

# PCC Newsletter

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**As the breed  
of RP carabao improves,  
people, communities gallop**



# PCC Newsletter



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The PCC Newsletter welcomes industry-related articles not exceeding 800 words, with photos and corresponding caption.

Success stories of farmers, cooperatives, and other beneficiaries and stakeholders of the Carabao Development Program are preferred.

PCC encourages reproduction of articles from this publication with proper acknowledgment.

Topic suggestions and comments are also welcome.

Please send your articles and comments to email address [pccnewsletter@ic@gmail.com](mailto:pccnewsletter@ic@gmail.com) or mail them to

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# As the breed of RP carabao improves, people, communities gallop

BY ANSELMO S. ROQUE

**S**harp contrast delineated the life and times of the Philippine carabao.

In the past, which was for many, many centuries, this mammal came to be known as the “mainstay of Philippine agriculture” and a “great ally of the farmers” for myriad of uses.

Their other uses, aside from being the muscle power for farm works, like plowing and harrowing the lands, include pulling carts for transport of people and goods, for recreation, and to a limited extent, a source of milk and meat.

Artists, who depict rural scenes, don’t miss putting into the picture this rural folk’s beloved animal.

But the Philippine carabao over the years has become smaller in terms of size and weight due to many factors which included deterioration of its bloodlines.

Today, the “new” Philippine carabao is touted to be the big wave for development among farmers and rural communities. In the first place, they are now becoming bigger, meatier and their female kind ready to yield milk several folds better than the average output of the native carabaos.

The emergence of the “new” Philippine carabao is the result of the determined and concerted efforts to improve the breed of the carabao.

## The Philippine carabao

No one for sure can say when the Philippine carabao came to existence.

One account, on theories of its existence on Philippine soils, said that a long time ago, two land bridges connected the place which later became the Philippines to the mainland Asia. The early settlers arrived on foot bringing with them ancient fauna and flora.

It was possible that in this migration wave theory, the first carabaos in the Philippines were among the animals brought in by the migrants.

Another theory was that when the land bridges disappeared, the second group, the Indonesian, came by boat some 8,000

NEXT PAGE ►►

years ago. They lived by hunting, fishing, and farming. They could have brought also with them carabaos.

Then came the Malays, the first group coming in 200 B.C. and the last in 1300 A.D. They were said to be fun-loving people and among their favorite sports were “carabao-racing” and “carabao-fights”. They developed agriculture and “introduced the water buffalo” as a draft animal.

Archeological findings indicated that wood coffins found in the caves in Palawan which were used by the early settlers were designed in boat form decorated with dragons and carabao design. In Mindanao, one of the folk games in the olden times was “carabao fighting”.

In particular places in the country then, the carabao was a very precious “bride’s wealth” for “wedding matches”.

The carabao, which is called worldwide as water buffalo, has two main classifications. They are the swamp buffalo and the riverine buffalo. Those that were brought in to the country were of the swamp buffalo type.

In Philippine soils, the water buffalo took a distinct name – carabao. In Tagalog, it is *kalabaw*. Most probably, the name came from the Visayan or Cebuano word “*karabaw*” which was apparently from “*kerbau*”, the Malaysian and Indonesian local name for the water buffalo. The Visayan or Cebuano dialect is a close relative of the Tagalog dialect.

Notwithstanding the exact date of when the carabaos came into existence in the Philippines, accounts tended to prove that the carabao has been here in the Philippines since a long, long time ago.

In earlier times, this animal did not prosper much. Importations were done to increase its number and improve its breed.

Based on accounts gathered, in the mid-1500, the Philippines imported water buffaloes from China. In 1903, some 10,000 “swamp buffaloes” were imported from China and Kampuchea. In 1918, “riverine buffaloes” were imported from India while in 1955, “Nili Ravi” buffalo breed was imported also from India.

In the early 1900s, the carabao



THE lady dairy farmers of Calabalabaan do not only nurture their da

population was almost wiped out because of the onslaught of diseases, particularly rinderpest, and the locust infestations that destroyed much of the vegetations used for supporting the dietary needs of this animal. Some well-off individuals and the government brought in imported water buffaloes that eventually increased the carabao population in the country.

Thus in 1962, the carabao population in the Philippines was placed at 3.5 million. But then again in the 80s, the carabao population was noted to be fluctuating in certain years. It was 2.83 million in 1980, 3.01 million in 1984 and 2.84 in 1989. In 1990, it was 2.75 million and in 1992, 2.76 million. From 2005 up to the present, the carabao population in the Philippines has stabilized at around 3.3 million.

They were not big, compared to the hulking water buffaloes in other parts of the globe, particularly in India where the water buffalo is a big source of income for the people and the nation.

## Improving the carabao

Determined efforts to improve the carabao in terms of breed, population, health and other relevant aspects, had its beginning in 1973. The Philippine Council on Agriculture Research (PCAR), later Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), included research activities for the carabao.

In 1976, the research and development (R&D) for the Philippine carabao was assigned to a specific group, the Carabao

Commodity Team. This was a significant development as the R&D for the Philippine carabao was given exclusive attention, time and funding under a particular team.

The “strengthening of the carabao research and development project” put in place trailblazing activities for carabao improvement and development in the country.

But more than anything else, the biggest achievement in this project was the inspiration to give birth to the idea of effectively, efficiently, and permanently institutionalizing carabao improvement and development in the country. The idea eventually led to the enactment of a law that specifically mandates full attention not only to carabao improvement and development but also to the direly needed concomitant carabao-based industry in the country.

In 1992, the Philippine legislature passed a law, Republic Act 7307, titled “An Act Creating the Philippine Carabao Center to Propagate and Promote the Philippine Carabao and for Other Purposes”.

The legislative moves in the House of Representatives and in the Senate for the creation of PCC were initiated by PCARRD. The principal sponsor of the Senate bill was then Senator Joseph Estrada.

The approved bill was signed into law on March 27, 1992 by then President Corazon Aquino, Speaker Ramon Mitra and Senate President Neptali Gonzales.

On April 1, 1993, then President Fidel Ramos appointed Dr. Libertado C. Cruz as the first director of PCC. Since that time



...iry carabaos but take charge of milking them as

## COVER STORY

“Our goal is to have more than 3,000 crossbred by 2015,” Mayor Virgilio Padilla said.

The town holds an annual “Nuang (Carabao) Festival” in which the crossbreds are gathered and paraded in the town proper.

In the town’s blueprint for development, a robust carabao and meat industry is high in its agenda. The town also girds to be declared as the “Crossbred Carabao Capital of the Philippines”.

In Nueva Ecija, carabao dairying is giving big dividends to farmers and entrepreneurs. A total of 36 dairy cooperatives in the province is operating. They are members of the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO) which is based in San Ricardo, Talavera, Nueva Ecija.

About 1,000 to 1,200 liters of milk are

It benefited at least 1,300 farmers who are members of the dairy cooperatives.

From 1,000 purebred dairy buffaloes loaned out to Nueva Ecija coops under certain terms and conditions, a total of 3,250 crossbred calves were produced. Of this number, 1,7614 are females which have boosted milk production output.

At the PCC headquarters, Mozzarella cheese is produced and marketed in different places. A big production and marketing outlet, to be operated by a quasi-government entity, is set to operate soon.

to this day, Dr. Cruz aptly and judiciously steered the wheels of the PCC machinery.

Since then, lots of beautiful things went on the carabao’s way. For one, there is a world-class “center” dedicated for the improvement of its breed and for bringing to the intended clientele all that the improved carabao breed offers for the benefit of the people and communities.

The center’s main headquarters are in the Science City of Muñoz in Nueva Ecija. It has 13 regional centers in strategic places in the country.

Among others, the PCC has scored breakthroughs in employing biotechnologies for artificial insemination, multiple ovulation and embryo transfer, in vitro embryo production, ovum pick-up, oocyte and embryo cryopreservation, semen sexing, DNA-aided system and somatic cell nuclear transfer or cloning.

It has also developed, packaged and implemented programs and projects for the multiplication of improved breed of carabaos, and even purebred buffaloes, for the benefit of the farmers.

### ‘Businessizing’ the carabao

Now, in the hands of the intended clientele, the improved breed of carabaos is triggering a scintillating giant leap forward by people and communities.

In San Agustin, Isabela, the local government unit and the farmers are very much stirred as the number of the crossbred carabaos is now over a thousand. This number is expected to further multiply.



MORE and more farmers are gaining smiles as they move miles steps forward through dairy-

collected from the dairy farmers a day which is bought at P40 to P45 per liter. Half of the volume is sold as fresh milk while the rest is made for milk products such as *pastillas de leche*, pulvoron, lacto juice, *kesong puti*, chocolate milk, and others.

“In seven years, the total volume of milk produced in Nueva Ecija by the cooperatives was 1,741,163.71 million liters,” Wilma del Rosario, coordinator of the PCC National Impact Zone Program, said.

The gross income from this milk production was P62.7 million, she added.

The 139 members of the dairy cooperative in Gen. Trias, Cavite have reason to be always on cloud nine. They worry not about spending their money for their needs as “cash money will surely come again tomorrow”.

Their coop’s gross sales in April and May 2010, for example, were to the tune of P739,479 and P713,903, respectively. They are paid for the milk collected from them the following day without fail.

It is interesting to note that at the doorstep of the town’s imposing four-story

**CONTINUED ON PAGE 13**



## A RAGS-TO-RICHES tale

# Carabao raiser now sports posh SUV, hefty pocket

BY ROWENA GALANG-BUMANLAG

Only boiled papaya for dinner with no rice and nothing more. This was sluggishly consumed under a nipa roof that leaks during rainy days.

This was how Francisco Solis, dotingly called Ka Asis, reckoned his deprived childhood at an early age of 10. He hardly gone up the education ladder and was bereft of his parents' care at the age of 27.

Now, there is no other dairy farmer in General Trias, Cavite who delivers fresh carabao's milk and *kasilyo* (white cheese) to buyers—in a manner all his own—riding in a posh Ford Everest but Ka Asis.

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**The Ford Everest, his latest property acquisition in 2007, is a statement of the product of his hard work and a demonstration of the many benefits of dairying.**

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Ka Asis, 47, exudes pure joy for his career as a carabao raiser.

As a young boy at the age of 10, he used to tend his grandfather's three native carabaos. He said he carried that passion up to now as he confessed to have found "addiction" to dairying.



Ka Asis treaded small steps toward the comfort that he enjoys today.

He bought his first female crossbred carabao at P11,000. The money rolled up as wedding cash gifts from principal sponsors and guests during his and wife Teresita's wedding in 1991.

They also engaged in rice farming, tilling 3 hectares.

*"Nakaipon kami noon ng P12,000 mula lang sa pinagbilhan ng gatas [ng kalabaw].*

*Ibinenta ko din yung unang anak ng nabili kong crossbred. Iyong pinagbilhan, ibinili ko ulit ng isa pang inahin (We had savings of P12,000 from carabao's milk sales. I also sold the first calf of my first crossbred. The sales afforded me the purchase of another crossbred dam),"* Ka Asis said.

His crossbred carabaos grew to five head when he purchased three more from the Philippine Carabao Center at the University of the Philippines- Los Baños

(PCC at UPLB) in 2000. The newly acquired animals were all pregnant.

Ka Asis' wife, Teresita, played an integral role when it comes to watching over their finances.

*"Mautak ang asawa ko. Lagi niyang sinasabi na wala na kaming pera pero kapag kailangang-kailangan talaga, may nailalabas siya kaagad (My wife is wise. She would always tell me that we no longer have money but if we really need it, she can immediately disburse it),"* Ka Asis proudly shared.

At the peak of lactation period, the industrious gentleman collects 100 gin bottles or 33 liters of fresh milk from his five lactating cows. Sold at P30 per liter, he earns P3,000 per day.

Aside from supplying fresh milk to his customers, he also makes *kasilyo* to triple his profit. One bottle of milk, he said, can constitute three pieces of *kasilyo* which is sold at P20 each. That means that one bottle of milk can be translated to P60, three times more than the cost of fresh milk at P20.

*Kasilyo*, a Caviteño is term for white cheese or *kesong puti*, is a famous carabao's milk product in Cavite which is also the most coveted take-abroad by expatriates.

*Kasilyo* is formed on a hot water added with a small amount of vinegar. It is basically cooked with glowing coal underneath the pot. It takes less than a minute to make one *kasilyo*.

Finally, the end product is wrapped neatly in banana (*saba*) leaf. Ka Asis said that leaves of other banana varieties are not used for wrapping as they make the *kasilyo* taste bitter.

He delivers *kasilyo* in the nearby towns of Kawit, Imus and Binacayan, in style, that is, as he uses his Ford Everest.

Presently, Ka Asis' animal inventory consists of 13 purebreds and one crossbred.

*"Dati 23 ang mga kalabaw ko, pero karamihan nagkasakit at namatay. Talagang dapat tutok kapag nag-aalaga ng kalabaw pero ito rin ang pinakamaalwang alagaan (I used to own 23 carabaos, but most of them got sick and died. Raising carabaos really needs full attention but this animal is also the most convenient to take care of),"* Ka Asis said.

A caretaker, who is provided benefits of free meals, monthly allowance of P1,000

and one calf every year, helps him maintain his herd, Ka Asis said.

*"Madali lang turuan ang taong gumatas kapag sarili niya ang kalabaw at kapag natuto na siya, pati na yung sa akin ay magagatasan na din niya ng tama (It is easy to teach a man to milk if he owns the carabao and if he already mastered it, he can also milk mine in the right way),"* Ka Asis said, sharing his principle in terms of managing people.

Like any newlyweds would do, the couple also tried their stake on other livelihoods. Aside from dairying, they took on vegetable farming. They also went into production of water spinach (*kangkong*) and taro (*gabi*).

They likewise found an opportunity to earn during wakes as they would vend street food such as fertilized duck egg (*balut*) and fishball.

Sometime in the early years of their marriage, they also tried swine raising but had given it up realizing that expense for feeds was using up a bulk of their savings.

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## Because of the couple's remarkable hardwork and perfect tandem, their profits were augmented four-fold allowing them to enter into other businesses like operating passenger jeepneys.

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Ka Asis currently owns four jeepneys: 9-, 10-, 13-, and 16-seaters. These jeepneys cost him from a range of about P200,000 to P400,000 per unit.

This venture alone provides the family a pleasing income of P2,650 per day.

His P1.3 million-worth Ford Everest came in later in 2007.

Aside from these, he was also able to acquire one owner-type jeep, L200 van, tricycle, threshers and handtractors.

*"Kung hindi dahil sa paggagatas, hindi ko maipupundar ang mga sasakyan ko at hindi ko rin siguro mapag-aaral ang mga anak ko sa magandang eskwelahan (Had it not been because of milking, I wouldn't*

have acquired these vehicles and sent my children to reputable schools),"

 Ka Asis said.

He has three children with wife Teresita and all of them studied in private schools. The eldest is a graduating student in Nautical Engineering, the second is studying Hotel and Restaurant Management at San Sebastian College and the youngest is in high school at St. John's Academy.

*"Kapag may pinag-aaral kang mga anak at ikaw ay naggagatas ng kalabaw, hindi mo mararamdaman ang gastos (If you are paying for your children's education and you are into dairying, you won't feel the expenses),"* Ka Asis said.

Ka Asis, no doubt, is now enjoying a satisfying life.

*"Napakalaking bagay para sa akin ang pag-aalaga ng kalabaw para maitaguyod ko ang pamilya ko at makarating kung saan man ako ngayon (Carabao raising has been very helpful to me in providing for my family and in reaching the state where I am now),"* he said.

He added, *"Noon, kapag kinukuha akong mag-anak sa binyag, ni wala akong maisuot na matinong sapatos o damit, lagi lang akong nanghihiram. Alam yan ng mga kapit-bahay ko. (Before, when somebody asked me to stand as a godfather for a child who will be christened, I don't even have decent shoes or clothes to wear and I would always resort to borrowing. My neighbors can attest to that)."*

Now, Ka Asis said, whenever he is asked to act as one of the principal sponsors in a wedding, he can easily afford to give as gift not just gas range but also the matching tank, which is gas-filled at that.

*"Napakahirap ng buhay namin noon kaya nasabi ko sa sarili ko na magsisikap ako para sino man ang mapangasawa ko ay hindi magsisisi (My family had a hard time then that is why I promised myself that I will do my best so that whoever I marry will never have regrets),"* Ka Asis recalled.

Teresita smiled, as if saying that what his husband bragged about has actually come true.



Villalobos



Delos Santos



Monzon



Formes



Colos

# The dairy farmers of Cavite **Cash-strapped** no more!

BY ROWENA G. BUMANLAG

**O**ther farmers exert much energy to pull off a day's toil in their rice fields, or they rush farm work from the wee hours of the morning until the day wears out. In contrast, dairy farmers in Barangay Navarro, General Trias, Cavite take it easy. They are much lulled to convenience and not battered by hard work.

Reylito Monzon, Danilo Colos, Nicomedes Formes, Celestino delos Santos and Godofredo Villalobos breeze through the day easily. Theirs is a schedule of less than an hour of milking one carabao, tethering the animal for grazing and snatching a nap or two in the afternoon. That convenience is borne by the

knowledge that the milk produced by their dependable carabaos, mostly purebreds and crossbreds, has just been converted to cash.

Their problem every day is rather a "happy problem": how to spend the money that flows with the gushing milk from their milking buffaloes.

During gatherings, they would share a laugh about a statement expressed by one of the milkmen in the neighborhood: "*Ubusin na ang kita ngayon kasi bukas meron na naman* (let us spend every penny today because tomorrow, there's sure cash again)." Their "happy problem" can last up to 300 days or 10 months as this is the lactation period of carabaos.

Parenthetically, if a crossbred cow averages 5 liters of milk per day within 300 days and sells at P60 per liter, that sums up to P300 daily income or a total of P90,000 per cow every lactation period. That exactly is what is being obtained in Barangay Navarro.

Dairy farmers supplying fresh milk to the General Trias Dairy Raisers Multi-Purpose Cooperative (GTRMPC) are

paid P20 per gin bottle, with three bottles making up a liter.

Perhaps almost at the same hour of each day before the milk collector finishes his route in Navarro, over 100 milkmen are ready to turn their bottles of fresh carabao's milk to cash. It is something they look forward to every morning.

Payment for their milk is collected the following day. This is because the coop still has to conduct organoleptic (sensory) test before they can determine the price of milk sold to them.

The price for Class A or premium raw milk offered by the coop is P20 per bottle and P18 (10 percent lower) for Class B.

"*Sa kalabaw, hindi naman malaki ang gastos* (There is only very minimal expenditure in raising a carabao)," Formes said.

He owns five crossbred carabaos and earns an average of P300 to P360 per day.

Normally, farmers only incur an expense of about P24 for every 2 kilograms of concentrates that they feed their lactating cows per day. The carabaos' fodders are mostly Napier and native





(From left to right) PCC-UPLB center director Dr. Arnel del Barrio, livestock inspector Gaylord Aguilar and Gentry Dairy Raisers Multi-Purpose Cooperative Chairman Reylito Monzon appreciate that the local government unit of GenTri showcases the coop as its accomplishments were one of the highlights in the town's annual report.

grass. Barangay Navarro is rich for grazing, which makes raising carabao in the locality practically convenient.

The four milkmen radiated satisfaction as they share their experiences in carabao raising. They couldn't be happier, they said, fully aware that their carabaos can willingly and ably provide them easy income every day, year round.

Colos, a rice farmer cum carabao raiser with seven purebred and two crossbred carabaos, said that if he has to make a choice, he would rather raise more carabaos than plant rice. *"Sa pagsasaka ng palay, masyado kasing mataas ang gastos (In rice farming, investment is too high),"* he added.

*"Walang gawat sa paggagatas (There's no lean season in milking),"* he further said.

One of his carabaos, Colos shared, had a peak of 7 liters of milk per day.

Through the credit facility of the coop, Colos was granted a loan to acquire appliances and easily paid it with milk collected by the coop every day.

Delos Santos, who owns 10 crossbred carabaos, said *"Malaking tulong talaga ang kita mula sa paggagatas ng kalabaw sa aming mga magsasaka. Sa [pagtatanim ng] palay matagal ang paghihintay sa kita (Milking is indeed a great help for us farmers. In rice farming, waiting time for payback is very long)."*

Through the coop, camaraderie among farmer-members of the 'GenTri' coop has also grown stronger.

*"Iyong mga ibang farmers na hindi miyembro ng coop namin kahit paano naiinggit (Farmers who are not members of our cooperative now look at us with envy),"* Formes said.

*"Sa kalabaw, kapag sila'y nanganak, siguradong may tutulong gatas at siguradong kikita araw-araw. Hindi namin kailangang maghintay ng tatlo hanggang apat na buwan bago kumita. Sa palay, halos walang matira sa amin dahil maraming inaawas sa ani (A carabao, after giving birth, is sure to let off milk. We don't have to wait for three to four months before earning money. In rice farming, sometimes there is barely enough left to us because much is deducted from our harvest),"* he added.

Formes, just like the many other farmers who attested on the benefits of raising a carabao for milking, said that he is contented with how his carabao-based livelihood supported his family.

Colos echoed Formes' feeling as he enumerated the appliances that he was able to acquire with sales from milk: refrigerator, television set, stereo, gas range, DVD player and washing machine.

Other milkmen enthusiastically said that milking has afforded them enough

income for their children's education.

Villalobos shared, *"Ang asawa ko tagatanggap at tagaubos na lang ng pinagbilhan. Masaya sa paggagatas dahil ito na ang aming pinagkakakitaan. Wala rin akong maipintas sa PCC dahil lahat ng maibibigay nitong suporta ay ibinigay na sa amin."*

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**"My wife's role now is just to collect money that we earn from milk and spend it. We are truly happy to be engaged in dairying as this has become our source of income. I also don't have any negative thing to say about PCC because it has supported us in any way it can." —Villalobos**

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Navarro, one of the 33 barangays in General Trias, is considered the "milk spring" of this town with over 150 crossbreds and supplying more than 100 liters of carabao's milk to GTDRMPC. Majority of the farmer-members come from this barangay.

# GenTri's Best: Dairy Farmers' Best

BY ROWENA G. BUMANLAG



**B**oasting a scenic landscape with a historical background as the Philippines' cradle of revolution and independence to boot, Cavite is popularly becoming an industrial hub and tourists' detour south of Manila.

General Trias, one of its towns, boasts of something that it can be truly called its own—GenTri's Best.

GenTri's Best is popularly gaining appeal among local and international buyers and even to distributors and smallhold entrepreneurs who crave for

regular doses of fresh carabao's milk and its derived products.

These products are manufactured and distributed by the General Trias Dairy Raisers Multi-Purpose Cooperative (GTRMPC) in Cavite.

GTRMPC is a venue of opportunities for earning additional income among hundreds of dairy farmers in General Trias. It also currently endeavors to extend its noble mission to more carabao raisers in the nearby towns of Imus, Maragondon, Naic and Tanza.

## Humble beginnings

General Trias is considered the Municipality of Crossbred Buffaloes of the South being "home" to a significant crossbred buffalo population in Cavite.

GenTri is one of the identified impact zones of PCC at UPLB, where strategic

interventions and support are provided to fast-track the development and promotion of carabao-based enterprises.

Infusion of purebred buffaloes in Cavite started in 1980 through the then Central Luzon State University President Amado Campos. From then on, the conduct of artificial insemination (AI) services was initiated and strengthened and later complemented with the massive bull loan program in 2003 to 2005.

"AI and bull loan services were the strategies that resulted in the increase of crossbreds in the area. Crossbreeding was extensively conducted to hasten the propagation of crossbreds that are way better producers of milk compared to our native carabaos," Dr. Arnel del Barrio, center director of PCC at UPLB, said.

Recognizing the suitability of GenTri as a template for dairying, PCC at UPLB implemented the Carabao Development



Program (CDP) in 1997 in selected municipalities in Cavite, including GenTri. Other municipalities included Dasmariñas, Imus, Maragondon, Naic and Tanza.

GenTri's Municipal Agriculture Office then organized livestock raisers into a cooperative.

Several years of bringing together efforts to realize the impact of the government's CDP in Cavite eventually led to the founding of the GTDRMPC in April 2005 with the primary objective of promoting dairying among livestock raisers in the area.

Initially, the cooperative had 44 members. As of 2009, the number of its members increased to 139, 70 of whom sell their milk harvest to the coop.

All processing requirements, such as kitchen-type processing area, freezer, and kitchen utensils, were initially provided by the local government. Production and

processing were done on a "bayanihan" system then and processed only two products: kesong puti and chocomilk.

The coop has a total asset amounting to P2,219,698 as of end-2009. Its initial capital was only P14,000.

It currently maintains eight staff engaged in management, processing, milk quality testing, bookkeeping and milk collection.

Its processing capabilities were strengthened by the assistance given by the PCC at UPLB. It is now processing 21 dairy products and variants. These are: kesong puti, kasilyo, pastillas, chocomilk, strawberry milk, pasteurized fresh milk, Milk-O-Gel, ice candy and yogurt.

These products are now GenTri's One-Town One-Product (OTOP) items which merited for the coop as the "Best OTOP project implementer" in the municipality.

milking our carabaos, we have cash in our pockets)," Monzon said.

Celestino delos Santos, another coop member, said that the coop has significantly helped them in their financial needs especially during payment of tuition fees for their children.

*"Nagbibigay ang coop ng loan sa mga miyembro at nagbabayad kami sa pamamagitan ng gatas na araw-araw naming dinadala sa coop. Para sa amin, napakagaan ng ganitong sistema dahil hindi namin halos namamalayan ang gastos sa pagpapaaral (The coop provides loan to members and we repay it through the milk that we bring to the coop every day. For us, it's a very convenient arrangement that we don't even notice the cost of sending our children to school),"* delos Santos said.

Gaylord Aguilar, the livestock inspector

## General Trias Dairy Raisers Multi-Purpose Cooperative is a model dairy enterprise as it recently won as "Outstanding Agri-Entrepreneur" for Gawad Saka 2010 in Region IV-A.

who has been working with the dairy farmers since the project started, attested that the dairy farmers in GenTri are truly enjoying their state now that they are already benefitting from their lactating cows.

He added, "They used to depend only on their rice harvest for their income which takes about three to four months before they enjoy having cash money. Now, they feel they are much blessed because of the daily income that their carabaos produce for them."

The farmers agreed in unison, saying that their membership in the coop, and as dairy farmers, is providing them great rewards.

The farmers sell their milk harvest to the coop at P20 per gin bottle, with three bottles making up a liter. A crossbred carabao can usually give an average of 4 to 5 liters of delectable milk per day that lasts

GTDRMPC is under the stewardship of PCC at UPLB and the LGU of General Trias.

Just recently, it was named "Outstanding Agri-Entrepreneur" for Gawad Saka 2010 in Region IV-A.

### Proud members

Reylito Monzon, chairman of GTDRMPC, said that being a member of the coop has provided them many benefits. They can now breeze through the day easily without too much worrying where they can get cash for their family's needs, he revealed.

*"Lahat kami dito, malaki ang pakinabang sa paggagatas. Hindi namin problema ang cash araw-araw dahil sigurado na habang ginagatasan namin ang mga kalabaw namin, may pera kami sa balsa (All of us here benefitted from dairying. Having cash everyday is no longer a problem because as long as we are*

CONTINUED ON NEXT PAGE



**“MR. MOO’S” outlet in Tagaytay City is a favorite snack bar and pasalubong center among tourists and even local folks.**



**“HARVESTING 100 liters a day may still be a small business in the eyes of many. But, for us at PCC, it is already a big business because it is touching the lives of many people. Multiplying the beneficial effects to many other people is another bigger job,” – Dr. Arnel del Barrio**

for about 300 days of lactation period.

According to Dr. del Barrio, the dairy farmers acquired properties out of their milk sales.

Most of them have purchased basic appliances such as television set, washing machine, stereo, DVD player, gas range and refrigerator.

One member, Francisco Solis, who is now a model carabao-based entrepreneur in GenTri, even acquired a posh Ford Everest out of milking. Solis’ herd is now comprised of 14 crossbreds.

Aside from the Everest, Solis’ collection of vehicles include: four passenger jeepneys, an owner-type jeep, an L200 van, a tricycle, two threshers and two handtractors.

De los Santos said, *“Napakagandang maging miyembro ng coop, lahat kami ngayon nakikinabang. Masaya kami na ginagawa ng PCC ang lahat para mas maging mainam ang aming kita mula sa aming hanap-buhay* (It is good to be a member of the coop, all of us are now enjoying the gains. We are happy that PCC is giving its full support so that we can maximize profit from our livelihood).”

## GenTri’s Best

Currently, the coop is collecting an average of 250 liters of milk per day from dairy farmers. This is processed to 21 dairy

products and variants, including: *kesong puti*, *kasilyo*, *pastillas de leche*, chocomilk, strawberry milk, pasteurized fresh milk, Milk-O-Gel, ice candy and yogurt.

Now, GTDRMPC has a modern processing center, which is a multi-million collaborative project of the local government of GenTri, Korea International Cooperating Agency (KOICA) and the PCC. It is equipped with a 500-liter capacity fill line processing system.

Complementing this state-of-the-art facility is a quality assurance system where guidelines and best practices for milk collection and processing are strictly implemented and followed.

“Mr. Moo”, a carabao’s milk retail outlet owned by Mike Mercado with branches in Tagaytay City, Silang, Cavite and South Supermarket in Alabang, is the major buyer of the coop. The deal with “Mr. Moo” was sealed five years ago, with its increasing number of patrons, the deal is seen to last long.

Other loyal customers are town folks and tourists who crave for their regular dose of fresh carabao’s milk and its derived products.

In 2009, the coop registered gross sales amounting to P5,722,419.30 with a net profit of P825,733.59.

Members of the coop regularly attend capacity building activities on animal

management, crossbreeding, dairy processing, proper milk handling and quality control, packaging, marketing, record management and entrepreneurship.

These activities are supported and facilitated by its partner agencies: PCC at UPLB, provincial and municipal government units, Department of Trade and Industry (DTI) and the Department of Science and Technology-Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (DOST-PCARRD).

## Strong LGU support

Industrialization and agricultural modernization are the priority areas of the current administration of GenTri, led by Mayor Luis A. Ferrer IV, in its development agenda.

From the very start of the project, the LGU has extended full support to the carabao development program in the area.

Nerissa Marquez, GenTri’s hard-working municipal agricultural officer, said that since she worked closely with PCC at UPLB in 1997 on the onset of CDP implementation, the local government displayed deep cooperation and support to the program.

“We started collaboration in the AI program. The LGU willingly assumed payment of insurance for the dairy animals

dispersed in the family modules including hauling of bulls and heifers,” Marquez said.

She added that the LGU likewise allotted a budget for its Livestock Development Program which is intended for farmers’ trainings and other support system.

With regard to GTDRMPC support, the LGU takes on a major role in the much needed logistics in ensuring that the coop runs competently and successfully.

It provides assistance in the registration of the coop and in the formulation of its by-laws and guidelines. The LGU, Marquez said, implements a strong support mechanism in terms of helping the coop obtain funding from different agencies.

“We are truly lucky for having Mayor Ferrer at the helm of implementing livestock programs in GenTri. He gave full support to the establishment of the coop. He even dispatched a driver to go around the town to offer the products of the coop,” Marquez said.

She added that Mayor Ferrer even sent out a letter to all schools and other establishments in the town to patronize GenTri’s Best products.

Recently, the diligent town chief committed to provide a delivery van for the coop to ensure that the freshness of milk

products is maintained.

Marquez further said, “We, at the local government, aim at sustaining and expanding the operations of the coop in terms of collecting milk from other barangays and promoting the establishment of more carabao-based enterprises.”

During its initial operation, the coop was supported by the United Nations Development Fund for Women (UNIFEM). UNIFEM provided for the funding of 20 dairy heifers aimed at augmenting the milk production of the cooperative.

### **PCC guidance**

Establishing an active cooperative of dairy farmers in GenTri was long etched in Dr. del Barrio’s dream. He said that his target in realizing this dream was within five years but it took him eight years to realize the dream.

Nevertheless, it’s a dream worth realizing as it has now made hundreds of dairy farmers and their families enjoy the benefits of their hard work.

“The number of crossbreds is just an inventory but how to make profit out of them matters most. Harvesting 100 liters a day may still be a small business in the eyes of many. But, for us at PCC, it is already a

big business because it is touching the lives of many people. Multiplying the beneficial effects to many other people is another bigger job,” Dr. del Barrio said.

GTDRMPC chairman Reylito Monzon said, “*Lahat na ng suporta ay ibinigay ng PCC sa amin. Napakalaking tulong sa aming kabuhayan ng PCC* (PCC extended all the support to us. It has greatly helped us in our livelihood).”

He added that the coop projects to reach net sales of P800,000 to P900,000 by year-end. This, Monzon said, is attainable as long as they have the support of their partners.

PCC envisions expansion of the cooperative in terms of coverage, eventually collecting milk from Imus, Maragondon, Naic and Tanza.

“I dream of helping these farmers further succeed in dairying and I am optimistic that they will continue creating employment in their smallhold carabao-based enterprises few years from now,” Dr. del Barrio said.

## **AS THE BREED... from page 3**

town hall, milk and milk products are not only advertised well but are sold as well.

Individual farmer-entrepreneurs have also shown success in buffalo dairying. A private entrepreneur, Danilo Fausto of Talavera, Nueva Ecija, has put up the DVF Farm which is engaged in milk production and processing of milk into various products. His enterprise is thriving and is well-known not only in the province but in some other places.

Another entrepreneur in Talavera town, Engr. Jaime Ramos has at least 45 purebred buffaloes, 25 calves, two bulls, two work animals and two crossbreds in his semi-commercial farm. He makes at least a million-peso income a year for his enterprise.

In San Jose City, Salvador Tobias, an active member of the “Simula ng Panibagong Bukas Primary Multi-purpose Cooperative” was the 2009 “Best Buffalo

Dairy Farmer” during the PCC’s anniversary celebration. His buffaloes produce from 18 to 20 liters of milk a day.

There are many more achievers in carabao-based enterprise in the country. They are compiled in a PCC’s book titled “Beyond the Draft Animal”.

### **Looking forward**

The achievements of entities and individuals who are making good in their undertaking on carabao improvement and cashing in on the benefits that the improved breed bring about seem to warm the cockles of the heart.

Yet, the full flowering of a robust carabao-based enterprise in the country is still yet to come. When that time comes, it will certainly mean that another multi-billion-peso industry is throbbing in the country.

Not yet palpable is a local carabao meat industry. As well as an industry for the products derived from the animal’s horn

and bones.

For the industries involved in carabao, they certainly mean huge sums of money. For milk and milk products alone, the country is importing year in and year out millions of dollars worth of these products.

For employment, the workforce needed for tending the carabaos and for the carabao-based industries run into hundreds of thousands.

Without doubt, the outlook for the proliferation of the improved breed of carabaos and the industries that they can inspire and keep going is tantalizing.

And that means something good for the people and communities expecting for that single engine for growth and development – the carabao which is regarded as a lowly animal no more.

**C**onfronted with varying difficulties in life, they almost decided to give up and just wallow in despair. Not until the carabao dairying project reached their place and their daily lives changed.

They are the housewives of barangay Calabalabaan, Science City of Muñoz in Nueva Ecija.

In Calabalabaan, a great number of the population depends mainly on rice and onion production. The community is blanketed with colossal rice fields. Most of the time, the major loads in farming are shouldered by the males while women, or their wives, stay at home doing household chores and taking care of their children. When time permits, the women sometimes help in the rice fields' works.

But Calabalabaan is now in a different perspective. The community is not only

dominated with rice fields but with beasts swarming around the place. They are beasts but are "beauties" in the eyes of many.

These beasts are the dairy carabaos.

Standing tall with their carabaos, these people found better livelihood making their own money and winning their family's bread and butter. What is unique, and tremendously inspiring at that, is the fact that these people are all women.

The women in barangay Calabalabaan are banded by the Angat-Buhay Producers' Cooperative (ABPC). The cooperative sprang out of the 15-member Rural Improvement Club (RIC) in 1999 which carried out, as main livelihood project, swine raising.

The members were then provided with piglets to raise. After months of waiting, they were rewarded in their efforts by incomes barely enough for their family's needs. The escalating production cost made their margin of profit unattractive.

In October 1999, the group learned about the PCC's 25-heifer dairy buffalo module project and opted to avail of it.

As part of the PCC requirements, the members attended series of seminars and trainings on cooperative and buffalo management. They also invited other housewives to join them to complete the initial number of 25 members for the 25 head of dairy buffaloes.

They put up carabao sheds and allotted plots for pastures.

Two years later, the women started milking the carabaos and had a total of 2,588.50 liters of milk which generated the group an initial income of P82,832. This benchmarked the hope for the Calabalabaan women that based on their initial success, carabao dairying is an enticing venture which can help uplift their lives.

"Milking the carabaos at four in the morning has already become our morning ritual," said Cora, one among the coop members.

Over the years, they chalked-up an aggregate total earnings of more than P8 million out of the sales from milk alone, she said.

"Our members now have more than

## The housewives of Calabalabaan 'Carabao dairying makes our daily lives a breeze'



BY JOAHNA G. GOYAGOY

200 quality dairy carabaos,” Belinda Parugrug, the coop’s chair, said.

The active participation of its member made them renowned as hall of fame awardee for “Best Dairy Cooperative” in Nueva Ecija.

From the prizes they gained from the different awards they received, it enabled them to further strengthen their programs and services to their members. They are now capable of providing soft loan and emergency loans to their members. They also provide daily grocery needs of the members to be paid from their daily milk productions.

Now, they have better lives and are constantly keeping pace with the growing costs of living and now binding themselves miles step forward from where they first started.

### ‘Ugly’ cow metamorphosed

With what she thought was an “ugly” Bulgarian Murrah buffalo given to her in October 1999, Marites Avila, 36, who is a coop member, had doubts that the animal would live long.

Surprisingly, the “ugly” buffalo was able to give birth after two years. This motivated her and husband Donato in milking the animal.

Before the dairy carabao came into Marites’ life, she and her family were depending on a leased one-hectare rice field for a living. Unfortunately, the yield wasn’t always good that most of the time, they ended up saddled with debt.

“I even thought then of going abroad to augment our meager income from rice farming,” Marites exclaimed.

When the milking of the animal started, it sparked both hope and excitement to the couple. It provided fire to their enthusiasm to give extra care and management to the carabao.

From one single buffalo loaned to her by PCC, it grew in number to 15 in which eight were sold for P18,000 each. As of now, she has five Bulgarian and two Brazilian Murrah buffaloes.

From the milk sales, the couple was able to buy a house and a lot, a motorcycle, appliances, support the education of their children, fund the in-farm operation and provide cash money to sustain their basic daily needs.

Interestingly, her “ugly” cow metamorphosed into “Best Dairy Carabao”



MEMBERS of the Angat Buhay Producers’ Cooperative are among the farmers selected to pilot the Science and Technology-Based Farm project of PCC and Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) which is the use of the portable milking machine. The coop now has one unit scheduled for use by each of the members.

under the smallhold category for two consecutive years which were in 2005 and 2006. The award was given by PCC.

“Masaya ako dahil kahit babae ako, kaya ko pala (I am proud because I was able to prove that I can do it despite being a woman),” she said.

Marites proved to be more superior than other dairy carabao raisers, mostly males, from the different dairy cooperatives in the different regional centers of PCC who were considered for the award.

Marites no longer wishes to go abroad to work but to have vacation instead.

### Education from daily milk

Just like any other families in barangay Calabalabaan, Cora de Guzman and her family relied on the scant produce from rice farming. Life also became almost unbearable as their needs got even higher as they have to send their children to school.

Cora and husband Dante have four kids, namely: Daryl, 14; Darwin, 12; Daniel, 10; and Danica, six.

For years, their lives revolved around the income they get from being a tenant of Cora’s brother. And sometimes, they didn’t even get much when the produce was very low.

Their lives, however, changed for the better when Cora’s aunt, who was a former member of the cooperative, gave her the buffalo she got as a farmer-trustee of the 25-dairy buffalo module.

In 2001, the cow started to produce milk at 6 liters per day. It meant daily cash flow.

From one cow, they now have 17 dairy carabaos.

In 2009, she earned P108, 944.50 and P50,000 for selling male carabaos.

The education of her children is even funded mainly by dairying.

“Since I started on this project, I was able to send my children to school with no more worries where to get their daily allowance,” Cora happily said.

In addition to this, family nutrition improved because of regular milk intake. They were also able to buy their own tricycle which they use in transporting their products and their children to school. Aside from this, they were also able to accumulate home appliances.

Her husband also concentrated in dairying while he sometimes helps in her brother’s farm. Their children also assist in milking during weekends, when they do not have classes.

“Our lives now depend on dairying and it provides us more than our usual

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# Cattle raiser turns into carabao 'enthusiast'

BY KHRIZIE EVERT M. MARCELO

**T**welve years ago, Andy Garcia, 42, decided to trade his 10 head of cattle to four native female carabaos. Today, he said that he has never regretted what he did.

"They always say sacrifices have to be made to be able to fulfill your dreams," Garcia, who is better known as Ka Andy in his community, said. "I took that big sacrifice of trading my animals although to my disadvantage in terms of number," he added.

He is not alien to raising carabaos. As a son to a couple from Sitio Mapiña, Barangay Balitucan in Magalang, Pampanga, who are carabao raisers, he feels that he has inherited the liking and passion of his parents for raising carabaos. Thus, when he started to raise a family



of his own, he nurtured the hope that someday he will be taking care of his own carabaos.

Ka Andy received a male carabao from his parents as a gift when he married his wife Marivic, 42. But then, realizing that his male carabao has limited potential, he decided to trade it to a "viajero" for female cattle. Since he was then employed as a driver in a gravel and sand company, his father helped him tend the animal.

Eventually, the cattle multiplied to 10 head. He quit his job to concentrate in taking care of the animals.

"Kaunti lang ang kita sa baka at hindi naman ito nagagamit na pantrabaho sa bukid (There is little income from the cattle and it cannot be used for farm work)," Ka Andy said.

In 1998, he looked for the "viajeros" again, and traded his cattle to carabaos. That time, he heard from other farmers



that he can improve the breed of his carabaos through artificial insemination (AI).

### Semen from PCC

With the help of Apo Mitrang Parungao, a certified (AI) technician based in Magalang, Pampanga, he had his four carabaos artificially inseminated. He was charged P100 per AI service. The semen used was from the Philippine Carabao Center (PCC).

All four animals got pregnant and produced four new calves. He felt so great after the animals gave birth because he knows he can start collecting their milk. He managed to learn on his own how to milk his carabaos. He even learned how to market his products all by himself.

But then, his carabao being of the native type did not yield much milk. It was only after a few more years when his crossbreds started giving milk, that he and his wife began to savor the benefit of having dairy carabaos.

*“Malaking bulas at maraming gatas ang nakukuha sa nalahiing kalabaw kumpara sa native na kalabaw. Katumbas na ng sa tatlong native ang nakukuhang gatas sa isang nalahian (The crossbreds are really big and they give more milk compared to the native carabaos. The milk yield of one crossbred is equivalent to the milk yield of three native carabaos),”* Ka Andy said.

With much dedication and passion in his heart, Ka Andy devoted all his time in taking care of his prized animals.

At 12:00 in the morning, Ka Andy and Aling Marivic are already up preparing for milking the carabaos. By 12:30, Aling Marivic will start straining the milk.

The milk was sold then in “lapad” or gin bottle (355 ml). Customers come to their house to buy the milk which in their early years in the trade was selling at P9 per bottle.

They were collecting then 20-22 gin bottles of milk from the four lactating carabaos. Thus, their daily income then was P150 to P220.

“That was already big money. You don’t have to go far and sweat it out the whole day. It is only early in the day and we already have cash money,” Ka Andy, with pride etched in his face, said.

### Easy money

He attested that the income was definitely a big help as he recalled that in the past, they didn’t have money to buy their basic needs in the house, even coffee and sugar. With his dairy carabaos, he said that life for him and his family has definitely improved.

Part of his income from his initial success in dairying was used to acquire a motorcycle in 2002. He later attached a



sidecar to the motorcycle and used it as a transport facility.

Ka Andy said that he attends to his animals wholeheartedly. He makes sure that all of his animals are well-fed and cared for. Every other day, he goes to nearby villages to cut grasses for the feed supply of the animals. He also makes sure that he always has stacks of hay which he can use as feed when fresh grasses become scarce. He also makes sure that the animals are provided with abundant and clean water which he gets from his deep well.

When his animals grew in number, Ka Andy hired a helper. It was in 2004 when he took in Rudy Pangilinan, then 12 years old and a school drop-out. He was the eighth among 11 children of a peasant couple. His work included helping Ka Andy cut grasses, feed the animals, and milk the lactating carabaos.

He was also entrusted with the job of delivering milk, using a tricycle, to the customers in the public market in Angeles

City and collecting payment for the milk sold.

After four years of uncomplaining service, he was rewarded by Ka Andy with four carabaos. He sold two of the carabaos and the proceeds were used to buy a house and lot from a relative. He is raising the rest of the animals given to him. Ka Rudy is so grateful to Ka Andy that he returns his goodness with much passion in attending to the latter’s herd. He considers

Ka Andy a “father” and an excellent role model.

On his part, Ka Andy is now looking forward to the days when all of his four children finish higher education.

He never wavers in taking good care of his animals. *“Bago ako kumain, sila muna. Kahit nilalagnat ako, talagang pinipilit ko na hindi sila mapabayaan (Before I eat, I make sure that I have fed them well. Even if I have fever, I see to it that they are not neglected),”* Ka Andy confided.

### Properties acquisition

The income from selling buffalo calves helped Ka Andy in renovating his house and in acquiring a hand tractor with a trailer and a bull cart as facilities for transporting cut grasses from nearby barangays to their barn. He also bought two cell phones to facilitate business.

Aside from these, he was able to

**CONTINUED ON PAGE 43**

**W**hile the province of Nueva Ecija banners as the plain of lands for rice production, dairy carabao milk enterprise surges as a means of providing additional livelihood to most of the rural farming communities.

# daily MILK *for* daily GOLD

BY JOAHNA G. GOYAGOY

The identification and development of Nueva Ecija as the National Impact Zone (NIZ) paved the way to further develop the carabao from merely providing draft animal to an important instrument for uplifting the lives of the poverty-stricken communities, which is dairying. This becomes evident as more and more farmers feel the benefits they get from nurturing crossbred buffaloes producing milk and eventually into processed milk products. These milk products such as pastillas, kesong puti or white cheese, butter, and flavored milk, can bring more income to the rural folks.

A study made by PCC researchers Liza G. Battad, Wilma T. del Rosario, Sonia D. Pol, Arline M. Del Barrio and Honorato M. Baltazar titled "Intensifying Village Level Carabao-based Dairy Enterprise Development," presented the viability of dairy enterprise in Nueva Ecija. Its remarkable growth in the province, the study showed, was brought by the impact zone template that provided focus on the development of water buffaloes from draft to dairy.

When the NIZ project was initiated in 1999, a total of 36 cooperatives involving 928 farmer members in 11 towns and three cities of Nueva Ecija were identified as target clientele. From the 1,000 animals loaned out to the coop members, a total of 3,250 island-born Murrah buffaloes (dairy buffaloes) were produced. This made up the pool of genetically superior dairy buffaloes in the province, of which 1,614 are female.

## Arm of the project

Known as the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO), it is the major processing sub-system of the NIZ. It is a legal business entity registered



with the Department of Trade and Industry. It performs collective processing and marketing concerns of its primary cooperative-members.

As a central processing and marketing unit of small-hold dairy farmers, NEFEDCCO was also registered at the Bureau of Food and Drugs (BFAD) to ensure product safety and consumer protection.

NEFEDCCO has become a major purchaser and processor of the milk from the dairy farmers. The product line ranges from fresh pasteurized milk, choco-milk, lacto-juice (fruit-flavored milk), green milk (with pandan and moringa extracts),



*pastillas* (candied milk), “kesong puti” (cottage cheese) and milk bars.

Since 2002, the federation also ventured in the production of milk sachets for the milk feeding program in primary schools. It supplied 2.6 million of 200 ml milk sachets worth P29 million to 22,000 malnourished children in Metro Manila.

NEFEDCCO maintains and operates a central milk processing plant located in San Ricardo, Talavera, Nueva Ecija.

### Village-based dairy enterprise

The continuing increase in volume of milk production, due to the upscaled number of dairy buffaloes, proved that village-level dairy carabao enterprise development can be highly replicated. This is especially true in areas where farm residues from palay, corn, and sugarcane, to name a few, can be utilized as feed resources.

With the success posted under the Nueva Ecija experience, dairy cooperatives

are looked up to as the gateway to make carabao dairying applicable and possible. The basic package consists of incubator modules of imported Murrah-based buffaloes. Each module is composed of 25 head of buffaloes distributed on loan basis to pre-qualified cooperatives. Each group, made up of 25 farmer-trustees, is empowered to organize itself and form a producer cooperative. During the project implementation, regular provision of technical services on animal health, breeding and feeding management are provided.

The project started with the infusion of 1,000 purebred Bulgarian Murrah buffaloes that initiated the creation of the dairy communities. These buffaloes became the source of genetically superior animals and main input in the establishment of buffalo-based dairy enterprises in selected agrarian reform communities.

These buffaloes were entrusted to farmer-cooperator who were given sufficient social and technical training to rear the buffaloes properly. Each farmer-cooperator received, initially, one dairy animal for “hands-on” training. This increased to two, three or four animals, depending on the absorptive capacity of the farmer-cooperator to raise the animal.

### What dairy enterprise can offer to rural folks

With the buffaloes on the farmers’ hand, jobs were generated among rural folks. On the other hand, a dairy buffalo produces an average of 5 liters for a once a day milking practice. Milk valued at P36 per liter provides each family a daily cash income of P180. Each lactating buffalo is found to contribute an average income of P44, 833 for a 300-day lactation period.

In 2006, total milk production in the province reached 12.80 million liters which was 2.63 percent higher than that of 2005.

According to the Bureau of Agricultural Statistics, of the total Philippine dairy output in 2007, approximately 41.68 percent was carabao’s milk where 27.42 percent and 24.42 percent were contributed by dairy cooperatives and PCC, respectively. Also, it was noted that 80 percent of this milk volume was contributed by the cooperatives from the NIZ.

Moreover, as the business on rearing

dairy buffaloes gear up, more farming communities are enticed to endeavor on dairy enterprises as its benefits are seen and felt within a short period of time. This enterprise allows opportunities for the farmers in providing their children school allowances and for realizing their dream of acquiring their own residential and/or farm lots. Furthermore, the expansion of this dairy business, especially on processed products, also opens opportunities for more business profits.

### Dairy farmers talk on its impacts

No one say that farming is easy but most say farming can be a way for easy money provided one is rightfully powered with passion and enthusiasm in doing it.

Who can say that a civil engineer and an owner of a construction company will venture full-time into dairying?

Danilo Fausto of Talavera, Nueva Ecija beams with pride as he tells off his success in investing on dairy buffalo. He now owns a customer-studded dairy farm which he named after his initials, DVF. Engr. Fausto started from 10 head Murrah buffaloes that soon increased in number. From his herd, his products found their way to the SM Supermalls in Metro Manila and other outlets with the unequalled trademark “Gatas ng Kalabaw”. His products include pasteurized fresh milk, flavored milk (melon, choco, buko and pandan flavors), cream, gourmet cheeses including “kesong puti,” pastillas de leche and espasol de leche, to name a few.

Similar story is also shared by Cathy Armecin who is a microbiologist by profession, who owns the C&C Foods whose products are known and distributed in the different parts of the country such as Nueva Ecija, Pampanga, Bulacan Makati, Manila and Region 3. She processes and sells carabao’s milk-based products in her bakeshop in Talavera, Nueva Ecija.

What makes C&C Foods known and likable is its “kesong puti” which comes in olive oil with variants of garlic, basil and Italian spicy flavors. The milk-e-licious, an instant carabao’s milk drink that comes in chocolate and mocha flavors, classic, brown or white chocolate coated and fruit-filled pastillas de leche, are also some of Armecin’s well-known products with

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## PCC-CLSU Products Outlet: A model for small-scale dairy processing business

BY KHRIZIE EVERT M. MARCELO

**M**ilk preservation at household level has been applied for a long time in many countries. Traditional preservation procedures include pasteurization and fermentation, which are used for processing of curd, yogurt and cheese.

Proven and tested means of preservations are even kept secret by certain families and passed on to the next generations.

But as time changes, new technologies in milk post-harvest handling were introduced to guarantee food safety with a reliable processing system in place. These include proper transport, storage and marketing of milk products under chilled or frozen conditions.

Milk is being processed to lengthen its shelf life. Heat treatment (pasteurization) is done to ensure that it is safe for human consumption and for extended keeping quality. Commodities like yogurt, butter and white cheese are milk products that can be kept for a specific period of time.

In the Philippines, main sources of milk are from cattle, carabao and goat. The carabao's milk is considered to be the finest processing milk.

The market for carabao milk products is continuously changing and can offer great opportunities for entrepreneurs, dairy farmers and cooperatives.

According to the National Dairy Authority (NDA), the dairy production in the country is more of community based.

For the past few years, a high number of dairy cooperatives have begun spreading in different regions of the country. Because of this, milk quality assurance has become a major concern due to lack of proper processing facilities and milk delivery vehicles.

### The PCC Products Outlet

In 2003, the PCC at CLSU established a milk products outlet which caters to the high demand in Nueva Ecija as well as to promote dairy product technologies to promising dairy cooperatives.

This product outlet can be best described as a village-type milk processing center, having basic equipment and processing capacity of 100-120 liters of milk per day. It is set-up like a grocery style outlet to provide comfort to consumers in selecting their choice of products to buy.

### Choosing the location

Prime spots are always considered in starting a business. These are places that are highly visible to the consumers.

One thing that helped the PCC outlet become well-established is that it is located inside the compound of the Central Luzon State University (CLSU).

"We are fortunate to be located inside the university because of the number of students who buy from us and visitors from different schools coming in having educational tour," shared Mina Abella, manager of the PCC Products Outlet.

The outlet grossed a little over P505,000 last year, with *pastillas de leche* and pasteurized milk as the best sellers.

Summer vacations and Christmas break are peak seasons for the PCC outlet.



### Products development

The PCC outlet developed different products to create a bigger market. It offers wider variants of milk commodities as part of its marketing strategies.

The products produced by the processing unit are pasteurized milk, choco milk, white cheese, yogurt, lacto juice, *pastillas de leche* and pulvoron. In addition, ricotta and quark cheese are also produced.

These products are developed with help from its consumers, giving samples



of what products it intends to offer for sale to the public. These customers provide feedbacks and comments on how to improve the products until such time that PCC is able to meet the customer's satisfactions.

Different flavors are also introduced to meet customers' preferences and to make the products more competitive.

Pia Lim-Castillo has been a partner of PCC for eight years in developing new products. She is a chef and also a distributor with contacts like Pepato's Café Vola and other high-end restaurants in Makati.

## Processing

The products outlet starts its daily operation at seven in the morning.

Ready-to-process milk comes from the PCC Gene Pool and from nearby farmers' dairy cooperatives. Raw milk is procured at P40 per liter. From 100 liters to 120 liters of milk are delivered to the outlet daily.

Bulk processing and packing of products are done in the morning. Products like pasteurized milk, *pastillas de leche*, choco milk, pulvoron are processed daily, while yogurt take two days to produce. *Kesong puti* is processed three to four times a week and mozzarella cheese is produced once a week.

Processing of these products depend on the market's demand.

## Equipment

"The equipment used in processing these products are basic and can be found in a usual kitchen", Abella said.

In pasteurizing milk for family consumption, basic tools needed are gas stove and two casseroles for double boiler set-up.

If craving for some sweet milk candies like *pastillas de leche*, a local version of teflon or kawali, wooden spoon, gas stove and strong arms for stirring are needed, she added.

For higher production, these are the primary equipment needed in dairy processing:

1. **Gas stove**-for cooking and boiling
2. **Gas tank** (11 kg) that can be used for 4 days
3. **Cooking utensils**-wooden spoon, Teflon or kawali, casserole, milk buckets, trays and stirrer
4. **Freezer and cooling tank**-for storage and as cooling bath
5. **Weighing scale**-for accurate measurement of weight of products
6. **Measuring cup and spoons**- for accurate measurement of ingredients
7. **Packaging materials**-bottles, sachets or pouch for liquid products, cellophane for pastillas and pulvoron and labels.
8. **Disinfectant solution**-used for disinfecting bottles and in the work area
9. **Hand sanitizer**-for hand sanitation applied every 20 minutes, and
10. **Work clothes**-it is advisable to always wear face mask, hair net, apron and separate footwear preferably rubber

made worn only inside the processing area.

## Packaging of milk and milk products

"An innovative packaging technology is important to extend the shelf life of dairy products," Abella said.

"It prevents contamination and moisture that causes spoilage. The package is essential in promoting the products," she added.

The outlet uses plastic bottles and sachets in milk packaging. Heat sealers are used for sealing sachets.

"We disinfect bottles using chlorine solution to a certain amount mixed with water to ensure sanitation," Abella explained. "We also use food grade plastic sachets in packing milk products as they are safe."

The label in the packaging contains the production date and expiration for consumer awareness.

## Customer care

The producer has a responsibility to its customers and that providing basic information of the products is essential in keeping it safe and in wholesome condition, the PCC products outlet believes.

"We always consider the product preferences of our customers because we value their loyalty", Abella said. "We tell our customers the proper storage and handling of our products to protect them from untimely spoilage."

## Proper management

Managing a dairy outlet is having a full overview of the operation. It involves tasks like planning of production, marketing, and handling of finances and management of staff.

To maximize work efficiency, the work

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# A good life before, a great life today

## Dairying is their 'culture of excellence'

Farmers honored by the PCC as "outstanding" are champions of modeling smallhold village-based dairy enterprise depicted by their tales of success in venturing into the world of dairy carabao raising.

BY ROWENA G. BUMANLAG

Etched in PCC's milestones for the past 17 years are storyboards of successes of dairy farmers and cooperatives worth telling and retelling.

Easily, they champion carabao raising as a means of changing lives and thus provides faces to the attainment of the goals and mission of the Philippine Carabao Center (PCC). Their stories are stalwarts that provide motivation for PCC to do better and deliver great results for thousands of smallhold farmers who look up to dairying as their main source of big income.

Since 2002, the anniversary celebration of PCC thrusts takes into the center stage dairy farmers and cooperative evaluated to be "outstanding" in their achievements. They represented either of the three categories: semi-commercial, family module and smallhold.

Under the semi-commercial category, the farmer has 11 and more lactating animals, the family module has five to 10, and the smallhold category has one to four.

For the semi-commercial level, no farmer was yet named.

The winning outstanding dairy farmers and cooperative shared their stories with pride and humility as PCC strides to carry on its mission of making lives better.



### 'Dairying is family bonding'

In the enclave of Salvador Tobias, 55, of San Jose City, anyone can observe not just skillful carabao raising and dairying but also a remarkable bonding among family members admired by other dairy families.

Tobias, more fondly known to many as Ka Ador, is PCC's 2009 outstanding dairy

farmer. He is a model member of the Simula ng Panibagong Bukas Primary Multi-Purpose Cooperative (SIPBUPCO) based in Porais, San Jose City.

As "Best Dairy Buffalo Farmer", he was recognized for his best practices in adhering to standards for dairy farmers, such as: compliance to PCC set of



**SALVADOR Tobias enjoys feeding his herd with Napier grass. He get as much enjoyment as he and his family reap the benefits of dairying.**



**SIPBUPCO chairman Fernando Pablo keeps an organized record of the coop's members to keep track of their profitability and herd productivity.**

requirements, proper animal management system, good physical condition of animals, sanitary surroundings, proper milk collection and delivery system, family participation, and productivity.

Ka Ador started tending Bulgarian Murrah buffaloes in 2001 when he was entrusted two head by PCC. He started milking his cows in 2003. Currently, he owns 21 purebred buffaloes and one crossbred utilized for draft.

At the peak of lactation period, one of Ka Ador's high milk-producing cows gave him a mouth-watering milk harvest of 12 liters per day and the others a little notches below. He sold his produce at P34 per liter to the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO) that netted for him sales of a low of P340 and a high of P1,000 per day.

Ka Ador only incurred an expenditure of about P15 worth of feed concentrates per cow per day during its lactation period.

NEFEDCCO collects P1 per liter of milk sold by each dairy farmer and deposited in the fund of the farmer's cooperative as savings.

Ka Ador has acquired one tricycle, one motorcycle and one utility vehicle used for harvesting forage and formerly, delivery of milk when NEFEDCCO had not established yet its collection system.

Aside from being a dairy farmer, Ka Ador is a hands-on rice farmer tilling 4 hectares of farmland. Another hectare is planted to Napier grass as forage for his animals.

*"Pangarap ko sana na dumami pa ang mga gatasang kalabaw ko at hindi na magsaka (I dream of owning more dairy*

buffaloes so that I will no longer plant rice)," Ka Ador said.

He added, *"Kung tutuusin, katumbas lang ng kita mula sa isang gatasang kalabaw ang kita ko sa isang anihan (Actually, my income derived from one rice harvesting season is just equal to the income I obtain from one milking cow)."*

Ka Ador also gave testimony on the benefits of tending dairy-type animals as he never runs out of daily cash.

*"Napakalaking tulong talaga ng paggagatas dahil meron kaming pang-gastos sa araw-araw lalo na sa pambaan ng mga bata (Dairying is really a big help because it provides us money for daily expense especially for the school allowance of our children),"* he said.

Ka Ador has seven children with wife Teresita, four boys and three girls. Two of whom are still studying: one is in high school and the other in college taking up Bachelor of Science in Civil Engineering at the Central Luzon State University (CLSU).

Ka Ador was only able to go through the elementary grades. Thus, it gives him much pride, he said, when his children are able to finish their studies.

He said that he is truly contented with everything he has now and very thankful of his children's support to the family's major means of livelihood, which is carabao raising.

*"Nagpapasalamat ako sa aking asawa at mga anak dahil ganun na lamang ang suportang ibinigay nila sa akin sa pag-aalaga ng aming mga kalabaw. Katulong ko sila sa lahat ng bagay (I am very thankful to the support given by my wife and children in taking care of the carabaos.*

They are always there to help me in every way)," Ka Ador said.

His four boys: Dennis, Rusell, Aser and Wendell take on major roles in taking care of their herd. Dennis, an artificial insemination (AI) technician and trained veterinary aide helps in performing AI, pregnancy diagnosis, deworming and administering vitamins to the animals.

Rusell, Aser and Wendell help in other farm activities such as in grazing the animals and bathing them before milking. Every morning, the girls: Noemi, Ruthes and Laila including wife Teresita, are helping prepare everything that is required of the boys before, during and after milk collection. They also attend to chores needed in the upkeep of the corral and in keeping farm records.

*"Yung isa kong anak na babae, Grade 6 pa lang marunong nang maggatas. Naaaliw ako at sobrang proud na yung mga anak ko ay natutunan na ding mahal in at makita ang importansya ng mga kalabaw sa pamilya namin (My other daughter who was then in Grade 6 already knows how to milk. I was fascinated as much as I was proud that my children have also imbibed the importance of the animals to our family),"* Ka Ador said.

In winning PCC's annual search for outstanding dairy farmers, Ka Ador, wearing a big genuine smile, said, *"Nagpapasalamat ako at napakalaking tulong ng PCC para mapaganda ang aming buhay at ngayon ay nagkaroon pa ako ng award. Salamat at mayroon akong nagamit para sa mga dapat bilhin para maalagaang mabuti ang aking*

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*mga kalabaw at para ma-improve ang kanilang koral (I am very thankful to the significant help from PCC in improving our life and I now even have an award. I am very thankful that I have money to buy for the things that can help me take care of my animals better and to improve their corral)."*

Ka Ador's pride and honor of being PCC's outstanding dairy farmer also came with a cash prize of P10,000 and a plaque.

He added, *"Marami na ang talagang gustong mag-alaga ng kalabaw. Nakita na nila ang kagandahan ng paggagatas*

Pablo Nazar, 54, dotingly called Ka Ambo in his hometown in Talavera, Nueva Ecija, went through an ordeal when his first child with wife Susana succumbed to lupus (skin disease). The family had to battle with the disease emotionally and financially for six years.

*"Talagang lubog na lubog na ako noong mga panahong iyon. Hanggang ilong na siguro ang pagkalubog ko na halos malunod ako sa hirap (I was totally down during those years. I felt I was gasping for breath because of the difficulties I had to endure).*

for my family's welfare. I knew that with my carabaos still intact, we will be able to survive the difficulties)."

Indeed, positive disposition attracts good prospects. Ka Ambo is now reaping the benefits of steadfastly believing in the capability of his carabaos coupled with instituting a regimen of hard work.

In 2001, Ka Ambo was loaned one Bulgarian dairy buffalo through his cooperative, "Kilusang Bayan sa Pagpapaunlad ng Talavera." The animal was thin and petite. Other farmers who were also awarded with the dairy module teased Ka Ambo of his "unfortunate fate" only to find out later that the animal was pregnant. Since then, the animal never failed to give birth yearly.

From one, Ka Ambo's herd grew to

**"in spite of the difficulties we encountered, it never occurred in my mind selling my carabaos as I knew that they are the remaining hope for my family's welfare. I knew that with my carabaos still intact, we will be able to survive the difficulties . "**

18 head. He earned additional income from selling the male calves at P10,000 to P11,000, whose ages ranged from five to six months. Currently, Ka Ambo is tending seven head.

Every day, Ka Ambo and his son Arvin, 25, would be up at five to six in the morning to collect milk. At the peak of lactation, they collect 12 liters of milk per cow.

*"Ang pinakamataas naming nakolekta na bayad mula sa NEFEDCCO ay umabot ng P24,000 sa isang buwan. Napakalaking tulong nito sa aming kabuhayan (During the peak months of lactation, we collected as high as P24,000 monthly from NEFEDCCO. This is a great help for my family),"* Ka Ambo said.

Arvin, the youngest among the three children of Ka Ambo and a seaman by profession, opted not to pursue his career since he witnessed how their carabaos helped them get through the times of their ordeal.



**PABLO Nazar has truly appreciated the benefits that his Bulgarian dairy buffalo has provided him and his family since it was loaned to him in 2001.**

(Many others are indeed wanting to raise carabaos. They've already witnessed the benefits of dairying)."

## 'Dairying brought hope back to us'

In those times that his family was experiencing a litany of difficulties that he almost gave up, he held onto the belief that his carabaos are capable of bringing back his' and his family's hope. Bounded by this conviction, he eventually came out of difficulties with a wide grin.

He now stands certain that his family is facing a better future.

He added, *"Inubos ko ang mga lupa ko noon. Naisangla ko ng P400,000 ang dalawang ektarya ko para sa pagpapaspital at pagpapagamot sa anak ko. Pero sa totoo lang, kahit anong hirap namin noon, hindi ko inisip na ibenta ang mga kalabaw ko dahil alam ko na sila na lang ang natitirang pag-asa para sa pamilya ko. Alam ko na makaahon din kami ulit (I gave up tilling my land. I used my two-hectare as collateral for P400,000 for the hospitalization and treatment of my daughter. But then, in spite of the difficulties we encountered, it never occurred in my mind selling my carabaos as I knew that they are the remaining hope*



*“Pangarap ko din na mag-alaga ng kalabaw dahil nakita ko na talagang maganda ang kita. Magandang may pinagkakakitaan araw-araw (It is also my dream to tend my own carabaos because I’ve witnessed how they provided income to our family. It is good to have cash daily),”* Arvin said.

Arvin has started building a home for his own family, out of milk sales that is. Arvin now represents the second liners in the family who will ensure the viability of a buffalo-based business family enterprise.

Sally, the second child of Ka Ambo, finished a degree in accountancy. Ka Ambo and wife Susana both said that Sally was able to finish her studies because of the easy income that their carabaos brought into the household.

From the difficult times that Ka Ambo and his family went through, they are now recovering. They are now about to get back their 2-hectare land. This, Ka Ambo said, has become possible because of the income that they get every 15-30 from milk sales.

His determination to succeed has now brought his family to a better life than before and to a brighter future.

Ka Ambo’s award as the “Best Dairy Buffalo Farmer” under the smallhold category given by PCC can be attributed to his positive disposition aside from his compliance with the PCC set of requirements, good animal management system and productivity, among others.

*“Masayang-masaya ako at isa pala ako sa mga pinakamainam mag-alaga ng kalabaw ayon sa panuntunan ng PCC (I am very happy that I am one of the best dairy farmers based on the PCC standards),”* Ka Ambo said.

He added, *“Talagang isa sa mga ahensiya ng gobyerno na tunay na maaasahan ang PCC. Napakainam ng programa nito at talagang napakalaking tulong sa aming mga magsasaka. Sana ay maging tuluy-tuloy lang ang programa at marami pang tulad kong magsasaka ang makinabang (PCC is indeed one of the most dependable agencies of the government. Its program is really helping us a lot in our livelihood. I hope that the program will continue to help more farmers like me).”*



**KA AMBO, with his son Arvin in this photo, is now gradually achieving his’ and his family’s dreams after the tide due to loss of a family member. Now, they can only genuinely smile as they move forward to a better future.**

### ‘Cooperativism herds us to success’

Members of the Simula ng Panibagong Bukas Primary Multi-Purpose Cooperative (SIPBUPCO) say one thing in common: they see their venture in dairying as their culture of excellence.

*“Ang pag-aalaga na ng kalabaw ang naging kultura namin dito sa SIPBUPCO. Lahat kasi kami ay napakalaki ng pakinabang mula sa kalabaw (Carabao raising has been our culture here in SIPBUPCO. All of us have gained benefits from our carabaos),”* Leovigildo Padiernos, one of the members of the coop, said.

Coop vice chairman Florencio Collado said, *“Damang-dama na namin ang pakinabang mula sa kalabaw. Napakalaking tulong talaga dahil araw-araw sigurado kaming may kita. Kailangan lang talagang tutukan ang pag-aalaga ng kalabaw pero malaki din naman ang kita namin (We actually feel and experience the benefits of carabao raising. It has been a big help to us since we have income every day. Carabao raising only requires concentration but we are satisfied with the income we derive from dairying).”*

These statements were attested by chairman Fernando Pablo. He said: *“Dahil*

*sa paggagatas, nagkaroon kami ng dagdag na kita bukod sa pagsasaka. Marami na rin ang piniling tumuon na lang sa paggagatas dahil mas malaki ang kanilang kinikita mula dito (Because of dairying, we now have additional income aside from rice*

**“Carabao raising has been our culture here in SIPBUPCO. All of us have gained benefits from our carabaos.” --Leovigildo Padiernos**

farming. In fact, more and more members are now shifting to dairying because this is where they earn bigger income).”

When the dairy cooperative was established in 1998, what the late Enrique Sardenia, founding chair, had in mind was to leave a legacy to his fellow farmers in terms of opening livelihood opportunities through cooperativism.

Today, Sardenia’s legacy is undoubtedly ringing true. It has been bringing to many farmers in San Jose City life better than before, which they of course, well deserve.

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## P1.2 million income

The cooperative became a PCC cooperator for its 25-dairy buffalo module project in 1999. Twenty-five head of heifers and one bull were awarded to the coop in 2001. These were then allocated to 21 farmer-trustees from barangays Villa Josen and Porais. Dairy farmers in barangay Pinili are set to be absorbed later by the coop.

In 2002, SIPBUPCO became a member of NEFEDCCO and started to sell its milk collection to the federation the following year.

From the initial 25 members, the coop now has 53 active members and records a milk collection of as high as 2,487 liters per month or equivalent to about P82,000. In 2008 to 2009, the coop earned P1.2 million from milk sales alone.

Currently, SIPBUPCO has 95 purebred buffaloes in its herd, 63 of which are breedable cows.

The members of the coop said that they kept their original animals intact in recognition of their important role they played in providing them income every day. This recognition, they said, made them work harder to propagate the animals so that they can maximize their benefits out of carabao raising.

This qualified, among other requirements, the cooperative to be honored as PCC's "Best Dairy Cooperative."

*"Hindi namin inasahan na kami ang mananalo. Siguro malaking bagay na talagang hindi kami nagbenta ng mga original animals namin at talagang hangga't maaari ay hindi kami nagbebenta ng mga kalabaw puwera na lang kung lalake ang bulo (We didn't expect to win the competition. I think it is a big factor that we kept our original animals intact and we don't sell our carabaos as much as we can expect when the calf is male)," Pablo said.*

The outstanding dairy cooperative was judged based on the following criteria: functional set of officers, organization systems and procedures, organized collection and delivery system for daily milk production, overall herd management and facilities.

Wilma del Rosario, the National Impact Zone (NIZ) coordinator, said, "SIPBUPCO is one of the successful cooperatives in the NIZ that truly showcases a dairy enterprise as a stable source of additional income for many families in the countryside."

She added that the objective of giving the outstanding farmers' and cooperative awards is to recognize and appreciate their outstanding performance as PCC partners for development.

Other members of the coop, such as Gaudencio Ducusin, Sr. and Alberto Pacariem, have more good words about dairying and the program of PCC.

Ducusin, 77, who started tending carabaos way back the Japanese period, said, "Ang pag-aalaga ng kalabaw ay tinitingnan ko bilang paraan din ng ehersisyo bukod sa talagang malaking tulong sa aking pamilya at sa pagpapaaral ng anak (I look at tending my carabaos as a form of exercise aside from its being an important source of income for my family and for the studies of my children)."

He currently has four head of purebred buffaloes and one native animal, which is used for farm work.

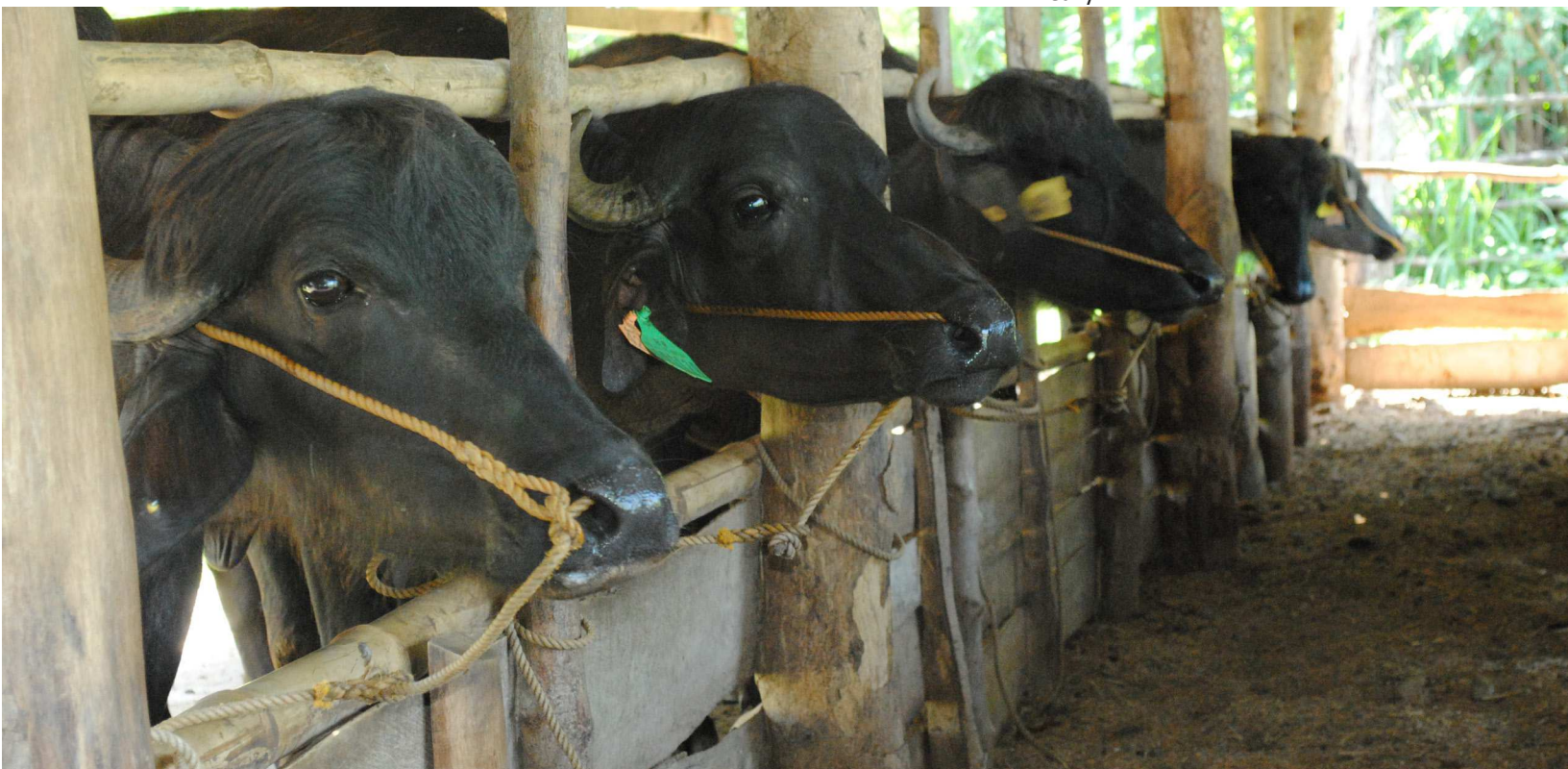
Pacariem, a relatively new member of the coop, said that he admires the other members of the coop who have already written success in dairying such as Salvador Tobias.

*"Nangangarap din ako baka sakaling dumami din ang mga alaga kong kalabaw. Kami ng anak ko ay maraming plano kung paano namin mapagbuuti ang pag-aalaga ng kalabaw at paggagatas (I also dream of having a big herd. I and my son already have plans on how we can make this venture successful)," he said.*

Currently, Pacariem is tilling a 2.7-hectare rice farm and plans to convert a parcel of it to Napier production when his animals grow in number.

Although in the twilight of his life, Pacariem still dreams of making it big in carabao dairying.

Which is not a remote possibility. Really.



# PCC's outstanding employee is a committed, dedicated worker



William R. Gudoy

BY KHRIZIE EVERT M. MARCELO

**“I am very proud to be an employee of PCC”.**

This statement was from William R. Gudoy, who made it after receiving the “Most Outstanding Employee Award” of the Philippine Carabao Center (PCC).

The award was given during the PCC’s 17<sup>th</sup> anniversary last March 26. The awarding rites were held at the PCC National Headquarters and Gene Pool, Science City of Muñoz, Nueva Ecija.

Gudoy, currently the Carabao-Based Enterprise Development Officer and Artificial Insemination (AI) Coordinator of the PCC at Mariano Marcos State University (PCC at MMSU), is one name very much respected by the farmers/carabao farmers and the local government officials of Marcos town in Ilocos Norte and neighboring municipalities.

What made him apt for the award can be traced to his involvement to the success in intensifying the upgrading of the carabao through artificial insemination in Ilocos Region. Through his efforts, the center was able to develop the town of Marcos in Ilocos Norte, as the PCC at MMSU’s Impact Zone for carabao dairying.

He managed to persuade the farming communities to adopt the AI technology, creating an impact on the growth rate in crossbred buffalo population. From 175 head in year 2002, it increased to 345 in 2007 and to a record of 428 head in 2009. He knows by heart the actual count of the female crossbreeds and their respective owners in the municipality. He is also very much aware of the general information about the carabao inventory of the town.

“William Gudoy is a dedicated worker and has always shown a consistent desire and commitment to contribute to the

attainment of PCC’s objectives. He always exerted his very best in carrying out tasks assigned to him,” declared Grace Marjorie Recta, center director of the PCC at MMSU.

As an AI technician, he was able to effect 40 percent calf drop efficiency (AI records, 2004, 2005) and has achieved in convincing the farmers to adopt AI in his service areas in Marcos, Solsona, Dingras, Banna in Ilocos Norte and San Juan in Ilocos Sur. This created an impact in the success of PCC at MMSU in implementing the Expanded AI Program.

Through his professionalism and pleasant disposition at work, Gudoy is considered a role model by Village-Based Artificial Insemination Technicians (VBAITs) in the area.

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**He is regarded as “Big Brother” by his fellow VBAITs. He is always willing to lend a hand and is sincere in helping them deliver better results. He also coached and encouraged aspiring technicians on the bright prospects ahead of them.**

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“I am also a farmer and I love doing things related to farming. I enjoy doing my work as a Community Organizer and AI Coordinator,” Gudoy shared. “I feel proud and contented whenever I helped someone who needed my expertise,” he added.

His patience in providing guidance on 17 strong VBAITs in Ilocos Norte, Ilocos

Sur and Abra has led to the reduction of cost incurred in the conduct of AI by the center. From close to P100,000, the cost of conducting AI has decreased to P60,000 (2006-2007) then down to P45,000 (2008-2009). This was because AI is conducted only upon written request by the local government units.

“He exhibits good leadership. He is firm yet gentle in stirring the AI technicians into action,” Recta added.

Gudoy extends his enthusiasm for work as demonstrated by his achievement while undergoing on Development Country Training Course of AI of Dairy Cattle at Singosari National Artificial Insemination Center, Malang City, East Java, Indonesia. He ranked second in performance among the 20 participants from 14 developing countries in Asia and Africa.

The training was sponsored by Japan International Cooperation Agency (JICA) and the Republic of Indonesia.

Ahead of his major tasks, Gudoy is quick to extend help in doing other activities such as repair of pasture fences, maintenance of pasture area, installation of deep wells and water systems, maintenance of vehicles and marketing of milk and milk products.

“In my 15 years of service in PCC, I learned to become a devoted and obedient government worker,” Gudoy said. I feel honored whenever I represent the PCC to farmers because I believe that we can really help them uplift their lives.”

A good leader, reliable team worker and an ideal companion at work, rolled into one, Gudoy was a unanimous choice for the award.

# Isabela town pins hope on the 'nuang'

BY ANSELMO S. ROQUE

**N**uang” is an Ilocano term for carabao. Over the centuries, the farmers love to own it as it is a reliable partner for the back-breaking toils in the field and for other uses and purposes.

As the country’s national animal, it is generally called the “beast of burden”. Others ascribed the many good qualities of the carabao as “the beauties in the beast”.

Technically, they are crossbreds - the progeny of the crossbreeding between the native female carabao and the male Murrah or other superior dairy breed of water buffalo. They are taller, meatier, and their females yield more liters of milk than their native counterpart.



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**In the town of San Agustin, Isabela, though, the “nuang” comes to mean as a very “different” carabao. It is a hulking animal with a jet black coat of skin and hair, hence, the farmers call it “black beauty”.**

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The San Agustin farmers further distinguish them as product either of *sumpit* or *bulog*. *Sumpit* is the farmers’

term for artificial insemination (AI) and *bulog* for natural mating.

Once every year since five years ago, the farmers’ “baby” their “black beauties”, sometimes more than their own children or their next of kin. They don’t use them much for work and they feed them *ad libitum*, with the feed selected from the most succulent of the abundant grasses in the field and with concentrate to boot at that.

They also trim the hair and hooves of their “baby”, massage their bodies with oil, de-worm them, give them vitamins, and don’t allow them to be festered by flies and mosquitoes.

Then they practice them with some of the tricks that their animals can do. Like kneeling or gyrating or gyrating while kneeling.

The reason for the big fuss? San

Agustin’s annual “*Nuang Festival*.”

The festival is held every September 28<sup>th</sup> of the year, which is the town’s founding anniversary. The town’s official thought of highlighting during the town’s fiesta their beloved of their animals – the *nuang*.

Easily, the “nuang” has emerged as the farmers’ and the town’s pride.

During the festival, the farmers, who are garbed in their fiesta attire, proceed to the plaza with their carabao in tow. Then, at a signal, the parade starts with the farmers proudly and happily riding on their respective nuang.

After the parade, the contest begins. It is in this contest that the best among the *nuangs* are selected by the selected judges. It is in this contest that such title as “best draft animal”, “biggest bull”, “most beautiful dam”, “best milk yielder”, “most

intelligent”, and some other awards. Prizes in cash and in kind are given to the owners of the winning animals.

“*Nagdidilim po ang plasa namin dahil sa dami ng black beauties na dinadala ng magsasaka sa tuwing may festival* (Our town plaza is a sea of dark due to the big number of black beauties brought in by the farmers during the festival),” a town resident said.

“Talaga pong malalaki sila at magaganda. At napakarami na po nila (They are really big and beautiful. And there are too many of them now),” another resident said.

“Malaki po ang natatanaw naming pag-asa dahil sa kanila (We see a bright future because of them),” he added.

## Engine for development

San Agustin is a fourth class municipality which evolved from the different barangays of Jones, Isabela 61 years ago. Located in the southernmost part of Isabela, it is overlooked by the extensive Sierra Madre mountain range.

While it is deprived of many endowments, except for its agricultural lands used for corn, rice and *saba* (a banana variety) production, it nevertheless boasts of having at least 6,000 native carabaos owned by the farmers. These carabaos proved to be the “saving grace” for the town.

The crossbreeding program in carabaos was initiated by PCC at Central Luzon State University as taken over by PCC at Cagayan State University.

In 1993, the town’s officials seized the opportunity for a carabao upgrading program offered by the Philippine Carabao Center (PCC) station at the Cagayan State University, in coordination with other agencies including the provincial veterinarian office, the regional field unit of the Department of Agriculture, and the provincial government of Isabela.

The program deals with AI in carabaos using extended semen from superior Murrah and Bulgarian buffalo bulls.

“We got interested in it,” said Julio Lamug, San Agustin municipal agriculture officer. “Our mayor then, Jesus Silorio Sr., directed me to try it in our town,” he added.

He said the farmers were reluctant as they feared something bad may happen to their work animal. But when they saw

the calves produced by the 10 carabaos inseminated, their attitude changed. Over the years, the number of farmers who wanted their carabaos given AI multiplied.

The AI project was later augmented by the coming in of superior bulls loaned out by the PCC for natural mating. The succeeding mayors of the town adopted in their respective terms the carabao improvement program as the town’s banner project.

Lamug said there are now 1,100 hulking crossbred carabaos in San Agustin.

Incumbent mayor Virgilio Padilla, who is on his second stint after completing his term from 1997 to 2004, said he is setting the production of 3,000 up to 4,000 crossbreds until 2015.

He added that an 11-hectare government property is being eyed as an area for a “milk, meat, hide and horn processing center” in his town.

“We want our town to be known as the ‘Improved Breed of Carabaos Capital of the Philippines,’” Padilla said.

Dr. Libertado Cruz, PCC executive director, confirmed that San Agustin has produced the most number of improved breed of carabaos compared to other towns.

“We have documented the achievements of San Agustin into a book,” Cruz said. “We hope San Agustin can serve as one of the models for other towns wishing to score big in carabao improvement,” he added.

The book is titled “San Agustin: Rising High on the Nuang (Carabao)”.

## Big business

Prof. Frank Rellin, PCC center director in Cagayan, confirmed that from among the many towns of Isabela, San Agustin showed tremendous enthusiasm in embracing the carabao improvement project offered to them some years back.

“The town’s officials and the farmers demonstrated very keen interest on this program. They saw it as a way of achieving progress and development for the town and for the residents,” Prof. Rellin said.

He recalled that the technicians who were assigned to carry out the AI project never get tired of going to San Agustin despite the distance and the difficulty of traversing the then rugged roads leading to San Agustin and the different villages of the town.

“It was inspiring for our team to carry out the mission as the farmers and town officials were very cooperative and enthusiastic,” Prof. Rellin said.

Often times, the team would use gas lamps to provide light to the job of giving AI to the readied native carabaos, he added.

“That was because the team was every now and then overcome by darkness in their forays to the different villages. The farmers would be disillusioned if their animals are not given AI so that even at night time our team continued working,” Prof. Rellin said.

For sure, the members of the team never complained. On the contrary, they feel fulfilled and satisfied, the PCC center director said.

Mayor Padilla, on the other hand, never tires of giving a helping hand and leading the cause of carabao improvement in his town. In fact, he himself is personally involved in the program. He was the first among those who took advantage of the project offered for improving the breed of the carabaos.

He currently own crossbreds. One of them even won in a regional contest, garnering the “most intelligent” carabao title.

Mayor Padilla said he is set to introduce farm implements remodeled for the prowess of the crossbreds. Instead of one plow, he said, it will have to be two which crossbreds should pull. The harrow should also be wider and the cart should be bigger and longer.

“They are really big and very strong,” Mayor Padilla said. “They will run, not walk, if harnessed for work using the usual farm implements,” he added.

Owing to the beautiful endowment that San Agustin currently has, the PCC has directed its Carabao-based Enterprise Development Team to redouble efforts in helping San Agustin what it has to achieve in terms of making the most out of their numerous crossbreds.

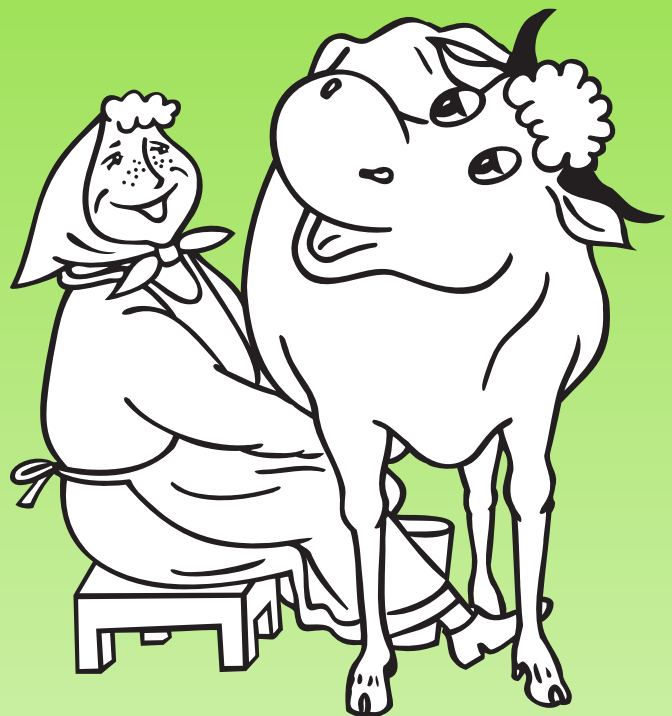
Staff members Conrad Penuliar and Roland Paraguison work closely with Mayor Padilla for putting on the ground the machinery deemed now ready for the eventual robust carabao-based enterprises in San Agustin.

The officials, the farmers and residents of San Agustin are happily stirred and interested about that exhilarating prospect.

# They who made good in dairy carabao raising ...and dairy production

Compiled by Anselmo S. Roque, Rowena G. Bumanlag,  
Joahna G. Goyagoy and Khrizie Evert M. Marcelo

In the past, which was not a long time ago, a number of farmers in the country were introduced to dairy carabao raising. One of the goals was to provide an alternative way for the farmers to earn, on a daily basis at that, thru daily milking of the animals for almost ten months.



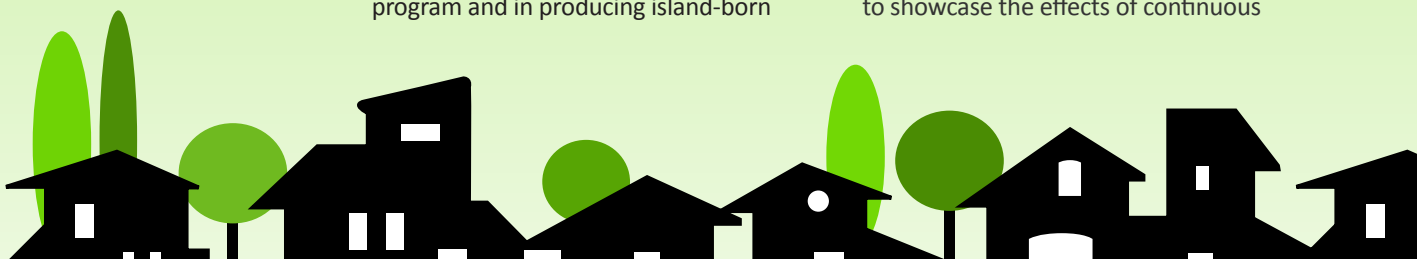
Although they were used to carabao dairying, what they knew at heart is only the minimal volume of milk that they get from the native animal which is 1.5 liters a day on the average.

Getting milk yield of at least 5 to 6 liters of milk a day per animal was far from their mind.

The Philippine Carabao Center (PCC) was already succeeding in its crossbreeding program and in producing island-born

water buffaloes that are of the dairy type. The agency, through its various branch stations nationwide reached out to its intended clientele, the smallhold farmers.

Among the projects introduced were the 25-heifer dairy buffalo module and bull loan with the *paiwi*-system as the entrustment contract intended to carry out the partnership between the recipient and PCC. The dairy module serves as a model to showcase the effects of continuous



backcrossing of native carabaos which requires at least 15 years to realize genetic merits of a purebred Murrah. The cooperative, as the host of the module, present the socio-economic benefits of translating farmers' collective interest into the viable operation of a business enterprise anchored at quality milk production amongst farmer members.

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## The end-result of this project is mobilization of crossbreds into becoming dairy animals and mobilization of resources towards the proliferation of carabao-based enterprises in the community.

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The first is providing members of dairy carabao cooperatives to own a dairy carabao after the payment of one offspring based on certain requirements. It is through this project that participants will prove for themselves that dairy enterprise in their respective places can help a lot in changing their lives and in making better nutrition flow into rural areas.

Bull disposal in areas densely populated with breedable female serves as a complementing component of the module. These bulls serve as the second project wherein bulls are loaned out to qualified recipients for the production of crossbreds. Benefits accrue to the recipient of the bull through service fee for every successful pregnancy.

The "paiwi system" is patterned after our forefathers' sharing system during the older times. A dairy buffalo is entrusted to a farmer to take care of it under a sharing system. The farmer gets two of the first three offspring after which the sharing

is on equal basis. The agency retains ownership of the original dairy buffalo.

Without doubt, these projects scored big in many places in the country proven by the testimonies of early farmer-cooperators of the PCC projects. Their tales of success were documented in a book titled "Changing Lives... Beyond the Draft Carabao," written by the late Dr. Sosimo Poblisco that was published by the PCC in 2006.

The tales were captured as a way of showing how carabao-based enterprise can do a lot of good for the farmers and their communities.

### In Baybay, Leyte

Gregorio Cueco, then 50 years old, used to work as a farm laborer in Barangay Gabas. He was finding it very difficult to support his family on a daily wage of P50.

A migrant worker, Cueco was renting a house for the comfort of his family. His wife, Nadie, was helping him augment his income by buying and selling vegetables in the market.

Life for the family was a litany of difficulties.

In 2001, however, Cueco was selected as one of the farmer-trustees of the 25-heifer dairy buffalo module from the PCC at Leyte State University (now Visayas State University). Life for him begun to change for the better. In 2003, his dairy buffalo provided 1,778 liters of milk for ten months.

At P25 per liter, his earnings for the milk totaled to P44,450.

He got another dairy animal in 2004 and his native carabao gave birth to a crossbred.

He was able to build his own house, became master of his own, and did not worry anymore about cash flow.

For his achievements, Cueco was given an award by the PCC at LSU for being the "highest milk producer". He was also cited by the local government of Baybay, Leyte for "successfully demonstrating the profitability of carabao milk production,

processing and marketing."

Cueco, after receiving the award, said in his native tongue:

"Had it not been for the dairy buffalo cows which I availed from the PCC at LSU, for which I got milk and thus helped me a lot in earning additional income to support our daily needs, I would not have climbed that stage and received the award".

Another farmer in a nearby village, Nolan Fernandez, was a recipient of a dairy buffalo under the family module scheme or the *paiwi*-system. In time, he was enjoying the benefit of earning daily from his animal.

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## In just months, with a daily milk harvest of 4.32 liters, he earned P19,440. His income increased as the animal in his care had its second calving and that his crossbred started to lactate.

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"We drink 2 liters of milk a day," his wife, Ana, said. "That is why our children are not sickly anymore."

She added that the income from the sales of milk also helped much for the education of their children, one of whom was a college student.

Leaving his work as a seaman, Aniceto Lebaresos, who is the vice president of the Baybay Dairy Farmers Association (BFDA), acquired a Bulgarian Murrah Buffalo heifer in 2002 which in due time gave birth and launched him into dairy business. He pasteurized the milk and sold it to their neighbors.

From his milk sales, he was able to

**NEXT PAGE** ▶





support the inputs for his rice and coconut farms and buy two sows.

Incidentally, the BFDA had total sales of P504, 110.45 in 2004. Its net income was P169, 946.75.

In Barangay Lingayon, Alang-alang, Leyte, the St. Benedict Farmers Institute on Sustainable Agriculture (SBFISA), a non-government organization run by the Order of Saint Benedict Sisters, got a family module of three pregnant buffalo dams in 2004. All three animals gave birth almost at the same time.

Needless to say, since the milk produced had a ready market, which is a hospital managed by Sister Eloisa David who was the prime mover for the formation of the farmers' organization, the SBFISA made good income from dairying.

### In Davao City

Better known for the production of high quality fruit trees and as one of the favorite tourists destinations in the country, Davao City is unheard off in so far as water buffalo dairying is concerned.

One of its villages, however, made a mark in this aspect. In Barangay San Isidro, in the city's district of Bunawan, with

guidance and assistance from the PCC at the University of Southern Mindanao, the San Isidro Livestock Raisers Association (SLRA), availed the 25-heifer dairy module in 2003.

The members soon enjoyed the benefits that emanate from their venture.

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**Its manager Fernando Kaimo, for example, was able to acquire or raise in a few years four lactating buffaloes. He usually sold ten liters of milk from walk-in customers daily and the rest to the association.**

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He has already turned over to the PCC the payment for one of the buffaloes he acquired and was preparing in 2006 to fully pay his obligation to the agency. On the other hand, under the bull loan project,

he was able to help 19 farmers own crossbreds thru the siring services of the bull in his care. Under the arrangement, he needs only six more crossbred deliveries before he can own the bull.

As a bull handler, Kaimo is committed to lend the bull to the farmer whose native carabao is in heat for the natural mating service.

Another member of the association, Divina Delica, an agribusiness degree holder, who serves as a member of the village's council, got three buffaloes under the dairy module. In due time, she was selling milk to the association and at the same time preparing and selling at a nearby elementary school pasteurized milk and other processed products like choco milk, ice cream, *pastillas de leche*, and *kesong puti*.

Her endeavor in producing milk and in processing and selling processed products was surely giving her multiple benefits.

Another woman from the village, Corazon Lumapas, 63, was taking good care of one dairy buffalo which she acquired through the dairy module program. In time, she was harvesting an average of 4 liters a day which she sells to the association at P20 per liter.

Aside from using the proceeds for household needs, Lumapas had ready cash to be lovingly given to any of her 14 grandchildren who will come to her and ask for a little allowance.

The association's chair, Leonora Orteza, 58, wasn't interested at first in owning dairy buffaloes. It was her husband who applied for one buffalo under the *paiwi*-system.

When her husband died, she decided to take care of the animal.

"I have come to like raising the animal," she said.

She eventually had two dairy buffaloes and was collecting milk daily which meant daily cash flow. She said she was ready to take care of five dams more which she said that based on her experience "would be no sweat at all".





## In Ormoc City

Straddling in three adjacent villages in Ormoc City is the 680-hectare “MR Ranch”. It was put up by couples Melchor Sr. and Rita Larrazabal in 1962 for cattle raising. In the late 90s, however, they had a change of heart as to the right animal to raise and propagate.

They decided that the carabao was a right choice as “it is much easier to manage than cattle and its meat and milk are better”. Thus, the 300 cattle were slowly replaced by carabao starting with 50 native carabaos bought from different locations in Leyte.

In 1999, the couple received two Bulgarian Murrah Buffalo bulls from the PCC at Leyte State University (now Visayas State University) under the bull loan program. They were named “Richard” and “Eddie” after two famous actors in the country.

Two more BMB bulls were added in 2004. As of 2005, the ranch had a whopping 300 carabaos, with 129 crossbreds which were mostly females.

The collected milk was being made in to *pastillas de leche* which found their way in many places. As often as possible, some of the animals were slaughtered as the family loved to cook and eat carabao meat and many residents were coming to buy “carabeef”. Some yearlings were also being sold to the meat market in Ormoc City.

“It would have been impossible for us to have this much number of carabaos were it not for the bull loan (program) of PCC and we would not be producing beautiful carabaos like these,” Larrazabal, then 77, said.

Management of the ranch was taken over by one of their 33 grandchildren (from seven children) as Melchor Sr. was already 85 that time. He was being assisted by 21 “cowboys” who usually rode on horses in attending to the animals.

## In Cagayan Valley

As of 2005, 511 dairy buffaloes were in the hands of 14 institutional recipients

from the provinces of Cagayan, Isabela, Nueva Vizcaya, Quirino, Apayao, and Kalinga. The number had already increased from the original stocks given to the institutions, mostly farmers’ association, by the PCC at Cagayan State University.

Total milk collection that year totaled to 83,732 liters which opened up dairy enterprises in different places. Both the farmers and the institutions involved in the program earned money on daily basis which they did not experience before.

The artificial insemination program carried out by the center in Cagayan produced 2,488 crossbreds in the valley.

“Some of our residents were suggesting to change the name of our village to Barangay Buffalo because of the benefits this animal was giving to us,” said one of the owners of crossbred animals.

One farmer attested that the offspring of his crossbred helped him finish the construction of his house. Another said he sold three crossbreds at various times to answer the much needed money by his son who was taking up a radiology course in college.

## In Nueva Ecija

The experience of Nueva Ecija in carabao dairying is worth repeating. The province, better known as the “premiere rice-producing province in the country”, has a total of 36 dairy cooperatives that carry the banner of developing and promoting carabao dairying in the country.

These cooperatives, located in the traditional non-dairy communities, banded themselves under the umbrella of the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO).

Carabao-based dairying was introduced in the province in 1999 by the PCC. With the needed assistance by the local government units, the province was designated as national impact zone and since then dairying has become the new wave in the province.

Among these cooperatives was an all-women cooperative in one of the villages of the Science City of Muñoz. The members

found carabao dairying as an “oasis where milk and money flow”.

According to a documentation by a PCC research team, from 2002 to 2008, the total volume of milk produced in Nueva Ecija by the cooperatives was 1,741,163.71 million liters. The gross income from this milk production was P62.7 million and benefitted at least 1,300 farmers who are members of 36 dairy cooperatives.

From 1,000 purebred dairy buffaloes, which were loaned out by PCC under certain requirements and conditions, a total of 3,250 calves were produced. Of this total number, 1,614 were females and 1,636 were males.

Most of the milk harvest was bought by the NEFEDCCO which processed and sold them to various outlets. (For other details about the Nueva Ecija experience, please refer to a full article in this issue.)

## Many others

There were many others whose achievements in carabao-based enterprises were included in the book “Changing Lives” by the late Sosimo Pablico. Among them were farmers from Laguna, Cavite, Bulacan, Sultan Kudarat, North Cotabato and South Cotabato.

Presently, if all the beautiful achievements in dairy carabao raising and carabao-based enterprises will be documented, it would already need several volumes of book.

There’s no doubt that as the carabao is improving, lives are also improving.



## PCC head presents advances in Asian buffalo industry in the 9th World Buffalo Congress in Buenos Aires

By Rowena G. Bumanlag

**Buffaloes remain the smallholder farmers' animal and are recognized as a dependable source of livelihood among millions of buffalo raisers in the world.**

In a paper presented by Dr. Libertado Cruz, Executive Director of the Philippine Carabao Center (PCC), during the 9th World Buffalo Congress (WBC), harnessing the potential of the buffalo to benefit rural farming families and consequently meet the requirements of the Asian economy through the establishment of enterprises was given prime focus.

The Congress was held in Buenos Aires, Argentina last April 25-28. Dr. Cruz is the former president of the International Buffalo Federation (IBF) and the Asian Buffalo Association (ABA).

Asia has a huge population of buffaloes taking 97 percent of the world's total population of 170 million, statistics of the Food and Agriculture Organization show. About 98 percent of this Asian buffalo stock belongs to small farmers who own less than two hectares of land and tend less than five buffaloes.

The Philippines account for only 1.8 percent of the total buffalo population in Asia.

"The traditional role of buffalo as source of draft and transport remains dominant in most of East and Southeast Asia and is almost associated with the smallholder farmers in a mixed-farming system," Dr. Cruz said.

In his paper "Recent Developments in the Buffalo Industry of Asia", Dr. Cruz said that latest developments in the buffalo industry in Asia include transforming the swamp buffalo to producers of milk and meat through an organized crossbreeding program.

Asian countries, he said, are gaining momentum in buffalo genetic improvement focused on increasing milk productivity, institutionalizing organized evaluation and selection systems and



photo from [www.wbc2010.org](http://www.wbc2010.org)

utilization of livestock reproductive biotechnologies.

Similarly, he added, the Philippines embarked on the utilization of livestock research and development to harness the genetic potential of livestock species. Foremost in this livestock research is the carabao, with the sheep, goat and cattle coming in soon.

Efforts in transforming the swamp buffalo from mere draft animal to efficient producer of milk and meat are now benefitting thousands of smallholder farmers in the countryside. More farmers are expected to benefit from this cause as livestock-based enterprises are expected to flourish in the near future.

The PCC, an attached agency of the Department of Agriculture, has been in the forefront of the efforts to transform the buffalo for other beneficial uses.

"The direction in the Philippines is a continuing backcrossing with the Murrah breed with the aim of producing close to purebred dairy animals on the third or fourth generation," Dr. Cruz said.

The large-scale crossbreeding program in the Philippines is done through the provision of reasonably priced frozen buffalo semen, he elaborated. Currently, he said, the country has the capability to deliver 55,000 artificial insemination (AI) services per year. This is carried out in congruence with organized selection

and progeny testing of riverine bulls from institutional herds and select farmer-cooperatives.

"F1 crossbreds have growth performance record of about 75 percent more than the local breeds and have an average daily milk production of 4.5 kg compared to 1.25 kg of the native carabaos," Dr. Cruz said.

He added, "There is linear increase in milk production with increasing blood of riverine among backcrosses."

Complementing the AI system is the bull loan program, he continued. Riverine bulls are loaned out to areas where AI is not available, he said.

Presently, about 1,850 head of bulls with maximum mating period of five years are assigned in select localities, Dr. Cruz disclosed as he further underscored the program.

In other Asian countries such as India and Pakistan, riverine or dairy-type buffalo breeds have a robust growth rate contributing 45 to 65 percent of these countries' total milk production.

A phenomenal growth in the utilization of buffaloes for meat export is experienced in India. Currently, the country makes use of its vast male buffalo population for organized rearing and fattening. This is considered a social program viewed to benefit thousands of village families depending on buffalo-based livelihood.

Dr. Cruz said that, generally, the buffalo meat is perceived by some as tough resulting in the low preference rate for buffalo meat among consumers. He said that the perception can be attributed to working animals being sent to slaughterhouse at retirement age.

Studies showed, he emphasized, that meat from a young buffalo is as good as the meat from young cattle.

Much as it is strong in buffalo meat enterprise, India has also seen the potential of smallholders as production base for increasing milk production. Through an organized three-tiered structure that handles the post-production aspect, India now has a dairy cooperative network comprised of more than 11 million farmer-members, over 100,000 village-level dairy societies, 180 district milk producers and 18 state-level dairy federations.

“In this phenomenal transformation, buffalo is favored by farmers mainly because it is not alien to their marginal way of life. Secondly, this is due to the high milk fat which is directly proportional to the price of milk,” Dr. Cruz said.

Intensification of research and development in water buffalo in Asia is likewise an important undertaking. Strong government support is significantly accorded to the establishment of institutions and manpower capacitation focusing on buffalo R&D.

The Philippines, through the PCC, has an intense buffalo R&D which is carried out through collaborations with various national and international institutions. Livestock reproductive biotechnology, particularly DNA-based techniques, is the area of focus in the R&D agenda.

Genetic conservation is also of prime importance, contributing to the overall progress of the buffalo industry.

Crossbreeding efforts of China and the Philippines resulted in the conservation of existing genetic resources. In the Philippines, gene pools for the swamp (Philippine carabao) and riverine buffaloes was established.

“This measure ensures that the outstanding indigenous animals are selected to form part of a continuing improvement program within the local animal breed,” Dr. Cruz said.

Dr. Cruz, in his concluding statements, said

**CONTINUED ON PAGE 39**

## PCC holds annual R&D review; best researchers are selected

**To ensure that the center operates on its mandated functions and to provide venue for the exchange of knowledge among researchers on the pressing issues and concerns in the livestock industry, the Philippine Carabao Center (PCC) conducts Research and Development (R&D) review annually.**

This year, the in-house review was conducted at the PCC national headquarters in the Science City of Muñoz last May 26-28.

“The industry should be the focus of our research while articulating and addressing the operations of the regional center heads. We should do it not for one’s sake but to address and identify the gaps in what we are doing,” PCC executive director Dr. Libertado Cruz said in his welcome remarks during the opening program.

Included in the review are researches on animal health, reproductive biotechnology, microbiology, dairy products and socio-economics.

Three completed researches were presented under the animal health discipline which highlighted the virulence of *Trypanosoma evansi* (the causative agent for surra) isolates of water buffaloes in Luzon, Visayas and Mindanao; prevalence and risk factors of zoonotic protozoa among small holder farmers in Aurora province; and optimization of Loop Mediated Isothermal Amplification Method (LAMP) in diagnosing *T. evansi*.

Under reproductive biotechnology, the studies that were presented dealt on the effect of medium supplement and storage temperature on motility and longevity of frozen-thawed buffalo spermatozoa and cryopreservation of in-vitro matured buffalo oocytes by slow freezing or vitrification methods.

Three research studies were presented under milk production and processing primarily focusing on refinements in the quality of milk products. Such studies included evaluation of the sensory quality and acceptability of soft white cheese from buffalo’s milk as influenced by the levels of salt and acid, effects

of tamarong (*Selar boops v*) and starter culture levels on the sensory quality and acceptability of probiotic fish soft cheese and production and quality evaluation of nata from buffalo milk whey.

Under the area of microbiology, one study was presented dealing with the genetic variability of *T. evansi* isolated from swamp buffaloes in the Philippines.

Another research paper on artificial insemination (AI) efficiency in Nueva Ecija was presented highlighting PCC’s efforts toward the strengthening of the village-based AI technician (VBAIT) program for more efficient and readily available AI services in rural communities. On the other hand, one study focused on the assessment of the performance of Bulgarian buffalo bulls loaned to various farmers in region 02.

Aside from the presentations, organizers of the review this year opted to give awards to the best paper and best presenter.

Dr. Felomino V. Mamuad’s research on “Increasing Efficiency of Artificial Insemination Program in Nueva Ecija” was adjudged as the best paper for completed research under the operations research category.

On the other hand, Dr. Clarissa Yvonne J. Domingo’s study on “Prevalence and Risk Factors of Zoonotic Protozoa among Smallholder Farmers in Aurora Province” was named as the best paper for completed research under the non-operations category. Dr. Domingo was likewise named as the “Best Presenter.”

The panel of judges and evaluators were composed of Dr. Jose Arceo Bautista of the UP-Los Baños Dairy Training and Research Institute (DTRI), Dr. Synan Baguio of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development of the Department of Science and Technology (PCCARD-DOST), Dr. Danilo S. Vargas of the Central Luzon State University (CLSU) Research Office, and Dr. Eric Palacpac of PCC.

Technical staff from PCC-Office of the Executive Director, Regional Centers, Center Directors, R&D coordinators and students from the CLSU-College of Veterinary Science and Medicine (CLSU-CVSM), University of the Philippines-Diliman (UPLB) and Don Mariano Marcos Memorial State University (DMMMSU), participated in the said review. [JGGoyagoy]

## DairyConEx-Cebu showcases enticing promises of dairying

**Filipinos consume 65-billion pesos worth of dairy products a year, most of which come from abroad, the Department of Agriculture said.**

Viewed as an enticing prospect, this figure offers to dairy-based entrepreneurs in the country a sure bonanza for varied enterprises.

These promises and prospects were showcased during the Dairy Congress and Expo (DairyConEx) in Cebu City held last April 16-18 at the Cebu International Convention Center.

The theme adopted by the congress was: "Sa dairy, ang kita ay daily" (In dairy, the income is daily).

Danilo V. Fausto, national chairman of the Dairy Confederation of the Philippines (DairyCon), said the DairyConEx was a fitting

the dairy sector in particular and the dairy industry in general.

Currently, it is composed of seven federations and five primary cooperatives.

Fausto presented the challenges in the dairy industry which need to be addressed. These include, among others: attracting more investment on dairy animals, fast-tracking the dairy herd build-up, upgrading of dairy stocks to higher daily blood line through continuous crossbreeding, addressing the financial requirements of the dairy entrepreneurs, stronger support on the marketing and promotion of local fresh milk, addressing malnutrition among children, and "power" product labelling that will help level the market field for dairymen.

all dairymen, including all stakeholders of the dairy industry, to vote for candidates who have sincere concern for the development of the dairy industry.

On the other hand, in his report on the state of the industry, National Dairy Authority (NDA) administrator Orkhan Usman said that 10 multiplier farms will be put-up to enable the local dairy industry to produce its own dairy animal requirements.

A memorandum of understanding was signed among government agencies including the NDA, PCC, Department of Agrarian Reform, Philippine Fruit and Vegetable Industries, Inc. and the DairyCon for various concerns.

These concerns are: procurement and dispersal of dairy animals; capability building; program management and monitoring; dairy information dissemination; other fields in dairy production; processing and marketing; technical cooperation on important decisions involving the procurement of dairy animals, among others; representation in national and international conferences, workshops and related fora where current dairy issues are discussed; and locate and source/generate funds for the succeeding actions of the parties.

In his message delivered by Agriculture Undersecretary Salvador Salacup, Secretary Bernie Fondevilla said the MOU is parallel with the activities of the DA in terms of improving the quality of dairy animals and products, teaching dairy farmers value-adding techniques, and in assisting dairy entrepreneurs in marketing their products.

The MOU, Secretary Fondevilla further said, reaffirms DA's commitment in providing technical support in the development of dairy production, processing and distribution.

Participants to the DairyConEx were given opportunity to attend sessions lined up with a wide array of topics. One session per day, subdivided into three fora, was the order of the day during the congress.

Sessions were on quality herd build-up and genetics improvement; pasture development, nutrition, milk collection and quality control (MCQC), and product development; marketing, the dairy entrepreneur, dairying: a career and profession; and the role of government and other institutions in dairy development.

About 15 exhibitors from the government and private sectors put up their trade exhibits.

The 13<sup>th</sup> DairyConEx was organized by the Dairy Confederation of the Philippines and hosted by the Cebu Federation of Dairy Cooperatives. It was concurrently held with the World Food Expo (WOFEX) Visayas, the region's largest food show. **[RGBumanlag]**



**Agriculture Undersecretary Salvador S. Salacup takes a tour to the exhibits, including PCC's booth, during the Dairy Congress and Expo in Cebu City last April 16.**

avenue to solidify the sector and present the directions imperative to a swift expansion and growth of the industry.

The DairyCon is the apex organization of all local dairymen and their cooperatives. Its main purpose is to be the avenue for dairy farmers in the discussion of common interests affecting

"Dairying indeed presents many opportunities for the progress of individual farmers and the dairy industry", Fausto said.

"It ensures job generation such that one job is created for every 20 to 30 liters of milk that are marketed per day," he added.

On a timely note, he further encouraged

# PCC consultant and veteran agriculture journalist is Binhi Awards' 'Hall of Fame' awardee

Philippine Carabao Center-Information Unit consultant and veteran development journalist Anselmo S. Roque was named "Agricultural Journalist of the Year (English Category)" during the 2008-2009 Binhi Awards held last April 16 at the BSWM Convention Hall, Visayas Avenue, Quezon City.

Dr. Roque is currently a correspondent of the Philippine Daily Inquirer.

Spearheaded by the Philippine Agricultural Journalists (PAJ), the Binhi Awards, for 33 years, give due recognition to dedicated journalists who carry the tasks of writing and disseminating important information about development, technology breakthroughs, programs and issues concerning the agricultural aspects.

As it was his third "Agricultural Journalist of the Year" award, the PAJ installed Dr. Roque in the prestigious "Binhi Hall of Fame". He was also recipient of the "Hall of Fame" award as "Pang-Agrikulturang Mamamahayag" in 1989.

Dr. Roque was adjudged winner based on his published articles about a wide variety of agriculture subjects that included the carabao, rice, and fish and the outstanding achievements of entrepreneurs.

He has garnered more than 30 awards and recognitions in writing. Among these awards were in the Palanca Memorial Awards for Literature, Cultural Center of the Philippines drama writing, PCCARD Professional Media



Dr. Anselmo Roque (3rd from right) poses here with his plaques. Also in this photo are his family and SL-Agritech Corp. CEO, Henry Lim (2<sup>nd</sup> from right).

Awards category, Jose Burgos Biotech Journalism Award and in the Jaime Ongpin Memorial Awards for Investigative Reporting.

He authored six books and co-authored three others.

Known for writing extensively on agriculture articles, Roque became editorial consultant of

various government agencies based in Science City of Muñoz.

Dr. Roque earned his Doctor of Philosophy degree major in Development Education and minor in Development Communication from the Central Luzon State University in 1992.

[KMMarcelo]

## PCC launches book on 'Appreciating the Carabao'

An 82-page book focusing on the native swamp buffalo and on-going efforts to improve its genetics is now on sale at the Knowledge Resource Management Center or the Information Unit of the Philippine Carabao Center (PCC) in the Science City of Muñoz, Nueva Ecija.

Availability of "Appreciating the Carabao", written by development journalist Anselmo Roque, followed its official launching last March 26 during the celebration marking PCC's 17th anniversary at the agency's headquarters.

The book was presented by the author to Agriculture Undersecretary Salvador S. Salacup, who represented Agriculture Secretary Bernie G. Fondevilla as guest of honor and keynote speaker.

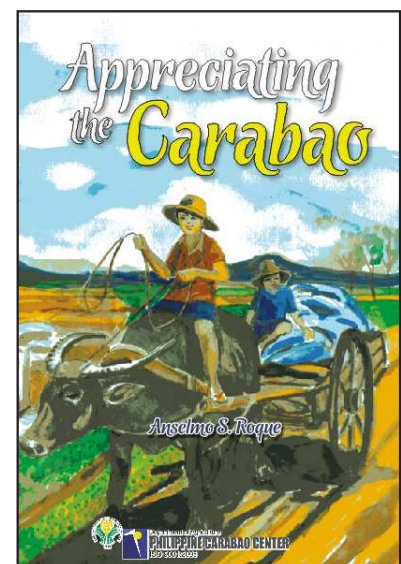
Roque, who holds a Ph.D. degree in Development Education and who has already authored 10 books, is currently a correspondent of the Philippine Daily Inquirer, a national

broadsheet.

He explained that "Appreciating the Carabao" attempts "to give readers fuller understanding of the many aspects in the life of the water buffalo, and the research and development efforts being spearheaded by PCC to upgrade its status to one that is better than what it was previously known for."

The native swamp buffalo, often referred to as a "beast of burden" and a "mainstay of Philippine agriculture", is now a symbol of increased incomes for many small-hold farming families through the establishment of carabao-based enterprises in the country.

This is the outcome of PCC's National Carabao Development Program, which includes the utilization of reproductive biotechnologies to improve the genetic potentials of the carabao as source of milk and meat, aside from draft power. [RGBumanlag]





(Fourth from right) Dr. Claro Mingala, “Most Outstanding Veterinarian in Government Service”, pose here for a souvenir photo with the other awardees during the 77th PVMA Annual Convention and Scientific Conference in Naga City.

## PCC official is ‘Most Outstanding Veterinarian in Government Service’

**Dr. Claro N. Mingala, PCC’s R&D coordinator and animal health expert, was awarded recently the “Most Outstanding Veterinarian in Government Service” by the Philippine Veterinary Medical Association (PVMA).**

The award was given during the 77th PVMA Annual Convention and Scientific Conference held last February 18 at the Villa Caceres Hotel in Naga City.

Dr. Mingala was recognized for his “significant contribution to government service as the head of Animal Health Unit and national research and development coordinator of the Philippine Carabao Center”.

His active participation and membership to numerous professional, government and scientific organizations were likewise recognized.

Dr. Mingala earned his Doctor of Veterinary Science and Medicine (DVSM) and Master of Veterinary Studies (MVSt) degrees at the

Central Luzon State University under the CSC MS-Local Scholarship Program. He completed his PhD degree, major in infectious diseases at the Graduate School of Veterinary Medicine in Hokkaido University, Japan, under the Monbukagakusho (Japanese Government) Scholarship Grant.

He specialized in the field of large ruminant immunology, epidemiology and virology and his main research areas are on bubaline cytokine expressions and immune responses, including viral diseases and hemoprotozoan of large ruminants.

Dr. Mingala authored and co-authored scientific papers which were published in diverse international scientific journals. Among these papers were about Cytokine, Veterinary Immunology and Immunopathology, Comparative Immunology, Microbiology and Infectious Diseases, Research in Veterinary Science, Basic

Microbiology, Tropical Animal Health and Production, Acta Tropica and the Infection and Genetics and Evolution.

He is also an active member of the Philippine Veterinary Medical Association, the Philippine Society of Animal Science, the Philippine College of Ruminant Practitioners, the Nueva Ecija Veterinary Medical Association and the Society for the Advancement of Veterinary Education and Research.

Dr. Mingala was adjudged as an awardee based on the following criteria: contribution to the government (75%), length of service (5%), position (5%), trainings/post graduate (5%), and membership to NGO’s contribution (10%) together with supporting documents and endorsements from fellow veterinarians.

**[KMMarcelo]**



Dr. Anselmo Roque (2nd from right, left panel) receives his Gintong Butil Award with his wife Corazon. Also in the photo (left to right) are CLSU president Dr. Ruben Sevilleja, CLSU Alumni Foundation president Dr. Romeo Ruiz, and CLSU Alumni Association, Inc. president Dr. Romeo Cabanilla. Dr. Danilda H. Duran (middle, right panel) poses with her Achievement Award also with CLSU officials including CLSU Alumni Association, Inc. director Dr. Quirino dela Cruz (extreme left).

## PCC consultant, biotech scientist are CLSU top alumni awardees

**PCC Applied Communications Section consultant Dr. Anselmo Roque was one of the 11 CLSU Gintong Butil Awardees, under the Professional Achievement category, during the CLSU Grand Alumni Homecoming and General Assembly Meeting last April 24 held at the CLSU Multi-purpose Gymnasium.**

Dr. Roque was recognized for his “vast experiences, exemplary moral and creditable performance in the area of public relations and professional journalism...”

Dr. Roque was recipient of various prestigious awards in the journalism discipline to include, among others: Hall of Fame for Agricultural Journalism in English and Pilipino

bestowed by the Philippine Agricultural Journalists, Inc. (PAJ); three-time first prize Professional Media Awardee of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development.

He was also given the Most Distinguished Award for Journalism during the CLSU’s Centennial Celebration in 2007.

Dr. Roque is currently a correspondent of the Philippine Daily Inquirer and a freelance contributor for other local and national newspapers.

The Gintong Butil Award is bestowed to CLSU alumni and alumnae who excelled and created significant impact in their chosen field

and workplace and distinguished themselves in demonstrating the virtues and wisdom of model CLSU alumni.

Another PCC family member, biotech scientist Dr. Danilda Hufana-Duran was recipient of CLSU Achievement Award.

Dr. Duran was recognized for her “outstanding achievements as prolific researcher, pioneer in the field of reproductive biotechnologies that served as tools for the water buffalo genetic improvement program in the country...her remarkable achievements gave pride to her Alma Mater and have put PCC at the realm of livestock biotechnology research and development not only in the Philippines, but, in the international community, as well.”

The CLSU Achievement Award is given to alumni and alumnae who have attained recognition for their technical, management and leadership capabilities and achieved distinguished position in their workplace.

**[RGBumanlag]**

### PCC HEAD PRESENTS.. FROM PAGE 34

that Asian buffalo will still be a smallholder animal in the foreseeable future, playing an important role in the lives of resource-challenged farming families in the developing countries in Asia.

“Harnessing the full potential of this Asian animal will benefit the majority of the rural farming families and at the same time meet the requirements of the fast-growing Asian economy through organized groups and cooperatives to promote

entrepreneurship,” he said.

On the recently held WBC, Dr. Cruz said, “The growing international collaboration on water buffalo R&D will undoubtedly result in enhancing the development of this species to further benefit the world.”

The 9th WBC provided an opportunity for its participants to gain knowledge and deliver presentation about the latest advances in buffalo development around the globe through plenary and parallel sessions and presentations. Breeding farms and national buffalo exhibits were also

visited by the international participants.

Visitors were experts and professionals in the different disciplines of buffalo development such as animal health and nutrition, breeding and genetics, meat and milk production, reproduction, biotechnology and production systems.

The congress was jointly organized by the International Buffalo Federation and the Argentine Association of Buffalo Breeders.

The next WBC is slated to be held in Thailand in 2013.

## Developing sub-sector dairy industry for sustaining cooperatives' gains

### Strong signs of fast growth in the Philippine's dairy sector are now most eminent.

These signs include the growing number of dairy enterprises and the operation of small dairy farming communities. They have been drawing attention to new aspirants on the market potential of milk and milk products.

Surveyed in 2002 by the Bureau of Agriculture Statistics (BAS) as largely unorganized, the dairy farming sector has developed over the years thru the collaborative efforts of national and local government units.

The Carabao Development Program (CDP) of the Philippine Carabao Center (PCC) was implemented using the National Impact Zone (NIZ) template. The NIZ promotes an integrative agribusiness system and introduces incubator modules as a model for smallhold carabao-based dairy enterprise development.

In addition, improving the genetic potentials of the native carabaos through crossbreeding with the dairy breed was included in the goal.

Nueva Ecija was selected as the NIZ in 1999. Currently, it has 36 dairy cooperatives with 928 members which later formed the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO).

The federation facilitates milk collection, processing and marketing of raw and processed milk products in local and mainstream processors and or consumers.

### Dairy capital

Nueva Ecija is now positioned to be the "Dairy Capital of the Philippines".

This was the overwhelming desire that came out during the 2nd Secondary Stakeholders Meetings held at the PCC Madamba Hall and San Jose City Health Center last May 17 and June 16, 2010.

The forum encouraged the stakeholders, such as the Department of Agrarian Reform (DAR), PCC, Department of Trade and Industry (DTI), Nueva Ecija Provincial Government (NEPG), Small and Medium Enterprise Development Council (SMEDC), Congressman Josefina Josen (1st District), Congressman Joseph Violago (2nd District) and Local Government Units (LGU) partners, to root for the legal declaration of Nueva Ecija as the dairy capital of the country.

"We are given the opportunity this 2010 to expand the program beneficiaries, and to show that Nueva Ecija may possibly be the Dairy Buffalo Capital of the Philippines," Dr. Libertado Cruz, PCC executive director, said. "No other province has yet position itself for this title," he added.

Dr. Liza Battad, PCC Chief for Planning and Special Projects Division, stressed the critical support from LGU partners to maintain sustainability in the dairy sub-sector in their respective municipalities.

She also cited the effort of the DTI in spearheading the "Gatas ng Kalabaw Festival" which was launched in 2007.

### Dairy sub-sector development plan

The Dairy Sub-Sector Action Plan for Local Government Units (LGU) in Nueva Ecija for the year 2009-2011 was designed to help achieve the goals of this program.

This plan is part of the National Impact Zone Dairy Development Convergence Action Plan which aimed for a stronger convergence for Nueva Ecija's Dairy Buffalo Entrepreneurship Program.

The importance of having synchronized actions of development implementers is

based on the NIZ development framework. These include concerns in the areas of production, processing and marketing and organizational development and a support services that will help sustain existing cooperatives and enterprises and encourage incoming industry entrants.

### Adoption of 'Balik-Kalabaw Program'

The forum also considered localizing the "Save the Herd Program" of the National Dairy Authority in the province.

As an initial step, it was agreed to adopt and serve as a basis the Balik-Kalabaw Program of Mayor Nery Santos of Talavera, Nueva Ecija.

Under the Talavera program, financial assistance is provided for interested farmer-recipient who wants to avail of the program. It ensures, among others, maintaining the animal in the same place.

The documentation of carabaos in the province will be a follow-thru activity of LGU partners together with the Provincial Cooperative and Entrepreneurship Development Office (PCEDO) and Provincial Veterinary Office (PVO). [KMMarcelo]

## Experts, researchers to convene for native animals concerns

### Native animals remain an important commodity considering their potential in providing livelihood to thousands of farming families.

In recognition of this fact, research and development experts will convene to promote technologies and strategies on sustainable production and profitable utilization of native domesticated animals. They will meet in an international seminar-workshop titled "Utilization of Native Animals for Building Rural Enterprises in Warm Climate Zones" scheduled at the Philippine Carabao Center National Headquarters and Gene Pool at the Science City of Muñoz on July 20-22.

The event is seen as a venue to exchange strategies on how to maximize the potentials of native animals in providing livelihood to rural farming communities and in mitigating the devastating effects of climate change.

The workshops will focus on identifying

research and development priority areas for native animals in warm climate zones in Southeast Asia, technology-transfer and commercialization strategies for the promotion of native animals and its products, and native animal products promotion and marketing modalities.

Various topics, all pertaining to utilizing the potentials of native animals, will be discussed in the international seminar.

Such topics will include: building native animal-based rural enterprises, genetic resource management, production technologies, conservation and utilization of native animals, production of native animal-based novel products through the aid of gene-based techniques, marketing, political support services, development and promotion, and R&D on native animals.

Resource persons who are experts in the fields of animal research and development





## 'It is in my heart to let our farmers and fishers feel progress' — DA Chief

**Accepting the challenge of President Benigno Aquino III to lead one of the country's largest sectors, Agriculture Secretary Proceso J. Alcalá urged all DA employees to work in full cooperation toward the achievement of the new administration's top priorities, one of which is food security.**

In his speech during the simple turn-over ceremony at the DA central office in Quezon City last July 5, Secretary Alcalá said that the country's grandeur can be regained through agricultural modernization.

The secretary emphasized that he would be more sensitive and responsive to the needs of the rural and fishery folks. He said his leadership would be more transparent and would involve farmers and fishers in the undertakings of the Department to hasten

from countries in Thailand, Taiwan, Vietnam, South Korea, Japan, Indonesia and Philippines, were tapped to present scientific papers and lectures during the said conference.

The Livestock Research Division of the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development of the Department of Science and Technology (PCARRD-DOST) with PCC and the Food and Fertilizer Technology Center (FFTC)-Taiwan organized the international-seminar workshop.

Research and development workers from colleges and universities in the country will also participate in the workshop. They are from the Western Mindanao University (WMU), Capiz State University (CSU), Isabela State University (ISU), University of the Philippines-Los Baños (UPLB), Central Luzon State University (CLSU), West Visayas State University (WVSU), and Benguet State University (BSU).

Selected staff from the Department of Agriculture including those from the private sectors, have been invited to participate.

[JGGoyagoy]

development in the countryside.

*"Nasa puso po natin ang makatulong sa kasalukuyang administrasyon para maramdaman ang pagbabago sa buhay ng ating mga magsasaka at mangingisda (It is in my heart to be of help to the current administration in order for the farmers and fishery folks to feel change in their lives),"* he said.

Secretary Alcalá said that greater involvement of the rural farming families in the activities of the DA will be pursued. This will be done, he added, through the establishment of a viable and sustainable contact and feedback mechanism wherein the general public and media persons could relay their concerns on major DA policies and programs.

*"I'm looking forward sa maganda po nating pagsasamahan, sa mas mabilis po nating pagkilos para mabilis din po nating masuklian ang pagtitiwala ng ating mga kababayan sa ating mahal na Pangulo (... for our beautiful relationship, faster action in order to repay the trust given by our countrymen on our beloved President),"* Secretary Alcalá said.

In his first press briefing, the Secretary also said that the Department will strengthen its extension and education support to farmers and fishers. The Local Government Code needs to be reviewed, he added, such that local government units will redirect their priorities to agricultural development and modernization as it is still the backbone of the country's economy.

*"Hindi nga po namin kaya itong gawin kung kami lamang ang gagawa ngunit ang departamento po ay malaki ang maitutulong kapag ang bawat isa ay magbibigay ng tamang kooperasyon (I will not be able to do this alone but the department can do much if everyone would give the right cooperation),"* Secretary Alcalá said.

On displacement or retrenchment of employees in the DA, Secretary Alcalá said, *"Sana po ay magkaunawaan po tayo na hindi po ako nandito na parang berdugo, tagpas dito tagpas dun. Ang akin pong gagawin kung saan po kayo nababagay, dun po natin*

*kayo dadalihin* (Please understand that I am not here to be an executioner who will act haphazardly. What I will do is to place you in a position that befits you)."

He warned the employees, though, that he has been an employee for some time and has been working in the field. He urged all employees to submit to him only factual and accurate data and not fictitious reports as he can personally go out of his way to do legwork and verify them.

*"At alam ko din po na kayo po ay mas maalam sa akin. Kayo po ang mas nakakaalam ng mga detalye kaya pagsama-samahin natin ito para sa ganun sa lalong madaling panahon, maisakatuparan po natin ang pinapangarap po ng ating Pangulo at ng buong bansa na ibalik po natin ang ating bansa sa kagalingan sa pamamagitan po ng agrilikutura (And I know that you are more knowledgeable than I am. You know better the details so let us pool them together so that in the shortest time possible we accomplish what our President and our nation desire in bringing back our nation to prosperity through agriculture),"* Secretary Alcalá said.

Secretary Alcalá, 55, was the Representative of the 2nd District of Quezon before he was invited by President Aquino to join his Cabinet.

A civil engineer by profession and an organic farming advocate, he championed the development of agriculture in Quezon. As a Congressman, he authored the Organic Agriculture Act of 2010 (RA 10068), and Mounts Banahaw-San Cristobal Protected Landscape Act (RA2718), Organic Agricultural Act of 2010 (RA 10068), and the Hazardous and Radioactive Waste Management Act. He also co-authored the Climate Change Act (RA 9729).

Due to his special concern for agriculture and the environment, Secretary Alcalá was a recipient of the "2003 Quezon Medalya ng Karangalan for Environmental Protection". He was one of the "Ten Most Outstanding Public Servants" awardees in which he was given the "Special Award as Environmentalist" in 2003.

[RGBumanlag]

## DAILY MILK... FROM PAGE 18

even a delicate packaging enticing certain corporate agencies to use her products as tokens for important occasions.

### Women's involvement in a male-dominated arena

Another important ingredient in the PCC's project on village-based dairy enterprise is its initiative of involving women in the scheme of work stereotypically typed for men.

Women took major shares in dairying, particularly in value-adding and marketing as in the case of the Rural Improvement Club-Angat Buhay Dairy Producers' Cooperative (RIC-ABPC) in Calabalabaan, Science City of Muñoz, Nueva Ecija. The dairy enterprise allowed them to engage in income-generating activities to an extent their social environment permits.

This manifests that PCC, either consciously or unconsciously, breaks the stereotypes between men and women alongside job capacities and abilities. This step can lead to a more collaborative and competitive effort to make a certain community work with mutual respect and upliftment of both sexes.

Further, this will go a long way to increased consciousness on the value of acquiring skills, and greater awareness of the significance of the dairy enterprise to family welfare.

### Sustainability

The level of dairy development in Nueva Ecija had transcended from subsistence farming towards entrepreneurship. This is manifested by the increasing number of dairy cooperatives with noticeably increasing membership.

The response of other development agencies has been clear and deliberate as exhibited in the PCC's delegation of rowing functions to the local government units in terms of provision of technical assistance, monitoring and evaluation (M&E) and coop development.

Having a total of 3,250 offspring from the original 1,000 infused purebred

buffaloes, it will then lead to a consolidated quality breeder stocks that will then generate more jobs and opportunities for the next farmer cooperators not only in Nueva Ecija but also in other PCC regional networks.

Having more dairy buffaloes will then create more doors for business opportunities amongst farmers. More so, this can also make these people stray away from migrating to the urban communities where they mostly perceive as where the "gold bars" are.

Many rural folks now beam with gratefulness for having their carabao milk turn to "gold."

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## THE HOUSEWIVES...

FROM PAGE 15

needs," she added.

Just like Marites, Cora also demonstrated her passion towards carabao dairying which made one of her cows reap the "Best Cow" award in 2009. She was granted with P30, 000 cash award, part of which was used for improving their carabao shed and the rest went to their family savings.

But the most rewarding part in carabao dairying, Cora shared, is that she is able to send her children to school. Someday, she added, they will graduate with their respective degrees.

Dairying, she attested, can also ensure giving the children their right to better education.

### Shifting perceptions

While most of the women were expected to be at home attending to the daily tasks of their household, Belinda Parugrug is now the boss of her own dairy business.

Challenged with adversities in a married life, Belinda has to stay home to take care of her child while her husband has to go to Manila and search for money that would aid in their basic needs and their growing child. They endured this set-up for 15 long years.

Conversely, the salary of her husband was still not enough to provide for their dairy needs.

Belinda, however, joined RIC in the hope of augmenting her husband's meager income through hog raising. This did not succeed, though.

When she became a recipient of dairy buffaloes, the tide changed.

She started with one dairy buffalo, like the other members. In 2001, she started to realize that there is really money in dairying. She committed her time in raising the cow well and carried with her a big hope that it will soon change their lives.

Since her husband is too distant from home, she urged him to come home so that they can both work on dairying.

"It was a relief when my husband agreed to return and work with me. At least, he doesn't have to work anymore for long hours. Plus he can be with us now, his family," Belinda happily said.

Though she had some hard time persuading her husband, she was still able to make him stay. "I also felt and saw how dairying brought a big change in our lives so I decided to stay," her husband acclaimed.

Now, it is not only their income that keeps getting bigger but their "family" as well for they now have 11 carabaos which they consider part of their family.

Showing her dedication and leadership towards the business and the cooperative, Belinda started as a treasurer of the Nueva Ecija Federation of Dairy Carabao Cooperatives (NEFEDCCO) in 2002.

With her exemplary performance, she earned a seat as a member of the Board of Directors of the federation in 2003 to 2005. She later became chair of the federation for four consecutive years. She currently seats as the chair of the RIC-ABPC.

Being an officer did not only hone her skills in leading big groups such as the cooperative and the federation but also opened her eyes to the most important thing to have in life—her family. And that is because she is now the boss of her business.

The women of Calabalabaan show that the partnership of men and women is indispensable to boost success and sustainable development. They serve as inspiration to other rural women who also seek empowerment for success.

Without doubt, they deserve high salute for being exemplary models for a truly sustainable dairy cooperative.

## FARMER TURNS BACK...

FROM PAGE 17

purchase a half-hectare rice land which he tills only for family consumption.

But Ka Andy has a share of losses, too. Some of his calves died due to sickness. There were also miscarriages.

He nevertheless took these losses philosophically.

*"Mahigít nang 10 ang namatay kong mga bula. Pero sa halip na malungkot ako ng husto, sinabi ko na lang sa sarili ko na dapat na pagbutihin ko pa ang pag-aalaga sa kanila (I already lost more than 10 calves. But instead of becoming sentimental about it, I just promised myself to improve my ways of taking good care of them),"* Ka Andy said.

Presently, Ka Andy has 17 head of female crossbreeds, one of which was bought (at P45,000) and pregnant. Likewise he has one male buffalo loaned out to him by PCC under the bull loan program. Five of his female carabaos are under the care of his relatives.

The highest milk yield Ka Andy got was in 2008 to 2009 when he had seven lactating carabaos. He used to collect 100 "catsup" bottles or 33 liters of fresh milk which he sold at P25 per bottle. His daily income then for months was P2,500.

These coming months, Ka Andy said he is expecting the calving of his eight carabaos.

## Association chair

Ka Andy, despite his busy schedule in his farm and his dairying enterprise, doesn't neglect his duties and responsibilities as chair of the Mapiña Carabao Raisers Association. Founded in 2009, each of the 25 active members owns and raises crossbreeds. They are set to be recipients of the 25-Dairy Buffalo Module from PCC.

*"Nahikayat na rin ang mga magsasaka dito na mag-alaga ng magandang lahing kalabaw dahil nakita nila na 'yong mga panggastos ko sa pang-araw-araw ay hindi ko na problema. Sila kasi ay nagtatanim lang ng palay at mais at matagal ang hinihintay na panahon para kumita. 'Pag may ginagatasang kalabaw, walang palya ang kita at umaga pa lang, may pera na (The other farmers felt encouraged in raising dairy carabaos because they saw that I have no problem in supporting our*

daily needs. In their case, they are raising rice and corn and as such they wait for sometime before they earn. If you have a dairy carabao, the income comes without fail and there is already cash money early in the morning)," Ka Andy happily said.

## Recognitions

In recognition of his achievements, the municipal government of Magalang always recommends him to represent the town in fora about carabao dairying. Likewise, he is always interviewed and visited by different media entities and foreign visitors.

Last November 22, he was invited

## OPPORTUNITIES...

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should be properly designated.

"We have 10 staff members working in the processing. Two food technologists who process high-end products like mozzarella, quark cheese, kesong puti and butter," Abella said.

She added that one microbiologist is tasked to oversee the quality control of the products, four staff members assigned to work on pastillas alone everyday, one worker for making pulvoron and a sales clerk who focuses on selling and recording the daily sales belong to the outlets work force.

Abella serves as the manager.

## Challenges

"Establishing a carabao-based dairy enterprise is an exciting business prospect but there are many challenges too," Abella averred.

Milk processors may face strong competition when it comes to the pricing and quality of the products offered. They may compete with the production of same products. As a result, the profit may become lower. There is also a perception that low priced products suggest low-quality.

The determinants of a price product include cost of raw milk, labor and supplies and the buying capacity of consumers.

"We addressed these problems by offering products that are affordable to everyone. We also assessed the financial capability of our consumers. In the

as a participant in a big forum of the Department of Agriculture regarding the government's project on AI

*"Hindi ko pinangarap na sumikat ng ganito dahil lang sa pagkakalabaw. Laging ako ang nirerekomenda ng munisipyo na humarap sa mga tao (I never dreamed that I would be this important person. Because of carabao dairying, I am always invited by our local government to meet with important persons)."*

As a final word, Ka Andy said he has one important advice to his colleagues in carabao dairying. "Love your carabaos like you love yourself. It will do big wonders for you and your family," he said in Tagalog.

production aspect, milk translates money, but we believe that when you add value to milk you get more profits out of it, that's the message we want to convey to people who want to venture in this kind of business," said Abella.

## Vision

"This product outlet is envisioned to be a techno-demo business unit. It is not about having products for sale but more importantly about showcasing viability of operating of a business and promoting the technology on how to make these products. We like to present how to start operation from production, processing and marketing that can create revenues out of milk," Abella said. "More money can be derived if there is a processing component. We offer lots of products because we want the people to know that we can do a lot of variants from buffalo milk."

## Capability enhancement

"We want to see in the future that dairy cooperatives and even private entrepreneurs will be able to replicate our production outlet by providing trainings to interested persons," Abella said.

The training, she said, includes proper milk handling and processing. A minimum of 10 to 15 participants, who should at least be high school graduates with basic cooking skills, are enough for a batch of trainees.

The training, she said charges minimal fee to cover expenses. "We are always ready to serve interested parties," Abella concluded.



Looking forward to serving dairy farmers in the villages, these calves from elite dams carry the promise of changing more lives, realizing dreams of smallholder farmers who depend on dairying for income.