

Bubalus



Quarterly Newsletter of the Department of Agriculture-Philippine Carabao Center

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FEATURES

Dough it right: Pandan MPC's recipe to success

By **Mary Antonette Andarza**

Bread is a simple food made in a complex process. It requires strength when kneading the dough, patience when waiting for it to proof, and attention when baking it in the oven. Like a good baker, Dedaci Nepomuceno knew she had to lead with strength,

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Carabao takes spotlight in farmers' congress

By **Ronaline Canute**

"The carabao remains the central figure of agriculture in the Philippines!"

Pablo John Garcia, representative of the 3rd District of Cebu, emphasized this during his message in the opening program of the 9th National Carabao

Conference (NCC) held on October 16-17 in Cebu. Cong. Garcia highlighted the vital role of the carabao as a sustainable livelihood for the locals of Pinamungajan, Cebu. He also lauded the efforts of the cooperative in helping improve the quality of life of

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Editor's Word



In this edition of *Bubalus*, a mosaic of stories reveals the intricate tapestry woven by diverse and concerted efforts in the Carabao Development Program. From ground-breaking projects like the Feed and Forage Development in Mindanao to the innovative “Cara Cuero,” each story peels back layers, unveiling a multi-pronged approach fortifying the nation’s carabao-related industries.

The collection of initiatives showcased, such as the School Feeding Program in Western Visayas, the launch of the retort facility at the DA-PCC national headquarters, the active engagement of agricultural extension workers in an AI training program, and the achievements in carabao crossbreeding in San Agustin, Isabela, represents a commitment to fortifying the carabao sector.

The success of “CaraWow Radyo Eskwela sa Gatasang Kalabaw” in CALABARZON, celebrating the graduation of 445 farmer-enrolees, underlines the unwavering dedication to disseminating knowledge and fostering entrepreneurship in carabao-based farming.

At the heart of these compelling narratives is the National Carabao Conference—an influential forum shaping the discourse on the future of carabao development and entrepreneurship. These stories collectively paint a vivid picture of collaborative efforts, innovative strides, and continuous learning initiatives steering the course for a thriving carabao industry in the Philippines.

For our readers, the key takeaway is clear—the stories within these pages are not just about preserving a cultural legacy but actively sculpting a dynamic and resilient future for the carabao industry. As we navigate through these narratives, you are invited to join in this collective effort, contributing to the ongoing legacy of a robust and sustainable carabao industry landscape for generations to come.

As the holiday season approaches, let the echoes of collaboration, innovation, and shared commitment guide us into a celebration. Wishing you a heart-warming Yuletide filled with unity, shared traditions, and the promise of a prosperous New Year. May the holiday season usher in growth, good health, and a spirit of resilience and harmony to each one of you.

Cheers to a season of warmth and celebration!

Eric P. Palacpac
Dr. Eric P. Palacpac

About the cover

Pandan Multi-Purpose Cooperative, a conduit co-op under the Carabao-based Business Improvement Network (CBIN) project, adopts the Karabun technology as another income generating venture. Through the convergence of the government agencies, the co-op was able to expand its business, which has greatly benefitted its members.



Photo by: Rowena Galang

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Initial 3k dairy animals set to build up local dairy herd

By **Ronaline Canute**

The Department of Agriculture-Philippine Carabao Center's (DA-PCC) Dairy Herd Buildup Program (DHBP) is set to revolutionize the local dairy industry, ushering in a new era of increased local dairy stocks and milk production.

In 2021, the Philippine Statistics Authority (PSA) reported an estimate of 2.82 million carabaos in the country, with only 17,907 listed as dairy buffaloes. This glaring statistic indicates that a significant portion of crossbred animals remains underutilized, primarily employed for purposes other than dairy production, such as meat and draft. According to the DA-PCC, crossbred animals realize their maximum milk production potential when their Riverine blood composition reaches at least 87.3%. Regrettably, many farmers with 50:50 crossbreds opt to sell their

livestock for quick gains rather than pursuing further crossbreeding to boost milk output.

In response to this challenge, the Senate Committee on Agriculture, Food, and Agrarian Reform, under the dedicated leadership of Senator Cynthia A. Villar, has generously funded the DHBP. This initiative includes the acquisition of an initial batch of 3,000 crossbred carabaos.

The procured crossbred herd will be carefully raised, both at the institutional farm of the DA-PCC and in collaboration with qualified agistment farmers (agistors). In this scheme, landowners allow the keeping and feeding of another person's livestock for a specified rate.

To enhance genetic merit, the crossbred buffaloes will be backcrossed with the Riverine breed using the highest-quality semen available from the DA-PCC semen bank. Advanced reproductive biotechnologies, including naturally estrus animals, enhanced AI, and fixed time AI (FTAI), will be employed to produce animals with a minimum of 87.3% Riverine blood composition, positioning them to rival purebreds in milk performance.

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The pregnant and bred animals will subsequently be distributed to carabao raisers, particularly within designated Carabao-based Business Improvement Network (CBIN) project sites.

The DA-PCC at CSU has recently received the first 100 crossbred buffaloes.

To ensure the program's sustainability, DA-PCC is intensifying its efforts by training additional village-based and LGU AI technicians, aiming to double the existing AI output from 90,000 to 180,000 services until 2025. This expansion will accelerate calf production.

The program also involves establishing pasture areas and cultivating at least 400 hectares of forage, ensuring a consistent supply of fodder for both confined feeding (cut and carry) and grazing within farmers' cooperatives and organizations.

Additionally, support for zero waste management initiatives, promotion of sustainable milk production, distribution of milk products in rural areas, and the implementation of a digitized Carabao Crossbred Registry and feedback system are key components of the program's comprehensive approach. **B**



DA-PCC, DA-RFO V ink partnership project for Carabao Development Program in Bicol

By **Jeremie Marinella Ledesma**

The DA-PCC and the DA-Regional Field Office Region V (DA-RFO V) signed a Memorandum of Agreement (MOA) for their joint partnership in conserving, propagating, and promoting the carabao as a source of milk, meat, draft power, and hide to benefit rural farming communities in the Bicol region. This signing took place on September 25, 2023, at Constitution Hills, Quezon City.

The partnership aims to promote agricultural development by providing policy

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(L-R) DA-PCC OIC Executive Director Dr. Caro Salces, DA RFO V Regional Executive Director Rodel Tornilla, and DA-PCC OIC Deputy Executive Director and PL480 Project Leader Dr. Claro N. Mingala signed a memorandum of agreement for the implementation of the Carabao Development Program in Bicol.

Carabao takes spotlight...

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its farmer members, as is the case with the Lamac Multi-Purpose Cooperative (LMPC). The DA-PCC and the National Dairy Box Business Group in partnership with LMPC, a conduit co-op under the Carabao-based Business Improvement Network (CBIN), were behind the organization of this year's NCC.

The NCC is an annual conference aimed at bringing together participants, caretakers, and all stakeholders in the carabao-based industry. It acts as a forum for the exchange and dissemination of important knowledge about innovations, know-how, ideas, and best practices in carabao farming.

"We are proud to say that because of the assistance of DA-PCC, the farmers here in Pinamungajan have become more empowered in their livelihoods by venturing into the carabao dairy enterprise. They are now aware na may mas malaking

pagkakakitaan pala sa kalabaw other than the tilling of their lands," said Ana Jessica Baricuatro, Mayor of Pinamungajan, Cebu.

Bearing the theme, "Pagbabagong Mukha at Sigla, Maalab na Pagkakalabawan sa Bagong Pilipinas," the event singled out the efforts and contributions of all the value-chain key players in improving the quality of life for farmers.

Dr. Caro B. Salces, OIC-Executive Director of DA-PCC, recognized the support of the sponsors and the provincial and local government units to the Carabao Development Program (CDP).

Through his presentation, "Kwentong Maalab na Pagkakalabawan: A Progress Briefer on the CDP," Dr. Salces featured the updates and successes of the Accelerating Livelihood and Assets Buildup (ALAB)-Karbawan projects, Dairy Box, retort milk facilities, among others.

The LMPC in Lamac, Pinamungajan, Cebu hosted this year's two-day event with 379 farmers, partners, and supporters in attendance.

The conference kicked off with the procession of some of the assisted cooperatives of the agency and the opening program graced by Cong. Garcia and Mayor Baricuatro.

The participants were engaged with stories of transformation among carabao farmers, cooperatives, and their communities in the form of a techno-product exhibition and plenary sessions and carabao industry stakeholders' consultation to consolidate and address the concerns of the cooperatives and individual farmers.

The consultation was divided into four groups namely: Milk Feeding, Dairy Box, AI/Bull Loan/Nutrition Management, and Production and Management.

One of the highlights of the event was the launching of the Dairy Herd Buildup Project (DHBP), a project funded by the Office of the Senate Committee on Agriculture, Food, and Agrarian Reform chaired by Senator Cynthia Villar that is set to revolutionize the local dairy industry.

This was followed by the launching of the official jingle of NCC titled, 'Wow Kalabaw' composed by the Applied Communication Section-Knowledge Management Division (ACS-KMD) of DA-PCC in collaboration with Brainfreeze Multimedia.

The awards ceremonies for outstanding carabao farmers from across the country punctuated the opening day of the conference. The winners for the Outstanding Dairy Farmers were Danilo Peralta (Family Module Category); Joseph Nathaniel Caguimbal (Semi-Commercial Category); and Dominic Paclibar (Commercial Category). The winner for the Outstanding Dairy Cooperative was The Rosario Livestock and Agriculture Farming Cooperative. The winner for Outstanding Bull Recipient was Mario Clavo while the Outstanding Village-Based Artificial Insemination Technician (VBAIT) was Edgardo Angeles. Also, the awardees for Best Dairy Animals include (Purebred-Junior Cow Category) ID no. 2LSC19003 owned by Gabriel Modina, (Purebred-Senior Cow) ID no. 2UMC19034 owned by Rodel Estañol, (Crossbred-Junior Cow) ID no. 5UMC21038 owned by Arturo Madrigal, and (Crossbred-Senior Cow) ID no. 6MMC21312 owned by Rhommel Gamponia.

Two 'Huwaran sa Kalabawan' were also recognized. The Huwarang Juana sa Kalabawan award was given to Olivia Palazo while the Huwarang Kabataan sa Kalabawan went to Lester Alagar.

Carabao festival

By **Ma. Cecilia Irang-Mariano & Ronaline Canute**



Seventy-one carabaos provided amusement to the attendees of the 2nd Pinamungajan Carabao Festival in Lamac, Pinamungajan, Cebu on October 16, 2023, which coincided with the celebration of the 9th National Carabao Conference (NCC).

These carabaos were adorned with decorations and painted using non-toxic paints, with 10 of them winning prizes. The Pinamungajan Carabao Festival was initially inaugurated in 2018 as a homage to San Isidro Labrador, the revered patron saint of farmers.

Community tour

By **Ronaline Canute**



The delegates of the 9th National Carabao Conference experienced the tranquility of the valley of Lamac, Pinamungajan, through the community tour. From beaches to falls, Pinamungajan is a haven for adventures.

The tour itinerary included: head office of the Lamac Multi-Purpose Cooperative, facility for garments, prints, and design, and soap production, Soft Village, dairy multiplier farm, dairy processing plant, Dairy Box, and integrated organic farm.



One of Pinamungajan's most renowned tourist destinations is the Hidden Valley Resort, where the conference was held. It is well known for its wave pool, which imitates the motion of the ocean. From the resort, the delegates enjoyed the view of the magnificent mountains and the lashing Sinungkulan Falls.

Drone sprayer

By **Ma. Cecilia Irang-Mariano**



The 9th National Carabao Conference took a leap into the future of agriculture during its community tour, where a cutting-edge drone sprayer for forage production was demonstrated.

The drone sprayer, equipped with state-of-the-art precision technology, soared over the lush fields of Lamac, Pinamungajan in Cebu, highlighting its potential to revolutionize forage production by promoting the use of organic fertilizers. This technology is a component of the Dairy Herd Buildup Project of the DA-Philippine Carabao Center.

Conference attendees were enthralled by the drone's ability to precisely apply fertilizers, reducing the risk of overuse or wastage. Aside from fertilization, the drone is also used for forage maintenance and monitoring.

As per the implementation team led by the DA-PCC's Production Support and Nutrition Section, this technological advancement will aid in monitoring and promoting the development of feed input production by harnessing drone technology in the livestock industry.

Food safety takes center stage in BizTalk series

By Ma. Cecilia Irang-Mariano and Louie Jee Huelar

The DA-PCC conducts a series of Business Talk on Food Safety for dairy buffalo supply chain players nationwide with a resounding emphasis on "Sa Quality Food Safety ang Priority", signifying a collective commitment to achieving higher standards of food safety.

The activity aims to enhance the DA-PCC food safety system by imparting essential knowledge to dairy suppliers participating in the milk feeding program about fundamental practices related to dairy safety across production, processing, and marketing.

"We also aim to model the identified smallholder farmers who will be attending this activity in the registration and acquisition of the license to operate from the NDA and FDA as part of the quality assurance of milk from our suppliers," Dr. Randolph Tolentino, DA-PCC food safety focal person, said.

The training program centers on the enhancement of food safety practices, offering lectures and hands-on exercises that cover a wide range of topics in food safety. It also tackles fundamental principles of food safety, covering areas such as food hazards, safety practices within the dairy buffalo supply chain, Good Manufacturing Practices, and applied 7S in dairy production and processing.

One of the key highlights of the activity is the extensive discussion on milk quality and safety within the dairy buffalo supply chain, along with crucial insights into dairy safety practices, milk testing, environmental sanitation for dairy buffalo enterprises, solid waste

management, and wastewater management for farms and milk processing centers.

Food safety refers to the conditions and actions undertaken to maintain the quality of food, thereby preventing contamination and foodborne diseases. The fundamental aim of food safety is to protect consumers from illnesses caused by the consumption of unsafe food. Foodborne diseases pose a significant concern to the food industry, affecting people worldwide due to inadequate food safety measures.

DA-PCC personnel from the Carabao Enterprise Development Section (CEDS) including Patrizia Camille Saturno, Science Research Specialist II; Teresita Baltazar, Science Research Specialist I; Dan Lowie Dacanay, quality assurance specialist; and Dr. Tolentino will serve as the resource persons for the series.

The training program, funded



Part of the activity is the demonstration of the milk quality testing and safety practices in the dairy supply chain.

through the PL-480 project with the Philippine Council for Agriculture and Fisheries as fund manager, and DA-PCC and the National Dairy Authority as implementing agencies, comprised four sessions.

The initial session took place in Bacolod on September 11-15 and was attended by 76 DA-PCC-assisted cooperative members from the Visayas region. The second session is scheduled for September 25-29 in North Luzon, while the third and fourth sessions are planned for November in South Luzon and Mindanao, respectively.

The training is facilitated by the DA-PCC through the Monitoring and Business Planning Support Section (MBPSS), headed by Pauline Maramag.

More than 300 participants including dairy farmers, processors, and dairy outlet staff from assisted cooperatives and regional centers are expected to attend the training. **B**

DSWD VI partners with DA-PCC for the 13th cycle of School Feeding Program

By Mary Antonette Andarza

The Department of Social Welfare and Development-Regional Field Office VI (DSWD-RFO VI) once again partnered with DA-PCC at WVSU for the 13th cycle implementation of the Supplementary Feeding Program.

This program, spanning 120 feeding days, began on September 11 and 13, and will continue until the first week of November, implementing a double feeding scheme.

Calinog Farmers Agriculture Cooperative will cater to 1,322 beneficiaries for MSWDO Dumarao, Capiz and is expected to deliver 158,640 pouches of pasteurized milk. Meanwhile, the Hamtic Multi-Purpose Cooperative has taken on the responsibility of serving 1,497 beneficiaries of MSWDO Sibalom in Antique, with a commitment to provide 179,640 bottles of pasteurized milk.

Janice H. Cuaresma, CBED coordinator of DA-PCC at WVSU, expressed her heartfelt appreciation to DSWD VI for their unwavering partnership that has been in place since the 10th cycle of the program. She emphasized the importance of DSWD's consistent commitment to utilizing local products in the program's implementation.

"DSWD has been our steadfast partner since we initiated the Supplementary Feeding Program here in Panay Island. This feeding initiative will undoubtedly contribute to the growth and development of our daycare pupils in the identified municipalities," she said.



Hamtic Multi-Purpose Cooperative delivers 20,958 bottles of pasteurized milk to 1,497 beneficiaries of MSWDO Sibalom in Antique as part of DSWD's 13th cycle implementation of the Supplementary Feeding Program.

Cuaresma added, "It is our joy that our local dairy farmers also benefit from this program. It gives them consistent opportunities as well as increases their families' income. As the CBED coordinator, I am further motivated to progressively develop locally produced milk in each project area, ensuring a steady supply for the Milk Feeding Program, funded by our partner agencies."

Meanwhile, MSWDO Valderrama, Antique, is set to receive its milk supply on September 25, benefiting 718 beneficiaries. The Pandan Multi-Purpose Cooperative, a recipient under the Carabao-based Business Improvement Network (CBIN) project, is expected to deliver 86,160 bottles throughout the implementation phase.

Since the implementation of the 10th cycle in January 2021, DA-PCC at WVSU and its assisted co-ops have made a significant impact by serving a total of 12,562 beneficiaries.

Their outreach has extended to the lone district of Iloilo City and various municipalities in Iloilo province, including Bingawan, Batad, Barotac Viejo, Banate, and Balasan.

Furthermore, the program has also reached the Province of Antique, specifically benefiting the municipalities of Bugasong, Tobias Fornier, Barbaza, and Sebaste. **B**

DA Usec. Savellano leads soft launching of retort facility at DA-PCC

By Dine Yve Daganos

DA Undersecretary for Livestock, Deogracias Victor B. Savellano, and his team, led by Butch Madarang, attended the opening of the 81st Program Management Committee (PMC) meeting of the DA-PCC on September 11, 2023, held at the DA-PCC National Headquarters and Gene Pool, Science City of Muñoz, Nueva Ecija.

During the meeting, the PMC, composed of DA-PCC top management, division chiefs, and 12 regional center directors, engaged in discussions with USec. Savellano. Their primary objective was to fortify the carabao industry through the development and implementation of new policies and programs. A key point of discussion revolved around the proposal to establish a satellite center in the Bicol region. Additionally, they explored the possibility of establishing a DA-PCC regional center in the same area. This strategic initiative aims to streamline the implementation of the Carabao Development Program (CDP) in the region. The current arrangement, where the DA-PCC at UPLB covers the Bicol region, poses logistical challenges due to its distance from the center and its concurrent responsibility for Regions 4A and 4B.

USec. Savellano also embarked on a comprehensive tour of the institution's research facilities. These facilities include laboratories dedicated to animal breeding and genomics, reproduction and physiology, production systems and nutrition, the National Livestock Cryobank, and the Gene Pool. In addition, he presided over the soft launch of the newly installed fully automatic water



immersion swing-type retort machine at the Central Dairy Collecting and Processing Facility. This state-of-the-art machine is designed not only to extend the shelf life of milk and milk products through a sterilization process but also to supply milk to far-flung areas of the country for the milk feeding program and distribute milk to many Dairy Boxes (physical stores for dairy and milk-flavoured products) nationwide.

During the discussions, USec. Savellano issued directives aimed at promoting the advanced technologies developed by the DA-PCC. He proposed the hosting and convening of a national livestock exposition designed to bring together a diverse array of industry stakeholders. This initiative seeks to showcase the innovations and best practices within the carabao industry, with the goal of fostering collaboration and knowledge sharing. Additionally, he suggested that the DA-PCC engage with product development specialists, particularly in the domain of carabao meat delicacies. This

collaborative effort aims to further enhance the range of Kardeli products related to carabao meat-based culinary delights.

USec. Savellano was also delighted to learn about the cryobank facility that caters not only to carabaos but also to other livestock species. Furthermore, he expressed his happiness in knowing that the Philippines is self-sufficient in buffalo semen production from top semen donors that can serve the demand nationwide. The DA-PCC's 30 years of breeding and selection have produced quality semen that Asian countries are eager to import.

He was also informed that DA-PCC will soon establish a sexed semen facility to scale up the multiplication of Philippine Dairy Buffalo and also to serve other livestock species for sexed semen production. This initiative further underscores the DA-PCC's commitment to advancing the livestock industry in the Philippines. **B**

100 carabaos star in San Agustin, Isabela's 'Nuang' Fest

By Ronaline Canute

Dubbed as the 'Home of Nuang Festival,' the town of San Agustin in Isabela province preserved the spirit of their long-standing tradition as 100 of its finest crossbred carabaos paraded its streets on September 27, 2023.

The parade was one of the highlights of San Agustin's twin celebrations, the "18th Nuang Festival" and the "74th Araw ng San Agustin" (Foundation Day).

'Nuang' is an Ilocano term for carabao. Cesar Mondala, municipal mayor of San Agustin, compared the hard-working trait of carabao to the people of the town.

"If we imitate the buffalo's positive traits, our community will continue to prosper," Mayor Mondala said.

The increasing number of crossbred carabaos in San Agustin has been made possible through the continuous effort of the town's local government unit to harness artificial insemination (A.I.) as a strategy to steadily build up its base of improved carabao breed.

Thousands of the town's carabao owners partnered with the DA-PCC and various agencies and entities for the government-led crossbreeding program.

Engr. Blas Lamug, retired municipal agriculturist of San Agustin and now serving as the chairperson of the SADACO Multi-Purpose Cooperative (SMPC), expressed his gratitude to the town leaders and to DA-PCC for the unfailing support in improving the dairy industry in San Agustin.

With the implementation of the Carabao-based Business Improvement Network (CBIN) project, funded thru the Office of the Senate Committee on Agriculture, and the continuous carabao upgrading program of the DA-PCC, a significant increase in carabao population in nearby Quirino and Nueva Vizcaya is seen manifested by the establishment of two processing and marketing facilities as development support for the dairy farmers.

The community has a tradition of holding competitions every year, recognizing the "best" among the

animals in the following categories: Best Milking Cow, Best Cara-cao (inahin), Best Draft (male), Best Talent, and Best Dressed (female).

On the other hand, a cooking contest using carabao's milk or meat as the main ingredient also took place at the town's auditorium.

The owners of the winning carabao crossbreds and winning recipe received cash prizes. The farmers who participated in the parade, likewise, were given PHP500 each as incentive.

DA-PCC officials also took part in the event. They were Ma. Theresa Sawit, national coordinator of Carabao-based Enterprise Development Program (CBED); Romulo Salas, CBED coordinator of DA-PCC at CSU; Prof. Franklin Rellin and Edelina Rellin, former Center Director and former Senior Science Research Specialist of DA-PCC at CSU, respectively. **B**

DA-PCC, DA-RFO V ink partnership project...

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frameworks, public investments, support services for agricultural business enterprises, and technical assistance to livestock clients. The main components of the project

include the DA-PCC Bicol Satellite Office and the supplementation of liquid nitrogen within the region. Liquid nitrogen is used to cryopreserve livestock germplasm for genetic improvement and upgrading.

This initiative is funded through the PL480 project, with the Philippine Council for Agriculture and Fisheries (PCAF) serving as the fund manager.

The MOA was signed by DA-PCC OIC-Executive Director Dr. Caro B. Salces, DA RFO V Regional Executive

Director Rodel Tornilla, witnessed by DA-PCC at UPLB Center Director Dr. Thelma A. Saludes, and DA-RFO V Regional Livestock & Poultry Program Coordinator Dr. Marissa E. Guillermo. PCAF OIC Executive Director Julieta Ofulencia and DA-PCC OIC Deputy Executive Director and PL480 Project Leader Dr. Claro N. Mingala were also in attendance during the signing. **B**

'CaraWow Radyo Eskwela sa Gatasang Kalabaw' in CALABARZON concludes with 445 graduates

By Jeremie Marinella Ledesma

The DA-PCC at UPLB, in partnership with the Department of Agriculture-Agricultural Training Institute (DA-ATI) CALABARZON, recognized 445 farmer-enrollees during its School-on-the-Air on Dairy Buffalo Production (SOA-DBP) graduation ceremony on October 13, 2023, at Baker Hall, UP Los Baños.

The first-ever SOA-DBP program in the region, dubbed "CaraWow! Radyo Eskwela sa Gatasang Kalabaw," was conducted from June to August 2023. Its aim was to deliver information on dairy buffalo production, the latest technologies, and business enterprise opportunities.

The graduates learned about buffalo management, nutrition management, health management and breeding, milking procedures, milk handling, milk quality testing, and carabao-based enterprises. With this knowledge, they embark on the journey of carabao entrepreneurship, serving the nation.

The guests and participants received a warm welcome from Dr. Mary Grace Bustamante, Provincial Veterinarian of Laguna, in her opening remarks. The farmer-enrollees, represented by Celerino Genuino (Cavite), Ruben Rubina (Laguna), and Runabet Abanico (Batangas), expressed their gratitude for the program's implementation and their newfound knowledge in dairy buffalo production.

Violeta Rayos of Manggalang Agrarian Reform Beneficiaries Cooperative (MARBENCO) shared their commitment to carabao development programs and encouraged fellow farmer-enrollees to work together for success.

Representatives from the provincial governments of Cavite, Batangas, and Quezon congratulated the graduates in their messages, expressing gratitude to the agencies and local government units (LGUs) involved in the program's success. They

hope that the knowledge shared will motivate farmers to engage in the carabao and dairy industry in their respective provinces.

Senator Cynthia A. Villar, chairperson of the Senate Committee on Agriculture, Food, and Agrarian Reform, in a recorded video message, expressed her gratitude to DA-ATI CALABARZON and DA-PCC at UPLB, emphasizing that the SOA program equips farmer-enrollees with valuable information to start carabao dairying for additional income, improving dairy production and increasing local milk supply.

Dr. Eric P. Palacpac, Information Officer V and Chief of the Knowledge Management Division (KMD) of DA-PCC, congratulated the farmer-enrollees on behalf of DA-PCC OIC Executive Director Dr. Caro B. Salces. He expressed gratitude to its partners (DA-ATI, DA-RFO, and LGUs) for the event's success. He emphasized the fresh graduates' essential role in the local carabao and dairy industry and

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DA-PCC at CLSU soft launches 'Cara Cuero' carabao leather products

By Mikee Antonio



Secretary Amenah "Mina" F. Pangandaman of the Department of Budget and Management (DBM) receives a leather bag made from carabao's hide as the university's token during the CLSU's RIDE FEST.

The DA-PCC at CLSU has reached a significant milestone by unveiling its latest innovation – "Cara Cuero", the brand name for carabao hide-derived leather products.

This groundbreaking line of leather products was proudly presented during the CLSU Research Innovation and Development Festival (RIDE FEST).

"Cara Cuero" was chosen as the university's institutional token and was presented to Secretary Amenah "Mina" F. Pangandaman of the Department of Budget and Management (DBM), during the opening ceremony of CLSU's RIDE FEST on October 9, 2023. The event was themed "Key to a Sustainable Society," and Secretary Mina delivered a speech emphasizing the importance of investing in research and development to drive economic growth and development. Sec. Mina, the youngest and only


female member of the country's Economic Team, received a token of appreciation—a stunning red leather handbag crafted from carabao hide. The gift was presented by Dr. Edgar A. Orden, University President; Dr. Ericson N. Dela Cruz, Regional Center Director of DA-PCC at CLSU; Dr. Marvin Villanueva, Chief of PCC Research and Development Division (RDD); Dr. Ravelina R. Velasco, University Acting VP for Academic Affairs; Dr. Ariel G. Mactal, VP for University Business Affairs Program (UBAP); and Dr. Evaristo A. Abella, University VP for Administration. This token symbolizes the culmination of DA-PCC's commitment to preserving, propagating, and promoting the carabao as a vital resource for rural farmers, providing milk, meat, draft power, and hide.

Impressed, Sec. Mina commended Dr. Dela Cruz and the entire agency, saying, "You're doing a

great job; please continue creating these magnificent and excellent products."

DA-PCC at CLSU now produces a wide range of leather items from carabao hide, including belts, sandals, wallets, bags, and shoes, in collaboration with its partners in the tanning industry in Meycauayan, Bulacan. They offer an array of classic and modern colors, prints, textures, finishes, and thicknesses tailored to meet customers' specific preferences.

DA-PCC at CLSU commits to further this venture into greater heights as its significant contribution in the local leather industry.

The DA-PCC at CLSU's RIDE Fest booth is located in front of the CLSU Research and Extension Office, where its offerings of carabao-based products are available until October 11, 2023. 

DA-PCC launches feed, forage development project in Mindanao

By Rodolfo Valdez Jr.

The DA-PCC has initiated the implementation of the project Feed and Forage Development Technology Rollout in Mindanao. This endeavor commenced with a ceremonial turnover of forage choppers at D&L Dairy Farm in M'lang, North Cotabato, on September 28.

The project's primary objective is to ensure a consistent supply of feed for the growing carabao population in the country. It aims to promote sustainable carabao-based farming by encouraging the adoption of PCC technologies.

Director Benjamin John Basilio of DA-PCC at USM stated: "Apart from introducing our farmers to innovative approaches in carabao-based farming through technology adoption, I am confident that this initiative will address the issue of low carabao

productivity caused by inadequate feeding management."

During the turnover ceremony, farmers from cooperatives supported by DA-PCC at MLPC, DA-PCC at CMU, and DA-PCC at USM actively participated during the hands-on demonstrations on ensiling with Buro Booster™, processing of enhanced rice straw (e-RS), and producing BlockMate™.

Ernesto Buco, a farmer-participant from Baclay Multipurpose Cooperative in Zamboanga, said this is a helpful project as it mechanizes the production of silages suitable for animal feeds.

Knowledge on these, he said, prepares farmers to have a ready supply of feeds during El Niño.

This project, funded through PL-480, aims to capacitate approximately 200 carapreneurs

across the nation on feed and forage development. Its key components include organizing learning events, such as technical training on forage and feeding practices, mentor-mentee mentorship programs, and provision of forage choppers to selected carapreneurs.

During the mentorship program, DA-PCC's role is to impart knowledge, techniques, and skills to mentees—cover aspects such as establishment and management of forage areas with improved and cultivated grass species, pasture rehabilitation through enhanced soil management, forage/feed conservation (ensiling process)—and demonstrate the application of feed conservation technologies such as Buro Booster™ and e-RS.

Mentees will be provided with starter kits containing planting materials and BlockMate™. **B**

Twin calves in Tarlac

By Mikee Antonio and Christine Helen Adriano

Artificial insemination (AI) technology recently played a pivotal role in the birth of twin male and female calves in barangay Laoang, Tarlac City, Tarlac. This remarkable achievement can be attributed to Jaime Bacsa Jr., a dairy farmer who, in addition to his previous career as a cook, currently serves as a barangay councilor.

On September 16, 2023, the barangay witnessed the birth of its first set of twin calves, a historic moment made possible through AI. Bacsa's journey in the world of farming traces back to the 1980s and 1990s when carabaos were primarily valued for their draft power. During that time, he sustained his livelihood by buying and selling carabaos, a venture that allowed him to support his children through college and witness them earning professional degrees. Upon retiring from his cooking profession, he returned to caring for carabaos, finding them

as his steady source of happiness and income.

Bacsa's elation and pride are immeasurable as Dr. Noel Soliman, the city veterinarian, introduces his first set of twin calves, which are yet to be named. They were produced through AI by DA-PCC at CLSU. Before the birth of the twins, Bacsa already had a prior success with AI with the birth of a female calf.

Last year, when the DA-PCC at CLSU AI team visited the barangay to promote AI program, Bacsa eagerly embraced the opportunity, despite some of his neighbors favoring natural mating for their animals. Initially, only a few farmers joined the program. However, months later, those who participated saw positive results as their buffaloes successfully conceived through AI, with Bacsa's twins being a prime example. This experience solidified Bacsa's belief in the saying "to see is to

believe." He expressed his sincere gratitude to the DA-PCC at CLSU AI team, particularly to Francis "Anchet" Adriano, the AI technician responsible for the birth of his twin calves.

Research has shown that calves can be categorized as either monozygous or dizygous, and they may share the same sex or have different sexes. In cases where twins of opposite sexes are born, a condition known as freemartinism occurs in 90% to 97% of pregnancies, leading to sterility in the female calf.

Understanding the advantages and challenges of having twin calves of opposite sexes, Bacsa remains undeterred and committed to supporting and promoting the AI program. He has ambitious plans to expand his carabao ownership—the primary goal is to soon venture into dairying and be a proactive contributor to the progress of his community. **B**



Pangasinan dairy co-op notches up as national finalist in 2023 Productivity Olympics

By Maximo Peralta, Jr.

The Bantog Samahang Nayon Multi-Purpose Cooperative (BSNMPC), regional winner of the medium agri-business category in the Ilocos Region, emerged as a national finalist during the 2023 Productivity Olympics awarding ceremony held at Crowne Plaza Galleria in Ortigas City on October 19.

The Productivity Olympics is a national and biennial competition organized by the National Wages and Productivity Commission (NWPC) in coordination with Regional Tripartite Wages and Productivity Boards (RTWPBs) nationwide under the Department of Labor and Employment (DOLE). Said competition aims to promote productivity, stimulate healthy and positive competition, and recognize the best micro, small, and medium enterprises (MSMEs) in terms of productivity.

Enterprises were evaluated based on business excellence, employee engagement, innovation and green programs, and corporate social responsibility.

According to Rolly Mateo, Sr., BSNMPC's chairperson, they are happy to win the regional level, but overjoyed to know that they made it to the national finals. Mateo said they were admittedly not ready for the competition but the recognition made them even stronger as a group as they were made aware of aspects that they still need to improve on.

Mateo also extended his utmost gratitude to the DA-Philippine Carabao Center for being the co-op's consistent enabler and supporter.

"Syempre po [...] gusto kong magpasalamat sa DA-PCC kasi sila naman talaga ang dahilan kung bakit kami nandito ngayon," he said.

Through the DA-PCC's collaboration with DepEd and DSWD for the Milk Feeding Program, the assisted cooperative has been actively supplying carabao's milk from 2020 to the present, amounting to PHP177 million worth of milk supplied for the program.

Aside from milk-based products they offer—such as fresh, pasteurized, and chocolate milk, flavored yogurt milk drinks, polvoron, espasol, and pastillas de leche—BSNMPC has also ventured into marketing carabao's meat such as karabeef bulalo, skinless longganisa, and tapa in chili garlic and sweet & spicy flavors to step up as a key player in the growing industry.

BSNMPC's dairy buffalo products are available at their Dairy Box outlet in Bantog, Asingan, Pangasinan.

BSNMPC is one of the DA-PCC at DMMMSU's assisted cooperatives. **B**

Graduation ceremony celebrates success of agricultural extension workers in AI training

By Steven Marx Tangonan

In celebration of skill and knowledge, the graduation ceremony for the "Basic Training Course on Artificial Insemination and Pregnancy Diagnosis in Large Ruminants" took place on September 29, 2023, at the DA-Agricultural Training Institute-Regional Training Center 02 (DA-ATI-RTC02), Cabagan, Isabela. This milestone marks the culmination of a collaborative effort between the DA-ATI-RTC02, the DA-Regional Field Office 02 (DA-RFO2), and the DA-PCC. The training course, which ran from September 4 to September 29, 2023, saw 20 agricultural extension workers from various municipalities in Cagayan, Isabela, Quirino, and Batanes Provinces successfully completing the program.

The objective of the training was clear: to equip these dedicated agricultural extension workers with essential skills and knowledge in artificial insemination, enabling them to provide vital extension services in large ruminants within their respective regions. This effort is seen as a significant complement to existing programs of the DA-PCC, such as the DA-National Livestock Program (DA-NLP) and the Carabao Development

Program. These initiatives collectively aim to enhance breed quality and boost the population of carabaos and cattle, ultimately contributing to the food security of the Philippines.

Gracing the ceremony with their words of encouragement were prominent figures in the agricultural sector, including Dr. Roberto C. Busania, Regional Technical Director for Operations of the DA-RFO2; Claris M. Alaska, DPA, Assistant Center Director of the DA-ATI-RTC02; and Dr. Rovina R. Piñera, OIC Center Director of the DA-PCC at CSU.

"The government spent a lot of money on this training; do not let the learnings and talents that you have acquired from this training go to waste," Dr. Busania said.

Moreover, Dr. Busania announced the DA is committed to providing A.I. equipment to deserving municipalities to enhance nutrition and production of carabaos and cattle in Region 2. He also challenged the trainees to contribute to the food sufficiency of the country through the provision of A.I. services. On the other hand, Alaska, uplifted the morale of the trainees by emphasizing their

role in knowledge and technology transfer.

"Stretch out your services to the agricultural industry. Ituring niyo ito bilang bagong simula ng pagpapalaganap ng A.I. sa inyong mga nasasakupan. Kayo ang inaasahan ng DA-PCC na magdadala ng mga makabagong pamamaraan at teknolohiya sa mga minamahal nating magsasaka," she said.

Meanwhile, Dr. Piñera commended the successful collaboration of DA-RFO2, DA-ATI-RTC02, and DA-PCC.

"Alone we can do so little, but together we can do so much. Coming together is a beginning, keeping together is progress, working together is success," said Dr. Piñera.

The participants themselves shared their gratitude and enthusiasm for the training. John Dave D. Salvador from Basco, Batanes, highlighted how this training was long-awaited in his province and expressed his commitment to bring these valuable skills back to his community.

Gabby M. Zamora from Diffun, Quirino, shared his excitement about using his newfound

knowledge to benefit local farmers and their livestock.

"Nadagdagan pa ang aking kaalaman sa pag-aalaga at pagpaparami ng mga alagang kalabaw. Sabik na akong maibahagi ang aking mga natutunan sa mga magsasaka sa aming bayan upang malaman din nila ang mga bagong teknolohiya sa pagpaparami ng kanilang mga alaga," Zamora said.

Ian Paul V. Septimo from Gonzaga, Cagayan, was overwhelmed by the quality of training provided by DA-ATI and expressed gratitude for the equipment received to support their continued efforts in artificial insemination.

"Nagpapasalamat ako sa DA-ATI, DA-RFO2, at DA-PCC sa pamamahagi ng mga equipment upang masigurong hindi masasayang ang aming natutunan sa training na ito at upang maipagpatuloy namin ang A.I. sa aming mga lugar," Septimo added.

This graduation ceremony represents a significant step forward in enhancing the livestock industry in Region 2 and demonstrates the potential for collaborative efforts to bring positive change to agriculture and food security in the Philippines. **B**



AI soldiers accept challenge of enhancing reproductive efficiency of water buffaloes

By Mikee Antonio

Fifteen artificial insemination (AI) technicians from different regions of Luzon recently gathered to acknowledge their active participation in a comprehensive training program. The training employed both theoretical lectures and practical assessments as methods of learning.

Preserving the genetic diversity in water buffalo-endemic regions is crucial for long-term and sustainable enhancement of buffalo genetics. As a component of the Genetic Improvement Program (GIP) of the DA-PCC, AI technicians from various local government units (LGUs) and village-based artificial insemination technicians (VBAITs) across the Philippines have consistently provided an increasing number of annual AI services for water buffaloes.

From September 18 to October 7, 2023, the DA-PCC at CLSU successfully conducted a 20-day training program titled “Intensified Reproductive Management Program Towards Improving Reproductive Efficiency in Water Buffaloes” at the DA-PCC National

Bull Farm (NBF) in Digdig (Joson), Carranglan, Nueva Ecija.

Dr. Edwin C. Atabay, National AI Coordinator, emphasized a Triple “E” strategy to increased AI efficiency: enhancing pregnancy rate, effective rebreeding program, and early detection of pregnancy. He outlined that the program’s primary objective is to improve the pregnancy rate of the country’s water buffaloes, aligning with the agency’s responsibility to propagate and protect the species.

During one of his lectures and demonstrations, Erwin C. Encarnacion, Science Research Specialist II and regional AI and bull entrustment program coordinator, expressed: “In increasing the buffalo population in the country, the challenge begins when we are trained as technicians and the program’s success continues when we enhance the reproductive efficiency of the carabao.”

Hernando V. Venturina, often referred to as the father of AI at the DA-PCC, who formerly

headed the NBF, shared that he remains steadfast in supporting the program even after his retirement from DA-PCC. He encouraged the AI technicians to actively contribute in achieving the agency’s vision, mission, and mandate.

One of the participants, Dante A. Esalan from the Provincial Veterinary Office of Laguna, reflected on his experiences. He had serviced more than 2,000 carabaos and cattle, but one unique carabao from NBF challenged him. Dante emphasized that with sharing his good practices, engaging with fellow technicians, and acknowledging his own limitations, he found the DA-PCC training program more meaningful.

Esalan demonstrated improved accuracy and reduced ruminant abortions, ultimately benefiting his farmer clientele. Dante’s passion in AI has earned him a spot in the top three during the batch graduation in October.

AI is one of the flagship services of DA-PCC rendered nationwide in villages by trained village-based or LGU AI technicians. The objective is to produce animals with better productivity for milk and meat through sustained backcrossing to at least four generations, without disregard for draft power through harnessing superior genetic materials of riverine buffalo breed.

The NBF is a training ground for a majority of AI technicians and a pioneering research and development center for GIP. **B**



RIC women undergo hygienic milk handling, product processing

By Mikee Antonio

The DA-PCC at CLSU concluded a two-day training on hygienic milk handling and product processing for 23 female members of the Municipal Federation of Rural Improvements Club (MFRIC) in Brgy. Macapilapil, San Ildefonso, Bulacan on September 11-12.

The requested training was a livelihood initiative of DA Rural-Based Organization (RBO) for hands-on training in the production of kesong puti, chocolate milk, pastillas, and pasteurized milk. Participants are association representatives from a number of Brgy. in San Ildefonso Bulacan.

Kaycelyn Vasallo, the RIC focal person, explained that the livelihood initiative provides financial assistance to RIC women members. Following training, the LGU will provide the federation



with a livelihood startup package by establishing a Dairy Processing and Marketing Outlet in the city.

Vasallo also expressed the intention of establishing connections with the City’s pasalubong center and inviting other Micro, Small, and Medium Enterprises (MSMEs) to participate in this endeavor. To obtain greater support, the LGU intends to promote these buffalo-based products to the Department of Tourism.

Vasallo added that after the training and successful product processing, RIC will soon begin connecting with DA-PCC carabao recipients in the city. The objective

was to purchase the produced milk, which will also secure a market for dairy farmers to sell their milk.

Mayor of San Ildefonso City, Fernando S. Galvez Jr., assured that with these initiatives, the city will give its complete support to the livelihood project for women that demonstrates gender and development in the city.

The RIC of the Philippines is a non-governmental organization that operates to enhance the living circumstances of its members and to make them effective and productive partners of the government in the community. **B**

‘CaraWow Radyo Eskwela sa Gatasang Kalabaw’...

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their contribution to government goals, such as increasing the local dairy supply and supporting milk feeding programs.

DA-PCC at UPLB Center Director Dr. Thelma A. Saludes extended her gratitude to partners and highlighted the graduates’

important role in milk feeding programs, increasing milk supply in the country, and improving the nutritional status of Filipino children.

In his closing remarks, Dr. Rolando V. Maningas, DA-ATI CALABARZON Center Director, celebrated the

success of dairy farmers and encouraged graduates to share their knowledge and contribute to abundant agriculture and a prosperous economy. He concluded by saying, “Mabuhay dairy farmers in CALABARZON!” **B**

Government crossbreeding program boosts population of dairy carabaos in Region 2

By Ma. Cecilia Irang-Mariano



The government's crossbreeding program has significantly boosted the population of dairy carabaos in Region 2. San Agustin, a town in Isabela province, stands out as the "Crossbred Carabao Capital of the Philippines" due to its remarkable achievements in carabao crossbreeding.

The municipality actively collaborates with the DA-PCC to train village-based artificial insemination technicians, aiming to increase the population of crossbred carabaos.

This endeavor has yielded impressive results, with the municipal agriculture office reporting 2,854 crossbred carabaos in June 2023 in San Agustin.

The success in San Agustin can be attributed to the local government's commitment to harnessing AI for breed improvement. Initiatives like

the Carabao-based Business Improvement Network project and the DA-PCC's carabao upgrading program are also expanding the carabao population in neighboring Quirino and Nueva Vizcaya through processing and marketing facilities.

San Agustin is known for its "Nuang Festival," celebrating the achievements of carabao owners who have actively participated in the program to improve the native carabao breed.

During the 13th Nuang Festival in 2018, three farmers received buffalo bulls with 93.75% riverine blood, introduced as the "Philippine Dairy Carabao" breed during the DA-PCC's 25th anniversary celebration.

The Philippine Dairy Carabao is a product of a continuous backcrossing method conducted by researchers at DA-PCC at UPLB under the guidance of Dr. Ester Flores, DA-PCC's National Genetic Improvement Program coordinator.

This breeding approach involves mating purebred riverine buffaloes with native swamp buffaloes (carabaos). The resulting offspring—crossbred carabaos—are bigger, meatier, and produce more milk than native carabaos, which can only provide an average of one to two liters of milk a day.

The development of the Philippine Dairy Carabaos did not stop at the production of the first cross—the 50:50 bloodline. Subsequent generations of purebred riverine bulls that are the product of careful selection and mating are used for continuous mating (backcrossing) of the subsequent generations of crossbred cows with increasing riverine bloodline until the fourth generation.

At this point, the crossbreds are no different from purebred riverine but have the distinct advantage of better tolerance or adaptability to Philippine climate.

"These bulls [entrusted to farmers] are products of continuous backcrossing and selection of cows that are really good milk producers. Their daughters will be included in the genetic evaluation, the process that purebred cows undergo, having their own estimated breeding values," Dr. Flores said. "With all the rigorous processes done to come up with these bulls, they are ready to be used for breeding," she added.

San Agustin, through LGU collaboration with DA-PCC and other partners, aspires to excel in carabao upgrading and dairy enterprise development. The production of more "Philippine Dairy Carabaos" positions the Philippines among countries that have successfully bred their dairy buffalo, potentially boosting the dairy carabao population nationwide. **B**

Dough it right: Pandan MPC's recipe...

From page 1

patience, and attention if she dreams of tasting a scrumptious success for their cooperative and its members.

Pandan Multi-Purpose Cooperative (PMPC), a conduit co-op under the Carabao-based Business Improvement Network (CBIN) project and Karabun technology adopter, inaugurated its Dairy Products Processing Center – Bakery last June 30, 2023 in Talisay, Pandan, Antique. The PHP2-million worth facility is a grant from the DA-Agribusiness and Marketing Assistance Division. The said facility will produce bread and pastry products infused with buffalo's milk.

Dedaci Nepomuceno, manager of PMPC, expressed her gratitude to the stakeholders who were present during the inauguration. She cited that the convergence of the agencies like the DA, DA-PCC, Department of Trade and Industry, and Department of Labor and Employment made it possible for the cooperative to expand its business, which has greatly benefitted its members.

Nepomuceno also recalled the time when DA-PCC at WVSU Center Director Arn D. Granada presented the CBIN project to their cooperative in 2019:

"When chairperson Engr. Celso Tajanlangit and I were offered the project, we were a bit hesitant to accept it for fear that we could not carry out the responsibilities. But we still took courage and went ahead to take part in the project. Now, we are reaping the benefits of the said project. To date, PMPC has 113 carabaos, and we have engaged in the DepEd Milk Feeding Program and twice in DSWD's Supplemental Feeding Program," Nepomuceno said.

On behalf of the PMPC, Nepomuceno is grateful to the instrumentalities who brought the project to them. "Access to these projects is easier because of our accreditation to the civil society organization. We also credit the efforts of Senator Loren Legarda, Senator Cynthia Villar, and Senator Imee Marcos."

PMPC's engagement in the

previous milk feeding programs had supplied milk in the northern part of Antique, benefiting more than 7,000 school children. Their engagement with the Schools Division of Antique for the provision of Karabun in the province of Antique is still in the works, with the cooperative hoping to supply 13,000 buns on a weekly basis.

To date, the cooperative operates its own Dairy Box from the CBIN project, producing pasteurized and flavored milk products, and also white cheese, pastillas, milk-infused buns, and muffins for the non-beverage products. Moreover, PCC had also facilitated their training for Karabun production, in which they will comply with several documents to be officially registered as one of the technology's adopters.

With all the support and interventions that it was able to receive, Pandan MPC can only hope for a future that is as golden as a perfectly baked Karabun. **B**



GOT QUESTIONS OR SUGGESTIONS? CONTACT US



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