

Pakistan's milk potential

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ABOUT 150 million family units are engaged in milk production around the globe. World milk production was 914 million tonnes in 2020 and is forecasted at 1020 million tonnes by 2030. The contribution of cow and buffalo milk was 81 per cent and 15 per cent, respectively while the combined share of (goat, sheep, and camel milk) was 4 per cent. India was the largest milk producer producing 198 million tonnes, while Pakistan ranked the third, milk-producing 57 million tonnes in 2020. It is also projected that India and Pakistan, being important milk producers, will contribute more than half of the growth in the world's milk production over the next decade, and will contribute more than 30 per cent of the world's milk production by 2030. India and Pakistan will also lead in milk production and consumption of fresh dairy products respectively in the world by 2030. In Pakistan, about 35-40 per cent of the income of 8 million rural families is associated with livestock, and milk is the single leading

commodity; its gross product value was Rs.2.36 trillion, which is 54.4 per cent of the total gross value of livestock and poultry products of Rs.4.34 trillion in 2018.

A working paper by the Pakistan Institute of Development Economics (PIDE) investigated that total annual milk production jumped from 6 million tonnes in 1961 to 57 million tonnes in 2020 and is forecasted to 63 million tonnes in 2022. This translates that ten times increase, with an average growth rate of more than 3 per cent. The increasing population of buffaloes and cows are playing an imperative role in milk production. The milking buffaloes mounted from 2.6 million to 14.9 million, and their milk yield escalated from 1.6 tonnes to 2.3 tonnes. The milking cows amplified from 1.9 million to 14.1 million, and their milk yield escalated from 0.9 tonnes to 1.5 tonnes. The milking buffaloes' population and their milk yield mounted to six and 1.4 times respectively while milking cows' population and their milk yield boosted to seven and 1.6 times respectively during the last six decades. The milk composition also changed during 1961-2020. Buffalo and cow milk constituted 70 per cent and 28 per cent respectively, while the share of goat, sheep, and camel milk was 1 per cent in 1961; buffalo and cow milk compositions were 60 per cent and 37 per cent, while the share of goat, sheep, and camel milk share 3 per cent in 2020. The share of buffalo milk decreased by 10 per cent, while the share of cow milk increased by 9 per cent in total milk production during six decades. The combined share of goat, sheep, and camel milk tripled during the same period. The share of cow milk is rapidly augmenting total milk production. Because buffalo dairy farms are dwindling while mixed (buffaloes and cows) and pure cow dairy farms are becoming popular. Dairy farms hosting buffaloes have become unprofitable due to the increasing cost of feed and fodder and stationary farm gate milk.

Buffalo and Cow milk had been dominating in total milk production during the last six decades in Pakistan. Pakistan produced 55 million tonnes of buffalo and cow milk in 2020. The estimated production potential was much higher at the research station level; the estimated potential was 82 million tonnes, while the maximum breed potential was 110 million tonnes. The country's buffalo milk production was 34 million tonnes, while the estimated milk potential was 51 million tonnes at the research station, and the estimated breed maximum potential was 68 million tonnes. Cow milk production was 21 million tonnes, while its estimated milk potential was 31 million tonnes at the research station, and the estimated breed maximum potential was 42 million tonnes. The milking cows' population and their milk yield growth augmented slightly higher than the milking

buffaloes' population and milk yield growth. Pakistan has milk production (buffalo & cow) potential between 82 to 110 million tonnes but produced only 55 million tonnes in 2020. Multiple factors, including; low return for dairy farmers, credit constraints, the low genetic potential of milking animals, the absence of a formal milk marketing system, lack of healthcare for milking animals, insufficient/improper feeding, and lack of research, are impinging the full milk production potential of Pakistan.

Keeping in view the importance of the dairy sector, it should be separated from agriculture, and a separate budget should be allocated to the dairy sector in which a significant chunk should be allocated to dairy research and development. In the past, milk yield augmentation had been practiced through artificial insemination, which had a very diminutive impact on milk production. Milk yield can be raised only through genetic advancement and cross-breeding of cattle with high-yielding exotic breeds. It would endow with increasing milk yield by three to four times. Government should formulate an appropriate producer milk pricing policy to stop the exploitation of milk producers. The small dairy farmers living in rural areas should be financially supported in the short and long term with interest-free loans. This should be done through banking and non-banking channels for purchasing high milking yield animals, fodder production, and animal treatment. The credit policy needs to be formulated in such a way that soft-term loans reach small farmers. This will positively impact milk production in Pakistan.

Moreover, insurance companies should launch insurance programs for valuable milking animals through insurance policies. The small dairy farmers should focus not only on the sale of milk rather they should focus on value-added items like desi ghee, yoghurt, butter, khoya, and cheese. The farmers should start switching to cow milk rather than focusing only on producing buffalo milk as raising buffaloes is more expensive than raising cows due to higher prices of feed and fodder. They should also focus on the production of green fodder because it is economical relative to other feeds. The private sector should establish more milk collection centres and cold chains in rural areas. The sector can provide high-yield milking animals in reasonable instalments to the small dairy farmers. The milk processing companies should also focus on dairy items from cows like casein, butter, cheese, skimmed milk powder, whole milk powder, and whey powder.

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