which was originally conceptualized by Dr. Teresita K. Mangli, the research chief of BPI-BNCRDC. Now, operations are handled by the citrus project teams in Kalinga and Mountain provinces.

In addition, the experiences derived from the implementation of the RP-German Fruit Tree Program in the

Highlands in the early 2000 were used to come up with more innovative and participatory strategies to make citrus production more profitable and sustainable. To date, the project is expanding in terms of technical assistance provided in the form of farmers' training and field demonstrations which promote information-sensitivity and development-oriented citrus agribusiness in citrus growing areas in the Cordilleras. (Marlowe U. Aquino,

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local tastes. It was due to these reasons that indigenous vegetables are suitable as cash crops in peri-urban systems, source of vegetables for daily sustenance in home gardens, source of new crops, and as source of variation for diversification of production systems and diets.

According to the project leader, Dr. Liwayway Engle, initiating awareness about these kinds of vegetables and collecting the seeds are just part of the initial

steps. The ultimate goal is an increase in the actual use of these “unpopular” vegetables.

Promising lines are already identified and their seeds are being purified for distribution. Nutritional tests have also been conducted and production strategies are being developed. In no time, these so-called underutilized vegetables will soon find their way in the mainstream veggies arena and will be easily known even by non-veggie eaters. (Rita T. dela Cruz)



photo by RIMAGIRANG

Himbabao (*Allaeanthus luzonicus*)

Tissue-cultured rubber for rapid propagation being studied



photos by RBERNARDO

“Tissue culture, also known as micropropagation, is the technique of producing plants from small (micro) pieces of plant tissues.”

Given the bright future for the natural rubber industry, the Department of Agriculture (DA) has taken the initiatives to significantly increase the areas planted to rubber and its total production in generating abundant supply and contributing significant share in the global trade of natural rubber.

Considering the most pressing problems in rubber seedlings propagation, such as the inadequate supply of rubber seeds and the lack of skilled budders, the Bureau of Agricultural Research (BAR), in cooperation with the University of Southern Mindanao (USM), funded the project titled, “Rapid Propagation of Rubber via Somatic Embryogenesis”.

With Dr. Romulo Cena leading this endeavor, the project is aimed at developing a simple and efficient tissue culture technique (somatic embryogenesis) for rapid propagation of rubber.

Field trials of promising clones of rubber propagated via somatic embryogenesis will also be conducted. Somatic embryogenesis is a useful tool for the mass propagation of rubber that

helps improve rubber yields through the production of vigorous, uniform plants growing on their own roots.

The project intends to test the performance of tissue culture derived rubber clones in terms of root development and anchorage, resistance to lodging, growth and branching habit, and yield potential.

“Tissue culture, also known as micropropagation, is the technique of producing plants from small (micro) pieces of plant tissues,” Dr. Cena explained when he presented their DA-BAR-funded project during the First National Review and Consultation Workshop on Rubber RDE (Research, Development and Extension) Agenda and Program held on 6-7 May 2009 at RDMIC Building, Visayas Avenue, Diliman, Quezon City.

Studies on tissue culture of rubber trees started in 1966. Different parts of the plant such as embryo, anther, shoot tip, and integument can be used for tissue culture. “In this project, somatic embryogenesis (tissue culture) in *Hevea* for rapid clonal propagation as an alternative budding technique will be studied,” he said.

The study will utilize existing methods of somatic embryogenesis following the new protocols for somatic embryogenesis in *Hevea*. The prescribed steps for the short method of somatic embryogenesis will be strictly followed. These include: 1) induction of embryogenesis, days 0 to 25; 2) expression of embryogenesis, days 26 to 50; 3) development of the proembryos, days 51 to 80; and 4) maturation of the embryos, days 81 to 105.

Five recommended rubber clones namely: USM 1, RRIM 600, PB 260, PB 235, PB 330 are being used in this study. Plantlets developed via somatic embryogenesis and micro-cutting experiments will be tested both in the nursery and field condition. Nursery data like root growth and development, girth and girth increment, plant height and resistance to nursery pests and diseases will be gathered for eight months.

Project implementation started in January 2009. (Christmas B. de Guzman)

Lang-ay showcases Cordillera agri technology

This year's Lang-ay Festival held on 1 to 7 April 2009 at the capitol grounds and major thoroughfare of Bontoc, Mountain Province showcased a variety of culture and technologies with the theme, “Nurturing our Heritage and Culture.” The theme is very timely because it depicts the rich and diverse technological breakthroughs of the Bontoks from agricultural systems to food processing, textile weaving, and production management systems and to business and tourism activities.

Lang-ay is the local festival of Mountain province together with its municipalities that combines community cohesiveness and interactions and celebrations. It is defined generically as an occasion to share happiness, promote family solidarity, hospitality, and nurture friendships with toasts of home-brewed wine hence, government agencies and local communities joined forces to enhance and support local technologies with social and economic relevance.

During the festival, the Department of Agriculture -Regional Field Unit CAR, and BFAR CAR including Benguet State University (BSU) and invited research institutions, and provincial and the local government units contributed to the occasion by providing technical assistance to local farmers through the DA *Ginintuang Masaganang Ani* banner programs for rice, vegetables,



photo by MAQUINO

rootcrops, and fruits. Indigenous technologies were highlighted particularly the heirloom rice varieties which are organically produced for the production and processing of local wine - *tapuey* and some fruit wine for the merry making and festivities.

Fruits and vegetables are produced by locals following the traditionally practiced organic agriculture that does not require any chemical or pesticides. Traditional and integrated pest management practices were used to produce the products showcased and sold during the activity.

Visits to local communities with their traditional agricultural practices were also featured as part of

the week-long activity that showing the skills and warmth of the culture. These were complemented with songs and dances plus local food delicacies prepared from the bountiful harvests of the different farming and inland fishing municipalities.

Lang-ay also featured the best quality agricultural produce of the farmers, culminating the search for the Best Municipal Booth and “Pinaka Best” products. Winners were recognized and awarded during the testimonial dinner hosted by Governor Maximo B. Dalog and the provincial board. (Marlowe U. Aquino, PhD)

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regional monitoring teams to conduct periodic field validation and rapid appraisal of the Department's intervention measures under its banner program *Ginintuang Masaganang Ani* (GMA), and adopted stringent guidelines on the release of funds to program partners like non-government organizations (NGOs) and people's organizations (POs).

To maximize the use of funds, DA is shifting its focus on hard or “big-ticket” projects covering irrigation maintenance, postharvest facilities, farm-to-market roads (FMRs), and rural extension work, in lieu of “soft” projects like fertilizer support to farmers. (DA Press Office)

DA convenes information champions for first-ever consultative meeting



Agriculture Secretary Arthur C. Yap encourages DA Public Information Officers to be pro-active in delivering the "good news" from the agriculture sector.



photos by RDELACRUZ

Acknowledging the importance of information officers as conduits of relevant and updated information on the Department's latest initiatives and programs, a consultative meeting of public information officers (PIOs) was held on 22-24 April 2009 at the BSWM Convention Hall. The Agriculture and Fisheries Information Service (AFIS) led by OIC-Director Noel O. Reyes, spearheaded the event.

According to Mr. Reyes, who welcomed the participants, this activity is a first-ever gathering of PIOs since 1988 and considering the important role that PIOs play in the agency, such meetings must be done at least twice a year.

The consultative meeting was called in an effort to compel concerned agencies through the PIOs to produce regular updates and success stories on the agency's activities contributing to DA's major programs and initiatives. With AFIS at the helm, the activity is hoping to develop an efficient, working network among PIOs in spreading the "good news" and keeping the public updated.

Assistant Secretary Salvador Salacup who filled-in for Secretary Arthur C. Yap delivered his keynote address. In the speech he delivered, he advised all

PIOs that as "information champions" of the Department, they must show cohesiveness and coordination in spreading the "good news". He mentioned key issues that, according to Sec. Yap need to be further promoted in the media. These are: 1) ensure national food security and food affordability following the farm to plate formula vis-à-vis the AFMA program, 2) improve competitiveness of national fishery products, and 3) sustainability of resources while keeping biodiversity protected.

Capping the first day of the meeting were presentations on the *Ginintuang Masagang Ani* (GMA) Banner programs including rice, corn, high-value commercial crops (banana, mango, vegetables, pineapple, coffee and rubber), livestock, and fisheries. Dr. Frisco Malabanan, national program coordinator for GMA Rice Program, presented a report on the country's rice industry performance including production growth rate from the last four decades and rice self-sufficiency plan and targets based on the Philippine Rice Master Plan (2009-2013) with various government interventions. Other presenters included

representatives from GMA Corn, HVCC, Livestock, and Fisheries.

Accomplishments and updates on the FIELDS program were also presented during the meeting. FIELDS, which stands for Fertilizer, Irrigation, Extension, Loans, Dryer, and Seeds is the centerpiece program that President Arroyo launched in April 2008 to raise the national food sufficiency level and ensure adequate, accessible, affordable and nutritious food for all Filipinos. The government has allotted higher public spending on agriculture and fisheries, particularly on the mentioned six major components.

Presentations on major DA programs and initiatives were made during the second day that included Comprehensive Livelihood and Emergency Employment Program (CLEEP), North Luzon Agribusiness Quadrangle (NLAQ), Foreign Assisted Projects (FAP), DA Website/Call Center, and *Barangay Bagsakan*. CLEEP is a proactive measure initiated by the government initially intended to cover a few

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Biotech project to revive duck industry underway

With the problems on low production and genetic deterioration facing the Philippine mallard duck industry, a biotechnology project funded by the Bureau of Agricultural Research (BAR) of the Department of Agriculture (DA) is being firmed up to revive this once profitable business.

The mallard duck is a multi-billion peso industry which is predominantly owned by small- and medium- scale commercial producers. It used to be the major source of income of people living along the shorelines of Laguna Lake comprising the provinces of Laguna and Rizal.

The declining marine resources such as snails and fishes and the pollution of Laguna Lake are cited as the culprits for the decline in the production and the deterioration of the duck genetic diversity.

To cope with these problems, the industry is now adopting the herding system in rice paddies and the mixing in of unconventional ingredients in the feed to offset the expensive but unreliable qualities of available commercial feeds.

To help the duck industry recover, the Animal and Dairy Sciences Cluster (ADSC) of the University of the Philippines Los Baños-College of Agriculture (UPLB-CA), in collaboration with the National Swine and Poultry Research and Development Center (NSPRDC) based in Tiaong, Quezon, proposed the project, "Applied Animal Biotechnology for the Improvement of Philippine Mallard



photos by LDC

Duck". Proponents of this biotech initiative are Drs. Renato Vega, Dr. Angel Lambio, and Dr. Severino Capitan.

The goal of this undertaking is to improve the genetic resources and determine the effect of feed and water environmental residues on duck-egg production.

This project is set to focus on three areas of study, namely: 1) morphological and molecular characterization of mallard ducks, 2) age-related changes in plasma cortisol, estradiol, and vitellogenin of mallard

ducks, and 3) effect of organochlorine and cadmium levels in feeds on the reproductive performance of mallard ducks.

Duck sampling, DNA/physical characterization, water and feed residue analysis, and blood vitellogenin assay system are among the activities to be undertaken for this project.

Expected outputs include DNA finger prints of various ducks, a breeding program, and a protocol to measure the endocrine-disrupting chemicals (EDCs).

EDCs are exogenous substances that alter the function of the endocrine system that result to adverse effects in an intact organism. They usually stimulate the liver to release vitellogenin which is an indicator of environmental pollution in an ecosystem. The kinds of EDCs are natural and synthetic hormones, plant constituents, organochlorines, compounds used in plastic industry and in consumer products, and other industrial by-products and pollutants.

This is a three-year project that is currently in the pre-implementation stage. (Dondon Carlo P. Lejano)

POT for Asha... from page 1

materials. The center also conducted five batches of Asha production trainings in the provinces of Isabela, Cagayan, Nueva Vizcaya, and Batanes. A total of 333 stakeholders participated and were technically equipped. Field days and television airings were also done to promote the POT for Asha.

Given the massive promotion for Asha, it is now being planted nationwide. In Region 2 alone, the peanut is planted in about 47.1 hectares excluding some unaccounted for areas.

In Jones, Isabela, where a community-based and village-level peanut industry continue to thrive, Asha is already being mass-produced for processing. (Rene Cris P. Rivera)

BAR supports BPSU banana tissue-culture lab



(Left photo) BPSU Tissue Culture Laboratory inside the Abucay Campus. (Right photo) BAR Director Nicomedes P. Eleazar (2nd from right) and BPSU President Delfin O. Magpantay (2nd from left) lead the ribbon cutting ceremony during the inauguration of the new research facility.

In support of the Bataan Peninsula State University's (BPSU) effort to revive and boost the banana production industry in Abucay, Bataan, the Bureau of Agricultural Research (BAR) of the Department of Agriculture (DA) supported the establishment of a tissue-culture laboratory that will produce, to in economic production scale, clean and disease-free banana planting materials.

With the laboratory in place, BPSU hopes that this will lead to increased of upland farming areas to increase the production of bananas, especially the *Lakatan*, *Latundan*, *Saba* and *Quarenta Dias* varieties which are cultivated in the province.

According to Dr. Delfin O. Magpantay, president of BPSU, the presence of a tissue culture laboratory in Abucay will also free farmers from the hassle of traveling to other places just to acquire the planting materials that they need to boost their production. "It will also help agriculturists in introducing new methods on how to improve banana production in the province," he added.

As testimony of his full support to this endeavor, BAR Dir. Nicomedes P. Eleazar attended the inaugural ceremony of the newly-established tissue-culture laboratory. The activity was held during the BPSU Commencement Exercises where Dir.

Eleazar was also the keynote speaker.

In a dialogue with BPSU, Dir. Eleazar mentioned the benefits that this kind of facility will bring not only to the researchers but the students as well. "The laboratory will be very helpful in developing the research capabilities of the students and can also be used for the extension services of BPSU," he reiterated.

Other agencies like the National Economic Development Authority (NEDA) and the Department of Science and Technology (DOST) also collaborated in and supported the establishment of the banana tissue-culture laboratory. (Patrick A. Lesaca)

BAR jumpstarts... from page 1

determine the least cost combination of farm inputs while providing sufficient supply of nutritious and safe high value vegetables in the market.

The immediate beneficiaries of the project are the marginalized vegetable growers, farmers, and consumers within the Bataan district. The agribusiness enterprise will be replicated by 100 farmers from the different municipalities of the province.

The Department of Agriculture's battle cry on food security coined as "*Sapat na Pagkain sa Lahat*" serves as the goal for the success of the project. The challenge, therefore, is to provide nutritious, affordable, and accessible food for every Filipino.

With the project on board, both BAR and BPSU will serve as front runners for the promotion and cultivation of high value vegetables, not only in the province of Bataan, but in the entire region as well. (Patrick A. Lesaca)



Results of SSNM on-farm trials highlighted at first nat'l review

To consolidate and review project outputs, identify operational constraints encountered and find recommendable solutions, and plan upcoming activities for the next cropping season, the Bureau of Agricultural Research (BAR) with partners from DA-GMA Corn, BSWM, UPLB, and SEAP-IPNI, conduct the first National Review and Planning Workshop on Site-Specific Nutrient Management (SSNM) for Maize. The activity was held on 28-30 April 2009 at the RDMIC Bldg., Visayas Avenue, Diliman Quezon City.

Present were Dr. Christian Witt, director of Southeast Asia Program for International Plant Nutrition Institute (SEAP-IPNI); Dir. Nicomedes P. Eleazar of BAR; Ms. Julie Mae Pasuquin, IPNI agronomist; Dr. Artemio Salazar, former GMA-Corn director; Dr. Gina Nilo, chairperson of the SSNM Technical Working Group (TWG); Milo delos Reyes, head secretariat of GMA Corn Program; and TWG members and SSNM Regional Focal Persons.

The workshop highlighted the presentation of results of on-farm trials from different provinces. In Region 1, a positive agronomic efficiency of the nitrogen fertilizer was obtained from the SSNM treatment, wherein 25 to 29 kg of grain yield was obtained for every kilogram of nitrogen fertilizer applied in the soil. Indigenous P and K in the soil can support low yield in corn, but this is not enough to obtain a high yield.

Nitrogen is the most limiting nutrient in corn production. Increasing the amount of N fertilizer can be an assurance of a high yield in corn, but the agronomic efficiency needs to be checked. Likewise, strategies need to be developed that will lower input cost and increase profit of farmers.

Refined SSNM fertilizer rates will be applied in all SSNM sites for the next cropping season as well as the timing of application were discussed. Dr. Witt further suggested that weather conditions should be taken into consideration during fertilizer application, especially in areas prone to disaster wherein in such cases, fertilizer

splits will be done more often to optimize efficiency of fertilizer use.

Dr. Witt also presented an upcoming software featuring a state-of-the-art and user-friendly system that will help farmers develop an optimum planting density for a certain location; evaluate current management practices; determine a meaningful yield goal based on attainable yield; estimate fertilizer NPK rates required for the selected yield goal; translate fertilizer NPK rate into fertilizer sources; develop an application strategy for fertilizers (right rate, source, location and time); and to compare the expected or actual benefit of current and improved practices. The software is expected to be available before the end of the year 2009.

Scaling up is scheduled for Regions 1, 2, and 7 while SSNM will resume for the wet season to the rest of the regions.

The program ended with the awarding of certificates to all the participants. (Edmon B. Agron and Jacqueline S. Rojas)



photo by NDELROSARIO III