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BAR leads harmonization meeting on ACEF R&D Grants for SUCs

As the tasked agency by the Department of Agriculture (DA) to lead in the screening and evaluation of the research and development (R&D) component of the Agricultural Competitiveness Enhancement Fund (ACEF) program specific for all state universities and colleges (SUCs), the Bureau of Agricultural Research (BAR) led a harmonization meeting and orientation/proposal conceptualization workshop on 4-6 April 2018 in Quezon City.

The activity aimed to harmonize the R&D program implementation of DA and SUCs by providing specific guidelines and directions on research prioritization focusing on commodities that are demand-driven and have high impact to the sector.

The SUCs are one of the key partners of BAR and recipients of various funded and assisted projects. In the implementation of these agriculture and fisheries projects, the intensification and complementation of all R&D programs is necessary to ensure a holistic and integrated R&D partnership. With the presence of SUCs, the meeting sought to harmonize and organize the R&D program implementation both the for the agriculture and fsheries sector.

The meeting was attended by 123 participants, composing of vice president for research, research directors, and senior researchers, representing 59 SUCs from all over the country.

In his welcome message, BAR Director Nicomedes P. Eleazar said that the bureau has completed the updating of the Research and Development, and Extension Agenda and Programs (RDEAP) for 2017-2022 that will serve as reference material for BAR's partners in implementing R&D projects and programs. He mentioned that "ACEF will fund R&D activities of qualified SUCs that are focused on increasing productivity, profitability and competitiveness of various priority agricultural and fishery ventures through commercialization of appropriate technologies and further upgrading of their research and development facilities."

As part of the outputs, SUCs were to conceptualize research proposals that can be considered for funding support by the DA under the ACEF R&D grants specifically for technology commercialization and research facilities development projects.

ACEF R&D Grant is a funding facility that aims to increase productivity and competitiveness of farmers and fisherfolk through services and technologies derived from the funded agriculture and fishery R&D activities of the SUCs.

In closing, Mr. Joell H. Lales, head of BAR-Program Development Division, reiterated the importance of a "synergistic approach." "It is through this strengthened partnership between BAR and SUCs (and other partner agencies in R&D) that we are able to have a harmonized action and common path toward addressing the various challenges of the sector," he said. ###

(Patrick Raymund A. Lesaca and Rita T. dela Cruz)

IN THIS ISSUE...

Technologies must be instrumental in farmer's progress – Eleazar

Thus the gist of Bureau of Agricultural Research (BAR) Director Nicomedes P. Eleazar's message during the opening of the 2018 National Review of the Site Specific Nutrient Management (SSNM) Cassava Projects held on 10 April 2018 in Lipa City, Batangas.

The bureau chief, addressing his message to the researchers, stressed that that their projects will not only be evaluated based on whether they have achieved their objectives or not but it will also be assessed based on "how the technologies we have introduced through the project have become instrumental in making the sector productive and our farmers progressive."

The four-day review aimed to present the results of SSNM cassava projects implemented in the regions, review SSNM cassava protocol, and present the analysis across sites and refine fertilizer recommendations. A hands-on coaching on the SSNM Cassava Nutrient Expert® was also conducted during the review.

Now on its second year of implementation, the SSNM cassava projects were reviewed and evaluated by Dr. Apolonio Ocampo, university researcher from University of the Philippines Los Baños (UPLB), Dr. Candido Damo, technical consultant on cassava production from Department of Agriculture (DA), and Mr. Milo delos Reyes, assistant regional director for operations and extension from DA-Regional Field Office (RFO) 4A.

Dr. Eleazar commended the International Plant Nutrition Institution (IPNI) for being one of the most active international partners of BAR particularly in bringing viable technologies to farmers which is evident of the positive results in many areas of the country. He also said, "realizing the impact of Nutrient Expert® for maize and how it was successfully adopted by private sectors, DA-RFOs, and local government units, it is with high hopes that Nutrient Expert® for Cassava will also be a success."

After the successful and wide adoption of Nutrient Expert® for Maize, the SSNM-Technical Working Group recommended for the adoption of SSNM Cassava. Thus, DA through BAR along with partner R&D institutions collaborated to generate technologies for one of the major root crops in the country—cassava. Cassava, one of the important agricultural crops, has numerous uses as raw material in the production of flour and bioethanol.

IPNI, a non-profit, science-based organization dedicated to responsible management for plant nutrition, developed the Nutrient Expert® for Maize—a nutrient decision support tool for hybrid, open-pollinated, and traditional varieties in the Philippines. It is a product of the collaborative field research among BAR, UPLB, and IPNI. ### ***(Rena S. Hermoso)***

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

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BAR to strengthen regional network through RRDEN

In his welcome remarks, BAR Director Nicomedes P. Eleazar says, "we view this activity as an important venue to plan on strategies on how we can further strengthen the established zonal and regional RDE networking centers and research satellite stations. PHOTO: PRLESACA

In an effort to strengthen regional cooperation and establish common grounds for an effective implementation of research and development projects on agriculture and fisheries, the Bureau of Agricultural Research (BAR) spearheaded the conduct of a "Special Meeting for Regional Research, Development and Extension Network (RRDEN) for Agriculture and Fisheries" on 17 April 2018 in Quezon City.

BAR Director Dr. Nicomedes P. Eleazar, in his welcome remarks, said that the "Regional RDE Network must work as one" thus saw it imperative that a modality in the agenda setting, planning and formulation of agriculture and fisheries projects be established.

"We view this activity as an important venue to plan on strategies on how we can further strengthen the established zonal and regional RDE networking centers and research satellite stations. We hope to provide sound recommendations on how we can fine tune the guidelines and policies related to the network, while strengthening partnerships among agencies," he said.

BAR's Program Monitoring and Evaluation Division (PMED) Chief Salvacion Ritual presented the updated guidelines relative to the implementation of the Regional RDE Network while Mr. Joell Lales, head of the Program Development Division, discussed the importance of the network to further strengthen the agriculture and fisheries sector. He reminded research managers to assist in the screening of project proposals prior to regional endorsement to the bureau for further assessment.

BAR's Institutional Development Division (IDD) Head Digna Sandoval discussed the establishment and upgrading of facilities in the regions and Applied Communication Division Head Julia Lapitan shared the bureau's on-going initiatives on scientific publication grants and the compendium of BAR-funded projects.

The salient accomplishments and plans of the regional network centers for Luzon, Visayas, and Mindanao were also presented. Ms. Lovelyn Gaspar of Department of Agriculture-Regional Field Office (DA-RFO) 2 provided the updates for Luzon group; Engr. Leonarda Londina of DA-RFO 8 for Visayas group; and Ms. Juanita Salvani of DA-RFO-10 and Mr. Macmod Mamalangcap of BFAR-ARMM for Mindanao group.

Among the agreements reached during the meeting were review of RRDEN membership, RDE policies and guidelines, technical and financial assistance on the establishment of RRDEN facilities, increase on networking funds, and financial matters, among others.

The RRDEN will serve as a vehicle to systematically develop and implement a regional RDE agenda and program for agriculture and fisheries. The research division is tasked to serve as the lead agency for the regional R & D cluster in agriculture and fisheries. ###

(Patrick Raymund A. Lesaca)

Successful ATIN project presented in 5th AFACI General Assembly

Ms. Julia A. Lapitan, BAR-Applied Communication Division head and Agricultural Technology Information Network in Asia (ATIN) project principal investigator presents the success story of the ATIN project during the the 5th Asian Food and Agriculture Cooperation Initiative (AFACI) General Assembly on 3-5 April 2018 at Lao PDR. PHOTO COURTESY OF AFACI SECRETARIAT

The Rural Development Administration (RDA) and National Agriculture and Forestry Research Institute (NAFRI) based in South Korea, conducted the 5th Asian Food and Agriculture Cooperation Initiative (AFACI) General Assembly on 3-5 April 2018 in Vientiane, Lao PDR.

The assembly, held every three years, serves as a venue for all 14 AFACI member-countries to come together and share the progress and developments of the projects and discuss future directions for smoother and better implementation. Among its members are: Bangladesh, Cambodia, Indonesia, Kyrgyz Republic, Lao PDR, Mongolia, Nepal, Philippines, Sri Lanka, Thailand, Vietnam, Myanmar, Bhutan, and South Korea.

The assembly was attended by 90 delegates, including the minister and vice minister of the Ministry of Agriculture from RDA, Korea; and head of agricultural research institutes from the AFACI member-countries.

Representing the Philippines, Ms. Julia A. Lapitan, head of the Applied Communication Division of the Bureau of Agricultural Research (BAR) and principal investigator (PI) of the Agricultural Technology Information Network in Asia (ATIN), attended the general assembly.

Ms. Lapitan presented the ATIN project in the Philippines, along with the other five "Most Outstanding Projects" from Korea, Vietnam, Sri Lanka, and Lao PDR. The five countries were chosen from the 20 countries that were awarded the "Most Outstanding" and "Outstanding" AFACI projects.

ATIN is one of the projects under the Extension Program that is being coordinated by AFACI, to which the Philippines is a member-country. ATIN is an initiative that aims to build a standardized network and/or web-based information database system for agricultural knowledge and share information among AFACI member-countries.

Ms. Lapitan reported the bureau's past and current initiatives in advancing agricultural development through the promoting sustainable agriculture, and enhancing technological innovations, and establishing network for joint research and development (R&D) initiatives through the ATIN platform. She also underscored the importance of knowledge sharing in attaining a progressive agriculture.

In April 2010, the Philippines hosted the first AFACI General Assembly. Since its establishment, BAR has been partnering with AFACI. Agriculture Undersecretary Bernadette Romulo-Puyat is the national representative of AFACI in the Philippines, while Dr. Nicomedes P. Eleazar, director of BAR, is the head of AFACI-ATIN in the Philippines.BAR is the overall coordinator of the AFACI-funded projects in the Philippines.

The next AFACI General Assembly will be held in Bhutan in 2021. ### ***(Patrick Raymund A. Lesaca and Rita T. dela Cruz)***

Newton Fund researchers visit BAR

Researchers under the Newton Fund Partnership between UK-Biotechnology and Biological Sciences Research Council (UK-BBSRC) and the Bureau of Agricultural Research (BAR) visited the bureau on 18 April 2018.

During the courtesy visit, BAR Director Nicomedes P. Eleazar welcomed Dr. Christine Tait-Burkard, Dr. Tanja Opriessnig, and Dr. Samantha Lycett from the University of Edinburgh-Roslin Institute. They were accompanied by Dr. Clarissa Yvonne Domingo, project leader for the Filipino counterpart R&D project from Central Luzon State University, and Dr. Daphne Jorca, a collaborator in Bureau of Animal Industry. With the partnership, diagnostic tools to identify and differentiate viral pig diseases using new assays and flow cell detection methods will be developed.

PHOTO: RHERMOSO

BAR Dir. Eleazar (3rd from right) and researchers under the Newton Fund Partnership between UK-BBSRC showing various fruit wines made from underutilized high value crops that were developed by various research institutions funded by the bureau.

The research team composed the R&D program titled "A Strategic Approach to Identifying and Combatting Porcine Reproductive and Respiratory Syndrome Virus

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IDG facilities inaugurated in Siquijor

The Bureau of Agricultural Research (BAR), through its Institutional Development Division (IDD), in partnership with the Department of Agriculture-Regional Field Office (DA-RFO) 7 inaugurated two R&D facilities established at Siquijor Research and Development Center on 24 April 2018 in Caipilan, Siquijor, Siquijor.

Attending the ceremony were Mr. Joell H. Lales, head of BAR-Program Development Division, representing BAR Director Nicomedes P. Eleazar; Ms. Judith A. Maghanoy, head of BAR-Finance Division; and Mr. Alvin L. Fontanil, BAR's focal person for High Value Crops Development Program. Joining them were: Dr. Fabio Enriquez, research division chief, representing DA-RFO 7 Regional Executive Director Atty. Salvador Diputado; Dr. Gregolito Bunado, center chief of Siquijor R&D center; Mayor Richard Quezon of Siquijor, Siquijor; and other officials from DA-RFO 7 and LGU-Siquijor.

PHOTOS: AFONTANIL

INSET (L-R): Dr. Fabio Enriquez, research division chief, Ms. Judith Maghanoy, BAR-Finance Division head, Dr. Gregolito Bunado, center chief, and Mr. Joell Lales, BAR-Program Development Division head, doing the ceremonial ribbon-cutting.

The facilities are the first BAR-IDG supported project at Siquijor R&D Center. It serves as a venue for research, training, meetings and conferences for RDE staff in the region, local government unit (LGU) technicians and farmers.

Highlights of the event were the ceremonial ribbon-cutting, unveiling of markers of the two

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BAR participates in KM workshop in support to AMIA

Representatives from the Department of Agriculture (DA) main office, selected DA bureaus, and DA regional offices attended the workshop on the Adaptation and Mitigation Initiative in Agriculture Knowledge Management Strategy Development held on 4-5 April 2018 in Quezon City.

PHOTO: MGREGORIO/CIAT-PHILIPPINES

A two-day workshop on the Adaptation and Mitigation Initiative in Agriculture (AMIA) Knowledge Management (KM) Strategy Development was called by the International Center for Tropical Agriculture (CIAT) in cooperation with the DA System-Wide Climate Change Office (DA-SWCCO) on 4-5 April 2018 at the Oracle Hotel in Quezon City.

In attendance were representatives from the DA main office, selected DA bureaus and regional offices. BAR, as the focal agency for Climate Change R&D Program, also joined in the workshop.

The activity was held to iron out the details of a KM strategy that will guide the communication and outreach initiatives of AMIA, DA's national framework in addressing climate change in agriculture and serves as the umbrella program covering climate change that cuts across all programs, functions, and agencies.

The government is looking at making available a comprehensive range of support services such as climate information, finance and insurance, climate-resilient infrastructure, and technologies and practices, among others.

For DA, the response to the challenges of climate change (CC) lies in building Climate-Resilient Agri-Fisheries (CRA) communities by the hundreds, or even thousands. The main challenge is how to make CRA an operational strategy. Field level action that directly involves and impacts on the livelihoods of farming communities is needed. Decision makers, implementation teams on the ground, and stakeholders need to be equipped with readily accessible knowledge and user-friendly tools to support the rollout of CRA practices on a major scale. Towards attaining this objective, CIAT was given the role of developing a Decision Support Platform for CRA Investment Prioritization in collaboration with various DA offices and State Universities and Colleges.

During the workshop, the purpose of KM was understood to be "data for CC-resilient communities that is captured, stored and made accessible, including useful information, as basis for reflections and communications." The challenge in developing CRA communities is that CC responses have to be context- and site-specific. For adaptation and mitigation at local levels to happen and be on target, integrated decision support systems that gather and analyze information have to be developed and delivered in a timely fashion to decision makers and various stakeholders.

Participants were tasked to participate in the development of: (1) Data and Information Management Strategy and Plan that will map out the flow of all program data from the sources to their receivers; and (2) Communications and Outreach Strategy and Plan to form the communication support towards meeting AMIA's objective of building CRA communities. These will be crucial when the DA, through AMIA, begins to upscale the use of climate-smart practices.

Representatives from BAR were Mr. Danielle Joseph Sisican of the Program Monitoring and Evaluation Division, Ms. Candice Guilaran of the Program Development Division, and Mr. Victoriano Guiam of the Applied Communication Division who presented a paper on BAR's regular outreach and communication activities. Workshop outputs will undergo editing and refinement by CIAT prior to submission to DA-SWCCO. ### ***(Victoriano B. Guiam)***

BAR joins 2nd Garlic Summit

The Bureau of Agricultural Research (BAR) participated in the Second Garlic Summit held on 25 April 2018 in Lubang, Occidental Mindoro.

Spearheaded by High Value Crops Development Program (HVCDP) of the Department of Agriculture (DA), in cooperation with DA-MIMAROPA, the summit, which was attended by more than 250 participants aimed to aid the crafting of the Five-Year Philippine Garlic Industry Development Roadmap. Through the stakeholders' collaboration, involving DA, provincial government, and various garlic farmers and growers from Occidental Mindoro, several issues on the industry will be addressed.

Lubang Mayor Roberto Sanchez, in his welcome remarks, said that "we need to educate and equip farmers, especially garlic farmers and to create market-matching, not only for garlic, but for all agri-fishery produce." The host mayor thanked the Department for the support it extended to the municipality.

Meanwhile, Agriculture Undersecretary for High Value Crops and Rural Credit, Evelyn G. Laviña, who delivered the keynote address, mentioned that under the leadership of Agriculture Secretary Emmanuel Piñol, DA is focused and target-driven on its deliverables in making food available and affordable.

Confronting the perennial issues concerning garlic production is a clear indication of the DA's commitment to increase (garlic) production and empower farmers. Usec. Laviña added the active participation of farmers as vital in the preparation of the roadmap, since garlic is experiencing a dramatic price increase in the local market and reported decrease in local production in recent years.

Dr. Wilhelmina Castañeda, chief of the Agribusiness and Marketing Assistance Division of DA-Regional Field Office 1, presented a BAR-funded project on the application of gibberellic acid (GA3) in garlic to enhance the growth and yield of garlic cultivars.

During the open forum, Ms. Amavel A. Velasco, assistant head of the BAR-Program Monitoring and Evaluation Division (PMED), shared the bureau's on-going interventions on garlic including funded and coordinated projects on applied research and development, and technology commercialization

Part of the activity was the turnover of onion and garlic processing center and equipment, 20,000 kilos of garlic planting materials and other farm inputs, GA3 and fertilizers, and five motorized pump boats. ###

(Patrick Raymund A. Lesaca)

INSET: Usec. Evelyn G. Laviña (left) says that the Department of Agriculture is focused and target-driven in making food available and affordable under the leadership of Sec. Emmanuel Piñol while BAR-PMED Assistant Head Amavel A. Velasco shares the bureau's on-going interventions on garlic. PHOTOS: PRLESACA

Book on Mount Makiling Forest Reserve launched

UPLB Chancellor Fernando Sanchez, Jr. (center left); Ms. Evelyn H. Juanillo, representing BAR Director Nicomedes P. Eleazar (center right); Dr. Portia G. Lapitan, UPLB Vice Chancellor for Academic Affairs, editor and lead author; and other co-authors of the book during the launching.
PHOTO BY: VRMANGINGAS/UPLB-OPR

A book that compiles and synthesizes findings of scientific studies undertaken in Mount Makiling Forest Reserve (MMFR) since the early 1900s and put together into a sustainable management, conservation, and development program for forest reserve and the upland community was launched on 18 April 2018 at the University of the Philippines Los Baños (UPLB).

The book titled, "*Science-based Management and Upland Community Development: The Case of Mount Makiling Forest Reserve.*" Dr. Portia G. Lapitan, vice chancellor for academic affairs of UPLB and professor of forestry, is the lead author and editor of the book. According to Dr. Lapitan, this is the first attempt to synthesize a number of researches about Mount Makiling, where significant scientific investigations have been conducted as early as the 1900s.

The book is funded by the Bureau of Agricultural Research (BAR), through the UPLB Foundation, Inc. Ms. Evelyn H. Juanillo of BAR, attended the book launch in behalf of Director Nicomedes Eleazar.

Reading Dr. Eleazar's message, Ms. Juanillo mentioned that, more than the development of technologies, the bureau is also putting emphasis on how technologies are translated and disseminated to target audience. "I see the publication as a useful tool in packaging the outputs of researchers undertaken at the Mount Makiling Forest Reserve. This could be a basis of management and conservation plan on upland community development," she read.

BAR hopes that through this publication, UPLB's contributions to upland community development and natural resources management will further encourage researchers and policymakers to continuously seek and provide the much-needed technology and interventions for upland farmers.

Prior to the production of the book, BAR has supported the conduct of two relevant research projects on similar initiatives, the "Community-based Watershed Management Approach in Improving Livelihood Opportunities in Cambantoc Watershed;" and the "Participatory Upland Development in Dampalit Watershed of the Mount Makiling Forest Reserve." ### ***(Ma. Eloisa H. Aquino)***

16 NTCP completed projects reviewed

16 NTCP completed projects were reviewed by a pool of technical experts on 24-26 April 2018 in Subic, Zambales.
PHOTO: RDELACRUZ

To further assess the implementation of the projects funded under the Bureau of Agricultural Research's National Technology Commercialization Program (NTCP), 16 projects (13 from state universities and colleges; and 3 from non-DA agencies) were subjected to terminal review on 24-26 April 2018 in Subic, Zambales.

Part of the objective of the review was to identify impacts, milestones, and commercialization activities geared towards entrepreneurship and socio-economic development. It also aimed to determine how the project will be able to sustain and contribute to the overall goal of the

Newton Fund...from page 5

Outbreaks and Other Porcine Viral Diseases." BAR provided funding support to the R&D project of the Filipino counterpart.

Dir. Eleazar led the tour inside the R&D Technology Commercialization Center wherein research results, innovations, and products developed under BAR's two banner programs, National Technology Commercialization Program and Community-based Participatory Action Research, were showcased. Visitors were also able see various fruit wines made from underutilized high-value crops developed by various research institutions funded by BAR.

They were able to taste cacao wine. Adding premium to cacao, the Quezon Agricultural Experiment Station under the DA-Regional Field Office 4A developed wine from various cacao varieties produced through the project, "Technology Commercialization for Cacao in the Province of Quezon" funded by the bureau. Cacao wine was also used as in ingredient in one of the featured recipes during the Madrid Fusion Manila in 2017.

Joining Dir. Eleazar during the tour were BAR technical staff including Ms. Maria Elena M. Garces, assistant head of the Technology Commercialization Division (TCD); Ms. Ma. Eloisa H. Aquino of the Office of the Director; Mr. Ian Jomari Panaga of the Program Development Division; and Mr. Rodolfo Fernandez of TCD. ### ***(Ma. Eloisa H. Aquino)***

Dr. Nicomedes P. Eleazar, BAR director, explains to the Newton Fund researchers some of the products developed and funded through the bureau's banner programs — National Technology Commercialiaztion Program and Community-based Participatory Action Research.

PHOTO BY: RHERMOSO

agriculture and fisheries sector.

The 16 projects subjected for review were: (1) nutraceutical and cosmeceutical products from saluyot and okra; (2) tissue-cultured banana; (3) cacao traceability; (4) cacao products development; (5) biocontrol for major diseases of high-value crops; (6) hot water tank for heat treatment; (7) development and promotion of katmon; (8) organic vegetable production; (9) lotus R&D; (10) Technology Commercialization on Wheels; (11) super sweet sorghum; (12) beekeeping and bee products; (13) Cavite State University Bee Program; (14) safe and quality bee products; (15) quality grade ethanol from sweet sorghum; and (16) saccharine feedstocks.

Serving as evaluators for the review were: Dr. Edna Aguilar of the University of the Philippines Los Baños (UPLB); Dr. Cleofas Cervancia of UPLB; Engr. Roberto Villa of the Center for Environmental Law and Policy Advocacy (CELPA), Inc.; Mr. Anthony B. Obligado, head of BAR Technology Commercialization Division (TCD); Ms. Maria Elena Garces of BAR-TCD; and Ms. Ann Martha Laspinas of BAR-Program Development Division (PDD).

Ms. Garces, assistant head of the BAR-Technology Commercialization Division (TCD), welcomed the presenters, evaluators, and participants of the three-day activity, in behalf of BAR Director Nicomedes Eleazar. She reiterated the importance of conducting the terminal review as a "form of check and balance" on the end of BAR as a funding and coordinating agency. Meanwhile, Ms. Glacelle Alyne Malinao of BAR-TCD served as the emcee for the activity.

NTCP is a banner program of the bureau that serves as a vital tool for the development of enterprises and the improvement of agriculture and fisheries related industries. The activity was organized and led by TCD. ### ***(Rita T. dela Cruz)***

BAR conducts gender mainstreaming training

Participants of the gender mainstreaming training conduct gender analysis on specific cases assigned to them by the facilitators. PHOTO: EJGESTUPA

The Bureau of Agricultural Research (BAR) conducted a Gender Mainstreaming Training to its technical and administrative staff who were members of its Gender and Development (GAD) Focal Point System on 17-20 April 2018 in Zambales. The activity was facilitated by GAD consultant Ms. Loren Umali and National GAD Resource Pool member, Ms. Maria Daryl Leyesa. The activity was a follow-up to the Gender Sensitivity Training of which the participants have already undertaken at BAR.

In the first day of the training, Ms. Leyesa and Ms. Umali did a review of the important GAD concepts such as gender equity, gender stereotypes, and social construction. These concepts are to be considered in order to bring to the surface the existing gender biases within society.

Ms. Leyesa also presented the current economic status of women in Filipino rural communities in terms of their health, education, and work roles.

Ms. Umali then facilitated the discussions on the legal basis of GAD integration in government institutions. Upon citing various laws such as RA 9710 otherwise known as the Magna Carta of Women, she discussed Gender Analysis as the tool for transforming research projects to also address gender inequality and aim for women's empowerment. According to Ms. Leyesa, Gender Analysis aims to: (1) surface the differential *situation* of men and women, (2) identify the differential *roles and responsibilities* of men and women, (3) analyze the differential *access to resources* of men and women, and (4) analyze the differential *impact* of programs or project interventions to men and women.

During the training, Ms. Umali and Ms. Leyesa had the participants conduct gender analysis on various case studies on rural women in farming communities. Part of the workshop also included the evaluation of BAR research proposals through gender analysis.

Ms. Leyesa reminded the participants that as members of BAR's GAD Focal Point System, they are the lead in mainstreaming GAD in all stages of BAR's mandated operations, especially in its banner programs.

"We need to ensure that in the implementation of research projects, there will be no negative outcomes concerning gender, and we accomplish this by understanding why gender gaps exist and persist" added Ms. Leyesa.

In his closing remarks, Mr. Anthony Obligado, head of the BAR-Technology Commercialization Division further affirmed the activity's objective by saying that "incorporating a gender perspective on the inputs and potential impacts of our projects is a critical component to its success." ### ***(Ephraim John J. Gestupa)***

IDG facilities...from page 5

facilities and a short turnover program. Dr. Bunado officially opened the program by welcoming the officials and participants and giving the rationale of the activity.

In his message, Mr. Joell Lales emphasized that the Siquijor R&D Center must put utmost utilization of the two R&D facilities to produce quality research outputs from efficient and effective researchers and scientists.

Research Division Chief Dr. Enriquez, in behalf of Atty. Diputado, was thankful to BAR for the funding support and in response, accepted the challenge of optimizing the utilization of the two R&D facilities for a sound research and development.

The LGU of Siquijor also showed their support to BAR's intervention through Mayor Richard Quezon. He brought up how important agriculture is to their province and encouraged the youth to practice agriculture as future generation of farmers.

The BAR-IDG program caters to the growing development needs for a more responsive delivery of services and technological interventions in the agri-fishery sector. It aims to strengthen the institutional capacities of RDE network members with the upgrading and acquisition of priority agriculture and fisheries R&D facilities and equipment. ### ***(Alvin L. Fontanil)***

Chicken production featured in BAR seminar

INSET: Ms. Julieta Delos Reyes, assistant professor of agricultural economics at UPLB serves as the resource person on the topic, "Supply Value Chain Analysis of Native Chicken in Batangas and Quezon, Philippines."

Dr. Ma. Asuncion Beltran, dean of the College of Veterinary Medicine of Tarlac Agricultural University presents the BAR-funded project, "Commercial Production of Free-Range Chicken"

PHOTOS: LFONTANIL

The Bureau of Agricultural Research (BAR), together with the Asian Food and Agriculture Cooperative Initiative (AFACI), a major partner of the bureau in providing and disseminating significant agricultural information in the country, featured two topics on the commercial production of free-range chicken and the supply value chain analysis of native chicken in its monthly seminar series. Spearheaded by BAR's Applied Communication Division, the seminar that drew around 150 participants from all walks of life, was held on 26 April 2018 at BAR's 4th Floor Conference Room.

Dr. Ma. Asuncion Beltran, dean of the College of Veterinary Medicine of Tarlac Agricultural University (CVM-TAU) and Professor Julieta Delos Reyes, assistant professor of agricultural economics at the University of the Philippines Los Baños (UPLB) served as the resource speakers.

Dr. Beltran provided insightful, scientific tips that were the results of a BAR-funded research study, "Commercial Production of Free-Range Chicken" including the most basic yet highly essential management practices on rearing free-range chicken geared towards enterprise.

Meanwhile, Prof. Delos Reyes discussed the analysis of the productivity, profitability, and technical efficiency of native chicken. The project, titled "Supply Value Chain Analysis of Native Chicken in Batangas and Quezon, Philippines," to which her presentation was based from, is also funded by the bureau.

She mentioned that the native chicken sector is an important component of the poultry industry in the Philippines, constituting more than 50 percent of the total chicken population in the country. She explained that many consumers continue to give preference for native chicken products due to their distinct characteristics including flavor, leanness and suitability to most Filipino dishes. The growing awareness on the benefits of eating good food and the hazard in ingested contaminants from chemically-treated ones was attributed to the huge demand and economic potentials of our Philippine native chicken, according to Dr. Delos Reyes. ### ***(Leoveliza C. Fontanil)***

SCoPSA technology highlights CPAR farmers' field day in Isabela

A farmer's field day showcasing the "Community-based Participatory Action Research (CPAR) on Improvement of Cropping Pattern and Enterprise Development in Banana-based Areas through Sloping Agricultural Land Technology (SCoPSA) of Barangay Calaoagan and Progreso, San Guillermo, Isabela" was held on 4 April 2018 at Brgy. Progreso, San Guillermo, Isabela.

CPAR is a banner program of BAR that aims to validate matured, location-specific technologies to enhance productivity of a farming community.

Organized by the Department of Agriculture-Regional Field Office 2, the activity was participated by representative/s from each of the 26 barangays in San Guillermo and the graduating farmers from the Farmers Field School on Rice. They visited the project site and were able to hear testimonies from the farmer cooperators of the CPAR project. An open forum was also held to facilitate inquiries and questions from the audience.

The goal of the project, according to Mr. Rickson T. Baldugo, project proponent, is to increase the income of the farmers and uplift their living conditions. Thus, the project was aimed to "increase productivity in banana-based areas of barangay Calaogan and Progreso, San Guillermo, Isabela through CPAR project that aims to accelerate the promotion of appropriate technologies within the framework of an integrated farming system in the community."

SCoPSA is a program developed by DA as part of its national advocacy to adopt soil and water conservation measures to address soil erosion, and to enhance productivity of corn farmers by the use of sustainable, adaptive corn technologies especially in sloping areas. It was in 2013 when the SCoPSA program was initiated through the Bureau of Soils and Water Management (BSWM).

Ms. Salvacion M. Ritual, head of the BAR-Program Monitoring and Division (PMED), attended the field day in behalf of BAR Director Nicomedes P. Eleazar. She was joined by Ms. Apolonia A. Mendoza, BAR-PMED technical staff; Engr. Rolando D. Pedro, DA-Cagayan Valley Research Center chief; Mr. Honorio E. Sanchez, chairman of the Municipal Agricultural Fisheries Council; Ms. Jeannie C. Mangaoil, municipal agriculturist; Hon. Renato R. Valdez, Jr. barangay captain of Progreso; Hon. Ricardo G. Castañeda, Sangguniang Bayan-Committee on Agriculture; and Mr. Peter Noble, executive assistant to the municipal vice mayor, in behalf of Municipal Vice Mayor Felipe N. Guyud. ### ***(Rena S. Hermoso)***

INSET: Ms. Lucita Tangalin, farmer cooperator from Brgy. Calaoagan, shares her positive experience with the CPAR project and hopes that the government could bring more projects and programs like it to their *barangay*.

Representatives from each of the 26 barangays in San Guillermo together with the graduating farmers from the Farmers Field School listens to Mr. Rickson T. Baldugo, project proponent, as he explains the rationale of the CPAR project. PHOTOS: RHERMOSO

POT from CPAR rice-corn-shallot showcased in field day

Farmers, researchers, members of the local government units, and community members attend the CPAR Farmers' Field Day held on 5 April 2018 at Caoayan, Ilocos Sur. PHOTO: DLBATTAD

Showcasing the success of the Community-based Participatory Action Research (CPAR) intervention, the Ilocos Norte Research and Experiment Center (INREC) of the Department of Agriculture-Regional Field Office (DA-RFO) 1 organized a farmers' field day featuring the package of technologies (POT) on rice-corn-shallot farming system.

The farmer's field day, held on 5 April 2018 in Brgy. Pantay-Tamurong, Caoayan, Ilocos Sur, was attended by close to a hundred participants, comprising of farmers, researchers, members of the local government units, and community members.

The CPAR project, which introduced the POT on rice-corn-shallot farming system, resulted to an increase in the farmers' yield and income. The CPAR farmer-cooperators were able to share their experiences in their involvement with the project.

Rodel Abella, for instance, presented the returns he acquired from rice production, allowing him an additional net profit of almost Php20,000. Combined with his earnings from other crops such as corn and shallot, Abella said that CPAR has been beneficial for him and especially his family in making all ends meet.

Another farmer-cooperator Hubert Rivera, shared his own results on shallot production. In his most recent yield data, he earned a respectable net income of almost Php70,000. Aside from the earnings, he narrated how he values the learnings and new knowledge he gained from CPAR.

Likewise, Richard Alconcel managed to earn a net income of Php 32,534.00 from his most recent corn harvest of more than 7,400 kilograms/hectare.

The result of the CPAR project is yet another proof of an enhanced production performance and increased profitability of integrated crop production systems while changing the values of the farmers, and subsequently, drawing more farmers to adopt the technology through CPAR.

Ms. Amavel Velasco, BAR's coordinator and focal person for CPAR joined the activity. In her message, she commended the farmer-cooperators who have been more than willing to adopt, much more sustain the intervention set by CPAR. "Graduate *na po kayo sa* CPAR project *natin. Ibig pong sabihin nito, kayo naman ang magsisilbing mga* model farmers *sa iba pang mga magsasaka na nais rin gayahin ang teknolohiyang ginawa ninyo, para sila rin ay makinabang tulad ninyo. Ito naman po ang* nature *ng ating* CPAR: *mag*-introduce *ng* technology, *maging* efficient *ito sa inyong mga* farms, *at maipakalat ito sa inyong mga komunidad*," Velasco said.

CPAR is one of the banner programs of BAR that intends to validate matured, location-specific technologies to enhance productivity of a farming community. ### ***(Daryl Lou A. Battad)***

Doctor-farmer now Phl top cassava grower

by Daryl Lou A. Battad

As a child, Dr. Richard Torno did not dream of becoming a farmer one day. In fact, he pursued to be a veterinarian and worked his way to an international animal hospital based in Singapore.

Forty-two years later today, Dr. Torno is not only a community vet, but a remarkably successful farmer who holds the largest production of cassava in the entire Philippines.

Dr. Torno hails from Ascomo in Guagua, Pampanga with his wife and three children. His father, who is his greatest influence in farming, introduced him to cassava, among other crops.

Cassava in the Philippines

Cassava, or *kamoteng kahoy* to Filipinos, is one of the most important crops in the country. In many rural areas, it is considered a staple food and a substitute to rice because of its high carbohydrate content. About 15 million Filipinos eat cassava both as a staple and supplement, and more than 218,000 farm families depend on cassava for a living.

From being an undervalued crop in the past years, farmers and stakeholders began to recognize the value and many potentials of cassava.

Cassava is mainly used as food, processed feeds, and starch. Processed feeds remain to be cassava's main utilization accounting to more than 50 percent of the total production of the country. Dr. Torno hopes to break this pattern, if possible, and utilize more of cassava for human food.

Self-taught, self-help farmer

Ask anything about veterinary medicine, Dr. Torno would answer in a blink of an eye. He is a doctor, to begin with. However, when it comes to farming, he admitted he needed to start from scratch, with only the desire to learn and the courage to risk even his rising career as a vet in Singapore.

It was in 2004 when he began his journey as a fulltime farmer. "*Na*-convince *talaga ako na mag*-farming *kasi naisip ko, labing-isa kaming magkakapatid, at lahat kami napagtapos ng tatay namin ng pag-aaral na pagsasaka ang hanapbuhay niya. Bukod pa roon, siya na rin ang nagma*-market *ng* produce *niya*," Dr. Torno said. "So '*yon ang ginaya ko*," he added. This, according to him, was the deal breaker.

Apparently, it was also during this time when cassava dealt with extensive losses due to the proliferation of pest and diseases. "*Natatandaan ko noon na nagkaroon ng problema ang* cassava *sa* Leyte. *Dahil do'n, bumaba ang bilang ng mga* farmers *na gustong magtanim ng* cassava. *Humina rin ang* market. *Ayaw na ng mga tao na kumain ng* cassava," Dr. Torno said. This however did not discourage him to still plant cassava.

"So *ang ginawa ko, nagtanim ako. Sinamantala ko 'yon. Sumugal ako. Nagtanim ako n*g cassava *sa* 7 hectares *na lupa. Hindi ko pa alam ang proseso noon kung paano*, so *lagi akong nagtatanong sa tatay ko*," he shared. His father then, being a longtime farmer, advised him too to go to other farmers to learn different techniques and gain practical knowledge. "*Sabi ng tatay ko na tanungin ko ang mga kilala niyang farmers na magaling sa* planting, *mayroon din magaling sa pagpapataba, mayroon namang magaling sa pagku*-cultivate, *sa* timing. So *ang ginawa ko*, I compiled *lahat ng natutunan ko sa kanila, kasama na ang mga tinuro rin sa akin ng tatay ko*," Dr. Torno shared.

Such practice, coupled with *sipag at tiyaga* as they say, resulted to a significantly good yield then. The income Dr. Torno earned out of the seven-hectare production area enabled him to purchase farm implements such as a tractor, fertilizers, and additional savings he later used as capital.

Farmers' practice

According to Dr. Torno, there are four success variables in his cassava production with respect to his conventional practices: soil type, planting practice, climate, and crop rotation practices.

With cassava production areas in Florida Blanca, Porac, and in Guagua in Pampanga, Dr. Torno considered this a good advantage over other cassava areas from other regions. Pampanga's soil type – thanks to lahar – is sandy loam which is an ideal soil for the crop. The region is also fairly hot and humid on most months, creating a conducive growing environment for the crop especially during the planting season, which begins from January to February. "*Hinahayaan muna namin na pawala*

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"Magandang bagay na may R&D support tayo mula sa gobyerno, sa BAR, kasi talagang ina-actual ang research, nakikita talaga namin kung saan o ano ang pwede pa naming i-improve."

Dr. Richard Torno

Doctor-farmer now...from page 14

na ang moisture. *Kasi pag tubo ng* cassava *tapos wala nang gaanong* moisture, *tipid kami sa alaga o* maintenance *ng* cassava. *Napansin kasi namin na pag nagtanim kami* around November to December, *mataas ang* moisture," he said.

Deep ploughing also plays a crucial role in generating quality tubers. "*Ang* key *rin talaga ay* deep ploughing *kasi* tubers *'yan. Kailangang mabasag ang* hardpan *ng lupa kasi paano lalaki or magpe-*penetrate *kung matigas ang lupa? Pag* deep ploughed, *makaka-*penetrate *rin ang* moisture," Dr. Torno added.

He also mentioned that he keeps a close eye on managing weeds that grow around the area. "*Kalaban mo rin ang* weeds *kaya lagi dapat nagpapa-araro, paulit-ulit dapat 'yan*," he shared.

One of the practices that keep cassava pests at bay is through crop rotation. This, according to Dr. Torno, is carried out by planting other crops such as corn and sweet potato.

For replanting, he mentioned that he gets planting materials from nearby farms who also share the same farming practices like his. He does not set aside a portion of his harvest as planting materials for the next season as this will entail longer storage, since he implements crop rotation patterns. "*Hindi kami 'yong pag nagha-*harvest, *itatabi mo para maitanim mo sa susunod. Hindi na kasi* fresh '*yon*. We practice *na pag magtatanim kami, laging* fresh and newly harvested *ang* planting materials. Based sa experience *kasi namin, pag ganon ang* practice, *ang taas ng* mortality *ng* cassava," Dr. Torno emphasized.

SSNM intervention

Although Dr. Torno has been quite successful using conventional practice, it did not stop him from acquiring new learnings and additional knowledge to continuously improve his production.

When the Department of Agriculture-Regional Field Office (DA-RFO) 3, Research Division and Corn and Cassava Banner program implemented a project on the Site Specific Nutrient Management (SSNM) for Cassava, Dr. Torno was enthusiastic to be considered as one of its farmer-partners.

In partnership with the Bureau of Agricultural Research (BAR), the project carried out field fertilizer trials using the SSNM protocol for the development of cassava fertilizer recommendations. The SSNM program for cassava is a research and development (R&D) initiative on acquiring a new technology that will identify the minimum fertilizer requirement for cassava to reach its optimum and maximum production. The technology was first introduced in the country through collaborative projects of the International Plant Nutrition Institute (IPNI) and the University of the Philippines Los Baños (UPLB).

Fertilizer trials through omission plots were conducted at different locations in region 3 using 4 replications. Two cassava varieties, Lakan 1 and Pinusuan (a local farmer's variety) were used in the field experiment.

The project was able to determine the amount of nutrients being taken by the crop at certain growth stages, which, in turn, defined the correct timing of fertilizer application for maximum nutrient utilization. Further, to maintain soil health, the project also determined the amount of nutrient content of the different plant parts of cassava that can supply more nutrient to the soil once returned to the field.

Based on the results of the experiment, Dr. Torno acquired the highest yield of cassava at 33 tons/hectare (t/ha) versus farmers' practice at 27 t/ha. On the average, SSNM yields 24 t/ha while farmers' practice resulted to 20 t/ha.

Currently, the national average for SSNM cassava ranges from 12-14 t/ha. This means that Dr. Torno's production using the SSNM recommendations exceeded the national average by almost 50 percent.

With farmers' practice and SSNM technology combined, Dr. Torno's produce ranged from 40-60 t/ha, making it the largest production in the entire country. 70% of his fresh produce is marketed in many parts of Metro Manila such as Divisoria, Muñoz, Pasig, Marikina, as well as in some provinces of Central Luzon. He also regularly supplies fresh tubers to major cassava cake processors, such as Don Benito's, whose cassava consumption requires 7-10 tons per day.

Being able to link with Mekeni, a Pampanga-based food corporation giant, Dr. Torno's cassava produce far reaches other countries such as the United States of America, Australia, Japan, and Dubai.

Future plans

Dr. Torno's success on farming is something he said he did not honestly expect, but 100 percent worked hard for.

When asked what he still wants to accomplish, Dr. Torno said that he envisions the possibility of being able to produce for a year-round supply of fresh cassava. Also, since raw cassava tubers are highly perishable, he plans to embark on value adding technologies to produce grated vacuum pressed grated cassava. "*Malaki ang* market *talaga ng* cassava. *Sa mga* cake processors *pa lang*, raw ingredient *nila ito.* So *naisip ko, paano* if *magkaroon tayo ng mga* processor outlets *na imbis na bibilin sa atin ng* fresh, grated *na ang maipo-*provide *natin? Kasi pag ganito, mas maitatabi mo siya ng mas matagal, mas matagal ang* shelf life *niya*," he explained.

While it's reasonably easy to be overpowered with this kind of success, Dr. Torno remains focused on his goal.

"*Hindi tayo magsasawang matuto ng bagong mga teknolohiya para mas maging* successful *pa ang industriya ng* cassava s*a atin. Magandang bagay na may* R&D support *tayo mula sa gobyerno, sa* BAR, *kasi talagang ina-*actual *ang* research, *nakikita talaga namin kung saan o ano ang pwede pa naming i-*improve," he concluded. ###

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ABARE hosts 1st Quarter DAEA-NEC Meeting

Dr. Nicomedes P. Eleazar, BAR director (center), with the DAEA-National Executive Council Board Members during the 1st Quarter DAEA-NEC Meeting. PHOTO: LFONTANIL

The Association of Bureau of Agricultural Research Employees (ABARE) hosted the First Quarter Meeting of the Department of Agriculture Employees Association-National Executive Council (DAEA-NEC) on 18-20 April 2018 at BAR, Visayas Avenue, Diliman, Quezon City.

The activity was conducted to provide the new members of the Association with the recent information the various policies and practices as well as to keep them aware on the various programs and services to protect the interests and welfare of the employees.

ABARE is the newest addition to the DAEA family having been a member only in 2017.

Director Nicomedes Eleazar in his opening message encouraged the DAEA members to continue promoting the moral, social, and economic well-being of the employees, protect the individual and collective rights, as well as foster harmonious and progressive labor and management relations. He also prodded everyone to work collaboratively in implementing the agency's programs and activities and foster complementation of activities.

In attendance were Chief of Staff and Head Executive Assistant to the DA Secretary Ferdinand Piñol, BAR Director Dr. Nicomedes Eleazar, DAEA-NEC President Isabelita Butuan, ABARE President Kris Thea Marie Hernandez, and board members of the different DAEA chapters.

Part of the activity was the induction of the new set of officers of the DAEA-NEC Standing Committees that was presided by COS/HEA Piñol. The new set committee chair officers of the DAEA-NEC were Mr. Jose Manguerra (chair of Membership Committee); Mr. Lorenzo Alvina (chair of Grievance and Welfare Committee); Mr. Esmael Intao (chair of Labor Education and Research Committee); and Dr. Jonic Natividad (chair of Committee on Plans and Programs). Together with them in the oath-taking were Mr. Ricarte Castro as the newly-elected DAEA-NEC assistant auditor and Ms. Ma. Eloisa H. Aquino, ABARE vice-president for Internal Affairs. ###

(Leoveliza C. Fontanil)

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