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## Japan

### Oilseeds and Products Annual

#### Marginal Increase in Japanese Soybean Crush

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**Report Highlights:**

A planned increase in the price of cooking oil in spring 2017 is not expected to have an impact on consumption. Further, Japanese crushers are enjoying improved margins on soybean meal. FAS/Tokyo forecasts a slight increase in soybean imports at 3.22 million metric tons (MMT) in market year (MY) 2016/17. Rapeseed imports and crush are forecast to decrease to 2.37 MMT given the increase in soybean imports. Food grade soybean imports increased marginally in MY 2016/17 to 760,000 metric tons based on novel flavors and consumer perceptions of soybean food products as healthy.

Keywords: JA7046, soybean, rapeseed, palm, olive, oil, meal, tofu, natto.

## Oilseeds Section

Oilseed, Soybean

Oilseed, Rapeseed

### Planted Area:

Since hitting bottom in marketing year (MY; October to September) 2013/14 (108,900 ha), Japan's soybean planted area in MY 2016/17 increased for the third consecutive year to 150,000 hectares (ha), a 6 percent increase from the previous fiscal year (142,000 ha). One factor in the increase has been the conversion of rice paddy to alternative crops. Japan's Ministry of Agriculture, Forestry and Fisheries (MAFF) adopted two subsidy programs in 2007 to reduce table rice production by encouraging farmers to plant other crops under a program known as the "Rice Paddy Utilization Direct Payment Subsidy", and to encourage the production of strategic crops such as wheat and soybeans (based on yield and quality of production) known as the "Dry Field Crop Direct Payment Subsidy". MAFF revises these subsidy programs every three years (the next revision will occur in early April 2017 and run through March 2020). Since the government of Japan (GOJ) announced an end to rice subsidies in 2018, and introduced the highest value diversion payment value in 2014, farmers have converted 11,400 ha of rice paddy land to soybean crops by MY 2016/17.

Table 1: Field Types Planted with Soybean

| Area (ha)                       | Paddy    |          |        |        | Field    |          |        |        |
|---------------------------------|----------|----------|--------|--------|----------|----------|--------|--------|
|                                 | National | Hokkaido | Tohoku | Kyushu | National | Hokkaido | Tohoku | Kyushu |
| MY 2013/14                      | 108,900  | 14,500   | 29,500 | 19,800 | 19,900   | 12,300   | 2,690  | 611    |
| MY 2014/15                      | 110,800  | 15,200   | 29,400 | 20,900 | 20,800   | 13,400   | 2,620  | 603    |
| MY 2015/16                      | 117,700  | 17,000   | 32,100 | 21,200 | 24,300   | 16,900   | 2,570  | 637    |
| MY 2016/17                      | 120,300  | 18,200   | 33,400 | 21,200 | 29,800   | 22,000   | 2,540  | 1,090  |
| Area Change since MY 2013/14    | 11,400   | 3,700    | 3,900  | 1,400  | 9,900    | 9,700    | -150   | 479    |
| Percent Change since MY 2013/14 | 10.5%    | 25.5%    | 13.2%  | 7.1%   | 49.7%    | 78.9%    | -5.6%  | 78.4%  |

Source: MAFF

Japan's leading soybean producing region is Hokkaido, with 35 percent of production, followed by the Tohoku region (northeast Japan) with 23 percent, and the Kyushu region (the southernmost of Japan's main islands) with 9 percent. Hokkaido is Japan's northernmost island, where farm sizes are larger in scale at 22 ha (as opposed to 1.5 ha in the rest of Japan) and the lack of a rainy season is more suitable to soybean production in Japan. Hokkaido also contains the majority of Japan's dry fields where farmers produce wheat, sugar beets, potatoes, and soy/adzuki beans in crop rotations with soybeans.

Japanese farmers planted soybeans on 150,000 ha in MY 2016/17; 120,000 ha in rice paddy and 30,000 ha in dry field. Hokkaido represented 73 percent of the dry field area, as well as 80 percent of the increased area planted in in MY 2016/17.

Tohoku, like Hokkaido, has little or no rainy season and is more suitable to soybean production. Rice paddy use is much greater in Tohoku (33,400 ha) than in Hokkaido (18,200 ha in MY 2016/17), and the rice diversion policy is a larger factor behind its increased area.

The typical crop rotation in Hokkaido is wheat, sugar beets, potatoes, and legumes (soybeans or adzuki beans). In the last few years, seeking higher returns, many farmers in Hokkaido have chosen to plant soybeans rather than adzuki beans. In MY 2015/16, the reduction in adzuki beans planted area was 5,700 ha, nearly equal to Hokkaido's increase in soybean dry field planted area (5,100 ha).

In 2016, the GOJ revised the "Basic Plan for Food, Agriculture and Rural Areas" (Basic Plan), a policy to divert farmers from rice production by encouraging the planting of soybeans, wheat or feed crops. The Basic Plan calls for 150,000 ha in total soybean planted area and 320,000 metric tons (MT) in soybean production by 2025. Japan's planted area reached this target in MY2015/16, but yields are insufficient to reach the production target. To achieve the production target, Japan's average yield would need to increase 30 percent from the ten-year average of 1.7 MT/ha to 2.15 MT/ha. Japan's average dry field yield of 2.39 MT/ha is reduced by the yield on paddy fields (1.49MT/ha), which make up 80 percent of the national planted area. Paddy production isn't necessarily worse for soybean production (as it generally has a higher pH level, allowing the plant to better absorb nitrogen) but soybeans are planted in in May and June during Japan's rainy season (except Hokkaido) and rice paddy's water retention causes water-logging. Soybeans grown on rice paddy in Hokkaido have an average yield near the nation dry field average.

The GOJ will continue to pay farmers to convert from rice production and will reduce the payments made for volume and quality of soybean production beginning in JFY 2017 (beginning April 1, 2017). FAS/Tokyo forecasts that soybean planted area will continue to expand, albeit at a slower rate, in MY 2017/18 to 155,000 ha.

The Basic Plan also set a goal for rapeseed, including a transition program that resulted in a 21 percent (350 ha) increase in planted area, bringing the total to 1,980 ha in MY 2016/17. Despite the limited size of the total area planted, FAS/Tokyo forecasts a similar increase in MY 2017/18, to 2,300 ha.

## Production

A series of typhoons struck northern Japan for the first time in recorded history in late summer 2016, inflicting damage to Japan's soybean producing regions. Although planted area increased six percent in MY 2016/17, the average yield fell to 1.57 MT/ha (compared to a 10-year average of 1.71 MT/ha) leading to a reduction in production to 236,000 MT.

Japan plants soybean varieties that have a much lower yield than those in the United States, but are more suited to the heavy wind and rain Japan experiences in the rainy season. To bridge the difference, MAFF began a five-year research project to improve soybean yields that began in JFY 2015. The project involves 50 organizations, including 28 prefectures, industry groups, academia, and private companies. The project will develop diagnostic procedures to collect physical, chemical and biological data from the soil in soybean fields to investigate factors that contribute to low yields, and techniques to improve productivity. But the availability of more productive soybean varieties hasn't gained widespread acceptance among Japanese farmers, in part because soybean food producers are skeptical that new varieties may change the flavor of their products. Five traditional, low-yielding soybean

varieties account for 60 percent of soybean production in Japan, despite the availability of newly developed high-yielding varieties.

Assuming a return to the 10-year average yield, and taking into account the increased planted area, FAS/Tokyo forecasts soybean production to increase to 260,000 MT in MY 2017/18, a 10 percent increase from the previous marketing year.

### Planted area and Production of Soybean in Japan



Source: Ministry of Agriculture, Forestry and Fisheries

Like soybeans, Japanese rapeseed is grown mostly in Hokkaido and the Tohoku region, accounting for 44 percent and 30 percent of Japan’s production, respectively. Domestic rapeseed production is primarily for ornamental use, or for small local crushers to make products for local consumption. Corresponding to the increase in planted area, Japan’s rapeseed production increased 15 percent to 3,630 MT in MY 2016/17, and is forecast to increase further to 4,000 MT in MY 2017/18. However, domestic production accounts for only 0.1 percent of Japanese consumption of rapeseed -- almost all Japanese rapeseed consumption comes from imports.

### Consumption

#### Crush:

There are an estimated 40 crushing plants in Japan, of which thirteen are large-scale plants that produce approximately 90 percent of Japan’s annual oil consumption. Most of these facilities were built in the late 1960’s and are less efficient than newer, modern facilities. One of the major oil crushing companies

has built a new soybean crushing plant that will begin operations in April 2017. This new facility will replace a 48 year-old plant and will crush soybeans exclusively. Other similar projects may be scheduled in the next 10 years as many of Japan's crushing facilities will reach their expected longevity of 50 years.

Table 2: Japan's Oil Crushing Capacity

| CY   | Number of Mills* | Crushing Capacity*<br>(1,000 MT) | Materials crushed<br>(1,000 MT) | Operating Ratio*<br>(percent) |
|------|------------------|----------------------------------|---------------------------------|-------------------------------|
| 2012 | 40               | 8,587                            | 4,977                           | 58.0                          |
| 2013 | 40               | 8,587                            | 4,977                           | 57.5                          |
| 2014 | 40               | 8,587                            | 5,068                           | 59.0                          |
| 2015 | 40               | 8,587                            | 5,335                           | 62.1                          |
| 2016 | 40               | 8,587                            | 4,986                           | 58.1                          |
| 2017 | 40               | 8,400                            | 5,000*                          | 59.5*                         |

Source: MAFF (Vegetable oil production report), \* FAS/Tokyo estimate

Rapeseed oil is the most-consumed oil in Japan (about 75 percent of the in-home) with 44 percent of the market. Palm oil is the second most-consumed oil with 27 percent, and soybean oil accounts for 14 percent. Rapeseed and soybean oil are largely interchangeable and are blended in vegetable oil, referred to as "salad" oil in Japan. Although the profitability of crushing soybeans is derived from soybean meal, industry sources indicate that crushing volume is largely determined by domestic demand for oil. Currently, higher prices for Chinese soybean meal and a weaker Japanese Yen have improved the profit margin on meal produced in Japan from imported oilseeds, which is predominantly soybean meal. Increased consumption of soybean oil in hotel, restaurant and institutional services (HRI; such as supermarket ready-made fried products) has supported a rise in the crush rate of soybeans that have driven a reduction in that of rapeseed. FAS/Tokyo estimates soybean crush in MY 2016/17 will increase by 2 percent to 2.33 million metric tons (MMT). FAS/Tokyo forecasts a reciprocal decrease in rapeseed crush of one percent to 2.4 MMT in MY 2016/17, a rate that is expected to continue into MY 2017/18.

Japan's oil industry announced a planned increase to the retail price of "salad" oil that will take effect in spring 2017. The announcement caused a brief surge in oil purchases ahead of the increase. Industry contacts, however, expect demand for oil to remain relatively unchanged as it is an essential cooking ingredient. Further, crushers have expressed interest in maintaining soybean crush to take advantage of higher soybean meal margins. FAS/Tokyo forecasts crushing volumes of soybeans to remain flat at 2.33 MMT in MY 2017/18.

#### Food Use Consumption:

In addition to its use for oil and meal, soybean is an essential ingredient in Japanese diets, with dishes such as tofu, natto, boiled beans, soy sauce, and miso consumption accounting for approximately 25 percent of total domestic soybean consumption (65 percent is used for oil production and soybean meal). According to industry sources, all but a negligible amount of domestically produced soybeans are used

for food. Among the various types of soy food available in Japan, tofu continues to dominate the utilization of food grade soybeans, accounting for almost half of total consumption.

Contrary to Japan's decline in population and the resultant reduction in consumption, these soy foods are gradually regaining their popularity due to their perceived benefits by health conscious Japanese consumers. Some tofu manufacturers have successfully created new demand through the development of new products, such as flavored tofu. Flavored soy food is now expanding to natto and soy milk. FAS/Tokyo forecasts domestic soy food consumption to increase one percent (to 970,000 MT) in MY 2016/17, and expects that trend to continue in MY 2017/18, increasing domestic consumption to 980,000 MT.

#### Feed, Seed, Waste Consumption:

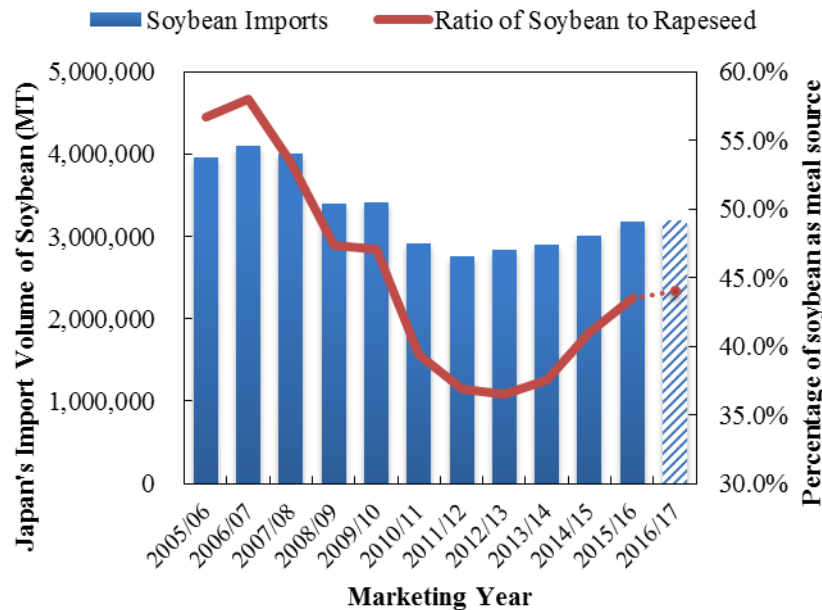
Consumption of soybeans used for feed, seed and waste is unchanged in MY 2016/17 and MY 2017/18 (at 155,000 MT). A marginal decline in consumption given gradually declining livestock inventories (and associated reductions in feed requirements -- see [JA7011](#)) is offset by increased waste from greater volumes of crushing.

Rapeseeds (whole seed) are generally not used for feed, and the volume used for seed is negligible in Japan. FAS/Tokyo forecasts rapeseed feed, seed and waste in MY 2016/17 and MY 2017/18 at 5,000 MT.

#### Trade

Japan's imports of soybeans have increased marginally since 2012 when the relative value of meal to oil shifted in favor of meal – and thus soybeans. Chart 2 below depicts the trend in soybean vs. rapeseed meal and the bar graph corresponds with the increase in soybean oilseed imports.

**Chart 2 - Trend of soybean crushing in Japan**



Source: MAFF

Japan imported 3.2 MMT of soybeans in MY 2015/16. Monthly data indicates that the margins on crush continue to favor meal, contributing to the expectation that increased soy crush will continue through the current marketing year. Available data do not show a build-up of rapeseed stocks that historically indicate that the value ratio is shifting to oil. FAS/Tokyo expects the five-year trend toward greater soybean meal utilization to continue on reduced soybean meal imports, greater utilization in compound feed, and the markets ability to absorb the increased production of soybean oil (see “Consumption” section for hotel, restaurant and supermarket use). FAS/Tokyo estimates that imports will realize a marginal increase of one percent for MY 2016/17 to 3.22 MMT, approximately 760,000 MT of which is for food.

The United States has the largest market share of food soybeans at approximately 50 percent (390,000 MT), followed by Canada with 40 percent. Nearly all food soybean imports are non-genetically engineered, identity preserved (IP) and are grown on contract and transported through segregated channels. IP soybeans are generally sourced from northern U.S. states and Canada at premium prices through annual contracts. Increasingly, those contracts also call for specific attributes that are preferred for food soybean products, such as small size for natto, or high-protein varieties (Vinton 81 and Beeson) for tofu.

Japan will consume an estimated 970,000 MT of food soybeans in MY2016/17, and produced 234,000 MT domestically. FAS/Tokyo forecasts a 10,000 MT reduction in import volumes of food soybeans to 750,000 MT in MY 2017/18 as a result of greater Japanese domestic production (see “Area Planted” and “Production” sections above).

For crushing, the United States accounts for nearly 75 percent (1.8 MMT) of imported soybeans, followed by Brazil with 14 percent. Soybean demand in Japan is saturated, though areas of the market such as HRI are absorbing the increased crush. FAS/Tokyo expects soybean imports for crushing to remain unchanged at 2.33 MMT in MY 2017/18, but a decrease in food use soybeans will contribute to a marginal decline in soybean imports to 3.18 MMT.

Unlike for soybeans, all imported rapeseed is for crushing. As mentioned above, the value ratio of oil vs. meal has favored soybean meal, reducing the demand for rapeseed. Given the anticipated increase in soybean utilization, FAS/Tokyo forecasts a one percent decrease in rapeseed imports to 2.37 MMT in MY 2016/17. FAS/Tokyo forecasts this trend to continue in MY 2017/18 and further decline in rapeseed imports.

### Stocks

Since the termination of the national soybean stock program in 2010, the only stocks are those of the private sector (e.g. crushing mills, distributors and feed millers). According to industry sources, the volume of food soybean stocks is stable at roughly 100,000 MT, a volume sufficient for soybean food producers to maintain production through a limited disruption of supplies. Industry contacts indicate that crushers maintain approximately 4-6 weeks of crushing consumption throughout the year (approximately 200,000 MT), with seasonal variations. Japan's stocks have consistently remained at these levels for years and FAS/Tokyo forecasts these stocks to remain unchanged in MY 2016/17 and MY 2017/18. Similarly, crushers and feed millers maintain 200,000 MT of rapeseed stocks, and this too is expected to remain static in the near-term.

### **Meal Section**

Meal, Soybean

Meal, Rapeseed

Meal, Palm Kernel

Meal, Fish

### Production

Domestic crushers generally produce about half of Japan's demand for soybean meal with soybean meal imports filling the remainder. All but a negligible amount of rapeseed meal comes from domestic crush. The volume of meal production is determined by demand for oil. Soybean and rapeseed meal are crushed continuously, with some plants dedicated and others switching between them as needed.

In MY 2014/15, Japanese feed manufacturers reduced their utilization of distillers dried grains and solubles (DDGS) by 130,000 MT, but increased utilization of soybean and rapeseed meals by a combined 120,000 MT. DDGS utilization increased marginally in MY 2015/16, but the inclusion of soybean meal in compound feed increased 160,000 MT while rapeseed meal decreased 100,000 MT.

As stated above, the underlying value ratio continues to encourage soybean crush. Furthermore, industry sources anticipate a reduction in soybean prices in 2017 on expectations for high soybean



production in major suppliers. As demand for soybean oil remains strong, and margins on soybean meal are favorable, FAS/Tokyo estimates that Japan's soybean meal production will increase slightly, by two percent, to 1.76 MMT in MY 2016/17. Further, based on the forecast of unchanged soybean crush volumes in MY 2017/18, FAS/Tokyo forecasts production of soybean meal to remain flat in MY 2017/18 (1.76 MMT).

The inverse relationship of soybean to rapeseed crush indicates a reduction in the production of rapeseed meal in MY 2016/17. FAS/Tokyo estimates a marginal rapeseed meal production decrease in MY 2016/17 to 1.33 MMT (compared to 1.34 MMT in MY 2015/16). As with soybean meal production, FAS/Tokyo forecasts rapeseed meal production to remain unchanged in MY 2017/18 (1.33 MMT).

Fish meal is used to produce feed, primarily for aquaculture and some livestock, and a small volume is utilized for fertilizer. Japan imports a little more than half of its fish meal requirements. Nearly 90 percent of domestically produced fish meal is produced from fish residue, and ten percent is produced from whole raw fish. According to industry sources, domestic fish residues have become more difficult to collect due to government policies aimed at reducing food loss. Further, the domestic fish processing industry has been shrinking slowly, contributing to the gradual decline in domestic fish meal production. Fish meal is predominantly imported from Ecuador (22,000 MT), Peru (21,000 MT) and Thailand (21,000 MT). FAS/Tokyo forecasts fish meal production to fall one percent to 183,000 MT in MY 2016/17 and another one percent to 181,000MT in MY 2017/18.

All palm kernel meal is imported in Japan as there is no domestic production. Japan uses the same harmonized standard (HS) code for palm kernel meal and palm kernel shell (PKS). PKS is a popular fiber material for firing in cogeneration power plants – an area of strong investment and growth in Japan. PKS imports have doubled each year for the last few years and are nearing 1 MMT in 2016. Of that volume, however, only about 5,000 MT to 7,000 MT reflects Japan's imports of palm kernel meal, which has historically been a minor ingredient in feed.

### Consumption

Nearly 90 percent of soybean meal (3 MMT), is consumed as feed in Japan. The remaining portion of soybean meal is used as an ingredient in the production of food products such as soy protein and soy sauce, estimated at 400,000 MT annually. Therefore, the volume of compound feed and the ratio of soybean meal in compound feed are important factors in determining the volume of consumption. Japanese compound feed products contain about 12-13 percent soybean meal. Of soybean meal used for compound feed in Japan, 60 percent is used for poultry (layers and broilers), 20 percent is used for swine, 10 percent for beef, and 10 percent for dairy.

As mentioned in the previous section, the MY 2014/15 formulation of compound feed increased the use of soybean meal at the expense of DDGS and rapeseed. While the DDGS inclusion was largely unchanged in 2015/16, rapeseed meal was reduced 100,000 MT and soybean meal increased another 130,000 MT. FAS/Tokyo forecasts feed consumption of soybean meal (including waste) to increase one percent to 3.05 MMT in MY 2016/17, and to remain flat in MY 2017/18.

Table 3 - Japanese Livestock Population (1,000 head)

| Calendar Year | Dairy Cows | Beef Cattle | Swine | Layers  | Broilers |
|---------------|------------|-------------|-------|---------|----------|
| 2011          | 1,467      | 2,763       | 9,768 | 175,917 | N/A*     |
| 2012          | 1,449      | 2,723       | 9,735 | 174,949 | N/A*     |
| 2013          | 1,423      | 2,624       | 9,685 | 172,238 | 131,624  |
| 2014          | 1,395      | 2,567       | 9,537 | 172,349 | 135,747  |
| 2015          | 1,371      | 2,489       | N/A*  | N/A*    | N/A*     |
| 2016          | 1,345      | 2,479       | 9,313 | 175,733 | 134,395  |

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

\* There were no surveys conducted for swine in 2015, or for poultry in 2011, 2012, and 2015.

Rapeseed meal is another source of vegetable protein in compound feed products, but its inclusion rate in compound feed ranges between 4.2 and 5.5 percent due to price and nutrition/quality considerations. Feed manufacturers typically increase the ratio of rapeseed meal (while decreasing the volume of soybean meal) to save money. Industry sources have noted that rapeseed meal is less desirable due to its high tannin levels and coarse texture compared to soybean meal. In Japan, generally 40 percent of rapeseed meal is used for poultry (layers and broilers), 30 percent for swine, 20 percent for beef cattle, and 10 percent for dairy cows. Based on the forecasted increase in soybean meal production and consumption, FAS/Tokyo estimates feed consumption of rapeseed meal (including waste) to decrease one percent to 1.10 MMT in MY 2016/17, followed by a marginal decrease in MY 2017/18 (on continued downward pressure from soybean crush).

Approximately 60 percent of fish meal is used for aquaculture, followed by poultry and swine feed, and a small amount used for fertilizer. As mentioned above, domestic fish processing is declining slowly, reducing the availability of raw material for fish meal production. Aquaculture and livestock industries are considering the use of plant-derived protein to reduce costs. FAS/Tokyo estimates fish meal consumption will be reduced marginally to 350,000 MT in MY 2016/17. A gradual decline in fish meal consumption is expected in MY 2017/18.

Palm kernel meal is a common feed ingredient in other countries, such as New Zealand. Trade statistics show that Japanese palm kernel meal imports have increased significantly in recent years. The Harmonized schedule (HS) code 230660 includes both palm kernel meal and palm kernel shells that are used for biomass fuel. Palm kernel meal has been imported for more than 30 years and has historically been a minor ingredient in feed. The annual import volume of palm meal has consistently been approximately 5,000 to 7,000 MT over the last five years.<sup>1</sup>

## Trade

### Meal, Soybean

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<sup>1</sup> The substantial growth in imports under this HS code is largely the result of palm kernel shells that are imported for use in co-generation biomass facilities. The number of these facilities has been increasing significantly over the same number of years, and palm kernel shells are a registered alternative to the forest thinnings that many of these facilities are designed to utilize.

Soybean meal imports increased 1.5 percent to 1.72 MMT in MY 2015/16. The United States the third largest supplier after China and Brazil with 70 and 11 percent of trade, respectively. U.S. exports fell seven percent, mainly due to less competitive prices and freight expenses. Chinese meal offers greater flexibility in delivery time and volumes than shipments from the United States.

In the first five months of MY 2016/17, Japan imported soybean meal from India, Argentina, Paraguay, Brazil and the United States, which had competitively lower prices than China. Although industry contacts expect Chinese soybean meal imports to pick up later in the MY, strong domestic demand in China may encourage a continuation of Japanese soybean meal imports from other markets. Japan's relatively weaker currency, on the other hand, has made domestic soybean crush more competitive with soybean meal imports. FAS/Tokyo forecasts a marginal decline in soybean meal imports in MY 2016/17 (to 1.69 MMT), and a marginal decline in soybean meal imports in MY 2017/18 (to 1.68 MMT) on flat domestic soybean crush.

#### Meal, Rapeseed

Rapeseed meal trade is minimal, and imports are primarily made to adjust inventory. Japan imported 15,000 MT of rapeseed meal in MY 2015/16, and has done so for years. FAS/Tokyo forecasts import volumes of soybean oil will remain the same in MY 2016/17 and MY 2017/18 (15,000 MT).

#### Meal, Fish

According to industry sources, some of the decrease in domestic fish meal production is replaced by increased imports, but the rest resulted in decreased fish meal utilization. Furthermore, MY 2016/17 fish meal prices are approximately 10 percent lower than in the previous year. Therefore, FAS/Tokyo forecasts fish meal imports in MY 2016/17 to increase slightly by one percent from the previous year (to 165,000 MT). FAS/Tokyo forecasts a similar increase in MY 2017/18 to 167,000 MT.

### **Oil Section**

Oil, Soybean

Oil, Rapeseed

Oil, Palm

Oil, Sunflower seed

### Production

Japan's crushing industry relies on imported soybean and rapeseed, as all but a negligible amount of domestic soybean production is used for food. The price of imported soybean meal and demand for oil are the two leading factors in determining crush volume. Given stable soybean meal demand from Japanese feed millers, and competitively high international soybean meal prices supported by strong demand in China, FAS/Tokyo estimates soybean oil production at 455,000 MT in MY 2016/17, an increase of two percent from MY 2015/16. FAS/Tokyo forecasts comparable volumes of soybean oil production in MY 2017/18 (455,000 MT) as industry sources expect domestic demand for soybean meal to remain unchanged.

Rapeseed oil accounts for nearly 75 percent of the share of in-home cooking oil use, and a 40 percent share of the overall oil consumption in Japan (see the "consumption" section below for more details). Some of rapeseed oil's in-home market share has been eroded in recent years by gains in demand for olive oil and other specialty oils that market on health benefits. Furthermore, since soybean oil and rapeseed oil are inter-changeable in blended vegetable oil ("salad oil"), increasing soybean oil production in response to increased demand for soybean meal has displaced some rapeseed oil. Therefore, consistent with the forecast for rapeseed imports and crush, FAS/Tokyo forecasts rapeseed oil production to decrease one percent to 1.03 MMT in MY 2016/17. FAS/Tokyo also forecasts MY 2017/18 rapeseed oil production to remain flat at 1.03 MMT.

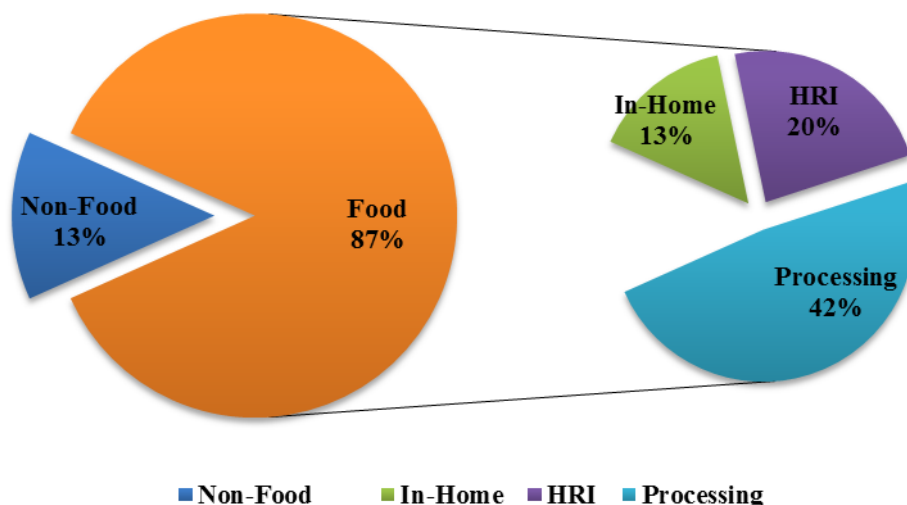
Japan does not produce palm or sunflower seed oil.

### Consumption

According to MAFF, soybean oil (17%), rapeseed oil (44%), and palm oil (23%) are the major vegetable oils that account for 84 percent of total domestic vegetable oil consumption (2.36 MMT) in Japan in calendar year 2016. The remaining 16 percent of domestic vegetable oil consumption include: corn oil, rice oil, olive oil, palm kernel oil, sesame oil, and coconut oil - of which olive oil consumption has increased rapidly in 2016 and now has a market share of two percent.

According to industry sources, in-home oil consumption is on a steady decline due in large part to Japan's demographic decline, but also due to perceptions that oil consumption is not part of a healthy diet, and opportunities to eat out or bring food home. Consumption from HRI has been an important outlet for increased soybean oil production. According to MAFF, per capita vegetable oil supply and consumption had a marginal increase to 36.7 grams per day in JPY 2017 (compared to 34.9 grams in JPY 2015).

**Chart 3 - Vegetable Oil Use by Purposes in Japan**



Source: Japan Margarine, Shortening & Lard Industries Association

As described above, rapeseed oil is the dominant in-home cooking oil, largely due to its healthy image associated with a high oleic acid content. HRI industries prefer the flavor and color attributes of soybean oil, which is ideal for traditional cuisine like tempura. FAS/Tokyo forecasts an increase in soybean oil consumption to 415,000 MT and an additional increase to 420,000 MT in MY 2017/18. FAS/Tokyo expects a marginal decrease in rapeseed oil consumption to 990,000 MT in MY 2016/17 and for consumption to remain flat in MY 2017/18.

The second most consumed oil in Japan is palm, whose signature characteristic is its solid form at room temperature and lack of color or flavor. These features make palm oil ideal for producing various processed products, including chocolate, instant noodles and ice cream. Margarine, “fat spread” (vegetable oil-based low-fat flavored cream), and shortening are major processed products using vegetable oils as a processing product. Non-food uses of oil account for 350,000 MT annually for the production of paint, varnish, ink, soap and lubricants.

Major oil suppliers announced a market price increase of 30 JPY/kg (approximately 15 percent) in December 2016, which created a last-minute surge in purchases before prices could rise. As leading oil producers have yet to negotiate the actual increase with retailers, the long-term impact of the increase has yet to be seen. Industry contacts expect the market to experience a temporary lag in demand due to the rush to purchase before the price increase, but don’t expect a lasting impact as oil is an essential item for daily life and consumption that doesn’t change drastically. Further, domestic soybean meal value is expected to be maintained at a level in favor of soybean crushers, maintaining a strong supply of soybean oil.

Trade

Palm oil is the second most commonly utilized oil in Japan after rapeseed. Following Economic Partnership Agreements with Malaysia in 2005 and Indonesia in 2008, Japan eliminated duties on palm oil that led to 38 percent increase in imports from 450,000 MT in MY 2004/05 to 620,000 MT in MY 2015/16. Imports have continued a modest increase over the last few years and industry sources expect that trend to continue in MY 2016/17. Taking into consideration an estimated two percent increased utilization of palm oil in HRI and the processed food sectors, FAS/Tokyo forecasts an increase of palm oil imports to 640,000 MT in MY 2016/2017, and will further increase to 650,000 in MY 2017/18.

Sunflower seed oil imports have been small and trade has been flat. It is used to produce a hard butter that is a substitute for cocoa butter. FAS/Tokyo expects Japan to continue imports at 21,000 MT in MY 2016/17, and expects imports to remain flat at 21,000 MT in MY 2017/18.

Japan imported 7,000 MT of soybean oil in MY 2015/16, largely for specialty products. FAS/Tokyo forecasts imports of soybean oil to remain flat at 7,000 MT in MY 2016/17, and again in MY 2017/18. Japan also imported 15,000 MT of rapeseed oil in MY 2015/16 as companies made short-term adjustments to supplies. FAS/Tokyo forecasts rapeseed oil imports to remain flat at 15,000 MT in MY 2016/17 and in MY 2017/18.

Table 4 contains Japan's tariffs on major oilseeds and oils.

Table 4 - Japan's tariff on major oilseeds and oils (as of January 2017)

| HS Code     | Commodity   | Duty        |
|-------------|---|-------------|
| 1201.10,.90 | Soybeans  | Free        |
| 1205.10,.90 | Rapeseed  | 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  |
| 1509 & 1510 | Olive oil   | Free        |
| 1511.10-000 | Palm oil, crude, EPA preferential rate for Malaysia and Indonesia   | Free        |
| 1511.90-010 | Palm stearin, EPA preferential rate for Malaysia and Indonesia      | Free        |
| 1511.90-090 | Palm oil, other, EPA preferential rate for Malaysia and Indonesia   | Free        |
| 1512.11-110 | Sunflower-seed oil, crude, of an acid value exceeding 0.6           | 8.5 yen/kg  |
| 1512.11-210 | Safflower oil, crude, of an acid value exceeding 0.6                | 8.5 yen/kg  |
| 1512.11-120 | Sunflower-seed oil, crude, other                                    | 10.4 yen/kg |
| 1512.11-220 | Safflower-seed oil, crude, other                                    | 10.4 yen/kg |
| 1512.19-010 | Sunflower-seed oil and its fractions                                | 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 |
| 1514.99-000 | Rapeseed oil, other   | 13.2 yen/kg |
| 2301.20     | Fish meal   | Free        |
| 2304.00     | Soybean meal  | Free        |
| 2306.41,.49 | Rapeseed meal   | Free        |
| 2306.60     | Oil-cake and other solid residues of palm nuts or kernels           | Free        |

Source: Japan Tariff Association

## PSD Tables

| Oilseed, Soybean<br>Market Begin Year<br>Japan | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--|---------------|----------|---------------|----------|---------------|----------|
|  | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Planted                                   | 130           | 142      | 140           | 150      | 0             | 155      |
| Area Harvested                                 | 142           | 142      | 140           | 150      | 0             | 155      |
| Beginning Stocks                               | 206           | 206      | 255           | 255      | 0             | 256      |
| Production                                     | 242           | 242      | 240           | 236      | 0             | 260      |
| MY Imports                                     | 3186          | 3186     | 3100          | 3220     | 0             | 3180     |
| MY Imp. from U.S.                              | 1850          | 2204     | 2150          | 2220     | 0             | 2200     |
| MY Imp. from EU                                | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                                   | 3634          | 3634     | 3595          | 3711     | 0             | 3696     |
| MY Exports                                     | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                                  | 0             | 0        | 0             | 0        | 0             | 0        |
| Crush  | 2283          | 2283     | 2200          | 2330     | 0             | 2330     |
| Food Use Dom. Cons.                            | 941           | 941      | 1000          | 970      | 0             | 980      |
| Feed Waste Dom. Cons.                          | 155           | 155      | 155           | 155      | 0             | 155      |
| Total Dom. Cons.                               | 3379          | 3379     | 3355          | 3455     | 0             | 3465     |
| Ending Stocks                                  | 255           | 255      | 240           | 256      | 0             | 231      |
| Total Distribution                             | 3634          | 3634     | 3595          | 3711     | 0             | 3696     |
|  |               |          |               |          |               |          |

(1000 HA) ,(1000 MT)

| Meal, Soybean<br>Market Begin Year<br>Japan | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|---|---------------|----------|---------------|----------|---------------|----------|
|   | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|   | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Crush                                       | 2283          | 2283     | 2200          | 2330     | 0             | 2330     |
| Extr. Rate, 999.9999                        | 0.7547        | 0.7547   | 0.7568        | 0.7554   | 0             | 0.7554   |
| Beginning Stocks                            | 56            | 56       | 47            | 77       | 0             | 77       |
| Production                                  | 1723          | 1723     | 1665          | 1760     | 0             | 1760     |
| MY Imports                                  | 1721          | 1720     | 1800          | 1690     | 0             | 1680     |
| MY Imp. from U.S.                           | 250           | 124      | 250           | 100      | 0             | 90       |
| MY Imp. from EU                             | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                                | 3500          | 3499     | 3512          | 3527     | 0             | 3517     |
| MY Exports                                  | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                               | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.                       | 280           | 280      | 280           | 280      | 0             | 280      |
| Food Use Dom. Cons.                         | 120           | 120      | 120           | 120      | 0             | 120      |
| Feed Waste Dom. Cons.                       | 3053          | 3022     | 3020          | 3050     | 0             | 3050     |
| Total Dom. Cons.                            | 3453          | 3422     | 3420          | 3450     | 0             | 3450     |
| Ending Stocks                               | 47            | 77       | 92            | 77       | 0             | 67       |
| Total Distribution                          | 3500          | 3499     | 3512          | 3527     | 0             | 3517     |
|   |               |          |               |          |               |          |

(1000 MT) ,(PERCENT)



| Oil, Soybean<br>Market Begin Year | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|-----------------------------------|---------------|----------|---------------|----------|---------------|----------|
|                                   | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|                                   | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Japan                             |               |          |               |          |               |          |
| Crush                             | 2283          | 2283     | 2200          | 2330     | 0             | 2330     |
| Extr. Rate, 999.9999              | 0.1949        | 0.1949   | 0.1955        | 0.1953   | 0             | 0.1953   |
| Beginning Stocks                  | 14            | 14       | 15            | 15       | 0             | 22       |
| Production                        | 445           | 445      | 430           | 455      | 0             | 455      |
| MY Imports                        | 7             | 7        | 8             | 7        | 0             | 7        |
| MY Imp. from U.S.                 | 1             | 3        | 1             | 3        | 0             | 3        |
| MY Imp. from EU                   | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                      | 466           | 466      | 453           | 477      | 0             | 484      |
| MY Exports                        | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                     | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.             | 40            | 40       | 35            | 40       | 0             | 40       |
| Food Use Dom. Cons.               | 411           | 411      | 403           | 415      | 0             | 420      |
| Feed Waste Dom. Cons.             | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Dom. Cons.                  | 451           | 451      | 438           | 455      | 0             | 460      |
| Ending Stocks                     | 15            | 15       | 15            | 22       | 0             | 24       |
| Total Distribution                | 466           | 466      | 453           | 477      | 0             | 484      |
|                                   |               |          |               |          |               |          |
| (1000 MT) ,(PERCENT)              |               |          |               |          |               |          |

| Oilseed, Rapeseed<br>Market Begin Year | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--|---------------|----------|---------------|----------|---------------|----------|
|  | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Japan                                  |               |          |               |          |               |          |
| Area Planted                           | 0             | 0        | 0             | 0        | 0             | 0        |
| Area Harvested                         | 2             | 2        | 2             | 2        | 0             | 2        |
| Beginning Stocks                       | 96            | 96       | 67            | 67       | 0             | 36       |
| Production                             | 3             | 3        | 3             | 4        | 0             | 4        |
| MY Imports                             | 2387          | 2387     | 2450          | 2370     | 0             | 2370     |
| MY Imp. from U.S.                      | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imp. from EU                        | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                           | 2486          | 2486     | 2520          | 2441     | 0             | 2410     |
| MY Exports                             | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                          | 0             | 0        | 0             | 0        | 0             | 0        |
| Crush                                  | 2414          | 2414     | 2450          | 2400     | 0             | 2400     |
| Food Use Dom. Cons.                    | 0             | 0        | 0             | 0        | 0             | 0        |
| Feed Waste Dom. Cons.                  | 5             | 5        | 5             | 5        | 0             | 5        |
| Total Dom. Cons.                       | 2419          | 2419     | 2455          | 2405     | 0             | 2405     |
| Ending Stocks                          | 67            | 67       | 65            | 36       | 0             | 5        |
| Total Distribution                     | 2486          | 2486     | 2520          | 2441     | 0             | 2410     |
|  |               |          |               |          |               |          |
| (1000 HA) ,(1000 MT)                   |               |          |               |          |               |          |

| Meal, Rapeseed<br>Market Begin Year<br>Japan | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--|---------------|----------|---------------|----------|---------------|----------|
|  | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Crush  | 2414          | 2414     | 2450          | 2400     | 0             | 2400     |
| Extr. Rate, 999.9999                         | 0.5563        | 0.5563   | 0.5551        | 0.5542   | 0             | 0.5542   |
| Beginning Stocks                             | 36            | 36       | 61            | 61       | 0             | 88       |
| Production                                   | 1343          | 1343     | 1360          | 1330     | 0             | 1330     |
| MY Imports                                   | 15            | 15       | 15            | 15       | 0             | 15       |
| MY Imp. from U.S.                            | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imp. from EU                              | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                                 | 1394          | 1394     | 1436          | 1406     | 0             | 1433     |
| MY Exports                                   | 8             | 8        | 25            | 8        | 0             | 0        |
| MY Exp. to EU                                | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.                        | 250           | 210      | 250           | 210      | 0             | 210      |
| Food Use Dom. Cons.                          | 0             | 0        | 0             | 0        | 0             | 0        |
| Feed Waste Dom. Cons.                        | 1075          | 1115     | 1138          | 1100     | 0             | 1100     |
| Total Dom. Cons.                             | 1325          | 1325     | 1388          | 1310     | 0             | 1310     |
| Ending Stocks                                | 61            | 61       | 23            | 88       | 0             | 123      |
| Total Distribution                           | 1394          | 1394     | 1436          | 1406     | 0             | 1433     |
|  |               |          |               |          |               |          |

(1000 MT) ,(PERCENT)

| Oil, Rapeseed<br>Market Begin Year<br>Japan | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|---|---------------|----------|---------------|----------|---------------|----------|
|   | May 2015      |          | Oct 2016      |          | Oct 2017      |          |
|   | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Crush                                       | 2414          | 2414     | 2450          | 2400     | 0             | 2400     |
| Extr. Rate, 999.9999                        | 0.4296        | 0.4296   | 0.4388        | 0.4292   | 0             | 0.4292   |
| Beginning Stocks                            | 37            | 37       | 31            | 30       | 0             | 24       |
| Production                                  | 1037          | 1037     | 1075          | 1030     | 0             | 1030     |
| MY Imports                                  | 16            | 16       | 18            | 15       | 0             | 15       |
| MY Imp. from U.S.                           | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imp. from EU                             | 0             | 1        | 0             | 0        | 0             | 0        |
| Total Supply                                | 1090          | 1090     | 1124          | 1075     | 0             | 1069     |
| MY Exports                                  | 1             | 1        | 1             | 1        | 0             | 1        |
| MY Exp. to EU                               | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.                       | 60            | 60       | 60            | 60       | 0             | 60       |
| Food Use Dom. Cons.                         | 998           | 999      | 1033          | 990      | 0             | 990      |
| Feed Waste Dom. Cons.                       | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Dom. Cons.                            | 1058          | 1059     | 1093          | 1050     | 0             | 1050     |
| Ending Stocks                               | 31            | 30       | 30            | 24       | 0             | 18       |
| Total Distribution                          | 1090          | 1090     | 1124          | 1075     | 0             | 1069     |
|   |               |          |               |          |               |          |

(1000 MT) ,(PERCENT)

| Meal, Palm Kernel<br>Market Begin Year | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--|---------------|----------|---------------|----------|---------------|----------|
|  | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Japan                                  |               |          |               |          |               |          |
| Crush                                  | 0             | 0        | 0             | 0        | 0             | 0        |
| Extr. Rate, 999.9999                   | 0             | 0        | 0             | 0        | 0             | 0        |
| Beginning Stocks                       | 0             | 0        | 0             | 0        | 0             | 0        |
| Production                             | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imports                             | 9             | 7        | 9             | 7        | 0             | 7        |
| MY Imp. from U.S.                      | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imp. from EU                        | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                           | 9             | 7        | 9             | 7        | 0             | 7        |
| MY Exports                             | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                          | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.                  | 0             | 0        | 0             | 0        | 0             | 0        |
| Food Use Dom. Cons.                    | 0             | 0        | 0             | 0        | 0             | 0        |
| Feed Waste Dom. Cons.                  | 9             | 7        | 9             | 7        | 0             | 7        |
| Total Dom. Cons.                       | 9             | 7        | 9             | 7        | 0             | 7        |
| Ending Stocks                          | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Distribution                     | 9             | 7        | 9             | 7        | 0             | 7        |
|  |               |          |               |          |               |          |

(1000 MT) ,(PERCENT)

| Oil, Palm<br>Market Begin Year | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--------------------------------|---------------|----------|---------------|----------|---------------|----------|
|                                | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|                                | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Japan                          |               |          |               |          |               |          |
| Area Planted                   | 0             | 0        | 0             | 0        | 0             | 0        |
| Area Harvested                 | 0             | 0        | 0             | 0        | 0             | 0        |
| Trees                          | 0             | 0        | 0             | 0        | 0             | 0        |
| Beginning Stocks               | 23            | 23       | 22            | 22       | 0             | 27       |
| Production                     | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imports                     | 622           | 622      | 625           | 640      | 0             | 650      |
| MY Imp. from U.S.              | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imp. from EU                | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                   | 645           | 645      | 647           | 662      | 0             | 677      |
| MY Exports                     | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                  | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.          | 35            | 35       | 35            | 35       | 0             | 35       |
| Food Use Dom. Cons.            | 588           | 588      | 600           | 600      | 0             | 615      |
| Feed Waste Dom. Cons.          | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Dom. Cons.               | 623           | 623      | 635           | 635      | 0             | 650      |
| Ending Stocks                  | 22            | 22       | 12            | 27       | 0             | 27       |
| Total Distribution             | 645           | 645      | 647           | 662      | 0             | 677      |
|                                |               |          |               |          |               |          |

(1000 HA) ,(1000 TREES) ,(1000 MT)

| Meal, Fish<br>Market Begin Year<br>Japan | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--|---------------|----------|---------------|----------|---------------|----------|
|  | Jan 2016      |          | Jan 2016      |          | Jan 2017      |          |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Catch For Reduction                      | 860           | 860      | 860           | 850      | 0             | 840      |
| Extr. Rate, 999.9999                     | 0.2151        | 0.2151   | 0.2151        | 0.2153   | 0             | 0.2155   |
| Beginning Stocks                         | 30            | 30       | 14            | 22       | 0             | 20       |
| Production                               | 185           | 185      | 185           | 183      | 0             | 181      |
| MY Imports                               | 157           | 163      | 180           | 165      | 0             | 167      |
| MY Imp. from U.S.                        | 5             | 13       | 0             | 14       | 0             | 14       |
| MY Imp. from EU                          | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                             | 372           | 378      | 379           | 370      | 0             | 368      |
| MY Exports                               | 2             | 0        | 1             | 0        | 0             | 0        |
| MY Exp. to EU                            | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.                    | 50            | 50       | 50            | 50       | 0             | 50       |
| Food Use Dom. Cons.                      | 0             | 0        | 0             | 0        | 0             | 0        |
| Feed Waste Dom. Cons.                    | 306           | 306      | 310           | 300      | 0             | 300      |
| Total Dom. Cons.                         | 356           | 356      | 360           | 350      | 0             | 350      |
| Ending Stocks                            | 14            | 22       | 18            | 20       | 0             | 18       |
| Total Distribution                       | 372           | 378      | 379           | 370      | 0             | 368      |
|  |               |          |               |          |               |          |

(1000 MT) ,(PERCENT)

| Oil, Sunflowerseed<br>Market Begin Year<br>Japan | 2015/2016     |          | 2016/2017     |          | 2017/2018     |          |
|--|---------------|----------|---------------|----------|---------------|----------|
|  | Oct 2015      |          | Oct 2016      |          | Oct 2017      |          |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Crush  | 0             | 0        | 0             | 0        | 0             | 0        |
| Extr. Rate, 999.9999                             | 0             | 0        | 0             | 0        | 0             | 0        |
| Beginning Stocks                                 | 5             | 5        | 5             | 4        | 0             | 3        |
| Production                                       | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Imports                                       | 30            | 21       | 33            | 21       | 0             | 21       |
| MY Imp. from U.S.                                | 15            | 4        | 0             | 4        | 0             | 4        |
| MY Imp. from EU                                  | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Supply                                     | 35            | 26       | 38            | 25       | 0             | 24       |
| MY Exports                                       | 0             | 0        | 0             | 0        | 0             | 0        |
| MY Exp. to EU                                    | 0             | 0        | 0             | 0        | 0             | 0        |
| Industrial Dom. Cons.                            | 0             | 0        | 0             | 0        | 0             | 0        |
| Food Use Dom. Cons.                              | 30            | 22       | 33            | 22       | 0             | 22       |
| Feed Waste Dom. Cons.                            | 0             | 0        | 0             | 0        | 0             | 0        |
| Total Dom. Cons.                                 | 30            | 22       | 33            | 22       | 0             | 22       |
| Ending Stocks                                    | 5             | 4        | 5             | 3        | 0             | 2        |
| Total Distribution                               | 35            | 26       | 38            | 25       | 0             | 24       |
|  |               |          |               |          |               |          |

(1000 MT) ,(PERCENT)