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Report Highlights:

India's milk production has been trending upwards for a decade. FAS New Delhi (Post) foresees this growth continuing in the near- to medium-term. Production increases, however, are falling short of their full potential. Post attributes Indian fluid milk production shortcomings to a combination of factors, including a shortage of quality feeds and fodders and a limited number of higher-yielding milk cows. Post forecasts MY 2024 (January-December) fluid milk production at 212.7 million metric tons (MMT) (up three percent), along with 0.8 MMT of nonfat dry milk (skimmed milk powder (up four percent), and 6.9 MMT of butter (up two percent) compared to 2023 volumes. India consumes the bulk of its milk and milk products production; this will likely continue for the foreseeable future. FAS New Delhi forecasts MY 2024 fluid milk consumption at 90 MMT (up three percent); nonfat dry milk is foreseen to come in at 0.7 MMT (up one percent) and butter at about 6.9 MMT (up two percent) compared to 2023 volumes.

EXECUTIVE SUMMARY

India's dairy sector benefits from considerable political support due to its far-reaching economic and sociocultural impacts. In addition to being India's producer of milk and milk products, in a country where vegetarians make up over a third of the population, this sector embraces a significant portion of the farming community, especially marginal and small farmers. In support of the dairy sector, the Indian government is pursuing policies aimed at improving animal health and genetics, milk production, animal feeds and fodders availability, while promoting the economic viability of dairy farming as an occupation. India's contribution to world milk production is nearly 24 percent. Of the total cattle and buffalo population in the country, estimated at 307 million head, about a quarter are higher-yielding crossbreed animals.

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India consumes domestically the bulk of its milk and milk products production; this will likely continue for the foreseeable future. FAS New Delhi forecasts MY 2024 fluid milk consumption at 90 MMT (up three percent); nonfat dry milk (skimmed milk powder) is foreseen to come in at 0.7 MMT (up one percent) and butter at about 6.9 MMT (up two percent) compared to 2023 volumes.

India imports limited quantities of milk and milk products. Imports are largely driven by production shortages occurring during seasonal gaps. For example, India had an uptick in imports of milk and milk products, especially milk fat, in early 2022 and 2023.

Supply of fluid milk is foreseen to improve in 2024, which will lower the need for imports. India often imposes trade restrictive import measures, that effectively ban imports, as means of protecting domestic production. India's milk and milk products exports have been growing over time, but export volumes are low compared to that of other milk and milk product exporters. Post forecast India's 2024 exports of fluid milk at 0.02 MMT, while exports of SMP should come in at 0.01 MMT and butter at 0.03 MMT.

COMMODITIES:

FLUID MILK

Table 1. India: Commodity, Dairy, Milk, Fluid - Production, Supply and Distribution (PSD)

Dairy, Milk, Fluid	2022		2023		2024	
Market Year Begins	Jan 2022		Jan 2023		Jan 2024	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk (1000 HEAD)	59500	59500	61000	61000	0	61500
Cow Milk Production (1000 MT)	97000	96500	99500	99000	0	102000
Other Milk Production (1000 MT)	105500	105500	108000	108100	0	110700
Total Production (1000 MT)	202500	202000	207500	207100	0	212700
Other Imports (1000 MT)	0	0	0	0	0	0
Total Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	202500	202000	207500	207100	0	212700
Other Exports (1000 MT)	14	15	15	16	0	20
Total Exports (1000 MT)	14	15	15	16	0	20
Fluid Use Dom. Consumption (1000 MT)	85000	84500	87450	87000	0	90000
Factory Use Consumption (1000 MT)	117486	117485	120035	120084	0	122680
Feed Use Dom. Consumption (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	202486	201985	207485	207084	0	212680
Total Distribution (1000 MT)	202500	202000	207500	207100	0	212700

PRODUCTION

FAS New Delhi (Post) forecasts India's fluid milk production (i.e., from bovine cow milk) in market year (MY) 2024 (January-December) increasing by 3 million metric tons (MMT) to 102 MMT, growing 2.5 percent from the U.S. Department of Agriculture's (USDA) official 2023 estimate of 99.5 MMT. The growth in fluid milk production is attributable to an increased number of animals (i.e., bovine and buffalo cows) in milk. Also there has been greater government policy focus on improving animal husbandry and the viability of the dairy sector.

Dairy Cattle and Milk Cows in Production: India accounts for the world's largest inventory of bovine dairy cattle (*Bos taurus and Bos indicus*) and the Asian domestic water buffalo (*Bubalus bubalis*).[1] The country's stock of the two is gradually marching upwards, registering a growth

[1] India's A1 milk producing cow breeds (crossbreed – *B. taurus*) include largely Holstein Friesian, Karan Swiss, Jersey, and Brown Swiss. Whereas India's A2 milk producing cow breeds (pure desi breed – *B. indicus*) include the Gir, Sahiwal, Red Sindhi, and the Kankrej. The zebu, also known as indicine cattle or humped cattle, is a species or subspecies of domestic cattle originating in the Indian sub-continent. The zebu has a fatty hump on its shoulders, a large dewlap, and often drooping ears. Used often in the past as a draught animal, crossbreeding with foreign imported breeds has led to the increased incidence of smaller humps in bulls and bullocks (steers), reducing their value as draught animals. Key physiological differences that *B. indicus* and *B. taurus* cattle evidence include delayed age at puberty along with higher circulating concentrations of hormones such as estradiol, progesterone, insulin, and IGF-I. Overall reproductive success of *B. indicus* animals is inferior to that of *B. taurus* ones. However, *B. indicus*,

rate of over one percent during the period 2019-2022 (see, GAIN-INDIA | IN2023-0060 | Livestock and Products Annual - 2023). India's 2019 census (20th edition) reports that the national cattle herd is composed of over 192 million head of bovine dairy cattle (*B. taurus and B. indicus*) and roughly some 110 million head of Asian domestic water buffaloes.[2] Post estimates that in 2023, that the Indian cattle herd of 307.5 million head is composed of some 194.2 million head of bovine dairy cattle and 113.3 million water buffaloes.[3]

India's number of bovine milk cows in 2024 are forecast to grow to 61.5 million head, up some 500,000 head from the USDA official 2023 estimate of 61 million head.[4] Cow milk production in 2024 is foreseen to reach 102 MMT thanks to the increased number of cows in milk production. Facilitating the rise in bovine cow numbers is the Indian Ministry of Fisheries, Animal Husbandry, and Dairying financial and physical infrastructure support schemes/programs for dairy farmers, dairy-processors, input manufacturers, and veterinary services.

Post estimates 2023 cow milk production at 99 MMT, off somewhat by 0.5 MMT from the USDA official estimate of 99.5 MMT, largely due to the lingering effects of the 2022 Lumpy Skin Disease (LSD) outbreak. The LSD flare-up ran across large swathes of India's diary production countryside, resulting in increased animal morbidity and mortality. Post sources report that this impacted fluid milk production and yields (see, GAIN-INDIA | IN2023-0060 | India - Livestock and Products Annual - 2023, GAIN-INDIA | IN2022-0066 | India: Outbreak of Lumpy Skin Disease in Cattle Raises Alarm, and GAIN-INDIA | IN2022-0070 | India Update - Lumpy Skin Disease Spreads to Northern States).

India's cow milk production is spread across the country, with the largest production volume coming from Rajasthan (15 percent), Uttar Pradesh (15 percent), Madhya Pradesh (8 percent), Gujarat (7.5 percent), Andhra Pradesh (7 percent), Maharashtra (6.5 percent), and Punjab (6 percent). Those states with higher numbers of crossbreed and exotic animals tend to exhibit higher milk yields irrespective of the size of the bovine population.

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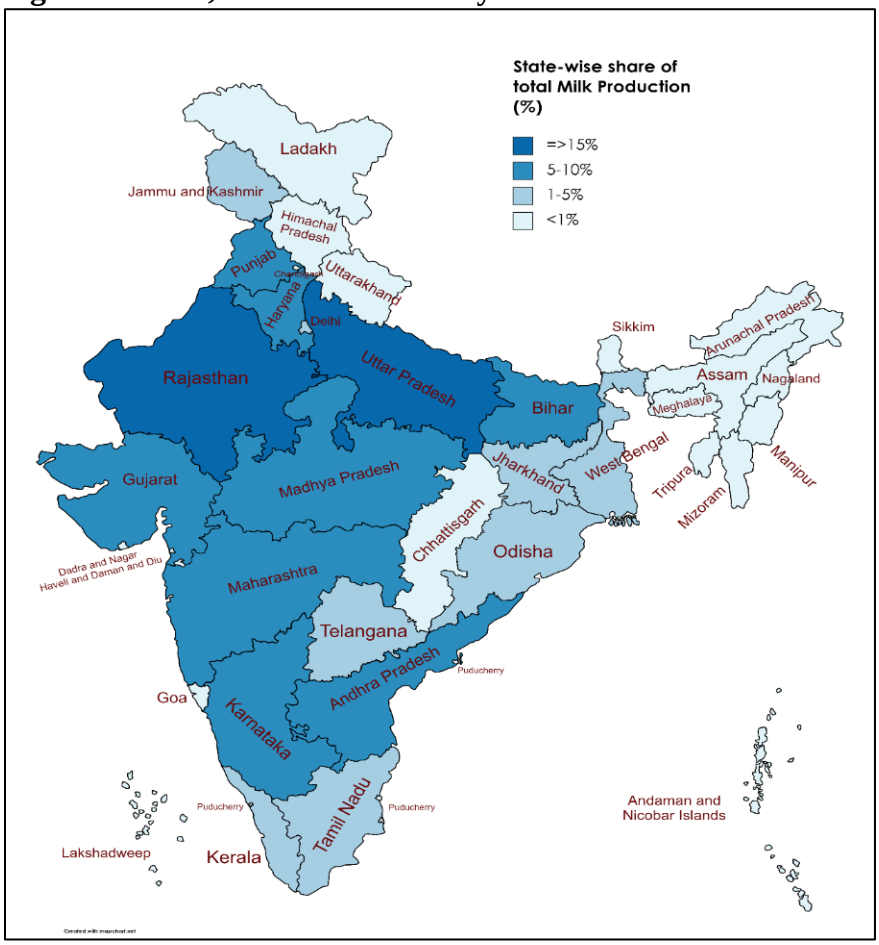
is heat tolerant and parasite resistant, making it better adapted to India's hot, humid climatic conditions. These animals can be used for both meat and milk production; however, meat quality characteristics vary and milk its milk production is not necessarily very high.

[2] The Department of Animal Husbandry and Dairying under the Ministry of Fisheries, Animal Husbandry and Dairying, conducts a livestock census throughout India. To date, and dating back to 1919, there have been 19 Livestock Censuses conducted in participation with Indian state governments and Union territories administrations every 5-years. The current 20th Livestock Census was launched in October 2018. The enumeration was done in both rural and urban areas. Various species of animals (cattle, buffalo, Mithun, yak, sheep, goat, pig, horse, pony, mule, donkey, camel, dog, rabbit, and elephant)/poultry birds (fowl, duck, and other poultry birds) possessed by households; household enterprises/non-household enterprises were counted on site. Another important feature of 20th Livestock Census is it has been designed to capture breed-wise number of animals and poultry birds.

[3] Out of the 192 million head of bovine dairy cattle, it is estimated that around 51 million head are foreign (exotic) introduced and or crossbreed animals; about 142 million head are indigenous (*B. indicus*)/ non-descript. Goats, sheep, and pigs represent about 232 bovid animals.

[4] This herd number refers to cows used for dairy purposes during the year. It does not include dry cow, heifers, or buffalo cows.

Figure 1: India, Milk Production by State



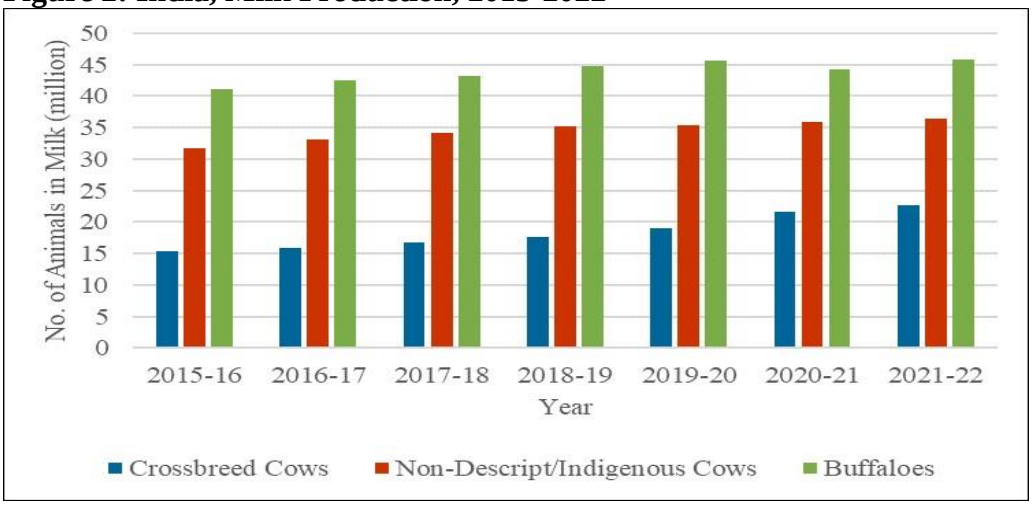
Source: FAS New Delhi office research, Basic Animal Husbandry Statistics, 2022.

India's Other Milk Production on the Rise: India's other milk production comes mainly from buffalo cows. Buffalo milk production in 2024 is forecast at 110.7 MMT, representing a year-over-year increase of nearly two percent. Buffalo milk production in 2023 is estimated at 108.1 MMT, up slightly by 0.1 MMT from the USDA official figure of 108 MMT. Post attributes the variation to the LSD outbreak's more limited impact on the buffalo herd's health compared to that of the bovine dairy cattle herd. The Asian domestic water buffalo is a native species, that is climatically better adapted to the Indian subcontinent's weather conditions and animal diseases.

Buffaloes Gaining in Popularity: A notable rise in milk prices in 2023, especially that of milk fat, is prompting farmers to choose the rearing of buffaloes over bovine dairy cows as buffalo milk is richer in fat content relative to bovine dairy cow milk.[5] Furthermore, the disposal of dry buffalo cows for slaughter and hides, makes buffaloes more economically remunerative than bovine diary milk cows.[6] The Indian government aims to see the country's buffalo herd increase in size (see, GAIN-INDIA | IN2023-0060 | India - Livestock and Products Annual - 2023).

[5] Buffalo milk comprises of 15-16 percent total solids (TS) which includes 6-7 percent fats and 9 percent solid-not-fat (SNF); cow milk comprises 12 percent TS comprising 3.5 percent fats and 8.5 percent SNF.
[6] On October 26, 2005, the Supreme Court of India upheld the constitutional validity of anti-cow (bovine) slaughter laws enacted by various Indian states governments. Twenty out of 28 Indian states regulate or prohibit the slaughter

Figure 2: India, Milk Production, 2015-2022



Source: FAS New Delhi office research, Basic Animal Husbandry Statistics, 2022.

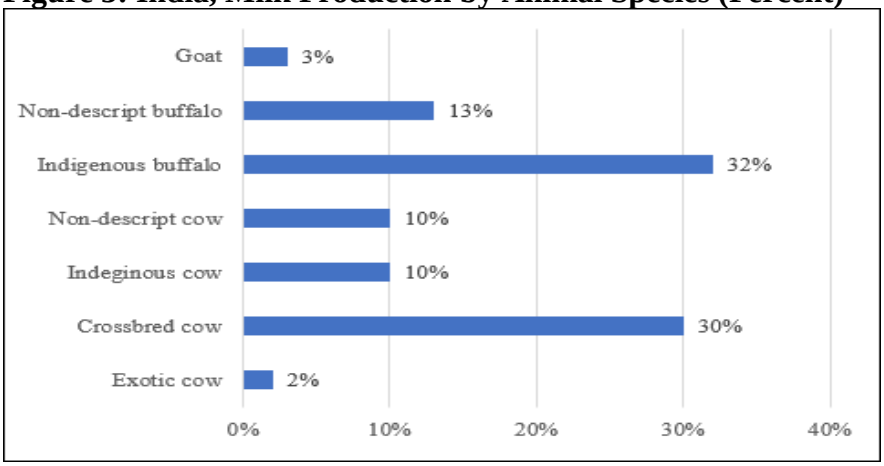
While India's milk yield per animal has been rising, it nonetheless continues to remain low relative to that of other producer countries. India's average milk yield is lower than that of neighboring Pakistan, the Latin America states, China, Russia, Australia, the European Union (EU), the United States, and Canada (see, FAO, 2023).

Table 2: India, Milk, Average Yield per In-Milk Cow and Buffalo Cow (kg/day), 2015-2022

Animal Breed	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Exotic and Crossbred Cow	7.5	7.5	7.7	8.0	8.2	8.4	8.5
Non-descript/ Indigenous Cow	2.7	2.8	2.9	3.0	3.1	3.2	3.4
Buffalo Cow	5.1	5.2	5.5	5.6	5.8	5.9	6.0

Source: Basic Animal Husbandry Statistics, 2022.

Figure 3: India, Milk Production by Animal Species (Percent)



Source: FAS New Delhi office research, Basic Animal Husbandry Statistics, 2022.

of cows (bovine). The slaughter of bovine cattle, an animal considered sacred by Hindus, is banned in most Indian states; conviction can incur penalties of up to 10 years imprisonment and fines of upwards of $6,000.

Outyear 2024 Production on the Rise: FAS New Delhi foresees total (cow and others) fluid milk production on the rise in 2024, in part due to a combination of factors, including increased dairy cooperative support, improved animal health and genetics, as well as better feeds and fodders along with farmer incentives.

i. **Dairy Cooperative Support**: The Indian government, aiming to safeguard national food security, prioritize milk production in this largely vegetarian society.[7] To ensure dairy farmers' commercial profitability, and their welfare, government agencies act to facilitate the ease of milk procurement, that further stimulates production.[8] The Indian government provides the dairy cooperatives with financial and physical support. For instance, prices put forward by dairy cooperatives often act as floor price for private purchases. Dairy cooperatives also facilitate animal genetic improvement, health services, and remunerative waste management systems (see, National Dairy Development Board, 2022). Some of India's key, private milk players include Nestlé, Heritage, HATSUN, and Lactalis. Dairy cooperative-backed milk brands are Amul, Mother Dairy, Vijaya, Verka, and Aavin.[9]

ii. **Improved Animal Health**: India's Livestock Health and Disease Control Program (2019-2020 and 2023-2024) has an operational budget equivalent to $1.8 billion. The program is geared to providing quality veterinary care. For example, as part of this scheme, the Indian government is allocating $4.8 million for mobile veterinary units to assist remote dairy farmers by providing access to animal healthcare.

iii. **Genetic Improvement**: The India government counts with specialized programs to facilitate animal health and genetic improvement.[10] Under the *Rashtriya Gokul Mission* (RGM), the government extends a 50 percent capital subsidy (i.e., limited to $0.25 million) for the establishment of breed multiplication farms.[11] The program is focused on improving and expanding indigenous breeds. In this manner, the National Dairy Research Institute (ICAR-NDRI) produced India's first cloned female indigenous cattle calf.[12] The institute has also produced cloned buffaloes. Through the

[7] India has a population estimated to number 1.399.1 billion (Central Intelligence Agency, 2023 est.). While vegetarianism is prevalent in India, it is not universal. The survey conducted by the Register General of India in 2014, indicates that 30 percent of the population (or some 420 million Indians) is purely vegetarian. By some estimates, India's vegetarians as a percent of the population could even be 39 percent of the national population or about 545 million individuals.

[8] The National Cooperative Dairy Federation of India, Anand (Gujarat), is the apex body for the cooperative dairy sector in India. Federal dairy cooperatives of states and union territories are its members. The National Dairy Development Board (NDDB) is a statutory body established to finance and support dairy cooperatives.

[9] In the year 2013, there were nearly 183 milk unions in India, this number by 2023 has increased to 225.

[10] The Indian Council of Agricultural Research (ICAR) - Central Institute for Cattle Research (CIRC) conducts research in the field of cattle breeding, feeding, management and reproduction. One of its projects, the Indigenous Breeds Project (IBP) focuses on indigenous cattle breeds (the Gir, Kankrej and Sahiwal breeds).

[11] Progeny testing is being done in nine states for cattle breeds such as Gir, Sahiwal, Jersey; crossbreeds of Holstein and Jersey; and buffalo breeds such as Murrah and Mehsana. The main institutions for such testing are: GADVASU, Ludhiana, BAIF, Pune, KVASU, Mannuthy and GBPUA&T, Pantnagar.

[12] Since 2021, in collaboration with Uttarakhand Livestock Board, the NDRI has been working on cloning indigenous cow breeds of Gir, Sahiwal, Red-Sindhi, and Tharparkar. These breeds are the most common and best milk producing indigenous cow breeds in India.

RGM, the nation-wide artificial insemination (AI) program MAIRITIs (Multi-Purpose Artificial Insemination technicians in Rural India) provides AI services.

iv. **Feeds and Fodders**: India is facing acute feeds and fodders shortages. The country's dairy producers are confronting a deficit of green fodder (11 percent), dry fodder (23 percent), and feed concentrates (29 percent). Shortages are due to increased acreage being dedicated to higher returning commercial crops, degraded pasture, rising input costs, and insufficient quality fodder seeds.[13] To address these issues the India's Department of Agriculture and Farmers Welfare, through the National Dairy Development Board (NDDB), is implementing programs to tackle fodder shortages. For example, the National Livestock Mission (NLM) and Animal Husbandry Infrastructure Development Fund (AHIDF) are two key schemes seeking to ameliorate the fodder shortage.[14] (See, GAIN-INDIA, | IN2023-0060 | India - Livestock and Products Annual - 2023.

v. **Farmer Incentives**: In addition to the Indian government extending credit, animal health, and infrastructural support, the Indian state governments are also extending financial incentives to farmers to boost milk production and animal rearing. The *Mukhyamantri Dugdh Utpadak Sambal Yojana* (launched originally in Rajasthan state in 2019) is active across the country. Under this scheme dairy farmers are provided a financial incentive of ~$0.06/kilogram (kg) for the milk procured.[15]

So, What Happened in 2022-2023: Less than ideal weather conditions with the delayed onset of winter, the outcome of the COVID-19 period induced artificial insemination rates drop-off, and poor animal husbandry practices.

i. **The Weather Doesn't Help:** Post sources and Indian media reports highlight that heat stress is a growing concern. Shortcomings in cow fluid milk production are being attributed to heat stress. The delayed 2022 winter also hindered the milk flush season.

ii. **Where Have the Cows Gone? Declines in Artificial Insemination:** The COVID-19 outbreak in 2020, with labor movement restrictions and lockdowns in India, limited the practice of artificial insemination of dairy cows.[16] Reduced insemination of

[13] See, Ministry of Fisheries, Animal Husbandry and Dairying/ Department of Animal Husbandry and Dairying, "Fodder Shortage," December 23, 2022, at https://dahd.nic.in/sites/default/filess/RS2021.pdf.

[14] The NLM facilitates financial assistance for production of high yielding fodder seed varieties, and promotion of fodder as a cash crop. The entrepreneurship development program of the NLM focuses on establishment of fodder blocks/hay bailing/silage units by providing financial assistance, 50 percent subsidy up to nearly $62,000. The AHIDF incentivizes investments for establishment of animal feed manufacturing units and animal feed testing laboratories. The NDDB facilitates formation and promotion farmer producer organizations (FPOs) that are primarily engaged in fodder centric, and animal husbandry activities.

[15] See, https://www.business-standard.com/india-news/yogi-govt-announces-50-subsidy-on-dairy-farm-consisting-of-25-cows-123091200869_1.html.

[16] See, Down to Earth, "17 million missing: A DTE analysis sheds light on why India was dealing with milk inflation," at https://www.downtoearth.org.in/news/agriculture/17-million-missing-a-dte-analysis-sheds-light-on-why-there-is-a-shortage-of-milk-products-in-india-91390#:~:text=During%20the%20past%20two%20years,breeds%20that%20have%20low%20productivity.

animals resulted in a lower number of calf births; the effects of which are noticeable in 2022 and 2023 with the lower numbers of cows coming into milk production.

iii. **Poor Animal Husbandry:** During the COVID-19 period, Indian dairy farmers sought to control herd size by delaying animal pregnancies. Most of the smaller farmers reportedly also underfed their cattle in response to rising prices of fodders along with lower market demand for milk. Undernourished pregnant animals have borne weaker calves. These animals upon reaching their milking-age in 2022-2023, are often under productive. Now with improving animal health care and the retreat of the LSD outbreak, milk production in 2023 is seeing signs of improvement.

CONSUMPTION

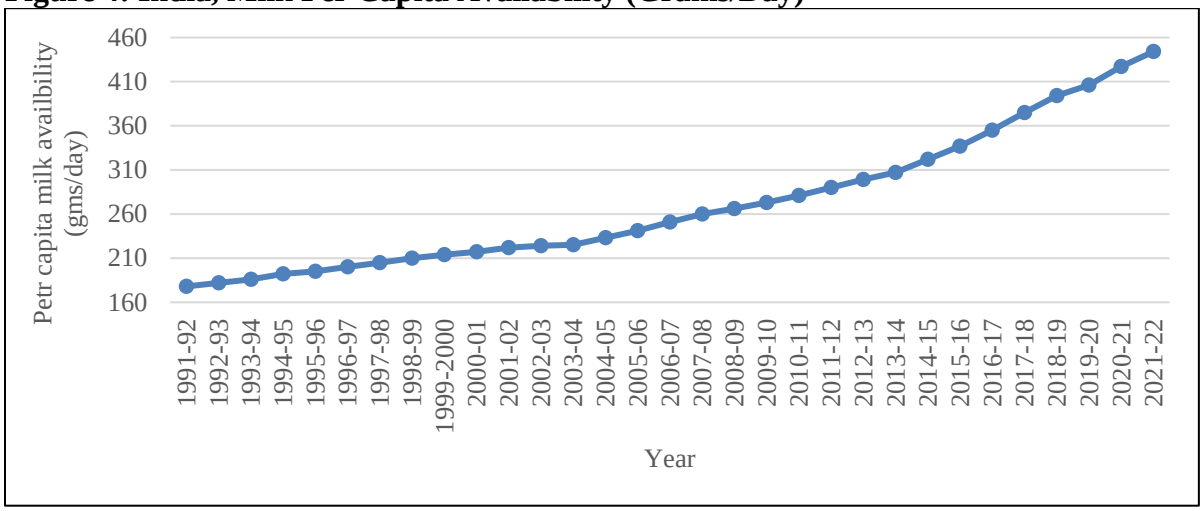
Domestic Consumption Tends Upwards: FAS New Delhi forecasts 2024 domestic consumption of fluid milk to grow to about 90 MMT, up three percent from the 2023 estimate of 87 MMT. Post is revising its earlier 2022 and 2023 estimates by roughly 0.5 MMT in both market years, bringing them in lower than the USDA official numbers. Post is adjusting its fluid milk consumption numbers downward, accounting for a combination of reduced supply along with consumer fear of exposure to LSD through tainted milk.[17] Concerns with adulterated fluid milk during the period of reduced supplies further motivated drops in consumption.

Factory Consumption Grows along with Value-Added Products Demand: FAS New Delhi forecasts 2024 factory consumption expanding to about 122.6 MMT, up two percent from the 2023 estimate of 120 MMT. Post attributes growth driven by an uptick in exports of milk and milk products occurring during a period of domestic population growth. At the same time, Indian consumers are seeing their disposable incomes increase along with rapid urbanization. With more money in their pockets, urban consumers' consumption patterns are shifting to demand more healthy and nutritious milk and milk products. The takeoff of online markets and home delivery during the COVID-19 pandemic in urban settings has changed how consumers view milk and milk products (i.e., health inducing), and especially how they purchase these products.

Per Capita Consumption, the Rural Urban Divide Not That Great: Monthly per capita consumption expenditure on milk and milk products in rural India represents 19 percent of the total food expenditure. In urban India, milk and milk products account for over 20 percent of the total food expenditure. In rural and urban settings, there is a consistent increase in food expenditure over time. India today is consuming almost the entirety of it fluid milk production despite its high production volumes.

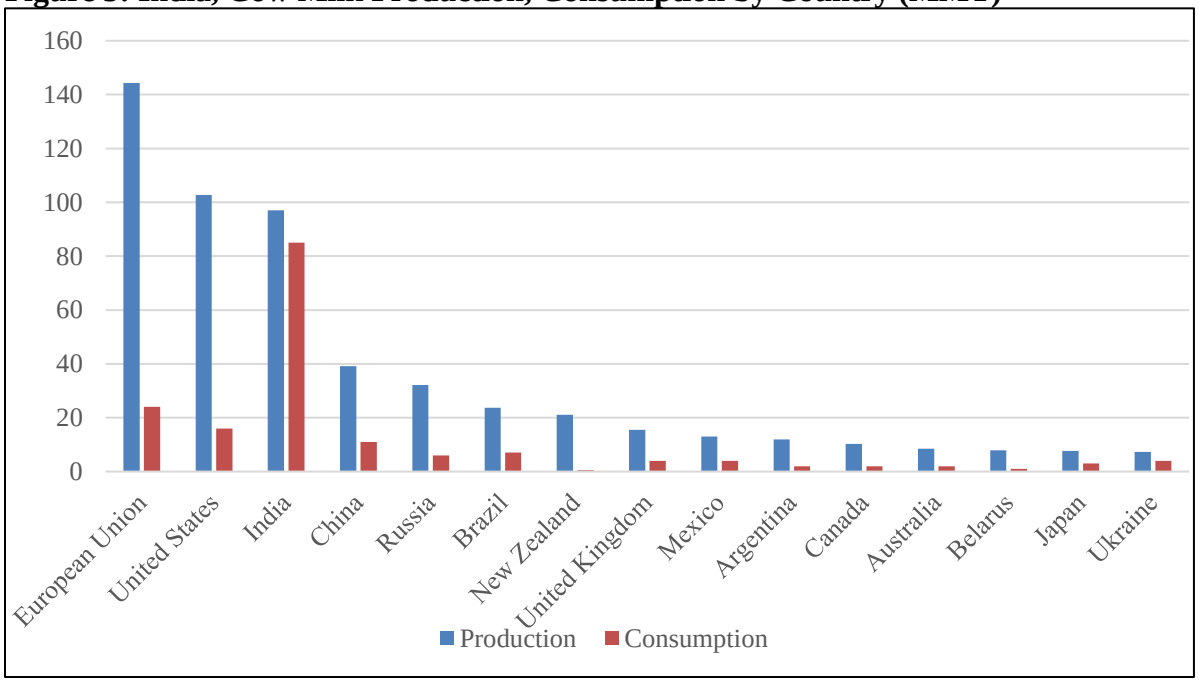
[17] See, https://www.tribuneindia.com/news/ludhiana/milk-adulteration-feared-due-to-lsd-fda-collects-samples-424413.

Figure 4: India, Milk Per Capita Availability (Grams/Day)



Source: National Dairy Development Board.[18]

Figure 5: India, Cow Milk Production, Consumption by Country (MMT)



Source: Dairy: World Markets and Trade, 2023.[19]

TRADE

Imports Remain Sluggish: Milk and milk products in India are imported in response to seasonal shortages. However, import quantities tend to be very low given the dairy sector's political backing. FAS New Delhi forecast 2024 milk imports to remain low at potentially 450 metric tons (MT). India remains nearly self-sufficient in milk production. In the first half of 2023, imports

[18] National Dairy Development Board at https://www.nddb.coop/information/stats/percapitavail.
[19] Dairy: World Markets and Trade, 2023, at https://www.fas.usda.gov/data/dairy-world-markets-and-trade.

dropped marginally compared to 2022 due to stocks of nonfat dry milk powder being utilized to meet fluid milk demand. France supplies nearly three-fourths of India's fluid milk import volume. India does not source any fluid milk from the United States. The Indian government and industry strongly oppose imports, raising significant barriers to trade.

Exports to Increase: FAS New Delhi forecasts India's 2024 fluid milk exports at 0.020 MMT, up from the 2023 estimate of 0.016 MMT. Milk exports benefit from global demand for milk. India's fluid milk export markets are Bangladesh, the United Arab Emirates (UAE), Sri Lanka, and Bhutan. Post estimates 2023 fluid milk exports higher than the USDA official estimate number of 0.015 MMT. Export trends in the first half of 2023 support Post's higher estimates.

PRICE DATA

Prices of milk and milk products continue to follow an upward trajectory in India. Local media sources foresee prices remaining elevated through 2024. The price surge over the last three years has been nearly 24 percent, with 2022 registering an annualized price hike of 10.5 percent. The main drivers of higher fluid milk prices include:

i. **Overall Inflation Increase**: India is experiencing increased overall inflation, both headline and core inflation. India's food price index increased by 11.5 percent, while consumer prices increased by 7.4 percent year-over-year (July 2023). Labor costs, a critical component of the cost of production is rising which is fueling milk and milk products higher prices. Operational and procurement costs are high, further contributing to higher milk prices. The cost of feeds, fodders, and other inputs (i.e., labor costs, transportation, and energy) have escalated over the past two years.

ii. **Demand and Supply Gap**: Low milk production, accompanied by increased demand are driving prices higher. Indian media reports, along with government and industry sources comment on the unexpected increase in domestic demand in 2022. This demand previously had been held in check due to COVID-19 pandemic supply chain constraints.

POLICY

Government Policy To Boost Production: The Indian government aspires to achieve a nine percent increase in milk production, allowing India to then account for 33 percent of global milk production. The government is stimulating milk production by increasing the profitability of dairy farming. To do so, the government is allocating $1.32 billion over five-years (2021-2026) to facilitate the growth of the dairy sector through special schemes and programs. The India Fiscal Year (IFY) (April-March) 2023-2024 budget allocates to India's Department of Animal Husbandry and Dairying (DAHD) $52.8 million, a 40 percent increase over the preceding year.

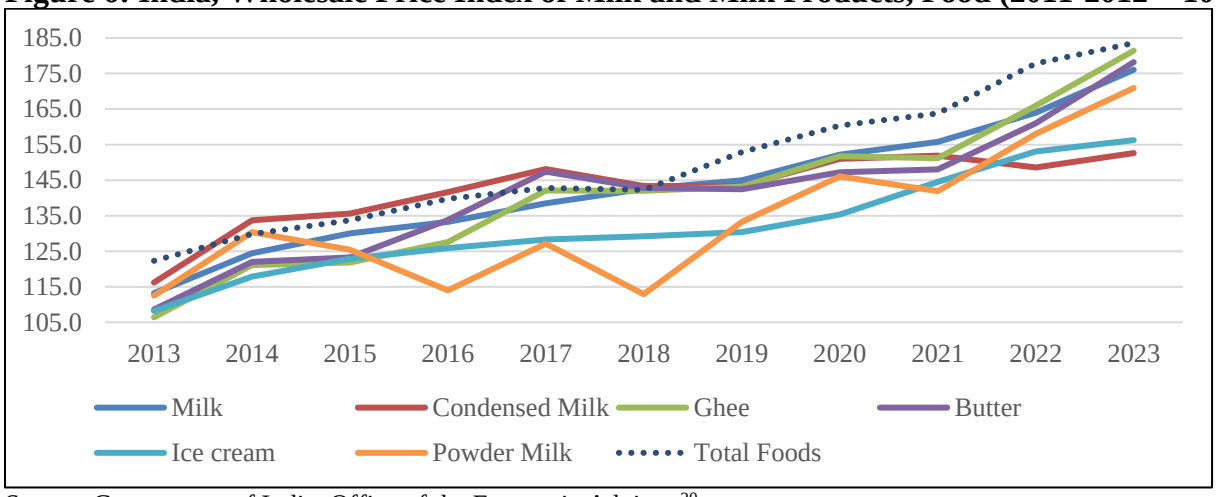
Budget Allocations, Realignment of Schemes: The Indian government's IFY 2023-2024 budget realigns dairy schemes and programs, including:

- **The Development Program:** The Development Program is the new name assigned to the earlier White Revolution Scheme, which is now realigned with other prevailing

schemes such as: a) *Rashtriya Gokul Mission* – which includes accelerated breed improvement program and establishment of breed multiplication farms; b) the National Program for Dairy Development – which focuses on improvement in productivity and production of milk; c) the National Livestock Mission – which includes development and establishing of the rural poultry hatcheries, private breeding farms for sheep, goat, and pigs and also their feed and fodder, and fodder seed multiplication facilities; d) the Livestock Census and Integrated Sample Survey; and (e) the Dairying through Cooperatives Program.

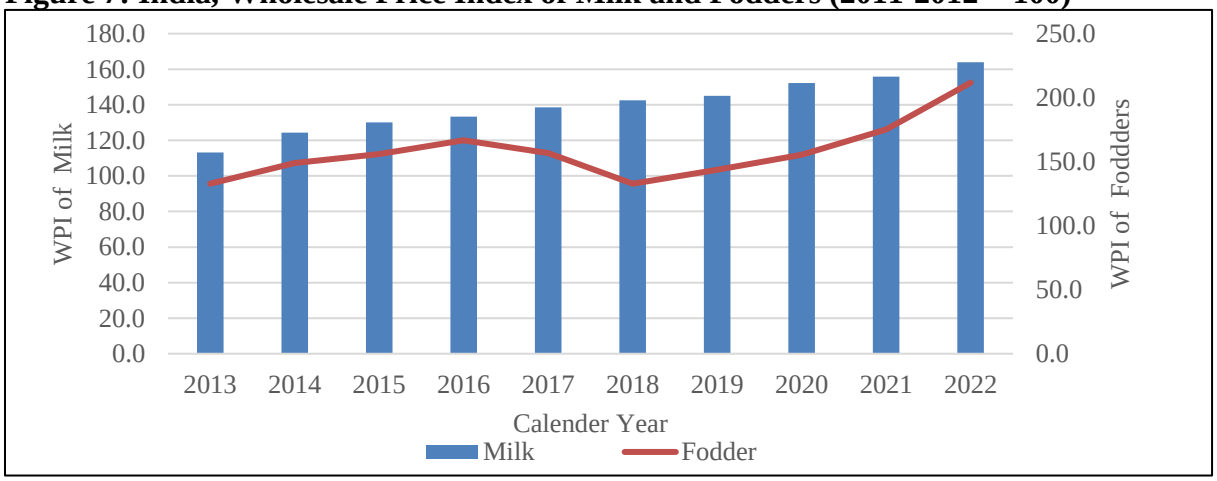
- The Animal Husbandry Infrastructure Development Fund (AHIDF): The AHIDF incorporates the Dairy Infrastructure Development Fund (DIDF) and the scheme for support to Dairy Cooperatives and Farmers Producers Organizations (see, GAIN-INDIA | IN2023-0060 | India - Livestock and Products Annual – 2023).

Figure 6: India, Wholesale Price Index of Milk and Milk Products, Food (2011-2012 = 100)



Source: Government of India, Office of the Economic Advisor.[20]

Figure 7: India, Wholesale Price Index of Milk and Fodders (2011-2012 = 100)



Source: Government of India, Office of Economic Advisor.

[20] Government of India, Office of the Economic Advisor, https://eaindustry.nic.in/download_data_1112.asp.

Integrated Veterinary Health Certificate: On July 17, 2023, India's Ministry of Fisheries, Animal Husbandry and Dairying/Department of Animal Husbandry and Dairying, published **Office Memorandum (OM) L-11/1/2019-Trade (E-11542)**. This memorandum grants additional transition time to stakeholders prior to implementation of the requirement of the integrated veterinary health certificate (VHC) for the import of milk and milk products into India. The new date of implementation is set for December 31, 2023. The timeline has been extended to provide "Ease of Doing Business," as well as support various representations received from industry stakeholders to delay the effective implementation date (see, GAIN-INDIA | IN2023-0053 | India's FSSAI Extends Integrated Veterinary Health Certificate's Implementation Date - Milk and Milk Products and GAIN-INDIA | IN2023-0002 | India - FSSAI Publishes List of HS Food Product Codes Requiring Health Certificate).

Food Safety Programs: To improve fluid milk product quality and food safety, the Indian government continues implementing the Strengthening Infrastructure for Quality and Clean Milk Production Program (Indian rupees - INR 300 million/~$3.6 million). The program seeks to address food safety issues at the farm and village level, aiming to improve milk quality throughout the supply chain. The Ministry of Food Processing Industries also is providing subsidies for cold chain infrastructure (see, GAIN-INDIA | IN2022-0091 | Dairy and Products Annual – 2022).

Restriction on Dairy Imports: India restricts market access for U.S.-origin food products. Imports of most livestock and livestock-derived food products, including several milk and milk products, are effectively banned due to overly restrictive Indian import requirements (see, GAIN-INDIA | IN2021-0151 | India Exporter Guide - 2021). Food use lactose and whey imports must meet all Indian veterinary import requirements. India insists, premised on religious and cultural grounds, that all imports of dairy products be derived from animals which have never been fed any animal feed preparation produced from the internal organs, blood meal, and or tissues of ruminants (i.e., bovines).

Registration of Foreign Manufacturing Facilities: On October 10, 2022, the Food Safety and Standards Authority of India (FSSAI) published **Order F. No. TIC-B02/2/2022-IMPORTS-FSSAI**, requiring that all foreign food manufacturing facilities intending to export milk and milk products; meat and meat products; egg powder; infant food; and nutraceuticals to India, to register with a competent authority. Additionally, the order requires the competent authorities of all exporting countries to email the FSSAI, a list of existing manufacturers and of those who intend to export such food products to India as per the format published by the FSSAI. The FSSAI itself will load this information to its online portal. The effective date of this order is February 1, 2023 (see, GAIN-INDIA | IN2022-0091 | Dairy and Products Annual – 2022).

COMMODITIES:

MILK, NONFAT DRY (SKIMMED MILK POWDER)

Table 3: India: Commodity, Dairy, Milk, Nonfat Dry – Skimmed Milk Powder (PSD)

Dairy, Milk, Nonfat Dry	2022		2023		2024	
Market Year Begins	Jan 2022		Jan 2023		Jan 2024	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	44	44	30	5	0	5
Production (1000 MT)	700	700	730	730	0	760
Other Imports (1000 MT)	0	0	0	0	0	0
Total Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	744	744	760	735	0	765
Other Exports (1000 MT)	28	28	5	2	0	10
Total Exports (1000 MT)	28	28	5	2	0	10
Human Dom. Consumption (1000 MT)	686	711	735	728	0	735
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	686	711	735	728	0	735
Total Use (1000 MT)	714	739	740	730	0	745
Ending Stocks (1000 MT)	30	5	20	5	0	20
Total Distribution (1000 MT)	744	744	760	735	0	765

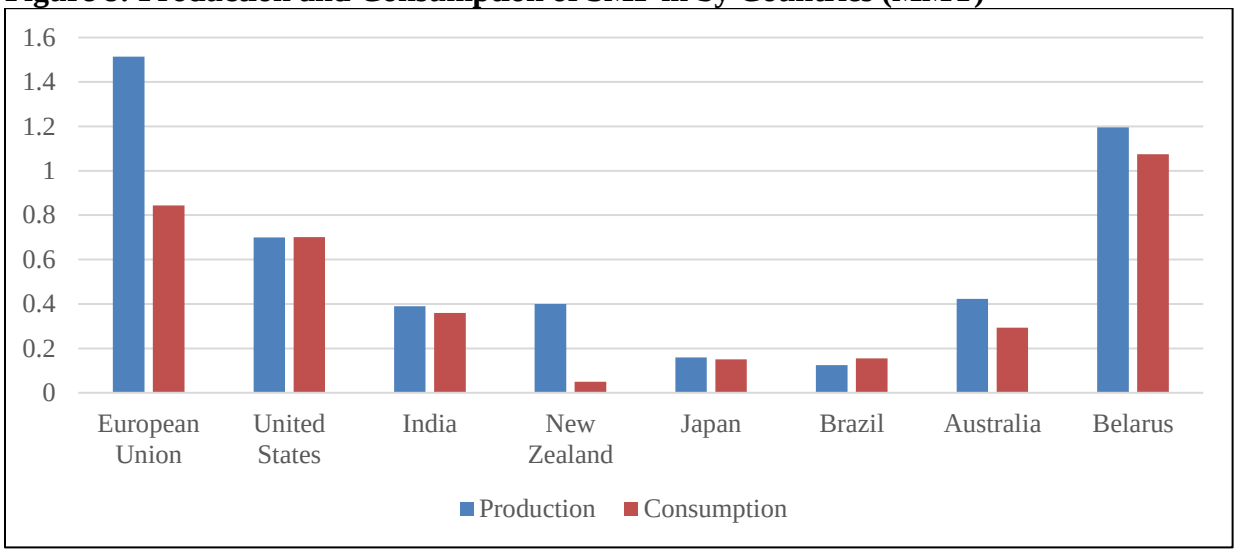
PRODUCTION

Production Gets a Boost: FAS New Delhi forecasts India's nonfat dry milk (skimmed milk powder - SMP) 2024 production at 0.76 MMT, up four percent from the 2023 estimate of 0.73 MMT. The increase is driven by increased milk production, greater consumption demand in domestic and international markets, and the need for maintaining SMP stocks in order to be better prepared for market and weather uncertainties.

CONSUMPTION

Consumption Rising: FAS New Delhi forecasts SMP 2024 consumption at 0.735 MMT, just shy of one percent year-over-year growth from the SMP 2023 production estimate of 0.728 MMT. Increasing demand for milk and milk products throughout the year, an outcome of a combination of growing disposable income, changing consumption habits, more awareness and availability of online retails marketing channels, a growing population, urbanization, and the rebound of the hotel-restaurant-institutional (HRI) and tourism sectors are expected to strengthen demand for SMP. India consumes most of its SMP production domestically. The SMP consumption in the year 2023 is estimated at 0.728 MMT to be slightly less than the expected USDA official figure of 0.735 MMT. This is primarily due to shortage of fluid milk production in the country. Post estimates SMP consumption in 2022 to be 0.711 MMT, slightly higher than USDA official numbers due to a then unexpected increase in demand.

Figure 8: Production and Consumption of SMP in by Countries (MMT)



Source: Dairy: World markets and Trade, 2023.[21]

TRADE

Imports: There has been no change in the tariff-rate-quota (TRQ) permits for SMP. India permits imports of SMP/whole milk powder under a TRQ of 10,000 MT, with a 15 percent import duty.[22] Outside of the TRQ, imports are subject to a 60 percent import duty (see, GAIN-INDIA | IN2022-0091 | India - Dairy and Products Annual – 2022).

Eligible Entities for Quota Allocations: Products with quota allocations include milk powder (harmonized tariff system - HS code 0402.10 and 0402.21) and white butter, butter oil, anhydrous milk fat (HS code 0405). Entities eligible for quota allocations include the National Dairy Development Board (NDDB), the State Trading Corporation (STC), the National Cooperative Dairy Federation (NCDF), the National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED), the Minerals and Metals Trading Corporation (MMTC), the Projects and Equipment Corporation of India Limited (PEC), and the Spices Trading Corporation Limited (STCL).

[21] Dairy: World Markets and Trade, 2023, https://www.fas.usda.gov/data/dairy-world-markets-and-trade.
[22] Earlier, in June 2017, the 10,000 MT TRQ was fixed at a 15 percent tariff rate. In February 2020, this provision was deleted from the notification. With **Customs Notification No. 28/2020 (June 23, 2020)**, the status quo has been restored.

Table 4. India: TRQ for Imports of SMP, Butter, and Oils

Description	HS Code	In/Out of Quota Rate (%) as per WTO	In/Out of Quota Rate (%) as per Indian Tariff	Notifications	TRQ in Metric Tons
Milk and Cream: Skimmed Milk Powder, granule, and solid forms, of fat content by weight no exceeding 1.5% and later exceeding 1.5%	0402.10 0402.21	15/60	15/60	12/12-Cus S.I No.7 and 12/12-Cus S.I No.7	10,000
Butter and Other Fats	0405.10	NA	0/30	12/12-Cus S.I No.9	15,000
Butter Oil	0405.9010		0/30	12/12-Cus S.I No.9	
Ghee	0405.9020		0/30	12/12-Cus S.I No.9	
Dairy Spreads	0405.20	NA	0/40	12/12-Cus S.I No.9	15,000
Other	0405.9090		0/40	12/12-Cus S.I No.9	

Note: Harmonized tariff system (HS).
Source: Ref: Para 2.60, Handbook of Procedures, Director General of Foreign Trade.

Exports: Assuming a normal year regarding weather and animal health, FAS New Delhi forecasts 2024 SMP exports to reach 0.01 MMT. Based on six-months of exports, Post estimates 2023 SMP exports at 0.002 MMT, lower than the USDA official export figure of 0.005 MMT. This is attributed to increased demand for milk and milk products in the country, reduced stocks, and rising SMP prices within India that make domestic trading more lucrative. India's main SMP export destination includes the UAE, Bhutan, Singapore, and the Maldives.

STOCKS

Beginning Stocks Increase: FAS New Delhi forecasts 2024 beginning stocks of nonfat dry milk or skimmed milk powder to be nearly 0.005 MMT. This is same as the 2023 stock level estimate. This is a glaringly low stock level as compared to the year 2022. Such low stocks volumes are a consequence of a shortage of fluid milk. SMP stocks are being used to help mitigate shortages. Media reports point towards almost exhaustion of SMP stocks in 2022. The Indian government is focusing on policy measures to increase milk production in the country, while aiming to grow SMP stocks for the future.

COMMODITIES:

BUTTER

Table 5: India: Commodity, Dairy, Butter (PSD)

Dairy, Butter	2022		2023		2024	
Market Year Begins	Apr 2022		Apr 2023		Apr 2024	
India	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	0	0	0	0	0	0
Production (1000 MT)	6500	6500	6700	6750	0	6900
Other Imports (1000 MT)	0	0	0	0	0	0
Total Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	6500	6500	6700	6750	0	6900
Other Exports (1000 MT)	42	37	17	18	0	25
Total Exports (1000 MT)	42	37	17	18	0	25
Domestic Consumption (1000 MT)	6458	6463	6683	6732	0	6875
Total Use (1000 MT)	6500	6500	6700	6750	0	6900
Ending Stocks (1000 MT)	0	0	0	0	0	0
Total Distribution (1000 MT)	6500	6500	6700	6750	0	6900

PRODUCTION

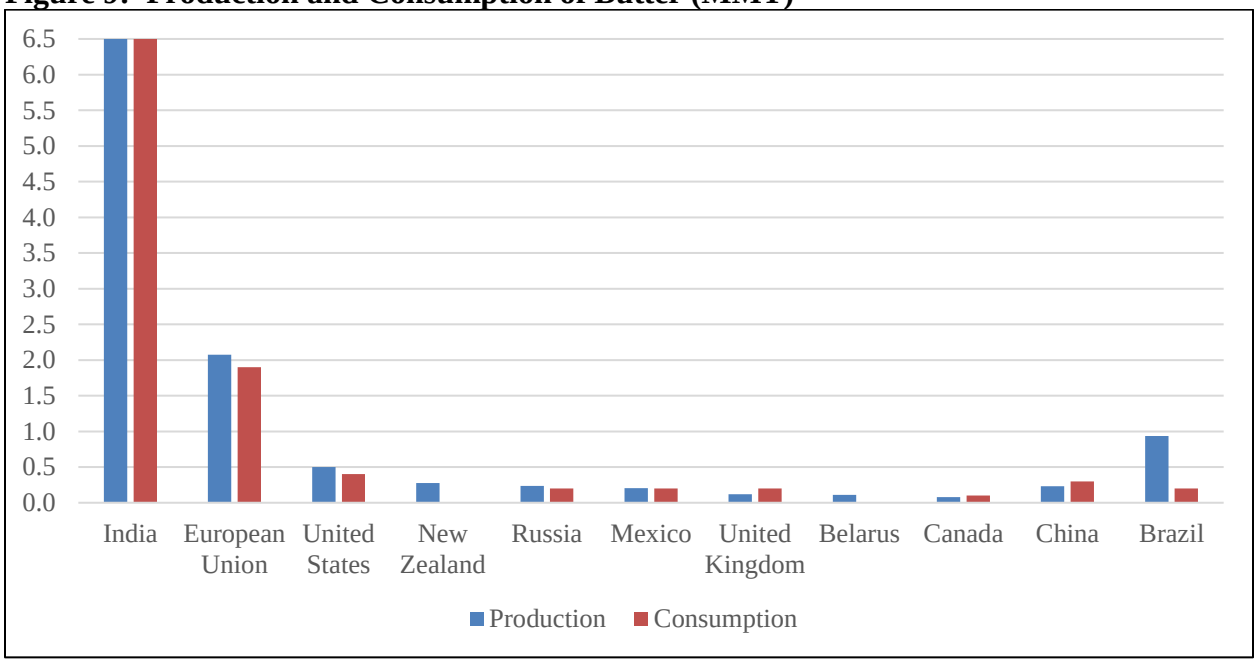
Production Increasing: FAS New Delhi forecasts India's 2024 butter production at 6.9 MMT, an increase of two percent over the 2023 estimate of 6.8 MMT. Foreseen production increases in 2024 result from higher butter demand in both domestic and international markets. The increase in 2023 over 2022 is influenced by an increase in domestic consumption demand.

CONSUMPTION

Domestic Consumption Rising: Much as is the case with fluid milk and SMP, India consumes almost the entirety of its butter domestically. FAS New Delhi forecasts India's 2024 butter consumption at 6.9 MMT, up two percent compared to the 2023 estimate. Rising incomes, growing awareness, changing food habits towards processed foods, improving tourism and demand from the HRI sector are driving demand upwards.

Post estimate India's 2023 butter consumption at 6.8 MMT, a four percent increase over the previous year. However, butter consumption numbers in 2023 are seen to shy away slightly from the USDA expected numbers due to shortfall of milk production and availability. In 2022, Post is estimating domestic consumption at 6.5 MMT, slightly higher than the USDA official numbers due to a then unexpected increase in demand for milk and milk products.

Figure 9: Production and Consumption of Butter (MMT)



Source: Dairy: World Markets and Trade, 2023.[23]

TRADE

Exports Growing: FAS New Delhi forecasts India's 2024 butter exports to climb to nearly 0.025 MMT. Butter exports in 2023, based on half-year published export data, are estimated at 0.018 MMT, slightly higher than the USDA expected number (i.e., 0.017 MMT). Published export data reveals 2022 butter exports of about 0.042 MMT. India's main butter export destinations are the UAE, Saudi Arabia, and the United States. Other smaller export destinations for Indian butter include Bahrain and Qatar.

Attachments:

No Attachments

[23] Dairy: World markets and Trade, 2023, https://www.fas.usda.gov/data/dairy-world-markets-and-trade.