Pakistan's dairy trade

Abdus Sattar & Usman Ahmad

Being the largest contributor to the country's GDP and employer of 44 percent of Pakistan's population, agriculture remains Pakistan's most important industry. On the other hand, the dairy industry in Pakistan is at a crossroads, looking to modernise and adopt some of the practices and technology as adopted by other major agricultural nations. Pakistan is the world's third-largest dairy nation, with over 47 million tonnes of milk produced each year.

Dairy farming in Pakistan looks much different than it does in North America. Even today, most of the milk in Pakistan comes from buffaloes. The country's dairy farmers face specific challenges including hot weather, difficulty in attaining high-quality fodder and having to farm with low-producing animals. Still, commercial farming has risen near or in urban areas to supply milk to populated areas. Without the proper infrastructure to transport raw milk or manufacture it into other goods, large farms need to be located close to dairy markets.

The contribution of cow and buffalo milk was 81 percent and 15 percent respectively while the combined share of goat, sheep, and camel milk was four percent in world milk production in 2019. In the same year, world dairy exports were $80 billion. The three major exporters of dairy products are New Zealand, the EU, and the US. The EU exported cheese and butter worth $54 billion. New Zealand exported whole milk powder, butter and cheese worth $10 billion while the US exported cheese, skimmed milk powder and whey powder worth $5 billion in 2019. In the same period, India's dairy exports, mainly skimmed milk powder, were $ 91million.

The three major dairy exporters are projected to collectively account for around 65 percent of cheese, 68 percent of whole milk powder, 76 percent of butter, and 77 percent of skimmed milk powder of the total world dairy exports in 2029. Casein and butter export prices were $6,462 and $4,028 per tonne respectively while cheese prices were $3,784 per tonne. Also, in 2020, whole and skimmed milk powder prices were $3,243 and $2,913 per tonne respectively and export prices of whey powder were $965 per tonne. The world export market is hovering around casein, cheese, butter, whole and skimmed milk powder.

Even though Pakistan produces milk surplus, the country still ends up spending Rs20 billion to import milk and other dairy products every year. It is a major milk-producing country which has produced 64 million tonnes in the year 2020-21. Buffaloes remained a major driver in milk production. The share of buffalo milk has always remained higher than cow's milk. On the other hand, the share of goat, camel and sheep milk has been less than the former two. In 1961, the annual milk production composition was 70 percent buffalo's milk, 28 percent cow's milk, and one percent goat, sheep, and camel's milk, and in 2019 the figures were changed to 60 percent buffalo's milk, 37 percent cow's milk, and three percent goat, sheep, and camel's milk.

Pakistan's dairy imports were $2 million in 1961, and they climbed to $138 million

in 2017. Later, they dwindled to $132 million in 2018 and then reached up to $140 million in 2019. The dairy imports contained 86 percent of skimmed milk powder and 11 percent of whole milk powder. The amount of dairy exports was $74 million in 2013, and it plummeted to $35 million in 2017 and toppled to $14 million in 2019. The share of fresh cow's milk is 95 percent while whole and skimmed milk powder made up for five percent of the total exported items. The average export price of fresh cow's milk remained at $825 during the period between 1980 and 2019 and confronted a deficit of $126 million in dairy trade in 2019.

Raising buffaloes is more expensive than cows due to higher feed prices. Dairy farmers should focus on value-added dairy items produced from cow milk -- like desi ghee, yogurt, and butter. They should also focus on green fodder production because it is the most economical relative to other feeds. Pakistan's dairy products export potential can easily reach $30 billion. Major dairy products exporters produced all of their dairy items from cow milk. Here, Pakistan has a unique opportunity as it can produce dairy products from buffalo and cow milk. Large parts of the world are unfamiliar with the use of buffalo milk and its dairy products.

Pakistan can benefit from it by producing dairy items from buffalo milk for its domestic need and those produced from cow milk should be exported. But the dairy sector here is confronting multiple glitches like the illiteracy of small dairy farmers, milk quality, animal's health, fodder quantity and quality, urbanisation, and low milk production of animals. There is a dire need that we separate the dairy sector from agriculture by allocating separate budgets for its development. Also, a major chunk should be allocated for cow dairy research and development.

Methods such as artificial insemination and cross breeding can be used to increase milk production. Government-backed or privately run or progressive dairy farmers can import high-yielding dairy cows, super bulls and semen doses from the US, Australia, the Netherlands, and New Zealand. Production levels can be raised only through genetic innovations in the crossbreeding process where high-yielding exotic breeds are used. According to rough estimates, the total milk production would be three to four times more than the present value.

India experimented with these processes in Himachal Pradesh. It was observed that one percent increment in the number of crossbred cows and artificial insemination would increase the total milk production by 0.64 and 0.9 percent respectively. Also, the R&D investment of INR1.5 billion resulted in the overall economic surplus from milk production of INR2.2 billion. This all resulted in the benefit-cost ratio of 1.41 and 62 percent internal rate of return.

A majority of farmers in Pakistan, especially in rural regions, do not have access to better farming practices, proper veterinary services and financial services that could help them expand. Having seen what the 'white revolution' of India's investment in the dairy industry has done for it, there is a strong belief that there is a great export potential for a country already producing so much under difficult circumstances. Small dairy farmers living in rural areas should be financially supported through short- and long-term interest-free loans distributed through banking and non-banking channels for the purchase of high-yielding dairy cows, green fodder production, and cow treatment.

Moreover, insurance companies should start insurance products for valuable cows. Milk processing companies should export value-added dairy items made from cow's milk such as casein, cheese, skimmed and whole milk powder, butter and yogurt.

Prices of these dairy items are three to four times higher than the prices of cow's fresh milk in the international export market.

What Pakistan can do is consume buffalo's milk to produce dairy items for its domestic needs and use cow's milk to produce dairy products that can be exported. These items can be sold to the highest milk deficit countries like China, Russia, and Indonesia at relatively cheaper prices and to neighbouring countries.

Also, this step will reduce the country's reliance on the import of various dairy items, which will end up saving foreign exchange. Once the government commits to modernising the industry's infrastructure, the country will one day become a major exporter of milk. This achievement will definitely be a long-awaited moment for Pakistani farmers looking to expand. For other countries, Pakistan will become a strong competitor in the international market.

At present, major investments are required at the national level in order to fully maximise the country's ability to produce dairy items. Until then, farming in Pakistan continues to be an act of perseverance.

Abdus Sattar is a staff economist at PIDE.

Dr Usman Ahmad is a senior research economist at PIDE.