

6. Current situation of consumption

■Types of milk

Currently, there are six types of drinking milk sold in Japan, gyunyu = cow's milk / whole milk (component not adjusted), low fat milk, fat free milk, milk with adjusted component, processed milk, milk drink. These labelling and component standards are regulated by " Ministerial Ordinance concerning the ingredient standards for milk and dairy products " under the Food Hygiene Law, and in regards to the labeling the detail is set out by the dairy industry's voluntary regulation "Code of Fair Competition Concerning Labeling of Drinking Milk ".

Whole milk

It is 100% pure cow's milk which is just sterilised with heat. It is prohibited to mix anything but raw milk, and milk fat to be over 3%, and non-fat milk solids (components excluding milk fat and liquid) to be over 8%. Half moon shape notch can be found on top of many cartons for visually impaired people to recognise milk easily.

Low fat milk

It is milk with milk fat excluded. Milk fat is reduced to 0.5-1.5%. Non-fat milk solids level is the same as whole milk at over 8%. Only raw milk is used with no other ingredients.

Fat free milk

It is milk with milk fat to be reduced under 0.5%. Non-fat milk solids level is the same at over 8%, and only raw milk is used without any other ingredients.

Components adjusted milk

Specific components only are excluded from raw milk. Again, only raw milk is used without any other ingredients. For example, milk adjusted with milk fat at 1.5-3.0% and non-fat milk solids at over 8% is classified in this category.

Processed milk

Raw milk mixed with butter, cream and/or skimmed milk powder. Non-fat milk solids is at over 8%.

Milk drink

Dairy products such as raw milk, butter, cream and skimmed milk powder mixed with non-dairy products normally not found in milk such as coffee extracts, fruit juice, minerals like iron, calcium and vitamins.

Fig 7

Fig. 7: Type of Milk

Standards of Milk products

Type	Standard of element		Hygiene Standards	
	Milk Fat	Non-Fat Milk Solids	Bacteria Count (in 1ml)	Escherichia coli count
Milk	3.0% over	8.0%over	50,000 less	Negative
Milk with adjusted component				
Low Fat Milk	0.5%over1.5%under			
Fat Free Milk	0.5%under			
Processed Milk				
Milk Drink	Milk Solids 3% or more(Under Fair Competition Codes)		30,000 less	Negative

■ Amount of milk and other dairy products consumption

Milk and other dairy products consumption in Japan was about 38kg of raw milk weight per capita per year in 1965, but in 2010 it was about 86kg, increased by almost 2.3 times. Total consumption of milk and other dairy products is about 11.63 million tonnes, which is bigger than rice consumption (9.02million tonnes) and is the second most demanded products next to vegetable in the country.

However, consumption per person is still low compared to the Western countries..

Consumption of drinking milk is about 32.7kg per person per year, and this is only about one third of UK, Denmark and Australia, and less than half of USA.

As for other main dairy products, consumption of butter is 0.6kg per person per year, which is 1/5 of UK, and 1/12 of France who consumes the most. Cheese is consumed about 1/5 of UK and 1/12 of France. For the products which reflect the westernised diets in the post war Japan, consumption is said to be rather small.

Japanese method of consumption is mainly as milk to drink, butter on bread, cheese as accompaniment to alcohol or on pizza. Unlike the Western countries, dairy products are not really used in cooking, therefore potential needs for milk and other dairy products could be pretty high. **Table13, 14**

Table 13: Change of milk and other dairy products consumption (amount destined to consumption) per person per year

Unit : kg ,%

Year	Raw Milk						Dairy Products		
	Milk and other dairy products						SMP	Butter	Cheese
	Liquid drinking		Other dairy products						
	Rate of change from previous year		Rate of change from previous year		Rate of change from previous year				
1965	37.5	5.9	18.4	8.2	17.7	2.9	0.8	0.2	0.3
1970	50.1	5.9	25.3	4.1	23.7	8.7	0.8	0.4	0.4
1975	53.6	3.5	28.1	4.5	24.8	2.9	1.0	0.5	0.5
1980	65.3	0.9	33.9	1.8	31.0	0.6	1.2	0.7	0.6
1985	70.6	▲ 1.0	35.2	▲ 1.1	35.0	▲ 0.8	1.5	0.8	0.7
1986	71.3	1.0	35.3	0.3	35.5	1.4	1.5	0.9	0.7
1987	75.8	6.3	37.2	5.4	38.1	7.3	1.5	1.0	0.7
1988	81.3	7.3	38.9	4.6	42.0	10.2	1.6	1.2	0.7
1989	80.6	▲ 0.9	39.8	23.0	40.5	▲ 3.6	1.5	1.1	0.7
1990	83.2	3.2	40.8	2.5	42.1	4.0	1.7	1.1	0.7
1991	84.8	1.9	40.8	0.0	43.6	3.6	1.7	1.2	0.7
1992	83.5	▲ 1.5	40.6	▲ 0.5	42.6	▲ 2.3	1.7	1.3	0.7
1993	83.5	0.0	39.9	▲ 1.7	43.3	1.6	1.7	1.4	0.7
1994	89.8	7.5	41.6	4.3	47.9	10.6	1.8	1.4	0.7
1995	91.2	1.6	40.6	▲ 2.4	50.4	5.2	1.8	1.5	0.7
1996	93.3	2.3	40.8	0.5	52.1	3.4	1.8	1.6	0.7
1997	93.2	▲ 0.1	40.2	▲ 1.5	52.8	1.3	1.8	1.6	0.7
1998	92.4	▲ 0.9	39.3	▲ 2.2	52.8	0.0	1.8	1.7	0.7
1999	93.0	0.6	38.6	▲ 1.8	54.3	2.8	1.7	1.8	0.7
2000	94.2	1.3	39.0	1.0	55.0	1.3	1.5	1.9	0.7
2001	93.0	▲ 1.3	38.1	▲ 2.3	54.7	▲ 0.5	1.4	1.9	0.7
2002	92.9	▲ 0.1	39.2	2.9	53.5	▲ 2.2	1.4	1.8	0.7
2003	93.0	0.1	38.5	▲ 1.8	54.4	1.7	1.4	1.9	0.7
2004	93.9	1.0	38.0	▲ 1.3	55.7	2.4	1.4	2.0	0.7
2005	91.8	▲ 2.2	36.7	▲ 3.4	54.9	▲ 1.4	1.5	1.9	0.7
2006	92.2	0.4	35.8	▲ 2.5	56.3	2.6	1.4	2.0	0.7
2007	93.3	1.2	34.9	▲ 2.5	58.1	3.2	1.5	2.1	0.7
2008	86.3	▲ 7.5	34.2	▲ 2.0	51.8	▲ 10.8	1.2	1.7	0.6
2009	84.8	▲ 1.7	32.7	▲ 4.4	51.9	0.2	1.2	1.9	0.6
2010	86.4	1.9	31.8	▲ 2.8	54.5	5.0	1.3	1.9	0.7

Resources: Food Balance Sheet by Ministry of Agriculture, Forestry and Fisheries

Table 14: International Comparison of Dairy Farming (2010)

Classification	Unit	Netherlands	France	Germany	Denmark	UK	Canada	USA	Australia	NZ	Japan	Hokkaido	
Number of parous cows	1000	1,479	3,729	4,182	573	1,847	987	9,117	1,600	4,397	933	480	
Number of Farms	1000	20	82	90	4	16	13	63	7	12	21	8	
Number of parous cows per farm		75	45	46	133	117	76	146	230	386	44	64	
Raw Milk Production Cost	1000t	11,941	24,000	29,610	4,965	13,935	8,434	86,769	9,374	17,859	7,631	3,897	
Average production yield per cow	kg	7,440	6,657	7,113	8,589	7,501	9,768	9,517	5,871	3,944	8,046	8,045	
Volume of Dairy	cheese	1000t	753	1,756	2,169	292	335	349	4,742	333	282	123	18
Products	butter	1000t	181	409	449	33	119	83	709	132	478	82	69
	SMP	1000t	64	320	261	27	66	72	824	244	363	170	144
Consumption per person	Drinking milk	kg	59.6	58.5	53.0	91.4	107.0	80.3	79.9	105.0	79.7	32.7	-
	Cheese	kg	21.2	25.6	22.8	16.2	11.2	12.7	15.0	11.9	6.1	1.9	-
	Butter	kg	3.4	7.5	6.0	1.8	3.2	2.6	2.2	3.8	3.8	0.6	-
Farm-gate price of raw milk	JPY/kg	44.4	38.4	39.6	44.3	36.0	60.4	34.1	30.5	43.3	88.2	77.2	

Resources : IDF 『World Dairy Situation』、AMI 『Marktbilanz Milch 2011』、CDC 『ANNUAL REPORT』、USDA 『Milk Production』、『Farms, Land in Farms, and Livestock Operations』 Dairy Australia 『Australian Dairy Industry In Focus 2011』、LIC 『Dairy Statistic 2010/2011』、Livestock Statistics, Milk Products Statistics, Statistics of Agricultural Products prices by Ministry of Agriculture, Forestry and Fisheries.

Note: Figures for Hokkaido Japan is of 2010. Currency exchange rate by Mitsubishi Tokyo UFJ Bank (TTS Market) is used For Raw Milk production and Average production yield per cow, figures were calculated using 1 pound=0.45kg for USA, 1 litre=1.03KG for Australia and NZ.

■ Trends of milk retail prices

Milk retail prices have a tendency of declining over the years. Looking at the prices of 1 litre carton of milk sold at supermarkets, milk sold at under 160 yen was only 19.5% in 2001, but in 2007 the ratio went up to 56.6%.

However, since 2006, following increased demands the prices of crops in the international market has been kept very high. This has led to the increase of the raw milk prices for drinking milk use for two years, and relatively the retail prices were raised, too. As a result, in 2008 milk sold under 160 yen was decreased to 29.2%, and also in 2009 down to 10.5%.

For price setting at supermarkets for 1 litre container of milk, it is average retailed at 213.7 yen. Average purchased price is 177.9 yen, so it works out the profit level at 16.7%. **Table15, 16**

Table 15: Change of distribution ratio of milk by price range (percentage of amount of milk in 1 liter carton sole at supermarkets by price range)

Unit : %

data price (yen)	2001 September	2002 September	2003 September	2004 September	2005 September	2006 September	2007 September	2008 September	2009 September
~150	8.0	8.6	15.2	19.4	29.1	24.4	36.9	8.4	-
151~160 (under160yen)	11.5 (19.5)	9.4 (18.0)	19.6 (34.8)	18.9 (38.3)	13.7 (42.8)	19.3 (43.7)	19.7 (56.6)	20.8 (29.2)	10.5 (10.5)
161~170	14.4	15.7	16.1	13.3	17.3	13.5	9.0	25.8	30.5
171~180 (under180yen)	20.6 (54.5)	12.2 (45.9)	14.8 (65.7)	17.2 (68.8)	9.5 (69.6)	9.3 (66.5)	10.7 (76.3)	10.9 (65.9)	4.7 (45.7)
181~190	13.8	16.5	7.5	9.4	8.5	7.3	5.8	9.0	15.0
191~200 (under200yen)	21.9 (90.2)	16.5 (78.9)	14.5 (87.7)	6.4 (84.6)	8.2 (86.3)	12.2 (86.0)	6.0 (88.1)	5.1 (80.0)	20.0 (80.7)
201~210	2.1	7.7	1.3	4.4	5.3	3.7	5.3	9.7	2.2
211~220 (under220yen)	2.9 (95.2)	1.9 (88.5)	2.2 (91.2)	2.0 (91.0)	3.2 (94.8)	3.2 (92.9)	2.7 (96.1)	4.0 (93.7)	4.8 (87.7)
221~230	1.5	3.2	3.3	4.0	2.7	3.6	1.2	2.9	3.0
231~240 (under240yen)	1.4 (98.1)	5.6 (97.3)	3.3 (97.8)	1.3 (96.3)	1.5 (99.0)	1.3 (97.8)	1.5 (98.8)	1.4 (98.0)	5.5 (96.2)
(over240yen)	(2.0)	(2.8)	(2.1)	(3.6)	(0.9)	(2.3)	(1.2)	(2.0)	(3.8)
241~250	0.8	1.3	1.0	3.2	0.3	1.5	0.5	1.0	1.9
251~	1.2	1.5	1.1	0.4	0.6	0.8	0.7	1.0	1.9
total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Resources: Research on milk price trends by the Food Marketing Research and Information Center

Note1 : Total may not add up equal due to the figures being rounded up.

Note 2: Exclusive of Consumption Tax

Note 3: Data up to September 2009 without any further data available following the end of the research on milk price trends.

Table 16: Gross profit of milk (1000ml) at supermarkets by price range (2009)

Milk 1,000ml Carton				
price range (yen)	cost (yen)	gross profit (yen)	retail price (yen)	rate of gross profit (%)
average	177.9	35.8	213.7	16.7
~150				
151~160	149.3	9.8	159.0	6.1
161~170	161.1	6.5	167.6	3.9
171~180	155.7	21.3	177.0	12.0
181~190	162.4	26.0	188.4	13.8
191~200	167.4	30.7	198.1	15.5
201~210	173.1	34.5	207.6	16.6
211~220	179.5	38.0	217.5	17.5
221~230	183.1	44.3	227.4	19.5
231~240	192.1	45.4	237.5	19.1
241~250	196.0	51.8	247.9	20.9
251~	214.0	57.9	271.9	21.3

Resources: Research on milk price trends in 2009 by the Food Marketing Research and Information Center