USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Required Report - public distribution

Date: 10/15/2018
GAIN Report Number: 8083

Japan

Dairy and Products Annual

2018 Market Situation Summary and 2019 Outlook

Approved By:
Alexander Blamberg

Prepared By:
Aki Imaizumi

Report Highlights:
Japanese raw milk production is forecast to contract slightly in 2018 due to declining numbers of cows in milk and heat stress during an exceptionally hot summer. Growing fluid use consumption will divert limited raw supplies away from factory use, leading to lower production of butter, nonfat dry milk, and cheese. Sustained consumption of processed dairy products will push imports of all three commodities upward. In 2019, Holstein herd replenishment is expected to boost raw milk production with the bulk of new output going to factory use, thereby limiting import demand for processed products.

Commodities:

Dairy, Milk, Fluid
Dairy, Butter
Dairy, Cheese
Dairy, Milk, Nonfat Dry

Production, Supply and Demand Data Statistics:

Fluid Milk PS&D Table

Dairy, Milk, Fluid	2017		2018		2019	
Market Begin Year	Jan 2017		Jan 2018		Jan 2019	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Cows In Milk	735	735	730	731	0	735
Cows Milk Production	7280	7281	7240	7230	0	7275
Other Milk Production	0	0	0	0	0	0
Total Production	7280	7281	7240	7230	0	7275
Other Imports	0	0	0	0	0	0
Total Imports	0	0	0	0	0	0
Total Supply	7280	7281	7240	7230	0	7275
Other Exports	0	0	0	0	0	0
Total Exports	0	0	0	0	0	0
Fluid Use Dom. Consum.	3970	3979	3950	3980	0	3980
Factory Use Consum.	3260	3252	3240	3200	0	3245
Feed Use Dom. Consum.	50	50	50	50	0	50
Total Dom. Consumption	7280	7281	7240	7230	0	7275
Total Distribution	7280	7281	7240	7230	0	7275
(1000 HEAD) ,(1000 MT)						

Butter PS&D Table

Dairy, Butter	2017		2018		2019	
Market Begin Year	Jan 2017		Jan 2018		Jan 2019	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	25	25	26	22	0	23
Production	59	60	57	59	0	60
Other Imports	8	8	10	12	0	10
Total Imports	8	8	10	12	0	10
Total Supply	92	93	93	93	0	93
Other Exports	0	0	0	0	0	0
Total Exports	0	0	0	0	0	0
Domestic Consumption	66	71	68	70	0	70
Total Use	66	71	68	70	0	70
Ending Stocks	26	22	25	23	0	23
Total Distribution	92	93	93	93	0	93
(1000 MT)						

Cheese PS&D Table

Dairy, Cheese	2017		2018		2019	
Market Begin Year	Jan 2017		Jan 2018		Jan 2019	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	15	15	15	9	0	14
Production	46	46	46	45	0	46
Other Imports	273	273	285	290	0	290
Total Imports	273	273	285	290	0	290
Total Supply	334	334	346	344	0	350
Other Exports	0	0	0	0	0	0
Total Exports	0	0	0	0	0	0
Human Dom. Consumption	319	325	331	330	0	335
Other Use, Losses	0	0	0	0	0	0
Total Dom. Consumption	319	325	331	330	0	335
Total Use	319	325	331	330	0	335
Ending Stocks	15	9	15	14	0	15
Total Distribution	334	334	346	344	0	350
(1000 MT)						

Non-Fat Dry Milk PS&D Table

Dairy, Milk, Nonfat Dry	2017		2018		2019	
Market Begin Year	Jan 2017		Jan 2018		Jan 2019	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	50	50	54	56	0	56
Production	112	121	106	115	0	120
Other Imports	55	59	60	60	0	55
Total Imports	55	59	60	60	0	55
Total Supply	217	230	220	231	0	231
Other Exports	0	0	0	0	0	0
Total Exports	0	0	0	0	0	0
Human Dom. Consumption	136	144	135	145	0	150
Other Use, Losses	27	30	28	30	0	30
Total Dom. Consumption	163	174	163	175	0	180
Total Use	163	174	163	175	0	180
Ending Stocks	54	56	57	56	0	51
Total Distribution	217	230	220	231	0	231
(1000 MT)						

2018 Situation Summary and Update

Fluid Milk

The number of cows in milk continued to decline in 2018, down 4,100 head from the previous year to 731,000 as of February 1. The decline is due in part to the long-term reduction in the number of dairy farms which fell four percent to 15,700. High calf prices have also constrained herd replenishment. As noted in FAS/Tokyo's Livestock and Products Annual (JA8043), dairy operators have sought in recent years to capitalize on rising demand for beef cattle by using wagyu embryo transfers to produce pure wagyu calves from Holstein cows. This gradually led to a shortage of Holstein calves on the market, pushing prices higher. The market started to correct itself with increased Holstein heifer births in 2016, but they are not expected to start milking until 2019. The recovery was spurred by increasing use of sexed semen as well as government efforts to promote Holstein calf reproduction.

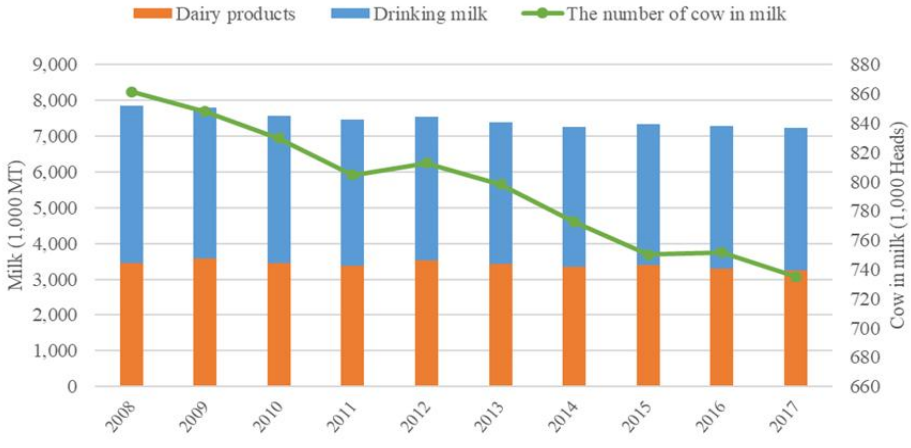
Table 1 Japan's Dairy Heifer Production

Year	New born dairy heifer (head)	Year by year increase (%)
2015	252,543	
2016	253,962	100.6
2017	266,100	104.8
2018	286,500	107.7

Note: The numbers for 2017 and 2018 are estimated.
Source: Japan Dairy Heard Recording

In line with FAS/Tokyo's previous estimates (see JA7125), Japan's year-end raw milk production in 2017 was 7.281 million metric tons (MMT) as Hokkaido production rebounded strongly after suffering a string of damaging typhoons in the summer of 2016. However, the recovery is expected to slow in 2018 due to adverse weather this year which included a large number of typhoons and unusually strong summer heat throughout the country. Particularly on the central island of Honshu, dairy producers reported lower than average production volumes in the summer months, creating a supply shortfall for drinking milk that was filled with increased volumes transported from Hokkaido, Japan's largest dairy producing region. On September 6, Hokkaido itself was struck by a 6.7 magnitude earthquake which caused widespread blackouts and disrupted dairy supply chains on the southern part of the island. Media reports estimate that approximately 20,000 metric tons (MT) of raw milk production was discarded after the earthquake, accounting for about 0.3 percent of Japan's annual production. As a result, FAS/Tokyo revised its raw milk production estimate for 2018 down slightly to 7.230 MMT.

Figure 1

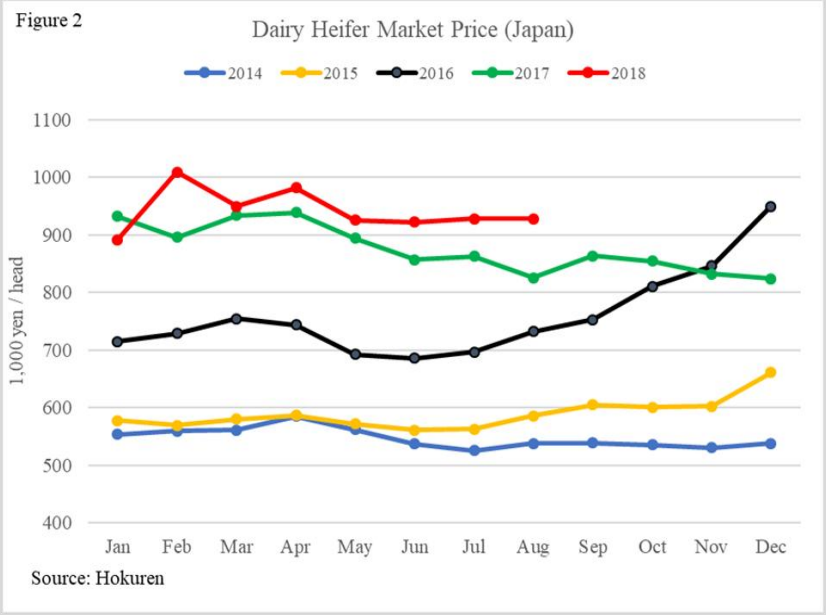


Note: The production is counted in JFY and the number of cow in milk is as of February 1.
Source: MAFF

According to a national household survey conducted by the Ministry of Internal Affairs and Communications (MIAC), milk beverage consumption on a value basis increased eight percent year-on-year in 2017 and seven percent from January to July in 2018. In response to growing consumer preference for fresh dairy products, many dairy and beverage companies increased the use of fluid milk in the production of prepared coffee beverages and other milk-based drinks. Convenience store chains

also shifted toward including more fresh milk in takeaway coffees. These trends pushed year-end fluid use consumption up to 3.979 MMT in 2017. Consumption was also boosted by a series of health-related television programs in early 2018 which promoted greater milk consumption as part of a healthy diet. As a result of these trends, FAS/Tokyo increased its fluid use consumption estimate for 2018 by 30,000 MT to 3.980 MMT.

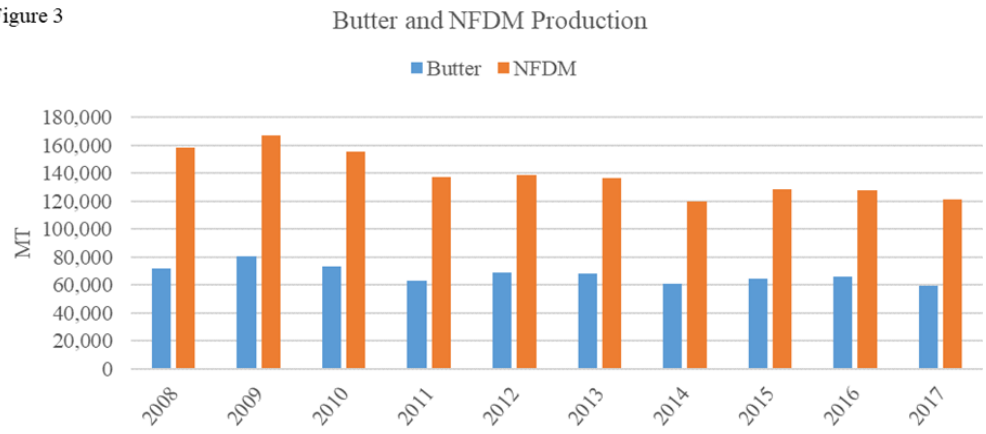
With higher fluid use consumption, declining raw milk production will result in less milk available for factory use. This is particularly true for Hokkaido which supplies the bulk of Japan's factory-use milk, but now sees increasing volumes of fresh milk diverted to the rest of Japan for fluid consumption. In April 2018, the Government of Japan responded by expanding a support program for producers who ship factory-use milk to designated associations for the production certain dairy products. With the expansion, program participants can receive subsidies even if they ship to manufacturers that are not designated associations. However, as of September 1, only 14 dairy farms in Hokkaido (0.4 percent of all farms in the area) were reported as having changed consignees under the program. In the short term, at least, it appears that raw milk producers will continue to prioritize the fluid market. As a result, FAS/Tokyo projects factory-use consumption to fall two percent in 2018 to 3.200 MMT.



Butter

Butter production in the first eight months of 2018 increased one percent over the same period in 2017. This comes after production fell ten percent from 2016 to 2017 to 59,808 MT due to low availability of milk for factory use. With milk supplies low, butter manufacturers are focusing production on the more lucrative retail table butter market, while institutional users such as confectionary companies turn to imported butter for ingredient needs. FAS/Tokyo forecasts domestic production to remain stable at 59,000 MT.

Figure 3

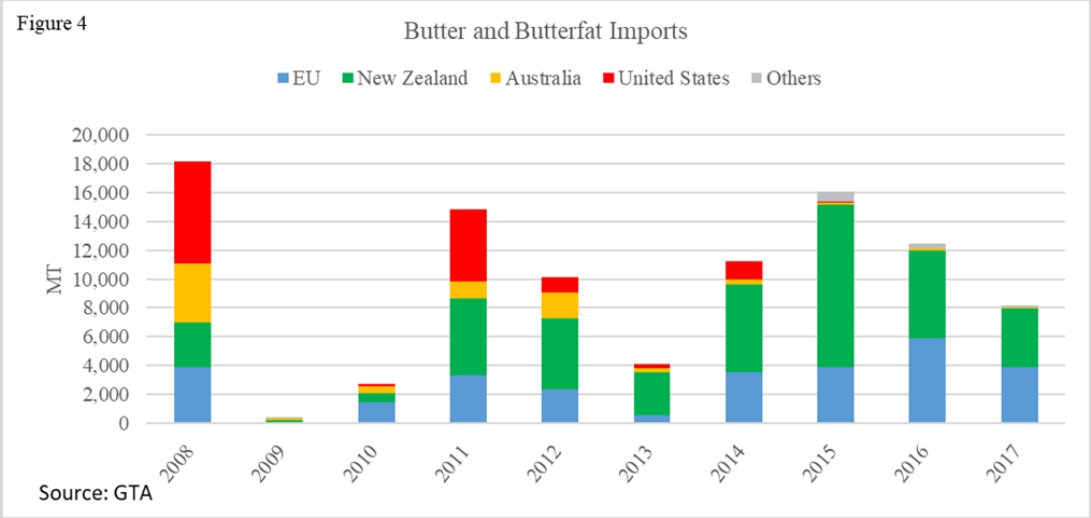


Source: ALIC

Industry surveys indicate that consumers are increasingly substituting butter for margarine. According to MIAC, household consumption of table butter in 2017 increased five percent on a value basis from the previous year, while margarine consumption declined two percent. This trend has continued in the first seven months of 2018 with butter consumption up three percent and margarine down one percent. As with other dairy products like drinking milk, Japanese consumers appear to be developing a preference for fresh butter. This is particularly notable at convenience store chains which introduce new dairy-based confections on a nearly weekly basis. On sustained consumer demand for butter, FAS/Tokyo forecasts consumption to hold steady in 2018 at 70,000 MT.

With domestic butter primarily destined for the retail market, the baking and confectionary industry will continue to look to imports to meet factory demand. In Japan Fiscal Year 2017 (April 2017 – March 2018), the Animal and Livestock Industries Corporation (ALIC), Japan's state trade agency, set an import quota of 13,000 MT to fill the domestic supply-demand gap, but ultimately filled only 9,430 MT of that quota. ALIC has provisionally set the same volume of 13,000 MT for the JFY 2018 quota which it estimates as sufficient to meet Japan's butter import needs through March 2019. On September 25, the Ministry of Agriculture, Forestry, and Fisheries (MAFF) announced that it did not anticipate a butter shortage this year.

Figure 4

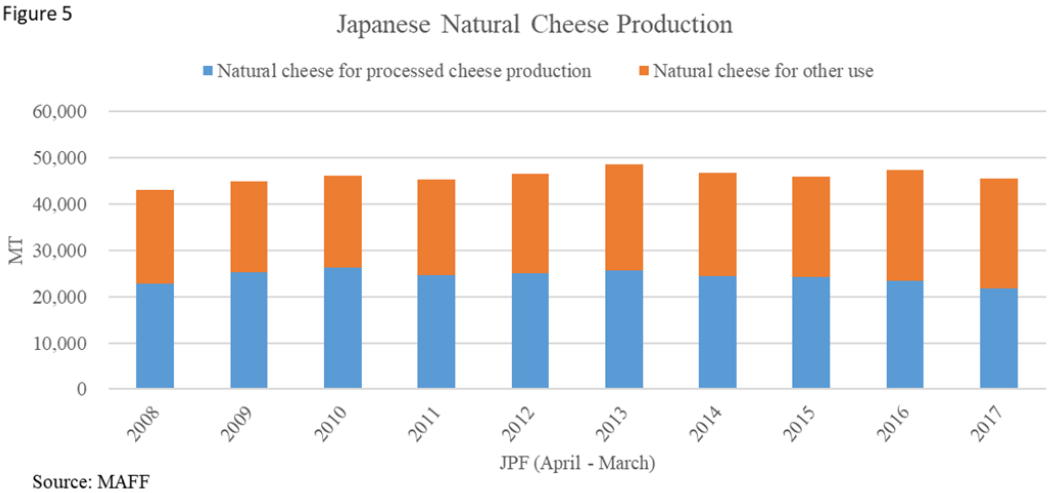


New Zealand and the European Union supply the bulk of Japan's imported butter with suppliers able to secure tenders from ALIC based on price competitiveness and the ability to meet various technical requirements. Japan imported 11,146 MT of butter in the first eight months of 2018, more than double the same period of the previous year after ending stocks tightened more than expected. With an eye toward increased consumption toward the end of the calendar year, typically around the New Year's holidays, importers appear to have built sufficient stocks in the late summer of 2018, suggesting that imports will slow over the next few months. FAS/Tokyo projects year-end total butter imports at 12,000 MT. This volume will allow ending stocks to stabilize at 23,000 MT.

Cheese

As dairy manufacturers prioritize butter production, less factory-use milk will be available for cheese. In JFY 2017, this caused Japan's cheese production to fall four percent to 45,535 MT. In February 2018, the Government of Japan introduced new measures aimed at supporting domestic production of consumer-oriented natural cheese (see JA8031). However, shortly thereafter in May 2018, two of Japan's largest dairy manufacturers increased prices of certain cheese products and announced plans to limit production citing high input costs. With the availability of factory-use milk remaining constrained, FAS/Tokyo projects Japan's year-end cheese production to contract slightly in 2018, falling two percent to 45,000 MT.

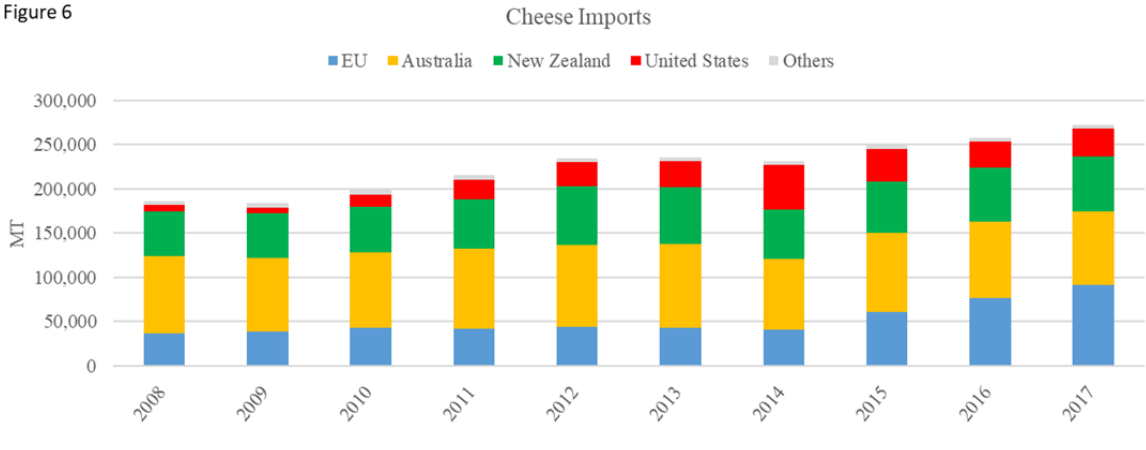
Figure 5



Source: MAFF

According to MIAC surveys, Japanese cheese consumption grew seven percent on a volume basis in 2017 and eight percent in the first eight months of 2018. Like other dairy products, cheese consumption has benefited from a renewed consumer focus on the nutritional value of milk, particularly among the older population. Meanwhile, young consumers continue to adopt Western-style dining habits, leading cheese consumption to grow hand-in-hand with other luxury products such as imported wine (see JA8023). As a result of these trends, FAS/Tokyo projects cheese consumption to reach 330,000 MT in 2018.

Figure 6



Source: GTA

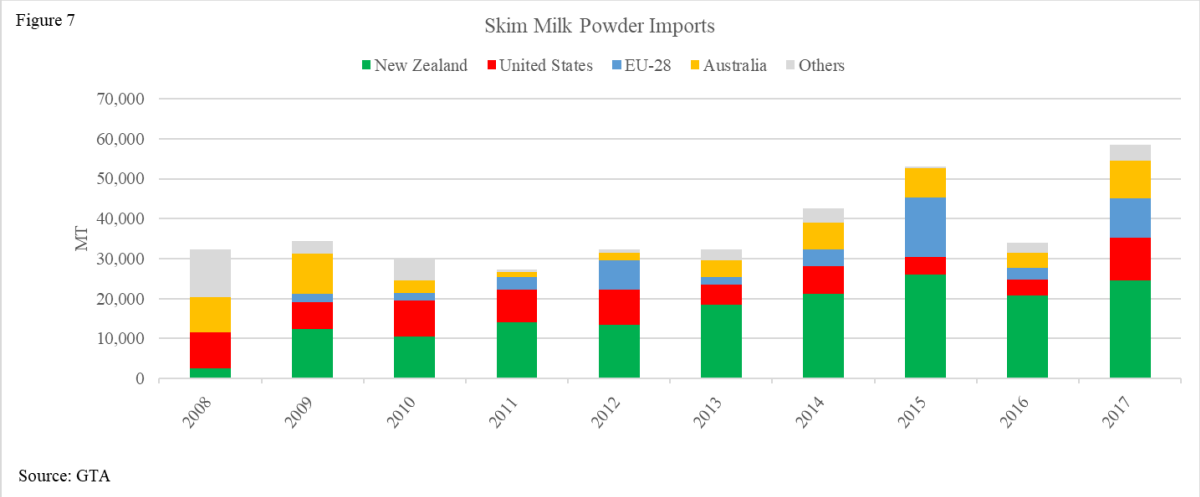
With production contracting slightly, Japan is expected to import more cheese to fill the growing gap between domestic production and demand. Year-end cheese imports in 2017 grew six percent from the previous year to 272,776 MT with the European Union accounting for 34 percent of this volume followed by Australia at 30 percent and New Zealand at 23 percent. Imports continued trending upward in the first eight months of 2018, up six percent from the previous year. FAS/Tokyo projects prevailing market dynamics to hold through the remainder of 2018, pushing year-end 2018 imports up to 290,000 MT. Increased imports will allow for an expansion of stocks which contracted significantly at the end of 2017. FAS/Tokyo projects ending stocks in 2018 to reach 14,000 MT.

Nonfat Dry Milk (NFDM)

Japanese production of NFDM in the fourth quarter of 2017 grew faster than expected, bringing the year-end total to 121,000 MT. However, growth stalled in the first eight months of 2018 as production increased only 11 MT. With butter output forecast to remain relatively constant through the rest of this year, FAS/Tokyo projects NFDM output to contract slightly in the remaining months, bringing 2018 annual production to 115,000 MT.

Consumption of NFDM is driven largely by consumer demand for milk beverages and ice cream. An unusually long and hot summer this year boosted household consumption of ice cream 10 percent on value basis in the first seven months of 2018 following two percent growth in the previous year, according to MIAC. Consumption of premium ice cream products using fresh cream (see JA7125) as well as cheaper alternatives using NFDM is becoming more widespread in Japan as a result of expanded product lineups available at convenience stores and grocery chains. As a result, FAS/Tokyo revised its consumption estimate up by 9,000 MT to 175,000 MT for 2018.

Figure 7



Source: GTA

Year-end imports for 2017 fell slightly below FAS/Tokyo's earlier estimates to 58,542 MT on higher year-end domestic production. New Zealand was the largest supplier (42 percent of total imports) followed by the United States (18 percent) and the European Union (17 percent). Despite reduced imports, ending stocks grew 12 percent, leading ALIC to set the JFY 2018 quota for NFDM at 27,000 MT which was 7,000 MT lower than the previous year's level. However, only about half of Japan's NFDM imports come through this quota and overall imports grew two percent through the first eight months of 2018. With additional imports needed to meet growing demand, FAS/Tokyo projects the year-end total to grow slightly to 60,000 MT with ending stocks remaining stable at 56,000 MT.

2019 Outlook for Dairy Commodities

FAS/Tokyo forecasts that Holstein heifers born in 2016 and 2017 will start milking in 2019, bringing the total number of cows in milk to 735,000 head, approximately half a percent higher than 2018. Total raw milk production is projected to grow one percent to 7.275 MMT as Hokkaido production rebounds from the 2018 earthquake. Fluid-use consumption is expected to remain steady at 3.980 MMT on renewed

consumer preference for fresh milk. FAS/Tokyo anticipates that increased raw milk production will flow primarily to factory-use on growing demand for butter and cheese.

Butter production is forecast to grow two percent to 60,000 MT, pulling NFDM production up to 120,000 MT. Consumption of butter is projected to remain stable in 2019, leading to slightly reduced imports which FAS/Tokyo projects at 10,000 MT. Consumption of NFDM is projected to increase slightly to 150,000 MT with imports contracting to 55,000 MT. FAS/Tokyo anticipates ending butter stocks to hold steady at 23,000 MT and NFDM stocks contract slightly to 51,000 MT as industrial users seek to maintain sufficient buffer supplies of largely state-traded commodities.

Cheese production is expected to increase slightly to 46,000 MT. Growth in production will likely be met by increased consumption, leaving cheese import volumes flat at 290,000 MT. Importers are expected to maintain slightly larger cheese ending stocks to moderate potential swings in consumption growth.

In August 2018, Japan introduced new standards for liquid infant formula which opened the market to domestic production (see JA8062). However, manufacturers indicate that it will take at least 18 months before production commences, suggesting minimal impact on dairy production or consumption at least until 2020.

This report does not take into account Japan's upcoming free trade agreements with the European Union and ten members of the Comprehensive and Progressive Trans-Pacific Partnership as the implementation dates are not yet known. For more information on dairy components of these agreements, see JA8029.

Supplemental Tables:

Table 1: Japanese Household Consumption of Milk and Dairy Products (two or more person household)

1-a) Household consumption in value

Unit: JP Yen

	Bread	Milk	Powdered Milk	Yogurt	Butter	Cheese	Confectionary	Coffee Beverage	Lactic Acid Bacterial Drinks	Milk Beverage	Margarine	Ice Cream and Sherbet*
2014	29,212	15,176	643	11,458	995	4,721	80,129	4,159	3,503	1,469	770	8,007
2015	30,508	15,434	607	12,134	959	4,936	83,026	4,453	3,702	1,594	799	8,709
2016	30,294	15,518	737	13,496	981	5,194	83,473	4,451	4,080	1,640	702	8,907
2017	29,956	15,300	685	13,391	1,031	5,493	83,088	4,427	4,129	1,765	685	9,047
% Chg.	-1	-1	-7	-1	5	6	0	-1	1	8	-2	2
Jan/Jul, 2017	17,591	8,841	393	7,896	588	3,060	47,196	2,576	2,400	997	402	5,190
Jan/Jul, 2018	17,762	8,564	382	7,854	605	3,347	47,580	2,619	2,375	1,066	396	5,697
% Chg.	1	-3	-3	-1	3	9	1	2	-1	7	-1	10

*Ice Cream and Sherbet are also included in Confectionary Data

Source: Ministry of Internal Affairs and Communications (Statistics Bureau)

1-b) Household consumption in volume

	Milk (1 liter)	Powdered Milk (1 gram)	Cheese (1 gram)	Butter (1 gram)	Margarine (1 gram)	Bread (1 gram)
2014	79	309	2,864	512	1,156	44,931
2015	78	292	2,902	458	1,075	45,644
2016	79	331	3,087	472	956	45,111
2017	78	306	3,309	492	932	44,840
% Chg.	-1%	-8%	7%	4%	-3%	-1%
Jan/Aug, 2017	52	196	2,108	318	613	29,921
Jan/Aug, 2018	51	197	2,268	321	593	29,921
% Chg.	-2%	1%	8%	1%	-3%	0%

Source: Ministry of Internal Affairs and Communications (Statistics Bureau)

Table 2: Japanese Fluid Milk Production

Unit: 1,000 Metric Ton

	2013	2014	2015	2016	2017	% Chg.	2017	2018	% Chg.
	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec		Jan/Mar	Jan/Mar	
National Fluid Milk Production	7,508	7,334	7,379	7,394	7,272	-2%	1,819	1,830	1%
Hokkaido	3,883	3,811	3,868	3,923	3,888	-1%	952	980	3%
Other Prefectures	3,626	3,524	3,524	3,471	3,392	-2%	867	849	-2%
Hokkaido Share	52%	52%	52%	53%	53%		52%	54%	
Other Prefectures Share	48%	48%	48%	47%	47%		48%	46%	
Fluid Milk Utilizations	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec		Jan/Aug	Jan/Aug	
For Drinking	3,975	3,911	3,933	3,992	3,980	0%	2,637	2,656	1%
For Processing	3,477	3,364	3,390	3,349	3,253	-3%	2,237	2,254	1%
Others	57	59	57	53	49	-7%	32	32	-1%

Source: MAFF and ALIC

Table 3: Japanese Utilization of Fluid Milk for Drinking Use Category

Unit: 1,000 Kilo Liters

	2013	2014	2015	2016	2017	% Chg.	2017	2018	% Chg.
	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec		Jan/Aug.	Jan/Aug.	
Total Drinking Milk Products	3,507	3,456	3,456	3,491	3,532	1%	2,334	2,353	1%
Regular Milk	3,031	2,989	3,005	3,049	3,087	1%	2,033	2,073	2%
Processed Milk	476	468	451	441	444	1%	302	279	-8%
Milk Beverages	1,367	1,330	1,306	1,236	1,178	-5%	799	746	-7%
Fermented Milk	1,003	1,001	1,055	1,105	1,076	-3%	727	727	0%
Lactic Acid Bacteria Drinks	157	146	148	140	129	-8%	90	87	-4%

Note: Processed Milk: low fat, high fat, vitamin and mineral fortified, calcium enriched

Milk Beverages: flavored milk (coffee and fruits flavored)

Fermented Milk: Yogurt etc.

Source: ALIC

Table 4: Japanese Production of Processed Milk Products

Unit: Metric Ton

	2013	2014	2015	2016	2017	% Chg.	2017	2018	% Chg.
	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec		Jan/Aug.	Jan/Aug.	
Butter	68,303	60,762	64,810	66,210	59,808	-10%	43,025	43,504	1%
Cream	113,502	116,911	114,205	111,030	115,678	4%	74,761	75,836	1%
Whole Milk Powder	10,765	12,077	11,862	11,505	9,416	-18%	6,610	7,532	14%
Prepared Milk Powder	22,915	26,659	26,309	27,657	26,711	-3%	17,526	18,388	5%
Skim Milk Powder (NFDM)	136,354	119,844	128,610	127,598	121,063	-5%	83,729	83,740	0%
Ice Cream (Unit: kilo liter)	143,433	144,724	134,093	141,767	151,287	7%	*34094	*32826	-4%

* Jan - Mar, 2018

Source: ALIC

Table 5: Japanese Imports of Non Fat Dry Milk

Unit: Metric Ton

	2013	2014	2015	2016	2017	% Chg.	2017	2018	% Chg.
	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec	Jan/Dec		Jan/Mar	Jan/Mar	
For School Lunch Program	1,924	1,874	1,803	1,752	1,689	-4%	433	444	3%
For Feeds	22,361	24,040	25,483	26,701	27,655	4%	8,982	9,759	9%
ALIC (Current Access and Additio	4,970	13,665	23,805	4,052	25,365	526%	0	7,941	∞
For Other (Ordinary Imports)	3,026	2,947	1,911	1,386	3,836	177%	886	625	-29%
Total NFDM Imports	32,281	42,526	53,002	33,891	58,545	73%	10,301	18,769	82%

Source: ALIC