

palm oil and palm kernel oil

China is a country with very poor oil and fat resources. Every year, it imports a large amount of oil from abroad to meet people's living and industrial needs. According to statistics, in 1997, China imported 2 million tons of soybean oil, 1.62 million tons of palm oil and 15,000 tons of palm kernel oil, of which palm oil consumption ranked fourth (see Table 2).

It is estimated that by 2005, world palm oil consumption will exceed soybean oil (see Table 1). As a fat and oil resource with great market potential and value, research on the production, physical and chemical properties and application of palm oil and palm kernel oil has been deepening abroad [1], but in China related to palm oil and palm kernel oil. There are very few research and presentation materials. To this end, I hope that through the introduction of this article, I can deepen my understanding of palm oil and palm kernel oil, and it can attract widespread attention in the industry.

1 Oil palm introduction Oil palm is derived from Africa, and its name is *Elaeis Guineensis*. It is a monoecious plant. According to research, palm oil has been used as an edible oil for 5,000 years. Commercial farming began in 1917 in Malaysia. The high-yielding species grown in Malaysia is now a hybrid called D*P. Oil palm seeds need to be carefully selected and germinated under carefully controlled conditions and then transplanted into plastic bags. And cultivate in the nursery for at least 12 months.

Approximately 136 to 160 plants per hectare can be planted in a triangular pattern to maximize the use of land and sunlight. After planting in the garden, the flowering result begins in about 32 months, and it takes about 6 months from flower opening to fruit ripening. Mature fruits are reddish yellow, usually harvested at intervals of 7 to 10 days. Oil palm trees can last for more than 100 years and can be as high as 20 to 30 m, but the economic life expectancy is about 20 to 30 years. Because the age is too large, the yield will drop. The higher the tree, the harder it will be to harvest.

Therefore, it is generally cut off and replanted in about 20 to 30 years. Each oil palm tree can pick about 10 to 12 fruits per year, and each fruit has about 1,000 to 3,000 palm oil seeds. In terms of fruit, about 20% oily

~ 25%. Each hectare of land produces 3.2 tons of palm oil and more than 400 kilograms of palm kernel oil. Therefore, the reason why the oil palm planting industry develops so rapidly is its strong competitiveness. The yield of palm oil per hectare is 8.5 times that of soybean oil, while the production of palm kernel oil is 1.2 times that of coconut oil. The growth of oil palm requires sufficient moisture and abundant sunlight. The annual rainfall requirement is about 2000 mm, and the average daily sunshine time is at least 5 h, and the temperature is around 20-30 °C.

Therefore, oil palm is most suitable for countries and regions within 10 degrees of the equator and north and south. For example, Malaysia in Southeast Asia, Indonesia, Thailand; Nigeria in Africa, Ivory Coast; Colombia in Central and South America. Among them, Malaysia's oil palm planting area and palm oil production rank first in the world. 2 In the oil and fat market until the 1950s and 1960s, palm oil was still negligible in the world oil and fat market. The annual output is about 1.3 to 1.4 million tons. In 1958, it only accounted for 4.8% of the world's oil production. The Malaysian government is based on the principle of promoting industrial diversification

In order to promote oil palm plantation, palm oil production has grown by leaps and bounds in

the 1970s, and its position in the global oil trade has become increasingly important [2]. In 1997, its palm oil production reached 8.882 million tons. The world's palm oil production was 50.8% of the 137,500,000 tons; while the other major producing country, Indonesia, produced 5,066,000 tons of palm oil, accounting for 21.6% of the world's total palm oil production; Second in soybean oil;

In 1997, the per capita consumption of palm oil and palm kernel oil in the world was 2.86 kg and 0.4 kg, respectively, which was also ranked second. Palm kernel oil is a by-product of palm oil, and its output is generally about 10% to 13% of palm oil. Palm kernel oil and coconut oil are the two most important laurel oils.

In 1997, the consumption of palm kernel oil was 2.29 million tons, while that of coconut oil was 3.17 million tons. It is expected that the production of palm kernel oil will exceed that of coconut oil in 2005 (see Table 1, Table 2). Due to its good physicochemical properties, application prospects and market competitiveness (detailed in detail), palm oil is used as an edible oil or an industrial raw material.

In 1984, China's palm oil production was 96,000 tons, accounting for 1.53% of the world's total production at that time. In recent years, compared with the rapid growth of world palm oil production, China's palm oil production has not developed much, with China joining WTO, China's imports of palm oil and palm kernel oil will increase, and its position in China's oil market will also become increasingly prominent. Table 4 Competitiveness of palm oil and palm kernel oil [3]

Soybean oil 2024. 9 18? 19 377. 9 Cottonseed oil 1 016 18? 20 193. 0 Peanut oil 796. 2 45? 50 378. 2 Sunflower oil 1 233. 1 40? 50 524. 0 Rapeseed oil 1 285 40 ? 50 546. 5 Sesame oil 370. 5 45? 50 175. 9 Palm oil 16 000 20 3 200 Palm kernel oil 891. 9 45? 50 423. 4 Coconut oil 520 65? 68 346. 3 3 Competitive analysis table 4 is The oil content of various oilseeds, the yield of oilseeds per hectare, and the equivalent oil production. According to Table 4, the oil production of palm oil is 3200 kg/ha, which is much higher than that of other oils, and the production of palm kernel oil is also high. Therefore, as a high-yield species, this oil crop has a pole in the world oil market. Strong competition

Force, and will soon replace soybean oil to become the first consumer of oil. Therefore, in the face of possible changes in the oil market after China's accession to the WTO, especially the potential impact of cheap palm oil and palm kernel oil, we must make preparations to establish a large-scale production of palm oil and palm kernel oil raw materials as soon as possible. And the product oil base.

4 Output by major producing countries or regions Table 5 shows the production statistics of major palm oil producing countries or regions. Table 6 is the two largest brown

Oil palm planting area and palm oil production statistics for palm oil producing countries Malaysia and Indonesia.

It is estimated that after 2005, the planting area of oil palm and the production of crude palm oil in Indonesia will exceed that of Malaysia. However, China must fully study the geographical characteristics of China and make early countermeasures in the production and consumption of palm oil.