

Bubalus



Quarterly Newsletter of the Department of Agriculture-Philippine Carabao Center

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FEATURES

Carapreneurship with a youthful touch

By Dine Yve Daganos

Food security is one of the primary concerns of the government during this pandemic. The crisis accentuated the demand for agricultural

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DA-PCC's partnership with LGUs, private enterprises highlights 7th NCC

By Chamanei Elias

The Department of Agriculture-Philippine Carabao Center (DA-PCC) highlights meaningful partnerships with various local government units and private institutions in the recently concluded 7th National Carabao Conference (NCC) held in a blended approach (online and on-site

following standard safety and health protocols) on October 25 to 29.

The conference kicked off with the opening of a techno exhibit, which showcased DA-PCC's technologies at the Milka Krem compound. The ribbon cutting ceremony for the

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Editor's Word



As the year 2021 comes to a close, the management and workforce of the DA-PCC can't help but recollect how the various government and private entities, local government units, academic community, R&D institutions, and rural organizations have supported and partnered with the agency in carrying out meaningful programs and projects for the benefits of the livestock industry in general and the farmer-carapreneurs in particular. The said partnerships and worthwhile programs and projects are taking place even in the middle of the lingering COVID-19 pandemic, something that the DA-PCC is forever grateful for. As a result, we see and experience another very fruitful and productive year for the agency and its stakeholders.

Here at *Bubalus*, we are always happy to cover and share with you not only the good but great stories, so to speak, as a result of such partnerships and engagements. We are, of course, grateful to all those who became subjects of or resource persons for the news and feature stories, which we write and package to become more informative, interesting, and inspirational to our readers. At this point, I personally thank the KMD writing team as well as the Regional Information Officers for always endeavouring to document all DA-PCC and carabao industry-related events and success stories involving the carapreneurs. Our end goal, remains as it is, i.e., to influence and drive the readers to reflect and act on what they read about.

Success stories of carapreneurs are springing up everywhere, thanks to the stewardship of DA-PCC's central office and 12 regional centers. These days, we are particularly happy to share stories of young farmer-carapreneurs, which are living testimonies that there are still second liners to our aging farmers, a departure from the stories about stereotypical youths who leave the farms and find jobs in the city. We are also always excited in sharing stories about the application and commercialization of new technologies towards improving further the carabao productivity and the livestock industry as a whole. Likewise, we see to it that we always bring you the latest developments in line with the implementation of DA-PCC's banner enterprise development projects as well as activities that support the nutrition program of the government.

It may be another pandemic year with natural calamities adding to the challenging times, but like the carabao, which is a symbol of sturdiness, we at the DA-PCC remain steadfast and optimistic in carrying out our mandate in the service of the Filipino farmers. *Bubalus* is one of our major platforms to showcase and disseminate the outputs and outcomes of the Carabao Development Program and we will continue doing so, as we look forward to another great and fulfilling year!

From all of us, have a joyous season of hope, good health, and thanksgiving!

Eric P. Palacpac
Dr. Eric P. Palacpac

About the cover

Championing both farming and carabao industry at the age of 24, Domingo Astillero Jr. from Guinobatan, Albay is challenging the youth's perspective towards agriculture today. Astillero proves that the young generation plays a crucial role in realizing a sustainable and food-secure future for the country.



(Photo by Chamanei C. Elias)

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DA-PCC's genetic scientist Dr. Flores is 'CSC Pagasa' awardee

By Ma. Cecilia Irang

Dr. Ester Flores deems the past two years of her government service among her anni mirabiles, after she was conferred the rank of Scientist I under the Scientific Career System in 2020 and was hailed, this year, as one of the Civil Service Commission (CSC) Pagasa awardees.

Dr. Flores, DA-Philippine Carabao Center's (DA-PCC) supervising science research specialist, and other outstanding government workers were conferred recognition during the virtual awarding rites led by President Rodrigo Roa Duterte on November 15 for exemplary display of public service. The conferment ceremony was aired via the Facebook pages and YouTube channels of CSC and Radio Television Malacañang, respectively.

The DA-PCC's National Genetic Improvement Program (GIP) Coordinator was recognized for her significant contributions and professional expertise in research and development particularly in

animal breeding and genomics and for being the prime mover of the central animal genetic data management program.

Among her noteworthy accomplishments include the establishment and implementation of separate structured breeding program for riverine and swamp buffaloes, development of a suitable genetic evaluation model for estimation of genetic parameters and estimated breeding values (EBVs), and marker-assisted selection, which all paved the way to DA-PCC becoming the only livestock agency in the DA that has a well-organized and -structured breeding program demonstrated with locally produced riverine buffalo and swamp buffalo bulls with EBVs.

These initiatives, coupled with genomic selection using high density single nucleotide polymorphism (SNP) genotyping, ushered the latest generation of performance- and progeny-

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NEWS

Former DA-PCC Center Dir. receives DOST-PCAARRD's NSAARRD Dev't Paper Award

By Dine Yve Daganos

Former Department of Agriculture-Philippine Carabao Center at Central Luzon State University (DA-PCC at CLSU) Center Director Dr. Daniel L. Aquino bagged the 2nd Best Development Paper Award for his study on "Sustainable Homegrown Forages and Complete Nutrient Diet Towards Enhancing Growth and Milk Production of Dairy Buffaloes in Nueva Ecija and San Agustin, Isabela," in the 2021 National Symposium on Agriculture, Aquatic, and Natural Resources Research and Development (NSAARRD) hosted by DOST-PCAARRD.

The study by Dr. Aquino promoted Science and Technology (S&T) farm approach in producing homegrown forages with a complete nutrient diet (CND) developed for buffaloes that was proven effective in enhancing their growth and milk production while increasing income of dairy farmers. The technologies are also low-cost, practical, and sustainable making it considerably adoptable by every farmer.

The homegrown forage uses Napier grass and legumes as main components which are chopped and mixed with feedstuff or concentrates. This technology aimed to address the inadequate supply and poor quality of fodder for carabao feed which contributes

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Bubalus is a quarterly publication published by the Department of Agriculture-Philippine Carabao Center (DA-PCC) that gives its readers new updates and inspiring stories happening in the carabao industry.

Email us your comments, feedbacks, and suggestions at ilivestockbiotech@gmail.com or mail them to: The Editor, *Bubalus* Newsletter, Knowledge Management Division, Philippine Carabao Center National Headquarters and Gene Pool, Science City of Muñoz, 3120 Nueva Ecija. You may also call us at (044) 456 0731 to 35.

DA-PCC ensures protection of safe spaces

By Chamanei Elias



In line with ensuring the protection of safe spaces, the DA-Philippine Carabao Center (DA-PCC) participated in the observance of the 18-Day Campaign to End Violence Against Women on November 25 to December 12.

With the slogan “Filipino Marespeto; Safe Spaces, Kasali Tayo,” this year’s campaign focuses on the Safe Spaces Act (SSA) or RA 11313 which defines and/or penalizes gender-based sexual harassment in the streets and public spaces, workplace, and educational and training institutions, and online.

“We, at the DA-PCC, ensure the protection of safe spaces and will

continue to strengthen the agency’s GAD policies and programs in support of the VAW advocacy and safe spaces act. We also encourage our employees to be responsible and do their own part as individuals to protect safe spaces, empower gender fair workforce and observe gender fair language,” Aimee Fulgencio, DA-PCC Gender and Development (GAD) Focal Person stated.

The agency participated through hanging of the 2021 18-Day Campaign to End VAW official streamers at the national headquarters and gene pool and regional centers, production and distribution of PCW-prescribed advocacy face mask to all PCC employees, use of the All-Women

Cast Lupang Hinirang Video in activities and during Flag Raising Ceremony, and uploading advocacy materials to the DA-PCC’s official website and social media accounts.

Prior to the VAW campaign, the DA-PCC’s GAD Focal Point System (FPS) and technical working group (TWG) has conducted a gender mainstreaming assessment to determine the level of the agency’s efforts on GAD using Gender Mainstreaming Evaluation Framework (GMEF) tool. They also laid out plans and activities for the following years to develop gender-responsive policies and program, for a gender-sensitive institution. **B**

DA-PCC’s genetic scientist...

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tested Philippine dairy buffalo bulls with pedigree-based and genomic breeding values.

“What’s more encouraging is when you see your efforts pay off. Knowing that farmers are benefiting from our breeding program is priceless and I call that job satisfaction,” Dr. Flores said.

“Job satisfaction is more than money.

It’s really looking at your effort to see if your job actually has done something or has impacted the lives of our farmers. If that happens, it is definitely a pat on our back and that’s it for me,” she added.

President Duterte also imparted an inspirational message to the awardees saying: “The awards that you received today only mean progress for our nation. Carry it proudly and use it to

inspire and serve more Filipinos.” Pagasa award is “given to an individual or group of individuals for outstanding contributions that directly benefit more than one department of the government.”

The CSC said the awardees will receive a gold medal crafted by the Bangko Sentral ng Pilipinas, cash prize, and a plaque signed by President Duterte. **B**

Young carapreneurs get firsthand motivation from industry champs

By Chamanei Elias



Second liners in their respective family’s dairy buffalo business get firsthand inspiration from practitioners who are considered as staunch advocates of carapreneurship. This was during a learning event on “Dairy Buffalo Farming for Food Security and Sustainability” with 45 youths in attendance at the Milka Krem Hall, Science City of Muñoz, Nueva Ecija on November 11-12 and 15-16.

The attendees, aged 15 to 30, are children of dairy farmers who are members of a dairy cooperative.

Said activity was initiated by the DA-Philippine Carabao Center (PCC) Socio-Economics and Policy Section (SEPS) led by Estella Valiente.

Valiente said that studies show that older farmers do not necessarily encourage their children to engage in agricultural activities. As a result, they do not impart long-established farming techniques to the younger generation, which may be linked to the declining interest among youth to engage in agricultural activities.

This was supported by Palis (2020) stating that 65 percent of Filipino farmers want their children to be better off going to college and

work in cities or abroad rather into farming.

The activity then aims to transform the mindset of the youth on their crucial role in pushing forward the future of dairy buffalo farming industry along with their imminent takeover as the next leaders of their respective cooperatives.

Joel Cabading, Carabao-based Enterprise Development OIC section head, also gave an inspirational message in behalf of DA-PCC OIC executive director Dr. Ronnie Domingo.

He cited the PSA (2019) data stating that farmers in the Philippines are getting older with 57, as the average age of workers in agriculture. He then urged the participants to start knowing the basics of dairy farming at an early age and develop passion for it as well as to develop their eagerness to help local farmers in their community.

“Ang mga kabataan hindi masyadong nakafocus sa pagkabalabaw. After makapag-aral ang iniisip ay makapagtrabaho para magkapera. Pwede naman po yun pero at the same time mag-invest po tayo. Sa pagkabalabaw maaring gawin mo ito hanggang pagtanda

at kaya mo pa dahil hawak mo ang oras mo,” Miccaela Alfonso, 26, proprietor of Alfonso Dairy Farm in San Jose City, Nueva Ecija quipped.

Alfonso was one of the speakers who imparted her experiences in integrated farming. She shared that in dairy farming she was able to grow as a person in terms of constantly learning how to manage and expand their family business. The farm, she added, was also able to help their community grow by generating jobs and by teaching them to patronize local farm products.

Patrick Pascual, artificial insemination technician from Sto. Domingo, also shared his experiences on being a technician and how this has earned him sustainable income.

Among the topics that were discussed include introduction to buffalo milk- and meat-based enterprises, basic business management, cooperativism and leadership, spiritual and values orientation, and business planning.

SEPS will hold another batch of seminar via Zoom on November 25 and 26 to accommodate more than 100 youth participants. **B**

DA-PCC, conduit co-op unbox first 'Dairy Box' in Antique

By Mary Antonette Andarza



The first of its kind in Antique and the island of Panay, a delicatessen store called "Dairy Box" is now ready to offer dairy products produced by dairy buffalo farmers to Antiqueños.

This is after the turnover of said dairy facility by the DA-Philippine Carabao Center at West Visayas State University (DA-PCC at WVSU) to Hamtic Multi-Purpose Cooperative last October 8.

Senator Cynthia A. Villar, chairperson of the Senate Committee on Agriculture, Food, and Agrarian Reform sponsored the funding of this facility, which is a component of the Carabao-based Business Improvement Network (CBIN) project.

"Kailangan nating palakasin ang milk

production sa probinsya ng Antique at bayan ng Hamtic, para ang kanilang mga magsasaka na miyembro ng Hamtic Multi-Purpose Cooperative ay magkaroon ng dagdag kita sa pamamagitan ng gatas ng kalabaw na pwedeng isama sa milk feeding program ng DepEd at DSWD. Mahalaga na patuloy nating mapalago ang dairy industry ng Pilipinas," Senator Villar said.

On behalf of Hamtic MPC, as its former chairperson, Pedro N. Javier Jr. said in his response: "I am very thankful not only for this occasion, but to the future of the cooperative because it gave way to the realization of my dream, for the co-op to go for integrated agricultural productivity and development as a way

to diversify its business operations."

"This effort is an initiative to strengthen dairy development in Antique especially in its Southern part. What we aim is to help Antique engage in a sustainable local production of buffalo's milk," Arn D. Granada, center director of DA-PCC at WVSU, said in his closing remarks.

The ceremonies, held at the New Public Market and Terminal of Hamtic in Hamtic, Antique where the Dairy Box is located, were led by Center Director Granada, Hamtic MPC Manager Sonny Dolendo, Hamtic MPC Chairperson Febes Abapo, representatives of Mayor Julius Pacificador, Gov. Rhodora Cadiao, and Cong. Loren Legarda. **B**

sa Batang Pilipino Act". The purpose of this act is collectively pursued by the Department of Agriculture, the National Dairy Authority, the Philippine Carabao Center, and the Cooperative Development Authority.

Fresh buffalo's milk and milk-based food products are included in the fortified meals and cycle menu of target schoolchildren as stipulated in R.A. No. 8976 or the "Philippine Food Fortification Act of 2000".

The DA-PCC sees the milk feeding program as a sustainable market and an opportunity for the farmers' cooperatives to increase their production and income. **B**

DSWD, DA-PCC at MMSU partner for milk feeding program

By Marijoan Nefulda

The Department of Social Welfare and Development (DSWD) Field Office I partnered with the DA-Philippine Carabao Center at Mariano Marcos State University (DA-PCC at MMSU) for the implementation of a PHP3.1 million milk feeding program in the provinces of Ilocos Norte and Ilocos Sur.

Around 1,300 target preschoolers will benefit from this program that will run for 120 feeding days, with each

beneficiary to receive a 180-ml fresh milk daily.

This program is in support of the United Nations Sustainable Development Goal, which aims to end hunger, achieve food security and improve nutrition, and promote sustainable agriculture.

This program also supports Republic Act No. 11037 otherwise known as the "Masustansyang Pagkain para

Coconut-carabao project advances in Zambo

By Dorie Bastatas



The tandem project of the DA-Philippine Coconut Authority (DA-PCA) and DA-Philippine Carabao Center (DA-PCC) called Coconut-Carabao Development Project (CCDP) in Zamboanga Sibugay is steadily gaining ground as efforts to infuse dairy carabaos in select pilot sites are underway.

This was following the recent entrustment of 34 female dairy carabaos—24 head in Makilas and 10 in Tomitom, both in Ipil town, last October 8.

The CCDP is anchored on the One-DA's reform agenda on consolidation, under which is diversification of commodities among producers of rice, corn, and coconut. The objective of the strategy is to enhance productivity and increase farmers' incomes.

An initiative of the Office of the Senate Committee on Agriculture, Food and Agrarian Reform through Senator Cynthia Villar, the CCDP aims to accomplish the following: contribute in uplifting the economic situation of coconut farmers through the establishment of carabao-based enterprises complemented with increased coconut farm productivity, provide dairy carabaos to coconut farmers to promote coconut

farm diversification, increase the local milk production in order to contribute in improving the nutrition of the community, and assist in market linkaging through cooperative conduits.

DA-PCC OIC Executive Director Dr. Ronnie Domingo said, "We thank you for your sincere support of these programs and we will continue to partner with you. You know that the Department of Agriculture, headed by Secretary Dar, is trying to achieve the dream of "Masaganang Ani at Mataas na Kita". That is why, we in the national government will continue to support our cooperatives, our farmers, and our local government units so that this dream may come true".

Present during the entrustment ceremony were Ipil Mayor Hon. Anamel Olegario, Legislative Staff Member of Sen. Villar Robert Christian Villacura, PCA-Ipil OIC Division Chief Ariel Tomong, Manager of Ipil Community Multi-Purpose Cooperative Masdi Hasim; Association President of Makilas Coconut Farmers Association (MaCoFA) Nilo L. Gualberto, and Association President of Tomitom Coconut Farmers Association (ToCoFA) Pedro Maligro, Center Director of DA-PCC at MLPC

Cecelio Velez, Community Development Specialist of DA-PCC at MLPC Fe Emelda Academia, and DA-PCC employees and farmers.

"We are so lucky that we were chosen out of the 16 municipalities. That is why we will not forsake this project," Mayor Olegario said during the activity.

"Hopefully, this project, which started from training to entrustment of dairy buffaloes and provision of supplies and materials, can increase our farmers' productivity and give them additional income," added Tomong.

Meanwhile, Director Velez said the project is still experiencing birthing pains, as implementation is still met with challenges.

"With the help of our farmers and with the steady support of our partners and the office of Senator Villar, we are certain this project will very soon reap its expected impact on the community," he said.

The fresh milk that will be produced by the local dairy farmers in the region will be supplied for the national milk feeding program in support of RA 11037, otherwise known as "Masustansiyang Pagkain para sa Batang Pilipino Act". **B**

17th NBW celebration highlights Pinoy agribiotechnologies

By Marah Arquero

This year's National Biotechnology Week (NBW) celebration, which ran from November 22-26, highlighted the crucial role of biotechnology innovations in healing the nation from the COVID-19 pandemic.

This essentially was the message of Department of Interior and Local Government (DILG) Secretary Eduardo Año who chaired the event.

"Sa panahong ito, kailangan talaga natin ng kaagapay ng mga kababayan natin mula sa kagutuman, pagkakasakit, pagbagsak ng ekonomiya at pagkasira ng kalikasan at biotechnology ang

naging sandigan ng ating patuloy na pananaliksik at paglikha ng mga produkto, metodolohiya at iba pang proseso at pamamaraan upang makalikha ng produkto na pang-agrikultura at medisina," Secretary Año said.

With the theme "Kapit-bisig na Pagtutulungan, Bioteknolohiya Ating Paghusayan!", physical and virtual exhibits during the celebration aim to focus on the efforts of the government, non-government sectors and private institutions working together to bring forth milestones and technologies achieved through

Philippine biotechnology.

In addition, DILG Undersecretary Marlo L. Iringan said the Department's goal is to bring biotechnology to local levels in the context of battling the COVID-19 pandemic.

On efforts to improve the public's understanding and appreciation of biotechnology, Department of Agriculture Secretary William Dar expressed his stance in fighting misinformation by proper information dissemination about biotechnology. He zeroed in on how biotechnology could be an instrument to halt malnutrition in Filipino children.

In his inspirational message, Department of Science and

Technology Secretary Fortunato Dela Peña underscored the support and innovations made by the department during the time of the pandemic such as promising results of virgin coconut oil and lagundi as treatment for COVID-19 as well as passing of the House Bill 2155 establishing the Virology Science and Technology Institute of the Philippines (VIP).

One of the featured Pinoy Agricultural Biotechnologies is the QuickCARe Caprine Arthritis Encephalitis Virus Test Kit developed by the DA-Philippine Carabao Center. This rapid, low-cost, pen-side DNA-based test with high detection rate can be performed in four easy steps without the use of specialized equipment. **B**

DA-PCC launches 24/7 vendo machine for dairy products

By Ma. Cecilia Irang



Ready-to-consume dairy carabao products are now officially available to the public 24/7 following the launching of a oneSTore.ph vending machine of the Department of Agriculture-Philippine Carabao

Center (DA-PCC) on October 27.

Located beside the entrance of the Milka Krem outlet in the Science City of Muñoz, Nueva Ecija, the automated machine aims to promote

the produce of local dairy farmers and make them conveniently and easily accessible to a wider range of consumers.

It was made possible through the DA-PCC's partnership with the Department of Science and Technology-Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development thru its oneSTore.ph project; and Central Luzon State University-Central Luzon Agriculture and Resources Research and Development Consortium.

Marivic Orge, DA-PCC's Central Dairy Collecting and Processing Facility Plant Manager, demonstrated the how-tos of operating the vending machine and underscored its importance as a new marketing scheme in this time of pandemic.

"This will be useful for our 'kababayans' who want to patronize our dairy farmers' products but are unable to at times when the Milka Krem store is already closed.

It offers fast service and prime location to ensure that you can still enjoy dairy products any time at your convenience," Orge said.

She also assured the customers that the products in the vending machine are always fresh as they replace them with new stocks every three days to avoid spoilage.

Specifically, among the products available include pasteurized milk, chocomilk, rice milk, yogurt, pastillas, polvoron, and milkaroons.

Also present during the launching were DA-PCC Deputy Executive Director for Administration and Finance Dr. Caro Salces, Deputy Executive Director for Production and Research Dr. Claro Mingala, Carabao-Based Enterprise Development Section Officer-in-Charge Joel Cabading, and former DA-PCC Executive Director Dr. Libertado Cruz. The launching ceremony was broadcasted live via the DA-PCC's Facebook page in partnership with Tulong Balita Online. **B**

Former DA-PCC Center Dir. receives...

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to their poor performance and, subsequently, low income of farmers.

towards a more resilient AANR sector" via Facebook live stream on November 29, 2021. **B**

The supporting authors of the study include Armie M. Molina, Christian C. Lacanilao, Nomer P. Garcia, Chief of Knowledge Management Division Eric P. Palacpac, former DA-PCC Executive Director Arnel N. Del Barrio, and Tsutomu Fujihara.

Dr. Aquino and the five other winners for both Development and Research categories were awarded during the 10th anniversary celebration of DOST-PCAARRD themed "Harnessing the gains of GALING PCAARRD

The annual DOST-PCAARRD's NSAARRD aims to recognize and encourage Filipino Researchers to strive hard in achieving quality R&D outputs and package better technologies for the countryside's sustainable development.





Carapreneurs receive PHP4.6 million-worth of loan under DA-ACPC-ANYO Program

By Dine Yve Daganos

With the endorsement of Department of Agriculture-Philippine Carabao Center (DA-PCC), 38 carapreneurs from Nueva Ecija were formally granted a total of PHP4,617,000 worth of loan by the New Rural Bank of San Leonardo (NRBSL) Incorporated, Nueva Ecija, under the DA-Agricultural Credit Policy Council (ACPC) Agri-Negosyo Loan Program (ANYO).

The ceremonial turnover, which happened during the 7th National Carabao Conference closing program, was presented by NRBSL President and Chief Executive Officer Abundio Quililan Jr., with Senior Vice President Marcelo Jampil, Vice President for Marketing and Relationship Banking Group Liza Ison, and Vice President for Accounting Management Support Jubailene Bulawit. The ceremonial cheque was received by DA-PCC OIC Executive Director Dr. Ronnie D. Domingo and few carapreneurs

who were able to attend the event physically.

The loan will be used for the purchase of additional numbers of carabao as well as improvement of carabao pen and other incidental or miscellaneous expenses. The loan proceeds will be released directly to the supplier of carabao and/or source of construction materials except for the miscellaneous/incidental expenses, which will be received in cash by the carapreneur-beneficiaries.

The DA-ACPC ANYO Program is a zero-interest capital loan intended to support the daily business operations of small farmers and fisherfolk, farmers' cooperatives and associations (FCAs), and agri-fishery-based micro and small enterprises (MSEs). This is in line with the DA's efforts to promote food security and affordability of agricultural products in the market. **B**

Technical workshop on copyrights, trademark

By Charlene Corpuz

The DA-PCC, thru its Intellectual Property and Technology Business Management (IPTBM) office, conducted a "Technical Workshop on Copyright and Trademarks" for the agency's researchers and employees last November 22.

This virtual learning activity aims to capacitate the participants on how to conduct a trademark and copyright search using various databases, file them online through the Intellectual Property Office of the Philippines

(IPOPHL), and determine which works are eligible for copyright and trademark protection.

Dindo Dumali, IP Rights Specialist III of IPOPHL, served as the resource person of the said activity. The two major topics that were discussed included the Introduction to Copyrights and Introduction to Trademarks and Nice Classification.

The DA-PCC's implementation of Intellectual Property (IP) management-related program aims to improve the translation of innovations derived from its Research for Development (R4D) programs into commercial products and public goods.

IPs such as patents and Utility Models (UMs) were filed at the IPOPHL through the establishment of the IP-TBM Office and the support of DOST-PCAARRD Phase II Project called Patent Mining in

Dairy Buffalo and Cattle Thru IP-TBM in the Philippine Carabao Center.

Based on the previously conducted activity of IPTBM, "Technical Workshop on Prior Art Search, Claim Drafting and Invention Spotting for PCC Researchers" last September 6-10, trademarks and copyrights are the types of IPs that also require focus, thus, these IPs contribute to maximize the value of products created out of research.

As of now, the DA-PCC has four patent applications, 20 UMs of which 13 are registered, and 15 trademarks of which nine are registered.

According to IPOPHL, copyright is acquired in such a way that works are protected by the moment of their creation, irrespective of the mode or form of expression, as well as their content, quality, and purpose.

Copyright protects the value of a researcher's work. Moreover, it gives the creators rights on how their works are used. Trademark, on the other hand, is a name, symbol, or logo that is placed on the product. This refers to any visible sign distinguishing the goods or services of an enterprise (Sec. 121.1 RA 8293). The trademark owner has an exclusive right to use, sell, license, and profit from this type of IP.

Continuous efforts concerning IPs, copyrights and trademarks will be strengthened by the IPTBM office to ensure that the agency remains on track in effectively managing IPs, which in turn benefit the community and its investors. For DA-PCC researchers and employees, understanding the nature of various IP rights, what they protect, how the rights can be gained and how efficiently they can be commercialized are some important takeaways from the said technical workshop. **B**

DA-PCC's partnership with LGUs...

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exhibit was presided by Science City of Muñoz Administrator Dr. Raul Divina, DA-PCC OIC Executive Director Dr. Ronnie Domingo, DA-PCC Deputy Executive Director Dr. Caro Salces and 7th NCC overall Chairperson Dr. Peregrino Duran. Dr. Cyril Baltazar, Farm Superintendent II, facilitated the demonstration and explained the importance of some technologies such as the mechanical baler.

The techno exhibit is also part of the Kadiwa ni Ani at Kita where carabao's milk-based products, Kardeli carabao's meat products, and local vegetables and fruits produced by different partner cooperatives and farmers were also on sale.

Meanwhile, DA Secretary William Dar in his keynote address enumerated the carabao industry's goals, which include accelerating herd build up, increasing productivity and profitability of carabao-based enterprises, ensuring

availability of safe and quality milk and meat products from genetically improved carabaos and harnessing the niche market for carabao-derived products.

"In achieving such goals, we must modernize farm facilities, strengthen farm consolidation, reduce the cost of feed, strengthen research for development, and continue collaboration with LGUs," encouraged Dar.

Similarly, Committee Chairperson for Agriculture, Food, and Agrarian Reform Sen. Cynthia Villar reiterated the importance of carabao's milk as a supplement for undernourished children and as an additional livelihood for local farmers and entrepreneurs.

Further, Dr. Ronnie Domingo, during his presentation of the 2022-2027 Carabao Industry Roadmap, emphasized the importance of the competitiveness in marketing industry. He challenged the agency to identify niche market where the agency will target specific consumers and market segment for carabao-based products.

DA-Assistant Secretary-Designate for Regulations Dr. Liza Battad also shared her message of encouragement

through virtual presentation during the program.

Activities during the third and fourth day include the Launching of the New DA-PCC music video sung and composed by outgoing DA-PCC at La Carlota Stock Farm (LCSF) Center Director Ariel Abaquita, Roundtable Discussion with DA-PCC Partner Chief Executives hosted by Francis "Kiko" Flores of Tulong Balita Online, Dairy Value Chain Innovations updates, and Discussions on the agency's Policy and Program Implementations.

These were followed by the recognition of the 7th NCC awardees across the DA-PCC network. Winners for the Outstanding Dairy Farmers include Ceferino Ligot, Panfilo Tutor, and Pedro Silvidad (Family Module Category); Ernie Lita June Flores and Dominic Paclibar (Semi-commercial Category); and Elpidio Manaloto Jr. (Commercial Category). Winners for Outstanding Dairy Buffalo Cooperative/ Farmers Association include General Trias Dairy Raisers Multi-purpose Cooperative, San Jose Dairy Producers Association, and Muleta Side Buffalo Dairy Association. Winners for Outstanding Bull Recipients include Joselito Canlas and Ruben Butlig while winners for

Outstanding Village-based Artificial Insemination Technicians (VBAITs) include Bernie Glenn Guevarra and Rolly Richard Zalameda. Also, awardees for Best Dairy Cow (Purebred-Junior Cow Category) ID no 2BP16013 owned by Richard Reyes, ID no 2LC17006 owned by Doreen Alicia and ID no 2LSC14012 owned by Gregorio Cueco; and (Purebred-Senior Cow Category) ID no 2NIZ16006 owned by Victoriano Dumale and ID no IT20141135 owned by Melgin Zenith were recognized.

The testimonial narratives video for the ALAB Karbawan Project Communities, which were sponsored by Sen. Villar, was also premiered followed by the launching of Gawad Livestock and Poultry Award and holding of a Knowledge Café.

A MOA Signing of the DA-PCC, Bureau of Animal Industry (BAI), and Le Ferme Livestock Development Partnership took place after the closing ceremony. The agreement aims to establish the partnership between the three agencies in revolutionizing livestock production by producing the best quality beef cattle through the infusion of Wagyu breed and to strengthen the dairy production by producing genetically superior buffaloes using advanced reproductive biotechnologies. **B**

Ex-soldier finishes valedictorian in FLS-DBP-Albay

By Aldrin Geronimo

An army veteran graduated as the class valedictorian among 65 completers of the first batch of Farmer Livestock School on Dairy Buffalo Production (FLS-DBP) in the Province of Albay, on November 4.

Forty-nine-year old Jay Pascua from Camalig ventured into dairy buffalo production after retiring from the Philippine Army with the rank of colonel. He now owns 32 head of dairy carabaos.

Together with Pascua, Domingo Astillero, Jr. and Alvin Losande of Guinobatan and Daraga, respectively, also graduated as valedictorians.

The FLS-DBP in Albay is a partnership project of the Provincial Government of Albay-Albay Veterinary Office (PGA-AVO), Gubat St. Anthony Cooperative (GSAC), DA-Philippine Carabao Center-University of the Philippines Los Baños (DA-PCC at UPLB), LGUs of Camalig, Daraga, Guinobatan and Libon, and cities of Ligao and Legazpi. It was conducted by the AVO led by Provincial Veterinarian Dr. Pancho Mella with Dr. Marlon

Tapel and Ms. Catherine Mancera as facilitators.

The undertaking was made possible through the Office of the Senate Committee on Agriculture, Food, and Agrarian Reform headed by Sen. Cynthia Villar.

Vice-Governor Edcel Greco B. Lagman attended the event and made remarks on the importance, potential and future support of the provincial government to dairy buffalo production. Also present in the commencement exercise were Agriculture Center Chief of Albay and Sorsogon Florentino Ubalde, Chairperson of Gubat St. Anthony Cooperative (GSAC) Engr. Rene Hermo, OIC City Veterinarian of Ligao City Dr. Azel Ranada, Municipal Agricultural Officer (MAO) of Daraga Meljie Matociños, MAO of Camalig Dante Alejandro, and MAO representative of Guinobatan Gil Camases.

The training course, originally intended for 34 weeks commenced in March 2020 and took 20 months to finish due to the pandemic. **B**



DA-PCC's partner LGUs share headways in carabao development

By Chamanei Elias

The DA-PCC's partner LGUs shared their localized Carabao Development Program (CDP) accomplishments as part of the 7th National Carabao Conference (NCC) last October 25 to 29 through a livestream broadcast via the Facebook page of DA-PCC.

The LGU of Bohol shared about a marketing strategy for their buffalo milk produce called "Gatas Bol'anon".

For a year in operation, the program boosted the number of animals and farmers involved in dairying, increased the income of participating families and were able to provide 100 percent of the milk requirement of the provincial feeding program benefitting more than 20,000 children in Bohol.

In Nueva Ecija, a total of 20 cities or municipalities in the province are progressively involved in the dairy industry. This can be round up to a total of 677 farmers and 62 cooperatives/associations. A total of 1,164 individuals have been employed to jobs such as managers, milk collectors, delivery personnel, treasurers, milk processors/quality control officers, bull handlers, and village-based AI technicians.

In Isabela, a genetic breeder base and herd buildup program ensures the sustained growth of crossbred carabao herd from 1,905 to 5,717 through artificial insemination (AI). San Agustin currently has four fully trained active village-based AI technicians who are helping

accelerate herd buildup.

The San Agustin LGU also helped establish the San Agustin Dairy Cooperative with 155 active members. The said cooperative produces an average of 250 liters of milk daily.

San Agustin also hosts the Nuang Festival where farmers get to flaunt their beloved carabaos amid a cheerful crowd once a year. This celebration, which parades a bevy of charcoal black crossbreed carabaos at the town's plaza, is an annual show of the successful herd buildup program in San Agustin and an awareness campaign about the importance of carabaos in Isabela. To protect this resource, the LGU passed an ordinance on prohibiting the selling of carabaos outside the province.

Meanwhile, in Pangasinan, a milk processing facility and dairy products outlet were established as key strategy to create a steady market for carabao-based products for increased income of dairy farmers. Complementing this is the aggressive promotion of dairy products in trade fairs and community bazaars. The province's next step forward is to open new markets in three locations spread out in strategic areas to increase the income opportunity of farmers. Deemed to further promote this advocacy, dairy products are declared as one of the One Town, One Product of Pangasinan.

In Mindanao, the Baclay Multi-Purpose Cooperative in Zamboanga, Lanao Del Norte provided an opportunity to out-of-school youths and women to be employed in milk processing. With over 9,000 members since 1993, Baclay co-op has generated income opportunities for its members and the most recent and currently its biggest venture yet is dairying, which generates some PHP400,000 to PHP1,000,000 of monthly income.

Stronger partnership despite the imminent devolution

An open forum ensued after the sharing of each LGU's hallmark accomplishments in CDP implementation.



The roundtable discussion revolved around the role of DA-PCC in the face of the Mandanas-Garcia Ruling of the Supreme Court (SC) consequently devolving some functions of national government agencies (NGAs) such as the DA-PCC to the LGUs.

The DA-PCC assures its assisted dairy farmers and cooperatives that the Mandanas-Garcia SC Ruling offers new opportunities in the partnership and should not disrupt current interventions.

Dr. Caro B. Salces, Deputy Executive Director for Administration and Finance, said the agency will focus on the provision of activities to capacitate LGUs and successfully implement the devolved functions particularly extension services. The DA-PCC will create strong linkaging with planning officers of LGUs, participate in planning sessions for the conduct of trainings such as AI trainings and monitor the implementation of projects through supervision to ensure the standard and quality of services.

As for the provision of incentives for AI technicians, it was clarified that NGAs could still establish an incentive scheme for them. Cooperatives and other concerned agencies were also encouraged to directly coordinate with their respective LGUs and ensure that they are part of the planning process of their LGU's transition plan

for the full implementation of the Mandanas-Garcia SC Ruling.

Through the utilization of AI and sexing machines for herd build-up programs, protection of dairy carabao population is ensured against the increasing demand for carabeef. Local and national legislators were urged to pass a law that would prohibit the slaughter of female carabaos.

Dr. Claro Mingala, Deputy Executive Director for Production and Research, assured the continuous service of DA-PCC to its partner stakeholders. The agency committed to support the genetic improvement program through a milk test day recording, provision of frozen semen to clients and breed registry services. Technical assistance and services in terms of animal health and nutrition, among other areas of care and management for both the animals and the cooperative, through production support and experts' consultation services will be provided by the DA-PCC.

Former executive directors of the DA-PCC, Dr. Libertado Cruz and Dr. Arnel del Barrio, served as the reactors during the roundtable discussions.

Proceedings and important agreements firmed up during the sessions will be used as input to the agency's Carabao Industry Roadmap for 2022 to 2027. **B**

DA-PCC's conduit co-ops practice food safety standards

By Ma. Wynne Pagaduan

On the bases of consumer welfare and protection, Republic Act No. 10611, "An Act to Strengthen the Food Safety Regulatory System in the Country to Protect Consumer Health and Facilitate Market Access of Local Foods and Food Products, and for Other Purposes" otherwise known as the "Food Safety Act of 2013", serves as the Philippine framework for implementing the farm to fork Food Safety Regulatory System.

Anchored on this purpose is the OneDA strategy on food safety and regulations, which focuses on funding activities to ensure that traceability systems and control measures against plant and animal epidemics are in place and secured.

On the DA-PCC's end, this strategy puts focus on upscaling buffalo-based products through the development of the Philippine National Standards for buffalo milk and meat products in partnership with the Bureau of Agriculture and Fisheries Standards (BAFS), in close coordination with the National Dairy Authority (NDA) and Bureau of Animal Industry (BAI), and Food and Drug Administration (FDA) for the certification of buffalo milk and meat.

Along this line, the DA-PCC aggressively embarked on initiatives to fulfill the purpose through massive information dissemination and capability building for dairy buffalo farmers' cooperatives and associations and has identified focal persons on food safety and regulatory compliance to safeguard consumers.

Among other interventions, the DA-PCC has recently established

food safety control management measures for regular disease monitoring and surveillance of zoonotic and important animal diseases (e.g. tuberculosis, brucellosis, leptospirosis, mastitis, surra), prepared a scalable and efficient risk management plan as a dairy safety regulation, and assisted the dairy cooperatives to secure a License to Operate (LTO) from NDA. Said LTO would authorize the cooperatives or the associations to undertake or carry out business activities on food manufacturing and distribution.

Securing the LTO, however, proved to be challenging for the cooperatives and the matter has unfavorably affected their operational flexibility, hindering them to fully participate in the national milk feeding program. The DA-PCC, through the Coconut-Carabao Development Project (CCDP) in partnership with the DA-Philippine Coconut Authority (DA-PCA), proactively capacitates them to improve their knowhow on the legal and technical requirements of securing accreditation.

In the same way, safety officers, dairy personnel, and compliance officers are consistently provided with proper training to ensure that farmers are ably assisted. They are also regularly monitored to ensure that the risk management plan is implemented and food safety regulations on safe food production and proper postharvest handling are strictly adhered to.

The CCDP was funded by the Office of the Senate Committee on Agriculture, Food and Agrarian Reform with the initiative of its chairperson Sen. Cynthia Villar. **B**

FEATURES

Carapreneurship with a youthful touch

From Page 1

products more than ever. This problem along with the decreasing number of farmers only stress the need to enliven the industry, especially during these critical situations.

Food production has always been and will always be relevant. At the same time, there is always income in the industry and more opportunities can be offered with steadfast support from the government. In realizing the vision of a food-secure Philippines with prosperous farmers and fisherfolks, the young generation plays a crucial role.

Domingo Astillero Jr., also called as 'Doming' by the locals is a 24-year-old carapreneur from Barangay Malobago in Guinobatan, Albay. Championing both carabao and the farming industry at his age, Doming is challenging the perspective of many youths today towards agriculture.

Interest in agriculture or farming is increasingly waning among the youth. Data from the Philippines Statistics Authority in 2018 shows that the average age of farmers is 55 years. Many young people would prefer the work in the city over the traditional strenuous farming.

Despite this trend, Doming chose to embrace the provincial life after completing his degree in Bachelor of Science in Education major in Mathematics at the Bicol College. Except for him, all of his siblings

went to search for opportunities in Manila and eventually built a family life there.

Being the youngest among four children, their neighbors didn't expect Doming to be the one who would choose to stay behind and help his parents tend the farm. Recognizing his passion and skills in farming, the barangay officials would always consider him as a participant in capacity-building projects such as the Farmer Livestock School on Dairy Buffalo Production (FLS-DBP) of the DA-PCC.

Attending the FLS-DBP has been a life-changing decision for Doming. This learning course encouraged him to expand his agricultural ventures to include buffalo production. With the backing and recommendation of the barangay, Doming received two dairy buffaloes through a loan.

Farmer Livestock School on Dairy Buffalo Production

FLS-DBP is in line with the Accelerating Livelihood and Assets Buildup (ALAB)-Karbawan projects, which is composed of the two province-wide Carabao-based Enterprise Development projects namely Carabao-based Business Improvement Network (CBIN) and Coconut-Carabao Development Project (CCDP). Under the CBIN the FLS-DBP is one of the capacity-building trainings given to farmers and partner LGUs.

The project has already established sites in Pangasinan, Tarlac, Bataan, Albay, Palawan, Negros Oriental, Zamboanga del Norte, Zamboanga del Sur, Davao Oriental and North Cotabato.

"I learned a lot from the training. Now, I am trying to apply them one by one," Doming said. "I'm taking it slowly due to limited financial resources but I am hopeful that soon I will be able to have a milking barn constructed for our dairy buffaloes," he added.

Forward looking

The young carapreneur's family is not at all new to carabao raising. Doming was used to seeing the carabao as a dependable help for their farm. The family owned a carabao that they used to plow the field where they planted crops like rice, maize, and peanut. Prior to the FLS-DBP, Doming said they had no idea that the carabao could be used for dairying.

"We only had native carabaos in the farm before. Now that we have the dairy buffaloes, we saw how milk production could significantly improve our venture in agriculture," he said.

Doming admits that farming crops take a lot of hard work and harvest time takes months. This is why the promise of daily income in dairying persuaded him to go into dairy buffalo production for additional income and because economic crisis was then at hand due to the pandemic.

The young carapreneur has his plans already set on constructing a milking facility for their buffaloes. His ultimate goal was to significantly contribute to the build-up of dairy buffalo population in the area. Although he experienced birth pains when starting with the business, the young carapreneur's resolve shows optimism for the future.

Sustainable industry

For Doming, farming is not just a livelihood but their family's heritage that can be passed from one generation to another. He believes that producing food for the people is a noble profession and is ever-relevant. And this belief is anchored on what was taught to him by his parents since childhood and he is forever grateful to them.

"I enjoy doing the chores in the farm while earning plus the fact that you have yourself as the boss," he said. "We should also help our parents because there are others who were raised thru farming but they forget all about it after getting jobs," he added.

Doming is also aware of the anxiety faced by many youths today because of the pandemic.

"Look for simple things that you can do for a living like how I chose a work that I enjoy. Raising crops and taking care of animals make me happy. Try farming because it is an honest and noble job. It is a job that serves many people," he said, as he encouraged the youths. **B**



DA-PCC's PL480-funded project bares promising upshots in strengthening livestock biotech

By Ma. Cecilia Irang

As the national lead agency for livestock biotechnology research and development, the DA-Philippine Carabao Center (DA-PCC) had embarked on a Public Law (PL) 480-supported project titled "Strengthening the Livestock Biotechnology Center" in a bid to further intensify the performance of the livestock industry.

The implementation of the PHP391-million project brought forth significant contributions to strengthen the livestock industry, which included enhancement of DA-PCC's workforce capabilities and provision of the needed biotechnology laboratories and equipment to efficiently address the concerns of farmers and the agribusiness sector.

It is expected in the long run that the DA-PCC with its improved capability and R&D efforts would ultimately redound to benefit

millions of stakeholders in the Philippine livestock sector. Its improved institutional capability in animal biotechnology would also eventually make a significant impact on the livestock sector with the following concrete effects: improved production efficiency, affordable quality animal-based food products, and new enterprises that create new jobs.

The project was comprised of three components namely: (1) development of Biotechnology Research Capacity through strengthening of its core scientists, (2) establishment of Livestock Biotechnology Center as an invigorating workplace, and (3) conduct of research and development initiatives focused

on areas with significant impact on genetic improvement and productivity. All were implemented within the duration of the project from January 2008 to December 2015.

The Livestock Biotechnology Center named Livestock Innovations and Biotechnology Complex, inaugurated by then DA Secretary Proceso Alcala in March 2015, was established as a workplace to entice scientists and their scientific research team as well as for those who are interested to undertake research and innovations on livestock biotechnology and related fields. The infrastructure was a long-term project, which are collective efforts from other funding agencies including the Philippine

Government GAA and Korean International Cooperation Agency (KOICA).

The complex consists of biotechnology laboratories hub, cryobank facility, livestock pavilion, and animal biotechnology showroom. Among these, the animal biotechnology showroom has yet to be completed. Currently, all the rest of the complex are operationalized.

Core scientists and their research teams, on the other hand, were sent to take postgraduate degree courses and specialized training programs to strengthen their technical capabilities in meeting the demands of new and emerging bio-techniques. These were carried out by continuous exposure of the senior scientists on the newly developed methodologies by working together with foreign

experts in either domestic or foreign laboratories.

Younger scientists were also allowed to pursue short-term trainings as well as degree programs in more developed laboratories elsewhere. They are partnered with a senior staff as a mentor or coach for them to acquire relevant and new knowledge and skills from.

Currently, the project has produced two PhD and seven MS degree holders while there are still two employees taking PhD and another two pursuing MA/MS courses.

There were 13 specialized trainings participated in by 24 scientists and researchers in various biotechnology and R&D laboratories in about 11 countries worldwide.

A total of 30 technical collaborations were established, which engaged 28 experts in various fields of animal production and biotechnologies. Within the period of the program

implementation, various linkages and partner institutions were created, locally (n=21) and internationally (n=51). The DA-PCC was able to send its research and extension teams to various study missions related to R&D in livestock biotechnology and technology adoption programs in Asia and the Pacific, Southeast Asia, and Africa.

Meanwhile, another PL480-funded project is set to be carried out in 2022, which is focused on the "Intensified Community-Based Dairy Enterprise Development". It will be jointly implemented by the National Dairy Authority (NDA) and DA-PCC with the Philippine Council for Agriculture and Fisheries (PCAF) as fund manager.

With a budget of PHP513 million, the DA-PCC will focus on increasing the milk production and dairy buffalo herd through the following project components: dairy buffalo procurement and distribution, expanded artificial insemination, feed production and development, dairy buffalo enterprise development, capacity building, and project management, monitoring and evaluation. **B**



Livestock Innovations and Biotechnology Complex

- laboratories hub
- cryobank facility
- livestock pavilion
- animal biotechnology showroom

National Livestock Cryobank strengthens ex situ conservation of AnGR in PH

By Ma. Cecilia Irang and Lilian Villamor

The ex situ or offsite conservation and management of animal genetic resources (AnGR) paves the way for sustainable genetic diversity of livestock species in the country through the National Livestock Cryobank (NLC) facility.

Department of Agriculture Secretary Dr. William Dar recently led the unveiling of the NLC facility marker, which serves as a national repository of germplasm and biological samples from diverse livestock species.

The construction of this facility was made possible through the technical assistance and generous support of DA-PCC's international partners, which include the Republic of South Korea through the Korea International Cooperation Agency (KOICA) and the United States of America through the Public Law (PL) 480 project, "Strengthening the Livestock Biotechnology Center". The NLC, situated at the Livestock Innovations and Biotechnology Complex of the DA-Philippine Carabao Center (DA-PCC) in the Science City of Muñoz, Nueva Ecija, will aid in the advancement of research for development (R4D) works on ex situ cryoconservation for animal genetic resources (AnGR) from diverse livestock species towards conservation, management, and utilization, leading to sustainable animal production systems.

These endeavors are seen to sustain the genetic diversity of

livestock species such as buffalo, cattle, and goat, among others, in the country and to provide a source of genetics to be used by farmers, livestock breeders, and other interested clients.

During the inauguration program, Secretary Dar deposited frozen buffalo semen in the cryotank, as part of a demonstration that the AnGR can be stored in an extremely cold temperature and can stay viable until future utilization. The cryobank repositories, which consist of six huge cryotanks and liquid nitrogen depot, are utilized as storage for frozen animal genetic materials.

The NLC is capable of long-term storage of frozen semen in storage tanks applied and maintained with liquid nitrogen. This is being done for future utilization in sustaining the supply of animal genetics.

Since the establishment of the DA-PCC-Cryobank in 2012, the Cryobank has served as a catalyst for the inauguration of the NLC. The NLC aims to lead the national effort to increase the preservation and cryoconservation of AnGR from diverse indigenous and introduced species and breeds within the species. These are



The NLC is capable of long-term storage of frozen semen in storage tanks applied and maintained with liquid nitrogen. This is being done for future utilization in sustaining the supply of animal genetics.

animals that have economic importance and exhibit adaptable and resilient traits towards diseases and adverse effects of climate change.

As of January 2021, the collection of cryopreserved semen and oocytes are from various species, which include 91.31% buffaloes, 8.41% cattle, 0.28% caprine, and 0.01% swine.

In addition, DNA samples and cryopreserved whole blood cells from various species are preserved as genetic sources for molecular analysis in genetic diversity studies, species identification, and other research outputs.

The number of collected AnGR from species and breeds of animals is still meager to represent the country's genetic diversity. Thus, the declaration of DA-PCC's Cryobank facility as the National Livestock Cryobank towards conservation and management program has made headway to improve further the documentation and promotion of cryobanking activities and intensification of linkages and information relative to Philippine livestock breeds, including their cultural heritage and social importance. **B**

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