



PALM OIL IN POLAND

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What is palm oil?

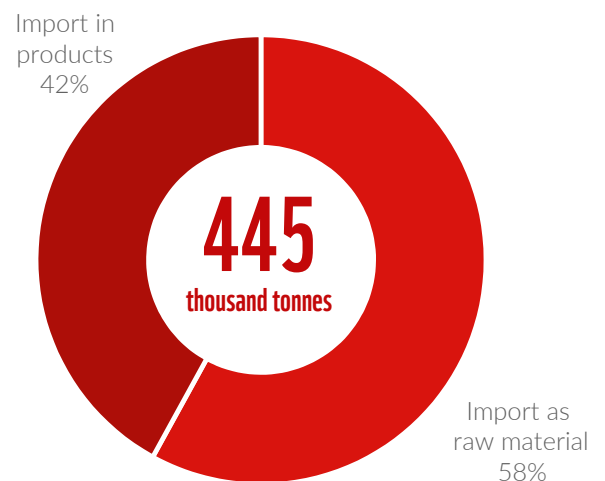
Oil palm (*Elaeis guineensis*) produces **two types of oil**: **Crude palm oil (CPO)** from the fibrous mesocarp, and **crude palm kernel oil (CPKO)**. Both of these types of oil come from the same tree, but they have different physicochemical properties. To simplify this analysis, both oils produced by palm oil are jointly named: palm oil

The use of palm oil or its derivatives may be indicated by designations including: CBE and CBS fats • E471 emulsifier • isopropyl myristate • palmitic acid • glyceryl stearate • sorbitol stearate • cetyl alcohol • ascorbyl palmitate • tocopheryl acetate • stearyl alcohol • oleyl alcohol and octyldodecanol • sorbitol oleate and stearate • ethylhexyl palmitate

Global production and import to Europe (and Poland):

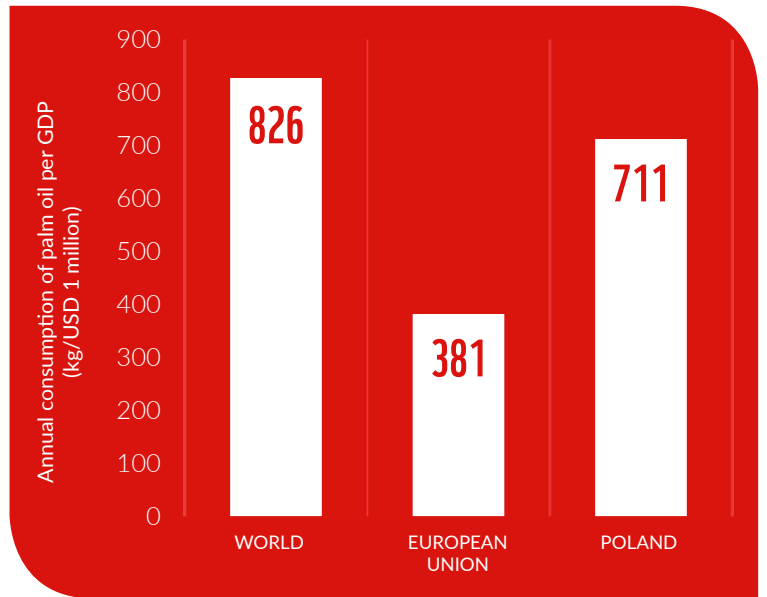
- **66 million tonnes** – annual global production of palm oil
- **35,6 million tonnes (54 %)** – comes from plantations located in **Indonesia**
- **85%** of global production – takes place in **Indonesia and Malaysia**
- **the palm oil market in Poland** covers both the **oil imported as raw material**, and the **oil included in ready products** imported to Poland
- **248 thousand tonnes** – the amount of palm oil which reached Poland in 2017 **as raw material**, and **188 thousand tonnes in products**
- **445 thousand tonnes*** – total – amount of palm oil imported to Poland in 2017

* this number includes also the additional 9.5 thousand tonnes of palm oil from the solid remainder from the extraction of oils from palm nuts or their kernels



Estimated amount of palm oil imported to Poland as raw material and in products, 2017

- **over 30%** of palm oil imported to the European Union goes **through the port of Rotterdam** (the Netherlands). The rest of palm oil goes primarily to Italy (over 20%), Germany (14%) and also the United Kingdom (6%)
- palm oil reaches Poland mostly **from Germany and the Netherlands**. Direct import from Malaysia and Indonesia is marginal in Poland (less than 1%)
- **most of palm oil in the Netherlands and Germany** comes from palm oil plantations in **Indonesia and Malaysia**, so it can be assumed that the palm oil reaching Poland comes from these two Asian countries
- **150%** – by this much **import of palm oil to Poland as raw material has increased since 2004**: this increase is proportional to the increase of import of rapeseed, coconut and soybean oils together. Therefore, it can be concluded that the demand for palm oil was the result of **increased needs for oils in general**, and it did not stem from an increased need for this specific type of oil
- **Poland** is a large **driving force behind palm oil consumption in the European Union**. Per gross domestic product, Poland is decidedly **above the average EU consumption**, however, below the global average
- **711 kg** – this is the average annual palm oil consumption in Poland per GDP unit in 2017, in comparison to the EU average, which is **381 kg**

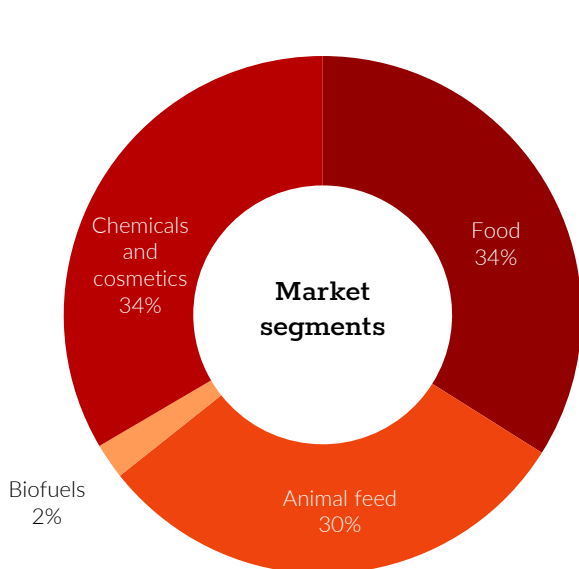


Average annual consumption of palm oil per one million USD of GDP, 2017

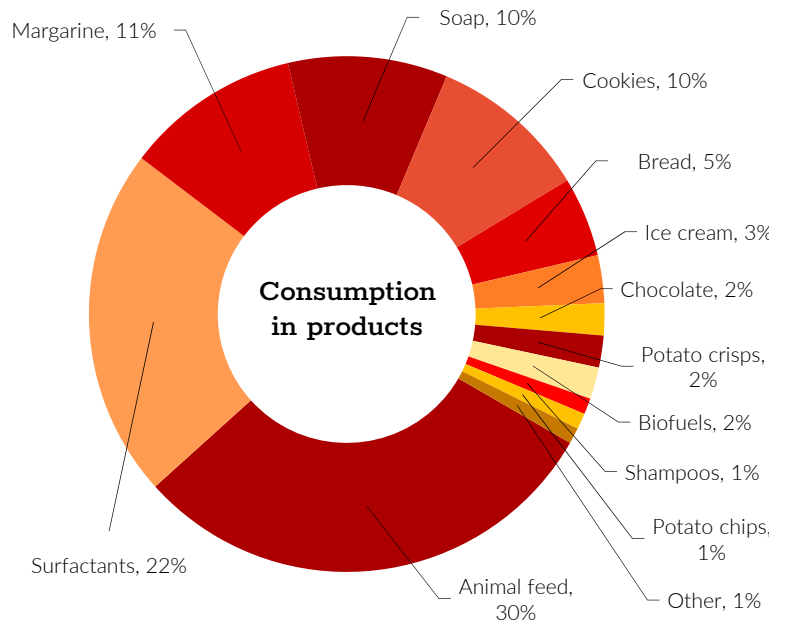


Palm oil application in Poland

In Poland, food, including animal feed, is estimated at **64%** of the total market, and industrial applications (soaps, surfactants and hair care products) are **34%** of the market



Consumption of palm oil in Poland: division into market segments, 2017



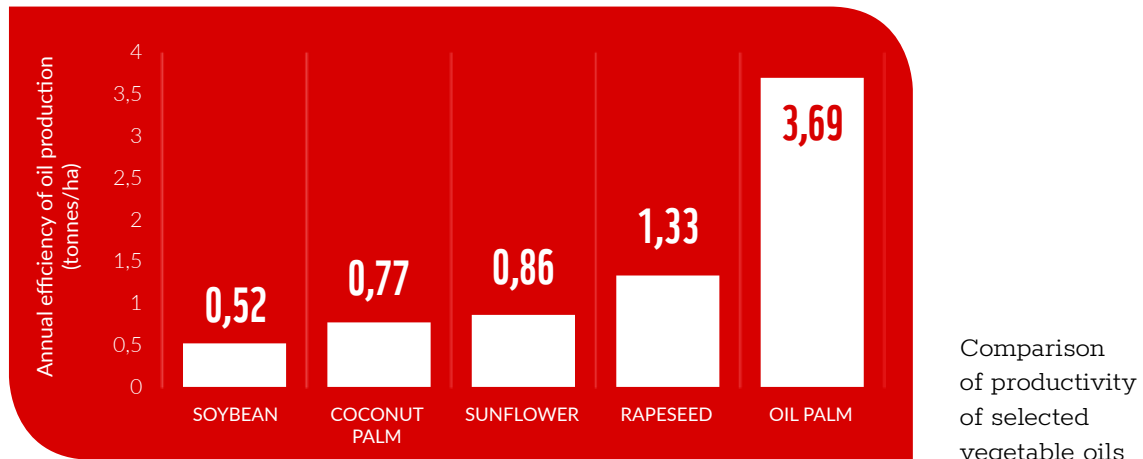
Consumption of palm oil in products, estimates, 2017

In the case of **import to Poland in products**, the largest amount of palm oil is in **chemicals – 68%**, while **28% is food and feed**, whereas **only 4% of palm oil import in products is attributed to biofuels**

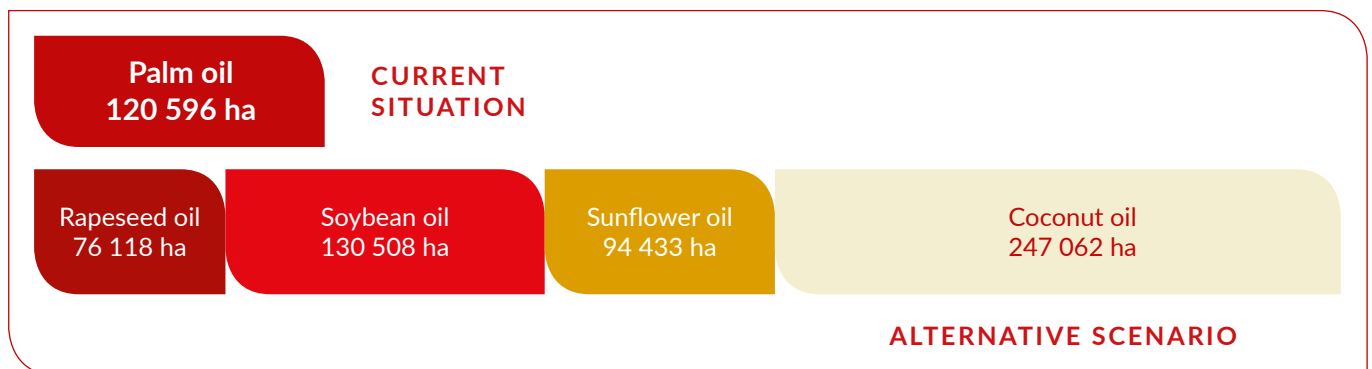


Other vegetable oils

- **theoretically, there are many alternatives** for palm oil: rapeseed oil, sunflower oil, soybean oil, olive oil, coconut oil, jojoba and jatropha oils, cocoa butter, algae oil, shea butter, beeswax, or recycled vegetable oil
- the list of potential substitutes can be reduced to **4 types of oil**, which are mass-produced and generally used in products, i.e. **rapeseed oil, soybean oil, sunflower oil and coconut oil**
- apart from **many differences in physicochemical properties** (e.g. smoke point or melting point) or flavour, there are significant differences in the **effectiveness of production**



- complete replacement of palm oil in Poland would be connected to **unfavourable changes regarding land use**, but also to **increased carbon dioxide emissions**
- **in the scenario of complete replacement of palm oil in Poland**: production of the four substitutes of palm oil would require over **four times bigger production area**




Visualisation of scenario of replacing palm oil in the context of arable land surface

- the alternative scenario based **on the use of rapeseed oil in all possible applications** also **does not seem favourable** from the point of view of environment protection
- **substituting uncertified palm oil by certified palm oil seems to be the right step** in fighting the negative effects of growing this raw material on the environment
- it would not require drastic changes in production processes on part of the **manufacturers. The positive effect** of such a change would be very significant **for the environment and for the people of the producer countries**
- **69%** – this much of palm oil imported to Europe for food industry came from certified sources in 2016, and **79%** in 2017





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Data sources

- The Impact of the Consumption of Palm Oil in Poland on the Global Natural Environment and Analysis of the Possibility of Replacing it by Other Vegetable Oils, Frost & Sullivan, 2019
- RSPO Impact Report 2018

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SUMMARY AND RECOMMENDATIONS:

- **the increasingly growing demand for vegetable oils** is undoubtedly **problematic** from the point of view of global economy and environment protection
- the **productivity** of palm oil is its doubtless **advantage**, and the attempts at **substituting** it completely with other vegetable oils can have **negative consequences for the environment**
- firstly, the **necessity of using oils** in the respective branches of economy should be **analysed**
- actions of governments and non-governmental organisations should focus on **reducing the consumption of all oils**, both of vegetable and animal origin, and to impose on the **manufacturers the obligation to use oil from certified sources**
- **certified palm oil (CSPO)** with the same physicochemical properties and the same applications as the non-certified oil has a decidedly **less negative impact** on global biodiversity, as well as climate change