

# Bubalus



Quarterly Newsletter of the Department of Agriculture-Philippine Carabao Center

Vol. 5 No. 2 • 2022



## FEATURES

### Finding refuge: youths create more than livelihood in a farm club

By Dine Yve Daganos

Not everything that unfolded from the pandemic was a disaster. In fact, the isolation served as a time for

To page 15

### Partner-carapreneurs take center stage in DA-PCC's farmers' and fisherfolk's tribute

By Ma. Cecilia Irang-Mariano

One hundred twenty champion-partners in the carabao development program (CDP) implementation were honored during the "Pistang Parangal sa mga Kaagapay na Magkakalabaw sa Nueva Ecija" in celebration of the National Farmers' and Fisherfolk's Month on May 16.

This year's celebration is anchored on the theme "Buwan ng Magsasaka at Mangingisda 2022: Modernisasyon at Industrijalisasyon Tungo sa Masaganang Ani at Mataas na Kita."

During a program organized by the

To page 6



# Editor's Word



We have much to celebrate and be grateful for.

Foremost, this year marks the 29th anniversary of the Philippine Carabao Center (PCC), as an attached agency of the Department of Agriculture (DA). Technically speaking, though, it should have been DA-PCC's 30th or pearl anniversary, as the agency was born out of RA 7307, which was signed as a law on March 27, 1992. Its funding and operations, however, started on April 1, 1993, thus the latter, by tradition, has been the reference year for the agency's anniversary celebrations. Be that as it may, in the span of almost three decades, the DA-PCC has proven, time and again, its worth as a leading government institution in the fields of livestock R&D, extension, and community development. Milestones after milestones, the agency has been very consistent and competent in carrying out its mandate.

Second, the COVID-19 pandemic, while still a major health concern worldwide, seems to be slowing down, gauging from the fewer number of new cases reported in many countries, including the Philippines. In fact, many areas in the country are already under Alert Level 1, which allows intrazonal and interzonal travels without regard to age and comorbidities and activities of people and establishments at full on-site or venue capacity provided that minimum health standards are followed. The DA-PCC is taking advantage of this favourable situation. That is why, the three-pronged Carabao Development Program (i.e., genetic improvement, R&D, and enterprise development) is now, again, in full swing.

Finally, as a democratic country, we should be grateful to, once again, exercise our rights to elect our new leaders in the forthcoming national and local elections. They are expected to either legislate, execute meaningful programs, or institute necessary policies or reforms for the benefit of the populace. Let us look forward to an honest and peaceful election. Likewise, let us respect the voice of the electorates when the results finally come out. As a learned and civilized society, let us give our full support and cooperation to whoever wins fair and square. But let us be vigilant about the whole electoral process and not allow ourselves to be trapped to extremely partisan and dirty politics, which, unfortunately, are still pervasive. At the end of the day, it is (or should be) us who shape our own future.

*Eric P. Palacpac*  
Dr. Eric P. Palacpac

## About the cover

From zero knowledge and experience to establishing a remunerative business, the young people of San Vicente, Ubay, Bohol consisting the UNBA 4-H club proved resilience and self-sufficiency. More than a source of income, the organization also served as home to friends and refuge from critical situations.



(Photo by Dine Yve Daganos)

## Editorial Staff

ERIC P. PALACPAC MA. CECILIA IRANG-MARIANO  
ROWENA G. BUMANLAG Managing Editor  
Editors

MA. CECILIA IRANG-MARIANO GRANDE S. SATURNO  
RONALINE C. CANUTE PAULYN GRACE L. SATURNO  
DINE YVE D. DAGANOS LILIAN P. VILLAMOR  
COORES E. CELOY SUNSHINE SABIDALAS  
Staff Writers Contributors

COORES E. CELOY COORES E. CELOY  
Layout and Illustrations DINE YVE D. DAGANOS  
Circulation

RONNIE D. DOMINGO  
Editorial Adviser

## Contents

- 3 DA-PCC's 'Cara-Ugnayan' underscores farmers' success stories in Region 1
- 4 DA-PCC, Hungarian university team up for research and technical innovation
- 4 DA-PCC enhances database management systems for digitalizing carapreneurship
- 5 DA-PCC extends R&D partnership with DMMMSU and Swisspharma
- 6 31 participants complete first ever FLS-DBP Facilitators' Learning Workshop in Region 8
- 8 DA-PCC updates Palawan leaders on carabao dairy project progress
- 10 Soon-to-rise Dairy Boxes
- 12 DA-PCC eyes R&D collab with BISU
- 12 DA-PCC kicks off employee wellness program
- 13 DA-PCC employees get hands-on training on emergency, safety procedures
- 13 DBM commends DA-PCC in annual monitoring and review of agency performance
- 14 DA officials visit facilities for persons deprived of liberty
- 14 DA-PCC joins DA-RFO V in LN2 Depot Project
- 17 It started with a promise: A story of a retired overseas worker who chose to be a full-time carapreneur
- 18 Strategic utilization and conservation of the PH carabao

## DA-PCC's 'Cara-Ugnayan' underscores farmers' success stories in Region 1

By Ronaline Canute

"Nakita mi ti kinapintas na!" This Ilocano phrase, which means, "Nakita namin kung gaano kaganda!" was how farmers in the recent Cara-Ugnayan regarded the Carabao Development Program (CDP) of the Department of Agriculture-Philippine Carabao Center (DA-PCC) of which they are active participants.

Cara-Ugnayan is a platform of the DA-PCC's Knowledge Management Division (KMD) that aims to strengthen the agency's reportage by engaging with the local media and Local Government Unit-State Universities and Colleges (LGU-SUC) partners.

"We see a very important role that the local media takes on when it comes to not only disseminating information that could benefit a multitude of farming communities but also helping our progressive farmers tell their stories of success,"

Dr. Eric Palacpac, KMD Chief, said. The identified farmer representatives were Rolly Mateo, chairperson of the Bantog Samahang Nayon Multi-Purpose Cooperative; Annalyn Tade, manager of the Rosario Dairy Farmers Cooperative; and Freddie Ledda, vice-president of the Team Naguilian Dairy Raisers Association.

Mateo shared how the dairy enterprise multiplied their co-op's capital from 10,000 to a million pesos. The BSNMPC is actively engaged in sustainable enterprise with its participation in the milk feeding program led by the Department of Education. Similarly, Tade said the income generated by their cooperative's dairy business enabled them to purchase a site to expand their operation. The same story applies to Ledda, who attested to his family's increased income after they began dairying.

On the LGU counterpart, Ramsey Mangaoang, a former Sangguniang

Bayan member and chair of the Committee on Agriculture in Aringay, La Union, expressed his appreciation for the DA-PCC's CDP and mentioned that it is an important component of the municipality's development agenda.

He said there is a need for alternative livelihoods for farmers in the locality and carabao enterprise is one of them. With this, Mangaoang hopes to intensify a provincial ordinance that will replicate the carabao enterprise in the province.

During the media forum, some of the questions and topics discussed were the bull entrustment program, milk feeding program, PLGU and LGU's support program for carabao development, among others.

The Cara-Ugnayan is slated to be conducted in other regional centers in Visayas and Mindanao in the second semester of this year. **B**



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](mailto: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, Hungarian university team up for research and technical innovation

By Dine Yve Daganos



The DA-PCC, led by Deputy Executive Director for Production and Research Dr. Claro N. Mingala and Research and Development Division Chief Dr. Marvin A. Villanueva, forged a research and technical collaboration with the Hungarian University of Agriculture and Life Sciences (MATE) during a recent visit to Budapest, Hungary. A memorandum of Understanding (MOU) was signed to launch the partnership.

The parties agreed to do collaboration in the areas of knowledge exchange and technical cooperation on food safety, livestock biotechnology research, advanced agricultural mechanization, and exchange of expertise in areas of common interest to both parties.

In the duration of their visit from May 10 to 14, the DA-PCC team conducted an exposure trip on varying undertakings of MATE such as the La Fattoria di Mezőtúr Company in Mezőtúr City, a 100-head Italian Mediterranean Buffalo farm. The six-year-old farm practices extensive management with daily milk production of 10-12 liters.

The team also headed over to vitafort Zrt in Dabas City, Hungary's biggest animal feed company where they were briefed about its pioneering work and innovations for the past 40 years.

The team also visited the university's Animal Biotechnology and Embryo Laboratory in Herceghalom City. Here, Professor Dr. Andras Kovacs and Dr. Szilard Bodo shared about their latest research findings on biotechnology similar to DA-PCC's researches like embryo transfer, sperm sexing, in-vitro fertilization and cryobanking, among others.

The team were then toured to the Game Management Landscape and Ranch in Bószénfa. This is a 1,300-hectare game farm that houses several animals including red deer, fallow deer, water buffalo, donkey, goats, ducks and horses. While it works as a preservation and conservation facility for the animals, it also generates income as a tourist attraction site.

Philippine Ambassador to Hungary, Ambassador Frank R. Cimafranca and Ria E. Gorospe, Second Secretary and Consul also joined the DA-PCC delegation to discuss possible ways to increase the number of Filipino scholars taking graduate studies in Hungary and Europe with support from the Department of Science and Technology (DOST).

The MOU was held on the last day with MATE University Professor and Rector Dr. Gyuricza Csaba, Szandra Megyery, and Dr. László Máthé. Apart from DA-PCC team and office of the Philippine Ambassador, DA-PCC OIC-Executive Director Dr.

Ronnie D. Domingo and Hungarian Ambassador to the Philippines, Her Excellency Titanilla Toth, and Vice Consul and Head of Commercial Section of the Embassy of Hungary in Manila Gábor Lehócz was also present online.

The newfound partnership is expected to open doors for significantly improving the management processes and technologies by researchers in the Philippines. The ultimate objective of which is to give farmers better services to increase their production and income. **B**

## DA-PCC enhances database management systems for digitalizing carapreneurship

By Chrissalyn Marcelo

In line with the Department of Agriculture's (DA's) thrust to modernize the agri-fishery sector, the DA-Philippine Carabao Center (PCC) recently

## DA-PCC extends R&D partnership with DMMMSU and Swisspharma

By Grande Saturno and Dine Yve Daganos



From mining of seaweeds as an alternative feed supplement for water buffaloes, and conversion of carabao's milk into solid form, to innovated techniques in determining and treating diseases in water buffalo and others; these were the areas for Research for Development (R4D) collaboration discussed during the visit of DA-PCC National Headquarters and Genepool (NHQGP) to the Don Mariano Marcos Memorial State University (DMMMSU) in La Union, and Swisspharma Research Laboratories, Inc. in Laguna.

On April 5-6, the DA-PCC NHQGP

improved its two database management systems (DMS) for digitalizing carapreneurship and cascaded it to clients and carabao-based enterprise development (CBED) coordinators last May 31-June 2 at the Richmonde Hotel in Iloilo.

Its enhanced DMS are intensified research-based enterprise build-up (iREB) 2.0 and major final output (MFO) dashboard version 3.

The DA-PCC's Planning and Information Management Officer-in-Charge Alvin David said the enhancement of the two DMS was the output of the Database Management Enhancement System Project of DA-PCC, as funded by the

team led by Deputy Executive Director for Production and Research Dr. Claro N. Mingala, Production System and Nutrition Section (PSNS) Head Mary Rose De Guia, Livestock Biotechnology Center staff, and DA-PCC at DMMMSU Center Director Vilma Gagni, met with DMMMSU-Fisheries Research and Training Institute (FRTI) Director Dr. Andie John Tadeo to discuss the research project titled "Mining Alternative Feed Sources Using Seaweeds for Water Buffaloes."

De Guia presented the important benefits and components of seaweed as an alternative source of feed

DA-Bureau of Agricultural Research.

"The iREB2.0 is a tool to measure the profitability and productivity of the carabao-based enterprise (CBE) at the client or community level of DA-PCC nationwide, while the MFO dashboard is a tool to measure the output of the DA-PCC as an agency," David explained.

He added that the system is a good tool for information generation, especially when creating important business decisions and planning for the agency's targets.

Business Development Commercialization Unit Head Zadieshar Sanchez said the

supplement for water buffaloes in the country. Dr. Mingala was also stern to instruct precautions while conducting the project to avoid any unfavorable effect on seaweed production and sustainability of the said resources.

The following day, the team visited the seaweed farm while observing and assessing the environmental condition in the area.

On the other hand, another batch from DA-PCC NHQGP composed of Research and Development Division (RDD) Chief Dr. Marvin A.

To page 8

improved version of iREB1.0 was developed by the DA-PCC following its initiative to give value for money to all its research-based enterprises.

In her opening remarks, DA Assistant Secretary for Planning and Regulations Dr. Liza Battad said the iREB 2.0 corroborates the programs of DA-PCC in CBE. She also added that said system is a good tool for showcasing how competitive the CBEs of DA-PCC's clients are.

DA-PCC's Science Research Analyst Pauline Maramag and Project Evaluation Officer Catherine Alyssa Licudo, meanwhile, shared the improved features in the iREB 2.0

To page 8



# 31 participants complete first ever FLS-DBP Facilitators' Learning Workshop in Region 8

By Sunshine Sabidalas

The DA-PCC through its regional center hosted by the Visayas State University (VSU) conducted a Facilitators' Learning Workshop on Farmers Livestock School on Dairy Buffalo Production (FLS-DBP) from April 25 to May 6, 2022 in Baybay City, Leyte. It was the first time that such activity was conducted off-site DA-PCC national headquarters.

Thirty-one participants from different municipalities in eastern Visayas consisting of partners from the Coconut-Carabao Development Project (CCDP), farmer beneficiaries, Local Government Unit (LGU) technicians from Northern Samar, Leyte, Samar, Southern Leyte, and Biliran, and some DA-PCC at VSU staff members attended the learning workshop.

The FLS-DBP is an innovative approach that is anchored on participatory and adult learning methods and principles. The 15-day intensive activity aimed to equip participants with the necessary skills and competence in conducting FLS-DBP in their respective localities, making them effective facilitators of learning for farmers.

Aside from the lecture sessions, the training course included experiential learning processes through exercises, games, fieldworks and case analysis. Courses discussed throughout the training were focused on mobilizing communities for FLS-DBP, raising healthy and productive dairy buffalo, building enterprises from buffalo, participatory technology development, and

participatory tools to measure the FLS-DBP effects and its impact.

The DA-PCC's Knowledge Management Division (KMD) headed by Dr. Eric Palacpac, together with module developers from the national headquarters facilitated the said learning activity.

Resource persons included Director Francisco G. Gabunada Jr. of DA-PCC at VSU and module developers from the national headquarters (Dr. Eric P. Palacpac, Ms. Rovelyn T. Jacang, Dr. Phoebe Lyndia Llantada, Dr. Cyril P. Baltazar, Dr. Ester B. Flores, Dr. Peregrino G. Duran, Dr. Renelyn M. Labindao, Mina P. Abella, Patrizia Camille Saturno, Teresita Baltazar, former DA-PCC R&D Division Chief Dr. Annabelle S. Sarabia, and former KMD staff Erwin M. Valiente).

During the culminating ceremony, Dr. Caro B. Salces, DA-PCC's Deputy Executive Director for Administration and Finance, gave his inspirational message by sharing success stories of previous FLS-DBP graduates who ventured into the dairy buffalo business particularly in supplying the milk for the milk feeding program.

The participants expressed their gratitude, as they gained knowledge about dairy buffalo production, business aspects, and technology transfer. It gave them an opportunity to disseminate their knowledge to farmer beneficiaries of the CCDP Project. Further, they presented their re-entry plans for the implementation of a full scale FLS-DBP in their respective localities. **B**

## Partner-carapreneurs take center stage...

From Page 1

Knowledge Management Division-Learning Events Coordination Section in collaboration with the DA-Philippine Carabao Center at Central Luzon State University (DA-PCC at CLSU), partner-carapreneurs who are members of dairy cooperatives and associations, private farm owners, and family module beneficiaries received plaques of recognition from the DA-PCC for their resolute hard work and dedication in helping advance the growth of the carabao dairy industry in the countryside.

They were also recognized for their strong partnership with DA-PCC in achieving the goals of the agricultural sector, especially in improving the economic and social well-being of farming families and ensuring food security even during a pandemic.

DA-PCC OIC Executive Director Dr. Ronnie Domingo urged the farmer-carapreneurs to scale up their production and upgrade their products' quality in order to be more competitive in the market domestically and even internationally. He went on to say that success should be about getting better every day.

"The DA-PCC will rally behind you in your modernization and industrialization efforts," he assured. Dr. Domingo presented the highlights of accomplishments of the Ahon Lahat, Pagkaing Sapat Kontra COVID-19 (ALPAS COVID-19) project of the agency, which was launched during the National Farmers' and Fisherfolk's Month in 2020.

The DA-PCC implemented this in four project components: Creating



Opportunities Through Value Innovations and Development (COVID); Unlad Lahi Project (ULaP); Gatas, Isda, Gulay, at Karne (GIGK); and Cara-Aralan with a total of 38,684 beneficiaries.

Specifically, there were 9,795 beneficiaries provided with carabaos, incentives, technical and veterinary services, a crop-forage integrated system, technical, mechanization, and market support for food and feed production under ULaP.

In GIGK, a total of 28,357 beneficiaries received clustered vegetable and livestock forage production and market assistance, logistical support, or farm mechanization assistance; while 100 beneficiaries received upscale technologies, innovations in food production, processing, and value-adding in the COVID project component.

Under the Cara-Aralan project component, 432 beneficiaries were provided with e-learning or webinars focused on farm solutions, learning modules in Audio Visual Presentations, digitized IEC and

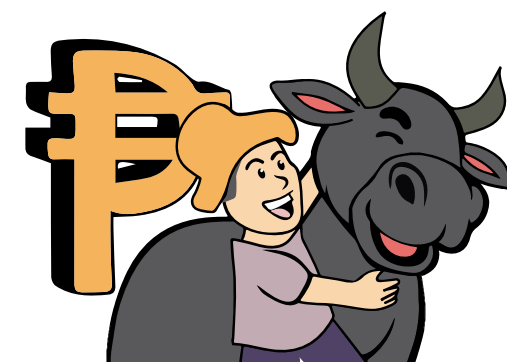
training materials, multimedia promotions, and communication support services.

Meanwhile, farmer representatives gave their respective testimonies on how the DA-PCC's program helped improve their way of life.

Catalanacan Multi-Purpose Cooperative chairperson Ferdinand Cueva shared how the income from the dairy enterprise enabled their cooperative to become entirely debt-free; Rosalie Mendoza of the Isla Buliran Farmers Association thanked the DA-PCC for providing technical assistance and enriching their knowledge in dairy buffalo

production; private farm owner Ernesto Padolina, who currently owns 100 dairy carabaos, expressed his gratitude to DA-PCC for convincing him to venture into carabao dairying, which is now providing him sustainable income; and family module beneficiary Apolonio Serrano proudly narrated how his three children were able to graduate from college with the income he earned from raising dairy carabaos.

In 1989, the month of May was declared as Farmers' and Fisherfolks' Month under Presidential Proclamation No. 33. **B**



Modernisasyon at Industriyalisasyon Tungo sa Masaganang Ani at Mataas na Kita



## DA-PCC updates Palawan leaders on carabao dairy project progress

By Paulyn Saturno

"The farmer cooperative Yamang Bukid, as assisted by the DA-Philippine Carabao Center at University of the Philippines Los Baños (DA-PCC at UPLB), has already earned more than Php3M from the carabao dairy project."

DA-PCC at UPLB Center Director Thelma Saludes gave this encouraging report to participating livestock leaders and DA officials.

The project was part of the Carabao-Based Business Improvement Network (CBIN), which was initiated thru the Senate Committee on Agriculture, Food and Agrarian Reform headed by Senator Cynthia Villar. Currently, the said cooperative also participates in the implementation of DepEd's and DSWD's school-based feeding program in the province of Palawan.

Dr. Saludes said dairying is a very good program and business opportunity for cooperatives and associations, especially now that we have a nationwide milk feeding program.

For his part, DA-PCC OIC Executive Director Dr. Ronnie Domingo highlighted the importance of returning to the noble values of the Filipinos, the recalibration of plans in response to the current outbreaks and conflicts, and the rebuilding of

relationships among industry partners.

The forum was organized by the Office of the city veterinarian of Puerto Princesa City headed by Dr. Indira A. Santiago.

USec William Medrano headed the delegation from the DA together with the different livestock agency heads. Also present in the event were DA MIMAROPA-Regional Executive Director Antonio Gerundio, Bureau of Animal Industry OIC Executive Director Dr. Reildrin G. Morales, and Dr. Edelyn David and Dr. Feddik Antonnette J. Serrano, from the National Dairy Authority.

USec. Medrano emphasized the importance of strengthening the partnership of the associations and the local government unit in helping the DA attain its Masaganang Ani at Mataas na Kita battlecry for our local farmers.

The livestock summit was attended by different farmer leaders and stakeholders in Palawan including Palawan Swine Producers Association, Tarabidan Association of Palawan, Palawan Agrarian Reform Community Cooperative Federation, CK Cooperative, Sorosoro Ibaba Development Cooperative, Iwahig Prison and Penal Farm and Farmers Association, Yamang Bukid Farm, Palawan Municipal Agriculture Officers Association, DVS Farm and others from the government sector such as Department of Science and Technology, Dairy Production and Development Center, Livestock Resource Center, Agricultural Production Coordinating Office (APCO), LGU- Puerto Princesa, and officials from the Provincial Office of Palawan. **B**



## DA-PCC enhances database...

From Page 4

and MFO dashboard version 3.

"Our iREB1.0 has several limitations in terms of usage. But with the improved version or the iREB2.0, we resolved these issues and even improved its database user requirements, graphic user interface, farmer cooperative accounts, and loading time rate," she explained.

She added that encoding is simplified in the iREB2.0 since a user no longer needs to encode everything in the DMS and that it now contains a data privacy feature where the user is given the rights of privacy and security on his/her account.

"The DA-PCC's MFO Dashboard version 3 system improved in terms of adding some important functionalities and modifications,"

Licudo said.

Such were the creation of a computation tab, modification regarding the showing of the status of submission of performance commitment reviews (PCRs), adding of exporting functions and other administrative functions," Licudo further explained.

Hands-on sessions were also conducted for the participants to appreciate and get familiar with the two DMS. They were also given the opportunity to present their experience of using the said systems.

"Through the iREB2.0, we can now easily assess the performance of our farmer-members since we can easily check based on their profile and data the areas where we can provide them immediate help in case they need it," Bohol Dairy Cooperative General Manager Herbert Joseph Tan Puracan said.

He added that the system is very helpful for their cooperative and he thanked the DA-PCC for doing such a great job in improving the iREB. Baclay Multipurpose Cooperative



General Manager Richard Hidalgo, another participant, happily shared that through the iREB2.0, they can now monitor and check if their business is profitable with just one click from their computers.

Meanwhile, Maramag also shared other plans related to the iREB2.0.

"In the future, the iREB2.0 will have a mobile app version, which can be used offline for data gathering

purposes and report-generating abilities. Clients will also be given an overall guideline or manual on how to use the system and how often they should encode data to the DMS," she added.

The same cascading workshop will be conducted by DA-PCC in Tagaytay for its clients and CBED coordinators in Luzon come first week of July 2022. **B**

## DA-PCC extends R&D partnership...

From Page 5

Villanueva, Product Development and Innovation Section (PDIS) head Mina P. Abella, with Patrizia Camille O. Saturno, Science Research Specialist II, and Teresita M. Baltazar, Science Research Specialist I also met with Swisspharma President Benjamin G. Tantiensu on April 7.

President Tantiensu with R&D head Tess Plazo and Quality Management Department (QMD) Head Sotera Jordan discussed with the DA-PCC team about research

plans to convert carabao's milk into powder or tablet form, particularly to support the milk feeding program of DA-PCC and DSWD. This is in response to the concern raised by PDIS head and milk feeding program coordinator Abella about their struggle on keeping milk products fresh, particularly when transported to far flung communities.

The discussion also involved collaboration on testing of antibiotic meds for carabao, having a customized dosage of Praziquantel as treatment for schistosomiasis in water buffalo, development of lateral flow assay or analysis for several cattle diseases like leptospirosis, and testing of antibiotic residues in carabao milk.

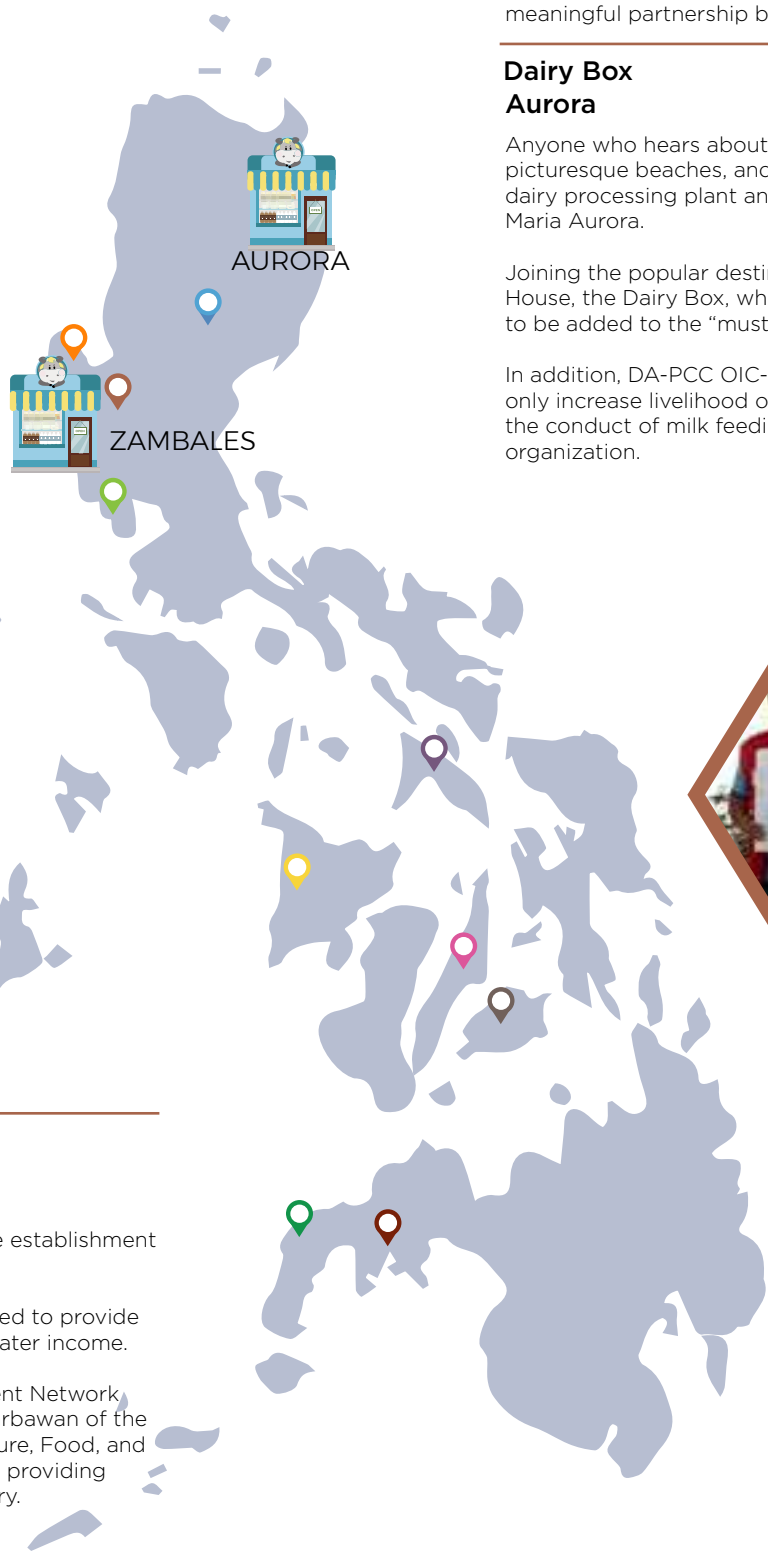
Pres. Tantiensu also indulged

the team with an exclusive visit throughout the research facility, particularly in their microbiology section, R&D office, molecular testing lab section, stem cell area, and nutrition center, while also introducing to them some of their high-end research instruments and technologies in the laboratory.

Swisspharma, a Filipino- Swiss joint venture is engaged in contract manufacturing, R&D of pharmaceutical products, cosmetics, and food supplements for the international and local markets employing state-of-the-art technology as well as the latest procedures in the industry. **B**







**Dairy Box  
Zambales**

Zambales is known for its beautiful coastline that can easily beguile any beach bum and is a go-to province as soon as summertime starts waving. Masinloc, a coastal municipality in Zambales, is also known for its sweet mangoes, which is a source of income for the locals. Soon, tourists and locals alike will witness the booming of another industry with the groundbreaking of a Dairy Box outlet and processing facility in the said town on April 4, 2022.

The project will be operated by the Masinloc Farmers Agriculture Cooperative while the LGU and the DA-PCC will be providing technical training and assistance at the onset of its operation.

Dr. Ericson Dela Cruz, Center Director of PCC at CLSU, said this is just the beginning of a meaningful partnership between DA-PCC, the LGU, and the local farmers of Masinloc.

**Dairy Box  
Aurora**

Anyone who hears about Aurora Province can visualize images of historical landmarks, picturesque beaches, and majestic mountains. Similar to its tourism tagline, "Aurora Rising," a dairy processing plant and marketing outlet is set to become a tourist destination in Malasin, Maria Aurora.

Joining the popular destinations in the province such as the Museo de Baler and Doña Aurora House, the Dairy Box, which is a one-stop-shop for dairy products of dairy farmers is hoped to be added to the "must-see" bucket list of tourists.

In addition, DA-PCC OIC-Executive Director Dr. Ronnie Domingo, said the project will not only increase livelihood opportunities in the province but will also aid malnutrition such as the conduct of milk feeding program. He also assured the support of the agency to the organization.

**Where else can you  
find our Dairy Boxes?**

-  **Pangasinan**  
Bantog, Asingan
-  **Bataan**  
San Ramon, Dinalupihan  
Tapulao, Orani
-  **Tarlac**  
Victoria
-  **Nueva Ecija**  
Bantug, Science City of Munoz
-  **Antique**  
Hamtic  
Pandan
-  **Bohol**  
Tamboan, Carmen  
Dao, Tagbilaran City  
Poblacio, Ubay
-  **Cebu**  
Poblacion, Compostela  
Parian, Cebu City  
Poblacion, Pinamungajan
-  **Masbate**  
Aguada, Placer
-  **Zamboanga Del Sur**  
Dumalinao
-  **Zamboanga Del Norte**  
Dapitan City



*Soon-to-Rise Dairy Boxes*

**By Ronaline Canute and Coores Celoy**

Two memorandum of agreements were inked in separate occasions for the establishment of Dairy Box and processing facility in Region III.

Dairy Box is an infrastructure support for smallholder dairy farmers designed to provide them with an opportunity to gain access to the commercial market for greater income.

It is a component of the project titled Carabao-based Business Improvement Network (CBIN), popularized as Accelerating Livelihood Assets Buildup (ALAB)- Karbawan of the DA-PCC. It was funded by the Office of the Senate Committee on Agriculture, Food, and Agrarian Reform Chairperson Senator Cynthia Villar and is geared towards providing income opportunities to farmers and progressing the carabao dairy industry.



## DA-PCC kicks off employee wellness program

By Ma. Cecilia Irang-Mariano

Employees of the DA-Philippine Carabao Center (DA-PCC) buckle down to stay fit and healthy by actively participating in the agency's Virtual Walkathon Challenge and Jump for Health physical fitness activities.

The DA-PCC, through its Management Systems Audit Office (MSAO) and Physical Health and Mental Wellness Program Committees, organized such activities to create a healthier workforce, increase productivity, and decrease employees' risk of developing chronic diseases.

The Virtual Walkathon Challenge, which started on June 1, gives the

participants 90 days to complete the 50km challenge using a pedometer or step counter app. Prizes will be awarded to those who finish first and walk the longest.

"Suportahan po natin ang ating programa para sa kalusugan ng bawa't isa. Health is wealth," encouraged DA-PCC OIC Executive Director Dr. Ronnie Domingo, who also took part in the activity by uploading a screenshot of his walk to the Balik Sigla Program Facebook group of the agency.

The Jump for Health, which started its first session on June 2, is an exercise that uses a jump rope to help lose weight and improve one's cardiorespiratory fitness. Participating PCCeans' body weight, height, and waist circumference measurements were taken and recorded prior to the program to determine improvements after six months. This activity is scheduled every Thursday from 4 p.m. to 5 p.m.

Apart from the physical health fitness program, the committee also offers

mental health wellness activities every Tuesday from 4:30 p.m. to 5 p.m.

"The overall program created an opportunity for us to realize that focusing on our health, along with our work, is actually possible. We can really do both things," Nomilyn Gonzales, one of the PCCeans, asserted. **B**



## DA-PCC employees get hands-on training on emergency, safety procedures

By Ma. Cecilia Irang-Mariano

Thirty personnel of the DA-Philippine Carabao Center (DA-PCC) have been designated as the agency's official first aiders should emergencies arise after completing the four-day training course on basic life support and standard first aid on May 2-5.

Through its Management Systems Audit Office, the DA-PCC organized the said activity in compliance with the Occupational Health and Safety Management System's rule on the required training for the agency's first aiders and health personnel.

The DA-PCC tapped the Philippine Red Cross (PRC) Nueva Ecija Chapter to conduct the training wherein the participants acquired several life-saving skills. They were trained in first aid basics, particularly on how to perform cardiopulmonary resuscitation (CPR) with an automated external defibrillator (AED).

Aside from a series of lectures and discussions, the participants also

underwent practical exercises on effective emergency procedures such as the safest first aid methods of moving and lifting a patient, bandaging and splinting, and immobilization, among others.

Rey Lovell Sabado and Jean Pascual of the PRC served as safety service instructors during the training. They emphasized the importance of having the ability to act in an emergency and save a life because "minutes matter."

Ismael Gajonera, DA-PCC administrative assistant and one of the participants, said he was grateful to the management for giving him the chance to learn how to deal with emergencies with confidence and be able to give life-saving care when it's needed most.

After the training and evaluation, the PRC will issue valid ID cards and certificates of competence to the participants. **B**



## DA-PCC eyes R&D collab with BISU

By Grande S. Saturno and Dine Yve Daganos

DA-PCC represented by OIC Deputy Executive Director for Production and Research Dr. Claro N. Mingala and DA-PCC at Ubay Stock Farm (DA-PCC at USF) Center Director Dr. Maria Dinah Loculan proposed collaboration with the Bohol Island State University (BISU) on Research and Development (R&D) advancements during the Central Visayas Agriculture, Aquatic and Natural Resources Research and Development Consortium (CVAARDEC) meeting and orientation with University President Dr. Regucivilla A. Pobar

and faculty members held at BISU. Dr. Mingala attended the meeting as part of his itinerary during his visit to the island from March 30 to April 1 with the objective of expanding the agency's partnership and network.

Dr. Mingala proposed a MOA signing with the university and discussed plans to offer R&D services, optimization of facilities, scholarship opportunities, and research items for BISU. Dr. Mingala also invited the university to visit the PCC National Headquarters and Genepool (NHQGP) in the Science City of Muñoz, Nueva Ecija for firsthand orientation and tour to the agency's facilities and services.

Dr. Mingala also witnessed the preparation of DA-PCC at USF for the milk feeding program implementation and the ongoing renovation and reconstruction of the damaged facilities from typhoon Odette, while also checking out the

centers native "oikos", a recently developed technology of the center, which serves as compost activator.

USF station chief Joaquin P. Polestico Jr., in-charge of farm operations Dr. Emerson Tapdasan, and Dir. Loculan also accompanied Dr. Mingala to the native pig and chicken farm where they examined the negative and devastating aftermath of the recent typhoon. Dr. Mingala mentioned potential assistance from the DA-PCC Cryobank Unit for semen preservation of their native livestock including cattle.

The DA-PCC NHQGP team also met with Central Visayas Livestock Research and Development Facility OIC Dr. Estrella B. Mellomida and staff to discuss possible collaboration with DA-PCC to maximize and optimize laboratory equipment or facilities in line with the One DA initiative. **B**

## DBM commends DA-PCC in annual monitoring and review of agency performance

By Ma. Cecilia Irang-Mariano

The Department of Budget and Management (DBM) has lauded the DA-Philippine Carabao Center (DA-PCC) for its efficient physical, financial, and income performance in a recently conducted monitoring and review of agency performance for FY 2021.

The DA-PCC is commended for exceeding all its set physical targets with accomplishment rates ranging from 102% to 133% and a revenue performance of 102.01%. The agency is also praised for its disbursement rate of 100% in total disbursement authorities issued.

DBM reported that the DA-PCC managed to meet and exceed its targets despite the adversities brought about by the pandemic.

DA-PCC OIC Executive Director Dr. Ronnie Domingo congratulated all PCCeans for the commendable financial utilization report.

DBM subsequently cited several recommendations for DA-PCC's continual improvement of performance particularly on fund utilization vis-à-vis its plans and targets, which include implementation of tighter linkage between strategic and operational planning and budgeting, as well as, promotion of better designed, well-prepared, and "shovel-ready" programs and projects.

Meanwhile, DA-PCC also garnered the highest place among the nine attached agencies of the DA for two consecutive years in terms of cash utilization under the General Appropriations Act, spending 99.90% of the Php437,609,880.00 Notice of Cash Allocation (NCA) for FY 2020 and 100% of the Php592,079,159.00 NCA for FY 2021. **B**



## DA officials visit facilities for persons deprived of liberty

By Pauly Grace Saturno

“There is hope behind bars,” said Department of Agriculture (DA)-Undersecretary for Livestock Dr. William C. Medrano in his message to the Iwahig Prison and Penal Farm (IPPF).

He challenged the Iwahig officials to participate actively in promoting food production and food security. Considering its 28,000 ha of land in Palawan and human resources, IPPF has huge potential for agriculture. With this, the IPPF gains to renew its partnership with the DA livestock agencies and other government

agencies to utilize its land and human resources and develop agricultural programs to help persons deprived of liberty realize that there is still hope behind bars. Initially, they already have livestock such as carabao, cattle, and goat.

Usec Medrano assured the group of DA's support and reiterated the OneDA Reform Agenda being spearheaded by DA Sec. William Dar.

The IPPF is one of the world's largest open-air jails. Instead of concrete walls, the prison is surrounded with a wire fence. A single guard at the entrance gate greets tourists and prisoners' relatives without inspecting them. It is one of the seven operating units of the Bureau of Corrections under the Department of Justice.

Recently, the Penal Farm was awarded as the best operating Prison and Penal Farm in the country. They are also proud to inform the DA officials that they have graduated from the training on organic production in collaboration with TESDA.

On the other hand, DA-PCC OIC Executive Director Dr. Ronnie Domingo said that it is high time to scale up food production to achieve the Masaganang Ani at Mataas na Kita battlecry of DA. With the current resources of IPPF and its collaboration with different government agencies and private organizations, the IPPF, he said, can contribute to food security.

In response, acting superintendent of IPPF CSupt. Joel R. Calvelo expressed their gratitude to the team. He said that they have been longing for a visit from the DA.

Also in attendance to the activity were Chief-Work and Livelihood Program CTI Teddy S. Martin, DA-PCC at UPLB center director Dr. Thelma Saludes, DA-RFO IV-B Regional Executive Director Antonio Gerundio, National Dairy Authority representative Dr. Edelyn David, and Ariel Colongon of Dairy Production and Development Center-Puerto Princesa. **B**

## DA-PCC joins DA-RFO V in LN2 Depot Project

By Grande Saturno and Dine Yve Daganos

The Department of Agriculture-Philippine Carabao Center (DA-PCC) National Headquarters and Gene Pool (NHQGP) team, led by Deputy Executive Director for Production and Research Dr. Claro N. Mingala, visited the physical structure and site along the vicinity of the DA-Regional Field Office (DA-RFO) V in San Agustin Pili, Camarines Sur headed by Regional Director Rodel P. Tornilla, where a liquid nitrogen (LN2) depot is expected to rise.

Joining Dr. Mingala were Animal Breeding and Genomics Section Head and Scientist I Dr. Ester Flores, Planning and Information Management Division Officer-in-Charge Alvin David, Admin. Assistant IV Catherine Alyssa Licudo, and

Engineer Raul Ruba. Assisting the team were Regional Livestock and Poultry Coordinator Dr. Marisa Guillermo and DA-PCC at University of the Philippines Los Baños (UPLB) Center Director and project head Dr. Thelma Saludes.

The NHQGP team further shared with the DA-RFO some of the agency's practices in LN2 handling particularly in the National Livestock Cryobank facility as well as the requirements for physical structure of Vacuum Insulated Evaporator (VIE) tank.

LN2 is essential in preserving livestock cells and tissues in dormant state while temporarily ceasing

most of their vital functions without causing death.

Said project is a joint endeavor of DA-RFO V and DA-PCC at UPLB as part of their commitment to expand technical assistance and services offered to livestock clients in order to increase farm efficiency and profitability.

Further, DA-PCC is also planning to set up additional infrastructures for workplace, quarters, and tank storage facility near the establishment.

A memorandum of agreement (MOA) is being drafted for the official documentation of the project. **B**

## FEATURE

### Finding refuge: youths create more than livelihood in a farm club

From Page 1

**contemplation and deeper realizations in life. For others like the youths of San Vicente, Ubay, Bohol, the pandemic has also paved the way for opportunities to enter and opened a safe haven from adversities.**

Following the COVID-19 outbreak, Bohol was struck by typhoon Odette in late December of 2021, leaving 80 people dead and 78 others injured, with Php5 billion worth of damage to properties. Despite these catastrophes, the young people comprising the UNBA 4-H club in San Vicente continue to thrive by farming and milking carabaos.

The UNBA 4-H club is a group organized through the encouragement of Department of Agriculture-Philippine Carabao Center (DA-PCC) at Ubay Stock

Farm Senior Agriculturist Gaudioso Calibugan a.k.a “Gudi” back in July 2021 as part of the objectives of the agency.

The club aims to engage the youth in agricultural business to lure them away from getting involved in unhealthy activities. The club ultimately teaches its members to value lasting friendships and cooperation while earning for themselves.

Gudi talked them into forming the said group. The membership grew from 18 to 30 individuals, aged 12 to 23 years old. As proposed by Gudi, the group first ventured into corn silage production. In a joint effort, the local DA office and DA-PCC provided on-the-job training to the group, from farming to processing corn silage. A chopper

and a harvester were also rented out to the group by the two agencies while the Bohol Dairy Cooperative (BODACO) also leased a tractor to assist in cultivating the farm area.

At that time, BODACO also invested a substantial amount to the group to be used as a start up capital for its production. A couple of months later, the group was able to generate 300 sacks of corn silage sold at Php7 per sack, with a total sale amounting to Php75,000.

The group's determination has been unwavering since then, soon enough they ventured into carabao and dairy cow milk production as well. The DA-PCC entrusted them with five carabaos while the DA entrusted eight cows.

Each liter of milk is sold at Php50, which gives them an average of Php8,000 income per month.

Because of the resolve they displayed for the industry, the DA entrusted them with another set of cattle for fattening.





## Safe haven

Melvin Sastrillas, standing president of the UNBA 4-H Club described how it was challenging to start from scraps.

“We had difficulties at first because we did not have any previous knowledge or experience in managing a business. Further, we were not sure how we could encourage the other youths to actively engage in our activities,” Sastrillas said.

Despite their rawness in the industry, the group was lucky enough to receive mentorship and regular technical expertise from Gudi.

The members of the group are all close cousins, which makes the work more of a family activity. They have also set rules regarding the sharing of responsibilities and a daily time record to track their attendance and duration of working hours.

“We are having a lot of fun doing the chores from planting to

harvesting our corn crops, especially the teasing and jokes shared in between,” says Sastrillas. All of the group members apart from Sastrillas are attending high school and college, which is why the continuous income from their business was truly helpful during the pandemic and after the recent typhoon.

“There is good income from our corn silage production and especially from milk, which is produced daily,” emphasized Sastrillas.

The amount generated helped significantly in supporting their educational needs, e.g., cellphones, which they utilized for their online classes, while the remaining amount was used to purchase groceries for their households.

### Faces of resilience

Because of their determination, they were conferred as the 4th placers for the National Excellent Achievers Award (NEAA) in 2020 during the 69th National 4-H Summit themed “RISE of the 4-Her: Reaching

Independence, Sustainability, and Empowerment of 4-H club amidst the Pandemic.” They also topped the regional awards category. The award is in acknowledgment of their relentless effort and dedication to the advancement of the Philippine agriculture.

The 4-H club is an organization committed to out-of-school youth (OSY) and in-school youth (ISY) involved in agriculture programs and livelihood projects for the four-fold development of the Head, Heart, Hands, and Health. It provides hands-on trainings and educational activities from government agencies and other volunteers.

Despite the sudden shifts and changes, the young people of San Vicente exuded resilience and self-sufficiency, as manifested in their performance in championing agriculture. The pandemic may have deprived them of many things, but their dreams and determination remain ever-burning and cultivated beneath the roofs of their UNBA 4-H club. **B**



“There is good income from our corn silage production and especially from milk, which is produced daily.”

Melvin Sastrillas,  
President, UNBA 4-H Club

## It started with a promise: A story of a retired overseas worker who chose to be a full-time carapreneur

By Coores Celoy

**“If I get employed, I will buy as many carabaos as I can.” This was what Joseph promised to himself years ago after witnessing his father’s grief when they had to sell their carabaos to afford their family’s needs.**

Joseph Mallari, 36, hails from Floridablanca, Pampanga. During his childhood, their father used to take him to the farm every day.

“When we were young, we were already working in the farm,” Joseph recalled.

Today, being a seafarer is Joseph’s main occupation. He has been in the profession for more than 10 years.

He is just one of the 1,221,417 Filipinos working abroad (POEA, 2006).

Joseph is the only male among his siblings and was often expected to help his father on the farm, who was then dependent on their carabaos for income.

However, when Joseph and his siblings were all studying at the same time, their parents could no longer afford to pay for their expenses, which made their father decide to sell their carabaos.

Angelito Mallari, 63, said that taking care of the buffalo has significantly helped them in their finances.

“We used to have carabaos but we sold them for PHP50,000, which we used for the education of my children,” Angelito added.

It was then that Joseph realized the value of the carabaos to their father and even to the entire family. He promised himself that he would replace the carabaos that his father had to sell to finance their education.

### Joseph’s Adventure

When Joseph graduated from college, he immediately set sail toward his dreams for his family.

When he was able to save enough money, he did not hesitate to buy five buffaloes to replace the carabaos that his father had sold. Angelito was very happy about his son’s kind gesture.

Being an Overseas Filipino Worker (OFW) has not been easy for Joseph. He endures the grief of being separated from his family, especially when his father got sick.

While Joseph was on the ship, he watched a show about the buffalo business and became interested in it. He began attending training and seminars, as facilitated by the Department of Agriculture-Philippine Carabao Center (DA-PCC). Joseph never thought that this would be the beginning of his progressive buffalo business.

### Good practices in buffalo management

Joseph makes sure that all the buffaloes he buys are good breeds and they are all females because, apart from being able to breed, they can also be milked.

Male buffaloes are sold or slaughtered. It also ensures the safety of pregnant buffaloes from the injuries they might get if they stay with the male buffaloes.

Despite his full-time job as a seafarer, Joseph still manages to be hands-on with his business in Pampanga.

He records patiently every business transaction so that he can easily audit the expenses. He monitors systematically when a female buffalo gives birth and when it should get pregnant again. In this way, he can assure the safety of the female buffaloes.

However, some challenges are inevitable, such as climate change, which may cause illness to the buffaloes and will result in low productivity.

“These are challenges that I encounter, but once you get used to it and make it a hobby, everything will be easy,” Joseph shared.

As of today, Joseph has 38 buffaloes and 10 of them are lactating. He is able to collect 40 liters of milk daily, which is brought to the public market and to the pastillas factory.

Because of his hard work and perseverance in the business that he chose, he was able to build his own house and was able to buy a car.

Joseph retired happily this year as a seafarer because he knew he had fulfilled the promise he once said to himself for his family, and he is now ready to take another step toward his dream, which is to put up his own milk processing facility.

A dream that is fueled by perseverance and dedication is not impossible to fulfill, and Joseph is a living proof of this. **B**



# Strategic utilization and conservation of the PH carabao

By Lilian P. Villamor

**Strategies for sustainable utilization and conservation of the Philippine carabao's valuable genetic resource are informed by an understanding of the genetic architecture and relationship among various swamp buffalo populations.**

Genetic conservation of diverse animal species, including the Philippine carabao, is one of the mandates of the DA-Philippine Carabao Center (DA-PCC).

Conservation efforts are done in two ways: in-situ conservation of live animals in their natural habitat or in institutional herd and ex-situ cryoconservation of animal germplasm in the National Livestock Cryobank at DA-PCC.

So, what is then the genetic pattern of the Philippine carabao? And what is its genetic position in relation to neighboring countries?

## Genetic pattern and relationship of the Philippine carabao

To approach this question, the DA-PCC Animal Genetic Resources team analyzed the maternal information using 367 mitochondrial DNA (mtDNA) D-loop region variations from eight swamp buffaloes populations. These include the Philippines, China, Myanmar, Laos, Thailand, Vietnam, Taiwan, and Malaysia. This was a starting point to determine the degree of genetic relatedness and exchange among the selected Asian swamp buffalo populations.

The genetic differences based on maternal D-loop sequences among the swamp buffaloes from the major islands in the Philippines were attributed to the differences between individuals rather than among populations. This means that there is little population differentiation that existed mainly due to the Philippine carabao in Visayas and Mindanao. This genetic pattern indicates the prevalence of high genetic exchange of swamp buffaloes living in

these sub-groups of major islands, with geographically close populations and had improved accessibility to inter-island transportations. Meanwhile, the high genetic differentiation within Luzon indicated the swamp species' restricted gene flow caused by the surrounding mountainous and coastal areas.

Thus, the pattern of genetic relationship of Philippine swamp buffalo populations could be influenced by the geographical features of the islands where they inhabit.

## Genetic position of Philippine carabao in relation to neighboring countries

The phylogenetic or evolutionary relationship of the Philippine carabao showed two main clusters: the first cluster consisted mostly of the three major islands in the Philippines, Myanmar, and Taiwan, while the second cluster was found predominantly in mainland populations encompassing China, Malaysia, Laos, Thailand, and Vietnam.

In this study, the Philippine carabao had higher genetic diversity than Taiwan,

Myanmar, and Malaysia. What does it mean? With the Philippine carabao's high genetic diversity, it implies a lot of mutations in the DNA. The mutations cause differences in animal appearance and important traits. In addition, the variety of characteristics in Philippine carabao with high genetic diversity indicates that they are more likely to cope with changes in their environment successfully. The additional research findings by including more individuals from Asian regions like Cambodia and Indonesia would be needed to ensure that low population differentiation is not an artifact of sampling from the Asia populations.

Among the Philippines' major islands, there was a very low genetic variation detected between Visayas and Mindanao in the Philippines and Taiwan.

From this study, the Philippine swamp buffalo populations from the Visayas and Mindanao sub-group of major islands seemed to be closely related to Taiwan swamp buffaloes, whose genetic information were obtained from an old population in the conservation sites. This genetic pattern suggested an extensive level of gene flow among

swamp buffalo populations. However, the high genetic exchange of swamp buffaloes between the two major islands of Visayas and Mindanao could be explained in two perspectives. First relates to the history of early migration of farmers who brought their native carabaos from Visayas to Mindanao for rice cultivation. Secondly, it is possible that access within and between inter-island transportation could have caused the genetic exchange of swamp buffaloes among sub-populations in the Philippines.

This study supported the results of genetic analysis showing lack of genetic differentiation between Visayas and Mindanao, suggesting that swamp buffaloes are introduced from Mindanao. Thus, the notion that the spread of domesticated Chinese swamp buffaloes from Taiwan to the Philippines could have been introduced to the Visayas rather than to Mindanao.

Thus, the results of this research agreed with the hypothesis of Lau et al. (1998) that after the domestication in the China region, the domesticated swamp buffalo spread to Taiwan, to the

Philippines, then to the eastern islands of Borneo and Sulawesi.

## Highlights of the research findings and implications

The research findings highlighted the genetic relationship among the modern Asian swamp buffalo populations. It can be deduced that the modern Philippine carabao population had the closest affinity to Taiwan swamp buffalo population based on the low genetic distance and that the Chinese swamp buffalo could be the ancestral population of the modern population of the swamp buffaloes in Asia, which was spread to Taiwan then introduced to the Visayas island of the Philippines, as supported by inferred mtDNA haplotypes.

Results imply that native buffaloes in the Philippines have various genes of buffaloes whose numbers are declining in Southeast Asian countries. This points to the importance of conserving and maintaining the Philippine carabao as a valuable resource while utilizing them in the Philippines. **B**

### Acknowledgement

Full paper can be accessed on Genetic Divergence and Phylogenetic Relationship - 東京農業... <https://nodai.repo.nii.ac.jp>

The research study was an extension work as part of the dissertation of LPVillamor and was conducted under the mentorship of Dr. Koh Nomura, Dr. Yukimizu Takahashi, and Takahashi Amano in Tokyo University of Agriculture, Atsugi Campus, Japan through the Ph.D. by research Tokyo NODAI-SEARCA scholarship. A special thanks to the Philippine Carabao Center National Headquarters and Gene Pool (PCC-NHQGP) and the Department of Agriculture Livestock Biotech Program and the Bureau of Agricultural Research through the DABIOTECHRI506 project for the research funds.



# GOT QUESTIONS OR SUGGESTIONS? CONTACT US



[www.pcc.gov.ph](http://www.pcc.gov.ph)



**Department of Agriculture-  
Philippine Carabao Center**



**Philippine Carabao Center**



## DA-PCC NETWORK

### DA-PCC AT MARIANO MARCOS STATE UNIVERSITY

Batac City, Ilocos Norte  
Telephone No.: (+63) (077) 792.3187  
(+63) 927.965.5724  
Email: [pccmmsu@gmail.com](mailto:pccmmsu@gmail.com)

### DA-PCC AT CAGAYAN STATE UNIVERSITY

Tuguegarao City, Cagayan  
Telephone No.: (+63) (078) 377.9315  
Email: [pccpiat07@yahoo.com](mailto:pccpiat07@yahoo.com)

### DA-PCC AT DON MARIANO MARCOS MEMORIAL STATE UNIVERSITY

Rosario, La Union  
Mobile No.: (+63) 920.982.9666  
Email: [pccdmmsu2020@gmail.com](mailto:pccdmmsu2020@gmail.com)

### DA-PCC AT CENTRAL LUZON STATE UNIVERSITY

Science City of Muñoz, Nueva Ecija  
Telephone No.: (+63) (044) 940 3061  
Mobile No.: (+63) 968.853.5754  
Email: [pccclsu@gmail.com](mailto:pccclsu@gmail.com)

### DA-PCC AT UNIVERSITY OF THE PHILIPPINES AT LOS BAÑOS

Los Baños, Laguna  
Telephone No.: (+63) (049) 536.2729  
Mobile No.: (+63) 908.811.2841  
Email: [pccuplb@gmail.com](mailto:pccuplb@gmail.com)

### DA-PCC AT VISAYAS STATE UNIVERSITY

Baybay City, Leyte  
Telephone No.: (+63)(053) 563.7649  
Mobile No.: (+63) 917.145.4772 | (+63) 908.895.2461  
Email: [pccvsu@gmail.com](mailto:pccvsu@gmail.com)

### DA-PCC NATIONAL HEADQUARTERS AND GENE POOL

Science City of Muñoz, Nueva Ecija  
Telephone No.: (+63) (044) 456.0734  
Email: [pccoed2021@gmail.com](mailto:pccoed2021@gmail.com)

### DA-PCC AT WEST VISAYAS STATE UNIVERSITY

Calinog, Iloilo  
Telephone No.: (+63) (033) 323.4781  
Mobile No.: (+63) 999.991.6115  
(+63) 928.945.7760  
Email: [pccwvsu@yahoo.com](mailto:pccwvsu@yahoo.com)

### DA-PCC AT LA CARLOTA STOCK FARM

La Granja, La Carlota City, Negros Occidental  
Mobile No.: (+63) 919.006.8392  
Email: [pccclcsf@yahoo.com](mailto:pccclcsf@yahoo.com)

### DA-PCC AT UBAY STOCK FARM

Ubay, Bohol  
Mobile No.: (+63) 997.111.7680 | (+63) 945.119.3998  
Email: [pccusf.ubay@yahoo.com](mailto:pccusf.ubay@yahoo.com)

### DA-PCC AT MINDANAO LIVESTOCK PRODUCTION CENTER

Kalawit, Zamboanga del Norte  
Mobile No.: (+63) 912.784.4668 | (+63) 906.726.0979  
Email: [pcc\\_mlpc09@yahoo.com](mailto:pcc_mlpc09@yahoo.com)

### DA-PCC AT CENTRAL MINDANAO UNIVERSITY

Maramag, Bukidnon  
Mobile No.: (+63) 939.916.9719 |  
(+63) 966.645.6292  
Email: [pccmusuan@yahoo.com](mailto:pccmusuan@yahoo.com)

### DA-PCC AT UNIVERSITY OF SOUTHERN MINDANAO

Kabacan, North Cotabato  
Mobile No.: (+63) 919.397.0872 |  
(+63) 920.621.9722  
Email: [usm\\_pcc@yahoo.com](mailto:usm_pcc@yahoo.com)

Scan the following QR codes to visit our Knowledge Portal and experience a virtual tour to the DA-PCC National Headquarters and Genepool

### DA-PCC K-Portal



The DA-PCC Knowledge Portal (or simply K-Portal) serves as a hub or a one-stop e-platform for all knowledge products (in various format) produced by the agency through its Knowledge Management Division.

### DA-PCC Virtual Tour



To know more about DA-PCC's services and facilities, you can now explore the National Headquarters and Genepool via virtual tour which can also be accessed in the agency's official website.