



Knowledge grows

Yara's Position on Palm Oil



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Introduction and background

Palm oil is the main product from oil palms. Oil palms grow throughout the tropics. The main producing nations are Indonesia and Malaysia, accounting for around 84 percent of the world production, which is estimated to be 73 million tons in 2018/2019¹. This makes an important contribution to the economies of the two countries. Today, palm oil represents a third of the world's vegetable oil, making it the most widely used vegetable oil. It is used for food and cosmetics, and 10-20 percent of the production is used for biofuel.

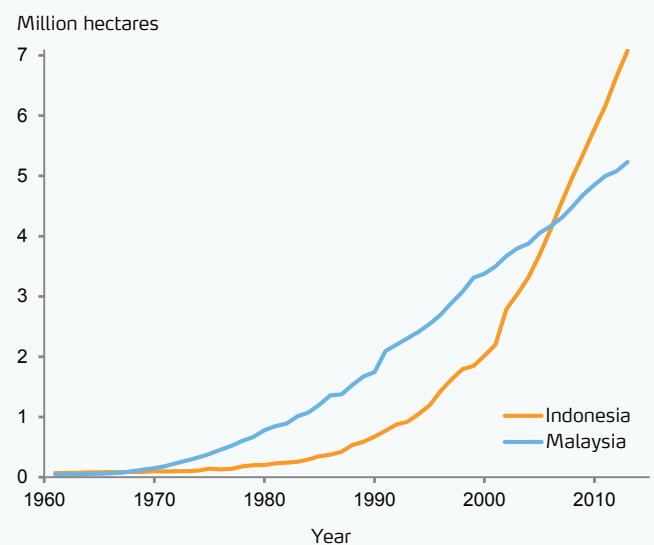
The growing area for oil palms has expanded exponentially since the 1960s, especially in Malaysia and Indonesia. Forests and peatlands function as CO₂ storage. However, tropical rainforest has been cleared to establish oil palm plantations, which continues to increase the world's greenhouse gas emissions and has affected biodiversity. This has attracted widespread criticism of palm oil use.

¹Source: United States Department of Agriculture (2019): Oilseeds: World Markets and Trade

The most efficient oilseed crop

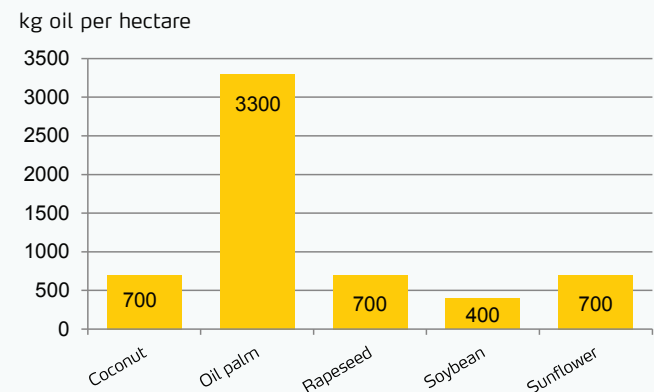
The reason for palm oil's advancement for the last decades is that oil palm is the most efficient oilseed crop. Oil palms require much less land than any other oil crop per ton of oil produced. The global average oil yield from oil palms is more than 3.3 tons per hectare, compared with rapeseed and sunflower giving 0.7 tons per hectare. Replacing palm oil with other vegetable oils would require several times more land to grow other oil crops. This may also lead to an expansion of farmland, including a risk of deforestation.

Oil palm growing area



*Source: FAOSTAT data 13.3.2019

Oil yield (average global yield)



*Source: WWF 2016

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Increased demand for palm oil can lead to risk of further deforestation

The OECD and FAO expect palm oil production to increase in the coming decade by 2 percent per year in Indonesia and by 1.5 percent per year in Malaysia. A key challenge is to achieve this without further deforestation. Both Malaysia and Indonesia have signaled a wish to cap plantation areas, and to focus on productivity growth. The Malaysian government has committed to keeping a fixed percentage of its land as forest. The challenge is to increase the productivity of palm oil production on the existing areas, where average yields have stagnated or even declined in the last two decades.

*²Noleppa S, Carlsburg M. 2016. Palm oil report Germany - Searching for alternatives. WWF Deutschland, Berlin

Mitigation of deforestation risks

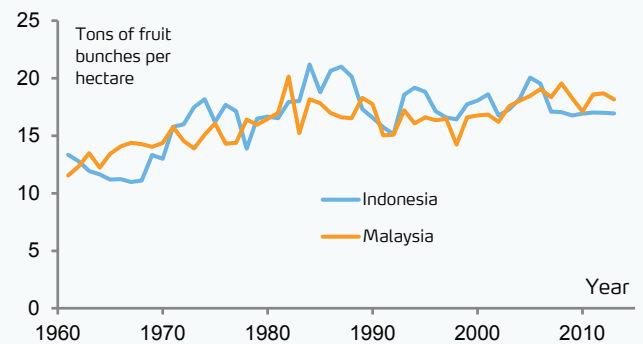
There are certification schemes aiming to ensure procurement of oil that has not contributed to deforestation. However, farmland has continued to expand into forest, albeit at reduced speed.

Modeling of future scenarios shows positive impacts in countries implementing such certifications and governments' bans on new plantations. However, achieving actual zero deforestation remains a challenge.

The biggest productivity gap is with the smallholder segment, because of various issues such as lack of access to finance schemes, lack of infrastructure and knowledge. It is more difficult to smallholders, although some smallholder schemes are now in place.

All this shows a clear need for strong land-governance measures, coupled with increased efforts on research and development, opportunities on degraded land and efforts to accompany growers toward more sustainable practices as well as capturing the potential for sustainable intensification.

Average oil palm yield



* Source: FAOSTAT data 13.3.2019

Yara's Position

Efficient land-use is climate-smart

The largest share of greenhouse gas emissions from agriculture comes from land-use change, i.e. when untouched land, such as forest and peatland, is converted into farmland. Yara believes in sustainable intensification of agriculture, of land that has already been converted to agricultural pursuits. Sustainable intensification will lead to increased yields on existing farmland while reducing the need to increase the crop production area.

Yara recognizes that oil palm is an important crop and believes that tropical rainforests and peatlands need to be protected. Any needed increase in agricultural production should be achieved by increasing yield on existing farmland to the extent possible – not by cultivating new land – thereby reducing pressure for land use change and the associated greenhouse gas emissions and biodiversity impacts. The way Yara is working with palm oil growers reflects this.

Yara's Position on Palm Oil

Better crop nutrition programs may supply more palm oil on existing land

Yara supports oil palm farmers with sustainable crop nutrition practices as an important part of the solution.

More efficient and balanced fertilizer recommendations, based on Yara's knowledge of the oil palm, can significantly increase yields. Yara's field trials show how farmers achieve yields 25 percent above national average due to better practice and knowledge transfer.

Even higher yield levels can be supported by Yara's crop nutrition knowledge and products, if other measures are used at the plantations as well, such as optimized harvest management. Intensification saves investments in infrastructure and new plantations.

In addition, Yara's nitrate-based nutrition solutions help reduce additional acidification compared to other ammonia-based forms of Nitrogen that traditionally have been promoted within the oil palm industry.

Yara recognizes the deforestation risk related to palm oil production

Yara recognizes the risk for deforestation when using palm oil. Challenges of indirect land use change are difficult to manage, while closing the yield gaps could help further reduce deforestation while increasing production, if supported by certification schemes and land governance measures.

Yara is willing to support certification processes by helping to integrate crop nutrition solutions and carbon footprint monitoring.

By providing crop nutrition knowledge to plantations willing to improve their productivity, as well as to smallholders, Yara can contribute to reducing the risk of deforestation.

In summary, Yara believes that it is possible to improve oil palm production so that the increased demand for palm

oil can be supplied without expanding the plantations at the expense of forests and peatlands. It needs to be ensured that the growth comes from increase of yield or land restoration. Yara is open to exchange experience and knowledge with anyone dealing with these questions.

About Yara

Yara grows knowledge to responsibly feed the world and protect the planet, to fulfill our vision of a collaborative society, a world without hunger and a planet respected. To meet these commitments, we have taken the lead in developing digital farming tools for precision farming and work closely with partners throughout the whole food value chain to develop more climate-friendly crop nutrition solutions. In addition, we are committed to working towards sustainable mineral fertilizer production. We foster an open culture of diversity and inclusion that promotes the safety and integrity of our employees, contractors, business partners, and society at large. Founded in 1905 to solve the emerging famine in Europe, Yara has a worldwide presence with about 17,000 employees and operations in over 60 countries. In 2018, Yara reported revenues of USD 12.9 billion.

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