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Oilseeds and Products Annual

2011 Update (soybean, rapeseed, soybean meal, rapeseed meal, fish meal, soybean oil, rapeseed oil and sunflower seed oil)

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Report Highlights:

Japan's total soybean imports in CY2010 were approximately 3.5 mmt, up 1.9 percent from 3.4 mmt in CY2009, of which the United States supplied 2.5 mmt. Demand for temperate oil in CY2010 increased 0.8 percent from CY2009 while demand for tropical oil increased 8.9 percent over the same period. Some soybean crushing mills were damaged by the earthquake and tsunami on March 11, 2011, but most are back to normal operations. Japan will continue to be a stable market for the U. S. soybean industry.

Commodities:

Oil, Soybean

Oilseed, Soybean

Oilseed, Rapeseed

Author Defined:**Oilseed Production**

Soybeans, like rice, have been a staple of Japanese food culture since ancient times. Soybeans, soy oil, and soy meal provide an important source of protein for the Japanese diet and recent research providing evidence of the health benefits of soy has further reinforced appreciation for soy foods with consumers. The Japanese soy industry generally requires product of superior quality and with high protein content. Japanese manufactures utilize a variety of different soy species that are intended for a multiple end uses. Tofu (soybean curd including that which is deep fried), is the most common end use for soy in Japan, accounting for 49% of total food soybean use.

Although there is a long history of soy production in Japan, it currently comprises a small part of total agriculture production. As such, domestically produced soy is not sufficient to meet total Japanese demand for food use (including soy sauce), accounting for just 25 percent of the total in 2010. Prospects for increased production through improved yields or other means remains limited by various factors including the lengthy rainy season. Soybean yields fluctuate from year to year, and soybean prices tend to be quite volatile. However, domestic soybean production has consistently contributed between 3-5 percent of total soybean supplies (for all uses) for the past thirty years. During that time the lowest level reached was 2 percent in 1995 and the highest was 6 percent in 2008 and 2009. Production in 2010 was 222,800 mt, down 3 percent from the previous year while the overall planted area decreased by 5 percent to 137,700 ha as more resources were allocated to planting newer varieties of rice for feed and milling.

In 2010 yields increased by 1.62 mt per hectare following a strong crop in the Hokkaido, Tokai region. Crop yields in Hokkaido were 57,100 mt, an increase of 18 percent from 2009, and in the Tokai region, yields increased to 17,800 mt, up by 80 percent from 2009. Even with higher yields, total yield still only reached 82 percent of MAFF's target for 2015; equivalent to 54 percent of total U.S. yield. Future soybean production is expected to decrease further as many aged members of the agriculture workforce move to retirement the soybean industry will face a shortage of labor since many of the younger generation is not willing to fill their place and overall declines in population will make it even harder to do so.

Table 1. Planted Area, Production and Yield of Soybeans in Japan

CY	Planted Area (Hectares)	Production (mt)	Yield (mt per hectare)	Yield – U.S.* (mt per hectare)
2003	151,900	232,200	1.53	2.28
2004	136,800	163,200	1.19	2.86
2005	134,000	225,000	1.68	2.90
2006	142,100	229,200	1.61	2.89
2007	138,300	226,700	1.64	2.78
2008	147,100	261,700	1.78	2.67
2009	145,400	229,900	1.58	2.96
2010	137,700	222,800	1.62	2.98

Source: MAFF (approximate figures for CY2009) and *USDA-National Agricultural Statistics Service Crop Production Report (October 8, 2010)

Farmland dedicated to growing soybeans has often been converted from rice paddies, which comprised 86 percent of total land use in 2010. Japan's rice production has exceeded demand for many years and MAFF has encouraged farmers to switch from rice to soybeans and other crops. MAFF has established nonbinding targets for soybean production for 2015 of 140,000 ha in total planted area, 270 thousand mt in total production, and 1.97 mt in yield per hectare.

Soybean production reached 270 thousand mt in 2001 and 2002, which is the targeted volume for the basic plan through 2015. Soybean yields have grown at a sluggish pace and production varies quite widely by region. A number of challenges make it difficult to achieve increases in the yield and quality of soybean production in Japan. For example, soybean production is often hampered by heavy rain and typhoons during the sowing and harvesting seasons. The ratio of lower quality soybeans, "3rd class" plus "specific end-use class", has been relatively high for the last eight years ranging from 35 percent to 61 percent of total production. Improved and more efficient production techniques could contribute to increased soybean production. Biotech soybeans are one example of new technology that could increase yields but Japan has not produced GM soybeans commercially despite having approved eight biotech soybean varieties.

Rapeseed is a low yield crop and requires vast amounts of land to make commercial production feasible. Total profit from rapeseed cultivation in Japan is just one tenth of rice. In 1957, the total amount of land dedicated to rapeseed was 260 thousand ha. During Japan's rapid industrial growth in the 1960-1980's, there was a major shift in labor from the agricultural sector to commercial goods; affecting rapeseed production significantly. The liberalization of soybean imports as an alternative oilseed in 1961 further accelerated the decrease in production. Due to these factors, the amount of area dedicated to rapeseed production hit a low of 300 ha by 1999 and, though slightly higher in 2010, still amounts to just 1,690 ha. Total rapeseed production in 2010 was 1,570 mt, meeting only 0.07 percent of Japan's annual consumption demand.

MAFF has announced targets for domestic agricultural production through 2020. MAFF hopes to see production levels reach 40 – 50 percent of total demand. The targeted volume for soybeans is 600 thousand mt, almost triple 2010 production of 223 thousand mt. To achieve this goal MAFF called for the following measures:

- Converting rice paddies to large scale dry fields (two hectares or more).
- Breeding and cultivation of high yield varieties.
- Improvement of cultivation techniques for soybeans.
- Product development emphasizing the characteristics of domestic varieties to create new demand.

MAFF's target volume for rapeseed production in 2020 is 10 thousand mt, 10 times the current level, and would be achieved through the use of high yield varieties and better integration between crushers and farmers. This is an ambitious target that even if realized would result in a gain of just 0.5 percent above current production levels.

Oilseed Consumption:

Soybeans and rapeseed are the primary oilseeds available in Japan. Soybeans are used as raw materials in food oil production and as soy meal in feeds. Recently, consumption of soybean products has been decreasing due to poor economic conditions. Higher prices for raw materials have, in turn, led to higher prices for processed foods, negatively impacting overall sales.

Japan's oil production is 2.5 mmt a year with all of demand currently met by imported soybeans. The demand for oil production has increased dramatically from the 1960's as the Japanese diet shifted more toward Western style cuisines that depend on heavier oil use. Since 2004 soybean oil demand has continued to decline as prices have escalated internationally.

Domestic soybeans have generally not been used for oil production due to much higher prices than imports and an insufficient amount of supplies having the characteristics desired.

Soybeans for food use comprise about 25 percent (1 mmt) of total consumption. However, the volume used in foods reached a low of less than 1 mmt for the first time in 2009, and the trend continued in 2010. Food soybeans, which are not genetically modified, are used for tofu (soybean curd), boiled soybean, natto (fermented soybeans) and miso (fermented soybean paste), and some whole bean soy sauce (*marudaizu shoyu*).

Table 2. Demand and supply of soybeans in Japan

CY	Demand (1,000 mt)				Supply (1,000 mt)					
	Total	Oil	Food	Feed	Import Total	U.S.	Brazil	Canada	China	Domestic
2006	4,149	2,978	1,046	125	4,042	3,225	378	282	156	229
2007	4,226	3,044	1,045	125	4,161	3,325	367	309	137	227
2008	3,953	2,802	1,037	114	3,711	2,729	568	325	86	262
2009	3,593	2,485	993	115	3,390	2,412	570	353	51	230
2010	3,586*	2,473	998*	110**	3,456	2,467	568	371	48	223

Source: MAFF ; *:MAFF estimate; **:POST estimate

All imported rapeseed is used for oil. Rapeseed meal production is a byproduct that is used in feed and fertilizer production. In CY2010, 2.3 mmt of rapeseed was consumed in Japan, up by 6 percent from CY2009. A healthy image for rapeseed oil continues to sustain stable demand.

Table 3. Demand and supply of rapeseeds in Japan (1,000 mt)

CY	Demand (all for oil)	Supply			
		Total	Canada	Australia	Domestic
2005	2,253	2,295	1,867	425	1
2006	2,272	2,274	1,941	333	1
2007	2,175	2,134	1,983	150	1
2008	2,237	2,313	2,209	103	0
2009	2,164	2,072	1,957	115	1
2010	2,296	2,344	2,145	199	2

Source: MAFF

Trade

Japan's soybean imports in CY2010 were approximately 3.5 mmt, up 1.9 percent from 3.4 mmt in CY2009. The value of imports also increased to \$1,818 million in CY2010, up 4 percent from \$1,744 million in CY2009. The reason for the increase was a shortage of supplies due to decreased soybean imports last year. In 2010, imports decreased by 14 percent to 568 thousand mt.

Soybean prices reached a record high in July 2008 on the Chicago futures market. Although the price of other grains experiencing price surges such as wheat and corn eventually returned to previous levels, oilseed prices including that of soybeans and rapeseeds has remained at a relatively high level. The industry has not been able to adjust soybean oil prices to a more profitable level during the current economic downturn. Rapeseed oil products have been in a similar situation. However, earnings performance and demand for rapeseeds has been better than soybeans and the production of rapeseed oil has been stable.

The United States supplied 2.5 mmt of soybeans to Japan in CY2010, up 2 percent from 2.4 mmt in CY2009, which is 71 percent of import market share. Other major suppliers include Brazil, Canada and China. Canada and China supply non-biotech soybeans for food use. The CIF import price of soybeans in CY2010 increased to \$528/mt from \$514/mt in CY2009, still a relatively high level. In 2010 the Ministry of Agriculture, Forest and Fisheries (MAFF) quit providing future forecasts for soybean production, supply, and demand and trade.

Canada's share of the Japanese rapeseed market was 92 percent in 2010, and the average price increased to \$495/mt from \$455/mt in CY2009.

Currently the Japanese vegetable oil crushing industry uses only imported materials. Canada and Australia are the major rapeseed suppliers to Japan. No import duties are levied on soybeans or rapeseeds.

Table 4. CIF Import Price Comparison of Soybeans and Rapeseeds (Dollars per mt)

	CY2006	CY2007	CY2008	CY2009	CY2010
Soybeans (World)	(317)	(400)	(636)	(513)	(526)
U.S.	304	391	627	493	511
Brazil	278	372	619	461	448
Canada	419	474	677	689	702
China	508	529	851	852	869
Rapeseed (World)	(313)	(446)	(675)	(455)	(495)
Canada	310	445	674	448	491
Australia	330	464	694	513	491

Source: GTA, HS 1201, HS 1205 (CY2006-CY2009), Trade Statistics (MOF CY2010)

Stocks:

Soybean ending stocks in CY2010 increased to 235 thousand mt from 223 thousand mt in CY2009. This volume includes 31 thousand mt of soybeans imported by a government supported stocking program, which started in 1974. The purpose of this program is to stock enough volume to supply one month's food use in case of a supply shortage. As a result of the new administration's streamlining process, the subsidy for the program will be discontinued beginning in JFY2011. The stock has never been commercially released even once in the past 36 years. Rapeseed ending stocks in CY2010 increased from 143 thousand mt to 155 thousand mt. It is assumed that this due to inherent annual variations and does not indicate any special circumstances.

Crushing Capacity

The earthquake on March 11, 2011, struck several large crushing mills in Ibaraki, Chiba and Kanagawa prefecture. Showa Sangyo's soybean crushing mill was severely damaged but has been partially operating since April 1, 2011. Other facilities were fortunate to incur only minor damage. The Japanese oil crushing industry was operating at well below full capacity even prior to the disaster so only minor impact is expected on the food oil and meal supply.

One crushing mill, Meito Oil, permanently ceased operations in August, 2010. The estimated crushing capacity for the mill was 200 thousand mt. There are 13 large scale crushing plants with a combined crushing capacity of approximately 90 percent of the Japanese total.

Table.5 Japan's Oil Crushing Capacity

CY	Number of Factories	Annual Crushing Capacity (1000 mt)	Actual Annual Production (1000 mt)	Operation Ratio (percent)
2001	53	8,992	6,669	74.2
2003	49	9,294	6,770	72.8
2005	41	8,911	5,987	67.2
2007	41	8,787	5,884	67.0
2009	41*	8,787*	5,259	59.8*
2010	40*	8,587*	5,388	62.7*

Source: MAFF (Note: 2001-2007), *POST estimate

Commodities:

Author Defined:

Oil Meal Situation and Outlook

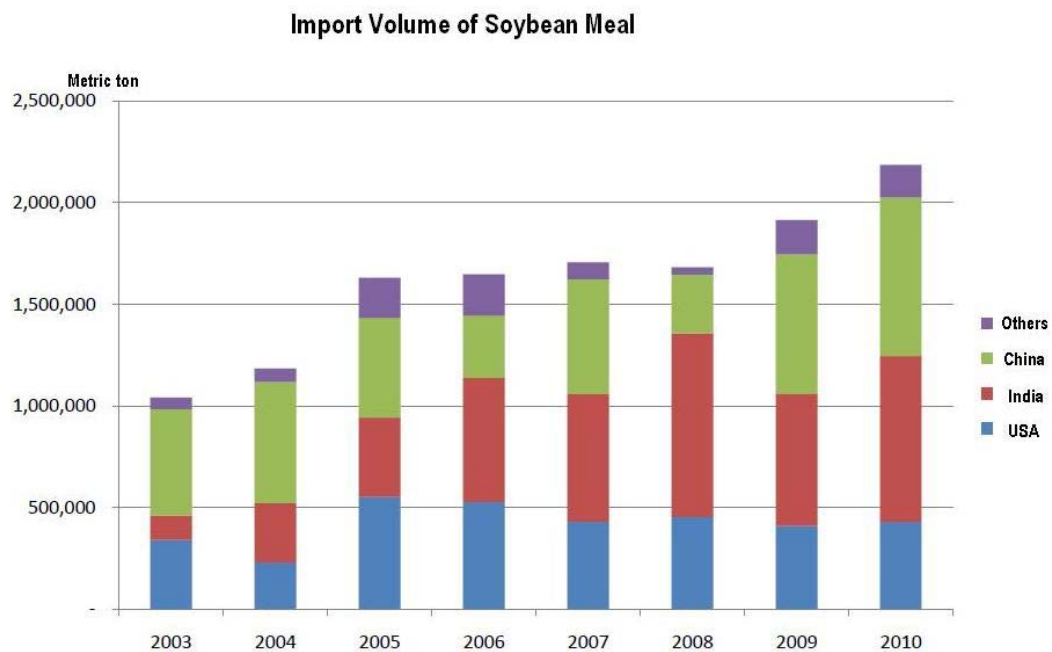
Soybean meal is not just a byproduct in the Japanese crushing industry but an important product in its own right, as is soybean oil. The soybean crushing process produces 190 kg of soybean oil and 760 kg of soybean meal from one metric ton (mt) of soybean. In terms of demand and value, soybean meal may be more important than soybean oil. Eighty-nine percent of soybean meal was used for feed in CY2010. The rest was used for ingredients in soy sauce, miso (bean paste) and, soy protein foods and as an improving agent for processed foods. Despite foot and mouth disease (FMD) and avian influenza (AV) outbreaks in Japan last year, the production of compound feed in 2010 remained at a fairly normal level. There is strong demand for soybean meal and the blending ratio in compound feed has been stable throughout the year at 14 percent. The Northern Japan Great Earthquake and tsunami severely affected the feed industry and some facilities in the area took several weeks to begin even limited operations. At this time they are recovering little by little day by day. Japan Agriculture (JA) Union announced that by mid-April it would be capable of supplying enough compound feed to meet demand in the area. According to POST estimates, there were 870 head of dairy cattle, 2,500 beef cattle, 30,000 swine and 630,000 poultry within a 20 km radius of the damaged Fukushima nuclear power station. Those animals were left behind when the area was evacuated by the Japanese government. It is a relatively small portion of the total Japanese livestock population and will have limited impact on feed demand.

In line with decreased oil production, soybean meal production in CY2010 was down 1 percent at 1.87 mmt from 1.88 mmt in CY2009. However, demand for feed was 3.47 mmt in CY2010, a slight increase from the previous year. Therefore, imports of soybean meal were 2.19 mmt in CY2010, increased 14 percent from 1.92 mmt in CY2009: record high volume. It was the first time Japan had imported more than two million mt of soybean meal.

Table 6. Demand and supply of soybean meals (1,000 mt)

CY	Demand			Supply			
	Total	Feed	Food and others	Total	Initial Stock	Domestic	Import
2004	3,804	3,308	495	3,928	119	2,627	1,182
2005	4,006	3,409	597	4,109	124	2,355	1,630
2006	3,879	3,401	478	4,008	103	2,258	1,647
2007	4,004	3,465	539	4,121	129	2,286	1,706
2008	3,805	3,306	499	3,936	117	2,137	1,682
2009	3,815	3,373	442	3,926	131	1,880	1,915
2010	3,917	3,467	450*	4,176	123**	1,866	2,186

Source: MAFF; *:MAFF estimate; **POST estimate



Source: Trade Statistics of Japan

Fig. 1 Import volume of soybean meal in Japan

Rapeseed meal and fish meal are used in feed and fertilizer production in Japan. The rapeseed crushing process produces 410 kg of rapeseed oil and 570 kg of rapeseed meal for one mt of rapeseed. Rapeseed meal production was up 5.8 percent in CY2010 to 1.27 mmt from 1.20 mmt in CY2009. Demand has remained stable at around 1.3 mmt over the last 5 years and the import

volume of rapeseed meal has increased to fill demand. There is no tariff on soybean meal (HS 2304), rapeseed meal (HS 2306.41) or fishmeal (HS 2301.20).

Table 7. Demand and supply of rapeseed meals (1,000 MT)

CY	Demand			Supply			
	Total	Feed	Fertilizer and other	Total	Initial Stock	Domestic	Import
2004	1,354	917	428	1,410	63	1,329	18
2005	1,303	909	394	1,386	56	1,394	36
2006	1,305	930	375	1,369	83	1,252	34
2007	1,270	894	375	1,358	64	1,216	78
2008	1,311	1,009	279	1,367	88	1,261	18
2009	1,327	1,033	293	1,381	57	1,198	126
2010	1,326	1,026	300*	1,395	58**	1,266	39

Source: MAFF; *:MAFF estimate; **POST estimate

Table 8. Japanese Livestock Population (1,000 heads)

CY	Dairy cows	Beef cattle	Swine	Layers	Broilers
2004	1,690	2,788	9,724	174,550	104,950
2005	1,655	2,747	9,750*	136,000*	102,277
2006	1,636	2,755	9,620	176,955	103,687
2007	1,592	2,806	9,759	183,224	105,287
2008	1,533	2,890	9,745	181,664	102,290
2009	1,500	2,923	9,899	178,208	107,141
2010	1,484	2,892	9,750*	139,200*	106,400*

Source: MAFF Monthly Statistics of Agriculture (as of February each year)

*:POST estimate (ref. Grain and Feed Annual 2011)

Distiller's Dried Grains with Solubles (DDGS)

The distiller's Dried Grains with Solubles (DDGS) situation was detailed in the GAIN report, "Grain and Feed Annual 201" ([JA1006](#)). The paragraph below is an excerpt from the report.

DDGS Imports on the Rise

One of the positive side effects of the ethanol boom in the United States is the increasing availability of a high value co-product, DDGS. As a result of aggressive educational activities led by the U.S. Grains Council, Japan's imports of DDGS from the United States have been increasing remarkably and surpassed the 100 thousand MT mark in 2007, and 275 thousand MT in 2009. In 2010, however, the demand for DDGS stalled as corn prices stabilized. The majority of these DDGS are currently used in dairy cattle feed. Given the recent surge in corn prices, DDGS imports will likely hit new highs in 2011.

Commodities:

Oil, Soybean

Author Defined:**Oil Situation and Outlook**

The total supply of vegetable oil in CY2010 was 2.5 mmt including 1.7 mmt from domestic production and 0.7 mmt from imports. Vegetable oil production in 2010 was 1,657 thousand mt, increased by 3.6 percent from the previous year of 1,599 thousand mt. However, the situation is more involved than this fact alone would seem to indicate. Compared with the average volume between 2006 and 2008, production in 2010 was 75 mt smaller, a 4.3 percent decrease. Japanese vegetable oil production has been on a downward trend since 2000 with peak production reaching 1,885 thousand mt. Soybean oil has especially decreased considerably. After the first confirmed BSE detection in Japan occurred in 2001 and imports of meat bone meal ceased, soybean meal and oil production was increased to fill that demand. Soybean crushing was at its highest level in 2003 at 760 thousand mt, resulting in a supply situation exceeding demand. Since then, soybean oil production has been decreasing every year. In contrast to soybeans, rape seed oil production has been stable at around the 950 thousand mt level and reached a record high of 993 thousand mt, offsetting the shortage in soybean oil. While oils from temperate products have been decreasing, oils from tropical products such as palm oil and palm kernel oil have been increasing.

International prices for soybean oil and rapeseed oil have been soaring, while palm oil prices have been relatively low. Around 70 percent of palm oil goes to use in margarine, shortening, instant noodles and snacks. The rest is used for various industrial production purposes such as soap, detergent, industrial lube, resin paint and cosmetics.

Table 9. Demand and Supply of Vegetable Oil (1000 mt)

CY			2006	2007	2008	2009	2010
Demand	Temperate products**		1,892	1,871	1,797	1,731	1,745*4
	Tropical products***		498	528	548	562	612*4
	Domestic consumption		2,390	2,399	2,345	2,293	2,357
Supply	Initial stock		122	125	107	154	113
	Domestic production	Soybean oil	576	576	542	477	468
		Rapeseed oil	972	942	951	929	993
		Other oil	215	212	211	193	196
		Total	1,763	1,730	1,703	1,599	1,657
	Import	Temperate products**	145	133	147	103	93
		Tropical products***	498	528	548	562	612*4
		Total	643	661	695	665	705
	Total		2,528	2,516	2,505	2,418	2,475
	Year end stock		125	107	154	113	108*1

Source: MAFF

*1: MAFF estimate

*2: Temperate products include oil from soybean, rapeseed, mustard, rice, cotton seed, safflower, sesame, corn, peanut and sunflower.

*3: Tropical products for human consumption include oil from coconut, palm kernel, palm.

*4: POST estimate

Trade

Rapeseed oil comprises the largest share of vegetable oil supplies in the Japanese market and exceeded 1 million mt including both domestic production and imports in 2010. The second largest category is tropical oil (palm oil, palm kernel oil and coconut oil), which has become the major vegetable oil in Japan. Import volumes have exceeded domestic soybean oil production since 2007.

Palm oil is the major vegetable oil imported by Japan. Unlike other oilseeds such as soybean and rapeseed, palm oil is produced from the flesh of fruit so that it is difficult to import raw materials meeting quality specifications that are in demand for production in Japan. Malaysia dominates the palm oil market in Japan. Japan imports palm kernel oil, coconut oil, soybean oil, olive oil and rice oil to meet various demands. Imports of soybean oil and rapeseed oil have

been very minimal. The market is protected by high tariffs on soybean and rapeseed oils. The tariff for both oils is either 10.9 yen/kg or 13.2 yen/kg depending on the acid value.

Table 10. Japan's tariff on major oilseeds and oils

HS Code	Commodity	Duty JFY 2011
1201.00-000	Soybeans	Free
1205.10-000	Rapeseed (low erucic acid)	Free
1205.90-000	Rapeseed (others)	Free
1507.10-100	Soybean oil, crude, of an acid value exceeding 0.6	10.9 yen/kg
1507.10-200	Soybean oil, crude, other	13.2 yen/kg
1507.90-000	Soybean oil, other	13.2 yen/kg
1508.10-100	Peanut oil, crude, of an acid value exceeding 0.6	8.5 yen/kg
1508.10-200	Peanut oil, crude, other	10.4 yen/kg
1508.90-000	Peanut oil, other	10.4 yen/kg
1509 & 1510	Olive oil	Free
1511.10-000	Palm oil, crude	3.5 percent
1511.90-010	Palm stearin	2.5 percent
1511.90-090	Palm oil, other	3.5 percent
1512.11-110	Sunflower-seed oil, of an acid value exceeding 0.6	8.5 yen/kg
1512.11-210	Safflower oil, of an acid value exceeding 0.6	8.5 yen/kg
1512.11-120	Sunflower-seed oil, other	10.4 yen/kg
1512.11-220	Safflower-seed oil, other	10.4 yen/kg
1514.11-100	Low erucic acid rapeseed oil, crude, of an acid value exceeding 0.6	10.9 yen/kg
1514.11-200	Low erucic acid rapeseed oil, crude, other	13.2 yen/kg
1514.19-000	Low erucic acid rapeseed oil, other	13.2 yen/kg
1514.91-100	Rapeseed oil, other, crude, of an acid value exceeding 0.6	10.9 yen/kg
1514.91-200	Rapeseed oil, other, crude, other	13.2 yen/kg

Source: Japan Tariff Association

Commodities:
Oilseed, Soybean

Production, Supply and Demand Data Statistics:

[illegible]

Oilseed, Rapeseed

[illegible]

Meal, Soybean

[illegible]

Meal, Rapeseed

[illegible]

Meal, Fish

[illegible]

Oil, Soybean

[illegible]

Oil, Rapeseed

[illegible]

Oil, Sunflowerseed

[illegible]