

USDA Foreign Agricultural Service

# GAIN Report

Global Agricultural Information Network

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## India

### Dairy and Products Annual

**2016**

**Approved By:**

Mark Wallace

**Prepared By:**

Vijay Intodia

**Report Highlights:**

India's CY 2017 fluid milk production is estimated to increase by four percent to 160 million metric tons (MMT) assuming a normal monsoon. CY 2017 NFDM exports are projected at 25,000 metric tons on expectations of moderate export demand. CY 2016 NFDM export estimates are revised down to 20,000 metric tons on slow export pace.

## **Executive Summary:**

CY 2017 fluid milk production is projected to increase by four percent to 160 million metric tons (MMT) assuming a normal monsoon. With rising incomes, urbanization, and demographic changes, demand for most of the value added milk products is rising. India's milk production is constrained mainly due to factors such as low genetic potential, falling water table, shrinking land resources due to urban sprawl, and insufficient feed and fodder resources. CY 2017 NFDM exports are projected at 25,000 metric tons on moderate export demand. CY 2016 NFDM export estimates are revised down to 20,000 metric tons on slow export pace.

## **Commodities:**

Dairy, Butter

Dairy, Milk, Fluid

Dairy, Milk, Nonfat Dry

## **Production:**

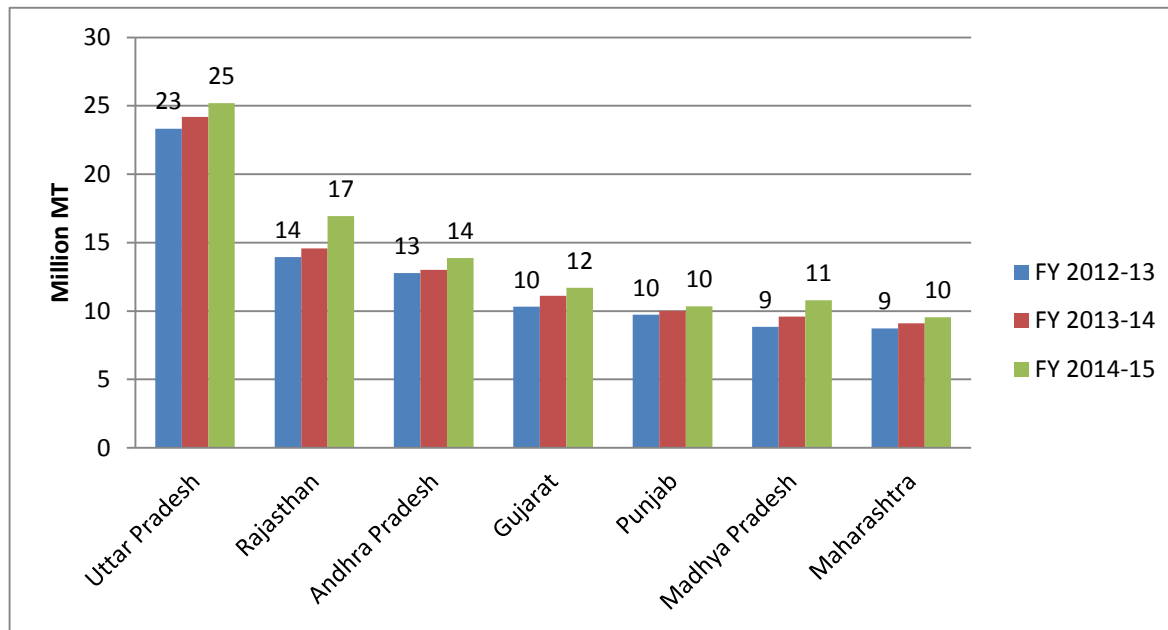
India's CY 2017 fluid milk production is forecast at 160 million metric tons (MMT) assuming a normal monsoon, up four percent from previous year. CY 2017 non-fat dry milk (NFDM) production levels are estimated at 570,000 MT on moderate export expectations due to uncompetitive prices. CY 2017 combined butter and ghee (clarified butter) production is estimated to rise by 3.8 percent to 5.4 MMT on rising domestic demand due to population growth and demographic shifts.

More than 90 percent of India's milk production is concentrated in 14 states (the top five states are Uttar Pradesh, Rajasthan, Andhra Pradesh, Gujarat, and Punjab (Figure 1). India's organized dairy sector comprises only 20 percent of the total milk production, which includes government supported dairy cooperatives and private sector dairies. However, cooperatives and private dairy companies are expanding their processing capacities and distribution network with growing demand for fluid milk and other value-added dairy products. Most of the dairy cooperatives and private dairies market products at the state or regional level and only a few players have a wider national presence.

Indian dairy production is characterized as a low input/low output system mostly constituted by small and marginal farmers and landless laborers owning less than five cows or water buffaloes. In general, milk productivity of dairying animals is very low in comparison to global standards. Per Government of India (GOI) statistics for the fiscal year 2014-15, the average milk yield of indigenous cattle and water buffaloes is 2.5 and 5.2 Kg per day respectively. The average milk yield for exotic/crossbred cattle is 7.2 kg per day. The yield is significantly less than that of 22 and 28 kg per day in U.K. and U.S. respectively. The lower milk yield is mainly due to low genetic potential, lack of nutritional feeds and inadequate veterinary services. India's growth in milk production therefore largely depends on an increase in the number of dairy animals, but that increase is constrained by the lack of sufficient additional quantities of feed and fodder. Water buffaloes are preferred by some farmers due to its higher fat content milk, which fetches higher prices since milk prices are determined by volume, fat, and solids-not-fat (SNF) content. The water buffaloes can also be sold for slaughter, unlike cattle, the

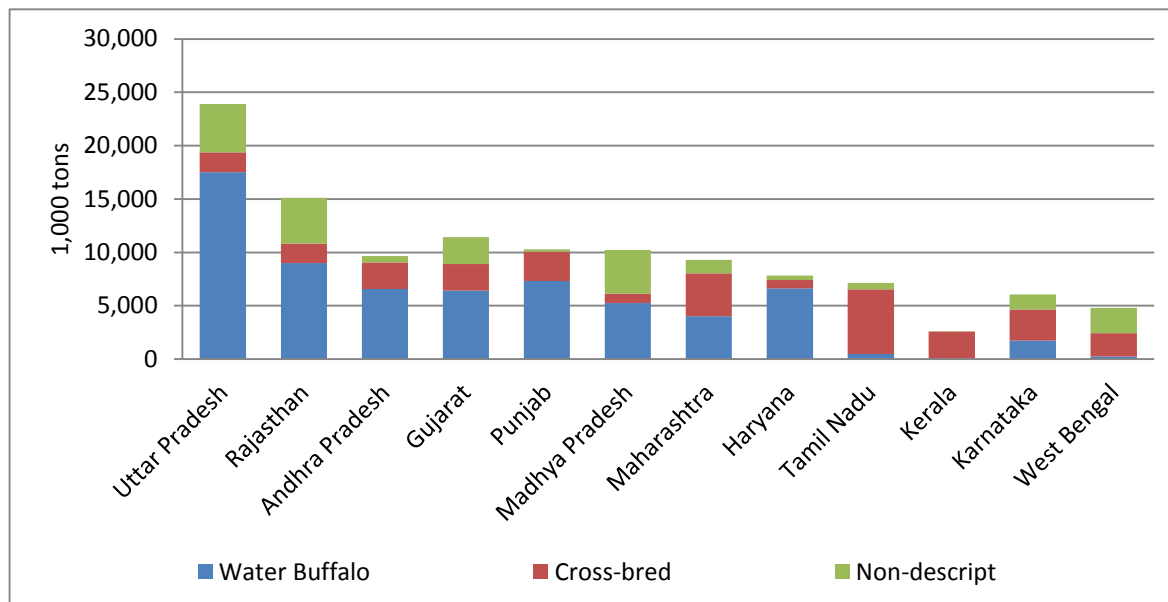
slaughter of which is banned in most Indian states. The crossbred cows are preferred in certain states including Tamil Nadu, Maharashtra, Kerala, Karnataka, West Bengal, and Punjab. See Figure 2 below.

**Figure 1. India: Major Milk Production States (Fiscal Year (April to March))**



Source: Department of Animal Husbandry, Dairying, and Fisheries

**Figure 2. India: Milk Production by Dairy Animal (Fiscal Year 2014-15)**

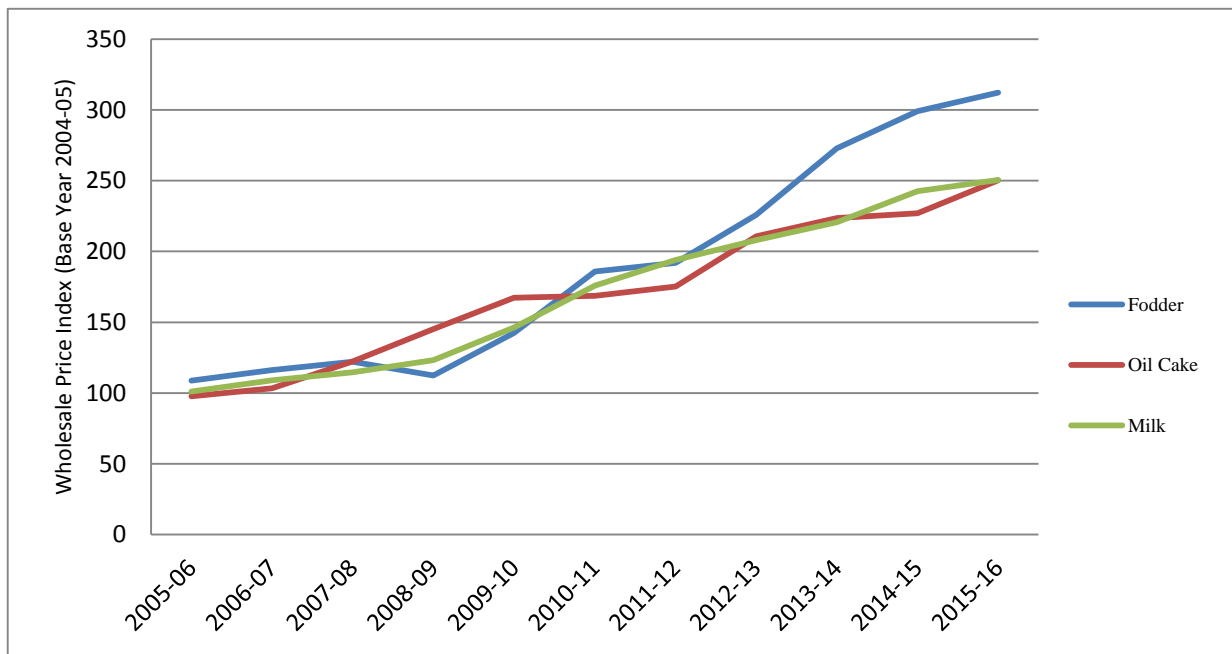


Source: Department of Animal Husbandry, Dairying, and Fisheries

## Prices

The farm gate prices offered to the dairy farmers by the state level dairy cooperatives are the benchmark prices that are generally followed by the private dairies. The dairy cooperatives generally consider factors such as increases in feed and other input costs for revising the farm gate prices. From fiscal year 2010-11 to 2015-16, fodder and oil cake prices increased at a compound annual growth rate of 11 and 8 percent respectively while milk prices increased by only 7 percent; this squeezed farmer's profits (Figure 4). Reportedly, some state governments provide financial subsidies to dairy cooperatives so that they can offer higher milk prices to farmers. According to industry sources, the September 2016 average farm gate price for milk ranges between INR 40 to 45 per liter (\$0.60 to \$ 0.67 per liter) for water buffalo milk (six percent fat and nine percent SNF), and INR 25 to 30 per liter (\$0.37 to \$0.45 per liter) for cow milk (four percent fat and eight-and-a-half percent SNF).

**Figure 4. India: Rising Feed Costs and Milk Prices (Fiscal Year-April-March)**



Source: Ministry of Commerce and Industry, Government of India

### Production Policy and Environs

The GOI's Department of Animal Husbandry, Dairying and Fisheries (DAHDF) supports state governments through various programs for breed improvement, dairy development, feed and fodder resources development, and animal disease control. DAHDF also assists states to implement a national control program for diseases such as Foot-and-Mouth Disease, Peste des Petits and Brucellosis. DAHDF has developed the National Disease Reporting System (NADRS), a web based system to report and monitor animal diseases across the country.

Through its National Program for Bovine Breeding and Dairy Development (NPBBDD), DAHDF assists state governments for activities such as breeding services, creation of infrastructure for quality milk production, procurement, processing, and marketing, providing inputs to dairy farmers, and farm

management training. The *Rashtriya Gokul Mission* under the NPBBDD focuses on improving the genetic potential of indigenous breeds.

GOI's National Dairy Development Board is currently implementing phase I of the National Dairy Plan (NDP I) in 18 states during the period FY 2011-12 to 2018-19. Phase I is valued at USD \$315 million (more than INR 20 billion). NDP I is focused on increasing milk production and productivity through support in areas such as breeding services and animal nutrition. The program also aims at enhancing village-level procurement systems such as milk weighing, testing, collection, and cooling, as well as extension services, and dairy cooperative development. For more details please see [IN4089](#) and [IN5009](#). The DAHDF supports dairy entrepreneurs through its Dairy Entrepreneurship Development scheme under which it provides subsidies up to 25 to 33.33 percent of the total cost to establish dairy farms, small scale processing facilities, cold storage infrastructure, or dairy marketing outlets.

### **Consumption:**

India's CY 2017 fluid milk consumption is projected to increase by four percent to 65.2 MMT on population growth and rising incomes. Milk and dairy products are a major source of protein, particularly for the large segment of India's vegetarian population. CY 2017 NFDM and butter consumption is forecast to increase to 560,000 MT and 5.39 MMT on population growth and demographic shifts. The consumption of value added dairy products is also growing due to higher incomes, urbanization and demographic changes (see processing section). For more details on changing consumption patterns, please see [IN4089](#).

### **Processing**

India's processed dairy segment is growing due to increased demand for more diversified dairy products. Increasing incomes, urbanization, dual income households and other demographic shifts are driving the demand for processed products such as milk powder, dairy whitener, butter, ghee (clarified butter), *paneer* (cottage cheese), flavored milk, ice cream, cheese, yogurt, butter milk, and ethnic sweets. Please see [IN5125](#) for more information on the growing cheese market. Consumer concerns about safety have also driven demand up for packaged, ultra-high temperature milk, owing to its long shelf life. This ultra-high temperature milk is also supplied to defense forces deployed in remote locations as well as to milk deficient regions in the northeastern states. Rabobank estimates the market share for value-added dairy products to grow from 20 to 30 percent from fiscal year 2012-13 to 2019-20. Nutritious products such as yoghurt and probiotic dairy are now in demand by an increasing number of health conscious consumers. According to NDDDB, the total installed processing capacity of the dairy cooperative sector is approximately 43 million liters per day; the data for installed capacity of private sector is not available, however, the total registered processing capacity of private dairy sector is 73 million liters per day.

Much of India's total milk production is produced by the unorganized sector, so food safety remains a challenge. To address food safety issues, GOI is implementing a program entitled Strengthening Infrastructure for Quality and Clean Milk Production, part of its NPBBDD scheme. The program provides financial assistance to states to improve milk quality and food safety at the farm and village level. The money is used to train farmers, install bulk milk coolers, strengthen laboratory testing capabilities, and monitor data collected from milk collection centers. The Ministry of Food Processing

Industries also provides subsidies to the private sector and dairy cooperatives to build cold chain infrastructure.

India's Food Safety and Standards Authority of India (FSSAI) regulates dairy products under the [Food Safety and Standards Regulations](#) (FSSR), 2011. Please see, [IN1174](#), [IN4123](#) and [IN4089](#) for more information on import procedures, food safety requirements, and other policies. The FSSR is applicable equally to both domestic and imported foods.

## **Trade:**

### **Exports**

India's exports are minimal due to high domestic consumption. CY 2017 NFDM exports are increased only slightly to 25,000 metric tons due to uncompetitive export prices. CY 2016 NFDM export estimates are also revised to 20,000 metric tons on slow export pace. CY 2015 NFDM and butter exports are revised to reflect customs data. India exports NFDM to regional milk-deficient countries such as Pakistan, Bangladesh, Afghanistan, Nepal, Bhutan, and United Arab Emirates. CY 2017 butter exports are forecast flat at 10,000 MT on expectations of steady demand. India also exports smaller volumes of casein (used for food processing or pharmaceuticals) to United States, EU and other countries.

### **Imports**

India's dairy imports are insignificant; however, there are irregular imports of milk powder and butter to compensate for declines in domestic supplies. India also imports small volumes of cheese, ice-cream and other dairy products, but nothing directly from the United States: a clause in the current Indian sanitary import permit regulation requires USDA to certify no ruminant-animal derived feed ingredients are used in the dairy production, which USDA currently cannot do.

## **Policy:**

### **Trade Policy**

GOI's Department of Animal Husbandry, Dairying, and Fisheries (DAHDF) regulates milk and dairy product imports in India. The import of dairy products requires a sanitary import permit issued by DAHDF, and a veterinary certificate certified by an exporting country's veterinary authority. India's import certification requirements for milk and dairy products are available on DAHDF's website (<http://dahd.nic.in/dahd/default.aspx>). India applies tariff rate quotas (TRQ) for dairy product imports such as NFDM and butter oil; imports above the TRQ are levied tariffs of 60 and 40 percent respectively. Table 1, at the end of this report, provides tariff structure details.

India recently revised its guidelines for import/export of bovine germplasm (revised April 2016) which are reportedly less restrictive. However, the import requires multiple approvals at the state and federal level which restricts trade significantly (For more details see [revised guidelines](#) for import/export of

bovine germplasm). GOI recently published veterinary health certificates for live bovine, bovine semen, and embryo imports. For more details see DAHDF's website (<http://dahd.nic.in/dahd/trade.aspx>)

India has further extended the ban on Chinese milk and dairy products until June 23, 2017 or until further notice, whichever is earlier. The notification also prohibits chocolates and chocolate products, candies, confectionary, and food preparations made with fluid milk or dairy solids as an ingredient.

**Table 1. India: Tariff Structure for Various Dairy Products, 2015**

HS CODE	ITEM DESCRIPTION	BASIC	CVD	SPL CVD	TOTAL DUTY with 3 % EDUCATION CESS	IMPORT POLICY
04011000 - 04015000	Milk and cream, not concentrated nor containing added sugar or other sweetening matter	30	0	0	30.900	Free San P
04021010	Milk and cream, concentrated or containing added sugar or other sweetening matter	60	0	4	68.272	Free San P
04021020 - 04021090	Milk and cream, concentrated or containing added sugar or other sweetening matter	60	0	4	68.272	Free San P
04022100	Milk and cream, not containing added sugar or other sweetening matter	60	0	4	68.272	Free San P
040229	Other: whole milk, milk for babies, other	30	0	4	36.136	Free San P
04029110	Condensed milk	30	0	4	36.136	Free San P
04029190	Other	30	0	4	36.136	Free San P
040299	Other: whole milk, condensed milk	30	0	4	36.136	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	30	0	0	30.900	Free San P
0404	Whey, whether or not concentrated or containing added sugar or other sweetening matter; products consisting of natural milk constituents, whether or not containing added sugar or other sweetening matter, not elsewhere specified or include	30	0	4	36.136	Free San P
04051000	Butter	40	0	4	46.848	Free San P
04052000	Dairy spreads	40	0	4	46.848	Free San P





Dairy, Milk, Fluid Market Begin Year	2015		2016		2017	
	Jan 2015		Jan 2016		Jan 2017	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>India</b>						
<b>Cows In Milk</b>	52500	52500	54500	54500	0	56500
<b>Cows Milk Production</b>	64000	64000	68000	68000	0	72000
<b>Other Milk Production</b>	83000	83000	86000	86000	0	88000
<b>Total Production</b>	147000	147000	154000	154000	0	160000
<b>Other Imports</b>	0	0	0	0	0	0
<b>Total Imports</b>	0	0	0	0	0	0
<b>Total Supply</b>	147000	147000	154000	154000	0	160000
<b>Other Exports</b>	0	0	0	0	0	0
<b>Total Exports</b>	0	0	0	0	0	0
<b>Fluid Use Dom. Consum.</b>	59750	59750	62750	62750	0	65200
<b>Factory Use Consum.</b>	87250	87250	91250	91250	0	94800
<b>Feed Use Dom. Consum.</b>	0	0	0	0	0	0
<b>Total Dom. Consumption</b>	147000	147000	154000	154000	0	160000
<b>Total Distribution</b>	147000	147000	154000	154000	0	160000

(1000 HEAD) ,(1000 MT)

Dairy, Milk, Nonfat Dry Market Begin Year	2015		2016		2017	
	Jan 2015		Jan 2016		Jan 2017	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>India</b>						
<b>Beginning Stocks</b>	25	25	55	55	0	45
<b>Production</b>	540	540	540	540	0	570
<b>Other Imports</b>	0	0	0	0	0	0
<b>Total Imports</b>	0	0	0	0	0	0
<b>Total Supply</b>	565	565	595	595	0	615
<b>Other Exports</b>	18	18	16	20	0	25

<b>Total Exports</b>	18	18	16	20	0	25
<b>Human Dom. Consumption</b>	492	492	539	530	0	560
<b>Other Use, Losses</b>	0	0	0	0	0	0
<b>Total Dom. Consumption</b>	492	492	539	530	0	560
<b>Total Use</b>	510	510	555	550	0	585
<b>Ending Stocks</b>	55	55	40	45	0	30
<b>Total Distribution</b>	565	565	595	595	0	615

(1000 MT)