



FAQs

Frequently asked questions on

Carabao Development Program

Why do we need to develop our
carabao industry?



DEPARTMENT OF AGRICULTURE
PHILIPPINE CARABAO CENTER
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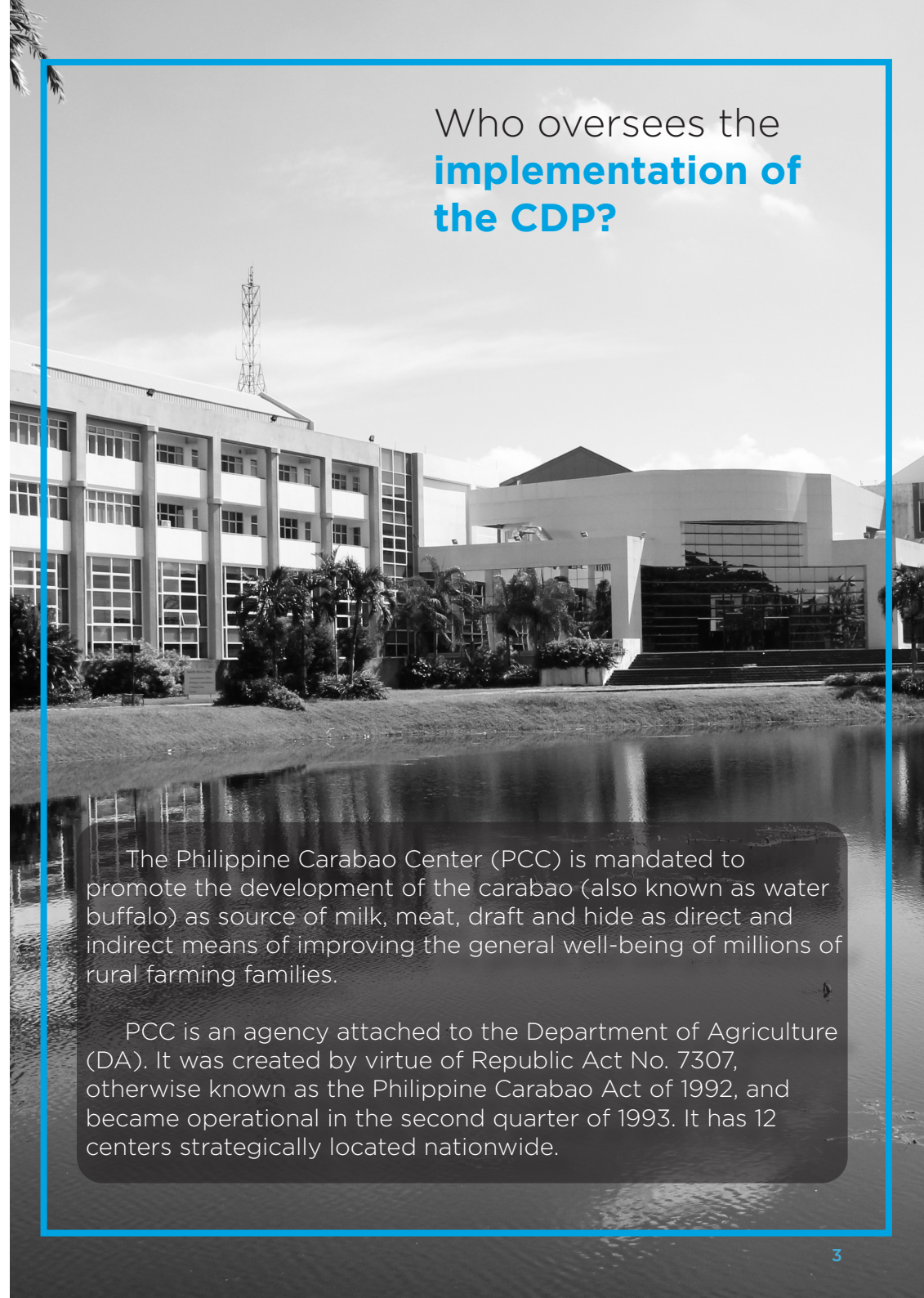


What is the Carabao Development Program?

The Carabao Development Program (CDP) is a continuous and organized effort to increase the genetic potential of the native carabao for milk, meat, draft and hide that would result in the development of carabao-based and related enterprises aimed at increasing income and nutritional status of farming communities.

The CDP, therefore, is a very important social development program that addresses the national concerns on:

- poverty alleviation
- nutritional improvement
- equitable income distribution
- people empowerment



Who oversees the implementation of the CDP?

The Philippine Carabao Center (PCC) is mandated to promote the development of the carabao (also known as water buffalo) as source of milk, meat, draft and hide as direct and indirect means of improving the general well-being of millions of rural farming families.

PCC is an agency attached to the Department of Agriculture (DA). It was created by virtue of Republic Act No. 7307, otherwise known as the Philippine Carabao Act of 1992, and became operational in the second quarter of 1993. It has 12 centers strategically located nationwide.

What are the activities of PCC?

The PCC promotes carabao development by carrying out the following activities and services:

- Development and production of genetically superior germplasm for enhanced and sustained genetic improvement



- Conduct of training and other learning events for technicians and farmers



- Assistance for the development of carabao-based enterprises



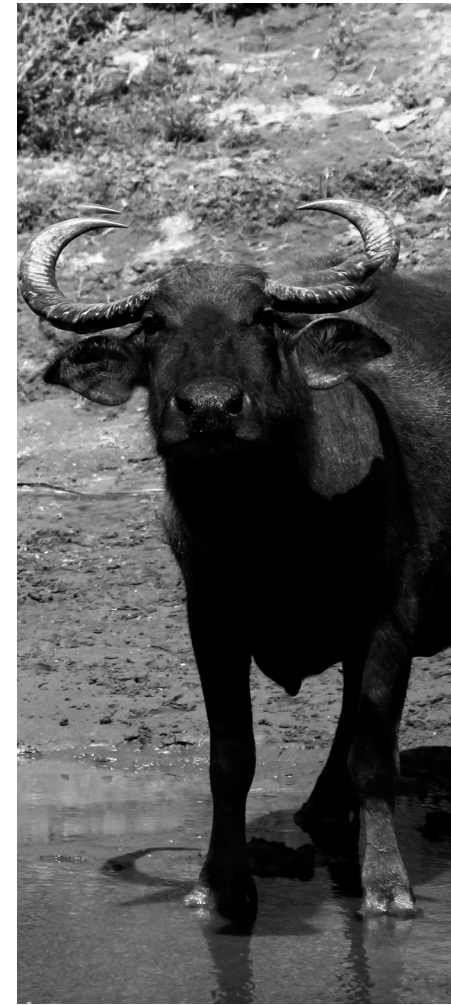
- Development and dissemination of technologies, and assistance in policy assessment and formulation leading to a more productive carabao industry



Why invest on carabao development when farmers are shifting to farm mechanization?

Shifting from the use of draft carabao to small hand tractor is apparently common on irrigated rice-producing areas. Nonetheless, reality remains that despite the introduction of hand tractors, the farmers cannot totally do away with the draft carabaos. This is becoming pronounced with the energy crunch.

The carabao and Philippine agriculture will remain synonymous for many years to come. This is because a large portion of our agricultural lands continues to be unirrigated. Moreover, land ownership of one hectare and below has significantly increased from 1981 to date. This could be due to decreasing land area against the increasing number of farming families in the rural areas. Unless the industrial sector absorbs this available labor, they will remain dependent on the produce of their decreasing size of land. Hence, the integration of crops and livestock is the best way to survive. Carabao is therefore indispensable in this scenario.



Why promote **carabao dairying** when dairy cattle may be more efficient?

In terms of milk production, the temperate breed of dairy cattle, such as, Holstein Friesian, is indeed more efficient than carabao. However, under tropical condition like the Philippines', the purebred Holstein cannot perform as well. In fact, efforts have been instituted to introduce tropical breed into Holstein Friesian, e.g. Sahiwal, to produce Sahiwal-Holstein crosses that can tolerate hot and humid conditions in the tropics. On the other hand, the dairy breed of carabao, the Murrah type, is essentially a tropical animal. Top-performing Murrah can produce 10-12 liters of milk per day containing 7 to 8% milk fat. In fact, under low level of management typical in the villages, carabao may be a more advantageous animal.

Developing the carabao as a potential source of milk and meat, than just draft, does not compete but rather complement the desired local dairy development. What is interesting is that our farmers have more than three million carabaos and that they have been used to raising these animals for millennium. Genetically improving their animals constitutes minor change compared to replacing carabaos with cows as milk producer.



Why do we have to improve the **carabao as potential milk source** when it may be cheaper to import milk?

Ninety-nine percent of our milk supply comes from importations that cost the country a sizable amount of foreign exchange. This is one of the major reasons for the need to develop the local capability. We have been paying the foreign farmers to produce milk for us. If we can only provide our farmers with a more productive and competitive dairy production system, then the amount we are spending for imports would be earned by them instead of the foreign farmers.



Why do we **need to import milk?**

While the production of local dairy farmers has been steadily increasing, the average annual local production from 2013 to 2015 is only about 19.88 million liters. On the other hand, the national demand requirement based on actual consumption during the same period 2013-2015 is some 1,852 metric tons or about 1.85 billion liters.

How much money do we pay foreign farmers to **produce milk for the Filipinos?**

We pay foreign dairy farmers millions of dollars each year. During the period 2013-2015, the Philippines spent an average of over US\$809 million to cover the cost for an average volume of over 1,826 thousand metric tons or 1.8 million liters of milk imports annually. Milk and cream accounts for some 85% of the imports.



Why are **riverine buffaloes** needed in the carabao upgrading program?

The riverine buffalo is a dairy-type buffalo. One particular breed is the Murrah, which can produce an average of 8 liters of milk a day for more than 300 days. We need to harness the potential of this breed to genetically upgrade our native carabaos to improve their milk production and increase their growth potential for meat and draft.

Why do we import **breeding stocks of murrah buffaloes**?

The number of purebred Murrah buffaloes in the country available for the massive upgrading activities is very limited. From 1993 to 2014, we have infused only 7,913 head against the estimated 20,000 head requirement for a reasonable rate of genetic upgrading leading to viable buffalo-based dairy enterprises.

Can we promote **raising carabaos for good quality meat** in the presence of slaughter ban?

The slaughter ban is now lifted through Republic Act 8485, an act to promote animal welfare in the Philippines, to allow slaughter of younger carabaos and to entice farmers to raise good quality carabaos for meat. Although silently or indirectly stated, Section 6 of the said Act provides for the lifting of Executive Order No. 626 or the carabao slaughter ban. In a way, this provides a stimulus for farmers to raise carabaos for quality meat as a source of additional income.



Carabao meat is perceived to be of lower quality than beef.

Yes. In our domestic market, carabao meat commands lower price because what is being sold are meat coming from old and retired work animals. With the enactment of the Animal Welfare Act of 1998 (Republic Act 8485), however, younger carabaos can now be slaughtered.

There are data which show that meats obtained from carabao slaughtered at 2-3 years of age are passed on as beef. In reality, the meat from carabao is comparable with that from cattle, assuming both are slaughtered at the same age. In fact, buffalo meat is considered a "healthy meat", having lower cholesterol than beef and pork.



Is there a need for a **water buffalo gene pool?**

Yes. Gene Pool is the source of best germplasm for the envisaged genetic improvement. It is not possible to talk of genetic improvement if there is no system of selecting the best and using the same to improve the ordinary stocks.

Gene Pool, therefore, is an essential component of genetic improvement. It ensures the sustained selection of good performing animals and mechanism by which these genetic materials are translated in terms of improvement in animal productivity.

Why a gene pool for the Philippine carabao?

Is the gene pool for dairy breed (riverine type) not sufficient?

Elite herd of dairy breed in the gene pool will be the source of germplasm of dairy breed. This germplasm shall be used for crossbreeding or upgrading of carabaos to improve milk and growth potential.

The elite herd of Philippine carabao in a gene pool shall serve as a source of germplasm of best Philippine Native carabao. There are farmers who may opt to produce carabaos for draft and meat alone. Moreover, the gene pool of Philippine carabao is needed as a way of conserving genetic materials for long-term breeding purposes.

Why use **artificial insemination (AI)** when pregnancy rate through natural mating is higher?

Average success rate following the first AI service is lower than that of natural mating, but given highly proficient AI technicians and good quality semen, the success rate may be comparable.

AI, however, is more than just impregnating the female. We use AI to introduce the semen from the best bulls. Since the use of best bulls is best maximized by way of collecting their semen to serve as many females as possible, they are not normally available for natural mating. A semen donor can produce an average of about 5,000 doses of semen per year which can be used to serve about 2,500-3,500 females. With natural mating, a bull can only serve a maximum of 50 females per year.

Moreover, there is a need to expand the AI service coverage as the total AI machinery at present can cover, at the most, only 6.0% of the breedable females.



Is there a need to apply **biotechnologies to carabaos?**

Yes, if we need to see the animals' ability as more than just a plain beast of burden. Improving the animals' productivity improves the farmers' capability to generate additional income.

Creating highly productive carabao is a relatively long process. Unlike in chicken and hogs where generation interval is comparatively short coupled with the advantage of producing multiple offspring, carabao takes an average of five years per generation and can only produce one offspring per calving. Getting into the 4th generation of continuous backcrossing to achieve a performance which is close to purebred will take at least 20 years. The use of the recently developed reproductive biotechnologies can significantly reduce the time.

Not all the Filipinos can own carabao. **So what is the national carabao program for?**

No one can be involved in everything. Those involved in carabao-raising, however, are the poor farming families. They depend on carabaos for the tilling of their land to produce a good harvest and to provide them with cash in cases of emergency.

Unlike the private stakeholders who are involved in poultry and swine-raising, most of the small farmers lack the resources to carry out research and develop techniques. The CDP therefore needs to be in place. This is in consideration of the almost three million carabaos, which equate to almost three million families or a total of approximately 10 million Filipinos who are directly linked with carabao-raising.

Can the Philippine Carabao Center **serve other countries with similar resources?**

It certainly can. Regional cooperation is mutually beneficial. While we endeavor to help our Filipino farmers by providing them with the best option to improve their carabaos and ultimately develop carabao-based enterprises, we can also see that these efforts render us to harness the potential source of genetic materials and technologies that may help other Asian countries.

Through continuous herd build-up and genetic improvement, the Philippines can become the center of buffalo development in this region. No other nation in Southeast Asia has put together such a development program.



PCC

Network of Centers

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

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How can farmers and other interested entities avail of PCC services? Interested parties can visit or contact any of the following:

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