



# 3R program launched; eyed to counter pandemic effects on agri-fishery sector

The Department of Agriculture-Bureau of Agricultural Research (DA-BAR) launched its refocused program dubbed as “Resiliency Response Research for Development Program” (3R) on 10 June 2020, which encapsulates the bureau’s refocused programs, activities, and projects in response to the drastic effects made by the COVID-19 pandemic to the agriculture and fishery sector.

Anchored to DA’s Ahon Lahat Pagkaing Sapat (ALPAS) Kontra COVID-19 program against the impacts of the ongoing health crisis, the bureau’s 3R program aims to utilize mature research for development (R4D)-generated technologies to increase and sustain food production, availability, and accessibility in the country.

The program has six core subprograms aligned to the National Agriculture and Fisheries Modernization and Industrialization Program 2020-2025, namely: 1) Intensified and Outscaled Farming and Production Systems, 2) Sustained Support for Upgrading of R4D Capacities, 3) Promotion of Urban Agriculture, 4) Digitizing Agriculture R4D, 5) Technology Business Incubation, and 6) Food Products and Technology Upscaling.

Subprogram 1 focuses on ensuring sustainable production and availability of food commodities, including crop, livestock, poultry, and fisheries, through the utilization of matured and suitable package of technologies (POTs). Production

is targeted to increase through diversification of farming systems, strengthening of capacities of farmers on production and post-production, and through the development of suitable support mechanisms and linkages.

Also covered in the subprogram is ensuring the production of sustainable quality seed stock of economically important aquaculture commodities by means of engaging village level hatcheries, and the increasing of production of quality planting materials through mass propagation techniques and protocols.

Meanwhile, subprogram 2 comprises efforts in support of the establishment of facilities and other equipment for the improvement of R4D and other related endeavors. This also covers networking, and the development of research facilities and provision of educational

opportunities to agricultural researchers in forms of scholarships and other grants, all to increase the capacities and competencies of the DA R4D system to deliver services and outputs to its clients.

The third subprogram supports the promotion of urban agriculture in the country. It highlights ensuring sustainability of food supply through the direct encouragement and engagement of communities and households, both in the rural and urban areas, on food production. Some of the technologies promoted include vertical gardening, edible landscaping, square-foot gardening, and hydroponics.

The fourth subprogram aims to achieve an information, communication, and technology-enabled R4D system by means of assessing, capacitating, and strengthening the current support

**turn to page 8**

## what's inside?

- 2** DA-BAR reviews first semester, plans towards New Normal
- 3** Vegetable, fruit processing facility to rise in La Trinidad, Benguet
- 4** AFACI-PhI project on moringa powder prod'n complements DA's twin objectives
- 6** From local festivities to local markets: Goat's meat turns into regular table food
- 7** DA-BAR holds online seminar series on urban agriculture

# DA-BAR reviews first semester, plans towards New Normal

PHOTO: RHERMOSO




---

Dr. Nicomedes Eleazar, DA-BAR director, opens the bureau's midyear review and planning workshop by giving his opening message and marching orders highlighting that "it would take a collective and concerted effort for [the bureau] to efficiently adapt and transition towards the 'New Normal'...What matters most is how we keep going together, despite our small steps, collectively contributing to a beneficial and huge change towards adapting and performing in excellence in the New Normal and recovery."

---

To assess the bureau's performance and accomplishments for the first semester of 2020, and revisit its strategies towards transitioning to the New Normal, the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) conducted its 2020 Midyear Review and Planning Workshop on 10-11 June 2020 via online conference.

Spearheaded by Dr. Nicomedes Eleazar, DA-BAR director, the workshop delved into the operationalization and implementation of the bureau's refocused programs, activities, and projects from 2020 onwards.

To be known as the "DA-BAR Resiliency Response Research for Development (R4D) Program or 3R," the refocused program is in line with DA's goal of achieving a food-secure and resilient Philippines with prosperous farmers and fishers.

"To truly elevate our game, the bureau, as an agency, has to develop a proactive stance in supporting

DA's directions and strategies. Firm on our commitment in serving the agri-fishery sector, proactivity allows us to see changes and challenges as opportunities for us to be of greater service to the sector," emphasized Dir. Eleazar.

As part of his marching orders, Dir. Eleazar highlighted the significant role of the DA-BAR 3R Program in providing the necessary R4D interventions in support to the department's Ahon Lahat Pagkaing Sapat (ALPAS) Kontra COVID-19 Program, which aims to address household food availability, accessibility, and consumption.

Alongside the 3R Program, also emphasized in the workshop was the boosting of the technology and strategic communication approaches and the unified database that will complement the existing and refocused initiatives to enhance the efficiency of the operations and services for the bureau's stakeholders.

Salient accomplishments of the bureau's banner and national commodity programs in the first semester, and plans for the second semester of 2020 were also presented during the workshop.

Digna Sandoval, DA-BAR assistant director, officially closed the workshop by commending everyone's commitment and encouraging continuous collective effort to achieve open communication and practice adaptive ways to strategize the bureau's overall plan and actions for the benefit of farmers and fishers.

Led by the Program Development Division, the planning workshop was participated in by members of the bureau's executive committee along with select staff.

The event is part of the regular activities conducted by the bureau to keep track of and monitor its goals and targets, as well as lay down new strategies. ### (Clarisse Mae N. Abao)

# Vegetable, fruit processing facility to rise in La Trinidad, Benguet

Agriculture Secretary William D. Dar approved the proposed establishment of the vegetable and fruit processing facility “Benguet State University-Agri-Processing Center” (BSU-APC) in a meeting held on 19 June 2020 at the Department of Agriculture-Cordillera Administrative Region, Baguio City.

The food processing center will complement the Benguet Agri-Pinoy Trading Center (BAPTC), one of the major traders of agricultural produce in key markets in Metro Manila, specifically through the purchasing of excess stocked or unbought fresh farm fruits and vegetables directly from farmers to prevent losses.

According to the BAPTC 2019 Report, “from the annual total volume traded, about 4.2 to 10 percent are left unsold during regular days, ranging from 5,091,800 kg to 12,123,335.40 kg. These unsold volumes are farmers’ losses, and when valued at Php 28/kg based on the monitored annual

average farm gate price of the 26 highlands commodities, may cost around Php 142,570,428.00 to Php 339,453,391.00.”

“When interpreted, Benguet is annually losing food crops worth about Php 485,463,524 at farm level alone. The occurrence of more than 26 annual typhoons, truck bans along the routes, the inter-island restrictions, and the new COVID-19 pandemic all add up to these high food and income losses,” the report further added.

To be funded by the Department of Agriculture (DA)-Bureau of Agricultural Research through its Research Facility Development Grant, the BSU-APC aims to utilize excess produce that were not bought by traders to create various food processing technologies that will convert fruits and vegetables into value-added products that, in turn, will be distributed for sale to establishments such as restaurants and other market outlets.

In line with the intensified KaDIWA ni Ani at Kita, the BSU-APC will also serve as a training and learning avenue for farmers to learn how to process their own produce into products (e.g. pre-packed *chopsuey*, fresh cut salads, potato chips, fries, *kimchi*, and other fermented vegetables) that when sold will augment additional income.

Earlier this year, vegetable shipments had to be suspended as precautionary measure following the pandemic. Due to limited access to roads that led to markets or trading posts, food traders were then forced to throw away some of their produce as delivering to local consumers in various parts of the country has become more challenging.

As the pandemic persists, DA hopes to address the impacts of the ongoing health crisis on food security through various initiatives like the BSU-APC. ### (Jireh Alodia R. Laxamana)



After the approval of the proposed BSU-APC, Agriculture Secretary William Dar (right) graces the blessing ceremony of the seven DA-funded vehicles (i.e. closed, passenger, and refrigerated vans, together with a one drop-side truck) of BAPTC in support of its various agricultural operations for the benefit of the Cordillera farmers. PHOTO COURTESY OF DA-AFID

# AFACI-Phl project on moringa powder p

The Philippines has long recognized the potential of Moringa as one of the most promising sources of nutraceuticals. Dubbed as “superfood” and “miracle tree” due to its high nutritional content, this prompted the Philippine Department of Agriculture, through its Philippine Center for Postharvest Development and Mechanization (PhilMech) to endorse a focused study, titled “Production of Moringa (*Moringa oleifera*) Powder Using Multi-Commodity Solar Tunnel Dryer,” under the project “Development of Agricultural Products Processing Technology (APPT).”

One of the five ongoing projects funded by the Asian Food and Agriculture Cooperation Initiative-Rural Development Administration (AFACI-RDA) based in Jeonju, South Korea, the APPT project is geared towards processing technology development on target agricultural commodity that is abundant in the local community and can easily be adopted by small-scale food producer and processors.

Since it kicked off in March 2019, the AFACI-Phl APPT Project has focused on the conduct of benchmarking activities, such as identifying and profiling of moringa growers and processors, assessing the quality and safety of dried moringa powder produced by farmer-processors, and evaluating existing drying facilities and practices in the area. At least three cooperatives/associations/groups involved in moringa processing



Moringa nursery PHOTOS COURTESY OF OFERO CAPARINO

were identified as cooperators. One of them has started to establish a one-hectare moringa farm to ensure the source and availability of quality moringa leaves intended for processing of moringa powder. Initial results on the quality evaluation showed that majority of the moringa powder

samples obtained from the local market contain high bacterial load and presence of *Salmonella* and *Escherichia coli* (*E-coli*). These findings can be attributed to lack of knowledge and skills by the farmer-processors in proper handling and drying procedures/protocols coupled with inefficient drying methods

**BAR CHRONICLE** highlights the bureau’s activities as the country’s national coordinating agency for agriculture and fishery R4D, and provides updates on NaRDSAF-member institutions.

For comments and suggestions, contact us through tel. nos.: (+632) 8461 2900 or (+632) 8461 2800 local nos. 1136, 2128, and 1138 or email us at kmr4d@bar.gov.ph. To subscribe, please send a formal request to our email.

Follow our social media accounts: [f](#) [t](#) [i](#) [v](#) [o](#) [d](#) [a](#) [b](#) [a](#) [r](#) [o](#) [f](#) [f](#) [i](#) [c](#) [i](#) [a](#) [l](#)



**EDITORIAL BOARD**

**Editor-in-Chief:** Mara Shyn M. Valdeabella

**Layout:** Rena S. Hermoso

**Writers:** Clarisse Mae N. Abao, Ma. Eloisa H. Aquino, Chantale T. Francisco, Jireh Alodia R. Laxamana, and Jhon Marvin R. Surio

**Circulation:** Lyn D. Pardilla

**Consulting Editor:** Julia A. Lapitan

**Advisers:** Dr. Nicomedes P. Eleazar, *CESO IV* and Digna L. Sandoval

# rod'n complements DA's twin objectives



The members of the MultiCom Producers Cooperative (MPC) are with Dr. Ofero A. Capariño (left), principal investigator of the AFACI-Phl APPT project.



MPC members and Dr. Capariño are at the on-going construction site of their office and processing area.

being adapted to produce high quality, safe, and shelf-stable dried moringa powder products.

To address the challenges on microbial safety issues in producing moringa powder, project implementers will be employing proper handling and dehydration protocols using a multi-commodity solar tunnel dryer, in order to attain the project's overall objective of increasing the income of moringa farmers and processors, and generate jobs in the villages.

"Its good productivity and wide range of adaptability can help develop resilience in farm enterprises and ensure better enterprise profitability and sustainability," Dr. Ofero A. Capariño, AFACI-Phl APPT project

principal investigator said. He furthered that this complements the Phl DA's twin objectives: *Ani at Kita* that aimed for inclusive growth and development.

Given its accomplishments, the project was conferred "2019 Outstanding APPT project," an annual award given by AFACI.

The succeeding years will focus on the development and establishment of on-site moringa farm, development of drying and dehydration protocols, and capacity building of farmer-processors on new knowledge and skills in producing quality and safe moringa powder.

As the demand for high quality moringa products increases in the global market, the Philippine

government and some private Institutions are working together in the production, processing, distribution, and marketing of moringa products. This June, Agriculture Secretary William D. Dar welcomed Moringaling Philippines Foundation, Inc. as one of the new civil society organization partners of the government that will collaborate in leveling-up of the agri-fishery sector. MPFI is a network organization serving the moringa supply chain in the Philippines.

APPT, together with ongoing projects on saline tolerant rice varieties, soil atlas, vegetable breeding, and integrated pest management, is among the 19 AFACI-supported projects in the Philippines since 2009. AFACI is an inter-governmental body working on multilateral cooperation where member countries in the Asian region, such as the Philippines, through the Department of Agriculture, share their knowledge and experiences in agricultural technologies and extension services for sustainable agricultural development.

Serving as the National Coordinating Agency for the implementation of AFACI-funded projects in the country is the DA-Bureau of Agricultural Research (BAR), who, in 2010-2019, implemented the project titled "Establishment of the Agricultural Technology Information Network in Asia (ATIN)" under the Extension program which aimed to help local farmers through knowledge sharing practices and information dissemination. Julia Lapitan, AFACI-Phl national contact person and DA-BAR Applied Communication Division head, bagged the Most Outstanding Principal Investigator (PI) of the ATIN project in the Philippines for two consecutive years (2018 and 2019). ### (Ma. Eloisa H. Aquino)

# From local festivities to local markets: Goat's meat turns into regular table food

Specialty cooked goat dishes are a common eye-sight during local festivities, gatherings, or drinking spree especially in the barrios. But through continuous research activities conducted since 2006, processed chevon or goat's meat, has become available and accessible in the local markets of Cagayan Valley region and beyond. Today, processed chevon is slowly being introduced as a regular table food; an initiative seen as an effective means of providing assistance to the most vulnerable people of the society that include poor families and small-hold raisers, especially during this time of global concern.

In support to the Philippine Goat Industry, the Department of Agriculture-Bureau of Agricultural Research (DA-BAR), has supported different research for development (R4D) projects encompassing the entire goat production-to-processing cycle. In 2014, the bureau funded the technology transfer of chevon product processing and the commercialization of new chevon products under its National Technology Commercialization Program. Implemented by Isabela State University-Cagayan Valley Small Ruminants Research Center (ISU-CVSRRC) in Echague, Isabela, the project utilized the center's chevon canning technology and produced nine more products, comprised of six canned chevon and three microwaveable packaging products. Highlighting Filipino native dishes, the canned products include *sinampokan* (goat's happy feet), chevon curry with peanut, chevon *mechado*, chevon *asado*, chili-garlic chevon, and pounded chevon with sauce. The three microwaveable packaging products were chevon meat balls, chevon with white sauce, and chevon ribs with chestnut sauce. At present, five Intellectual Property Rights were already granted while three more are still under evaluation.



PHOTO COURTESY OF ISU-CVSRRC

In response to the government's commitment to ensure the provision of adequate, accessible, and affordable food to every Filipino despite the threat of COVID-19, DA-BAR and ISU inked another project titled, "Commercialization of Chevon Canned Products: A Support to DA-ALPAS Kontra COVID-19 Program." Utilizing the existing chevon processing and canning technology, the project is geared towards upscaling the canned products, chevon curry, pounded chevon, and chevon *mechado*. The products will be distributed through the technology/product commercialization partners of ISU-CVSRRC in local and nearby regions. Furthermore, distribution of the products will also be coordinated with DA-Cagayan Valley's KaDIWA market.

"Commercialization of chevon-based food products is an important development to revolutionize goat industry. With product commercialization, small-hold raisers can expand their farm and start converting it to commercial-level as market is already in place," Dr. Jonathan N. Nayga, project leader, explained.

Dr. Ricmar P. Aquino, ISU president, also emphasized how the project will contribute to DA's *Ani at Kita* twin goals by establishing market for local produced, developing post-production activity for goat, and standardization of products for commercialization.

"With the application of the technology, raisers will have an assurance that there is a market for the stocks, hence they can increase the holding capacity of their farm. By increasing number of stocks, their level of production will grow which will lead to higher profit. Moreover, with retailing, the consumers' buying capacity will increase and more customers will be reached as the products are sold through multiple channels of distribution," said Dr. Aquino, in one of the interviews published in Manila Times.

The project also aims to showcase different government agencies' efforts that are pulled together to reach the common goal of helping raisers in rural communities sustain not only livestock-based enterprise, but also the availability of healthy food amid the crisis.

The computed return of investment (ROI) for a farmer raising five native does, is Php 16,450.40 annually. However, if the holding capacity increases to 10 heads, annual profit doubles at Php 32,841. Moreover, raising upgraded stock makes production more profitable. A farmer raising five upgraded does can earn Php 130,141 yearly; at 10 heads, profit is projected at Php 294,042 and when holding capacity reaches 15 does, profit can reach up to 460,315.00 (Farmer Livestock School-Goat Enterprise Management Manual, 2018 Revision). Computed ROI of the products has positive rates ranging from 35 to 54 percent while the ROI of microwaveable products ranges from 59 to 75 percent. ###  
**(Ma. Eloisa H. Aquino)**

For more information:  
**Dr. Jonathan N. Nayga**  
Project Leader  
ISU-CVSRRC  
Echague, Isabela  
(0921) 318 16 21  
jnn\_060369@yahoo.com

# DA-BAR holds online seminar series on urban agriculture

To continuously deliver research for development (R4D)-generated technologies to the public despite physical distance, the Department of Agriculture-Bureau of Agricultural Research (DA-BAR) held an online seminar series on urban agriculture in the month of June 2020.

In its pilot launching, DA-BAR featured three topics in response to DA's "Ahon Lahat, Pagkaing Sapat (ALPAS) Kontra COVID-19" or better known as the "Plant, Plant, Plant" program.

Dr. Chito Sace, Central Luzon State University-Hydroponics and Aquaponics Technology head, served as the first speaker in the seminar series held on 9 June 2020. He discussed hydroponics and its potential in helping shift our agricultural ways into a more advanced, climate-smart farming while producing safer and cleaner fruits and vegetables. He regarded this technology as the 'Farming of the Future.'

Meanwhile, to complement the discussion on hydroponics, a talk about SNAP hydroponics was conducted by Jesse Descalsota on 16 June 2020. Simple Nutrient Addition Program (SNAP) hydroponics was a hydroponics innovation developed by the University of the Philippines Los Baños (UPLB) that is climate-resilient, and utilizes a laboratory-developed complete nutrient solution. Also, the materials to be used for the complete hydroponics setup can be easily found anywhere making this a low-cost and environment- and user-friendly technology.

Lastly, the bureau also featured a two-part online seminar on edible landscaping (EL) and vegetable gardening

streamed on 23 and 30 June 2020 led by Dr. Fernando Sanchez, Jr. together with some of the members of EL UPLB team, namely Maria Charito Balladares, Jennica Amielle Mora, and Michael Kerby Balejo.

Overall, the pilot launching of the online seminar series garnered positive feedback from local and international viewers. The majority of them are very satisfied with the seminar's quality and would further

encourage more people to join upcoming seminar episodes.

In its commitment to continually serve farmers and fishers by making R4D-generated technologies accessible to the public even at the height of the global pandemic, DA-BAR through its Applied Communication Division will continue holding online seminar series weekly in the succeeding months. ### (Chantale T. Francisco)



**JUNE 9** | Hydroponics gardening  
by Dr. Chito F. Sace



**SNAP Hydroponics** | **JUNE 16**  
by Jess Descalsota

**Edible Landscaping**  
by Cherry Balladares

**PART 1** | **JUNE 23**

**PART 2** | **JUNE 30**



Watch the videos here:  [facebook.com/DABAROfficial/videos/](https://facebook.com/DABAROfficial/videos/)



mechanisms in all sub-sectors along the country’s agricultural value-chain.

Subprogram 5 is anchored on DA’s Agribusiness Incubation

Program which primarily focuses on increasing the capacities of partner universities and other research-based business incubators in managing agriculture and fisheries technology-

based enterprises. Hence, this zeroes in on the sustainability of commercializing mature technologies and the continued development of start-ups from new technologies and innovations.

Lastly, Subprogram 6 focuses on increasing the availability of supported processed food products. Overall, it aims to increase its production, strengthen capacities of farmer group-beneficiaries, improve product quality, packaging, and labelling, and help establish linkages with local markets through direct buyers, local government units, and KaDIWA markets. ### (Jhon Marvin R. Surio)

**BAR Chronicle**  
 RDMIC Bldg., Elliptical Road corner Visayas Avenue  
 Diliman, Quezon City, Philippines 1104

---



---



---



---

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