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Report Highlights:

Fluid milk production will drop slightly in 2024 as the number of cows in milk decreases. Tourism stimulated by foreign visitors will boost demand for dairy products in the foodservice industries, which will offset the dip in retail sales. Japan's 2024 butter and cheese imports will rise to fill a gap between domestic production and demand, but imports of non-fat dry milk powder will be minimal since stocks already are high.

Executive summary

FAS/Tokyo projects Japan's milk production in 2024 will drop slightly following the decline of 2023, when farmers limited milk production to curb losses in an unfavorable market. Farm management challenges in 2023 still include lower income from byproducts such as calves; and high production costs, which are partly a function of depreciation of the yen since that raises cost of imported feed inputs. Retail sales of drinking milk also have dipped in 2023 and that trend will extend into 2024 as consumer demand adjusts to the impact of inflation. At the same time, greater demand in the hotel, restaurant, and institutional (HRI) sectors, and in exports will offset some of the dip in retail sales. FAS/Tokyo forecasts that 2024 production of butter and its byproduct, non-fat dry milk (NFDM), will expand year on year after tight milk supplies forced a drop in production in 2023. Butter demand is growing, especially in food processing sectors, as tourism boosts production of confectionary products. However, instead of increasing domestic butter production to meet a shortfall, Japan will import more butter. This will avoid adding to already high stocks of NFDM, for which imports will in turn be minimal. FAS/Tokyo expects Japan's cheese production will be up in 2024 as tourism boosts the economy. Japanese cheese is increasingly competitive against imported cheese on price and quality, but production capacity cannot meet domestic demand, so Japan will increase cheese imports in 2024.

Fluid milk

Table 1: Fluid milk Production, Supply and Distribution

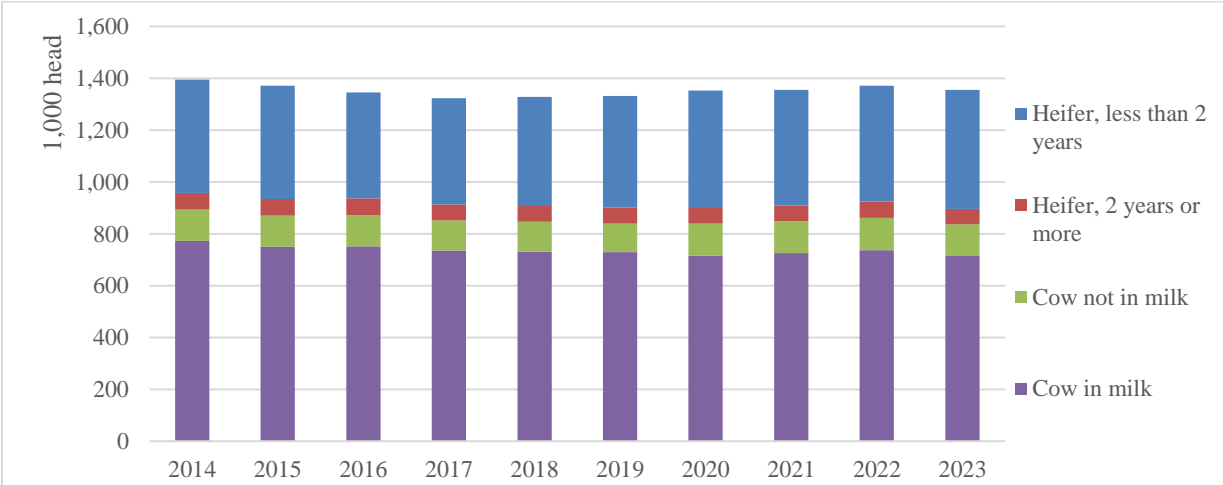
Dairy, Milk, Fluid Market Year Begins	2022		2023		2024	
	Jan 2022		Jan 2023		Jan 2024	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Japan						
Cows In Milk (1000 HEAD)	737	737	740	715	0	710
Cows Milk Production (1000 MT)	7630	7617	7660	7250	0	7230
Other Milk Production (1000 MT)	0	0	0	0	0	0
Total Production (1000 MT)	7630	7617	7660	7250	0	7230
Other Imports (1000 MT)	0	0	0	0	0	0
Total Imports (1000 MT)	0	0	0	0	0	0
Total Supply (1000 MT)	7630	7617	7660	7250	0	7230
Other Exports (1000 MT)	8	9	7	8	0	7
Total Exports (1000 MT)	8	9	7	8	0	7
Fluid Use Dom. Consumption (1000 MT)	4065	3977	4070	3850	0	3730
Factory Use Consumption (1000 MT)	3512	3594	3538	3360	0	3465
Feed Use Domestic Consumption (1000 MT)	45	37	45	32	0	28
Total Domestic Consumption (1000 MT)	7622	7608	7653	7242	0	7223
Total Distribution (1000 MT)	7630	7617	7660	7250	0	7230

(1000 HEAD) ,(1000 Metric Ton [MT])

FAS/Tokyo projects Japan’s fluid milk production in 2024 will drop slightly year on year since fewer cows are in milk. According to the latest Livestock Statistics published by Ministry of Agriculture, Forestry and Fisheries (MAFF), as of February 1, 2023, the number of cows in milk was down three percent year on year (Figure 1). Dairy farms have held milk production at the current level since fall 2022 as demand waned, especially in foodservice industries (See [JA2022-0090](#) and [JA2023-0026](#)). Dairy farms in Hokkaido, Japan’s largest milk production area, have been most aggressive in limiting production growth. The net decline in Japan’s milk production from January through July in 2023 was four percent. The limit in production has been accelerated by record high temperatures in Japan, including Hokkaido in the north. Production dropped six percent in August year on year as dairy cow productivity suffered under the heat. FAS/Tokyo projects that 2023 fluid milk production will be down five percent from 2022. Of course, with milk production down, production of butter and other processed products is also down in 2023.

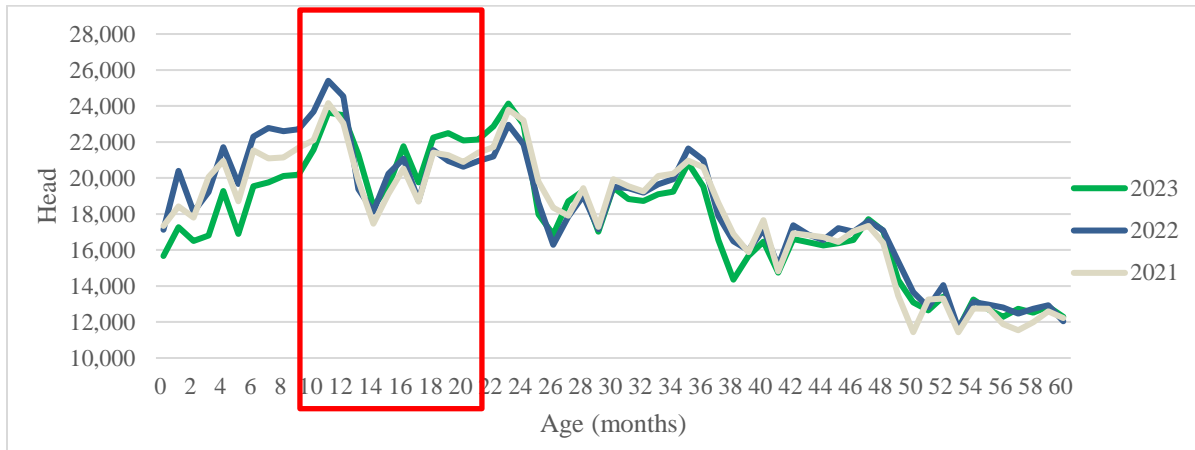
According to the Livestock National Breeding Center, as of July 31, 2023, the registered population of heifers and cows expected to be in milk in 2024 dipped by just one percent year on year (Figure 2). Unless dairy farmers extend dry periods of current cows, FAS/Tokyo projects that 2024 milk production will match 2023 production levels.

Figure 1: Japan’s Dairy Cow Population (as of February 1)



Source: MAFF

Figure 2: Dairy Cow and Heifer Population by Age (as of July 31 in 2021 – 2023)

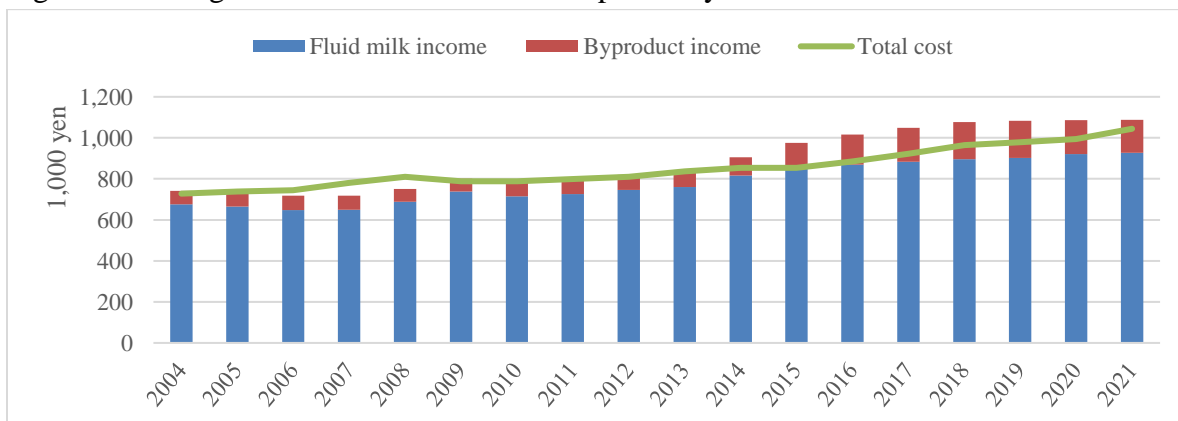


Note: Heifers aged 10 – 20 months normally start milking the following year.

Source: MAFF

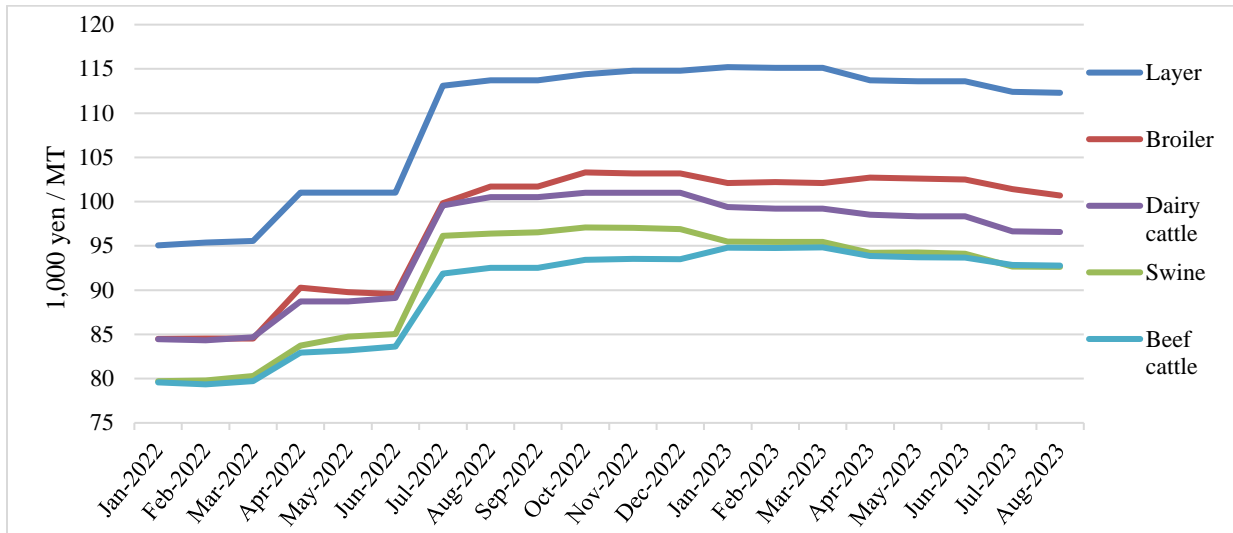
Dairy farm managers face a major challenge: production costs are hiking but byproduct prices as well as wholesale prices are down or not rising enough to cover higher production costs in recent years. According to the latest available data, in 2021 total cost of production had already exceeded total income from sales of fluid milk and byproducts (Figure 3). Since dairy farms are largely using imported feeds, feed costs rise as the Japanese yen depreciates against the US dollar and other currencies. Metric ton compound feed prices hit 101,000 yen (or \$678, \$1=149 yen) in October 2022 (Figure 4), but had moderated to 96,580 yen (or, \$648) by August, although that was still 17 percent higher than the price in August 2021 (for details, see [JA2023-0098](#)). Additional energy expenses needed to cool cows under a wave of extraordinary heat in summer 2023 added to the spiking production costs.

Figure 3: Average Production Cost and Profit per Dairy Cow



Source: MAFF and Japan Milk Association (J milk)

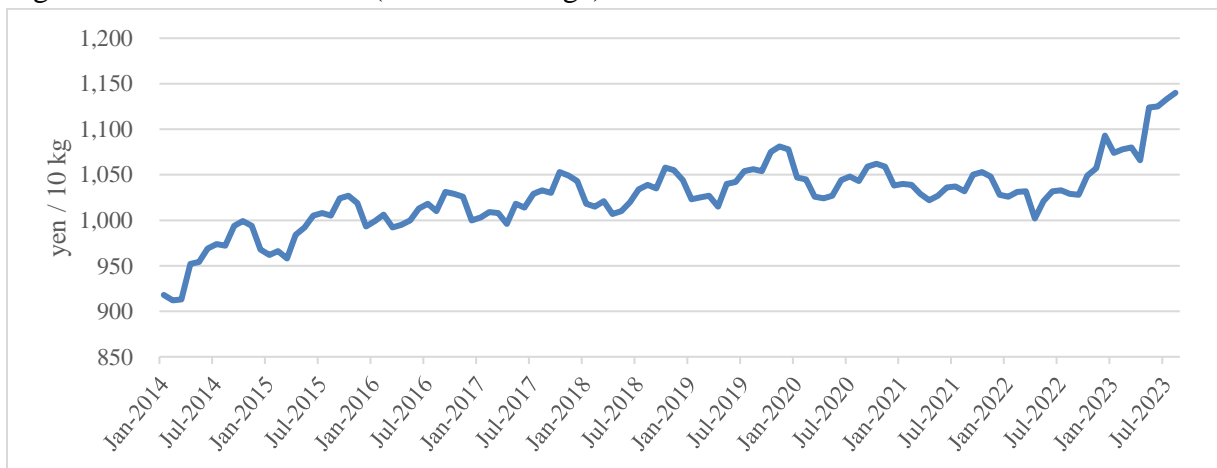
Figure 4: Retail Prices of Compound Feed



Source: MAFF

Wholesale milk prices in Japan differ depending on whether the milk is intended for drinking or to make other dairy products. These prices are negotiated annually between milk producers and processors. Ultimately, a farmer receives a pooled milk price which represents the price paid to producers based on the proportion of milk going to fresh consumption versus further processing, after factoring in government supports and fees. Given the general rise in production costs, industries have agreed to raise milk prices and pay farmers higher wholesale prices: the pooled milk price has risen since fall 2022 and by August 2023 the price was up 10 percent year on year (Figure 5). *Hokuren*, an agricultural cooperative in Hokkaido, agreed with dairy processors to raise milk prices for butter and fresh cream, and thus the pooled milk price will rise two percent.

Figure 5: Pooled Milk Price (national average)

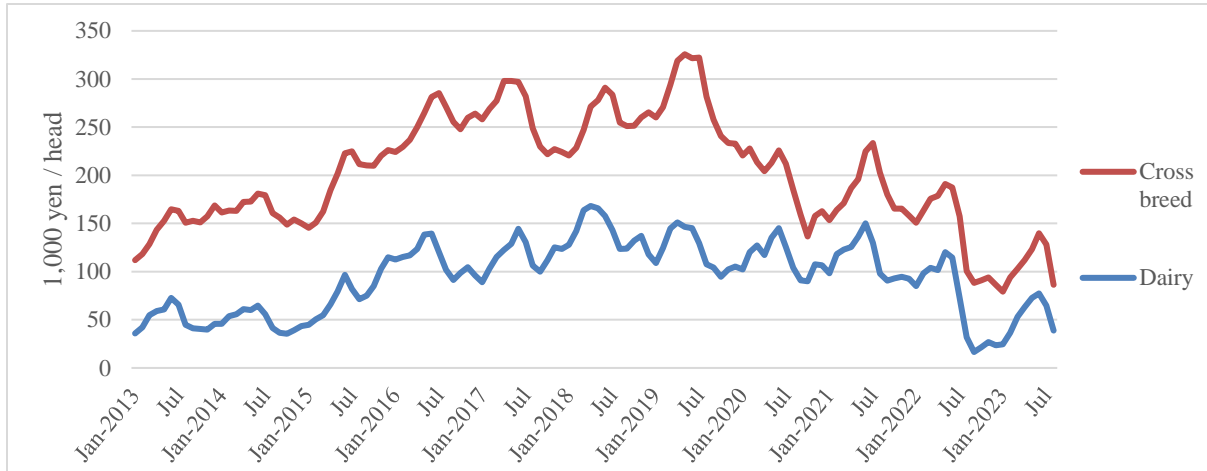


Note: Price includes payments in the Milk for Further Processing Supplemental Payment Program.

Source: MAFF

Byproduct incomes for dairy farms are down as well. Dairy farmers often raise beef calves instead of dairy calves when market conditions make that more profitable. Even so, market prices for both beef and dairy calves have dipped (Figure 6) on slackening demand since weak beef carcass prices leave cattle fattening farmers reluctant to take on more calves (for details, see [JA2023-0078](#)).

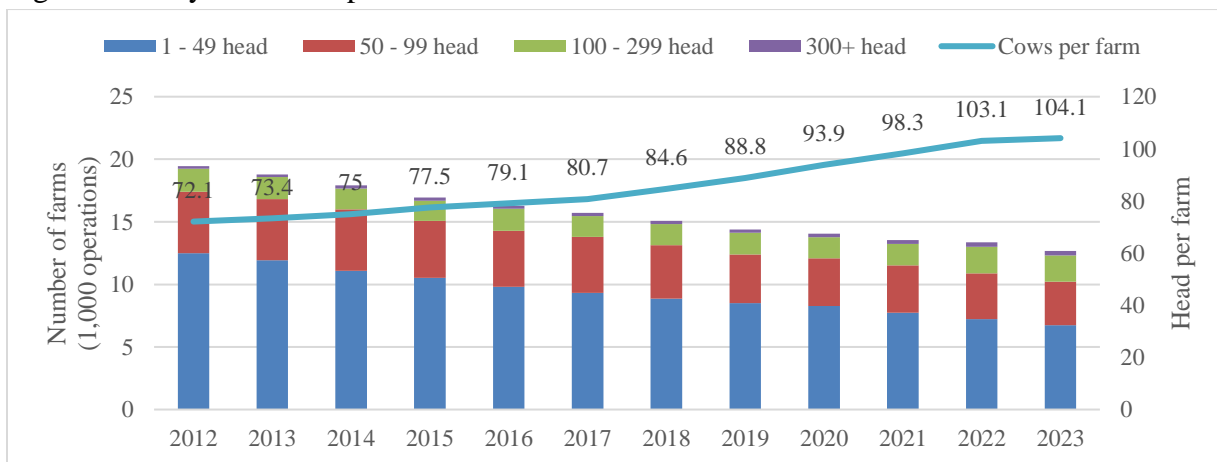
Figure 6: Calf Market Price (less than 2 months)



Source: ALIC

Industry sources say that unprofitable operations are driving some small and medium size dairy farmers to close their business or merge with other dairy operations to lower costs of production. MAFF statistics show that the number of farms rearing less than 100 head of dairy cows declined six percent in 2023, but the number of farms with 100 cows or more remained unchanged as the average dairy farm size expanded to 104 head in 2023 (Figure 7).

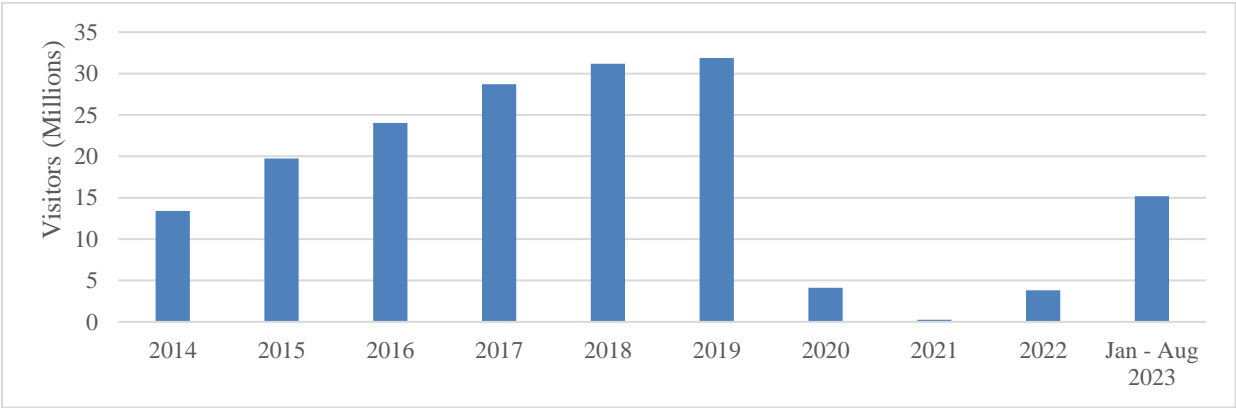
Figure 7: Dairy Farm in Japan



Source: MAFF

At the consumption level, ongoing inflation continues to depress fresh milk sales. According to a consumer survey by Ministry of Internal Affairs and Communications (MIAC), purchased volume of fresh milk in January through July in 2023 was down six percent (Supplemental table 1-b) while prices spiked eight percent. Despite that, a jump in the number of foreign visitors boosted demand for fresh milk in the HRI sector: by August the number had reached 47 percent of the total visitors in 2019 (Figure 8). To amplify that boost, Japan Dairy Association has run special campaigns to promote Japan’s dairy products explicitly to foreign visitors. In addition to that, Japan expanded exports of surplus fluid milk that accumulated during the demand shocks of the COVID-19 crisis. In 2022, exports totaled about 9,000 MT, up 66 percent from 2018. The main product exported was Ultra High Temperature (UHT) milk, for which the major destinations are Hong Kong, Taiwan, and Singapore. In 2023 and 2024, FAS/Tokyo expects the drop in retail demand will again be offset by growth in demand from tourism and exports. FAS/Tokyo updated 2022 imports in Table 1 based on the latest trade data.

Figure 8: Foreign Visitors to Japan



Source: Japan National Tourism Organization

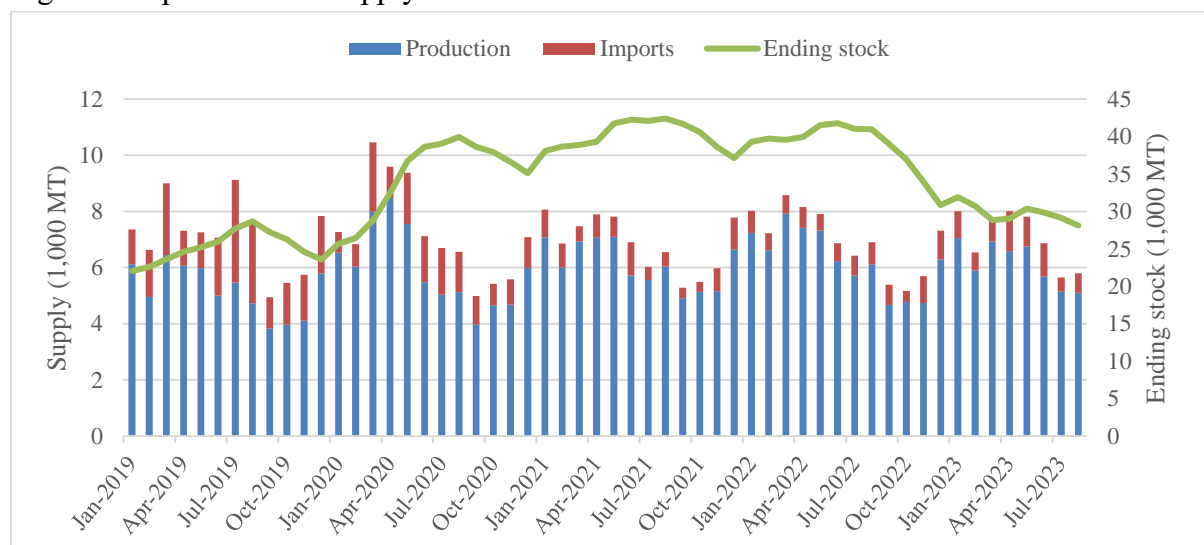
Butter

Table 2: Butter Production, Supply and Distribution

Dairy, Butter Market Year Begins Japan	2022		2023		2024	
	Jan 2022		Jan 2023		Jan 2024	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	37	37	37	31	0	26
Production (1000 MT)	75	75	77	70	0	75
Other Imports (1000 MT)	10	10	19	20	0	20
Total Imports (1000 MT)	10	10	19	20	0	20
Total Supply (1000 MT)	122	122	133	121	0	121
Other Exports (1000 MT)	0	0	0	0	0	0
Total Exports (1000 MT)	0	0	0	0	0	0
Domestic Consumption (1000 MT)	85	91	95	95	0	95
Total Use (1000 MT)	85	91	95	95	0	95
Ending Stocks (1000 MT)	37	31	38	26	0	26
Total Distribution (1000 MT)	122	122	133	121	0	121

For butter, FAS/Tokyo projects Japan's production in 2024 will increase year on year as the drop in demand for drinking milk forces suppliers to divert milk to butter production. For 2023, however, production is down due to the limited milk supply as explained in the fluid milk section in this report. The production of butter from January through August in 2023 dropped 10 percent year on year (Figure 9 and Supplemental Table 4).

Figure 9: Japan's Butter Supply



Source: ALIC

Demand for butter, especially in the food processing sectors, is driven partly by expanded production of confectionaries for souvenirs sought by tourists. Retail sales, by contrast, have slowed since dairy manufacturers raised the retail price in 2023. According to MIAC, by August prices in Tokyo were up 12 percent from 2022. Part of the retail consumption drop off is a shift to HRI consumption as consumers increasingly dine out in the post-covid resumption of normal social activities.

To meet expanding demand in 2023, Japan’s butter imports jumped 57 percent in the first 8 months year on year (Table 3). Industry sources reported that some dairy manufacturers are deferring sales to have more stock available in December, which is the most valuable marketing season with gift-wrapping and other value-added services helping juice margins. As a result, current supplies of butter have been spotty, giving consumers concern. In response, in September MAFF increased the tariff-rate quota for imports of butter in the current Japanese fiscal year (April 1 – March31) from 8,000 MT to 10,320 MT. Japan’s butter imports are done almost exclusively through ALIC’s tenders; in 2022, ALIC distributed 97 percent of Japan’s total imports. FAS/Tokyo projects greater butter imports continuing in 2024 even though domestic production is increasing as well.

Table 3: Japan’s Butter Imports

	Year			January - August		
	2021	2022	Change	2022	2023	Change
Total	11,935	10,035	-16%	6,621	10,362	57%
Comprehensive and Progressive Agreement for Trans-Pacific (CPTPP)						
New Zealand	8,249	6,602	-20%	4,359	7,031	61%
European Union (EU)	3,358	3,228	-4%	2,147	3,025	41%
France	1,911	2,101	10%	1,396	1,664	19%
The Netherlands	927	409	-56%	263	830	216%
Belgium	214	316	48%	279	298	7%
Germany	170	345	103%	177	225	27%
Other	328	205	-38%	115	306	166%

Source: Trade Data Monitor (TDM)

Cheese

Table 4: Cheese Production, Supply and Distribution

Dairy, Cheese Market Year Begins Japan	2022		2023		2024	
	Jan 2022		Jan 2023		Jan 2024	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	15	15	10	13	0	9
Production (1000 MT)	48	50	50	47	0	50
Other Imports (1000 MT)	274	274	255	265	0	270
Total Imports (1000 MT)	274	274	255	265	0	270
Total Supply (1000 MT)	337	339	315	325	0	329
Other Exports (1000 MT)	1	1	1	1	0	0
Total Exports (1000 MT)	1	1	1	1	0	0
Human Domestic Consumption (1000 MT)	326	325	305	315	0	320
Other Use, Losses (1000 MT)	0	0	0	0	0	0
Total Domestic Consumption (1000 MT)	326	325	305	315	0	320
Total Use (1000 MT)	327	326	306	316	0	320
Ending Stocks (1000 MT)	10	13	9	9	0	9
Total Distribution (1000 MT) (1000 MT)	337	339	315	325	0	329

FAS/Tokyo projects Japan's cheese production in 2024 will rise from 2023 levels to meet recovering demand after 2023's inflation-induced drop, but, given tight domestic production capacity, Japan will need to increase imports to meet the growth in demand.

According to MAFF, Japan's cheese production in the first 8 months of 2023 dropped by 7 percent year on year after years of growth enabled by MAFF's supports. Current weak milk supply is affecting cheese production as well as other dairy products. Inflation has hit retail consumption of cheese particularly hard: according to MIAC, in August retail prices were up 28% year on year for domestic cheese, and 14% for imported cheese. Nevertheless, cheese demand in foodservice industries is growing, especially for pizzas. Sales of delivery pizza spiked during the COVID19 pandemic and are sustained by a new segment of consumers who now enjoy pizza at social gatherings. This boost from the HRI sector leads FAS/Tokyo to project cheese consumption in 2024 will be up year on year.

Import prices of cheese remain high owing to the weak valuation of the Japanese yen. Cost, Insurance and Freight (CIF) prices rose 11% in 2022 and 21% in the first 8 months of 2023. Those price rises in turn drove Japan's cheese imports down by eight percent in the first 8 months year on year, which comes on the heels of a previous drop of imports of five percent in 2022 (Table 5). The shrinking of the price gap between domestic and imported cheese may drive some Japanese companies to begin favoring domestic cheese.

Table 5: Japan's Cheese Imports

	Year			Japan - August		
	2021	2022	Change	2022	2023	Change
Total	287,724	274,108	-5%	183,804	168,232	-8%
CPTPP	121,431	119,262	-2%	83,443	78,299	-6%
Australia	61,236	58,950	-4%	40,365	36,408	-10%
New Zealand	59,947	60,038	0%	42,944	41,747	-3%
EU	124,780	109,689	-12%	71,245	61,434	-14%
The Netherlands	34,021	28,612	-16%	18,534	17,471	-6%
Germany	25,532	20,247	-21%	12,085	10,259	-15%
Denmark	18,171	16,696	-8%	11,342	9,354	-18%
US	38,740	41,774	8%	27,305	26,535	-3%
Other	2,773	3,383	22%	1,811	1,964	8%

Source: TDM

Non-Fat Dry Milk (NFDM)

Table 6: NFDM Production, Supply and Distribution

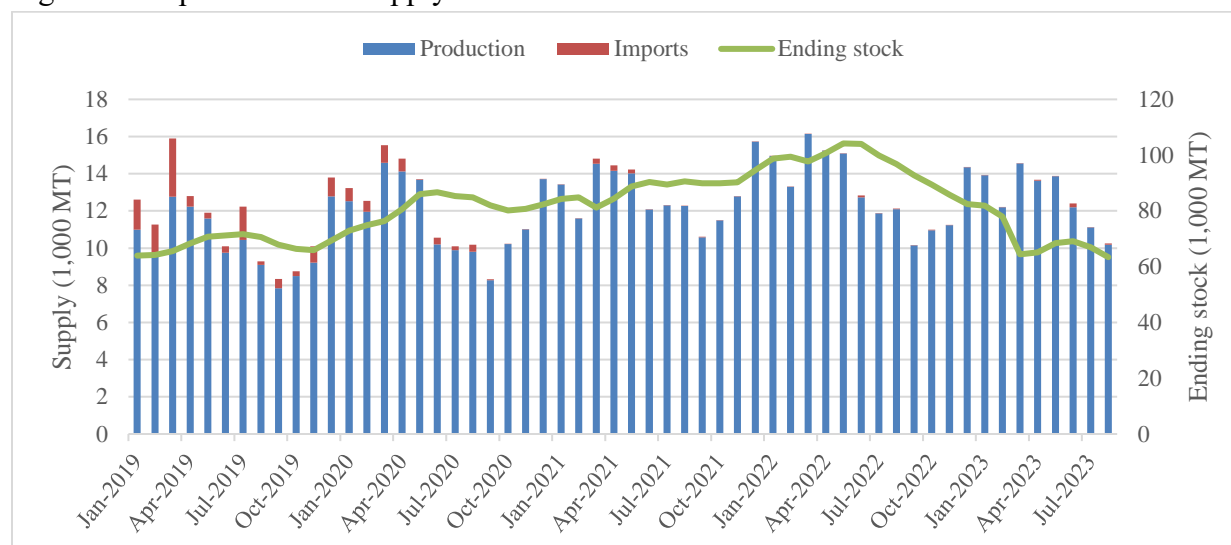
Dairy, Milk, Nonfat Dry Market Year Begins Japan	2022		2023		2024	
	Jan 2022		Jan 2023		Jan 2024	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	86	86	93	82	0	67
Production (1000 MT)	160	158	160	150	0	158
Other Imports (1000 MT)	20	20	10	10	0	10
Total Imports (1000 MT)	20	20	10	10	0	10
Total Supply (1000 MT)	266	264	263	242	0	235
Other Exports (1000 MT)	11	11	5	10	0	10
Total Exports (1000 MT)	11	11	5	10	0	10
Human Dom. Consumption (1000 MT)	142	151	135	155	0	155
Other Use, Losses (1000 MT)	20	20	30	10	0	10
Total Dom. Consumption (1000 MT)	162	171	165	165	0	165
Total Use (1000 MT)	173	182	170	175	0	175
Ending Stocks (1000 MT)	93	82	93	67	0	60
Total Distribution (1000 MT) (1000 MT)	266	264	263	242	0	235

After a drop in 2023 production, FAS/Tokyo projects non-fat dry milk (NFDM) production in Japan will increase minimally in 2024 year on year as butter production expands, but since stocks of NFDM are already high, producers will need to develop new markets, including for exports.

After two percent growth in 2022, Japan produced nine percent less NFDM in the first eight months of 2023, mirroring the drop in butter production (Supplemental Table 4). FAS/Tokyo expects that downturn to hold true through the end of 2023.

Weak demand during the COVID-19 outbreak resulted in high stock levels of NFDM for the Japanese dairy industry (Figure 10). Some companies have started substituting domestic NFDM for imported NFDM. MAFF encouraged this trend by holding the import TRQ for NFDM at its minimum level in JFY2023 (for details of TRQ run by ALIC, see [JA2023-0032](#), and for TRQs run by MAFF, see [JA2023-0035](#)). At the same time, Japan's exports of NFDM spiked to about 11,000 MT in 2022 as high global prices and the weak yen created favorable terms for Japanese exports. As of August, monthly ending stocks were less than in 2019 pre-COVID levels.

Figure 10: Japan's NFDM Supply



Source: ALIC

Table 7: Japan's NFDM Imports

	Year			January - August		
	2021	2022	Change	2022	2023	Change
Total	21,789	20,308	-7%	13,593	5,215	-62%
CPTPP	10,479	13,578	30%	7,962	4,017	-50%
New Zealand	6,196	9,737	57%	5,657	2,911	-49%
Australia	3,981	3,840	-4%	2,305	1,107	-52%
EU	4,900	2,827	-42%	2,196	449	-80%
France	3,863	2,152	-44%	1,757	87	-95%
The Netherlands	690	20	-97%	12	240	1900%
US	6,202	3,269	-47%	2,964	740	-75%
Other	208	634	205%	471	9	-98%

Source: TDM

Supplemental Tables

Supplemental 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
2019	32,164	15,174	795	13,157	1,123	6,044
2020	31,456	15,895	626	14,000	1,399	6,788
2021	31,353	14,959	707	13,815	1,362	6,728
2022	32,497	15,001	729	13,377	1,240	6,544
% Chg.	4%	0%	3%	-3%	-9%	-3%
Jan/Jul, 2022	18,976	8,617	412	7,808	721	3,688
Jan/Jul, 2023	19,627	8,746	485	7,755	722	3,917
% Chg.	3%	1%	18%	-1%	0%	6%

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

(cont.)

	Confectionary	Coffee Beverage	Lactic Acid Bacterial Drinks	Milk Beverage	Margarine	Ice Cream and Sherbet*
2019	87,469	5,001	3,992	2,363	672	9,701
2020	85,534	4,798	4,208	2,423	678	10,113
2021	88,195	4,923	4,410	2,576	627	10,148
2022	94,373	4,946	5,153	2,522	627	10,847
% Chg.	7%	0%	17%	-2%	0%	7%
Jan/Jul, 2022	52,944	2,742	2,837	1,397	362	6,132
Jan/Jul, 2023	56,079	2,988	3,341	1,571	366	6,406
% Chg.	6%	9%	18%	12%	1%	4%

*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)
2019	76	330	3,548	532	892	46,011
2020	78	N/A	4,051	650	911	45,857
2021	74	N/A	4,074	639	847	44,345
2022	73	N/A	3,799	597	765	43,571
% Chg.	-5%	N/A	1%	-2%	-7%	-3%
Jan/Jul, 2022	43	N/A	2,235	346	457	25,787
Jan/Jul, 2023	40	N/A	1,986	334	420	25,076

% Chg.	-6%	N/A	-11%	-3%	-8%	-3%
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Source: Ministry of Internal Affairs and Communications (Statistics Bureau)

Supplemental Table 2: Japanese Fluid Milk Production

Unit: 1,000 MT

	2018	2019	2020	2021	2022	% Chg.	2022	2023	% Chg.
	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	2022/ 2021	Jan/ Aug	Jan/ Aug	
National Fluid Milk Production	7,289	7,314	7,438	7,592	7,617	2%	5,171	4,938	-5%
Hokkaido	3,965	4,048	4,154	4,266	4,309	3%	2,921	2,795	-4%
Other Prefectures	3,319	3,265	3,285	3,326	3,308	1%	2,250	2,143	-5%
Hokkaido Share	54%	55%	56%	56%	57%	N/A	56%	56%	N/A
Other Prefectures Share	46%	45%	44%	44%	43%	N/A	44%	44%	N/A
Fluid Milk Utilizations	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	2022/ /2021	Jan/ Aug	Jan/A ug	% Chg.
For Drinking	3,999	4,000	4,020	4,001	3,977	-1%	2,654	2,557	-4%
For Processing	3,243	3,270	3,374	3,543	3,594	1%	2,487	2,350	-6%
Others	46	44	45	48	47	-3%	31	31	0%

Source: MAFF

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

Unit: 1,000 Kilo Liter

	2018	2019	2020	2021	2022	% Chg.	2022	2023	% Chg.
	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	2022/ 2021	Jan/ Aug	Jan/ Aug	
Total Drinking Milk Products	3,556	3,572	3,574	3,576	3,564	0%	2,366	2,295	-3%
Regular Milk	3,142	3,160	3,180	3,194	3,178	0%	2,111	2,042	-3%
Processed Milk	414	411	394	382	386	1%	255	253	-1%
Milk Beverages	1,129	1,128	1,108	1,059	1,077	2%	698	715	2%
Fermented Milk	1,068	1,030	1,060	1,034	1,063	3%	662	674	2%
Lactic Acid Bacteria Drinks	126	116	117	113	106	-6%	77	68	12%

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: MAFF

Supplemental Table 4: Japanese Production of Processed Milk Products

Unit: MT

	2018	2019	2020	2021	2022	Chg.	2022	2023	Chg.
	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	Jan/ Dec	2022/ 2021	Jan/ Aug	Jan/ Aug	
Butter	59,589	62,441	71,520	73,317	75,046	2%	54,571	49,142	-10%
Cream	116,246	116,298	110,124	119,711	120,104	0%	78,158	76,125	-3%
Whole Milk Powder	9,795	9,994	9,067	8,957	10,022	12%	7,340	7,278	-1%
Prepared Milk Powder	27,773	27,336	28,232	26,157	28,271	8%	18,813	19,878	6%
Skim Milk Powder (NFDM)	120,005	124,901	139,952	154,890	158,100	2%	111,390	101,632	-9%
Ice Cream (Unit: kilo liter)	148,317	146,909	131,543	137,382	141,634	3%	96,072	88,939	-7%

Source: MAFF

Attachments:

No Attachments