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## India

## Dairy Annual

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### Report Highlights:

India is expected to maintain the title of world's largest milk producer, with production forecast to reach 79.3 million tons in 2000. Opportunities exist for exports of US NFDM and butter oil to India, particularly during the lean production months of April through July.

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Includes PSD changes: Yes

Includes Trade Matrix: Yes

Annual Report

New Delhi [IN1], IN

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## Section I - SITUATION AND OUTLOOK

### Production

Indian milk production is forecast at 79.3 million tons in 2000, three percent higher than the estimated 1999 production level of 77.0 million tons. Total production capacity registered with the government under the Milk and Milk Product Order (MMPO) is estimated at 56.7 million liters per day. Registrations under the MMPO, which had been growing at a rate of about 15 percent per annum, have reportedly begun to slow. Increased dairy processing capacity has led to higher demand and farm-gate prices for raw milk, which in turn have encouraged dairy farmers to improve their feeding and husbandry practices. Trade sources identify various state taxation policies as limiting development of the organized dairy sector, particularly in the areas of cold storage and transportation.

Continued expansion in milk processing capacity by the private sector and the need to sustain fluid milk supplies during the lean production season (April-July) have led to an increase in total production of milk powder, forecast to reach 265,000 tons in 2000 (compared to 240,000 tons last year). Production of NFDM is forecast at 145,000 tons in 2000, constituting about 55 percent of the total milk powder production. Production of butter/ghee is forecast at 1.96 million tons in 2000, compared to 1.76 million tons produced in 1999. Production of ghee (melted butter) is forecast at 1.63 million tons and butter at 330,000 tons in 2000 (including about 45,000 tons of white butter for table purposes). Higher ghee prices have encouraged producers and traders to mix it with the butter oil (generally imported) for the purpose of producing reconstituted milk. An estimated 90 percent of total ghee/butter is produced by the unorganized sector.

The fat-based pricing system for procurement of fluid milk has led to an increase in the share of buffalo milk (which has a higher milk fat content) as a percentage of total milk production from less than 50 percent in 1995 to an estimated 53 percent in 1999. The average price for the fluid milk received by producers in March 1999 was rs. 11.30 - 13.50/liter (\$254 - 310 /mt) for buffalo milk (7% fat, 9% SNF) and rs. 7.00 - 11.00/liter (\$161 - 252/mt) for cows' milk (4% fat, 8.5% SNF). Retail consumers hardly differentiate between cow and buffalo milk.

### Production Developments

Government programs to improve the milk yield of local breeds focus mostly on the use of artificial insemination (AI). Embryo transfers have been tried on an experimental basis however, commercial adoption is not expected to be viable any time soon. In addition to funding for agricultural universities and research institutes, the government supports development of the dairy sector through various animal breeding and health care programs. Funding for these programs totaled rs. 2.5 billion (\$57 million) in 1998/99 (April/March). Cooperatives also support development of the dairy sector. Domestic use of compound feeds increased substantially in the past year due to increased availability of soybean meal stemming from higher production and weaker international demand. Total consumption of compound feed increased to an estimated 5.5 million tons in 1999 versus about 4.5 million tons utilized in 1998.

## Consumption

Indian per-capita consumption of milk is estimated at 215 grams/day, versus the WHO recommended level of 283 grams/day. Approximately one quarter of total milk production is consumed at the producer/household level, with the balance sold to either village-level vendors, dairy cooperatives or private dairies. The share of total milk purchased by cooperatives and private dairies has been increasing at the expense of local vendors, with quantities purchased by private dairies growing fastest. About 70 percent of the milk procured by cooperatives is marketed as fluid milk, whereas private dairies market only about 25 percent of their milk in fluid form. In light of the rapid growth in private sector dairy processing capacity and the increase in average income, consumption of fluid milk as a percentage of the total milk supply is expected to decline from about 45 percent in 1998 to around 40 percent by 2001.

Milk is increasingly being processed into value-added products such as ghee (melted, clarified butter), milk powder, milk-based sweet meats, cheese and ice-cream. Ghee is used as a premium cooking medium in most Indian households. Butter oil (along with NFDM) is mainly utilized by cooperatives and private dairies in the production of reconstituted milk. Table/processed butter is largely consumed by upper and middle income urban households. Whole milk powder and partially skimmed milk powder are used by bakeries and confectioneries, whereas infant milk food is consumed by households. Higher average income coupled with changing lifestyles and food habits have contributed to the growing demand for western-style milk products such as table butter, processed cheese and ice cream, the consumption of which is growing at a rate of about 15 percent per annum.

## Trade

Imports of NFDM are forecast to reach 2,000 tons in 2000, compared to an estimated 1,000 tons imported in 1999. Imports of butter/butter oil are forecast to reach 8,000 tons in 2000, compared to an estimated 5,000 tons imported in 1999.

Except for some informal cross-border movement, trade in fluid milk is negligible. NFDM can be freely imported into India at a zero duty rate. Imports of butter oil, whole milk, butter milk, yogurt, curdled milk, whey, crated cheese, and blue veined cheese are also permitted, subject to a 44 percent tariff. Special treatment is afforded luxury hotels, which can import all types of food products, including dairy products, against their foreign exchange earnings at an average tariff of 25 percent. Imports of other processed cheeses continue to be subject to a special import licensing requirement, which effectively bans their import. Import market access for these cheeses will improve within the next 2-3 years as WTO disciplines begin to take effect.

Government quota restrictions on bulk exports of milk powder and ghee/butter were removed in 1998. However, exports of NFDM actually declined to an estimated 1,354 tons in 1998, compared with 2,052 tons exported during 1997. The reduction in exports is attributed to strong domestic demand, lower world prices and the inability of exporters to conform to strict EU standards. Exports of butter witnessed a marginal increase during 1998, estimated at 476 tons compared with 455 tons exported during 1997. In the near term, the Indian dairy sector will likely emerge as a limited player in world milk product markets. The establishment of five export-targeted dairy units in as many years, is a reasonable assumption. World demand for Indian branded dairy products (e.g., "Amul" butter) meeting international hygiene standards is increasingly evident among non-resident Indians (NRI's) residing in the Middle East,

south Asia, Great Britain, South Africa and the United States.

### **Market Opportunities**

Domestic demand for safe-quality milk and milk products is very strong among middle-class Indian consumers. Imports of low-priced, safe-quality milk derivatives would not only augment local supplies during the lean production season (April-July), but would also assist domestic-oriented dairies in meeting increasing demand for safe-quality milk, as well as enable these dairies to more effectively compete with the standards set by export-targeted facilities.

During the hot summer months domestic production of milk declines, creating demand for imports of NFDM and butter oil for the purpose of producing reconstituted milk. Both NFDM and butter oil are eligible commodities under the USDA DEIP program, and allocations have been made available for sales to India. To date however, no sales to India have occurred under the DEIP program (despite Indian imports of about 450 tons of EU NFDM last year). In 1998, India imported nearly 3,200 tons of butter oil from New Zealand at an average landed cost of about \$1,525/ton.

Demand for processed cheese and other high-quality, dairy products by luxury hotels and an expanding fast food sector is expected to lead to new trade opportunities. In addition, strong growth in the consumption of ice cream will contribute to potential imports of the finished product as well as ingredients. Yogurt is a mainstay of Indian cuisine and recent liberalization imports could also create new market opportunities, particularly in the case of fruit flavored yogurt, the market potential for which has yet to be fully explored.

## Section II - STATISTICAL TABLES

## Commodity, Dairy Milk Fluid, PSD

PSD Table							
Country:	India						
Commodity:	Dairy, Milk, Fluid						
		1998		1999		2000	UOM
	Old	New	Old	New	Old	New	
Calendar Year Begin		01/1998		01/1999		01/2000	(MONTH/YEAR)
Cows In Milk	35000	35000	35500	35500	0	35800	(1000 HEAD)
Cows Milk Production	35500	35500	36000	36000	0	36500	(1000 MT)
Other Milk Production	39000	39000	41000	41000	0	42750	(1000 MT)
TOTAL Production	74500	74500	77000	77000	0	79250	(1000 MT)
Intra EC Imports	0	0	0	0	0	0	(1000 MT)
Other Imports	0	0	0	0	0	0	(1000 MT)
TOTAL Imports	0	0	0	0	0	0	(1000 MT)
TOTAL SUPPLY	74500	74500	77000	77000	0	79250	(1000 MT)
Intra EC Exports	0	0	0	0	0	0	(1000 MT)
Other Exports	0	0	0	0	0	0	(1000 MT)
TOTAL Exports	0	0	0	0	0	0	(1000 MT)
Fluid Use Dom. Consum.	32500	32500	33000	33000	0	33500	(1000 MT)
Factory Use Consum.	42000	42000	44000	44000	0	45750	(1000 MT)
Feed Use Dom. Consum.	0	0	0	0	0	0	(1000 MT)
TOTAL Dom. Consumption	74500	74500	77000	77000	0	79250	(1000 MT)
TOTAL DISTRIBUTION	74500	74500	77000	77000	0	79250	(1000 MT)
Calendar Yr. Imp. from U.S.	0	0	0	0	0	0	(1000 MT)
Calendar Yr. Exp. to U.S.	0	0	0	0	0	0	(1000 MT)

**Commodity, Dairy Milk, Nonfat Dry, PSD**

PSD Table							
Country:	India						
Commodity:	Dairy, Milk, Nonfat Dry						
		1998		1999		2000	UOM
	Old	New	Old	New	Old	New	
Calendar Year Begin		01/1998		01/1999		01/2000	(MONTH/YEAR)
Beginning Stocks	21	21	21	26	26	30	(1000 MT)
Production	120	120	130	130	0	145	(1000 MT)
Intra EC Imports	0	0	0	0	0	0	(1000 MT)
Other Imports	0	1	0	1	0	2	(1000 MT)
TOTAL Imports	0	1	0	1	0	2	(1000 MT)
TOTAL SUPPLY	141	142	151	157	26	177	(1000 MT)
Intra EC Exports	0	0	0	0	0	0	(1000 MT)
Other Exports	5	1	5	2	0	2	(1000 MT)
TOTAL Exports	5	1	5	2	0	2	(1000 MT)
Human Dom. Consumption	115	115	120	125	0	145	(1000 MT)
Other Use, Losses	0	0	0	0	0	0	(1000 MT)
Total Dom. Consumption	115	115	120	125	0	145	(1000 MT)
TOTAL Use	120	116	125	127	0	147	(1000 MT)
Ending Stocks	21	26	26	30	0	30	(1000 MT)
TOTAL DISTRIBUTION	141	142	151	157	0	177	(1000 MT)
Calendar Yr. Imp. from U.S.	0	0	0	0	0	0	(1000 MT)
Calendar Yr. Exp. to U.S.	0	0	0	0	0	0	(1000 MT)

**Commodity, Butter, PSD**

PSD Table							
Country:	India						
Commodity:	Dairy, Butter						
		1998		1999		2000	UOM
	Old	New	Old	New	Old	New	
Calendar Year Begin		01/1998		01/1999		01/2000	(MONTH/YEAR)
Beginning Stocks	0	0	0	0	0	0	(1000 MT)
Production	1600	1600	1750	1750	0	1950	(1000 MT)
Intra EC Imports	0	0	0	0	0	0	(1000 MT)
Other Imports	5	4	10	5	0	8	(1000 MT)
TOTAL Imports	5	4	10	5	0	8	(1000 MT)
TOTAL SUPPLY	1605	1604	1760	1755	0	1958	(1000 MT)
Intra EC Exports	0	0	0	0	0	0	(1000 MT)
Other Exports	3	1	5	1	0	2	(1000 MT)
TOTAL Exports	3	1	5	1	0	2	(1000 MT)
Domestic Consumption	1602	1603	1755	1754	0	1956	(1000 MT)
TOTAL Use	1605	1604	1760	1755	0	1958	(1000 MT)
Ending Stocks	0	0	0	0	0	0	(1000 MT)
TOTAL DISTRIBUTION	1605	1604	1760	1755	0	1958	(1000 MT)
Calendar Yr. Imp. from U.S.	0	1	0	2	0	2	(1000 MT)
Calendar Yr. Exp. to U.S.	0	0	0	0	0	0	(1000 MT)

**Commodity, Dairy Milk, Nonfat Dry, Export Matrix**



Export Trade Matrix			
Country:		Units:	Tons
Commodity:			
Time period:	Jan-Dec		
Exports for	1998		1999
U.S.		U.S.	NA
Others		Others	
Bangladesh	741		NA
Ghana	360		NA
UAE	114		NA
Sri Lanka	75		NA
Philippines	45		NA
Korea RP	16		NA
Afghanistan	3		NA
Total for Others	1354		0
Others not listed			
Grand Total	1354		0

**Commodity, Butter, Export Matrix**

Export Trade Matrix			
Country:		Units:	Tons
Commodity:			
Time period:	Jan-Dec		
Exports for	1998		1999
U.S.	200	U.S.	NA
Others		Others	
UAE	168		NA
Philippines	29		NA
Singapore	22		NA
Malaysia	14		NA
Oman	14		NA
HongKong	9		NA
Nepal	15		NA
Barbados	3		NA
Israel	1		NA
Total for Others	275		0
Others not listed	1		
Grand Total	476		0

**Commodity, Dairy Milk, Nonfat Dry, Import Matrix**

Import Trade Matrix			
Country:		Units:	Tons
Commodity:			
Time period:	JAN-DEC		
Imports for	1998		1999
U.S.		U.S.	NA
Others		Others	
Belgium	399		NA
Singapore	173		NA
France	67		NA
Australia	16		NA
New Zealand	16		NA
Total for Others	671		0
Others not listed			
Grand Total	671		0

**Commodity, Butter, Import Matrix**

Import Trade Matrix			
Country:		Units:	Tons
Commodity:			
Time period:	Jan-Dec		
Imports for	1998		1999
U.S.	1	U.S.	NA
Others		Others	
New Zealand	3170		NA
Nepal	421		NA
Australia	289		NA
Total for Others	3880		0
Others not listed			
Grand Total	3881		0

**Commodity, Dairy Milk, Nonfat Dry, Prices**

Prices Table			
Country:			
Commodity:			
Year:	1999		
Prices in (currency)	Rupees	per (uom)	1000 Kg
Year	1998	1999	% Change
Jan	61000	67000	9.8%
Feb	61000	68000	11.5%
Mar	59000	69000	16.9%
Apr	65000	68000	4.6%
May	65000	72000	10.8%
Jun	72000	71000	-1.4%
Jul	69000	73000	5.8%
Aug	66000	70000	6.1%
Sep	69000	64000	-7.2%
Oct	68000	NA	-100.0%
Nov	60000	NA	-100.0%
Dec	61000	NA	-100.0%
Exchange Rate	43.57	(Local currency/US \$)	

**Commodity, Butter, Prices**

Prices Table			
Country:			
Commodity:			
Year:	1999		
Prices in (currency)	Rupees	per (uom)	1000 Kg
Year	1998	1999	% Change
Jan	109666.7	125333	14.3%
Feb	112000	124000	10.7%
Mar	113000	129667	14.7%
Apr	124000	130000	4.8%
May	129333	126000	-2.6%
Jun	134667	130667	-3.0%
Jul	135000	141667	4.9%
Aug	130000	136667	5.1%
Sep	133333	132000	-1.0%
Oct	140000		-100.0%
Nov	115000		-100.0%
Dec	120000		-100.0%
Exchange Rate	43.59	(Local currency/US \$)	