

The Oil Industry of Japan

THOUGH JAPAN has a long history of the production of Vegetable and Marine oils, modernization of processing was started in 1910 when soybeans were first extracted with benzine. Since that time various types of extraction equipment have been introduced, and now both modern continuous extraction systems and older press systems are in use. However, after World War II, renovation of equipment has been remarkably rapid and many small oil mills are being abandoned.

The nation's oil supply is announced each year by the Food Agency of the Japanese Government. Figure 1 shows the annual supply from 1951 to 1960.

This graph shows that the amount of oil is increasing year by year, though the increase from domestic sources is rather slow. Soybeans, rapeseed, rice bran, and whale are the four major sources for the oil industry in Japan.

Figure 2 shows the increase in these four major sources during the past decade.

Soybeans are mainly imported from the U. S. A., and imported beans are mostly extracted. Defatted soybean flakes are used for human food. Shoyu, Miso, and Tofu are three typical foods derived from soybeans or soybean flakes.

Rapeseed is the main domestic vegetable oil source. Cultivation of this crop is encouraged by the government and production is increasing. In addition, small amounts of rapeseed are imported.

Rice bran is a potential resource, but production of rice bran oil has been limited because of the rapid increase of free fatty acids in the bran, and because of the high content of unsaponifiable matter in rice bran oil. However, improvements

proximately 56% of the total oil supply is consumed as human food. However, oil intake per capita per day is only 12 grams, which is just one fifth of the consumption in the U. S. A. For the benefit of human nutrition an increase of oil intake is being encouraged by the Government and consumption of edible oil is steadily improving. About half of the inedible oil is used for the manufacture of soap and detergents, including the amount hydrogenated for industrial use.

The average oil consumption of the Japanese people is rather low and this is also true for other Asiatic countries. But Japan has both modern facilities and excellent techniques for its oil industry. For example, oil sources are so various that oil technicians must handle oils from every available source in Japan. The problem with which Japan is faced is the shortage of oil source materials. If Japan could be supplied with enough oil seeds, our country could produce oils and oil products not only for their own use but also for the countries where oils and oil products are needed.



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in technical processing have made it possible to produce a good quality of edible oil from rice bran. The supply of rice bran oil is increasing remarkably. Both the Bosco type of batch extraction, and the Suzuki type of continuous extraction, are popular in Japan; but more than 70% of the total rice bran oil is produced by the batch system.

The whale is a major source of animal oil, and the Antarctic Ocean is the area where most whales are taken. The ships are floating factories for rendering the oil as the whales are taken. However, processing of the Antarctic whale is limited to the summer in the Antarctic Ocean. In other seasons whales are caught off the coasts of Japan and processing is carried out on land. Some amount of whale oil is exported to Europe, but most of it is consumed in Japan. Whale meat is also prepared in edible forms.

Oils and fats are used both for edible and inedible purposes. Ap-

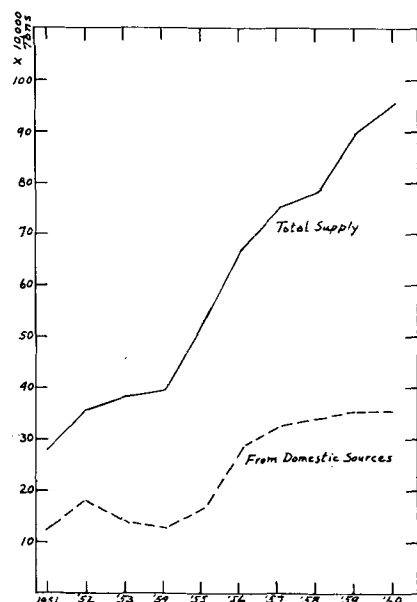


Fig. 1. Japan's supply of vegetable and Marine oil.

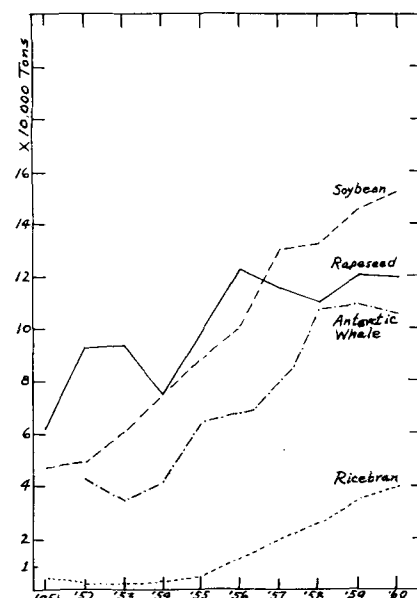


Fig. 2. Amount of Japan's oil supply of four types.