

USDA Foreign Agricultural Service

# GAIN Report

Global Agricultural Information Network

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## India

### Dairy and Products Annual

**2015**

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**Report Highlights:**

CY 2016 fluid milk production is projected to increase by 4.8 percent to 154 million metric tons (MMT) assuming a normal monsoon. CY 2016 NFDN exports are projected to be flat at 30,000 metric tons on expectations of high global supplies and low prices. CY 2015 NFDN export estimates are revised down to 30,000 metric tons on slow export pace.

## **Executive Summary:**

CY 2016 fluid milk production is projected to increase by 4.8 percent to 154 million metric tons (MMT) assuming a normal monsoon. Indian milk production is constrained by a variety of factors such as genetics, a falling water table, less land due to urban sprawl, and poor farm management. With a growing, more affluent population demanding more diversified milk and dairy products, India will be challenged to meet this rising demand. CY 2016 NFDM exports are projected to be flat at 30,000 metric tons on expectations of high global supplies and low prices. CY 2015 NFDM export estimates are revised down to 30,000 metric tons on slow export pace.

## **Commodities:**

Dairy, Butter

Dairy, Milk, Fluid

Dairy, Milk, Nonfat Dry

## **Production:**

CY 2016 fluid milk production is estimated to increase by 4.8 percent to 154 million metric tons (MMT) assuming a normal monsoon. CY 2016 non-fat dry milk (NFDM) production levels are projected flat at 540 MMT on high carry-in stocks resulting from low CY 2015 exports (see Trade section). CY 2016 combined butter and ghee (clarified butter) production is estimated to rise 3 percent to 5.2 MMT on rising domestic demand due to population growth and demographic shifts (please see the Consumption and Marketing section).

According to sources, only approximately 20 percent of India's total milk production is further processed or pasteurized via the organized sector, which includes government supported dairy cooperatives and licensed private sector dairies. With growing demand for fluid milk and other value-added dairy products, cooperatives and private dairy companies are expanding their distributional network and processing capacities (please see the Processing and Food Safety section). Most state players distribute product at the state or regional level; only a few have a wider national presence.

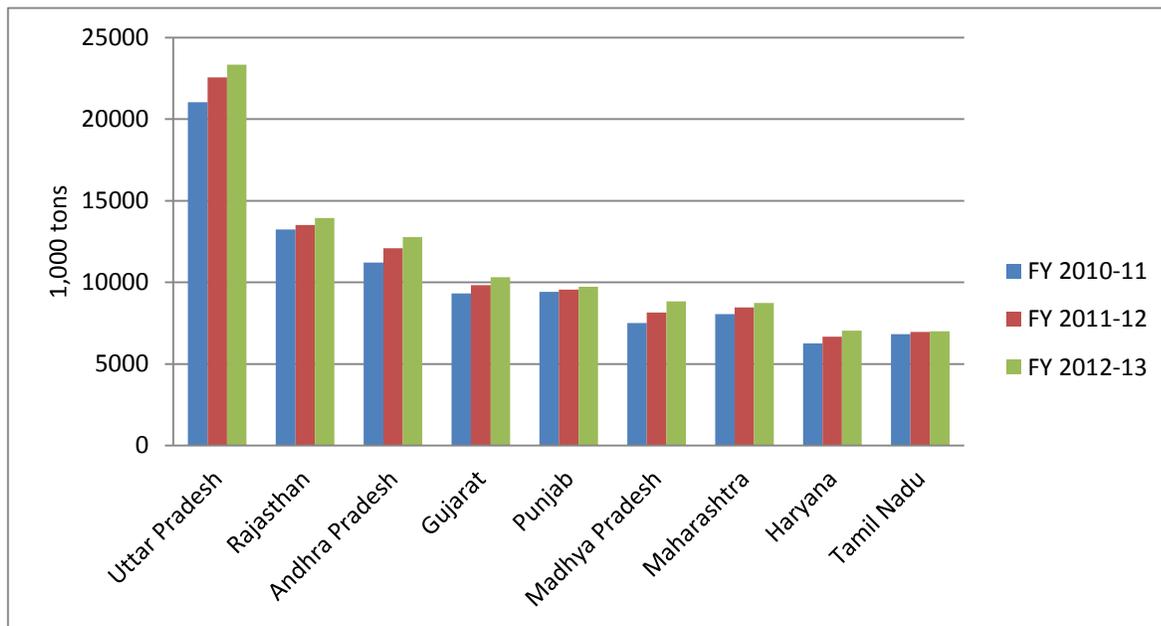
More than 90 percent of India's milk production is concentrated in 14 states (the top five states are Uttar Pradesh, Rajasthan, Andhra Pradesh, Gujarat, and Punjab (Figure 1)). Water buffaloes contribute more than 56 percent of total milk production. Some farmers prefer water buffalo milk due to its higher fat content, which can earn more money (milk prices are determined by volume, fat, and solids-not-fat (SNF) content); spent water buffaloes can also be sold for slaughter, unlike cattle which are banned in most Indian states. Cross-bred cows are used in certain states such as Tamil Nadu, Maharashtra, Kerala, Karnataka, West Bengal, and Punjab (Figure 2).

Indian dairy production is characterized as a low input/low output system mostly constituting small and marginal farmers and landless laborers owning less than five cows or water buffaloes. These small dairy farms mainly depend on low cost agricultural byproducts and other locally available feed sources. Many Indian policymakers believe that livestock is critical to support rural livelihoods.

Increasing milk production is critical to meet growing domestic demand; however, it is constrained by genetics, animal diseases, insufficient animal feed and fodder, lack of adequate veterinary and breeding services, a declining water table, less land due to urban sprawl, and poor farm management. The National Dairy Development Board (NDDB) is implementing the National Dairy Plan (NDP) (see

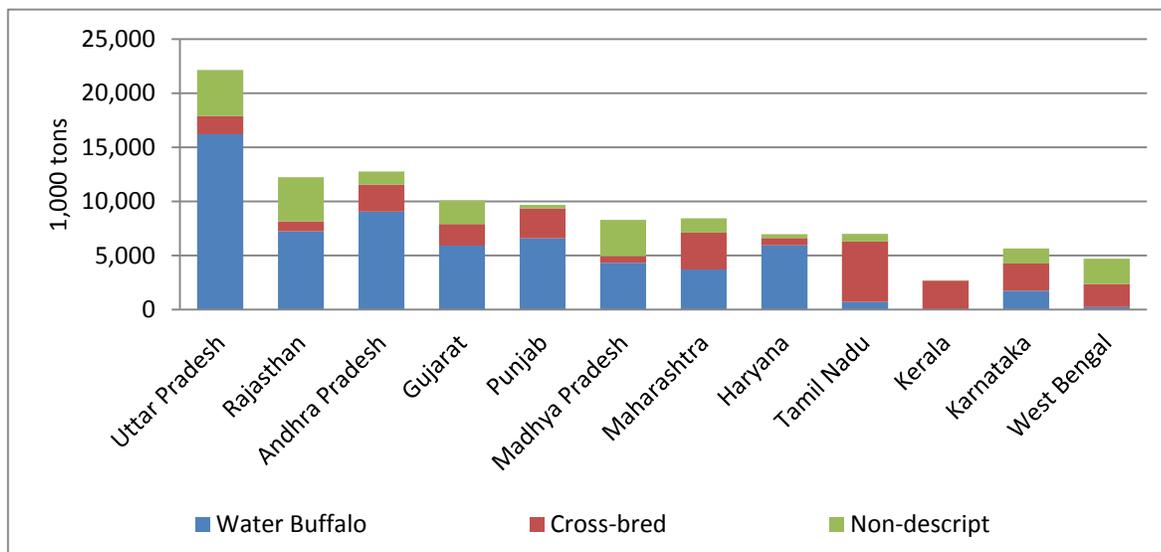
Production Policy and Environs section below) to help address some of these challenges, and in the process hopes to increase milk production to 200 to 210 MMT by fiscal year (April to March) 2021-22. Yet, these and other government efforts are primarily focused on assisting state-supported dairy cooperatives and processors, and not the private sector (please see the Production Policy and Environs section).

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 2012-13)



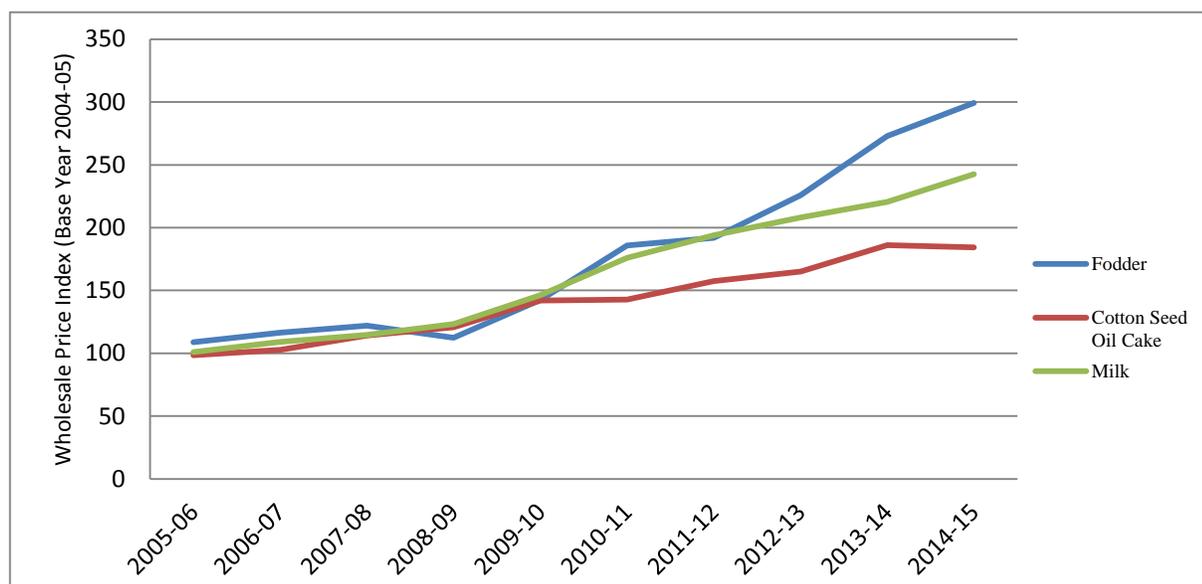
Source: Department of Animal Husbandry, Dairying, and Fisheries

## Prices

Industry sources note that dairy cooperatives set farmgate fluid milk prices; these prices generally are benchmarks for private players procuring milk in the region. Post contacts indicate that the September 2015 average farmgate price for milk ranges between INR 30 to 35 per liter (\$449 to \$524 per metric ton) for water buffalo milk (six percent fat and nine percent SNF), and INR 20 to 25 per liter (\$300 to \$374 per metric ton) for cow milk (four percent fat and eight-and-a-half percent SNF).

As feed and other input costs rise, dairy cooperatives allegedly increase farmgate fluid milk prices in order to help farmers cover total costs (Figure 3). From fiscal year 2009-10 to 2014-15, fodder and cotton seed oil cake prices increased at a compound annual growth rate of 16.01 and 5.36 percent while milk prices increased by 10.63 percent. Compound feed use is limited, although some believe demand is growing as farmers improve their on-farm management. Reportedly, some state governments provide financial subsidies to dairy cooperatives so that they can offer higher prices to farmers to improve profit margins.

Figure 3. India: Rising Feed Costs Cause Milk Prices to Rise (Fiscal Year-April-March)



Source: Ministry of Commerce and Industry, Government of India

## Production Policy and Environs

The NDDB is currently implementing the first phase of the NDP via the National Dairy Plan Phase I (NDP I) from FY 2011-12 to 2018-19, which is valued at USD \$315 million (more than INR 20 billion), and currently covers 18 states. NDP I is focused on increasing milk production in various areas such as improving artificial insemination conception rates, fodder development, and animal nutrition. The program also aims at enhancing village-level procurement systems such as milk weighing, testing, collection, and cooling, extension services, and dairy cooperative development. For more details please see [IN4089](#) and [IN5009](#).

The GOI implements various programs such as the National Program for Bovine Breeding and Dairy Development (NPBBDD) (fiscal year 2012-17), *Rashtriya Gokul Mission*, and National Livestock Mission. The major activities for the NPBBDD include breeding services, creating 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. Each state has its own breeding policy for dairy animals, which varies depending on whether the state focuses on improving non-descript cattle or water buffaloes with high quality foreign or domestic genetics. The National Livestock Mission concentrates on pork, poultry, and small ruminants via genetic improvement, extension services, risk coverage and insurance, farm management training, and fodder development.

Other national level programs include the *Rashtriya Krishi Vikas Yojana*, which provides financial assistance to state governments to improve fodder development, cattle and water buffalo genetics, milk production, raw material production (e.g., hides and skins) for the leather industry, and livestock health and infrastructure. The GOI also supports state governments through an animal disease control program that provides financial assistance for immunization and improving state veterinary biological production units and diagnostic laboratories for diseases such as Foot-and-Mouth Disease, Rinderpest, Peste des Petits, and Brucellosis. The GOI administers the National Disease Reporting System (NADRS), which is a web based system that reports and monitors animal diseases across the country.

The GOI offers some programming to increase private sector dairy development. For example, the Dairy Entrepreneurship Development scheme provides subsidies of up to 25 to 33.33 percent of the total cost to establish farms, small scale processing facilities, cold storage infrastructure, or dairy marketing outlets. The scheme entitled Establishment of Agri-Clinics and Agri-Business Centres (ACABC) provides financial assistance to professionals to establish their own business advisory centers, which provide guidance and other business services to farmers.

### **Consumption:**

CY 2016 fluid milk consumption is forecast to increase by five percent to 62.75 MMT on population growth; milk and dairy products are a major source of protein for a large segment of India's population. CY 2016 NFDM and butter consumption is forecast to increase to 530,000 MT and 5.19 MMT on population growth and demographic shifts (see the Marketing section). For more details on changing consumption pattern, please see [IN4089](#).

### **Processing and Food Safety:**

India's processed dairy segment has grown due to increased demand for more diversified dairy products (see Consumption and Marketing section). Sources believe that continued growth will largely depend on an enabling business environment, consistent supplies of high quality fluid milk, and an improved cold chain. According to the NDDDB, the total dairy cooperative processing capacity is approximately 43 million liters per day; however, only 77 percent of total capacity is used. Total private sector processing capacity data are unavailable; however, the NDDDB believes it could be as high as 73 million liters per day (actual utilization per day is unavailable).

Because a large segment of India's total milk production is produced by the unorganized sector, food safety will remain a challenge. For example, reportedly there have been cases of milk adulteration using water, urea, detergent, and fat in the supply chain. In order to address food safety issues, the GOI has enacted the program entitled Strengthening Infrastructure for Quality and Clean Milk Production under the NPBBDD. This program provides financial assistance to states to improve milk quality and food

safety at the farm and village level by training farmers, install bulk milk coolers, strengthen laboratory testing capabilities, and monitor data collected from milk collection centers in order to help FSSAI create better food safety policy. The Ministry of Food Processing Industries also provides subsidies to the private sector and dairy cooperatives to build cold chain infrastructure.

## **Trade:**

### **Exports**

Overall dairy exports are minimal due to high domestic consumption. CY 2016 NFDM exports are projected to be flat at 30,000 metric tons due to uncompetitive export prices; high global supplies are expected to keep international prices low. CY 2015 NFDM export estimates are revised down to 30,000 metric tons on slow export pace. For CY 2015 and 2016 butter exports are forecast at 10,000 MT on export pace and expectations of steady regional demand. CY 2014 butter exports are revised to reflect customs data. India generally exports NFDM to milk-deficient countries such as Bangladesh, Pakistan, Nepal, Bhutan, the United Arab Emirates, and Afghanistan. India also exports smaller volumes of casein, butter, and other dairy products to neighboring countries.

### **Imports**

India's dairy imports are minimal; however, there are irregular imports of milk powder and butter. India also imports small volumes of ice-cream, cheese, and other dairy products. U.S. dairy product exports are effectively prohibited under India's sanitary import protocol.

## **Policy:**

### **Trade Policy**

The Department of Animal Husbandry, Dairying, and Fisheries (DAHDF) regulates milk and dairy product exports to India. Imported dairy products require a sanitary import permit issued by DAHDF, and a veterinary certificate certified by an exporting country's veterinary authority. India's import certification requirements and documentation for milk and dairy products are available on DAHDF's website (<http://dahd.nic.in/dahd/default.aspx>).

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. India applies tariff rate quotas (TRQ) for dairy product imports such as NFDM and butter oil; imports above the TRQ will be levied at 60 and 40 percent. GOI published a [notification](#) that increased the butter, butter oil, and ghee tariff rate from 30 to 40 percent until 31<sup>st</sup> March 2016. Table 1, at the end of this report, provides tariff structure details.

India's guidelines for bovine germplasm imports (revised December 2013) are reportedly less restrictive; however, multiple approvals at the state and federal level can restrict trade significantly (Please see [IN5019](#) for revised guidelines). GOI recently published 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, 2016 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. The ban has been in place since 2008. Please refer to GAIN reports [IN1057](#), [IN1106](#), [IN2001](#), [IN3061](#), [IN4058](#) and [IN5081](#) for further information.

**Marketing:**

Due to rising incomes, urbanization, and other demographic shifts, demand has increased for more value-added dairy products. Cooperatives and private sector dairies are producing more dairy products to meet this demand, such as milk powder, butter, ghee (clarified butter), *paneer* (cottage cheese produced from water buffalo milk), flavored milk, ice cream, cheese, yogurt, and ethnic sweets. According to Rabobank, from fiscal year 2012-13 to 2019-20, the market for value-added dairy products is estimated to grow from 21 to 31 percent.

A variety of new products are being introduced to the market. More health conscious consumers are demanding nutritious products such as flavored, sour, and probiotic dairy drinks in lieu of soda and other sweets. Dual income households are also finding less time to prepare food at home, which has increased demand for convenient, ready-made products such as packaged *paneer*. Please see [IN5125](#) for more information on the growing cheese market. The demand for packaged, ultra-high temperature milk has also increased because more consumers believe it is safer than fresh milk.

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

HS CODE	ITEM DESCRIPTION	BASIC	CVD	SPL CVD	TOTAL DUTY w/ 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	60	0	4	68.272	Free San P

	sweetening matter					
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
04059010- 04059020	Butter Oil and Ghee	40	0	4	46.848	Free San P
04059090	Other	40	0	4	46.848	Free San P
04061000	Fresh (unripened or uncured) cheese, including whey cheese & curd	30	0	0		Free San P
04062000	Grated or powdered cheese of all kinds	30	0	4	36.136	Free San P
04063000	Processed cheese not grated or powdered	30	0	4	36.136	Free San P
04064000	Blue-veined cheese and other cheese containing veins produced by Pencilliumroqueforti	30	0	4	36.136	Free San P
04069000	Other cheese	30	0	4	36.136	Free San P
170211	Lactose and lactose syrup containing by weight 99 percent or more lactose, expressed as anhydrous lactose,	25	12.5	4	47.517	Free

	calculated on the dry matter					
21050000	Ice cream and other edible ice, whether or not containing cocoa	30	0	4	36.136	Free
3501	Casein, Caseinates and other casein derivatives; casein glues	20	12.5	4	41.492	Free

### Production, Supply and Demand Data Statistics:

**Table 2. India: Commodity, Dairy, Butter, PSD**

<i>Dairy, Butter</i>	2014		2015		2016	
<i>Market Begin Year</i>	Apr 2014		Apr 2015		Apr 2016	
<i>India</i>	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	6	6	8	8	0	8
Production	4,887	4,887	5,035	5,035	0	5,200
Other Imports	1	1	1	1	0	1
Total Imports	1	1	1	1	0	1
Total Supply	4,894	4,894	5,044	5,044	0	5,209
Other Exports	10	10	9	10	0	10
Total Exports	10	10	9	10	0	10
Domestic Consumption	4,876	4,876	5,027	5,026	0	5,190
Total Use	4,886	4,886	5,036	5,036	0	5,200
Ending Stocks	8	8	8	8	0	9
Total Distribution	4,894	4,894	5,044	5,044	0	5,209
CY Imp. from U.S.	0	0	0	0	0	0
CY. Exp. to U.S.	0	0	0	0	0	0

**Table 3. India: Commodity, Dairy, Milk, Fluid, PSD**

<i>Dairy, Milk, Fluid</i>	2014		2015		2016	
<i>Market Begin Year</i>	Apr 2014		Apr 2015		Apr 2016	
<i>India</i>	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk	50,500	50,500	52,500	52,500	0	54,500
Cows Milk Production	60,500	60,500	63,500	64,000	0	68,000
Other Milk Production	80,000	80,000	83,000	83,000	0	86,000
Total Production	140,500	140,500	146,500	147,000	0	154,000
Other Imports	0	0	0	0	0	0
Total Imports	0	0	0	0	0	0
Total Supply	140,500	140,500	146,500	147,000	0	154,000
Other Exports	0	0	0	0	0	0
Total Exports	0	0	0	0	0	0
Fluid Use Dom. Consum.	57,000	57,000	59,547	59,750	0	62,750

Factory Use Consum.	83,500	83,500	86,953	87,250	0	91,250
Feed Use Dom. Consum.	0	0	0	0	0	0
Total Dom. Consumption	140,500	140,500	146,500	147,000	0	154,000
Total Distribution	140,500	140,500	146,500	147,000	0	154,000
CY Imp. from U.S.	0	0	0	0	0	0
CY. Exp. to U.S.	0	0	0	0	0	0

**Table 4. India: Commodity, Dairy, Milk, Nonfat Dry, PSD**

<i>Dairy, Milk, Nonfat Dry</i>	2014		2015		2016	
<i>Market Begin Year</i>	Jan 2014		Jan 2015		Jan 2016	
<i>India</i>	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	11	11	25	25	0	50
Production	520	520	540	540	0	540
Other Imports	0	0	0	0	0	0
Total Imports	0	0	0	0	0	0
Total Supply	531	531	565	565	0	590
Other Exports	61	61	50	30	0	30
Total Exports	61	61	50	30	0	30
Human Dom. Consumption	445	445	489	485	0	530
Other Use, Losses	0	0	0	0	0	0
Total Dom. Consumption	445	445	489	485	0	530
Total Use	506	506	539	515	0	560
Ending Stocks	25	25	26	50	0	30
Total Distribution	531	531	565	565	0	590
CY Imp. from U.S.	0	0	0	0	0	0
CY. Exp. to U.S.	0	0	0	0	0	0