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# **Report Name:** Oilseeds and Products Annual

**Country:** Japan

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#### **Report Highlights:**

Japan's overall oilseed consumption is forecast to remain stable in MY 2020/21 and MY 2021/22. Due to the COVID-19-related shift from eating out to at-home cooking, in MY 2019/20 and MY 2020/21, Japan increased rapeseed imports and crush, while reducing soybean imports and crush. To meet the robust demand for soybean meal while domestic soybean crush declined, Japan increased imports of soybean meal in MY 2019/20 and MY 2020/21. Due to steady demand and domestic feed price stabilization programs, fluctuations in global soybean prices will not impact the volume of Japan's oilseed imports. Japan's implementation of a more stringent sustainability criteria for biomass will lead to a decline in imports of palm kernel residues and palm oil in MY 2021/22.

# Oilseeds

## **Commodities:**

Oilseeds, Soybean Oilseeds, Rapeseed Oilseeds, Cottonseed

# Production, supply and distribution of soybean (oilseed)

Oilseed, Soybean	2019/2	2020	2020/	2021	2021/2	2022
Market Year Begins	Oct 20	Oct 2019		2020	Oct 2021	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	144	144	142	142	0	145
Beginning Stocks (1000 MT)	182	182	179	244	0	180
Production (1000 MT)	212	218	235	221	0	241
MY Imports (1000 MT)	3325	3325	3410	3115	0	3264
Total Supply (1000 MT)	3719	3725	3824	3580	0	3685
MY Exports (1000 MT)	0	0	0	0	0	0
Crush (1000 MT)	2460	2393	2520	2300	0	2400
Food Use Dom. Cons. (1000 MT)	900	925	950	930	0	935
Feed Waste Dom. Cons. (1000 MT)	180	163	180	170	0	170
Total Dom. Cons. (1000 MT)	3540	3481	3650	3400	0	3505
Ending Stocks (1000 MT)	179	244	174	180	0	180
Total Distribution (1000 MT)	3719	3725	3824	3580	0	3685
Yield (MT/HA)	1.472	1.514	1.655	1.556	0	1.662
(1000 HA),(1000 MT),(MT/HA)						

# Production, supply and distribution of rapeseed (oilseed)

Oilseed, Rapeseed	2019/2	020	2020/	2021	2021/2022		
Market Year Begins	Oct 2019		Oct 2	:020	Oct 2021		
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Area Harvested (1000 HA)	2	2	2	2	0	2	
Beginning Stocks (1000 MT)	179	174	120	146	0	150	
Production (1000 MT)	4	4	4	4	0	4	
MY Imports (1000 MT)	2242	2242	2300	2315	0	2331	
Total Supply (1000 MT)	2425	2425	2424	2465	0	2485	
MY Exports (1000 MT)	0	0	0	0	0	0	
Crush (1000 MT)	2300	2270	2300	2310	0	2330	
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0	
Feed Waste Dom. Cons. (1000 MT)	5	4	5	5	0	5	
Total Dom. Cons. (1000 MT)	2305	2279	2305	2315	0	2335	
Ending Stocks (1000 MT)	120	146	119	150	0	150	
Total Distribution (1000 MT)	2425	2425	2424	2465	0	2485	
Yield (MT/HA)	2	2	2	2	0	2	
(1000 HA) ,(1000 MT) ,(MT/HA)							

Oilseed, Cottonseed	2019/	2020	2020/2	2021	2021/2	2022
Market Year Begins	Oct 2	Oct 2019		020	Oct 2021	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (Cotton) (1000 HA)	0	0	0	0	0	0
Beginning Stocks (1000 MT)	4	4	5	4	0	4
Production (1000 MT)	0	0	0	0	0	0
MY Imports (1000 MT)	102	102	100	100	0	100
Total Supply (1000 MT)	106	106	105	104	0	104
MY Exports (1000 MT)	0	0	0	0	0	0
Crush (1000 MT)	26	27	25	25	0	25
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0
Feed Waste Dom. Cons. (1000 MT)	75	75	75	75	0	75
Total Dom. Cons. (1000 MT)	101	102	100	100	0	100
Ending Stocks (1000 MT)	5	4	5	4	0	4
Total Distribution (1000 MT)	106	106	105	104	0	104
Yield (MT/HA)	0	0	0	0	0	0
(1000 HA), (RATIO), (1000 MT), (1	MT/HA)		· ·			

#### Production, supply and distribution of cottonseed (oilseed)

In marketing year (MY; October to September) 2019/20, Japan's Ministry of Agriculture, Forestry and Fisheries (MAFF) reported the country's total oilseed supply (production and imports) at 6.16 million metric tons (MMT). In MY 2019/20, soybeans accounted for 57.5 percent (crush, food, feed), rapeseeds for 36.5 percent (crush), sesame seeds for 3.3 percent (crush, food), cottonseeds for 1.7 percent (feed, crush) and peanuts accounted for 0.7 percent (food) of the supply. Japan relies heavily on oilseed imports, with just 3.8 percent of its MY 2019/20 consumption met with domestically produced oilseeds. The vast majority of Japan's domestic oilseed production goes toward food use, rather than crush.

#### Production

#### Soybean

Japan's soybean production is focused on food-grade soybeans, of which approximately 80 percent are distributed via the Japan Agricultural Cooperatives (JA) to food manufacturers (see <u>Utilization of Food-Grade Soybeans in Japan</u>). The remainder is consumed locally or used for planting. Domestic production does not contribute to crush.

MAFF reported that the MY 2020/21 soybean harvested area<sup>1</sup> will be 141,700 hectares (ha), a 1 percent drop from 143,500 ha in MY 2019/20. FAS/Tokyo forecasts Japan's soybean planted area will increase by two percent to 145,000 ha in MY 2021/22 due to the spike in global soybean prices.

FAS/Tokyo estimates<sup>2</sup> Japan's MY 2020/21 soybean production at 221,000 metric tons (MT) based on the November 2020 <u>production and sales estimation</u> (in Japanese only) by JA's National Federation of Agricultural Co-operative Associations (Zen-noh) that it would sell 1.2 percent more soybeans in MY 2020/21 than in MY 2019/20. Assuming Japan's average ten-year yield of 1.66 MT/ha, FAS/Tokyo forecasts Japan's MY 2021/22 soybean production at 241,000 MT.

<sup>&</sup>lt;sup>1</sup> In Japan, area harvested is typically nearly identical to area planted. MAFF's figures do not distinguish between area planted and area harvested.

<sup>&</sup>lt;sup>2</sup> In 2021, MAFF changed its reporting schedule so soybean production estimates will not be published until April 2021.

MAFF's final MY 2019/20 soybean production number was 217,800 MT with a 1.514 MT/ha yield, a slight recovery from the MY 2018/19 yield.

## Rapeseed

Japan has negligible rapeseed production that is concentrated in the north. <u>MAFF</u> announced that the MY 2020/21 rapeseed area harvested is 1,810 ha<sup>3</sup>, a decline from the 1,900 ha in MY 2019/20 as farmers chose to plant other rotation crops. MAFF reported MY 2020/21 rapeseed production at 3,560 MT. FAS/Tokyo forecasts Japan's MY 2021/22 rapeseed area harvested and production to remain at 2,000 ha and 4,000 MT, respectively.

## Cottonseed

Japan does not produce cottonseed.

## Consumption

The change in oil consumption brought on by the COVID-19 pandemic directly impacted MY 2020/21 oilseed consumption in Japan. As at-home food consumption largely replaced food consumption at hotels, restaurants, and institutions (HRI), the demand for rapeseed (i.e., canola) oil increased, while soybean oil demand declined. Consequently, FAS/Tokyo estimates Japan's MY 2020/21 soybean consumption fell to 3.4 MMT or 2.3 percent below MY 2019/20. Of the MY 2020/21 soybean total, nearly 70 percent (2.3 MMT) will go toward crush, approximately 27 percent (930,000 MT) toward food, with the remainder (170,000 MT) ending up as feed, seed and waste. Japan's total rapeseed domestic consumption will reach 2.3 MMT, which will all go to crush. MY 2020/21 cottonseed domestic consumption is expected to be stable at 100,000 MT.

# Crush

Three large oil crushers (Nisshin Oillio, J-Oil Mills, Showa Sangyo) produce over 80 percent by volume of Japan's edible vegetable oil<sup>4</sup> principally produced from imported soybeans and rapeseed. Although the overall oilseed market in Japan is typically stable, the modest fluctuations in the import volumes of soybeans and rapeseed reflect crop quality and relative prices of oilseeds and meal (i.e., price margin). The COVID-19 pandemic added another variable.

# Soybean and Rapeseed

Since the first COVID-19 state of emergency declared on April 8, 2020, as people increasingly cooked and ate at home, grocery purchases soared while HRI demand dwindled (JA2020-0170). Canola oil dominates the supermarket oil section, and MY 2020/21 rapeseed imports remained steady amid increasing demand. On the other hand, the HRI sector largely consumes soybean oil, so soybean demand suffered from the COVID-19-related shift in food consumption away from HRI. In response, in the summer of 2020, crushers began to reduce soybean imports and soybean crush.

<sup>&</sup>lt;sup>3</sup> It does not include ornamental planting areas.

<sup>&</sup>lt;sup>4</sup> According to the Japan Oil Products Association and MAFF, there are 10 edible vegetable oils: soybean oil, rapeseed (canola) oil, mustard oil, rice bran oil, cottonseed oil, safflower oil, sesame oil, corn oil, peanuts oil, and sunflowerseed oil. Linseed oil and castor oil are not included.

In MY 2020/21, FAS/Tokyo estimates Japanese crushers will use 2.30 MMT of soybeans, 3.9 percent down from MY 2019/20, and 2.31 MMT of rapeseeds, a 1.8 percent increase over MY 2019/20. Assuming a return to pre-COVID-19 oilseed consumption trends and prices for most of MY 2021/22, FAS/Tokyo forecasts crush use at 2.40 MMT of soybeans and 2.33 MMT of rapeseeds.

MAFF reports that in MY 2019/20, 2.393 MMT of soybeans (3.1 percent decrease from MY 2018/19) and 2.270 MMT of rapeseeds (5.3 percent decrease from MY 2018/19) went to crush. At the start of MY 2019/20, soybean demand was buoyed by concerns about rapeseed harvest quality, but the COVID-19-related shift in oil consumption abruptly changed the competitive landscape between soybeans and rapeseed in Japan.

## Cottonseed

FAS/Tokyo projects cottonseed crush to remain stable at 25,000 MT in MY 2020/21 and MY 2021/22. <u>MAFF</u> reports that in MY 2019/20 Japan crushed 26,593 MT of cottonseed to produce 4,681 MT of cottonseed oil, with an oil extraction rate of 0.176. Cottonseed oil is principally used as a high-end cooking oil, professional tempura oil and high-end oil for canned fish. The resulting 13,122 MT of cottonseed meal largely went to feed. Okamura Oil Mill in Osaka is the only cottonseed crusher in Japan.

## Food Use Consumption

Over the past ten years, Japan's food soybean consumption has been stable at approximately 0.9 MMT. FAS/Tokyo estimates soybean food consumption at 930,000 MT in MY 2020/21, a slight increase over the 925,000 MT consumed in MY 2019/20 as the demand for certain soybean-derived products is expected to increase (see <u>Utilization of Food Grade Soybeans in Japan</u>). FAS/Tokyo forecasts food consumption of soybeans to reach 935,000 MT in MY 2021/22.

#### Feed, Seed, and Waste (FSW) Consumption

Based on the long-term steady feed demand in Japan, FAS/Tokyo projects soybean FSW consumption at 170,000 MT in MY 2020/21 and MY 2021/22. As MAFF reports on oilseed volumes used in crush, food, feed and stocks, the seed and waste component of FSW consumption represents residual consumption and includes off-grade domestic soybeans. According to MAFF's MY 2019/20 feed statistics, Japanese feed manufacturers used 85,614 MT of soybeans. Rapeseed FSW consumption is residual and negligible.

Feed manufacturers use cottonseed as a minor ingredient, primarily in dairy feed. FAS/Tokyo estimates Japan's cottonseed feed and waste consumption to stay flat at 75,000 MT in MY 2020/21 and MY 2021/22, reflecting a stable domestic dairy cow population (see <u>2020 Japan Dairy and Products Annual</u>).

#### Trade

Japan relies heavily on oilseed imports and has no tariffs on soybeans, rapeseed and cottonseed. In MY 2019/20, soybeans accounted for 56 percent of Japan's total oilseed imports (5.9 MMT), rapeseed represented 38 percent, sesame seed represented 3.5 percent and cottonseed represented 1.7 percent.

#### Soybeans

FAS/Tokyo projects soybean imports will decline to 3.12 MMT in MY 2020/21 due to decreased demand for soybean oil but will recover to 3.26 MMT in MY 2021/22.

In MY 2019/20, Japan imported 3.325 MMT of soybeans, of which about 80 percent was feed-grade from the United States and Brazil and the remaining 20 percent was food-grade primarily from the United States, Canada, and China. The United States (73.3 percent), Brazil (15.7 percent), and Canada (9.3 percent) were Japan's top soybean suppliers. Japan's requirement of 47.5 percent crude protein<sup>5</sup> in soybean meal for high-protein feed preserves Brazil's market share due to higher crude protein content in Brazilian soybeans.

#### Rapeseed

Given the strong COVID-19-induced at-home oil consumption and assuming a gradual post-pandemic recovery, FAS/Tokyo forecasts Japan's rapeseed imports to increase to 2.32 MMT in MY 2020/21 and to 2.33 MMT in MY 2021/22. In MY 2019/20, Japan imported 2.242 MMT of rapeseed, with 98 percent from Canada and the rest from Australia

#### Cottonseed

FAS/Tokyo projects Japanese cottonseed imports to stay at 0.1 MMT in MY 2020/21 and MY 2021/22 due to the very stable cottonseed oil and feed demand. In MY 2019/20, Japan imported 102,264 MT of cottonseed, of which 65.9 percent came from the United States (for feed and crush) and 18.3 percent from Brazil (primarily for crush).

#### Stocks

According to MAFF, MY 2019/20 soybean beginning stocks were 181,570 MT, of which oil crushers held 177,305 MT and feed manufacturers held an additional 4,265 MT. Due to the COVID-19-driven sluggish soybean demand, MY 2020/21 beginning stocks grew to 243,880 MT, of which oil crushers held 239,003 MT and feed manufacturers held 4,877 MT. FAS/Tokyo forecasts soybean ending stocks will return to 180,000 MT in MY 2020/21 and MY 2021/22 as impact of the pandemic wanes.

MAFF statistics show that crushers held 174,342 MT of rapeseed at the beginning of MY 2019/20. Crushers drew down the stocks amid increasing canola oil demand, so MY 2020/21 rapeseed stocks fell to 145,792 MT. FAS/Tokyo forecasts rapeseed ending stocks at 150,000 MT in MY 2020/21 and MY 2021/22.

MAFF reported MY 2019/20 beginning cottonseed stocks for crush at 1,088 MT and MY 2019/20 ending stocks at 1,685 MT. There are no official figures of cottonseed stocks for feed. FAS/Tokyo estimates feed cottonseed stocks at 3,000 MT and total cottonseed stocks at 4,000 MT in MY 2020/21 and MY 2021/22.

<sup>&</sup>lt;sup>5</sup> The majority of domestic soybean meal production is low-protein soybean meal, which requires 44 percent of crude protein content.

# Meals

## **Commodities:**

Meal, Soybean Meal, Rapeseed Meal, Fish Meal, Palm Kernel

# Production, supply and distribution of soybean meal

Meal, Soybean	2019/2020 Oct 2019		2020/	2021	2021/2022		
Market Year Begins			Oct 2	2020	Oct 2021		
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Crush (1000 MT)	2460	2393	2520	2300	0	2400	
Extr. Rate, 999.9999 (PERCENT)	0.754	0.752	0.754	0.748	0	0.750	
Beginning Stocks (1000 MT)	101	101	228	98	0	100	
Production (1000 MT)	1855	1799	1900	1720	0	1800	
MY Imports (1000 MT)	1858	1858	1700	1854	0	1754	
Total Supply (1000 MT)	3814	3758	3828	3672	0	3654	
MY Exports (1000 MT)	1	1	1	0	0	0	
Industrial Dom. Cons. (1000 MT)	245	313	245	240	0	240	
Food Use Dom. Cons. (1000 MT)	200	200	200	202	0	204	
Feed Waste Dom. Cons. (1000 MT)	3140	3146	3170	3130	0	3110	
Total Dom. Cons. (1000 MT)	3585	3659	3615	3572	0	3554	
Ending Stocks (1000 MT)	228	98	212	100	0	100	
Total Distribution (1000 MT)	3814	3758	3828	3672	0	3654	
(1000 MT), (PERCENT)							

# Production, supply and distribution of rapeseed meal

Meal, Rapeseed	2019/2020 Oct 2019		2020/	2021	2021/2	2022
Market Year Begins			Oct 2	2020	Oct 2021	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	2300	2270	2300	2310	0	2330
Extr. Rate, 999.9999 (PERCENT)	0.563	0.545	0.563	0.550	0	0.549
Beginning Stocks (1000 MT)	74	74	65	58	0	70
Production (1000 MT)	1295	1236	1295	1270	0	1280
MY Imports (1000 MT)	5	5	5	6	0	6
Total Supply (1000 MT)	1374	1315	1365	1334	0	1356
MY Exports (1000 MT)	6	5	0	0	0	0
Industrial Dom. Cons. (1000 MT)	240	88	240	90	0	90
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0
Feed Waste Dom. Cons. (1000 MT)	1063	1164	1063	1174	0	1196
Total Dom. Cons. (1000 MT)	1303	1252	1303	1264	0	1286
Ending Stocks (1000 MT)	65	58	62	70	0	70
Total Distribution (1000 MT)	1374	1315	1365	1334	0	1356
(1000 MT) ,(PERCENT)					· · ·	

#### Production, supply and distribution of fishmeal

Meal, Fish	2019/2020 Jan 2020		2020/	2021	2021/2	2022
Market Year Begins			Jan 2	2020	Jan 2021	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Catch For Reduction (1000 MT)	840	895	840	885	0	885
Extr. Rate, 999.9999 (PERCENT)	0.214	0.225	0.214	0.211	0	0.211
Beginning Stocks (1000 MT)	17	17	11	21	0	20
Production (1000 MT)	180	201	180	187	0	187
MY Imports (1000 MT)	180	203	184	207	0	208
Total Supply (1000 MT)	377	421	375	415	0	415
MY Exports (1000 MT)	6	9	6	5	0	5
Industrial Dom. Cons. (1000 MT)	50	74	50	75	0	75
Food Use Dom. Cons. (1000 MT)	0	5	0	5	0	5
Feed Waste Dom. Cons. (1000 MT)	310	312	310	310	0	310
Total Dom. Cons. (1000 MT)	360	391	360	390	0	390
Ending Stocks (1000 MT)	11	21	9	20	0	20
Total Distribution (1000 MT)	377	421	375	415	0	415
(1000 MT) ,(PERCENT)						

#### Production, supply and distribution of palm kernel residues (HS code: 2306.60)

Meal, Palm Kernel	2019/2020 Oct 2019		2020/	2021	2021/2022 Oct 2021	
Market Year Begins			Oct 2	2020		
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	0	0	0	0	0	0
Extr. Rate, 999.9999 (PERCENT)	0	0	0	0	0	0
Beginning Stocks (1000 MT)	0	0	0	0	0	0
Production (1000 MT)	0	0	0	0	0	0
MY Imports (1000 MT)	170	192	120	220	0	130
Total Supply (1000 мт)	170	192	120	220	0	130
MY Exports (1000 MT)	0	0	0	0	0	0
Industrial Dom. Cons. (1000 MT)	166	188	116	216	0	126
Food Use Dom. Cons. (1000 MT)	0	0	0	0	0	0
Feed Waste Dom. Cons. (1000 MT)	4	4	4	4	0	4
Total Dom. Cons. (1000 MT)	170	192	120	220	0	130
Ending Stocks (1000 MT)	0	0	0	0	0	0
Total Distribution (1000 MT)	170	192	120	220	0	130
(1000 MT) ,(PERCENT)						

Note: Due to the difference in the application of HS codes used by Japan and its palm kernel residue suppliers (Malaysia and Indonesia), Malaysia's and Indonesia's export data notably differs from Japan's import data (see <u>JA2020-0110</u> for explanation). FAS/Tokyo relies on suppliers' export data to capture Japanese palm kernel residue imports, which are primarily utilized as biomass by Japanese powerplants.

## Production

#### Soybean Meal

Japanese crushers meet roughly half of domestic soybean meal demand. FAS/Tokyo estimates MY 2020/21 soybean meal production at 1.72 MMT, a 4.4 percent drop from MY 2019/20 due to the COVID-19-induced decrease in soybean oil demand. Assuming soybean oil demand recovers in MY 2021/22, FAS/Tokyo forecasts that Japanese crushers will produce 1.80 MMT of soybean meal from 2.40 MMT of soybeans based on Japan's five-year average soybean meal extraction rate of 0.75.

#### Rapeseed Meal

FAS/Tokyo estimates MY 2020/21 rapeseed meal production to reach 1.27 MMT, a 2.7 increase over MY 2019/20, as canola oil demand rose during the COVID-19 pandemic. FAS/Tokyo forecasts MY 2021/22 rapeseed crush to yield 1.28 MMT of rapeseed meal from 2.33 MMT of rapeseed based on Japan's five-year average rapeseed meal extraction rate of 0.55. MAFF reported that in MY 2019/20, Japan produced 1.236 MMT of rapeseed meal from 2.27 MMT of rapeseed at 0.545 extraction rate.

#### Fishmeal

Japan utilized fish trimmings and small whole fish (e.g., sardines) as inputs in the production of fishmeal. In MY 2019/20, the COVID-19 pandemic substantially reduced restaurant demand and consequently the availability of fish trimmings. A large portion of Japan's MY 2019/20 sardine catch, the largest in 20 years, went toward fish oil/meal production, rather than food, due to the smaller average body size of MY 2019/20 sardines. Japan Marine Oil Association estimates Japan produced 201,000 MT of fishmeal from 239,000 MT of domestically caught whole fish (e.g., sardine) and 655,000 MT from trimmings in MY 2019/20 (January-December 2020). Assuming steady sardine catch at about 230,000 MT and a stable level of fish trimmings, FAS/Tokyo projects MY 2020/21 (January-December 2021) and MY 2021/22 (January-December 2022) fishmeal production at 187,000 MT (Table 1).

Table 1. Japan S	able 1. Japan's Fishmear Froduction (Thousand WIT)									
		2016/17	2017/18	2018/19	2019/20e	2020/21f	2021/22f			
Domestic Input	Trimmings	681	662	665	655	655	655			
(Catch for	Whole Fish	156	177	225	239	230	230			
Reduction)	Total	837	840	890	895	885	885			
Extraction Rate		21.7%	21.4%	21.2%	22.5%	21.1%	21.1%			
Fishmeal Production		181	182	189	201	187	187			

# Table 1. Japan's Fishmeal Production (Thousand MT)

Sources: Fishmeal Association and Japan Marine Oil Association

Note: Fishmeal MY is January through December. MY 2021/22 is equivalent to calendar year 2022.

#### Palm Kernel Meal

Japan does not produce palm kernel meal.

#### Consumption

Based on data from MAFF (for domestically crushed soybean meal and rapeseed meal) and Japan Customs (for imported soybean meal), FAS/Tokyo calculated Japan's MY 2019/20 soybean meal and rapeseed meal consumption at 4.8 MMT, of which 88 percent went to animal feed, 8 percent toward industrial use, and approximately 4 percent (imported food-grade soybean meal) toward food processing.

#### Feed and Waste Consumption

Based on <u>MAFF</u>'s feed data, FAS/Tokyo estimates Japanese feed millers consumed 8.6 MMT soybean meal equivalent (SME<sup>6</sup>) protein in MY 2019/20, of which 36 percent was from soybean meal, 9 percent rapeseed meal, 8 percent corn-derived protein by-products (i.e., dried distillers grains with solubles (DDGS) and corn gluten feed and meal (CGF&M)), 4 percent animal by-products (e.g. meat and bone meal<sup>7</sup>, feather meal), and 3 percent fishmeal (Table 2). Total SME protein use by Japanese feed millers is by and large stable, with a marginal increase in recent years.

	MY 2017/18	2018/19	2019/20
Feed Total	8,461	8,527	8,600
Corn-derived	775	771	704
Animal-based protein subtotal	664	676	697
of fishmeal	236	263	264
of slaughterhouse by-products	316	313	334
High-protein oilseed meal subtotal	3,925	3,984	4,067
of rapeseed meal	801	796	807
of soybean meal	2,957	3,020	3,096
of palm kernel meal	0	0	0
of other meal (sesame etc.)	167	168	164

#### Table 2. Trends in Protein Sources in Feed (thousand MT SME)

Source: MAFF

Note: MY is October to September.

#### Soybean Meal and Rapeseed Meal

FAS/Tokyo projects stable plant protein meal demand, in line with livestock (2021 Japan Livestock and Products Semi-annual) and feed (2021 Japan Grain and Feed Annual) forecasts. As rapeseed crush recovers to pre-COVID-19 levels, FAS/Tokyo estimates rapeseed meal consumption at 1.14 MMT and 1.17 MMT in MY 2020/21 and MY 2021/22, respectively. In response, soybean meal consumption will decrease slightly to 3.08 MMT in MY 2020/21 and 3.06 MMT in MY 2021/22. MAFF reported that

<sup>&</sup>lt;sup>6</sup> To facilitate the comparison of crude protein levels across different feeds, they are expressed in soybean meal equivalent (SME): 1 MT of rapeseed meal equals 0.7115 MT of SME; 1 MT of fishmeal is 1.445 MT of SME, 1 MT of soybeans is 0.8 MT of SME; and 1 MT of DDGS equals 0.5833 MT of SME.

<sup>&</sup>lt;sup>7</sup> Since 2001, MAFF allows meat and bone meal derived from chicken and pork for feed of poultry and swine.

feed manufacturers used 3.10 MMT of soybean meal and 1.13 MMT of rapeseed meal (0.81 MMT SME) in MY 2019/20. FAS/Tokyo assumes annual waste and unaccounted feed use of 30,000 MT for rapeseed meal and 50,000 MT for soybean meal.

Although input prices for compound feed have been increasing for the first quarter of 2021, FAS/Tokyo does not anticipate a decrease in overall feed consumption due to a compound feed price stabilization system (2021 Japan Grain and Feed Annual).

#### Fishmeal

MAFF's data on fishmeal consumption represents all fishmeal consumption by feed millers supplying the livestock sector and some fishmeal consumption in aquaculture and pet food. In MY 2019/20, (2020), Japanese livestock consumed 57,030 MT of fishmeal. FAS/Tokyo estimates total MY 2019/20 fishmeal consumption at 312,000 MT, of which approximately 255,000 MT is for aquaculture and pet food. Due to the COVID-19 pandemic, HRI consumption of farm-raised fish (e.g., sea brim and yellowtail) declined and fishmeal consumption increased as aquaculture farms delayed harvesting. Assuming the HRI sector begins to recover, FAS/Tokyo estimates total fishmeal feed consumption at 310,000 MT in MY 2020/21 (2021) and in MY 2021/22 (2022).

# Palm Kernel Meal

According to feed industry experts, palm kernel meal is a feed ingredient for ruminants that is rarely used in Japan. In the absence of MAFF data, FAS/Tokyo estimates palm kernel meal feed consumption at 4,000 MT in every marketing year.

#### Food Use Consumption

Unlike feed-grade soybean meal, typical food-grade soybean meal is produced from i) identitypreserved (IP) soybeans, ii) not heat-treated and iii) imported. Manufacturers of soy sauce, isolated plant protein products (e.g., alternative meat) and hydrolyzed vegetable protein (HVP) are the principal users of food-grade soybean meal in Japan (see <u>Utilization of Food-Grade Soybeans in Japan</u>). According to industry sources, soybean meal demand for food is gradually increasing.

Food manufacturers occasionally use fishmeal as a cheaper substitute for bonito and other fish flakes in *dashi* broth packets and other seasoning ingredients. FAS/Tokyo estimates that volume at 5,000 MT every year.

#### Industrial Consumption

The primary industrial use of soybean, rapeseed and fish meals is for organic fertilizer production. Japan does not publish industrial use data for meals. FAS/Tokyo projects a steady annual consumption of rapeseed meal and fishmeal in MY 2019/20, MY 2020/21 and MY 2021/22. Soybean meal use in fertilizer production reflects soybean prices with higher consumption during period of lower prices (e.g., MY 2019/20).

Palm kernel meal (PKM) does not have industrial use in Japan. On the other hand, Japan utilized palm kernel shells (PKS) and residues as biomass for power generation (see <u>2020 Japan Biofuels Annual</u>).

Occasionally the same HS codes are used to report trade of PKM and PKS (see <u>JA2020-0110</u> for clarification of the trade discrepancies between PKS exporters and Japan) and create an erroneous impression of substantial PKM consumption by Japan. Since 2012, Japan's PKS imports have grown exponentially as Japan incorporated biomass power generation into its feed-in tariff (FIT) program. As Japan looks to introduce sustainability certification requirements for PKS in April 2022, Japanese imports of PKS are expected to decline sharply. According to industry experts, approximately 30 percent of PKS can be satisfied Japanese new requirement.

## Trade

Japan has no tariff on meal products.

Imported soybean meal primarily fills the gap left by domestic crush in meeting protein requirements for feed (Figure 1). In response to a drop in Japan's soybean crush in MY 2019/20 due to reduced demand for soybean oil following the onset of COVID-19 restrictions, Japan's MY 2019/20 soybean meal imports reached 1.858 MMT. To meet Japan's protein requirement of 47.5 percent in high-protein plant-based feed (Table 2), China, Brazil and Paraguay supply containerized high-protein soybean meal<sup>8</sup>. The United States exports feed-grade soybean meal and food-grade IP soybean meal to Japan.

FAS/Tokyo estimates stable soybean meal imports in MY 2020/21 and a marginal decrease in MY 2021/22 as Japan's soybean crush recovers, (Figure 1).

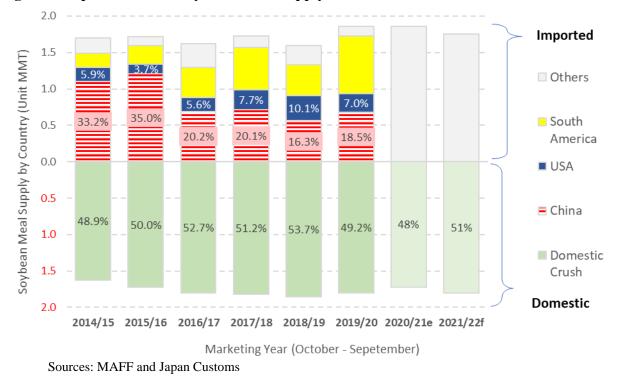


Figure 1. Japan's Annual Soybean Meal Supply

<sup>&</sup>lt;sup>8</sup> The majority of domestic soybean meal production is low-protein soybean meal (44 percent crude protein contents).

According to Japan Customs, in MY 2019/20, Japan imported 5,445 MT of rapeseed meal, which primarily consisted of fertilizer-grade high erucic acid rapeseed meal from China and India. FAS/Tokyo forecasts fertilizer-grade rapeseed meal imports to remain flat in the coming market years.

According to Japan Customs, Japan imported 203,110 MT of fishmeal in MY 2019/20 (2020) (Table 3). FAS/Tokyo forecasts fishmeal imports to marginally increase in response to the projected slight decline in domestic fishmeal production in MY 2020/21 (2021) and MY 2021/22 (2022).

1	1	(	,			
		2015/16	2016/17	2017/18	2018/19	2019/20
	Peru	23	42	44	76	51
	Chile	16	24	23	21	39
	Ecuador	18	14	11	8	9
Fishmool Immonto	Thailand	21	11	17	21	23
Fishmeal Imports	Vietnam	8	10	13	13	9
	United States	12	12	12	15	17
	U.S. (%)	7.8%	6.6%	6.3%	6.8%	8.6%
	Total	154	174	189	213	203
Domestic Pr	oduction	177	181	182	189	201
Total Fishme	eal Supply	331	356	371	402	404

#### Table 3. Japan's Fishmeal Imports (Thousand MT)

Sources: Fishmeal Association and Japan Customs

Note: Fishmeal MY is January through December. MY 2019/20 is equivalent to calendar year 2020.

Japan relies on imports to meet its demand for PKM and PKS. The import figures primarily reflect trade in PKS for power generation (see <u>JA2020-0110</u>). Due to the expected introduction of stricter sustainability certification requirements in April 2022, FAS/Tokyo forecasts a decline in PKS imports in MY 2021/22.

#### Stocks

At the start of MY 2019/20, MAFF reported soybean meal stocks at 101,067 MT, of which 50,238 MT was held by oil crushers and 50,829 MT by feed manufacturers. By MY 2020/21, soybean meal stocks fell to 97,613 MT, of which 45,421 MT was held by oil crushers and 52,192 MT by feed manufacturers. FAS/Tokyo forecasts soybean meal stocks at 100,000 MT in MY 2021/22.

MAFF data show that MY 2019/20 beginning rapeseed meal stocks were 74,414 MT, including 55,632 MT held by oil crushers and 18,782 MT held by feed manufacturers. By the start of MY 2020/21, MAFF reported rapeseed meal stocks decreased to 58,244 MT, of which crushers held 38,316 MT and feed manufacturers held 19,928 MT. FAS/Tokyo forecasts rapeseed meal stocks to return to 70,000 MT in MY 2021/22.

According to MAFF, feed manufacturers held 16,818 MT in fishmeal stocks at the beginning of MY 2019/20 (January 1, 2020) and 21,313 MT at the beginning of MY 2020/21 (January 1, 2021). FAS/Tokyo forecasts fishmeal stocks to remain around 20,000 MT.

# Oils

## **Commodities:**

Oil, Soybean Oil, Rapeseed Oil, Palm Oil, Sunflowerseed

# Production, supply and distribution of soybean oil

Oil, Soybean	2019/2020		2020/	2021	2021/2022 Oct 2021	
Market Year Begins	Oct 20	Oct 2019		020		
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	2460	2393	2520	2300	0	2400
Extr. Rate, 999.9999 (PERCENT)	0.195	0.195	0.195	0.195	0	0.195
Beginning Stocks (1000 MT)	27	17	22	22	0	17
Production (1000 MT)	480	467	491	449	0	468
MY Imports (1000 MT)	5	5	12	5	0	5
Total Supply (1000 MT)	512	499	525	476	0	490
MY Exports (1000 MT)	1	1	0	1	0	1
Industrial Dom. Cons. (1000 MT)	40	45	45	45	0	45
Food Use Dom. Cons. (1000 MT)	449	421	468	413	0	427
Feed Waste Dom. Cons. (1000 MT)	0	0	0	0	0	0
Total Dom. Cons. (1000 MT)	489	476	513	458	0	472
Ending Stocks (1000 MT)	22	22	12	17	0	17
Total Distribution (1000 MT)	512	499	525	476	0	490
(1000 MT) ,(PERCENT)						

# Production, supply and distribution of rapeseed oil

Oil, Rapeseed	2019/2	2020	2020/	2021	2021/2	2022
Market Year Begins	Oct 2019		Oct 2	020	Oct 2021	
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	2300	2270	2300	2310	0	2330
Extr. Rate, 999.9999 (PERCENT)	0.435	0.431	0.435	0.433	0	0.434
Beginning Stocks (1000 MT)	79	29	59	31	0	30
Production (1000 MT)	1000	979	1000	1000	0	1010
MY Imports (1000 MT)	42	42	45	18	0	20
Total Supply (1000 MT)	1121	1100	1104	1049	0	1060
MY Exports (1000 MT)	2	2	2	4	0	2
Industrial Dom. Cons. (1000 MT)	60	50	60	45	0	45
Food Use Dom. Cons. (1000 MT)	1000	967	1010	970	0	983
Feed Waste Dom. Cons. (1000 MT)	0	0	0	0	0	0
Total Dom. Cons. (1000 MT)	1060	1067	1070	1015	0	1028
Ending Stocks (1000 MT)	59	31	32	30	0	30
Total Distribution (1000 MT)	1121	1100	1104	1049	0	1060
(1000 MT) ,(PERCENT)						

# Production, supply and distribution of palm oil

Oil, Palm	2019/2020 Oct 2019		2020/2021 Oct 2020		2021/2022 Oct 2021	
Market Year Begins						
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	0	0	0	0	0	0
Beginning Stocks (1000 MT)	17	17	12	24	0	20
Production (1000 MT)	0	0	0	0	0	0
MY Imports (1000 MT)	781	781	800	700	0	700
Total Supply (1000 MT)	798	798	812	724	0	720
MY Exports (1000 MT)	0	0	0	0	0	0
Industrial Dom. Cons. (1000 MT)	156	194	170	134	0	130
Food Use Dom. Cons. (1000 MT)	630	580	630	570	0	570
Feed Waste Dom. Cons. (1000 MT)	0	0	0	0	0	0
Total Dom. Cons. (1000 MT)	786	774	800	704	0	700
Ending Stocks (1000 MT)	12	24	12	20	0	20
Total Distribution (1000 MT)	798	798	812	724	0	720
Yield (MT/HA)	0	0	0	0	0	0
(1000 HA) ,(1000 TREES) ,(1000 M	T) ,(MT/HA)					

## Production, supply and distribution of sunflowerseed oil

Oil, Sunflowerseed	2019/2020 Oct 2019		2020/2021 Oct 2020		2021/2022 Oct 2021	
Market Year Begins						
Japan	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Crush (1000 MT)	0	0	0	0	0	0
Extr. Rate, 999.9999 (PERCENT)	0	0	0	0	0	0
Beginning Stocks (1000 MT)	3	3	3	3	0	3
Production (1000 MT)	0	0	0	0	0	0
MY Imports (1000 MT)	32	27	35	27	0	27
Total Supply (1000 MT)	35	30	38	30	0	30
MY Exports (1000 MT)	0	0	0	0	0	0
Industrial Dom. Cons. (1000 MT)	0	2	0	2	0	2
Food Use Dom. Cons. (1000 MT)	32	25	35	25	0	25
Feed Waste Dom. Cons. (1000 MT)	0	0	0	0	0	0
Total Dom. Cons. (1000 MT)	32	27	35	27	0	27
Ending Stocks (1000 MT)	3	3	3	3	0	3
Total Distribution (1000 MT)	35	30	38	30	0	30
(1000 MT) ,(PERCENT)						

Note: New Post entries in the Production, supply and distribution (PS&D) for sunflowerseed oil do not include safflower oil data.

## Production

MAFF reports that in MY 2019/20, Japanese crushers produced 1.65 MMT of edible vegetable oil<sup>9</sup>, of which 59.5 percent was canola (rapeseed) oil, 28.4 percent soybean oil, 4.4 percent corn oil, 4.2 percent rice bran oil, 3.2 percent sesame oil, and 0.3 percent was cottonseed oil. Japan's soybean oil and canola oil production, protected by import duties on oil, relies on imported oilseeds. In the beginning of MY 2019/20, canola oil production declined due to poor rapeseed quality, but rapeseed crush recovered in the second half of MY 2019/20 following increased demand for canola oil for at-home cooking during the COVID-19 pandemic. On the other hand, MY 2019/20 soybean oil production began strong due to good crush margin but fell off due to a sharp reduction in soybean oil demand during HRI closures (JA2020-0170) during the pandemic. During the COVID-19 pandemic, the production of sesame oil and rice bran oil stayed strong for home cooking, while corn oil production declined.

FAS/Japan projects a decrease in MY 2020/21 soybean crush, in response to the COVID-19-induced shift in consumption, and a gradual recovery in MY 2021/22. FAS/Japan estimates MY 2020/21 and MY 2021/22 canola oil production to increase relative to MY 2019/20, as canola oil demand remains strong.

Japan does not produce palm oil or sunflowerseed oil.

#### Consumption

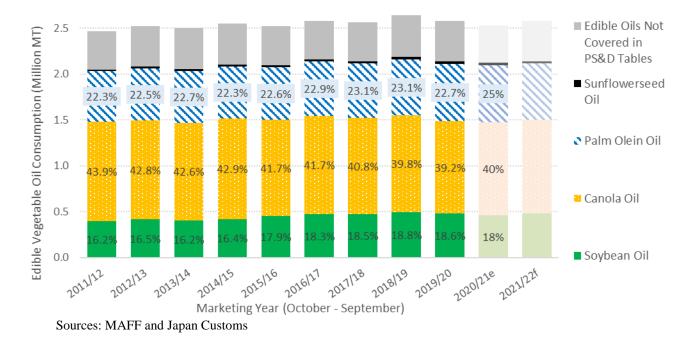
According to MAFF and Japan Customs, in MY 2019/20, Japan's consumption of edible vegetable oil for food and industrial use was 2.58 MMT (Figure 2), of which 63.9 percent came from domestic crushers. According to industry sources, the most consumed oils in MY 2019/20 were canola (39.2 percent), palm olein (22.7 percent) and soybean (18.6 percent). The target sectors for the three oil types differed, thus the impact of the COVID-19 shift in oil consumption affected the oils differently.

Canola oil dominates the edible vegetable oil market (Figure 2), particularly for at-home cooking, and experienced increased demand during the pandemic. On the other hand, the demand for palm oil and soybean oil, which are largely used in the HRI sector, fell in MY 2019/20 and 2020/21. A spike in demand for non-perishable food items, containing palm oil, such as instant noodles, frozen foods, potato chips and snacks, partially buoyed palm oil consumption drop in the HRI sector.

FAS/Tokyo estimates the total MY 2020/21 edible vegetable oil consumption to fall by 1.8 percent due to declining HRI demand stemming from the COVID-19 pandemic and adjustments made by crushers and exporters. Assuming a recovery in vegetable oil demand after the COVID-19 pandemic, FAS/Tokyo forecasts a slight increase in vegetable oil consumption in MY 2021/22.

Specialty oil products, such as sunflowerseed oil, have a small but stable niche market.

<sup>&</sup>lt;sup>9</sup> Soybean, rapeseed, corn, rice bran, sesame, cottonseed, peanuts, linseed, sunflowerseed, safflower, olive and olive pomace, coconut, palm kernel, and palm olein oil. Palm stearin oil is used for power generation and is not included. Linseed and castor oil are not considered edible oils.





# Food Use

In MY 2020/21, FAS/Tokyo estimates rapeseed oil consumption at 0.97 MMT, soybean oil at 0.43 MMT, and palm oil at 0.57 MMT. FAS/Tokyo forecasts steady food oil consumption in MY 2021/22. Sunflowerseed oil consumption is projected to remain flat at 25,000 MT annually.

# Industrial Use

Industry sources indicate that approximately seven percent of Japan's soybean oil and canola oil consumption goes toward industrial use for chemical manufacturing, cosmetics, and pharmaceuticals. Epoxidized soybean oil is used as a plasticizer and stabilizer in polyvinyl chloride plastics and the demand of food wrap has been especially strong during the COVID-19 pandemic. Industrial consumption of soybean oil, canola oil and sunflowerseed oil will remain stable in MY 2020/21 and MY 2021/22. Japan's production of biodiesel is negligible (Japan 2020 Biofuels Annual).

Industrial uses of palm oil include power generation (i.e., palm stearin) and chemical manufacturing (i.e., palm olein). Japan's utilization of palm stearin as feedstock for FIT-supported powerplants<sup>11</sup> depends on global stearin prices<sup>12</sup> (Figure 3). Following an increase in palm stearin price in MY 2019/20 and MY 2020/21, Japan's stearin consumption declined. FAS/Tokyo forecasts MY 2021/22 stearin consumption to marginally increase before Japan adopts new sustainability certification requirement for FIT-eligible biomass in April 2022. Japan also uses approximately 15 percent of palm olein oil (85 percent goes to food manufacturing) to produce detergents, soap, cosmetics, etc. Given the

<sup>&</sup>lt;sup>10</sup> Excludes palm stearin oil since its primary use is for power generation.

<sup>&</sup>lt;sup>11</sup> The FIT program promotes the use of non-edible agricultural residues for power generation (JA2019-0183).

<sup>&</sup>lt;sup>12</sup> If stearin price exceeds \$850 per MT, the fixed FIT payment of 24 yen/kWh no longer covers the feedstock cost.

high demand for sanitizing products during the COVID-19 pandemic, Japan's industrial palm olein consumption increased in MY 2019/20 and MY 2020/21, but FAS/Japan forecasts MY 2021/22 olein consumption to continue declining along with the demand for sanitizing products.

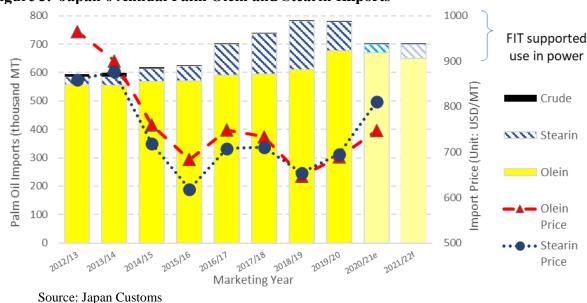


Figure 3. Japan's Annual Palm Olein and Stearin Imports

#### Trade

In MY 2019/20, imported edible oil accounted for 36.1 percent of Japan's vegetable oil supply. Japan's tariffs on soybean oil, rapeseed oil and sunflowerseed oil will be gradually eliminated under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Japan-EU Economic Partnership Agreement (EPA). The U.S.-Japan Trade Agreement (USJTA) will eliminate import duties on crude vegetable oil products in line with CPTPP, but many refined vegetable oil products covered by CPTPP were excluded from the first phase of USJTA. Over time, these agreements will likely reduce the competitiveness of Japanese crushers and change the trade patterns for vegetable oil products. Most of Japan's imports of palm oil, coconut oil, palm kernel oil and olive oil enter tariff-free due to bilateral EPAs with exporting countries (see Japan: CPTPP and EU Agreements May Reduce Demand For U.S. Oilseeds).

#### Soybean Oil

In MY 2019/20, Japan imported 5,097 MT of soybean oil, mostly from Taiwan, the United States and South Korea. Due to the value of soybean meal relative to rapeseed meal and higher tariffs on soybean oil, relative to soybeans, most of soybean oil in Japan is crushed domestically. FAS/Tokyo forecasts Japan's soybean oil imports to stay flat at 5,000 MT in MY 2020/21 and MY 2021/22.

#### Rapeseed Oil

According to industry sources, the long-term expectation is for imports to shift from rapeseed to crude canola oil due to the low value of rapeseed meal coupled with the projected shrinking of the domestic livestock industry. To prepare for that shift anticipated to take place in the next decade, Japanese oil

crushers have begun to import crude canola oil from Canada on a trial basis to take advantage of tariff reductions under CPTPP, which will eliminate tariffs on canola oil in April 2024.

In MY 2019/20, Japan imported 41,673 MT of rapeseed (canola) oil, of which 88.6 percent came from Canada. Due to COVID-19-induced swings in rapeseed crush and canola oil demand, crushers prioritized imports of rapeseed over canola oil in MY 2020/21. FAS/Tokyo forecasts that canola oil imports will hold steady in MY 2021/22 as crushers prioritize import of rapeseed over canola oil.

#### Palm Oil

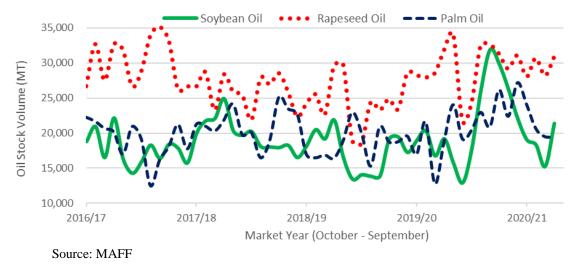
In MY 2019/20, Japan imported 780,854 MT of palm oil, of which 62.1 percent came from Malaysia and 37.9 percent from Indonesia. The relative distribution on stearin and olein imports changed per description in the Consumption section above. FAS/Tokyo projects a decline in palm oil imports in MY 2020/21 and MY 2021/22 due to falling demand in chemical manufacturing and power generation.

#### Sunflowerseed Oil

Japan's MY 2019/20 sunflowerseed oil imports were 27,144 MT, of which 69.6 percent came from the EU. Sunflowerseed oil is subject to a tariff<sup>13</sup>, which will be eliminated under the Japan-EU EPA in April 2023. Due to stable home cooking demand, FAS/Tokyo forecasts that Japan will import 27,000 MT of sunflowerseed oil in MY 2020/21 and MY 2021/22. Sunflowerseed oil and safflower seed oil share the 6-digit HS codes (1512.11 and 1512.99). Japan also imported 4,413 MT of safflower seed oil in MY 2019/20, of which 68 percent came from the United States.

#### Stocks

MAFF reported MY 2019/20 ending stocks for soybean oil, rapeseed oil, palm oil, and sunflowerseed oil at 22,108 MT, 31,084 MT, 17,006 MT, and 3,179 MT, respectively. Despite some fluctuation in Japanese crushers' oil stocks (Figure 4), particularly for soybean oil, during the pandemic<sup>14</sup>, FAS/Tokyo forecasts oil stocks to stay at pre-COVID levels in MY 2020/21 and MY 2021/22.



#### Figure 4. Oil Stocks held by Crushers on a Monthly Basis

<sup>&</sup>lt;sup>13</sup> 8.5 yen for crude (high acid) oil or 10.4 yen per kg for refined (low acid) oil.

<sup>&</sup>lt;sup>14</sup> Japan's soybean oil stocks hit a 10-year high in June 2020.

#### Attachments:

No Attachments