

THE MILKY WAY



Transforming the Dairy Sector in Nepal

MILKY WAY PROJECT EXPLAINED

South Korea is sending a gift of 101 Holstein heifers and 20 high genetic-worth breeding bulls to establish a high-quality nucleus herd to modernise the dairy industry of Nepal. The gift is a part of the Milky Way project, a joint initiative of Nepal and South Korea to transform Nepal's dairy industry through the genetic improvement of cattle.

Here are the things you need to know about the project.

What is the Milky Way project?

The Milky Way project is the joint initiative of the governments of Nepal, South Korea, and Heifer International aimed at transforming the dairy sector of Nepal through the genetic improvement of cattle. The project is to develop the local dairy sector, commercially and sustainably through the creation of a vertically integrated dairy value chain.

This will increase income and job opportunities for local farmers and employees in the dairy sector. The development of the local dairy value chain industry needs to be commercially viable to be sustainable since the success of the project will help improve livelihoods.

Under this initiative, high genetic value bulls from South Korea, which Nepal has received as a gift, will be placed at the National Livestock Breeding Offices for semen collection and distribution. The elite nucleus herd will be set up to supply high-quality breeding bulls required by the National Livestock Breeding Offices in the future. The nucleus herds will provide mating facilities to produce young bulls and female calves.

The objective of the project is to alleviate the present deficit of milk through quality bulls. The rise in the income of dairy farmers is possible through increased productivity and quality milk through reduced costs of production.

What is the need of Milky Way?

Currently, Nepal's milk yield of dairy animals is poor. Crossbred cows in Nepal produce around nine litres of milk daily. The Nepal government's

breed improvement programme lacks a systemic approach and genetic resources. The government's attempt to import high-quality genetic resources could not be successful due to the prohibitory policies of other countries to export genetic resources.

A 2020 study estimated that an average Nepali consumes 72 litres of milk and dairy products annually, while the recommended requirement is 91 litres. The Department of Livestock Services estimates that the milk deficit will likely worsen as the growth of dairy products—four percent annually—is not meeting the growing demand of eight percent annual growth. Overall milk production is relatively low due to poor genetic potentials, poor feeding, and a poor health care system.

What is the role of Heifer International?

Heifer International is the facilitator between cattle donors and cattle receivers. They have facilitated the transfer of high-quality genetic resources and technology from South Korea to support the transformation of the dairy sector in Nepal. South Korea's role has been crucial in ensuring the availability of animal resources and securing permissions from the two governments to transfer the animals.

How is the Government of Nepal engaged?

Through Nepal Government's support, the project will scale up technology across the country—mainly in breeding, processing, and improved husbandry practices. It stands to strengthen the technical capacity of the National Livestock Breeding Organisation and make policies to address the problems in the dairy sector.

This is one initiative to support the government's goal to achieve dairy sector improvement by providing genetic resources to three National Livestock Breeding Offices which will supply high-quality semen to 500,000 dairy farmers in the country.



■ How will this project take shape?

The gifted heifers will be handed over to 50 dairy farmers in Kamalamai Municipality, Sindhuli for establishing an elite nucleus herd of bulls' mothers. The bulls will be handed over to the National Livestock Breeding Offices in Pokhara, Lahan and Nepalgunj. Frozen semen will be used for artificial insemination.

■ How was the location chosen?

Kamalamai Municipality of Sindhuli, the country's central south, was chosen after a feasibility study and with enthusiastic support shown by the local government. Japan International Cooperation Agency (JICA) report shows this area has enormous potential for dairy production since it has a moderate climate and receives rainfall in the summer.

The municipality is the biggest municipality in the country and the headquarters of Sindhuli. The local farmers have also shown great enthusiasm and are actively pursuing commercial dairy farms. The municipality is connected to a road network to three major highways of the country—BP Highway, Mahendra Highway and Madan Bhandari Highway—linking major markets.

■ When is the first shipment of the cattle?

A total of 101 heifers and 20 bulls will be gifted to Nepal from South Korea. The first shipment of the cattle will land at Kathmandu's Tribhuvan International Airport on December 22 2022. There will be four different shipments. The cattle will stay in quarantine for a few days at Nepal Agricultural Research Council (NARC) premises in Khumaltar, Lalitpur. They will then

be moved to Sindhuli and will be distributed among 50 dairy farming families. This is the first time in known history that Nepal has received such a large shipment of animals as a gift.

■ Why is South Korea giving the cattle?

After the Korean War, when South Korea was suffering a humanitarian crisis with widespread hunger, Heifer International gifted the country with parent stock of poultry and cattle. Heifer continued its work in South Korea until 1976, and the cattle played a vital role in the transformation of the Korean dairy industry making it one of the biggest and best in the world today. The Korean dairy farmers are grateful for this gift and now want to pass on this gift to the farmers of Nepal, completing a full circle of giving back. Heifer Korea is facilitating this process.

■ What is 'Passing on the Gift' and the role of South Korea?

'Passing on the Gift' is fundamental to Heifer projects. It inculcates the value of giving back, transforming recipients into donors, and building dignity and social capital in the community. This act of giving back to the community is an ongoing process which is internalised by the families we work with and has continued for generations.

During the 1950s, war-stricken Korea faced hunger and poverty. The number of orphanages in the country grew rapidly and immediate intervention was needed. During such grave humanitarian crises, Heifer International shipped thousands of eggs followed by livestock to the country. This gift of poultry and cattle to the farmers helped pave the way for successful agri-enterprises and eventually the transformation of the families. This support has been monumental in shaping modern-day South Korea.

Today, the people of South Korea have reached a prominent level of prosperity. Looking back to the days of hardships and difficulty, they fondly recall Heifer for their support in uplifting and creating a resilient Korean community. As a token of generosity, the people of South Korea want to pass on the gift they received and are donating 101 heifers and 20 bulls to Nepal to transform the dairy sector of Nepal. This completes a full circle of 'Passing on the Gift'.

■ **In what other ways is Heifer extending support to the dairy farmers in Kamalamai Municipality?**

Heifer will support establishing a model dairy village to strengthen the production and value chain of the dairy industry. Initially, we will provide haylage or grass to feed the cattle. The project will also impart veterinary support, provide improved housing and build the capacity of the farmers.

The approach also builds on the self-reliance and social capital of supported communities by providing households with technical skills.

■ **Why are you flying Heifers to Nepal? Can't you import semen or embryos for this?**

Nepal is trying to increase its dairy productivity but lacks genetically superior animals, particularly bulls used for semen collection. Building a nucleus herd of bulls' mothers by artificial insemination (AI) using high-quality semen takes a long time [7-8 generations] or over 15 years. The cows or heifers that get bred by AI do not require a bull. AI or artificial breeding is the physical placement of semen into the reproductive tract of females with the aim of achieving pregnancies by means other than that of natural mating.

Similarly, importing embryos is a sound practice but the success rate is very low. These Heifers from South Korea will help in developing a nucleus herd capable of supplying high-quality bulls required by the country in future. So, the shipment of these cattle makes it a historic and once-in-a-lifetime opportunity to improve and increase the milk yield in Nepal in a short time.



In History: Two shipments of high-yielding breed of pig, cattle and sheep was donated by Heifer International to the Government of Nepal in 1957.

- **How long do the farmers need to care for the heifers before they are productive? Why bring heifers and not cows?**

The imported heifers are expected to give their first calf and start producing milk in the next 18 months. Technical difficulty to ship cows is why heifers are being brought.

- **What is the economic impact of the project?**

This project will prompt cash flows from urban to rural areas. The project aims to increase income and job opportunities for local farmers and employees in the dairy sector. The development of the local dairy value chain industry needs to be commercially viable to be sustainable and the success of the project will help improve livelihoods. In this project, a family with two cattle can make 60 litres of milk daily. This will contribute significantly to household income. Overall dairy production will enable businesses to increase the rural economy.

- **Can these breeds survive in Nepal? Are the cattle free of diseases?**

As South Korea has a weather range of -10 to 40 degrees Celsius, these cows have wider adaptability to climate.

All these animals are certified to be free of diseases as per the standard of the Nepal Government which will be verified as per the health certificate that comes along with the heifers and will be validated during the quarantine period.

- **Will this breed affect the local breed?**

Pure breeds are only viable for commercial farming and only those farmers who plan to establish a dairy enterprise will keep such purebreds. Other families who keep dairy animals for household consumption can still carry on keeping local or mixed breeds.

- **Dairy animals are blamed for high greenhouse gas emissions? How will this impact the emission?**

Industrial farming of dairy animals has high emissions due to industrial feeds. Small-scale dairy farms will plant fodders and provide silage which is plant sourced and reduces emissions. Moreover, we are planning to reduce the population of dairy animals by increasing per cow milk yield by up to three-fold, which reduces the footprint as well as greenhouse gas emissions.

- **What is the breed of heifers? What are the costs?**

The heifers and bulls belong to the Holstein family. The cost of a heifer is USD3,000 per head and the bull costs USD200,000 per head.

For Details:

Heifer International Nepal
Hattiban, Lalitpur - 15
Heifernepal.org
heifer.nepal@heifer.org
+977-1-5913554, 5912841

