



## DA-Davao Region inaugurates DARRDEN; inks MOA on *adlay* instant *mami*

PHOTO COURTESY OF ATELABANGCO/DA-DAVAO REGION



The Department of Agriculture (DA)-Davao Region held the blessing and inauguration ceremony for the newly-established Davao Region Research, Development, and Extension Network (DARRDEN) research for development (R4D) facility, on 23 October 2020 in Manambulan, Tugbok District, Davao City.

Funded by the DA-Bureau of Agricultural Research (BAR) through its Research Facility Development Grant Program, the PhP 3 million-worth facility is the first-ever RRDEN center established in a DA region. To function as the operation and coordinating office of regional network members, the facility is expected to advance RDE partnership and collaboration between

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# DA-BAR reviews black rice R4D project

To ensure the smooth implementation, the Department of Agriculture-Bureau of Agricultural Research (DA-BAR), through its Program Monitoring and Evaluation Division, reviewed the project “Performance Evaluation of Black Rice at Different Rates of Vermicompost Fertilizer under B.E. Dujali, Davao del Norte Conditions” on 19 October 2020 via video conferencing.

Funded by the bureau in 2019 under the DA National Rice research for development (R4D) program, the project sought to develop yield-enhancing and cost-reducing practices, and establish production technology on black rice. Specifically, it looked into the effect of vermicompost fertilizer on the performance of black

rice to reduce commercial fertilizer usage and improve soil fertility, hence, boosting rice productivity. The beneficiaries of the said project included the B.E. Dujali Organic Farmers Association and local black rice growers.

Aside from sharing recommendations and strategies to further improve project implementation, the review also discussed the project’s salient accomplishments during the wet season.

According to Grace Gutierrez, DA-Davao Region senior science research specialist, among the R4D activities conducted were site assessment, soil analysis, choice of good seed, land preparation, transplanting, weeding management, organic foliar application of

fermented fruit juice, and post-harvest activities.

*Korokan*, a traditional variety of locally grown black rice, was chosen as good seed as it was found to be free from insect damage and contamination.

With enhancing macro- and micro-organisms production in the area and improving the ecosystem as among the expected impacts of the project, location-specific recommendations on soil health management, as well as cultural management for black rice, will be developed through the project. Researchers target to increase farmers’ adoption of the technology, yield of black rice by 20 percent, and income of farmers by 20 percent. ### (**Jireh Alodia R. Laxamana**)

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government and private sectors. Specifically, it will strengthen the interrelationship among agriculture and fishery sector through the exchange of information, technologies, and expertise among government and private institutions. It will also serve as a databank of RDE information and technology in agriculture and fisheries.

The regional research divisions, under the guidance of DA-BAR, are mandated to develop and maintain a network of regional and provincial collaborators in systematically developing and implementing a regional RDE agenda and program for agriculture and fisheries (DA AO No. 6, S.1988). Further, by enhancing RDE activities complementation in the region, use of available resources (e.g. human, financial, support facilities) is also maximized.

In her speech, Dr. Angelina Pancho, DA-Davao regional technical director for research and regulations, said the goal of achieving a food-

secure and sustainable agriculture can be more easily achieved with the collaborative efforts of the partners of DA.

“We cannot achieve our goals if only the Department of Agriculture will implement,” she said.

“This is the center of our collaborative efforts in all our [R4D] initiatives promotion, and transfer, mature technologies to our farmers and fishers,” she added.

In his video message, Alfeo Piloton, Bureau of Fisheries and Aquatic Resources (BFAR)-Davao Region director, said that “the inauguration of this building is greatly determinative of the future of the agri-fishery sector especially here in Davao Region” adding that the facility “would definitely address both national and regional issues of which the results and activities will benefit the academe, local and provincial government units, and more importantly, the farmers and fishers.”

Philippine Coconut Authority-Davao Research Center, University

of Southeastern Philippines-SMAARRDEC, Vegetable Industry Council of Southern Mindanao, and United Farmers Agriculture Cooperative (UNIFARMACO) attended the event among other partners.

In line with the objectives and activities of the network, DA inked a Memorandum of Agreement with UNIFARMACO to commercialize *adlay* instant *mami* developed by DA-Davao Region Research Division-Adlay R&D Program.

As stated in the MOA, UNIFARMACO will lead in the production and marketing of *adlay* noodles while the DA-Davao Region will provide the technical assistance through hands-on trainings.

Since 2010, DA-BAR has supported adaptability trials and production of *adlay* all over the country, and the processing and commercialization of *adlay* products. ### (**Ma. Eloisa H. Aquino and Regina Mae Ronquillo of DA-Davao Region**)

# Batangas State University leads revitalizing *kapeng barako* project



Agriculture Secretary Dar leads the launching of the SWPB-FM 107.3 “D’ Ani Kita Radio” in Batangas State University on 13 October 2020. It is in this event where he also approved the Project BARAKO for implementation. PHOTO: DA COMMUNICATIONS GROUP

Designed to revive the *kapeng barako* in Batangas, the project titled, “BARAKO: Batangas Actions towards Revitalization and Acceleration of *Kapeng Barako* Industry,” was approved by Agriculture Secretary William Dar during the launch of DWPB-FM 107.3 “D’ Ani Kita” radio station on 13 October 2020 at the Batangas State University in Nasugbu, Batangas.

Project BARAKO aims to develop an optimized method of propagating *kapeng barako* seedlings which will involve a combination of remote sensing and smart farming for monitoring environmental conditions and the introduction of automation for precision agriculture.

Specific outputs of the project include a nursery with more than 40,000 seedling capacity, 80,000 good quality *kapeng barako* seedlings for distribution and promotion to coffee farmers in the region, and a half-hectare demo farm.

The project will also forge partnerships among universities,

local government units, coffee farmer cooperatives and associations, and other concerned stakeholders in the coffee industry.

Moreover, a capacity building component for farmers on nursery establishment and management as well as plantation care, maintenance, and postharvest processing to ensure the maintenance and sustainability of the project is included.

Funded by DA-BAR through the High Value Crops Development Program, the *kapeng barako* research for development project cum extension is expected to be completed in May 2023.

During the Taal eruption in January 2020, the hardest-hit crop, losing more than 3,000 metric tons amounting to about PHP 74 million due to damages caused by ash, magma, and steam was coffee.

According to experts, it will take around two years for the coffee industry in the South to significantly recover. ### (Clarisse Mae N. Abao)

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# 7 R4D projects on onion armyworm integrated pest management completed



Dr. Elda Esguerra (2<sup>nd</sup> row from top, left) of PHTRC-UPLB gives the completion report of one of the seven projects on onion armyworm.

To produce integrated pest management (IPM) options for onion armyworm, seven projects funded under the “Comprehensive Research and Development on Integrated Pest Management for Onion Armyworm *Spodoptera exigua* Hubner (Lepidoptera: Noctuidae)” program capped their almost three-year run with a virtual terminal review held on 28 October 2020.

Funded by the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) in partnership with DA-High-Value Crops Development Program (HVCDP) in 2017, the program formed an *ad hoc* committee consisting experts from the National Crop Protection Center-University of the Philippines Los Baños (NCPC-UPLB), Postharvest Horticulture Training and Research Center (PHTRC)-UPLB, and Central Luzon State University (CLSU) to address the problem on onion armyworm that plagued onion farmers in Luzon.

Scientist Melvin Ebuenga, Scientist Marcela Navasero, Dr. Bonifacio Cayabyab, Scientist Mario Navasero of NCPC-UPLB, Dr. Elda Esguerra of PHTRC-UPLB, and John Dave Aquino of CLSU presented the accomplishments of their respective projects.

Ebuenga and his team developed a monitoring and advisory system called “Farm-level Harabas Monitoring and Advisory System” (HarMoniA). This utilizes the identified breeding sites, alternative hosts, and hotspots.

Marcela Navasero discussed the science-based information on the life history, behavior, and habits of *S. exigua* on various host plants, host range and natural enemies, and preliminary and field cage experiments.

Dr. Cayabyab reported that results of all botanicals and microbials were effective in managing onion armyworm infestation as part of an IPM strategy. Among the botanicals and microbials tested during the field experiments include the nucleopolyhedrovirus crude, entomopathogenic fungi, (*Metarhizium anisopliae*), Aztron, *Bacillus thuringiensis* var. *aizawai* (biological insecticide), neem, integrated pest management, Kotetsu (chlorfenapyr), and wood vinegar.

Mario Navasero talked about the baseline information on insecticide usage on, insecticide management of, insecticide resistance management for, and field assessment protocol for insecticides against onion armyworm.

Dr. Esguerra reported that the use of microbials, biopesticides,

and various insecticides (as part of resistance management) did not affect the quality, safety, and storage behavior of red and yellow types of onions; hence can be an integral part of the IPM program against armyworm. Meanwhile, cultural management practices like the use of exclusion cage and combination of irrigation and fertilization did not affect the physico-chemical properties and storage behavior of the onions.

Aquino discussed that the identification of resistant onion varieties, appropriate trap/companion crops, optimum fertilization and irrigation, best planting date, and row spacing was collectively effective in reducing the infestation of onion armyworm.

The bureau’s Program Monitoring and Evaluation Division (PMED) spearheaded the terminal review. Joining the experts were Salvacion Ritual, PMED head, and the bureau’s focal persons for HVCDP.

Ritual formally ended the review by emphasizing the importance of releasing the consolidated information generated through these projects to partner research institutions and stakeholders, especially the onion farmers. ### (Rena S. Hermoso)

# CGUARD-IPB launches intensive 10-month corn breeding training amid pandemic

Amid constraints in conducting face-to-face trainings, the Institute of Plant Breeding (IPB) of the University of the Philippines Los Baños (UPLB), through its Corn Germplasm Utilization through Advanced Research and Development (CGUARD) project team, launched the CGUARD Corn Breeding 101 on 6 October 2020 via Zoom.

Led by Dr. Artemio Salazar, adjunct professor and researcher of IPB-UPLB, the said training is set to run for 10 months as part of CGUARD's capacity-building activities.

According to Dr. Salazar, the idea was inspired by the Department of Agriculture's (DA) old-aged aspiration of increasing the number of corn breeders in the country, especially in the regions. Moreover, the training was initiated to sustain the project's productivity amid the ongoing pandemic.

"Learning materials and other resources necessary for corn breeding

are already available in the country for a very long time. This [capacity-building] is one of the few things left for us to do. CGUARD needs to take advantage of this opportunity to develop [corn] varieties," Dr. Salazar said during the launching of the said training.

Participants who accepted the challenge to undergo in the said corn breeding training were designated corn focal persons from all the regions of the country, together with some staff of CGUARD.

The training is comprised of 20 sessions which will be conducted over a span of 10 months. Training materials will be sent to participants weekly through email. Assignments would also be given, to be submitted a week after the materials were sent.

A monthly meeting to be conducted via Zoom will also be arranged to facilitate updates on the training and to give way for questions regarding the training or CGUARD in general. A supplemental group channel for chatting and messaging

will also be created for clarifications regarding lectures and materials.

Topics to be covered in the said training are divided into two components: the corn plant and breeding procedures. For the first component, corn morphology, physiology, and genetics will be covered. Meanwhile, reconstitution and recombination, cycle of selection and reselection, monitoring, and hybrid breeding will be discussed in the second half of the training.

CGUARD is a long-term project launched in 2015 led by the DA National Corn Program funded through the DA-Bureau of Agricultural Research which aims to conserve native/traditional corn varieties in the country.

Conservation efforts such as CGUARD's corn germplasm collection safeguard native corn varieties of the country for when they are needed the most in the future, there are available genetic materials which can be used. ### (Jhon Marvin R. Surio)



Dr. Artemio Salazar of CGUARD-IPB shares that the initiative was inspired by DA's plans to increase the number of corn breeders in the country. PHOTO: JMSURIO/STOCK PHOTO

# Urban techno-demo garden launched in QC

The Department of Agriculture (DA) pushed urban agriculture as one of the means to ensure the continuous supply of food in the city as the country shifts to the New Normal. In line with this and through the initiative of Fiona Faulkner of The Freshestph and the University of the Philippines Los Baños (UPLB), an urban garden featuring crop production technologies was launched at The Pop Up Katipunan, Quezon City on 22 October 2020.

The establishment of the said urban garden is among the main objectives of the project implemented by the UPLB-Institute of Crop Science (ICropS) and UPLB Foundation Inc. Funded by DA-Bureau of Agricultural Research in 2018, the project aimed to promote rooftop and vertical gardening as a sustainable and sufficient food source in urban areas.

Among the technologies showcased are hydroponic drip irrigation system, nutrient film

PHOTO COURTESY OF UPLB ICROPS



technique, soil-less cultivation, and vertical and containerized gardening. Vegetables, herbs, and fruit crops suitable for vertical gardening set-up were also displayed. These technologies and crops are very well suited in urban communities with

limited spaces and water supply. Several lectures and seminars cum technology demonstration were also conducted to interested clients and garden enthusiasts. ### (*Elena C. Ros and Juan Gino Miguel V. Delos Santos of UPLB ICrops*)

## 7 newly-appointed, promoted DA-BAR staff take oath

Seven newly-appointed/promoted staff members of the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) took their oaths on 30 October 2020 via video conferencing. DA-BAR Director Nicomedes Eleazar officiated the said ceremony.

The newly-appointed staff were Glacelle Alyne Malinao, Agriculturist II; Jocelyn Dionido, Administrative Officer II; Joann Azares, Administrative Aide VI; and Abelardo de Jesus Jr., Administrative Aide VI. The promoted staff members were Marjorie Mosende, Senior Agriculturist; Juan Nikolas Paller, Agriculturist II; and Jennifer Alianza, Administrative Officer III.

Present to witness the oath-taking ceremony were Evelyn Juanillo, DA-BAR Administrative Division head, and Mara Shyn Valdeabella, DA-BAR Applied Communication Division assistant head. ### (*Mara Shyn M. Valdeabella*)



DA-BAR Director Nicomedes Eleazar (top, left) leads the oath-taking ceremony of newly-appointed, promoted staff members of the bureau. PHOTO: MSVALDEABELLA

# Soy: The next superfood

by Chantale T. Francisco and Mara Shyn M. Valdeabella



Even without the superfood trophy, most of us know that soybean is highly-nutritious due to its protein-rich content along with all essential amino acids and nutrients that our bodies need. Basically what you can also get when you eat meat. Thus, this makes soybean a perfect substitute for people following vegan and vegetarian diets. Low in saturated fat and cholesterol, this plant food originating in Asia also became a staple ingredient of most Asian cuisines because of its flexibility in food processing (Department of Health and Human Services, 2012).

In the Philippines, soybean, also known as *Utaw*, has become part of the Filipino culture because it completes the classic sweet treat – *taho*, a Filipino snack made of silken tofu topped with simple brown sugar syrup and tapioca pearls.

Apart from high-protein content of about 35-40 percent, soybean, aside from being known as a good source of nutrients which can be of aid in the prevention of coronary diseases,

diabetes, and even osteoporosis (Padilla, 2012), can also serve as a supplement for children with autism in terms of making their specialized diet.

According to the Autism Recovery Network of the Philippines (ARNP) – an organization that focuses on bettering the lives of children with autism, digestive disorders has an effect to the physical symptoms of autism. This means that children with autism’s daily intake should lean on more organic food choices.

Soybeans can be a healthier alternative for their diet. With the different ways on how to make flavorful soy-based recipes, this transition offers children with autism a variety that can help them be healthier and less symptomatic.

So, to develop diet recommendations for children with autism, ARNP committed to a study titled “Technology Piloting of Soybean Production and Utilization in Camarines Norte.” Funded by the Department of Agriculture–

Bureau of Agricultural Research, the project, also considered the aid that it can provide to children who are experiencing malnutrition aside from those with autism. Led by Marilou Lagdameo, ARNP president, the project produced, utilized, and processed soybeans into soya chips.

Apart from soya chips, soy milk, soybean muffins, soy balls, soy chips, soy polvoron, soy flan, and soy burger patties were also produced. But among them, soya chips were the most salable as its crunchiness and taste does not differ from commercial chips in the market. These chips are made from 100 percent organically-grown soybeans with no preservatives.

These chips were distributed in the town of Santa Elena and Therapy Centers of Children with Special Needs in Daet and Vinzons. Costing only PhP 7 per pack, it also reached school canteens in the municipalities of Talisay, Vinzons, Basud, and Daet, Camarines Norte. Other soy products like soybean milk and muffin were

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also distributed to Vinzons SPED Resource Center and Mabini SPED Laboratory.

Glenda Galero, the president of Soybean Producers and Processors Association of Vinzons and the lead processor of the product, said that their soybean-based products are booming in their area. This is because most of the orders came from people who are thrilled to taste a soy-based product for the first time. Apart from that, the health benefits of soy entice more consumers to try their products. *“Mas marami ‘yung kumukuha kasi nga gawa ng health benefits ng soybean tapos matagal pa raw makagutom,”* she quoted.

The project has provided not just healthier, less expensive food options, but also additional sources of income to different communities in Camarines Norte. As of writing, these soy-based products are still available in some parts of Camarines Norte, as shared by Lagdameo.

More than anything, ARNP sees initiatives such as this as opportunity to enhance people’s awareness on autism and the value of farming. Mario Sta. Rosa, a parent from the Mabini SPED Laboratory, said that these kinds of program give them a lot of optimism in improving the lives of their children. *“At the end, gusto ko makapag-aral ang anak ko. Gusto ko magkaroon siya ng magandang kinabukasan,”* he added. ###

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# DA-BAR obtains ISO 9001:2015 QMS certification anew

The Department of Agriculture-Bureau of Agricultural Research (DA-BAR) maintained its International Organization for Standardization (ISO) 9001:2015 Quality Management System (QMS) certification, as recommended by TÜV Rheinland, after successfully passing the second stage of the surveillance audit on 30 October 2020 in Diliman, Quezon City.

Conducted to assess the continuous fulfillment of the bureau’s QMS for its processes based on the ISO requirements since August 2019, the surveillance audit looked into how the bureau’s processes and documented information were complied with, maintained, and implemented through interviews and gathering of documented evidences.

On behalf of DA-BAR Director Nicomedes Eleazar, DA-BAR Assistant Director Digna Sandoval and Planning Development Division Head Joell Lales, physically joined the opening meeting. All divisions and sections of DA-BAR, with at

most three representatives physically present, participated in the whole-day audit and discussed their respective functions and processes.

From the audit areas, including those from the first stage of the audit which was a remote audit held on 11 August 2020, no non-conformity was raised by TÜV Rheinland Auditor Minda Fe Villapando—thereby confirming that the bureau’s QMS, with the scope “Coordination and provision of grants to agriculture and fisheries researches,” is adequate.

In closing, Quality Management Representative Marjorie Mosende thanked and commended the bureau’s officials and staff for their efforts that led to the positive results of the audit.

This initiative is in line with the instructions of Agriculture Secretary William Dar for all DA agencies and units to be ISO 9001:2015 certified. The bureau’s ISO 9001:2015 QMS certification is valid until 9 August 2021. ### **(Mara Shyn M. Valdeabella)**



Minda Fe Villapando of TÜV Rheinland audits the bureau’s management system, processes, and documented information during the second stage certification audit. PHOTO: MSVALDEABELLA

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