



PALM OIL

JUNE 2023



Key Facts	3
Palm Oil Definition	4
Palm Oil and Health	5
Palm Oil vs. Olive Oil	6
Palm Oil vs. Ghee Oil	7
Palm Oil and Environment	8
Key Points to Remember	10



Key Facts

- Palm oil has been one of the main dietary fat sources for centuries in West Africa. (Boateng L. et al., 2016)
- The world palm oil production was 77,559 million metric tons, in 2022. (USDA)
- The 59% of the world's palm oil production is made in Indonesia. (USDA)
- The global demand in vegetable oils will increase 46% by 2050. (Meijaard E. et al., 2020)
- Palm oil accounts for approximately 40% of the current global annual demand for vegetable oil as food, animal feed and fuel. (Meijaard E. et al., 2020)
- Palm oil is used in food, cosmetics, cleaning products, and as biofuel. (IUCN)
- Palm oil production has a negative impact on both the human health and the environment.

What is Palm Oil?

Palm oil is derived from the oil palm tree, *Elaeis guineensis*, which is best grown in tropical climates with abundant water.

There are 2 types of palm oil:

- Palm oil extracted from the fruit's flesh.
- Palm kernel oil extracted from the fruit's seed.

Palm oil is mainly used as a cooking oil (approximated $\frac{3}{4}$ of the total palm oil production), or for processed oils and fats, such as margarine or shortening.

The nutritional composition of palm oil is: 50% saturated fats, 40% monounsaturated fats and 10% polyunsaturated fats. (USDA)

Saturated fat is well known for its association with heart disease. (WHO)



How Palm Oil affects health?

Palm oil is widely used in deep frying due to its good stability at high temperatures (175–185°C); its content in natural antioxidants and linoleic acid, and the low unsaturated fat content increases its stability.

It is usually used for frying fish and chips, doughnuts, potatoes, and instant noodles.

Palm's oil high saturated fat content affects health:

- High saturated fat intake increases cardiovascular disease (CVD) risk. (Perna M. & Hewlings S., 2023)
- CVD is the leading cause of morbidity and mortality amongst seafarers. (Sagaro G.G., 2021)
- Saturated fat intake is associated with LDL cholesterol increase. (Perna M. & Hewlings S. , 2023)
- A meta-analysis between 23 countries, indicated that palm oil consumption is linked with higher mortality from ischaemic heart disease. (Chen B.K. et al., 2011)



Palm Oil vs. Olive Oil



PALM OIL

1 tablespoon of palm oil contains:
120 calories
13.6g total fat
(7g saturated fat, 5g monounsaturated fat)

VS.



OLIVE OIL

1 tablespoon of olive oil contains:
119 calories
14g total fat
(1.9g saturated fat, 10g monounsaturated fat)

Olive oil contains less saturated fat and more unsaturated fat, compared to palm oil, making it a healthier option!

Palm Oil vs. Ghee Oil



PALM OIL

1 tablespoon of palm oil contains:
120 calories
13.6g total fat
(7g saturated fat, 5g monounsaturated fat)

VS.



GHEE OIL

1 tablespoon of ghee contains:
121.5 calories
13.5g total fat
(8.1g saturated fat, 0.5g monounsaturated fat)

Both ghee and palm oils are high in saturated fat and is best not to be preferred!

Palm Oil and Environment

Palm oil production has a negative impact on the environment!

- **Deforestation and Biodiversity Decline**

Since palm oil trees are grown in tropical areas, endangered species' habitats will be destroyed, leading to a decrease in the biodiversity. According to the IUCN Red List of Threatened Species, palm oil production is affecting at least 193 threatened species.

- **Soil and Water Pollution**

For every metric ton of palm oil produced, 2.5 metric tons of waste is being generated. Hence, water and soil are polluted affecting both biodiversity and humans.

- **Soil Erosion**

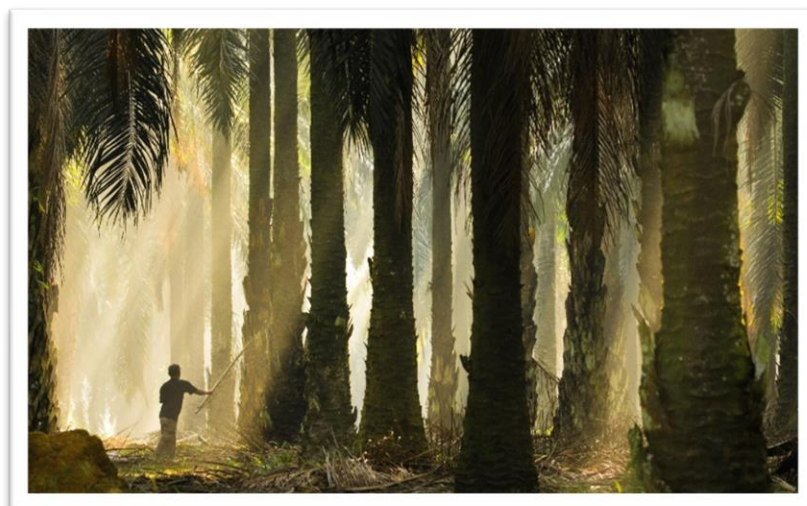
Palm oil trees are usually planted on steep slopes, causing soil erosion. This erosion can lead to flooding and silt deposition in rivers and ports, requiring further fertilization and road repairs.

- **Climate Change**

Forest fires used for oil palm plantations, release carbon dioxide in the environment, which results in climate change. Since, Indonesia has the world largest palm oil production, high deforestation rates rank Indonesia as the third-largest global emitter of greenhouse gasses.

- **Air Pollution**

To make palm oil, trees need to be burned. The smoke from burning releases carbon dioxide which pollutes the atmosphere. A burning occurred in 2013 to 2015 in Southeast Asia, resulted in air quality reduction at hazardous levels. (Karthik K.R.G et al., 2017)



PALM OIL IMPACTS ON BIODIVERSITY



193

Critically Endangered, Endangered and Vulnerable species have palm oil production as one of their main threats



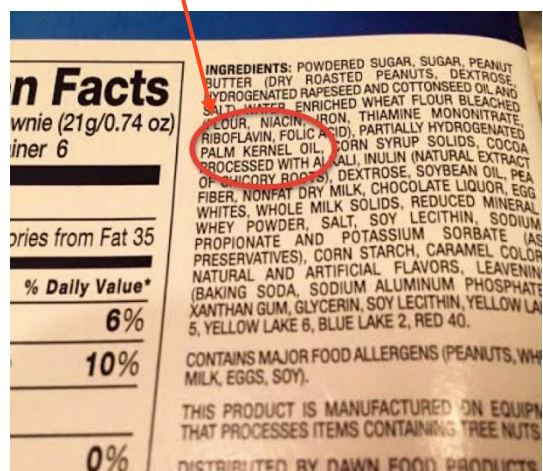
Above picture, indicates how palm oil impacts biodiversity. Monkeys, elephants, chimpanzees, tigers, bears, kangaroos, and orangutans are endangered species that are affected by palm oil production.



Key Points to Remember!

- ✓ Regular palm oil intake increases CVD risk!
- ✓ Palm oil production harms the environment!
- ✓ Prefer other types of oils when cooking, such as olive oil!
- ✓ Check food products' ingredient labels for palm oil!

****Note:** If a certain food is not available at your vessel, you might order.





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