#### Cont...

### Vertical gardening...from page 12

urban communities. It may seem that urban communities have no space for crop production, but through vertical gardening, one can maximize open spaces like walls and balconies for the purpose of food security," Ms. Ros said.

On the other hand, Dr. Perlin Belino, dean of the College of Home Economics and Technology (CHET) of Benguet State University (BSU) talked about the nutritional value of various common garden vegetables bought by consumers in the market. The college dean, who also happens to be a nutritional dietician, focused on the functional properties of various vegetables in the different phytochemicals that make food healthy. According to Dr. Belino, most phytochemicals are antioxidants and anti-carcinogenic, and they also help prevent cardiovascular diseases.

The seminars concluded with a demonstration of ways of preparing healthy vegetable-based juices and salads. The demonstration was led by Ms. Florida Rosario who is also an instructor at BSU-CHET. "Preparing these is very easy and requires quite a low cost," said Ms. Rosario. She added a new and healthier twist to preparing salads by transforming the dressing to one with protein-rich soya as the base ingredient.

Among the seminar's participants were architects and aspiring architecture students who have plans of venturing into green







architecture. Baguio City Councilor Leandro Yangot Jr., also attended the seminar to see how vertical gardening can be integrated into Baguio's City's infrastructure especially now that a law has been passed by the city council obliging building owners, regardless if they are commercial or institutional, to practice urban gardening.

Other participants were members of non-profit organizations and school faculty, while numerous others came as private individuals to gain new knowledge that can help them improve their own home

gardens.

BAR's Applied Communication Division, which organized the conduct of the seminar, also took the opportunity to disseminate various information, education, and communication materials such as crop calendars and technology brochures-the production of which was made possible through the partnership with the Asian Food and Agriculture Cooperation Initiative (AFACI). ### (Ephraim John J. Gestupa)



RDMIC Bldg., Visayas Ave., cor. Elliptical Rd. Diliman, Quezon City 1104 PHII IPPINES

Entered as second class mail at the Quezon City Central Post Office under permit no. 2C-14-01-148 NCR





Volume 18 Issue No. 3

A monthly publication of the Bureau of Agricultural Research

March 2017

# OA R&D centers in Regions 1 and CAR Two Organic Agriculture (OA) R&D Centers were now fully operational

inaugurated at the Department of Agriculture-Pangasinan Research and Experiment Center (DA-PREC) in Sual, Pangasinan and at the Baguio Stock Farm Compound in Baguio City on 15 and 16 March 2017, respectively. The construction of these R&D centers was made possible by the Bureau of Agricultural Research (BAR) through its OA R&D Program. These centers will be used to improve the delivery of services and assistance of the Department of Agriculture-Regional Field Office (DA-RFO) 1 and DA-RFO CAR to organic agriculture practitioners and prospective technology adopters in the form of capacity building and related R&D activities.

Gracing the inauguration at DA-PREC were BAR Director, Dr. Nicomedes P. Eleazar: BAR Assistant Director, Dr. Teodoro S. Solsoloy; Vice Mayor of Infanta, Pangasinan, Dr. Virgilio F. Vallarta; DA-RFO 1 Regional Executive Director, Dr. Valentino C. Perdido; OIC-Regional Technical Director (RTD) for R&D, Ms. Erlinda F. Manipon; and OIC-RTD for Operations, Dr. Gilbert D. Rabara. According to DA-RFO 1 officials, the establishment of the OA



R&D Center is a step forward towards the long term vision of DA-RFO 1 of turning DA-PREC as the center of organic agriculture in Region 1.

BAR Director Eleazar also attended the inauguration in Baguio City in which he was joined by Tadian, Mt. Province Mayor Anthony Wooden; DA-CAR OIC-RTD for Operations, Dr. Danilo P. Daguio; and Cordillera Integrated Agricultural Research Center (CIARC) Manager, Dr.

Magdalena T. Wanawan. Included in the ceremony was the turn-over of several inputs to the invited organic farmers' associations such as African night crawlers (for vermiculture), native pigs and chickens, rabbits, and mushroom fruiting bags.

nony in the inauguration of the OA R&D Center in Pangasinan

ceremony for the CIARC Multipurpose Facility, which is also being funded through BAR's Institutional Development Grant. This will be a multi-function facility that will house research laboratories and conference halls.

turn to page 6

The major event at DA-CAR was the groundbreaking

#### IN THIS ISSUE..

OA R&D centers in Regions	1
OA R&D center in Western Visayas	2
BAR's HR receives recognition	3
First leg of orientation on BAR's	3
OA RDEAP for next medium term	4
OA technologies showcased	5
BAR supports the first ICFA	6
BAR participates in ASEAN meeting	7
BAR celebrates National Women's	8
Study targets twister disease control	10
DA Region 5's rimas ice cream	11
Lanao del Norte official visits BAR	12
Vertical gardening, healthy foods	12
UPLB conducts training on edible	13
Seafarers attend BAR seminar	14
Research managers and their views	15

# OA R&D center in Western Visayas inaugurated



fficials of the Department of Agriculture (DA) graced the inauguration of the Organic Agriculture (OA) R&D Center of the DA-Regional Field Office (RFO) 6-Western Visayas Integrated Agricultural Research Center (WESVIARC) held on 16 March 2017 in Iloilo City.

Leading the ribbon-cutting and unveiling of the facility marker of the newly-constructed OA R&D Center were DA Secretary Emmanuel Piñol, Assistant Secretary for the Visavas Hansel Didulo, DA-RFO 6 Executive Director Remelyn Recoter, Bureau of Agricultural Research-Institutional Development Division Head Digna Sandoval representing BAR Director Nicomedes Eleazar, and other DA-RFO 6 officials.

BAR, through its Institutional Development Division (IDD), funded

spending on research and development activities to achieve a globallycompetitive economy. While the region is known as one of the prime movers of organic agriculture in the country, may this R&D center serve as our humble contribution to further reinforce the promotion and advocacies of Western Visayas when it comes to producing healthy and safe foods through organic means," he said.

The inauguration of the Center was held in conjunction with the Secretary's "Tapatan: Gobyerno Kag Pamuluyo" in WESVIARC. The Tapatan is a regular dialogue organized by the DA's Office of the Secretary to reach out to the DA stakeholders that include farmers, fisherfolk, and local government units. ### (Ronnel P. Pasion)



## and other stakeholders interested in organic agriculture. In the message of BAR Director Eleazar, as read by Ms. Sandoval, he recognized the importance of R&D as a driving force of innovation. "This is why BAR recognizes the significance of

the construction of the OA R&D

Program to develop and promote

organic agriculture throughout the

serve as a venue for the conduct of

organic agriculture research and as a

The OA R&D Center will

National Organic Agriculture

facility for the processing of

organically-grown crops of the

region. It will also be used as a

demonstration area for farmers,

fisherfolk, students, entrepreneurs,

country.

Center in support to the thrust of the

## PRODUCTION TEAM

Victoriano B. Guiam

**Consulting Editor:** Managing Editor/Layout: Writers:

Julia A. Lapitan Anne Camille B. Brion Ma. Eloisa H. Aguino, Darvl Lou A. Battad, Anne Camille B. Brion.

Reproduction:

Diana Rose A. de Leon, Leoveliza C. Fontanil, Ephraim John J. Gestupa. Patrick Raymund A. Lesaca, Ronnel P. Pasion,

and Mara Shyn M. Valdeabella Ricardo G. Bernardo

Circulation: ACD Head:

Lyn D. Pardilla and Lino Norman D. Reyes

Advisers:

Dr. Nicomedes P. Eleazar, CESO IV and Dr. Teodoro S. Solsolov

Copyright Bureau of Agricultural Research, Department of Agriculture 2017.
For subscription and inquiries, please contact us at: Tel. Nos: +63 (2) 461-2800 or 461-2900 local nos. 1136, 1143, 1132, or 1138 Fax No. +63 (2) 927-5691 Email: acd@bar.gov.ph

Visit our official website: http://www.bar.gov.ph
Follow and like us on: F Bureau of Agricultural Research

# Research managers and their views about GAD

by Ephraim John J. Gestupa

he Bureau of Agricultural Research (BAR) celebrated National Women's Month. In one of the meetings spearheaded by BAR, members of the Bureau's GAD Focal Point System sat down with the country's research managers from the Department of Agriculture-Regional Field Offices (DA-RFOs) to talk about their views as to the role of women in agriculture, as well as the impact of agricultural research in bringing about beneficial change that uplifts women farmers and fisherfolk.

When asked about the role of women in Philippine agriculture, DA-RFO 10's Regional Technical Director for Research Carmelita Bajarla, recounted a time when the term "farmer" connoted a man working in the field. "Women had lesser access to the technology and support services. To compensate for this, they listened to radio programs and watched TV shows on agriculture. They would then share what they learned from the programs with their husbands. But recently, the picture of women taking up more active roles is emerging," Director Bajarla added.

#### Support system

"Men are nothing without women," said Ms. Luz Marcelino, chief of the DA-RFO 5-Research Division as she elaborated on how women's work in the household is as noble a vocation as the job of their husbands who toil in the field. "Paano mapasasabay ng isang magsasakang lalaki ang pagaalaga ng mga bata, pagmamanage ng isang tahanan, at pakikilahok sa mga farm activities? Paano mangyayari iyon kung walang women?" she questioned. This was supported by Mr. Abel Wagas, chief of the DA-RFO CARAGA-Research Division, who described these roles as complementary in nature.

### New knowledge

A common observation is that of Mr. Macmod Mamalangkap, chief of the Fishery Research Section of the DAF-ARMM, wherein in fishing communities, it is common for women to have an edge against their husbands because they are more educated or well-versed in terms of new technology innovations and value-adding techniques. According to Director Bajarla, "Research promotes participation of women farmers in training initiatives. Their active involvement is an indicator of success for food security and prosperity."

#### Money makers

With women at the helm, agricultural practices become profitoriented and profitable. According to Ms. Marcelino, "Women are very keen in giving advice to their husbands when it comes to recordkeeping and financial management. Women are very exploratory, they exhibit ingenuity and they are self-reliant. This is why they are also the perfect agents for the commercialization, promotion, and value adding of agricultural products," she added. Director Bajarla regards these characteristics of women as manifest of their common vision in helping minimize poverty and achieve food security by increasing the family income.

Mr. Roberto Abrera, OICassistant regional director of BFAR MIMAROPA, supported this idea as well. "Women play an important role in fisheries development particularly in the postharvest sector. They ensure that they get premium price out of their fisheries commodities as they apply value adding, thus giving rightful income for our fisherfolk. In seaweed farming, considering that the endeavor is a family enterprise, women are actively involved in its production and in the post-harvest activities," he explained.

## Research-generated change

Mr. Wagas talked about a shift in the roles that women can assume outside the household, thanks to the advent of mechanized agricultural practices. "Before, a man needed to take out the carabao in order to till the land for hours and hours. Today, with readilyavailable technological innovations, one only needs to take hold of a steering wheel during land preparation. Research has allowed women to take on farming roles that are traditionally reserved for men," he added.

Research has also brought about new methods of growing crops that are more womenfriendly. "Today, there exists farming activities on the propagation of new crops in smaller and enclosed areas. While the size of the land may be significantly smaller than the hectares of farmland a person needs to take care of when planting field crops such as corn or rice, the income that is generated for both can be made quite the same," said Wagas as he cited the use of SNAP hydroponics as an example for maximizing limited growing space.

#### The pursuit of an inclusive R&D future

A lot been done, but there still is "a long way to go". As BAR is placed in a strategic position for bringing about change, it also takes on the role of making certain that research and development is as inclusive and empowering for women as it is with men. Already, through BAR's GAD mainstreaming program, proposals falling under the Community Participatory Action Research Program are being evaluated using a gender approach during Participatory Rural Appraisal wherein the roles of the women in the targeted communities are also assessed. ###

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 NaRDSAFmember institutions.

# Seafarers attend BAR seminar on PLANT PROPAGATION



he Bureau of Agricultural Research (BAR), through its Applied Communication
Division, sponsored a hands-on demonstration on vegetative propagation of plants at TM Kalaw St., adjacent to Luneta Park, in Manila on 24 March 2017. It was attended by 91 members of the Seamen in Agriculture (SIA), a private group of seafarers.

talk on vegetative propagation of plants. PHOTO:

Ms. Gloria Leycano, senior research specialist of the Department of Agriculture-Regional Field Office (DA-RFO) 4A-Lipa Agricultural Research and Experiment Station (LARES) and one of the resource speakers, discussed the budding and grafting techniques which are the most popular methods in vegetative plant propagation. According to her, the major advantage of using these methods is the multiplication of good quality plants that are identical (true-to-type) to the parent plant.

Meanwhile, Mr. Narciso Marave, plant propagator of DA-LARES, demonstrated the step-by-step procedure of budding and grafting. Mr. Marave showed the proper preparation of the scion from the donor plant and the proper way of attaching it to the rootstock. Afterwards, the SIA members were given the chance to try the actual procedures of plant propagation themselves.

Mr. Jaime Credo, president of SIA, sees that agriculture can be part of their income generating activities as soon as they retire from their profession. "We believe that engaging in farming will help us have additional income. Being a Seaman has an age limit requirement and has no retirement benefits even if you work for many years. In attending to this kind of seminar, we are able to gain new knowledge. These broaden our skills in farming and give us ideas on what sustainable livelihoods are available to us when we retire", he said.

The activity is part of BAR's efforts to further disseminate the informative results generated by agrifisheries research and development to the people in the community that need them the most. ### (Leoveliza C. Fontanil)

In attending to this kind of seminar, we are able to gain new knowledge...broaden our skills in farming and give us ideas on what sustainable livelihoods are available to us when we retire.

#### DA Region 5's rimas...from page 11

supported by BAR, we were able to see the economic importance of rimas as a crop which could respond to the goals of the DA of making food available and affordable, and in increasing the income of farmers. Gender and Development perspectives could also be mainstreamed into rimas ice cream enterprises as we are also giving importance to the empowerment of women in their roles in farming and food processing," Ms. Marcelino shared.

The local governments of the six provinces in the region assisted the project in identifying potential farmer-cooperators and rimas growing sites. There is also the support from Sorsogon Dairy Farm, which has become a source of raw materials, and the Yulaik Food Company that is facilitating the conduct of feedback surveys for product improvement.

Through plant propagation techniques of tissue culture and grafting, the project was able to grow 100 plants inside the laboratory, and 50 potted plants (using tissue-culture technique) and 150 grafted rimas.

To date, BAR has given support to five projects on rimas covering benchmarking studies and researches on pest management, propagation techniques, and nursery establishment implemented by several DA agencies and state universities and colleges.

"We hope that there would be a consolidated effort on rimas. Also, I encourage fellow researchers to continue finding ways on how to utilize the indigenous crops of their localities and collaborate with other research centers or networks for the sharing of information and expertise, and for future collaboration," Ms. Marcelino concluded. ### (Ma. Eloisa H. Aquino)

# BAR's HR receives recognition from CSC

ut of 178 government agencies assessed by the Civil Service Commission-National Capital Region (CSC-NCR), the Bureau of Agricultural Research (BAR) was declared as one of the 63 agencies recognized for reaching the Human Resource (HR) Maturity Level 2 indicators for HR systems and competencies on Recruitment, Selection and Placement, and Rewards and Recognition during the awarding ceremony of the Program to Institutionalize Meritocracy and Excellence in Human Resource Management (PRIME-HRM) of the CSC. The event was held on 8 March 2017 at the Novotel Hotel, Araneta Center in Ouezon City.

PRIME-HRM is a mechanism used by the CSC to ensure that excellence is met by the agencies in the performance of their respective HR management functions through a program of reward, recognition, empowerment, and continuous development. It covers all national and local government agencies including government-owned and -controlled corporations, state universities and colleges, and regional offices of agencies which have their own HR offices.

is given to agencies meeting the HR Maturity Levels 2, 3 and 4 Indicators of PRIME-HRM. Present to give the certificates of recognition to the awardees was CSC Chairperson Alicia dela Rosa-Bala. Receiving for BAR were **Assistant Director** Teodoro S.

Solsoloy and HR Head Ludivina Pelayo.

To be awarded a specific HR Maturity level, the agency's HRM

Maturity level, the agency's HRM needs to be assessed according to its competencies, systems, and practices in four HR systems: 1) recruitment, selection, and placement; 2) learning and development; 3) performance; and 4) rewards and recognition. The result of the assessment will be the basis for classifying the agency as to HR maturity level of which there are four, namely: 1) Transactional HRM, 2) Process-defined HRM, 3) Integrated HRM; and 4) Strategic HRM. The highest level is 4 which is Strategic



Receiving the recognition from CSC officials are BAR Assistant Director Teodoro Solsoloy (2<sup>nd</sup> from left) and HR Head Ludivina Pelayo (middle). PHOTO COURTESY OF BSWM

HRM.

Based on the HR maturity level achieved, the CSC will provide the necessary interventions for the further development of the HRM program and system of the agency.

The conduct of the awarding ceremony is also a strategy by CSC to motivate government agencies to always perform at their best in human resource management.

The bureau's PRIME-HRM accreditation would not be possible without the guidance of DA-DENR Cluster CSC Field Office Director Hans Alcantara. ### (Diana Rose A. de Leon)

# First leg of orientation on BAR's R&D grants guidelines held for Mindanao cluster



n orientation and writing workshop involving the implementing guidelines for the preparation, submission, screening and evaluation of R&D

proposals; and the monitoring and evaluation system for R&D projects contained in the updated Competitive Research Grants Manual (CRGM) was spearheaded by the Bureau of

Agricultural Research (BAR) through its Program Development Division (PDD) on 28-31 March 2017 in Los Baños, Laguna.

Serving as the first leg of a three-part workshop, the activity aims to solicit R&D proposals from the regions in the Mindanao cluster and ensure that the proposals submitted to BAR are anchored and aligned with the national and regional agri-fishery programs of the Department of Agriculture (DA). They should also include the R&D priorities of the individual regions, in order to achieve complementation and harmonization.

In his message, BAR Director Nicomedes P. Eleazar said that the

turn to page 5

# **OA RDEAP for next medium term** refined and finalized



dvocating organic farming is a proactive response to the need for sustainable food production and healthier living as it promotes an alternative farming system that totally rejects the use of excessive and dangerous chemical-based fertilizers and pesticides which are harmful to both the farmers and the environment.

In its effort to finalize the Organic Agriculture Research and Development, and Extension Agenda Program (OA RDEAP) and further align R&D efforts in organic agriculture to the priority thrusts set by Agriculture Secretary Emmanuel Piñol, foremost of which is the production of food that is both affordable and accessible, the Bureau of Agricultural Research (BAR) spearheaded the conduct of the workshop, "Prioritization of the Organic Agriculture Researchable Areas (2017-2023)," on 15-16 March 2017 at BAR.

Mr. Joell Lales, head of BAR-Program Development Division (PDD) and organic agriculture focal person, delivered the welcome remarks on behalf of BAR Director Nicomedes Eleazar. He mentioned that in finalizing the OA RDEAP, the identified researchable areas must be in accordance and in harmony with the current thrusts of the DA, specifically on making food available and affordable, increasing the income of farmers and fishers; and increasing the resilience of agriculture to climate change risks.

Ms. Grace Docuyanan-Moore, deputy national program coordinator of the National Organic Agriculture

Program (NOAP), presented the NOAP's current thrusts and priorities and elaborated on strengthening OA research and development through active collaboration among government agencies, private sector, and indigenous groups for the continuous upgrading of OA R&D and innovation in the generation of relevant and appropriate technologies.

(2017-2023)" held at BAR

The Bureau's OA RDEAP refinements and the agreements reached during the series of earlier consultation workshops spearheaded by BAR in coordination with the DA-Regional Field Offices and other implementing agencies were explained in detail by Mr. Jude Ray Laguna of PDD.

One of the highlights of the plenary session was the presentation of the final sectoral workshop outputs on crops (rice, corn, adlay, rootcrops, vegetables, herbs and spices, pili, strawberry, mango, jackfruit, banana, coconut, sugarcane [muscovado sugar]); livestock and poultry (to include meliponiculture, native swine and native chicken, and small and large ruminants); and fisheries and aquaculture (crustaceans, finfishes, seaweeds).

The other important output of the event included the ranking of the researchable areas determined for each key commodity; identification of the lead agencies

and other collaborating partners in the implementation of organic agriculture projects; and agreement on the schedule of RDE activities based on their chronological importance. The OA RDEAP 2017-2023 will now also serve as the basis and reference in the prioritization of organic agriculture R&D projects for funding.

**BAR Assistant Director** Teodoro Solsoloy capped the two-day event by acknowledging the participation of everyone and assuring that BAR will continue to support the implementation of the organic agriculture program in the country.

Dr. Blesilda Calub from the University of the Philippines Los Baños; National Organic Agriculture Board (NOAB) member, Mr. Ramon Marañon, representing the Visayas small farmers; and Ms. Grace Docuyanan-Moore served as resource speakers and evaluators during the plenary session and the workshop

Consistent with the directions set by the NOAP and adhering to the mandates issued by Republic Act 10068, also known as the Organic Agriculture Act of 2010, BAR has been tasked as the lead agency to facilitate and coordinate with other government agencies and private organizations in the implementation of organic agriculture RDE plans and programs from the national down to the field level. ### (Patrick Raymund A. Lesaca)

imed to further promote, disseminate, and popularize the concept of the edible landscaping (EL) technology, the University of the Philippines Los Baños (UPLB) EL Team held the "Training on Edible Landscaping" on 29 March 2017 at the Bureau of Agricultural Research (BAR) in Quezon City.

Members of the KYLEnatics Worldwide and Kylesters United, two groups of young students and young professionals who support Kyle John P. Echarri, a talent first introduced in the popular TV singing competition, The Voice Kids, were the participants. The group's founding members submitted a request to BAR and to the office of UPLB Chancellor Fernando C. Sanchez, Jr., who serves as project leader of the BAR-funded UPLB project, "Dissemination of Edible Landscaping Technology: Road to Self-Sufficiency", for a possible training-seminar on EL. On top of supporting Kyle, one of the advocacies of the group is social responsibility. They believe that the training will create awareness and appreciation for the use of edible plants in beautifying the environment and, at the same time, in producing readily available nutritious food for the family among the youth.

With the goal of making more Filipinos aware of the benefits that edible landscaping can offer, the project holds seminars and caters to training requests from institutions that assist teachers, farmers, hobbyists, students, government employees, local government units, organized groups, and individuals in putting up their own edible landscape gardens.

BAR Assistant Director Teodoro S. Solsoloy gave a message of inspiration to the youth group. "As the leading government agency for the coordination of national agriculture and fisheries research and development, it is BAR's commitment to raise awareness and interest on R&D initiatives. One of the ways by which the Bureau can be faithful to such a commitment is through the conduct of seminars and

# **UPLB** conducts training on edible landscaping for youth group





trainings such as today's event. The adoption of edible landscaping technology can help augment prevailing national concerns such as the lack of livelihood and income as well as issues on malnutrition." Dr. Solsolov said.

Ms. Virginia L. Agcopra, national project coordinator for the Food and Agriculture Organization's (FAO) Dynamic Conservation and Sustainable use of Agro Biodiversity in Traditional Agro Ecosystems of the Philippines was also present to welcome the participants.

Funded by BAR under its National Technology Commercialization Program, the EL Program started with its technology promotion activities in 2009. It aims to create a new dimension in organic vegetable production and find ways in packaging the technology to generate demand and increase its potentials for further adaptation.

During the training proper, Ms. Maria Charito E. Balladares, project co-leader, discussed the concepts, principles, and elements of edible landscaping as well its processes. On the other hand, Ms. Jenica Mora discussed landscape maintenance while Mr. Michael Kerby P. Bejo provided hands-on training on

site analysis, and creation and evaluation of the base map and edible landscaping design.

"Merging art and science together, EL gives a twist to conventional crop production as the basic tenets of landscape design become its guiding principles to produce attractive and beautiful landscapes," Ms. Balladares said. EL gives importance to the use of vegetables, herbs, fruit trees, and medical plants in the landscape design.

Served as merienda, appetizers, and drinks during the activity were camote burger, canna pancake, crispy *lagikway*, and *camote* and kamias juices. The development of these recipes was part of another BAR-funded project titled, "Utilization and Commercialization of Selected Indigenous and Endemic Plants Found in Region IV with Potential Economic Uses".

To date, EL is being demonstrated in the gardens of a number of institutions, schools, farm lots, subdivisions, resorts, and permanent exhibits. The first demosites were established at UPLB's Ornamental Crop Nursery and at BAR premises. ### (Ma. Eloisa H. Aquino)

## Lanao Del Norte official visits BAR for beekeeping opportunities

meeting between Bureau of Agricultural Research (BAR) Director Nicomedes Eleazar and Representative Abdullah Dimaporo of the 2nd District of Lanao Del Norte took place on 8 March 2017 at BAR. The meeting aimed to discuss a proposed livelihood program for the province, particularly its beekeeping projects. Rep. Dimaporo strongly believes that beekeeping would be a viable source of income for the local residents in the production and selling of honey, propolis, and other bee products.

Also in attendance were **BAR-Technology Commercialization** Division Head Anthony Obligado, Administrative Head and Technical Staff Evelyn Juanillo, and Rep. Dimaporo's staff Armani Michael Alcagaya.

During an initial meeting in 2016 attended by Mr. Alcagaya, along with officials and representatives from the University of the Philippines Los Baños (UPLB) Bee Program; Beekeepers Network of the Philippines (BEENET); Don Mariano Marcos State University-National Apiculture Research, Training and Development Institute; and BAR, it was agreed that the said institutions will lead beekeeping R&D projects in Lanao. They would promote

beekeeping in the province, train the locals on the proper management of bees, and develop the livelihood capacities of the households.

According to Dr. Cleofas Cervancia of the **UPLB** Bee Program, a beekeeping project will help improve the lives of the

people in the marginal communities where livelihoods are limited as even the women can actively participate in the enterprise. It benefits agriculture as pollination can increase crop yield by more than 50 percent. In human nutrition, honey can be considered as an energy food that can be fed to children, while bee pollen can help fill in the protein gaps in the diets of the residents.

The proposed projects of Rep. Dimaporo are in line with the Inclusive Growth Plan (IGP) of the Provincial Local Government Unit (PLGU) of Lanao del Norte. Beekeeping will significantly complement the PLGU's efforts especially in agriculture. With the beekeeping project, the beneficiaries will learn new techniques on apiculture that



BAR Director Nicomedes Eleazar shows Representative Abdullah Dimaporo some of the technologies supported by BAR showcased at BAR's R&D Technology Commercialization Center. РНОТО:

they are currently unaware of. The youth will be enlightened on their uses and benefits and will realize it to be of paramount importance as they get older and become the torch bearers for agricultural development in Lanao del Norte.

After the meeting, BAR Director Eleazar toured Rep. Dimaporo at BAR's R&D **Technology Commercialization** Center which showcases BARsupported products and technologies generated by the Bureau's partner agencies. ### (Alvin Fontanil and Ma. Eloisa H. Aquino

## OA technologies showcased in Pangasinan field day



BAR Assistant Director Teodoro Solsoloy visits some of the organic ag riculture technologies showcased during the field day. РНОТО:DDELEON

n support to the implementation of Republic Act 10068 or the Organic Agriculture Act of 2010, the Department of Agriculture-Regional Field Office 1 (DA-RFO 1) conducted the "2017 Regional Organic Agriculture Field Day" on 14-15 March 2017 at the DA-Pangasinan Research and Experiment Center (PREC) in Sual, Pangasinan.

With the theme, "Food Production, the healthy and safe way," the activity aimed to promote and disseminate organic agriculture technologies and practices in the province. The DA-RFO 1 believes that to achieve sustainable agriculture, the practice of organic agriculture should be adopted as it places emphasis on the production of safe and healthy foods while promoting the protection of the environment at the same time.

Gracing the event were Bureau of Agricultural Research (BAR) Assistant Director, Dr. Teodoro S. Solsoloy; Vice Mayor of Infanta, Pangasinan, Dr. Virgilio F. Vallarta; DA-RFO 1 Regional Executive Director, Dr. Valentino C. Perdido; OIC-Regional Technical Director (RTD) for R&D, Ms. Erlinada F. Manipon; and OIC-RTD for Operations, Dr. Gilbert D. Rabara. In the message of Dr. Solsoloy, he mentioned the support being given by the Bureau to advance organic agriculture R&D as it is the prerequisite to the development of effective information and technologies by the practice of organic agriculture.

Farmers, representatives from the academe and local government units of Pangasinan, and stakeholders were invited to the field day to personally see the showcased organic agriculture technologies and

best practices being done at DA-PREC on organic production of vegetables, duck, native animals (chicken and pig), fertilizers, and animal feeds.

Several technical seminars on organic production technologies such as formulation of organic fertilizers, among others, were also conducted. In the discussions, the importance of utilizing indigenous and available resources and substrates available onfarm to reduce expenses was likewise emphasized.

This kind of activity is being

organized not only by DA-RFO 1, but by other DA-RFOs nationwide as well in an effort to fast track the promotion of organic agriculture in the regions and help create local awareness on the various organic agriculture production technologies that can be adopted by farmers and other interested groups.

BAR also took the occasion as an opportunity to disseminate relevant information materials to the farmers. These materials were produced with funds from the Asian Food and Agriculture Cooperation Initiative (AFACI), a Korea-based inter-governmental and multi-lateral cooperation body that aims to promote sustainable agriculture through knowledge and information sharing on agricultural technology. ### (Diana Rose A. de Leon)



## First leg of orientation...from page 3

proposals should focus on the R&D gaps along the value chain and give priority to R&D interventions that will support the DA's thrusts on food production, security, sustainability, and affordability while taking into consideration the top commodity priorities of the regions.

Concerned divisions of BAR presented the detailed guidelines and formats in the packaging of proposals, the process of proposal screening and evaluation, and the process of monitoring and evaluation for BAR's core R&D programs, namely: Basic and Applied Research, Community-based Participatory Action Research, National Technology Commercialization Program, Institutional Development Program (including R&D Facilities

Development Program and Human Resource Development Program), and the Scientific Publication Grant under the Bureau's Knowledge Products and Services Program.

During the workshop proper, the participants were grouped according to region to work on their respective proposals. Outputs were presented afterwards by a representative from each institution for critiquing and evaluation.

Participating in the activity were representatives from the DA-Attached Agencies and Staff Bureaus, DA-Regional Field Offices-Research Divisions, Bureau of Fisheries and Aquatic Resources-Regional Offices, and regional state universities and colleges of Regions 9, 10, 11, 12, 13, and ARMM. ### (Anne Camille B. Brion)

# Vertical gardening, healthy foods from fruits and vegetables featured in BAR seminars



he Bureau of Agricultural Research (BAR) conducted its monthly inhouse seminars on 24 March 2017 with topics on vertical gardening, and healthy foods from fruits and vegetables. More than 400 participants attended the seminars, with some coming all the way from Baguio City.

The first speaker was Ms. Elena C. Ros, university researcher at the University of the Philippines Los Baños (UPLB), who talked about UPLB's research initiatives in partnership with BAR that seek to improve and share information on vertical gardening technology. "Our research in vertical gardening aims to improve food production in

turn to page 16

# **BAR** supports the first ICFA









BAR staff provide IEC materials and entertain queries from booth visitors. PHOTOS: DDELEO

he improvement of the agriculture and fisheries research and development (R&D) community and individual institutions through the provision of assistance for various R&D initiatives is what the Bureau of Agricultural Research has been doing for the past three decades. In line with this, the Bureau gave its full support to the conduct of the International Conference on Food and Agriculture (ICFA) 2017 on 2-3 March 2017 at SEARCA, Los Baños, Laguna.

The Department of Agricultural and Applied Economics, College of Economics and Management of the University of the Philippines Los Baños spearheaded the conduct of ICFA which was tagged as the first-ever international event in the country that brings together local and international stakeholders in the food and agriculture sectors.

With the theme, "Sharing Knowledge, Creating Solutions:

Capacitating Stakeholders of Agriculture for Future Earth," the conference served as a platform for dialogues among stakeholders from the academe, research institutions, government agencies, and industry players in the food and agriculture sectors to foster a collective understanding and nurture R&D partnerships to move forward sustainable practices for the earth's future.

Gracing the conference were Dr. Fortunato T. Dela Peña, secretary of the Philippine Department of Science and Technology; and Dr. Mohd Nordin Bin Hasan, professor emeritus at the Universiti Kebangsaan Malaysia. Contingents from the Philippines, Thailand, Vietnam, Indonesia, South Korea, and Malaysia joined the two-day

Highlights of the conference were the paper presentations under the topics of food security, poverty and rural development, climate change consequences on agricultural and food production systems, globalization and regional integration challenges, human capital development, and innovation and technology for sustainable agriculture.

In addition to its participation in the conference, BAR made use of the event to promote technologies generated by various R&D activities by giving out information, education, and communication materials produced with the Asian Food and Agriculture Cooperation Initiative (AFACI) assistance, a Korea-based inter-governmental and multi-lateral cooperation body that aims to promote sustainable agriculture through knowledge and information sharing on agricultural technology. ### (Diana Rose A. de Leon)

## OA R&D centers...from page 1

The R&D Facilities Development Program is one of the support mechanisms established by BAR to enable its partner agencies to efficiently deliver R&D services and technical support to agriculture and fisheries stakeholders. The program supports the acquisition of R&D and related equipment; construction and renovation of R&D facilities (office buildings, laboratories, and experimental farms); and development of basic R&D support facilities of National Research and Development System for Agriculture and Fisheries member institutions through institutional development grants.

Under the intensified implementation of the OA R&D Program of the DA, BAR is again at the helm ensuring that state-of-the-art R&D facilities will be established to support the various OA R&D initiatives being conducted by the DA-RFOs nationwide. ### (Diana Rose A. de Leon)

# DA Region 5's RIMAS ICE CREAM reaches Hong Kong; prospects deemed bright





utting a twist on the conventional flavors of ice cream, the Department of Agriculture-Regional Field Office 5 (DA-RFO 5), through the Bicol Integrated Agricultural Research Center (BIARC), developed rimasflavored ice cream as part of their research and development (R&D) activities. The team proudly shared that 20 kilos of rimas ice cream have been shipped to Hong Kong for acceptability trials and that they have started to look for possible distributors. This was made possible through Global Mana, a company that focuses on food, energy, and water, and which had once sponsored a breadfruit conference in Hawaii.

Rimas ice cream was first showcased and presented to the public in the 9<sup>th</sup> Agriculture and Fisheries Technology Forum and Product Exhibition held at SM Megamall, Mandaluyong City in 2013. Organized by the Bureau of Agricultural Research (BAR), the annual event showcases technologies and products developed by various R&D institutions in the country. The rimas ice cream which bagged an award is one of the innovative products featured in the said event because of its novelty, uniqueness, and market potentials.

With an interest in knowing more about rimas, Mr. Joshua Niel Echague of Global Mana came across one of BAR's articles on rimas ice cream in the internet. Mr. Echague contacted DA-BIARC and the Regional Agriculture and Fisheries

Information Division which, in turn, endorsed the concern to the project team who developed the product, led by Ms. Luz Marcelino, research manager of DA-BIARC.

Growing abundantly in the Bicol region, rimas or breadfruit is one of the highest-vielding food plants. with a single tree producing up to 200 fruits per season. Recognizing its potential, BIARC embarked on a project titled, "Rimas Biodiversity Research, Conservation, and Propagation in the Bicol Region," which was funded by BAR. Aimed at determining the biodiversity of rimas in the region, the project also intends to increase the awareness of the Bicolanos on rimas as an affordable alternative source of essential nutrients.

"It is abundant in carbohydrates and, therefore, can be a main source of energy. The fiber present in rimas is found to help the digestive system of our body, assisting in the digestion of food and helping reduce cholesterol levels," Ms. Marcelino shared.

With abundant harvests and with the conventional notion that rimas is just for snacks, much of the crop is just left to rot. Thus, value-adding activities were developed by the team.

The Regional Food Laboratory of DA-BIARC is continuously undertaking product development given the succulent endosperm present in the fruit. To date, 15 recipes have been developed from rimas. These include pastillas, cheese cupcakes, chips, caramel, *ginataan*, fries, kimchi,

torones de rimas, cookies, pork dumplings, rice balls, custard cake, spring roll, and muffin, aside from the rimas ice cream. The ice cream, composed of 80 percent rimas meat, now comes in three variants: rimas with sweet potato, with cheese and chocolate, and with langka. Other crops abundant in the region like siling labuyo, taro, and pili nut are also added into the mixture.

Ten kilograms of rimas fruit are needed to produce one kg of ice cream that can be sold at Php 150. "If we will just meet the present demand, we could process as much as 50 kilos of rimas thrice a week," Ms. Marcelino said. Such an effort would be parallel to the objective of helping farmers increase their income as the raw materials are sourced from farmers in Tigaon, Camarines Sur and in Sorsogon.

Rimas ice cream has gained high acceptance in terms of taste, aroma, texture, and appearance based on the product acceptability survey that was conducted. Rimas ice cream and its variants can also be offered to trendy cafes and restaurants given the increasing demand for innovative offerings.

"Rimas ice cream has a high potential because of its distinct flavor and the use of organically-grown ingredients," Ms. Marcelino added.

The team acknowledges BAR's support to the development of products that utilize locally-available crops. "With this undertaking

turn to page 14

**HVCDP** Climate Change

## Study targets twister disease control measures for onion

consid fundamental cuisine ingredient. Enjoyed for its unique taste elements that are almost difficult to single out, onions simply add flavor and life to many dishes. This makes onion a universal, highly valued crop that contributes to various economies such

as the Philippines. However, its incredible potential is also met with challenges in terms of production and postproduction issues. Data from the Philippine Statistics Authority (PSA) shows that for the October to December period, production of native onion had dropped by 5.1 percent, from 9.73 thousand metric tons in 2015 to 9.24 thousand metric tons in 2016. This decline in production was caused by different factors such as adverse climate conditions, lack of planting materials, and disease occurrences.

The Ilocos Region, Cagayan Valley, and Central Luzon are among the major producers of onion in the country. Ilocos, the top producer of native onion at 9.22 thousand metric tons shared 99.8 percent of the national production average in the 4<sup>th</sup> quarter of

This led a group of scientists at Central Luzon State University (CLSU) in Nueva Ecija to undertake research with focus on one of the major causes of the decrease in the production of onion in the Philippines the "Twister disease."

Twister disease, caused by the fungus, Gibberella moniliformis, causes white, oval, sunken spots on the leaves of onion at the early vegetative stage. It also causes twisting and



discoloration of the leaves resulting to elongated neck and slender bulbs. Twister disease has become prevalent in many onion farms, particularly in the major onion producing provinces of the country.

According to the farmers, frequent rains and high humidity greatly contribute to the proliferation of the disease.

Dr. Rolando Alberto, who leads the project titled, "Etiology, Physiological Characterization and Molecular Detection of Gibberellin and Fumonisin, and Management of Gibberella moniliformis Wineland Causing 'Twister Disease' of Onions in the Philippines," targets to study the cause of the disease and identify the most effective management practice to control, if not eliminate, the incidence of Twister disease.

The project team collected diseased onion specimens from 26 municipalities in eight provinces which included Nueva Ecija, Nueva Vizcava, Tarlac, Pangasinan, Ilocos Norte, Ilocos Sur, Mindoro Occidental, and Batanes.

From these specimens were isolated the fungal organism. The healthy onion seedlings were then inoculated to induce symptoms. The inoculated seedlings were then studied for disease development with respect

to humidity, dew period, light profiles, and temperature.

The inoculated onion seedlings underwent trials and exposures to various conditions such as 12-24 hour dark dew and photo periods and 20-35°C temperature variations. Molecular methods were also employed such as DNA extraction, PCR amplification, and

DNA sequencing for advanced disease detection and identification of the pathogen.

With only a year since its implementation, the project has so far been able to determine the role of dew period, temperature, and light periods in the development of the disease. The project is still on-going as it still needs to identify which among the environmental factors can mostly influence the production of the fungal substances, gibberellin and fumonisin, in onion plants. Once final results are generated, the project will then identify the most effective fungicides and of gibberellin inhibitors for the control of the twister disease of onion.

According to Dr. Alberto, with the results at hand, the project hopes to contribute to the development of a solution to the drastically low production caused by twister disease in the form of effective management practices in onion production.

The project, which received funding support from the Bureau of Agricultural Research (BAR), started in April 2016. ### (Daryl Lou A. Battad)

# **BAR** participates in ASEAN meeting on climate information system for agri

ecognizing the importance of providing reliable and accurate climate information for increasing the resiliency of farmers to the impacts of climate change, ASEAN Member States (AMS) have identified Climate Information Services (CIS) for agriculture as a priority area for collaboration and scaling-up of efforts. The ASEAN-Climate Resilient Network (ASEAN-CRN), in its continuous effort to promote climate resiliency through exchange of information, expertise, and experiences on climate-smart agriculture practices among AMS, organized the "Effective Climate Information Services for Agriculture in ASEAN."

Held on 21-23 March 2017 in Cebu City, Philippines, the knowledge exchange event was attended by representatives of the AMS and was chaired by Thailand's Department of Agriculture with the Philippine Department of Agriculture as host. Ms. Cynthia de Guia, Climate Change Research and Development (R&D) Alternate Focal Person: and Ms. Mara Shvn Valdeabella, Information Officer. represented the Bureau of Agricultural Research in the meeting.

With the primary aim of generating actionable learnings and regional collaboration on the effective use of CIS in ASEAN agriculture, the meeting held five sessions that focused on 1) CIS for agricultural productivity; 2) CIS for market access and financial inclusion; 3) CIS for risk management and gender inclusion; 4) institutional arrangements for enhanced CIS for agriculture; and 5) ways forward for enhanced regional collaboration on CIS. Each session started with keynote presentations from technical experts and partners from the region such as the Climate Change, Agriculture and Food Security (CCAFS) program of the Consultative Group on International Agricultural Research (CGIAR) Centers and Research Programs, and

the Food and Agriculture Organization.

Sessions 1 to 3 featured unique and dynamic marketplace sessions where the AMS shared the current status, challenges, and lessons learned from implementing CIS programs in their respective countries. Session 4, on the other hand, focused on the need and importance of mainstreaming CIS in the institutional and political frameworks of the member states to ensure that CIS will be scaledup and applied across the various stages of the agricultural value chain. Representatives from the Philippines, Thailand, and Vietnam talked about their experiences on establishing institutional partnerships for effective application of CIS in agriculture.

Discussions from the previous sessions served as basis for a series of interactive group works to develop actionable country plans for improving the generation and provision of CIS for agriculture in ASEAN.

In the first group work, the participants were distributed to four mixed country groups where each group was tasked to identify solutions to challenges being faced in the different steps of CIS

development. This was followed by a country group discussion where the AMS developed plans for action at the national level which were later on presented and shared with everyone. Each country group identified and discussed the bilateral and regional collaboration activities needed to support each other in promoting the uptake and use of CIS.

The last day of the meeting was dedicated to a field visit to the City of Ormoc in Leyte to give the participants an opportunity to see one of the many communities involved in the Philippines' Climate Resiliency Field Schools.

The meeting was made possible through support provided by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH of Germany; FAO of the United Nations; and the CCAFS program of the CGIAR. Participants came from the ASEAN Ministries of Agriculture, Ministries of Environment, and the Hydrological and Meteorological Institutes of AMS. Also present in the event were development partners and civil society organizations involved in the generation and provision of CIS in the agriculture sector. ### (Mara Shyn M. Valdeabella)



Information Services for Agriculture in ASEAN" held in Cebu

GAD



# BAR celebrates NATIONAL WOMEN'S MONTH



















he Bureau of Agricultural Research (BAR) kicked off its month-long celebration of National Women's Month on 8 March 2017 which also happened to be International Women's Day. The day began with a ribbon-cutting ceremony of the photo exhibit at the lobby area, celebrating this year's theme, "WE Make Change Work for Women." The photos in the exhibit featured 28 shots submitted by participating BAR staff in their interpretations of this year's theme. For the ribbon-cutting ceremony, present were Ms. Digna Sandoval, head of the Institutional Development Division, and Ms. Salvacion Ritual, head of the Program Monitoring and Evaluation Division.

Following the ribbon-cutting ceremony, BAR staff joined the kick-off activity program. In his welcome speech as read by Ms. Sandoval, BAR Director Nicomedes P. Eleazar said that for women to benefit in the change, we all need to work together. "We know that when change happens, everyone benefits. But before this can materialize, everyone has a role to play as mentioned in the theme that we

make change work," he said.

The kick-off activity included a friendly competition as BAR staff were split into teams for a game of trivial pursuit with questions about the notable women in Philippine History.

On 10 March 10 2017, BAR's GAD Focal Point System organized two in-house seminars for the BAR staff.

The first speaker was Philippine correspondent for the international non-profit organization, Stop Street Harassment, Ms. Karen Rodrigo. Her discussion centered around discrimination against women in the public sphere, whether it be out in the streets or in social media platforms. Part of her short discussion on street harassment was a lowdown on the experiences of women and members of the LGBT+ community: these include unwanted wolf whistling, leering or staring in a lascivious manner, catcalling, homophobic slurs, persistent requests for someone's name or number after they have said no, or

unjust fixation through stalking, and flashing.

According to Ms. Rodrigo, street harassment is subjecting women to unwanted attention. When someone excuses behaviors of street harassment as "complimenting" someone based on his or her appearance and gender, it is still street harassment because of the way it was forced upon the intended target and on how it ultimately make a person feel constricted and objectified.

The Convention on the Elimination of all Forms of Discrimination Against Women was also cited by Ms. Rodrigo as the international treaty that defines "discrimination against women" and lays out a framework for state parties to use as a guide in upholding women's rights and in creating a safe and free environment for women. Ms. Rodrigo also talked about the Anti-Discrimination Bill as well as Senate Bill 2351 during her discussion on gender-based electronic violence. Ms. Rodrigo concluded her seminar by

encouraging everyone to speak out against gender discrimination especially when they see it happening on the streets.

Facilitating the introductory run through on self-defense techniques were members of the International Krav Maga Federation, Ms. Rina Marie Buenaventura and Mr. Jess Ian Garcia. First, they talked about the general objective when using Krav Maga as selfdefense. When one is in danger, the goal is to survive and according to Ms. Buenaventura, sometimes the best way to survive is to run away from danger. But in case a person encounters an attack, then Krag Maga can be a powerful tool in inflicting pain upon an attacker so that a victim can buy some time to

After an intense workout from learning various self-defense techniques, the seminar participants were treated to a cool-off stretching yoga session by Ms. Zinnia Villarin, a freelance yoga instructor.

A film showing activity followed on 17 March 2017. This

year's film featured Froi Medina and Rody Vera's original screenplay, "Boses." The movie follows the life of Onyok, a seven-year old who was a victim of domestic abuse. As Onyok undergoes rehabilitation, the wounds of his past are slowly healed. He learns to play the violin with the help of a volunteer mentor, Ariel, and this plays a big part in his recovery.

After the movie, Mr. Roger Macau, advocate distributor from Erasto Films conducted a short discussion on the independent film and how it depicted the reality of Violence Against Women and Children (VAWC). Citing Republic Act 9262 (Anti-Violence Against Women and Their Children Act of 2004), Mr. Macau pointed out the forms of how VAWC can manifest in a household through physical, sexual, psychological, and economic violence.

According to Mr. Macau, parents should practice positive discipline: an approach where parents reinforce good morals and behavior of children in unthreatening manners. He ended his discussion encouraging the

BAR staff to take up the role of a concerned citizen if he or she sees an occurrence of domestic abuse in their own neighborhoods.

In the last week of March, the BAR staff voted for their favorite photograph out of those on display at the photo exhibit. They also voted for their favorite GAD logos from among those that were also part of the exhibit.

The winners of the photoexhibit and logo-making contest were announced on 7 April 2017. The winning photo was shot by Mr. Ricardo Bernardo of BAR's Applied Communication Division. It features a lady farmer in Sagada harvesting potatoes in her own farm. On the other hand, the winning logo which features gender symbols linked together was designed by Mr. Gian Carlo Espiritu of BAR's Institutional Development Division. The winning photograph will be used in BAR's publications, while the winning logo will be BAR's official GAD logo for the succeeding women's month celebrations. ### (Ephraim John J. Gestupa)

8 BARChronicle March 2017 | Issue BARChronicle 9