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Report Highlights:

Assuming a normal 2021 monsoon season (June-September) and sufficient feed availability, India's fluid milk production is forecast to rise from an estimated 194.8 million metric tons (MMT) in calendar year (CY) 2020 to 199 MMT in 2021 (out-year). Butter exports will grow 56 percent to 25,000 metric tons (MT), anticipating modest export demand. Similarly, Non-Fat Dry Milk (NFDM) export sales are forecast to rise to 20,000 MT. Since milk production is growing in tandem with domestic consumption, any uptick in future demand for milk-based products may generate imports.

Executive Summary:

Assuming a normal 2021 monsoon season, and adequate feed availability, India's fluid milk production is forecast to rise from an estimated 194.8 MMT in CY 2020 to 199.0 MMT in CY 2021. Further supported by a growing population and rising incomes, including a resumption in economic activities from the earlier COVID-19 lockdown, NFDM and butter consumption in CY 2021 will rise to 675,000 MT (up 5.5 percent) and 6.3 MMT (up 2.5 percent), respectively. Despite this growth, longstanding challenges continue to prevent optimal Indian dairy sector growth, including low Indian bovine animal milk productivity relative to those of developed countries; inconsistent availability of feed and fodder resources, and an inefficient cold chain network that is minimally accessed by milk producers.

There is growing health consciousness and demand for healthier food including dairy products, exacerbated by the COVID-19 global pandemic and the nationwide shutdown that occurred March-April 2020. In addition to fluid milk, consumers, especially those with higher disposable income will continue to demand value-added dairy products such as yogurt, nutrient based health drinks, buttermilk, processed cheeses (e.g., mozzarella, spread, flavored and spiced). Additionally, the demand for *ghee* (clarified butter) and butter will continue to be robust, with *ghee* among the most consumed value-added dairy products.

As India's milk production is just sufficient to meet domestic consumption (fluid and industrial use), any uptick in future demand for milk-based products may be filled through imports. U.S. dairy exports to India for human consumption are currently banned due to a veterinary health certificate requirement. Indian butter exports will slightly improve, from 16,000 MT to 25,000 MT in 2021 on the expectation of modest export demand. Similarly, NFDM exports will rise to 20,000 MT (close to the five-year average) from an estimated 6,000 MT in CY 2020.

Commodities:
Dairy, Milk, Fluid
Dairy, Milk, Nonfat Dry
Dairy, Butter

Production

India's fluid milk production is forecast to rise from an estimated 194.8 MMT in CY 2020 to 199 MMT in the out-year (2021). This projection assumes a normal 2021 monsoon season (June-September) and sufficient feed availability[1] that would contribute to improved dairy cattle and buffalo (milk) productivity. With restrictions easing on economic activities, businesses and food stores are slowly returning to pre-COVID output. A growing population coupled with rapid urbanization and improving income resources should support higher demand for milk and milk products in the out-year. The 2021 NFDM production is forecast to grow three percent to 680,000 MT on expectation of growing domestic demand for reconstituted milk during the summer when milk production declines due to high temperatures, dry weather, and poor pasture growth. Export demand for NDM is expected to modest. Combined butter and *ghee* production will also rise 3.3 percent to 6.3 MMT on strong consumption demand from household and near-normal demand from bulk users.

An estimated 80 million rural households are engaged in milk production as a source of their livelihood, the majority of which are small, marginal farmers and who are often landless (about 86 percent of total farmers are small/marginal, accounting for 47 percent of farmland and owning approximately 75 percent of milk animals). Unlike the larger herd sizes of leading milk producing countries, approximately 95 percent of India's milk producers hold just one to five milk animals per household, which amounts to a system slightly above subsistence-level farming (Department of Animal Husbandry and Dairying (DAHD), Government of India (GOI) Annual Report 2019/20). Larger dairy farms that have a minimum of 50 or more animals are increasing in some of the major dairy states such as Punjab, Gujarat, Maharashtra, and Telangana/Andhra Pradesh, although they remain sporadic.

Cow, Buffalo and Goat Milk with 48, 49 and Three Percent Shares

Between the two Indian Livestock Censuses (2012 and 2019), the relative share of cow's milk versus buffalo milk grew three percent to 48 percent[2] due to an increase in milk contribution from exotic and crossbred cows. Of that figure, exotic and crossbreeds contributed 26 percent; the remaining 22 percent produced by indigenous breeds. The state of West Bengal now leads in total cattle population (9.85 percent), followed by Uttar Pradesh (9.7 percent), Madhya Pradesh (9.7 percent), Bihar (7.9 percent), Maharashtra (7.2 percent) and Rajasthan (7.2 percent). Together, the six states constitute 50 percent of India's total cattle population (Source: 20th Livestock Census).

An estimated 49 percent of India's milk production originates from water buffalo (35 percent indigenous buffalos and 14 percent non-descript buffalos (i.e. animals not selected or bred for productivity).[3] Uttar Pradesh has the heaviest concentration of buffalo population at 33 percent, followed by Rajasthan (12.4

[1] Mostly includes crop residues of cereals, pulses, oilseeds, sugarcane, and other crops and cultivated green fodder.
[2] According to the 2019 Livestock Census, milk cattle population of exotic breeds and crossbreeds increased by 32 percent over the last census (2012) and significantly contributed to overall milk production. Those breeds have higher a milk yield of 7.95 kg/cow against 3.01 kg/cow for indigenous breeds.
[3] Between the two censuses, the milk buffalo population only marginally increased (0.2 percent), whereas the in-milk buffalo population rose 4.3 percent, and the "dry" declined 10.2 percent, the result of selective breeding.

percent), and Madhya Pradesh (9.5 percent). By contrast, unproductive goats can be sold for slaughter. Perhaps for that reason, although their share of milk production is only three percent, but is reportedly growing in states like Rajasthan (13.8 percent) and West Bengal (10.9 percent).

Water buffaloes are preferred by some farmers since their milk holds higher fat content (7-8 percent), which often receive higher market prices. Milk prices are determined by volume, fat, and solids-not-fat (SNF) content. Throughout India, water buffaloes may be sold for slaughter; by contrast, cattle slaughter is banned in most Indian states, which means that old unproductive cows become a costly burden.

Factors Affecting Milk Productivity

Key factors affecting the dairy cow productivity include low genetic potential of Indian bovines, a lack of nutritious and balanced feed rations, and inadequate veterinary services. Per the Department of Animal Husbandry and Dairying's (DAHD) latest annual report (2019-20), the average milk yield by volume per day in India includes indigenous cattle at 3.85 kilograms (kg) per day, crossbreeds at 7.85 kg, exotic cattle at 11.67 kg, indigenous water buffalo at 6.34 kg, non-descript buffalo at 4.35 kg and goat at 0.45 kg. Those figures contrast dramatically with dairy cow[4] production figures in the United Kingdom (22 kg/day) and the United States (28-29 kg/day or on average 7.5 gallons/day).

In addition, feed and fodder availability is another major challenge, where improved feed and fodder access would vastly enhance bovine animal productivity. According to the Government of India (GOI), by 2020, India may face significant deficits in dry fodder, green fodder, and concentrates to the extent of 11, 35 and 45 percent against estimated demand of 468 MMT, 213MMT and 81 MMT, respectively. Currently, only four percent of the cropping area is dedicated to fodder cultivation. That number may not increase in the short term due to competing uses of agricultural land for food and other cash crops.[5] As such, compound cattle feed use is just 8-10 MMT against India's total dairy feed requirement of around 80 MMT.

Fluid Milk Prices

Dairy cooperatives set farm gate fluid milk prices and are generally benchmarks for private actors who procure milk in the region. The dairy cooperatives consider factors such as feed and fodder cost increases, in addition to other inputs when revising farm gate milk prices. For example, cow milk procurement price which was upwards of Indian Rupee (INR) 30-31/liter in March 2020 ($0.40 to $0.42)[6] was reported to have slid to INR 18-20 per liter ($0.24 to 0.26/ liter),[7] but by mid-July had recovered to INR 24-25/liter ($0.32 to $0.33 per liter) in August[8] due to some demand amid government-eased COVID-19 restrictions. To offset some of the loss in profits, some state governments provide subsidies via cash transfers to improve producers' margins.

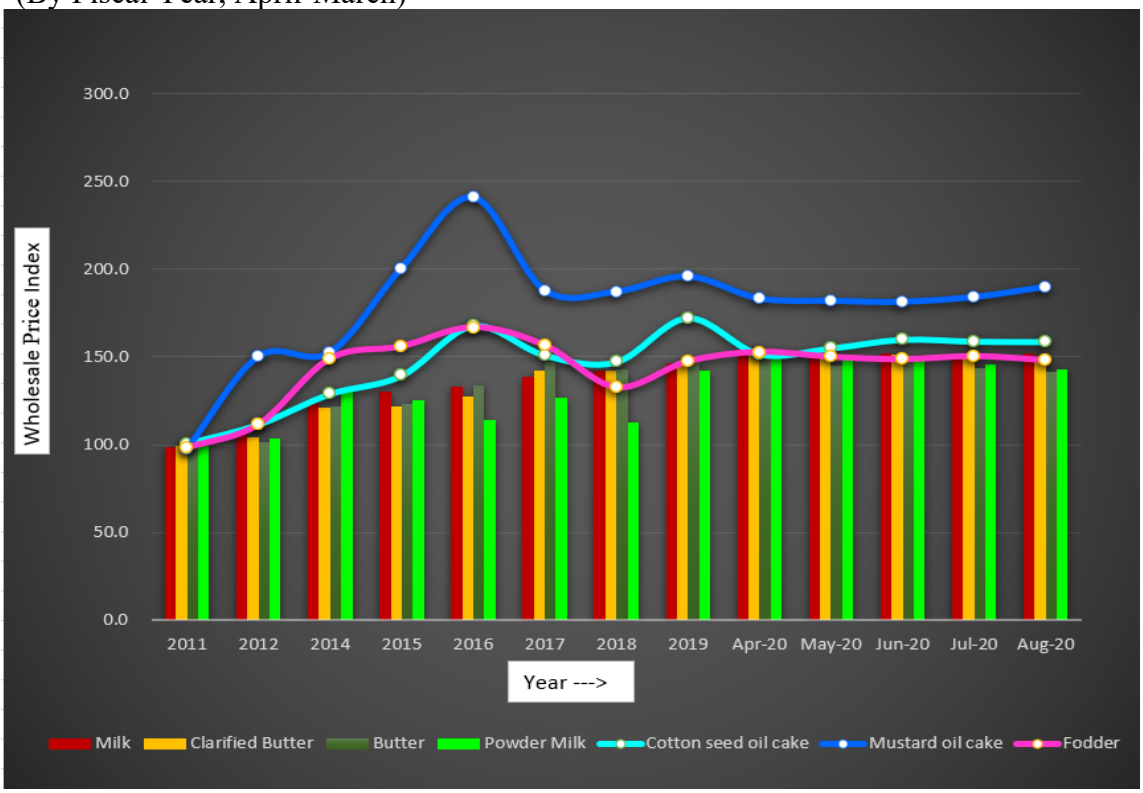
Being an essential commodity with its supply deemed an essential service, milk availability has been steady through the lean period. The flush season[9] (October 2019 through March 2020) was extended through April-May 2020 which partly ensured milk availability when the nationwide COVID-19 lockdown started on March 24. Starting April 2020, the milk wholesale price index (WPI) rose just 0.5 percent to INR 152.1 in August

[4] Holstein-Friesian is the dairy breed most common in the United States and United Kingdom.
[5] Source: National Action Plan on Fodder and Feed Security, DAHD, GOI.
[6] For comparison, the March average farm-gate all-milk price in the U.S. was $18/cwt (100-pound weight), equaling INR 29.6/kg basis prevailing exchange rate then. 1 cwt = 100 pounds = 45.359 kg. Source: AMS, USDA Dairy market news.
[7] July farm gate milk price was $20.5/cwt; equaled INR 33.9/kg.
[8] August farm-gate milk price was $18.8/cwt; equaled INR 30.9/kg.
[9] The "flush" season for milk is when dairy animal production is high because of sufficient feed availability and cooler temperatures and is normally October through March.

2020, while that of *ghee*, butter and powdered milk fell three, ten, and 11 percent, respectively. India's Fodder Price Index, which initially stood firm, also softened five percent with improved availability owing to good monsoon rains.[10] However, the Cottonseed and Mustard Oil Cake Indices grew seven percent due to tight supply and strong animal feed demand.

The India national average consumer retail price of milk as reported from the GOI's Department of Consumer Affairs ranged from INR 45.21 (USD $0.61)/liter in January 2020 to INR 47.0/liter through mid-September. In northeast India, milk was retailed at a premium of INR 10/liter and in the eastern region was sold at a discount of INR 5/liter as compared with the Indian average.[11]

Figure 1. India: Wholesale Price Index for Milk, Butter, *Ghee*, and Fodder/Feed
(By Fiscal Year, April-March)



Source: Office of Economics Adviser, Ministry of Commerce and Industry, GOI.

Production, Policies and Programs

Functions

DAHD is one of the departments under the Ministry of Fisheries, Animal Husbandry and Dairying, which was formed as a new Indian ministry on June 14, 2019. DAHD is responsible for matters related to livestock production, preservation, protection, and improvement of livestock through healthcare, dairy development, and National Dairy Development Board.

DAHD also assists and advises various state governments in animal husbandry and dairy development. Its focus areas include infrastructure development for improving animal productivity, improving value chains,

[10] The monsoons typically improve green roughage availability for grazing, although pasture and grazing lands are limited.
[11] See: Department of Consumer Affairs, GOI.

and maintaining superior germplasm at central livestock farms.[12] The department also supports states in implementing a national control program for diseases such as Foot-and-Mouth Disease and Brucellosis, and monitors animal diseases across the country through a web-based national disease reporting system.

Cattle Development Programs

Under the Rashtriya Gokul Mission,[13] the department focuses on development and conservation of indigenous bovine breeds[14] such as *Tharparkar, Gir, Red Sindhi, Rathi, Kankrej* and *Sahiwal* to increase the genetic potential of the unregistered bovine population (non-descript cattle) and improve milk productivity. It also supports state governments to subsidize the cost of animal insurance to the milk producers.

The National Animal Disease Control Program (NADCP) was launched in September 2019 for the control and eradication of Foot & Mouth Disease and Brucellosis. The program was approved by Union Cabinet on May 31, 2019 with total Central (Federal) funding and financial outlay of INR 133 billion for five years starting Indian Fiscal Year (IFY) 2019-20 to IFY 2023/24 for vaccinating all cattle, buffalo, sheep, goat and pig populations and all bovine female calves of 4-8-month age for Brucellosis.

Dairy Development

The National Dairy Development Board (NDDB) has developed an Information Network for Animal Productivity and Health (INAPH), an information technology application to collect data on breeding, nutrition, and health services. The animals registered in the network are also ear-tagged with a unique identification number.

The GOI is pushing to strengthen infrastructure for producing high quality milk, as well as for procurement, processing, and marketing of milk and dairy products through the following Dairy Development Schemes[15]:

- National Program for Dairy Development (NPDD): Goal to strengthen milk production, procurement, processing, and marketing by the state implementing agency.

- The NDP Phase-2 (Mission Milk); a proposed five-year program beginning in 2020 with the primary focus to develop milk processing infrastructure and establish of milk quality testing equipment at critical procurement points.

- Dairy Entrepreneurship Development Scheme (DEDS), implemented through the National Bank for Agriculture and Rural Development (NABARD) for self-employment and infrastructure development of the dairy sector.

- Scheme to support to Dairy Cooperatives and Farmer Producer Organizations engaged in dairy activity. It is implemented by NDDB with the objective to provide soft loans to state dairy cooperatives (working capital) and provide stable market access to dairy farmers while ensuring timely payments and remunerative prices for procuring milk.

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[12] Source: DAHD: Annual Report 2019-20.

[13] The Rashtriya Gokul Mission (RGM) was launched in December 2014 with the stated goal for indigenous breed development and conservation through selective breeding methods and genetic improvement.

[14] India's bovine genetics are represented by 41 registered indigenous breeds of cattle and 13 registered buffalo breeds. Indigenous bovines are robust and resilient and are particularly suited to the climate and environment of their respective breeding tracts. The milk of indigenous animals is high in fat and SNF content. Source: DAHD.

[15] Source: DAHD: Cattle and Dairy Development.

- Dairy Processing and Infrastructure Development Fund (DIDF) introduced in December 2017. Its objective is to modernize milk processing facilities for manufacturing high value-added milk products.

The issue of ensuring safe, wholesome, and high-quality food availability, including milk and dairy products, comes under purview of the 2006 Food Safety and Standards Act, which is implemented by the Food Safety and Standards Authority of India (FSSAI) and regulated locally by food safety commissioners throughout the Indian states. DAHD regularly reviews India's milk supply situation with the NDDB and State Milk Federations. Concerns and actions on issues including milk adulteration are taken in consultation with FSSAI.[16]

Consumption

2021 fluid milk consumption[17] is projected at 83 MMT, up 2.5 percent (equal to two MMT) above 2020 levels. In addition to pulses, milk and dairy products are the primary source of protein for nearly all consumer groups in India, especially the largely vegetarian populations. With a growing population, and rising median incomes, along with loosening restrictions from the COVID-19 pandemic, in forecast year 2021, NFDM consumption is expected to rise to 675,000 MT (up 5.5 percent) and butter to 6.3 MMT (up 2.5 percent). According to DAHD, per capita milk availability (grams per day) in Indian Fiscal Year (IFY, April-March) 2018/19 was 394 grams/day when fluid milk production was 187.7 MMT. For IFY 2020/21, per capita demand is projected at 409-410 grams/day.

There is growing health consciousness and subsequent demand for healthier food products, especially in 2020 amid the COVID-19 global pandemic. Consequently, consumers, including those with higher disposable income will continue to demand value-added dairy products including fermented yogurts, turmeric and nutrient-based health drinks that feature milk, buttermilk, processed cheese (e.g., mozzarella, spread, flavored and spiced), and ice cream. In addition, the demand for *ghee* and butter, will continue to be robust especially as *ghee* is one of the most consumed value-added dairy products in India. 2021 out-year milk production is forecast to be sufficient to meet domestic consumption requirements, but any uptick in future demand would most likely need to be filled through imports.

State Production and Consumption

Based on the milk and dairy product consumption patterns across the 29 states and seven union territories, the top five states that consumed 50 percent of dairy products in 2019 were Uttar Pradesh (19 percent, highest share), Rajasthan (nine percent), Gujarat (eight percent), Maharashtra (seven percent) and Bihar (seven percent). On the supply side, the top five milk-producing states were Uttar Pradesh (16.3 percent), Rajasthan (12.6 percent), Madhya Pradesh (8.5 percent), Andhra Pradesh (8.5 percent) and Gujarat (7.7 percent). Together, they accounted for 53.6 percent of total milk production in IFY 2018/2019.[18]

Demand Drivers

Dual income households, rapid digitization of commerce (e-platforms), increasing disposable incomes growing urbanization, changing consumer lifestyles, and other demographic shifts are driving demand for processed or value-added dairy products. Additionally, the expanding organized retail sector is driving value added dairy product sales with 15-20 percent annual growth. Smaller packaged dairy products are being

[16] See: FSSAI Press Release.
[17] Among fluid milk and processed milk products, the latter has higher share (53 percent national average) in both rural and urban India. Dairy products are comprised of products such as curd, *ghee*, butter, sweets, etc.
[18] Source: DADF Dairy Statistics, 2019.

aggressively marketed for the second and third tier markets to deepen a brand's penetration and increase the volume in the country. The increasing numbers of players in the dairy sector are focusing more on the untapped opportunity for growth in semi-urban and rural regions.

During the national lockdown, surplus milk purchased by dairy cooperatives[19] was converted to clarified butter, fat, and milk powder and remained unsold amid poor purchases from bulk and institutional buyers. Household demand however picked up fast, due to the rise in a new consciousness toward health, hygiene, and nutritional food products. This behavioral change kept sales moving, while only partly compensating for poor sales in the hotel, restaurant, and institutional segment. Following the national lockdown and gradual reopening of the economy, the demand for dairy and milk products is expected to resume. With the flush season approaching, milk supply will increase and should match concurrent seasonal and festive demand. Without this demand, higher supplies will negatively impact the milk procurement price, and the differences with consumer retail pricing will only grow wider.

Milk Distribution and Processing

Presently, India's total installed milk processing capacity is 66.3 million liters/day in Indian dairy cooperatives, 73.3 million liters/day in private sector companies, and 2.5 million liters/day at producer companies.[20] Unlike the unorganized milk sector, these companies have wide procurement and distribution networks, which include village-level milk collection and chilling centers. The milk collected at these centers is processed in dairy plants, which involves pasteurization, standardization, branding, packaging, and preparation of certain value-added products. Of the total Indian milk production, an estimated 48 percent is either consumed at the producer level or sold to small outlets in the rural area; the remaining 52 percent is processed and made available for sale to consumers in urban areas.[21]

Marketable Surplus

Of the 52 percent[22] of dairy production that is processed, about 40 percent of the sales are handled by the organized sector, with 20 percent cooperatives and producer companies, and the 20 percent private dairies. The remaining 60 percent is handled by the unorganized sector consisting of small private dairy, milkmen (Doodh Wala), and local producers. Among dairy products, the market for packaged milk is one of the faster growing segments, followed by various value-added dairy products. It is marketed as pasteurized milk, either as a mix of cow and buffalo milk or in pure form, in various percentages of fat content.[23]

Concerns about milk safety and quality[24] drive strong demand for packaged, ultra-high temperature (UHT) milk, which is sold in aseptic packaging which gives a longer shelf life. By 2022, the GOI's National Action Plan for Dairy Development seeks to double organized milk production from 20-21 percent to 41 percent of total milk production. Milk handling (production) by cooperatives has been targeted to increase from 10 to 20 percent, and the private sector from 10 to 30 percent. If achieved, it would give dairy farmers greater access to the organized milk-processing sector and ultimately greater incomes.

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[19] Farmers did not go to the private dairies which had slashed purchase rates due to falling demand.

[20] Source: Indian Dairy Vision-2022. National Action Plan for Dairy Development.

[21] Source: DAHD, GOI.

[22] Actual marketable surplus might have grown upwards of 56 percent but is yet to be verified.

[23] Available variants in the market include: *full cream milk* (six percent fat and 9 percent SNF, *standardized milk* (4.5 percent fat and 8.5 percent SNF), *toned milk* (three percent fat and 8.5 percent SNF), *double toned milk* (1.5 percent fat and nine percent SNF) and *skim milk* (not more than 0.5 percent fat and 8.7 percent SNF).

[24] In November 2019, FSSAI issued a 12-point action plan to ensure the safety and quality of milk and milk products in the country. The action plan focuses on testing and continued surveillance, preventive and corrective action for implementation and monitoring, and consumer engagement.

Milk Collection and Food Safety

Most of the private and cooperative dairies do not have separate collection systems for cow and water buffalo milk, so their packaged milk products are mostly a mix of the two, and only a few processors market pure cow milk. Milk collection from predominantly small-sized dairy farms in India is a huge challenge and requires significant investment in infrastructure and procurement systems. Food safety also remains difficult, since a large part of India's total milk production is handled and marketed by small vendors who have limited exposure to efficient milk handling and lack the capital or incentives to comply with food safety regulations which increases their cost of production.

GOI Schemes

To address food safety issues and improve milk quality in the supply chain, the GOI is implementing a program on improving product quality and ensuring food safety at the farm and village level. One such scheme named "Strengthening Infrastructure for Quality and Clean Milk Production," first started in 2003 and valued at INR 300 million. Additionally, the creation of a separate Dairy Processing and Infrastructure Development Fund (DPIDF) was to support improved milk-processing infrastructure from 2017 through 2020. The GOI's Ministry of Food Processing Industries also routinely provides subsidies to the private sector and dairy cooperatives to build cold chain infrastructure.

Trade

For years, India has been a net exporter of dairy and dairy products. The trade surplus in the last five years has grown from $82 million to $130 million in 2019.[25] However, in the first half of 2020, this trade surplus shrunk and turned to a deficit (to augment the supply gap); which is estimated at $1 million. Higher imports of lactose (syrup, solid), casein, infant food preparations and whey proteins from countries including the United States, Germany, the Netherlands, New Zealand, France, and Thailand, among others slightly weighed on India's own exports. With the ease in restrictions after the national lockdown, industry sources indicate that trade and export sales are expected to gradually resume in the second-half of CY 2020 and touch pre-COVID levels sometime during or after the first quarter of CY 2021.

Exports

India exports mostly value-added dairy products such as butter, butterfat, infant food preparations, cheese (Cheddar and Colby), milk powder, lactose, dairy spreads, and milk albumin. With rising domestic milk production in 2021 and a likely resumption in demand from overseas buyers, NFDM exports in 2021 are forecast to rise to 20,000 MT (close to the five-year average) from an estimated 6,000 MT in CY 2020. This volume could further rise by 25 percent if global trade resumes to near-normal levels prior to the global pandemic.

January-June 2020 trade data indicates that India exported skimmed milk powder (SMP) worth $1.9 million on shipments totaling 500 MT, which is 89 percent below the corresponding period in 2019 due to lower than expected purchases (pandemic-induced supply disruption) from regular buyers such as Bangladesh (the largest buyer), Afghanistan, the United Arab Emirates (UAE), Turkey, and Bhutan. Given the trend, Post has revised a lower 2020 export estimate to 6,000 MT, some 2,000 MT below 2019. In terms of ranking (January-June 2020), NFDM/SMP were a combined fifth in largest exports (value basis) after butter, butterfat, infant food preparation and cheese. The monthly average NFDM sales declined from its peak of 300,000 MT in January 2020, to spike intermittently in May/June and dip to its lowest (less than 20,000 MT) average monthly sales in July. Industry sources indicated some trade resuming in August 2020.

[25] Source: Trade Data Monitor (TDM).

Concurrently, total butter exports will rise from 16,000 MT (revised to reflect current trade estimate and 64 percent below last year) in 2020 to 25,000 MT for 2021, due to modest demand from traditional and new buyers. Trade data from January-June 2020 indicate total butter sales at 2,200 MT worth $10.2 million, almost 90 percent below the corresponding period last year. Amid the global pandemic, principal buyers such as Turkey, Egypt, UAE, Morocco, Bahrain, Saudi Arabia have also reduced their purchases. Incidentally, the United States and Bhutan increased their purchases from India by 41 percent and 40 percent respectively, with U.S. imports volumes at 910,000 MT and Bhutan at 791,275 MT.

Imports

India's major dairy product imports include milk albumin (including concentrates of two or more whey proteins), lactose and lactose syrup, infant food preparation, casein, ice cream, edible ice (e.g. additives) and cheese. The United States was the largest supplier of dairy products to India followed by the Netherlands, Germany, New Zealand, France, and Thailand. Post forecasts negligible imports of NFDM and butter in 2021 due to growing domestic production. Historically, India has only imported milk powder and butter in limited quantities when it was apparent that domestic production was insufficient or necessary to help control inflation (*please see trade policy section below for more details*).

Trade data for January-June 2020 indicates combined NFDM and butter imports at 1,100 MT (768 MT SMP and 333 MT butter) with a value just over $3.7 million. Post anticipates SMP imports to reach 1,000 MT through December 2020 with limited purchases in the second half of 2020. In 2019, both NFDM and butter imports stood at 1,155 MT, worth $3.8 million which was much closer to 2018 levels. Product wise, the United States is the largest supplier of milk albumin, while both the United States and Netherland are the largest for lactose, Thailand for infant food preparations, France for whey, United States and the Netherlands for casein and its derivatives, Italy for cheeses.

Recently, on August 10, 2020, DAHD issued an administrative order allowing imports of non-food use lactose and whey, provided the importer declares the same at the time of import. Food use lactose and whey imports should meet all import requirements as mentioned on the Indian veterinary certificates. India continues to insist via religious and cultural grounds that dairy products be derived from animals which have never received any feed produced from internal organs, blood meal, and tissues of ruminant origin.

Trade Policy

Currently, several trade restrictions limit market access for U.S. food products. Imports of most livestock and livestock-derived food products, including milk and milk products, were effectively banned due to established Indian import requirements (See India Exporter Guide: IN2019-0105).

India allows import of SMP/whole milk powder[26] under a tariff rate quota (TRQ) of 10,000 MT, with a 15 percent import duty during the current financial year. Outside the TRQ, such imports are subject to a 60 percent import duty. Likewise, TRQ and tariff for butter and other fats are mentioned below for easy reference (Figure 2).

[26] 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 the latest Customs notification 28/2020 dated June 23, 2020, the status quo has been restored.

Figure 2. India: TRQ for Import of SMP, Butter and Oils

Description	HS Code	In/Out of quota rate (%) as per WTO	In/Out quota rate (%) as per Indian tariff	Notification	TRQ in Metric Tons
Milk and Cream: Skimmed Milk Powder, granule and solid forms, of fat content by weight not exeeeding 1.5% and later exceeding 1.5%	040210 040221	15/60	15/60	12/12-Cus S.l No.7 and 12/12-Cus S.l No.7	10,000
Butter and Other fats	040510	NA	0/30	12/12-Cus S.l No.9	15,000
Butter Oil	04059010		0/30	12/12-Cus S.l No.9	
Ghee	04059020		0/30	12/12-Cus S.l No.9	
Dairy Spreads	040520	NA	0/40	12/12-Cus S.l No.9	15,000
Other	04059090		0/40	12/12-Cus S.l No.9	

Source: Ref: Para 2.60, Handbook of Procedures, Director General of Foreign Trade, GOI

Eligible entities for quota allocations: Milk Powder (Tariff Code No. 0402.10 or 0402.21) and White Butter, Butter oil, Anhydrous Milk Fat (0405) include: *National Dairy Development Board (NDDB), State Trading Corporation (STC), National Cooperative Dairy Federation (NCDF), National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED), Minerals and Metals Trading Corporation (MMTC), Projects & Equipment Corporation of India Limited (PEC) and Spices Trading Corporation Limited (STCL)*. More information on tariff structure for other milk and dairy products is found in Table 1 below.

The revised procedures for import/export of bovine germplasm[27] are available on the following link: Guideline Import Export Bovine Germplasm. However, its import requires multiple approvals at the state and federal level, which restricts trade significantly. The veterinary health certificate for import of various livestock products is available at Animal Quarantine and Veterinary Services, DAHD, GOI. The following links provide information regarding the various sanitary import requirements (bovine semen, bovine embryo from United States and bovine semen from United States, SOP for traceability of bovine germplasm).

Note the following excerpt from the guidelines: "Import of cattle/buffalo germplasm is under restricted list and is allowed against license issued by the Director General of Foreign Trade (DGFT), Ministry of Commerce on recommendation of DAHD, GOI. Introduction of temperate breeds in country for cross-breeding indigenous non-descript cattle has been accepted for quite some time now given the strong demand for exotic germplasm."

Imported milk and dairy products into India requires a sanitary import permit from DAHD and a veterinary health certificate from the exporting country's veterinary authority. India's import certification requirements for milk and dairy products are available on the DAHD website.

In May 2020, the FSSAI required that all milk and dairy products imported into India shall be accompanied with a veterinary certificate issued by the competent authority of the exporting country. The existing requirement was already implemented by DAHD's Animal Quarantine and Certification Service. The May announcement makes clear the terms of this veterinary certificate also applies to edible lactose and whey proteins.[28]

On July 8, 2020, DAHD issued a Circular offering one-time relaxation for imported milk and dairy products. The relaxation covers milk and milk products imported under Chapters 35 and 17 into India for human consumption and having bills of lading dated April 30, 2020 or before. Such imports are still subject to of sanitary and hygienic certification requirements.

[27] Revised January 2019.
[28] Source: CBIC CS Instructions-06-2020.

Subsequently, on August 10, 2020, DAHD gave administrative approval that non-food lactose (Chapter 17) and whey concentrate (Chapter 35) can be imported into India after importer makes a self-declaration that its end use is non-food as in pharmaceutical or nutraceutical, the formulations will be available on the Indian Customs Electronic Gateway portal. However, the recommendation a DAHD Technical Committee will have the final determination; but until then, non-food lactose and non-food whey concentrate can be imported. On contrary, milk and dairy product imports found under different chapters, including lactose and whey protein for direct food use and human consumption will still need the official Veterinary Certificate, and Customs will refer the bill of entry to FSSAI and Animal Quarantine and Certification Service. (Source: DAHD July 8, 2020 Circular and DAHD Office Memo August 10, 2020).

On July 24, 2020, FSSAI extended the compliance date for stakeholders to adopt standards established by the Bureau of Indian Standards (BIS) related to the commercial feeds/feed materials intended for meat and milk producing animals. The new compliance date is January 1, 2021, and the timeline has been extended to accommodate requests from industry stakeholders as they deal with the current COVID-19 pandemic and subsequent lockdown orders issued by the GOI.[29]

On October 14, 2020, the Department of Agriculture, Farmer Welfare and Cooperation, state government of Gujarat introduced a resolution to approve export subsidies for skim milk powder (SMP), schedule to begin from November 1, 2020 to April 30,2021. The resolution indicates the Gujarat government will provide total assistance of Rs 150 crores (US$20 million) for a six-month period to Gujarat Cooperative Milk Marketing Federation Ltd. The export subsidy will entail Rs 50 per kilogram of SMP exported by the milk cooperatives if the FOB price is Rs 180. The total amount of SMP that can be exported under the scheme is 30,000 metric tons.

FSSAI amended the Food Safety and Standards (Food Products Standards and Food Additives), 2011, to add new provisions and revise standards in Regulation 2.1 (Dairy Products and Analogues) and sub-regulation 2.1.8 (Milk Fat Products) respectively. On August 13, 2020, India notified this draft amendment to the WTO for comment (WTO Notification Number: G/SPS/N/IND/253). The deadline to provide comments is October 12, 2020 (GAIN Report IN2020-0105).

Note: Please see Table 1 below for more information on tariff structures for various dairy items, as compiled from CBIC, Department of Revenue, GOI.

[29] See: GAIN Report No: IN2020-0094.

Table 1. India Tariff Structures for Dairy Products, 2020.

Table 1. India: Tariff Structure for Various Dairy Products, 2020					
HS Code	**Item Description**	**Basic**	**IGST**	**Total Duty With 10 % SWS on BCD**	**Import Policy**
0401	Milk and cream, not concentrated nor containing added sugar or other sweetening matter				
0401 1000, 0401 2000, 0401 4000,0401 5000	In sequence: Of a fat content, by weight, not exceeding 1%, 1 to 6 %, 6 to 10 % and exceeding 10 percent	30	0/5*	33/39.65	Free San P
0402	Milk and cream, concentrated or containing added sugar or other sweetening matter				
0402 10	In powder, granules, or other solid forms, of a fat content, by weight not exceeding 1.5%				
0402 1010	Skimmed milk	60	5	68	Free San P
0402 1020	Milk food for babies	60	5	68	Free San P
0402 1090	Other: In powder, granules...exceeding 1.5%	60	5	68	Free San P
0402 2100	Not containing added sugar or sweetening	60	5	68	Free San P
0402 29	Other				
0402 2910	Whole milk	30	5	39.65	Free San P
0402 2920	Milk for babies	30	5	39.65	Free San P
0402 91	Other				
0402 9110	Condensed milk	30	5	39.65	Free San P
0403	Buttermilk, curdled milk and cream, yogurt, kephir & other fermented or acidified milk & cream, whether or not concentrated or containing added sugar or other sweetening matter or flavored or containing added fruits, nuts or coco				
0403 1000	Yogurt	30	5	39.65	Free San P
0403 9010	Butter milk	30	0	33	Free San P
0403 9090	Other	30	5	39.65	Free San P
0404	Whey, whether or not concentrateed or containing added suagr or other sweetening matter, products consisting of natural milk constituents, whether or not containing added sugar or other sweetening matter, not elsehwere specified or included				
0404 10	Whey, whether or not concentrateed or containing added sugar or other sweetening matter				
0404 1010	Whey, concentrated, evaporated or condensed, liquid or semi-solid	30	5	39.65	Free San P
0404 1020/90	Whey, Dry, Blocks and powdered	40	5	51.2	Free San P
0405	Butter an dother fats and oils derived from milk, dairy spreads				
0405 1000	Butter	40	12	56.8	Free San P
0405 2000	Dairy spreads	40	12	61.28	Free San P
0405 90	Other				
0405 9010	Butter oil	40	12	56.8	Free San P
0405 9020	Ghee	40	12	56.8	Free San P
0406	Cheese and curd				
0406 1000, 0406 2000, 0406 3000, 0406 4000	In sequence: Fresh (unripened and uncured) cheese, including whey cheese and curd, grated or powdered, processed, not grated or powdered and blue-veined cheese produced by Penicilliumroquqforti	30	12	48.96	Free San P
0406 9000	Other Cheese	40	12	56.8	
1702 11	Lactose and lactose syrup, containing by weight 99 percent or more lactose, expressed as anhydrous lactose, calculated on the dry matter	25	18	50.45	Free
1901	Malk extract, fod preperations of flour, groats, male, starch or malk extract not containing cocoa.....food preperatios of heading 0401 to 0404....				
1901 10	Preperations suitale for infants or youg children, put up for retail sale				
1901 10 10	Malted milk (powder)	50	18	77.00	Free
1901 2000	Mixes and doughs for preperation of bread, pastry and other bakers wares	30	5	39.65	Free
2105 0000	Ice cream and other edible ice, whether or not containing cocoa	30	18	56.94	Free
3501	Casein, Caseinates and other casein derivatives; casein glues	20	18	43.96	Free
3502	Albumins (including concentrates of two or more whey proteins, containing by weight > 80% whey proteinson dry matter), albuminates and other albumin derivatives				
3502 2000	Milk albumin, including concentrates of two or more whey protiens	20	18	43.96	Free
The expression 'milk' means full cream milk or partially or completely skimed milk					
*: 0 percent IGST for fresh and pasteurised milk, including seperated milk, milk and cream, not concentrated nor containing added suagr or other sweetening, excluding Ultra High Temperature (UHT) milk in 0401 and UHT milk attracts 5 % IGST					
	10 percent SWS exempted on goods in tariff line 0402 2100 and 0402 10: WTO binding. Also, a 10% SWS exempted on tariff line 0405 1000, 0405 90, 0405 2000 with fat content by weight at least 75% but less than 80%				
	Cream, yogurt, kephir & other fermented or acidified milk & cream, whether or not concentrated or containing added sugar or other sweetening matter or flavored or containing added fruits, nuts or coco				

Production, Supply and Demand Data Statistics:

Table 2. India: Commodity, Dairy, Milk, Fluid, PSD, 1000 MT						
Dairy, Milk, Fluid	**2019**		**2020**		**2021**	
Market Year Begins	**Jan 2019**		**Jan 2020**		**Jan 2021**	
India	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Cows In Milk (1000 HEAD)	54600	54600	56450	56450	0	58000
Cows Milk Production (1000 MT)	92000	92000	94000	93800	0	96000
Other Milk Production (1000 MT)	99000	99000	101000	101000	0	103000
Total Production (1000 MT)	191000	191000	195000	194800	0	199000
Other Imports (1000 MT)	0	0	0	0	0	0
Total Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	191000	191000	195000	194800	0	199000
Other Exports (1000 MT)	10	10	10	10	0	10
Total Exports (1000 MT)	10	10	10	10	0	10
Fluid Use Dom. Consum. (1000 MT)	79000	79000	81000	81000	0	83000
Factory Use Consum. (1000 MT)	111990	111990	113990	113790	0	115990
Feed Use Dom. Consum. (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	190990	190990	194990	194790	0	198990
Total Distribution (1000 MT)	191000	191000	195000	194800	0	199000

Table 3. India: Commodity, Dairy, Milk, Nonfat Dry, PSD, 1000 MT						
Dairy, Milk, Nonfat Dry	**2019**		**2020**		**2021**	
Market Year Begins	**Jan 2019**		**Jan 2020**		**Jan 2021**	
India	**USDA Official**	**New Post**	**USDA Official**	**New Post**	**USDA Official**	**New Post**
Beginning Stocks (1000 MT)	15	15	35	42	0	62
Production (1000 MT)	630	635	660	660	0	680
Other Imports (1000 MT)	1	0	1	1	0	0
Total Imports (1000 MT)	1	0	1	1	0	0
Total Supply (1000 MT)	646	650	696	703	0	742
Other Exports (1000 MT)	8	8	5	6	0	20
Total Exports (1000 MT)	8	8	5	6	0	20
Human Dom. Consumption (1000 MT)	603	600	650	635	0	675
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Dom. Consumption (1000 MT)	603	600	650	635	0	675
Total Use (1000 MT)	611	608	655	641	0	695
Ending Stocks (1000 MT)	35	42	41	62	0	47
Total Distribution (1000 MT)	646	650	696	703	0	742

Table 4. India: Commodity, Dairy, Butter, PSD						
Dairy, Butter	**2019**		**2020**		**2021**	
Market Year Begins	**Jan 2019**		**Jan 2020**		**Jan 2021**	
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)	5850	5850	6100	6100	0	6300
Other Imports (1000 MT)	0	0	0	0	0	0
Total Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	5850	5850	6100	6100	0	6300
Other Exports (1000 MT)	47	44	20	16	0	25
Total Exports (1000 MT)	47	44	20	16	0	25
Domestic Consumption (1000 MT)	5803	5806	6080	6084	0	6275
Total Use (1000 MT)	5850	5850	6100	6100	0	6300
Ending Stocks (1000 MT)	0	0	0	0	0	0
Total Distribution (1000 MT)	5850	5850	6100	6100	0	6300

Attachments:

No Attachments