

# Bubalus



Quarterly Newsletter of the Philippine Carabao Center

Vol. 1 No. 4 • 2018



San Agustin farmers proudly parade their prized crossbred carabaos during the town's observance of its annual "Nuang Festival" in September.

## FEATURES

### Dairy industry thrives in San Agustin, Isabela

By Charlene Corpuz

San Agustin is a far-flung mountainous town in Isabela province. Secluded and sprawled with mainly grasslands, this town lends anyone clueless of its hidden worth.

To page 22

### Parade showcases 440 carabaos in Isabela town's 'Nuang Festival'

By Ma. Cecilia Irang

In keeping with the assiduous celebration of San Agustin town's "Nuang Festival", proud owners of hundreds of crossbreds and native carabaos paraded their hulking animals along the streets of the town last September 28.

Their 440 crossbreds and native carabaos "blackened" the streets

where they were paraded. Majority of them are crossbreds which are products of continuing crossbreeding program in that town.

The parade was one of the highlights of the twin celebrations of San Agustin – the "14th Nuang Festival"

To page 10

# Editor's Word



As we enter the holiday season and reckoning of the year that will soon pass, we like to once again share inspiring stories related to Carabao Development Program (CDP) as they unfolded this quarter. Foremost is the first ever Livestock Technology Exposition held in Bohol, which saw the sharing of practical and effective technologies and best practices from the PCC and other livestock agencies with around 1,000 participants in attendance. We also featured (1) novel extension initiatives such as the ComDev interventions in select areas in Visayas and Mindanao, which sought to strengthen further the awareness and knowledge of carabao keepers in these parts of the country; (2) a welcome development by way of an institutionalization of the school feeding program for kindergarten and grade school pupils, which guaranteed the inclusion of locally produced fresh milk in the cycle menu; (3) a revisiting of San Agustin, Isabela and its current development on dairying enterprise, which is anchored on crossbred buffaloes; (4) effective breeding and feeding management of institutional herd in PCC@VSU and how they link with a local cooperative for the enterprise component of CDP; and (5) a thriving industry which utilize carabao horns as materials for world-class fashion accessories. We are also proud of the inauguration of the new administrative building of PCC@CLSU and the various awards and recognitions that our colleagues at PCC have received from prestigious conferences and award-giving bodies. All these keep us motivated even more. Happy Yuletide Season everyone!

**Dr. Eric P. Palacpac**

## About the cover

Taken during the 2018 annual Nuang Festival in San Agustin, Isabela, this photo indicated again the town's drive toward becoming crossbred buffalo capital of the Philippines.

(Photo by LGU-San Agustin)



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## Contents

- 3** Practical technologies, best practices on livestock production underscored in livestock industry's 3-in-1 event .....
- 4** Select PCC's ComDev VisMin sites, engage in FLS-DBP .....
- 5** Buffalo's milk is now part of the national feeding program diet .....
- 7** PCC at CLSU inaugurates new building .....
- 9** PCC researchers reap awards in scientific convention .....
- 11** PCC researchers clinch gold award in the National Research Symposium .....
- 12** Int'l institute subsidizes project for home communities .....
- 13** Stronger harmonization of EAS efforts urged .....
- 14** Malaysian delegates get briefing about PCC's breeding strategies; also make a visit to other agencies in the Science City of Muñoz .....
- 16** Cooperation pushes big progress in buffalo dairying at PCC@VSU .....
- 18** World-class women's adornments from carabao's horns .....



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## Practical technologies, best practices on livestock production underscored in livestock industry's 3-in-1 event

By Ma. Cecilia Irang

Exemplars of good practices and technologies on dairy, swine, poultry, and waste management were presented and aptly discussed during the 1st Livestock Technology Expo held last October 7-10 at the Bohol Cultural Center in Tagbilaran City.

With the theme “Masaganang Paghahayupan sa Teknolohiyang Maaasahan”, the exposition was conducted simultaneously with two other events: the 4th National Carabao Conference and the 4th Bohol Milk Festival.

The three-in-one event was organized by the Department of Agriculture and its livestock agencies comprised of the Philippine Carabao Center (PCC), Agricultural Training Institute-International Training Center on Pig Husbandry (ATI-ITCPH), Bureau of Animal Industry (BAI), National Dairy Authority (NDA), and National Meat Inspection Service (NMIS). It was held in cooperation with the Provincial Government of Bohol and the Bureau of Agricultural Research.

“We’ve observed that we conducted so many researches in the previous years but none of those seemed to reach the farmers. That’s why we are holding this activity, with the harmonization of all livestock agencies to make sure that all the researches that we conduct



(Upper photo) Participants in the 1st Livestock Technology Expo witness actual demonstration of silage production. (Lower photo) Experts from PCC at Ubay Stock Farm show the materials for uterine flushing technology of PCC.

will reach and benefit the farmers,” Assistant Secretary for Livestock Enrico Garzon Jr. said.

He added that it will be useless if farmers wouldn’t be informed about those researches and technologies.

He believes that with the utilization of apt technologies, farmers will be more productive.

PCC Executive Director Dr. Arnel del Barrio, on the other hand, encouraged farmers not to be afraid of the new and modern technologies because the adoption and implementation of these technologies will also help promote and develop the livestock industry as well as their own endeavors.

“The technologies that we have here

are already proven and tested. They are ready-to-use,” he averred.

He added: “We all have our technologies and best practices to share that’s why we are gathered here to learn from one another and from our speakers, which include stakeholders and value chain players in the livestock industry.”

The event featured plenaries and panel discussions on “Pamamahala ng Kooperatiba tungo sa Maunlad na Negosyong Kalabawan (Proper Management of Cooperative toward a Progressive Carabao-based Enterprise)” by Ma. Elena Limocon, General Manager of Lamac Multi-

To page 8

## Select PCC's ComDev VisMin sites, engage in FLS-DBP

By Charlene Joanino

Karbawan, a communication for development (ComDev) campaign initiative of the Philippine Carabao Center (PCC), is gaining ground in terms of increased interest among stakeholders in joining the national Carabao Development Program (CDP).

This is particularly evident in select regions in Visayas and Mindanao that were not previously reached by PCC.

The Karbawan campaign is complemented by various communication interventions that were developed and launched to address specific concerns identified in the participatory communication appraisal of stakeholders.

The Farmer Livestock School on Dairy Buffalo Production (FLS-DBP) is one of the interventions that was launched in the project sites specifically in Polanco, Zamboanga del Norte with 40 participants; Ipil, Zamboanga Sibugay, 25 participants; and Don Carlos, Bukidnon, 28 participants.



Participants from Visayas and Mindanao during their Farmers' Livestock School Facilitators' Learning Workshop Graduation at the Philippine Carabao Center. They are expected to facilitate a 34-week long FLS-DBP in their respective localities.

Meanwhile, in Leon, Iloilo, both FLS-DBP and School-On-the Air (SOA) are being carried out. There were about 500 farmers who enrolled in the SOA, 30 of which are also participating in the FLS-DBP.

### What is FLS?

Dr. Eric Palacpac, chief of the PCC Knowledge Management Division that oversees the implementation of the Karbawan, said, the aim of FLS-DBP is to improve the knowledge and skills of farmers on dairy buffalo production where technology options alongside indigenous knowledge can converge through a participatory type of learning.

The PCC's FLS-DBP modules were developed by a technical writing committee at PCC in partnership with Ms. Anna Marie Alo from the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development, who early on developed the FLS modality for Goat-Enterprise Management, which has now spread all over Luzon and elsewhere.

As a modality, FLS-DBP covers various topics such as Raising Healthy and Productive Dairy Buffalo, Building Enterprises from Buffalo, and Participatory Technology Development. It offers technology options that can be utilized according to the needs and capacity of the FLS-DBP attendee.

The FLS-DBP module covers 34 weeks of learning with 20-25 participants. The learner-participants are expected to demonstrate skills and application of their learnings at the end of the course.

Participants in each batch are administered with pre-test evaluation and would answer a post-test evaluation after six months to gauge their adoption of technology options. The said evaluations along with an impact assessment will be done after three years to measure the adoption pattern before and after FLS.

Farmers who wish to participate

To page 10

# Buffalo's milk is now part of the national feeding program diet

By Charlene Joanino and Ma. Theresa Sawit



The distribution of 200ml pasteurized fresh milk during the launching of milk feeding program at Brgy. Pinagpanaan gymnasium, Talavera, Nueva Ecija last November 14.

Locally produced fresh milk (that includes buffalo's milk) is now part of the diet in a national school feeding program for undernourished children under RA 11037.

In a meeting last September, the Department of Social Welfare and Development (DSWD) in collaboration with the Department of Education (DepED), Department of Health (DOH), Department of Science and Technology-Food and Nutrition Research Institute (DOST-NFNRI), the National Dairy Authority (NDA) and Philippine Carabao Center (PCC), tackled the Implementing Rules and Regulation (IRR) of Republic Act 11037.

The law, titled “Masustansiyang Pagkain Para sa Batang Pilipino Act”, was approved last June by President Rodrigo Duterte.

Among other things, it states that this law is “an act institutionalizing a national feeding program for undernourished children in public day care, kindergarten and

elementary schools to combat hunger and undernutrition among Filipino children and appropriating funds therefore”.

A section of the law indicated that milk-based food products should be included in fortified meals.

As an attached agency of the Department of Agriculture (DA), PCC is mandated in encouraging backyard dairy development in rural areas by raising carabaos to meet the nutritional needs of the smallholder farmers and families. The agency also aims to reduce dependence on imported milk by-products.

“This is a good initiative, as we can not only alleviate and fight malnutrition but also provide livelihood for our dairy farmers who will provide the milk”, Mina Abella, head of the PCC Carabao Enterprise Development Section and one among those who attended the meeting said.

Dr. Liza Battad, PCC chief of Planning and Information Management Division and Maria

Theresa Sawit, PCC head of Socio Economics and Policy Research, also attended the meeting.

## PCC Milk Supplementation Programs

Even as early as 2016, a total of eight completed milk supplementation programs were already conducted by PCC. More than 13,000 children became beneficiaries of the 200 ml toned buffalo's milk given during the conduct of the feeding program.

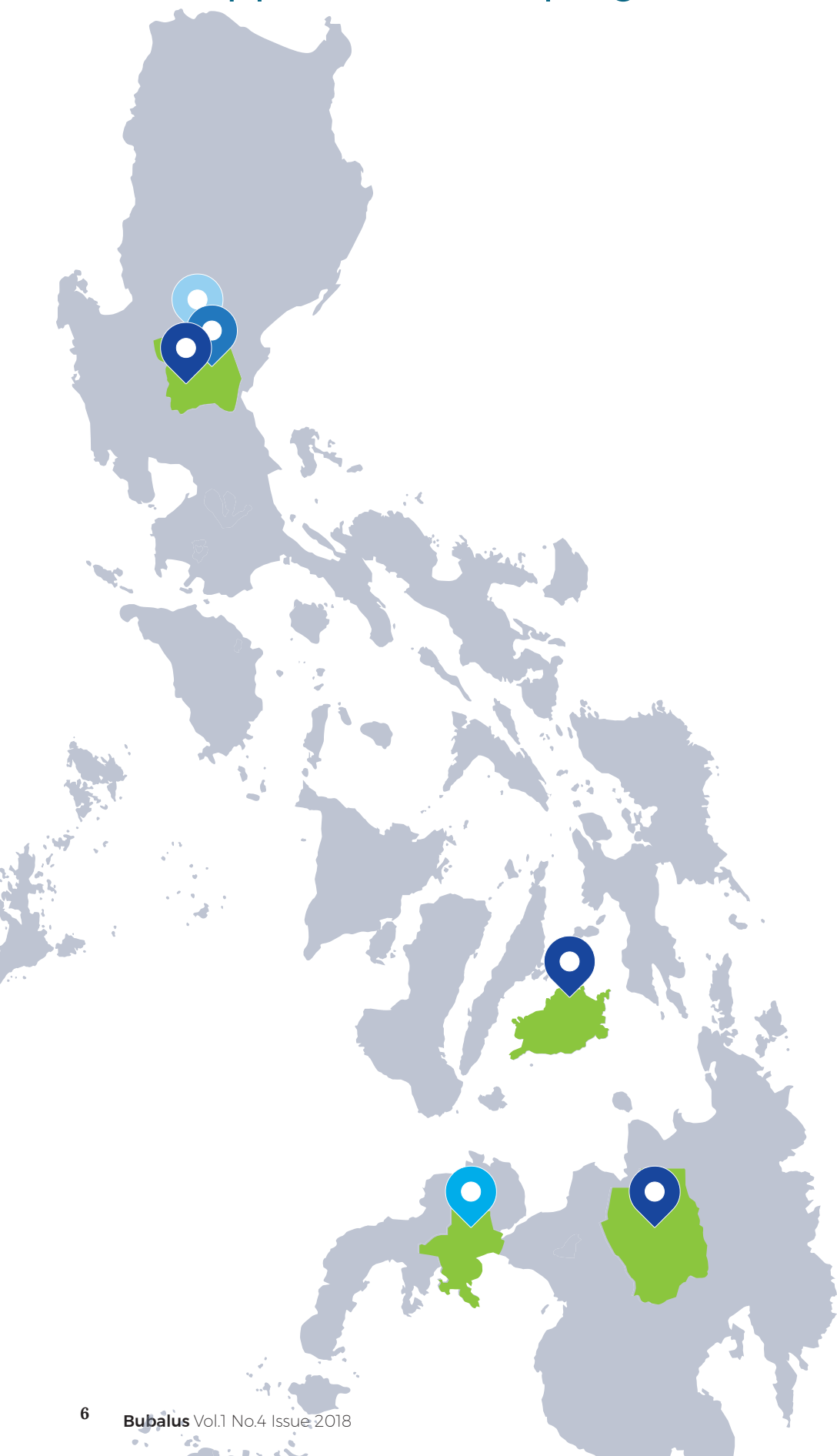
The program also benefitted many dairy farmers as the milk used was procured from PCC-assisted cooperatives.

The fresh buffalo's milk in 200ml packets is supplied by the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO), which is being assisted by PCC.

Due to the implementation of the RA 11037, more milk supplementation or feeding programs to combat malnutrition are expected to be carried out in the future.

Next page

# Beneficiaries and partners in the milk supplementation program



**Barangay Pinagpanaan and Dimasalang Norte in Talavera, Nueva Ecija; and Barangay Poblacion East, Science City of Muñoz, Nueva Ecija (on-going)**

**BENEFICIARIES:**  
Talavera Nueva Ecija: 100 children  
Science City of Muñoz: 40 school children

**PARTNERS:**  
LGU-Talavera and LGU-Muñoz

**Aliaga, Nueva Ecija; Talibon, Bohol; Maramag, Damulog, and San Fernando, Bukidnon**

**BENEFICIARIES:**  
10, 164 Daycare children

Note: 9,860 daycare children completed the feeding days, 304 children were drop-outs or had transferred to private schools

**PARTNERS:**  
DSWD, LGU-Aliaga, LGU of Talibon, Bohol; Maramag, Damulog and San Fernando towns of Bukidnon

**Brgy. Licaong, Science City of Muñoz, Nueva Ecija**

**BENEFICIARIES:**  
186 Schoolchildren, 5-12 years old

**PARTNERS:** City Health Office, City Social Welfare and Development (CSWD), Barangay Health Center Licaong Elementary School Licaong Parents-Teachers Assoc. (PTA), Barangay Council, Majestic Christ Church

**Science City of Muñoz, Nueva Ecija**

**BENEFICIARIES:**  
500 Grade I children

**PARTNERS:**  
DepEd District of Muñoz and LGU-Muñoz

**San Jose City, Lupao and Carranglan in Nueva Ecija**

**BENEFICIARIES:**  
San Jose City: 500 Grade I children  
Lupao Nueva Ecija: 500 Grade I children  
Carranglan Nueva Ecija: 530 Grade I children

**PARTNERS:**  
DepEd San Jose and LGU-San Jose; DepEd Lupao and LGU Lupao; DepEd Carranglan and LGU-Carranglan

**General Natividad, Nueva Ecija**

**BENEFICIARIES:**  
662 Grade I children

**PARTNERS:**  
DepEd San Jose and LGU-San Jose

**Pagadian City, Zamboanga del Sur**

**BENEFICIARIES:**  
360 Gov. Cereles  
Sports Academy Scholars

**PARTNERS:**  
Provincial-LGU Carabao Dairy Farm (Zamboanga del Sur)

## PCC at CLSU inaugurates new building

By Charlene Joanino



The attendees composed of the top officials of the PCC and CLSU; and PCC at CLSU staff during the inauguration of the new facility.

Another milestone was set as PCC at Central Luzon State University (CLSU) launched its new administration office at CLSU compound, Science City of Muñoz (SCM), Nueva Ecija last November 8.

“We hope to utilize the building to further mobilize initiatives on the PCC Carabao Development Program,” said Dr. Daniel Aquino, PCC at CLSU center director, in his message during the Inauguration Ceremony.

The Php4.8 million, single-storey building had its groundbreaking last year and its construction was finished last July. Since then, furniture and other necessities were gradually acquired.

Meanwhile, Dr. Arnel del Barrio, PCC executive director, noted in his message the unrivaled partnership between PCC and CLSU in pursuing the carabao dairy industry. He urged the harmonization of the Carabao-Based Enterprise Development efforts and underscored the

significance of the building in ushering more production of milk that he deemed needed in relation to the passing of RA 11037 or Masustansyang Pagkain Para sa Batang Pilipino Act, where it was stipulated that milk is to be included in fortified meals.

PCC at CLSU is in-charge of Region 3 where Nueva Ecija, deemed as the National Impact Zone (NIZ) for Dairy Buffalo Enterprises, is situated. Of the PCC’s 12 regional centers, the PCC at CLSU contributes more than 30% of the National PCC output.

“We will use this building as an instrument for us to produce more output and to achieve our goal, targets, and commitment,” Dr. Aquino added.

“We are happy that this building was erected for the benefit of the staff and clients of PCC at CLSU. At the same time, I hope to restore the defunct old fountain pool in the vicinity to bring back old memories of CLSU alumni,” said Dr. Tereso

Abella, CLSU president, who graced the event and had committed to accord help to the center in improving the other structures beside the new building.

On the side, Dr. Jerry Rigos, SCM’s city veterinarian and agriculturist, who attended on behalf of Mayor Nestor Alvarez, expressed appreciation towards PCC and other research agencies which made Muñoz, a science city. He further added that Mayor Alvarez supports PCC’s initiatives in dairy development and will support all other efforts that can benefit the city’s populace.

Also, in attendance to the event were officials and employees of PCC at CLSU and PCC National Headquarters and Gene Pool.

The Carabao Development Program being stewarded by PCC, is comprised of Genetic Improvement, Enterprise Development and Research for Development components.



From page 3

## Practical technologies, best practices..

Purpose Cooperative; “Kahanga-hangang mga Magsasaka sa Kalabawan (Best Practices of Champion Farmers)” by Henry Orbino, 2017 PCC Outstanding Dairy Farmer; and “Kahanga-hangang mga Produkto at Negosyo sa Gatas (Dairy Products and Enterprises)” by Erika Ng Wong of Karabella Dairy.

Panel discussions of exemplary technologies on NDA Communal Farming Scheme, Waste Management, Itik Pinas, and Native Chicken were also conducted. Other technologies discussed and presented were Lactic Acid Bacterial Solution, Silage Making, Uterine Flushing, and Mozzarella and Butter production.

Senator Cynthia Villar, chair of the Senate Committee on Agriculture and Food who served as the guest of honor during the event, commended the dairy industry of Bohol specifically

referring to the town of Ubay, where she met a group of women-dairy farmers. She noted that the province is worthy of the title “Dairy Capital of the Philippines”.

She also urged farmers to organize their own associations or cooperatives, and learn how to process and market their harvested milk and resulting products development.

“I hope that through this kind of gathering, we will be able to teach our farmers to be more knowledgeable, competitive and profitable,” she said.

Senator Villar stated the Senate Policy Directions on Local Dairy Development and assured that bigger funds are coming to boost further the performance of livestock, poultry and dairy in the country.

“I strongly endorsed the allotment

of a higher budget for livestock and poultry during the Senate deliberations on the 2018 budget of the DA. I will do my best for the enactment of a relevant bill that I authored very soon. This is the only way we can help our dairy farmers improve their income and livelihood,” she stressed.

She also extended her gratitude to the farmers present in the event saying: “Without you, we Filipinos, won’t be able to eat meat and dairy products, so keep up your good work because you are our hope toward a sustainable livestock and dairy industry.”

The tri-fold event was participated in by more than a thousand participants composed of farmers, members of different cooperatives and associations, students, and stakeholders of the livestock industry across the country.



## PCC researchers reap awards in scientific convention

By Ma. Cecilia Irang



**PCC researchers proudly show their certificates for reaping various awards during the 55th Scientific Seminar and Annual Convention of the Philippine Society of Animal Science at the Grand Menseng Hotel in Davao City last October 16-19.**

A number of researchers from the Philippine Carabao Center (PCC) received various awards and recognitions during the 55th Scientific Seminar and Annual Convention of the Philippine Society of Animal Science (PSAS) held on October 16-19 at the Grand Menseng Hotel in Davao City.

Dr. Eric P. Palacpac, chief of PCC's Knowledge Management Division, was bestowed the "PSAS Outstanding Professional in Animal Science Extension" award in recognition of his leadership in spearheading various learning platforms and development of Information, Education and Communication (IEC) materials for the benefit of the carabao-raising sector.

On the other hand, Dr. Marvin A. Villanueva, PCC's Senior Science Research Specialist, was hailed as the "2018 PSAS-UNAHC0, Inc. Outstanding Young Professional in Animal Science" awardee for his

innovative researches that led to the development of technologies particularly on animal health.

Three papers from the PCC also won the "Best Paper" award under different categories.

Dr. Ma. Wynne A. Pagaduan's study "Monitoring of Aflatoxin M1 and Dairy Farm Management of Water Buffalo" was chosen as the "Best Paper" under the applied research category. The other authors of the study were Dr. Villanueva and Gernerlyn G. Garcia.

The study "Effect of Different Prostaglandin (PGF2) Analogues during Synchronization in Dairy Buffaloes (*Bubalus bubalis*)" conducted and presented by Rebecca Ruby G. Gabriel of PCC at the Central Luzon State University (CLSU), bagged the same award under the biotechnology category. Her co-authors were Dr. Eufrocina P. Atabay, Dr. Edwin C. Atabay, Dr. Jessica Gay M. Ortiz, Dr. Edgar A.

Orden, and Jhon Paul R. Apolinario.

Finally, the study "Identification of Bacterial Community in Mastitic Milk Water from Buffalo in Selected Cooperatives of the National Impact Zone Using PCR and DGGE Method" presented by Paula Blanca Gaban was chosen the "Best Paper" under the disease and diagnostics category. The other authors of the study were Dr. Claro N. Mingala, Niña Rica A. Pagaduan, and Jervin R. Undan.

During the convention, different papers were presented under various categories, which included anatomy, physiology and biochemistry, nutrition, applied research, undergraduate thesis, breeding and genetics, biotechnology, disease and diagnostics, production and processing, socio-economic, and development.

More than 10 posters were exhibited during the course of the scientific sessions.

**To page 15**

From page 1

## Parade showcases...

and the commemoration of the town's "69th Araw ng San Agustin" (founding day).

"Nuang" is an Ilocano term for carabao. The festival is a much-anticipated occasion for carabao-owners as they are given the chance to flaunt their beloved crossbreds at the center stage of the festivities. It serves also as an occasion for gaining public recognition of their significant achievement in participating and sustaining a program designed for the improvement of the breed of native carabaos.

No doubt, the crossbreeding efforts in this town have already paid off as evidenced by the 2,138-head crossbreds (as of October) inventoried by a research team at the Philippine Carabao Center (PCC). The said research project is funded by the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (PCAARRD).

The town is long girding to be called the "Crossbred Buffalo Capital of the Philippines."

The increasing number of crossbred carabaos in San Agustin has been made possible through the continuous efforts of the town's local government unit to implement the use of artificial insemination (A.I.) program specifically for the production of improved breed of carabaos.

Thousands of the town's carabao owners partnered with the PCC

and various agencies and entities for the crossbreeding program.

In the recently held "Nuang Festival", competitions involving the crossbreds were also held. The titles vied for were "Best Buffalo in Milk Production", "Best Dairy Caracow", "Best Dressed Buffalo for female", and "Best Draft Carabao for native male".

The owners of the winning carabao crossbreds received cash prizes. The farmers who participated in the parade, likewise, were given Php300 each as incentive.

Five officials of PCC took part in the event and spoke during the program. They were Dr. Annabelle Sarabia, Research for Development Division Chief at PCC National Headquarters and Gene Pool; Ma. Theresa Sawit, PCC Head of Socio Economics and Policy Research; Honorato Baltazar, study leader of PCC-PCAARRD project; and Prof. Franklin Rellin and Edelina Rellin, Center Director and Senior Science Research Specialist of PCC at Cagayan State University, respectively.

Concerting efforts in organizing the Nuang Festival were accorded by Hon. Virgilio Padilla, Municipal Vice Mayor and Acting Municipal Mayor; Joel Pascual, Sangguniang Bayan Member; Engr. Blas Lamug, Municipal Agriculturist, and the whole local government unit of San Agustin town.

From page 4

## Select PCC's ComDev VisMin sites...

in the FLS-DBP must have at least three milking cows, an animal shed and must sign a commitment to finish the program.

From 2016 to 2017, 70 farmers were already trained in the FLS-DBP; 36 in Guimba, Talugtog and San Jose in Nueva Ecija; and 34 in Marcos and Batac in Ilocos Norte. Presently, there are ongoing FLS in Mabini, Bohol; Leon, Iloilo, Polanco, Zamboanga del Norte; Ipil, Zamboanga Sibugay; Don Carlos, Bukidnon; Sto. Niño, South Cotabato; Lal-lo, Cagayan; and Tarlac City, Tarlac.

### FLS-DPB Initiatives

Prior to the enrollment of farmers to FLS-DBP, KMD conducts a 15-day intensive learning workshop for PCC staff members, LGU partners, and progressive farmers who will serve as facilitators in the FLS-DBP in their respective localities.

As of April 2018, PCC has already trained a total of 81 facilitators from Nueva Ecija, Ilocos Norte, Tarlac, Bulacan, Bohol, Ilocos, Laguna, Cebu, Capiz, Iloilo, Zamboanga del Norte, Zamboanga Sibugay, Bukidnon and Pangasinan.

## PCC researchers clinch gold award in the National Research Symposium

By Ma. Cecilia Irang

The research of the Philippine Carabao Center (PCC) on the development of pen-side Caprine Arthritis Encephalitis Virus (CAEV) test kit for goats bagged the “Gold Award” during the 30th National Research Symposium (NRS) of the Bureau of Agricultural Research (BAR) last November 8 at the Philippine International Convention Center in Pasay City.

The research paper, titled “Development of Loop Mediated Isothermal Amplification (LAMP) Assay-Based Test Kit for the Detection/Screening of CAEV”, was conducted by a team composed of Dr. Claro N. Mingala, Dr. Michelle M. Balbin, Dr. Daryl G. Dela Cruz, and Dr. Joram J. Gautane.

Dr. Mingala presented the paper during the symposium.

It won the Agriculture and Fisheries Modernization Act (AFMA) Best R&D Paper Gold Award under the category “Applied Research (Technology Generation/Information Generation) – Agriculture Animal Science”.

The paper also clinched the “Bronze Award” for the AFMA Best R&D Poster category.



Dr. Claro Mingala (in the middle), along with his co-researchers (from his left and right), receives the plaque of recognition for their research paper that won the AFMA Best R&D Paper Gold Award.

The test kit referred to was CAEV dry – LAMP. It is a rapid and cost-effective molecular-based test kit which detects CAEV in goats even at the farm level.

Thirty-one of the 176 research papers submitted made it to the symposium proper of the 30th NRS.

“The 31 research paper entries scored 85 percent and above during the initial evaluation that qualified them for the final presentation and deliberation at the symposium proper,” the BAR said in a statement.

From the 31, 8 were selected for the gold award, 10 for silver, and 13 for bronze.

They were selected from eight categories, namely: (1) Applied Research (TG/IG/ TA/TV) – Fisheries, (2) Applied Research (TG/IG/TA/ TV) – Agriculture Crop Science and Crop Protection, (3) Applied Research (TG/IG) Agriculture Animal Science, (4) Applied Research (TG/IG/TA/ TV) – Agriculture Engineering and Postharvest, (5) Applied Research (TG/ IG/TA/TV) – Soil and Water Science, (6) Socio-economics Research, (7) Basic Research, and (8) Development- Agriculture Research.

The AFMA Best R&D Paper Gold award

received a cash prize amounting to Php100,000 and a research grant worth Php2M. The silver award received Php75,000 and Php1M worth of research grant while the bronze award took home Php50,000 and Php500,000 worth of research grant.

Meanwhile, the AFMA Best R&D Poster winners, received Php50,000; Php35,000; and Php25,000 for the gold, silver and bronze awards, respectively.

“My team at the PCC’s Biosafety and Environment Section will do its best to come up with a good proposal for the Php2M research grant,” Dr. Mingala said.

The NRS is a major annual event of the BAR that recognizes the works of the country’s scientists and researchers contributing to agriculture and fisheries R&D. It also serves as a venue for sharing and expounding the results of scientific researches leading to significant technologies and breakthroughs in the sectors of agriculture and fisheries.

This year’s NRS event carried the theme “Generating and Integrating Best Practices in Agriculture and Fisheries through Participatory R&D [research and development].”



## Int'l institute subsidizes project for home communities

By Charlene Corpuz



# Institute of International Education

An award intended to support alumni in a wide range of professional, academic, and community activities that provide benefits for home communities is offered by the Institute of International Education (IIE) based in New York.

The IIE oversees the program called International Fellowships Program (IFP) in conjunction with its Alumni Tracking Study. Its aim is to actually see how their alumni are doing in their fields parallel to creating impact to their communities.

Funded by the Ford Foundation, 'The IFP Alumni Award', that goes with it a \$1,000 bonanza, is allotted to an activity proposed by an IFP alumnus that he/she will implement or participate in within a period of one year.

After completion of the activity, an alumnus-awardee is required to submit an 800 word-essay accompanied by proofs like photos, videos, or other multimedia

documentation of the activity. The essay's deadline is on September 30, 2019.

The IIE is a private nonprofit entity in the international exchange of people and ideas and collaborates with governments, foundations and other sponsors in establishing programs for study and training for students, educators and professionals from all sectors.

The award is given every three years. A total of 103 IFP alumni-awardees out of the 507 hopefuls all over the world had been selected in the 2015 IFP Alumni Award. This year, about the same numbers were anticipated.

### **PCC official winner**

Dr. Eric P. Palacpac, one of the 2018 IFP alumni-awardees, said the monetary incentives he received from IIE will be used for his on-going "Farmer's Livestock School on Dairy Buffalo Production" (FLS-DBP) project. The project is being

carried out under the auspices of the Philippine Carabao Center (PCC) in collaboration with the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (PCAARRD).

Dr. Palacpac, who is the chief of PCC's Knowledge Management Division (KMD) and project-leader of FLS-DBP, disclosed that the FLS-DBP is now undertaken in different places in the country with the help of the different PCC regional centers. Presently, simultaneous implementation of the FLS-DBP for small hold farmers is on-going in Polanco, Zamboanga del Norte, Ipil, Zamboanga Sibugay, Don Carlos, Bukidnon, Lal-lo, Cagayan and Bangui, Ilocos Norte. Another one is set to be launched this December in Sto. Niño, South Cotabato. Dr. Palacpac plans to evaluate the project's impact either in Lal-lo, Cagayan or Bangui, Ilocos Norte as his activity under the IFP alumni award (see related article on FLS-DBP on page 4).



The new members of PhilEASNet, which include the staff from PCC's Knowledge Management Division, taking their oath at The Heritage Hotel Manila in Pasay City last October 4.

## Stronger harmonization of EAS efforts urged

By Charlene Joanino

The PCC's Knowledge Management Division staff and representatives from various agencies and local government units all over the Philippines gathered to broaden their view on various efforts on Extension and Advisory Services (EAS) last October 3-4 in the annual Philippine Extension and Advisory Services Network Inc. (PhilEASNet) Extension Policy Symposium at the Heritage Hotel Manila, Pasay City.

With the theme "Strengthening the Harmonization of the Philippine Extension and Advisory Services for Sustainable Development", the symposium was anchored on engaging EAS practitioners in discourse, raising awareness on expanding EAS, rendering policy recommendations, and exploring strategic alliances.

"We hope to enhance our competencies in doing extension through a conversation with experts who will be sharing challenges and opportunities towards harmonizing

extension", said Dr. Karen Eloisa Barroga, PhilEASNet president.

The explored cases as discussed by practitioners at the national level delved in the fields of Rice, Livestock, Agrarian Reform, Food and Nutrition, Trade and Industry, Community Development (NGO), Forestry and Natural Resources, and Technical and Vocational Education.

"In the nitty-gritty world of extension and advisory services, we put premium on people who can integrate everything", Dr. Segfredo Serrano, Department of Agriculture Undersecretary for Policy and Planning, underscored in his keynote speech.

He further challenged participants to "catch (engage) the youth" and be bolder in addressing new EAS resolutions and recommendations to make these initiatives felt on the ground.

The attendees participated in a

workshop aimed at crafting policy recommendations. They were subdivided into four groups, each of which was assigned specific topics on capability building, knowledge management, partnership, and governance and enabling environment.

The two-day symposium was spearheaded by PhilEASNet national and hosted by its MIMAROPA chapter officers. PhilEASNet's primary mission is to enhance competency and promote ethical standards among professionals engaged in the practice, research, instruction and policy advocacy on EAS.

The co-sponsors of the event were PCC, Agricultural Training Institute, Bureau of Agricultural Research, Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development, PhilRice-Philippine Rice Information System, and Asia Pacific Islands Rural Advisory Services Network.

## Malaysian delegates get briefing about PCC's breeding strategies; also make a visit to other agencies in the Science City of Muñoz

By Charlene Corpuz



A delegation of high profile officials of Malaysia which also included a World Bank (WB) official visited the Philippine Carabao Center (PCC) and got first-hand knowledge on what the agency has done and is doing as regards carabao dairying and related industries that it has spawned in the country.

The delegation, headed by Mr. Samuel Taffesse, Senior Agriculture Economist of the WB, was composed of 10 members who were mostly officials of Malaysia's Ministry of Agriculture and Agro-Based Industry.

It included Engku Zakir Hussein bin Syed Abdullah, Deputy Director, Agriculture Section, Economic Planning Unit (EPU) of Malaysia's Ministry of Economic Affairs (MEA).

The study visit was part of the WB-funded "Agricultural Transformation and Inclusive Growth: Malaysia-Philippines Two-Way Knowledge Exchange Program."

After their visit to the PCC, they also toured other attached agencies of Department of Agriculture (DA) such as Philippine Center for Postharvest Development and Mechanization (PhilMech), Philippine Rice Research Institute (PhilRice). They are also scheduled to visit various agricultural projects in Mindanao.

Welcomed by PCC officials headed by Executive Director Dr. Arnel N. del Barrio, the delegation started off their visit to this agency by having a walking tour of its Central Dairy Collecting and Processing Facility (CDCPF). It then later provided opportunities for the tasting of the dairy products produced by Milka Krem, which serves as the PCC's showcase of buffalo milk-based business utilizing farmer's milk produce.

Dr. del Barrio, in his message to the delegates, said that their visit, coupled by their sharing of their own experiences, knowledge, best-

practices, and technologies in the fields of agriculture, would surely benefit Malaysia and the Philippines.

The PCC executive director also briefed the delegation about the agency's Carabao-Based Enterprise Development (CBED), adding that more than 300 cooperatives nationwide are currently involved in the program with assistance from PCC.

He expressed gratitude to the WB for selecting PCC as one of the agencies to be visited by the delegation.

Dr. Eric P. Palacpac, chief of PCC's Knowledge Management Division, on the other hand, discussed the breeding technologies developed by PCC in relation to the agency's Genetic Improvement Program (GIP).

The visitors were also given a tour and briefing of the PCC's national buffalo genepool and cryobank facility.



Malaysian delegates with some of the officials of the Philippine Carabao Center (PCC) during their visit at PCC last November 21.

From page 9

## PCC researchers reap awards...

In the election for the governing council members and PSAS chapter officers for 2018-2019, Dr. Synan S. Baguio of the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD) was elected vice president and is automatically the incoming president after next year's convention.

During the closing ceremony, Dr. Enrico Supangco, PSAS incumbent president turned over the flag of responsibility to Dr. Ester B. Flores, head of PCC's Animal Genomics and Bioinformatics Unit, the incoming PSAS president.

Dr. Flores bared her plans and directions saying: "I can probably promise that we, the association and the governing council, will try to cultivate more or expand the reach or even the collaborations and the linkage of PSAS outside the country."

She added that they will also have more collaborative activities with their local chapters and that they would want and plan to formally have PSAS as a Continuing Professional Development (CPD) provider both for veterinarians and agriculturists.

Addressing the new members of the association which are mostly "millennials", she said: "It is also high time that the PSAS will move forward a bit more to become tech-savvy by exploring the use of internet and electronically-based services for registration and member's database, among others."

"We will try to explore that because that is what we will be needing now that we are in the internet age," she further said.

The PSAS is a professional non-profit organization comprised of

veterinarians, animal scientists and practitioners in related fields across the country conducting researches relevant to the developments in the field of animal science. Its annual scientific seminar and convention serves as venue for knowledge-sharing through presentations of scientific papers and posters as well as plenary sessions tackling issues and challenges confronting the industry.

This year's convention revolved on the theme "Animal Health Management: A Critical Control Point for Food Safety", which was meant to highlight the role of animal producers in providing nutritious and safe food for Filipino families.

Over 500 representatives from across the industry and academe participated in the annual convention.

## Cooperation pushes big progress in buffalo dairying at PCC@VSU

By Charlene Corpuz  
Translated by Charlene Joanino  
Photos by PCC@VSU



**In aspirations intended to optimize opportunities for success, the key is working together. This is exemplified in Baybay, Leyte where the people engaged in carabao dairying, work closely with one another.**

Due to ardent cooperation, the PCC at Visayas State University (PCC@VSU) attains high production of milk from island-born Bulgarian Murrah Buffaloes (BMB). The rearing of a herd of dairy buffaloes at PCC-VSU started in 1998.

The buffaloes they tend, according to Dr. Ivy Fe Lopez, OIC director of PCC@VSU, have good genetics so what needs to be done to achieve higher milk production is proper care and management by the people looking after them.

“Their good genetics dictates their

capacity to produce high milk volume,” Dr. Lopez explained.

“What needs to be taken care of are their proper diet, regular monitoring for the maintenance of their right body condition and health, and their intake of appropriate vitamins and others,” she added.

She noted that in terms of feeding, in early morning they give proper ration of feed with concentrates to the animals. Their workers also take the animals out of their corral to allow them to feed on fresh humidicola and guinea grasses. After feeding, they lead the buffaloes to drink clean water and allow them to wallow in the pond to cool themselves.

Rice straw and molasses are also set aside for the animals’ consumption. Dr. Lopez explained that the said strategy is religiously done by their

workers before and after the milk collection.

“It is important to ensure the good body condition of the dairy buffaloes before the milking session. It is also important to make sure that they have cooled down and had satisfied their hanker for feed,” Dr. Lopez said.

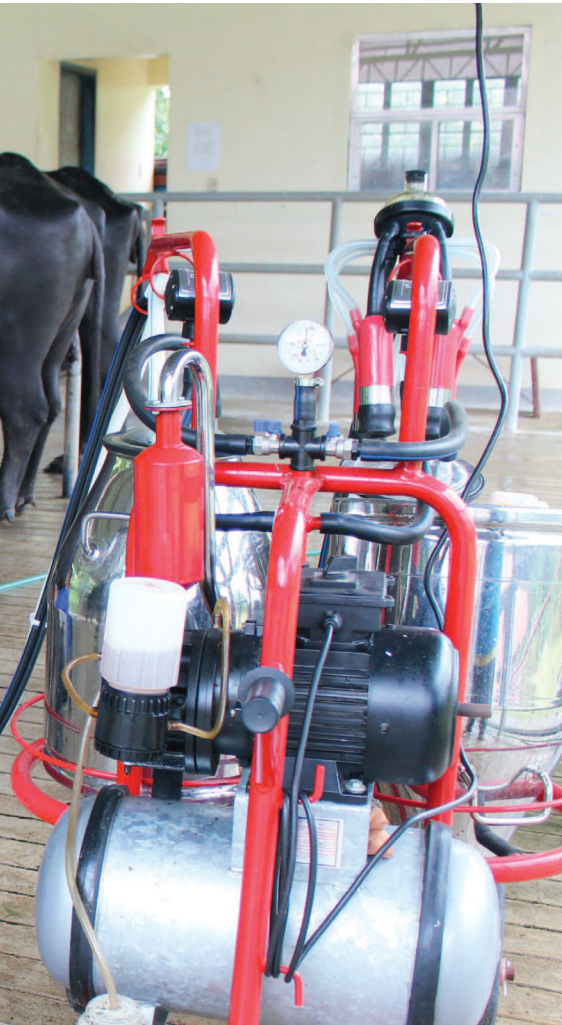
“They should also have the right amount of feed in their feeding tray after the milking procedure,” she added.

### **Milk Collection and Processing**

Based on the gathered data, milk production averages 5 liters per buffalo per day. On their peak season, it ranged 7-18 liters.

From the milk collected, the PCC-VSU makes sure that the calves get to suck about 30 percent of their respective





The PCC at Visayas State University (PCC@VSU) attains high production of milk from island born Bulgarian Murrah Buffaloes (BMB). Based on the gathered data, milk production averages 5 liters per buffalo per day. On their peak season, it averaged 7-18 liters. Said performance is only possible through proper management of buffaloes and the teamwork of PCC@VSU's staff.

mother's milk volume. The rest are sent to the Baybay Dairy Cooperative (BDC), which buys them at Php50 per liter.

The usual volume supplied by PCC@VSU to BDC is from 100-150 liters of milk per day.

BDC processes the milk into products such as fresh milk, choco milk, mango pandan, ice cream, ice candy, pastillas, milk-o-gel and white cheese for market distribution. Apart from walk-in clients, the coops' usual customers are students and Indian nationals.

"We make sure that each of the PCC@VSU staff involved in the project works cooperatively with the others to ensure an increasing rate of milk production of our dairy buffalo herd," Dr. Lopez said.



# World-class women's adornments from carabao's horns

By Khrizie Evert Padre  
Translated by Charlene Joanino  
Photos by Rowena Bumanlag



**For many, the carabao's horn is a by-product or worthless something, fit to be thrown away.**

For Nida Danao, however, they are materials worthy for transforming them into premium body adornments comparable to expensive jewelries particularly those that are worn by women.

Her established "Silnag Horn Jewelry" is a proof of it. "Silnag", in the Iloko dialect, means the light brought by the rising sun.

Her establishment depicts hope and aspiration of talented Filipino artisans whose abilities are unmatched when it comes to fashioning adornment

from the carabao's horns.

This is what Nida said who is the mind behind the making of world class adornments for the body.

With the help of her husband John, she turned into reality what she had been pondering about as regards body adornments. Their venture in Bulacan produces that are displayed and bought by enthusiastic customers in boutique shops and high end stores and malls not only in the country but in the United States (US), Japan, Hong Kong, and Europe as well.

## The beginning

In 2006, the couple took a vacation

in the US bringing with them adornments made from carabao's horns from their personal capital of Php50,000. Exhibited in New York, many of their products were sold out easily. This experience then fueled an urge for them to continue it as a business undertaking.

Nida, who was also then involved in selling organic vegetable from Benguet during Sundays market, included displaying their adornments products. Realizing that they were "saleable", they soon joined exhibits and trade shows including promotions in bazaar.

This paved the way to catch the interest of the owner of a prestigious



“The fashion industry puts emphasis on the creation of products made from eco-friendly materials such as those from carabao by-products, shells, scrap wood and seeds. We use materials from animals that isn’t included in the prohibited list of the Convention on International Trade of Endangered Species or CITES.”

**Nida Danao**  
 Owner, Silnag Horn Jewelry



department store that had branches all over the Philippines. This chain of department stores sells, among many items, famous branded products from different parts of the world.

“When we first started joining local bazaars, we were surprised that our products were well received by people. They told us that it has a unique vibe and fits well to the green fashion trend because our materials are eco-friendly,” Nida said.

For Nida, her being from Benguet, was the reason why she had the inspiration in designing her products. This allowed her, too, to promote in her own way her home province.

“My beautiful experiences in my home town molded me from childhood to become inspired in making adornments from natural materials found in the environment,” Nida stated.

Nida has a bloodline from a Kankanaey tribe in Benguet. Her homeplace is blessed with mountain ranges and surroundings that offer picturesque landscapes enriched further by the unique culture and tradition of the residents of their community.

Her deep connection with her environment can be mirrored in every masterpiece products she creates.

According to her, their community highly values the carabao including its horns which are used to adorn homes as a symbol of luxury.

“In our culture, one’s riches are measured by the number of carabaos owned. Also, one way of sharing good fortune in harvest is by performing the cañao ritual in which a carabao is slaughtered to serve as food to be shared by the community during celebration,” Nida said.

Although Nida didn’t take formal lessons in creating adornment, she got her talent in creating adornments during her childhood days. She recalled developing an innate passion

**Next page**



**From page 21**

for it from her participation in their usual practice of creating adornment out of those they saw from the environment like leaves, branches and plant seeds.

“I made adornments then as playthings and even gave them to my playmates,” Nida said.

The hobby of her grandmother in creating adornment from the bones of snakes and carabao horns for personal usage also served as her inspiration.

Nida grew up with a simple lifestyle. From childhood she and her eight siblings learned to work. They engaged in farm works and sold vegetables which was then the source of livelihood of their parents.

“In the past, as long as you can move your hands, you have to work.

Our parents served as our guide in doing our best in both our works and studies,” Nida reminisced.

To fund her studies, Nida worked in a convent. She served as the cleaner of the church and the nun’s quarters. Sometimes she would also participate in church activities.

“I really worked hard to complete and earn my Bachelor of Science in Education degree at St. Mary’s University in Nueva Vizcaya. Then I became a teacher in one of the schools there where I met and married my husband John,” she added.

While many things changed in Nida’s life, she didn’t forget her passion for creating adornment. It eventually enticed her to embrace it for a business enterprise.

“The fashion industry puts emphasis

on the creation of products made from eco-friendly materials such as those from carabao by-products, shells, scrap wood and seeds. We use materials from animals that are not included in the prohibited list of the Convention on International Trade of Endangered Species or CITES,” Nida explained.

According to her, their artisans make their products manually. In return, the artisans earn for a living, she added.

“Our supply of carabao horns comes from Manila and from the North. The suppliers remove the bone underneath the horn before bringing them to our shop in Bulacan,” Nida said.

According to her, the number of carabao horns supplied to her depends on her need. The materials are classified as “primera, segunda,

## Silnag's business mantra

RAW EARTH collections are eco-friendly since we use NATURAL/ORGANIC raw materials and not synthetic. We use horn, bone, nails, shell, wood and seeds. Our animal based materials are by-products of food so no animals are ever harmed for the purpose of obtaining raw materials.

From things that are thrown away, our artisans recycle and skillfully turned them into stunning pieces. By patronizing natural or organic collection, you help give livelihood to our local artisans and you help save Mother Earth.



Nida Danao, owner of Silnag Horn Jewelry

and tersiera klase” while others were from albino carabaos.

For Nida, making designs is based on her mood. There are times that she can create design in just hours but there are times, also, that she would count days before she could complete a design.

She makes a detailed sketch of an original design with attached direction on how the artisan would create it. From her inspiration based on the environment, like the image of a flying bird, falling leaf or rain drops, her adornment designs give anyone who would wear it a connection to the environment.

She has eight workers who serve as cutters, assemblers and quality control checker.

“Typically, a detailed design would

take 8-10 days before it becomes a finished product. But if it's a simple design, it will only take 3-5 days before it is finished,” Nida said.

She said that her talented cutters who skillfully cuts and polish the horns are from the Visayas.

From her cutters, the assemblers put together the materials based on her design. Nida then checks it before it is released to the market.

“We only make five to ten pieces in every design that we fashion out. If it's a limited edition product, we only make three pieces,” she noted.

She recalled that they were only few then when she started her business. But now, she said, there's a number of exporters who use carabao horns mixed with metal as their export

products.

“We use pure horns in our products to ensure they are eco-friendly,” Nida emphasized.

Nida added that in a prestigious department store where they usually supply their products, the women-buyers prefer much those that are unique and statement pieces. This is the preference of the store owner that's why there are many customers who patronize it.

According to John, they opt to continue creating handmade horn adornment with limited designs using natural components. And they feel fulfilled doing it.

“We are happy that through the Silnag Horn Jewelry, we are able to uplift and showcase the Filipino artisanship in the fashion industry,” John said.

From page 1

## Dairy industry thrives in San Agustin, Isabela



This laid-back town is home to 4,207 dairy buffaloes that are currently under the care of farmers being assisted by the Philippine Carabao Center (PCC) at Cagayan State University (PCC@CSU). If these animals will produce milk, then the local dairy industry is anticipated to boom in the province.

With this great potential in mind, PCC and the Philippine Council for Agriculture, Aquatic, and Natural Resources Research and Development (PCAARRD) collaborated on a project titled “Strengthening the San Agustin Crossbred Carabao-Based Enterprise Development (CBED) Model” to be funded by the latter.

Also called “Project 5”, this collaboration, which started in January 2016 and will end next year, aims to help dairy cooperatives in 23 barangays of San Agustin.

Dr. Kevin Dave Cho, project attending veterinarian, said the goal can be achieved with the full cooperation of dairy farmers in the town.

“We are aiming to create new associations out of the 10 unregistered farmers’ groups with the assistance of staff from PCC national headquarters including Hanah Halotjot, Armando Reyes, and Celso Quinet of PCC@CSU,” Dr. Cho said.

Relevant to this objective of boosting the carabao dairy industry in San Agustin, four other

related projects are also being implemented in partnership with PCAARRD in the fields of animal nutrition, breeding, health, and quality control of buffaloes’ milk.

Dairy farmers are also set to undergo social preparation training to maintain harmonious and productive relationship with their co-members in the association. A healthy relationship among members is seen as crucial to bringing the organization to collective success.

“While many farmers are used to tending their carabaos as they practically grew among these domesticated animals, most of them are still into the traditional methods of care and management. This is why we



know that the technologies of PCC on carabao raising and dairying can improve their livelihood”, Dr. Cho said.

With the string of PCC-led interventions that are laid out and implemented to promote dairying in the town, more and more farmers in San Agustin are gaining knowledge on the benefits of milking their dairy carabaos.

Those who are already milking their animals sell their produce to San Agustin Dairy Cooperative (SADACO) at Php50 per liter. Payouts are made on the 15th and 30th day of the month.

Among the dairy cooperatives in San Agustin, Sinoangan Sur Dairy Association (SSDA) headed by Chairman Genielex Raymundo

produces the highest milk yield. The chairman said this is a result of their constant campaign for members to engage in dairying.

SADACO serves as the marketing arm of all the milk produced in San Agustin with a processing plant manned by Joel Cabading who is also the manager of SADACO.

The project team estimated to produce 197,000 liters of milk within the three-year period of the campaign.

“Everyone here in San Agustin should realize that this vision is not an accountability and role of PCC alone but more of the barangay officials”, Dr. Cho emphasized.

Because of the cooperation between the implementers of the project and

the barangay officials, carabao owners have gained appreciation of dairying and are gradually shifting from traditional to PCC-recommended animal care and management.

For example, farmers previously did not like to sell the milk produced by their carabaos because they would rather feed it to the calves but this attitude has now changed.

As transformed perspective on dairying and the benefits of good practices on dairying are continuously observed, it is anticipated that toward the end of the project, what used to be a remote and shy town will soon gain its fair share of fame and fortune; in the dairy industry, that is.



Department of Agriculture  
**PHILIPPINE CARABAO CENTER**  
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# PCC NETWORK

**PCC has 12 regional centers strategically located nationwide: five centers in Luzon, four centers in the Visayas and three centers in Mindanao**

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