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Oilseeds and Products

Dutch Palm Oil Imports Are Expected To Surge 2005

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Report Highlights: In The Netherlands, palm oil imports for food purposes are anticipated to increase from about 1.2 MMT in 2004 to over 2.2 MMT in 2006. Another potential growth market of several MMTs of palm oil is as fuel for the production of “green electricity” and as a component for biodiesel. Palm oil could also be blended with soybean oil to produce biodiesel.

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In The Netherlands, a significant increase of palm oil imports is anticipated. Sector sources expect palm oil imports to increase from about 1.2 MMT in 2004 to over 2.2 MMT in 2006. This anticipated increase of at least 1 MMT is based on the construction and expansion of several refineries in the port of Rotterdam. Palm oil will increasingly replace other oils for food purposes, mainly due to the lower price compared to other vegetable oils.

On top of the increased imports for food use, the production of "green electricity" and biodiesel has the potential to boost demand for palm oil by more than 1 MMT annually. Electricity generation already accounts for about 400,000 tons of palm oil utilization in The Netherlands. The Dutch company BIOX bv is planning to build four new power plants, which will use palm oil as the primary fuel.

Another potential growth market for palm oil is the production of biodiesel. The Dutch companies BIOX bv and Unimills, a subsidiary of the Malaysian company Golden Hope Plantations, are conducting a feasibility study on producing palm oil fractions with lower melting points. These fractions could possibly be blended with fossil diesel in the petro-chemical refineries in Rotterdam and exported throughout North Western Europe. Another option is blending palm oil with soya oil to produce pure biodiesel.

Palm oil for food purposes.

Palm oil will increasingly be used for food purposes mainly due to the lower price compared to rapeseed oil and sunflower oil. According palm oil producers and refiners, palm oil is also preferred because it does not have to be hydrogenated, thus avoiding the production of trans-fatty acids. The anticipated increase of at least 1 MMT of palm oil for food purposes is based on the expansion of several refineries:

-Loders Crocklaan (part of IOI Group Malaysia) will build a palm oil refinery with a capacity of 900,000 MT/yr in Rotterdam. The refinery is expected to be operational in mid 2005.
-KUOK (a Singaporean/Chinese company) will also build a palm oil refinery with a smaller capacity of about 350,000 MT/yr. The refinery is expected to be operational December 2005.
-Cargill Rotterdam is investing in their existing plant to increase the refining capacity for tropical oils. Capacity for coconut and palm kernel oil refining will increase by 200,000 MT/yr, and palm oil by 300,000 MT/yr. The plant upgrade is expected to be finished by mid 2006.

The refining expansion of 1.35 MMT will not result in a similar increase in imports because about 600,000 MT/yr of refined palm oil is already being imported. These imports will partly be replaced by raw palm oil, and some imports will be further refined.

Palm oil for energy purposes.

Raw palm oil use for generation of “green electricity”.
The main growth market for palm oil is reportedly as fuel for the production of “green electricity”. Oil traders report that so far in 2005, 200,000 MT of palm oil has already been imported for the generation of electricity in The Netherlands. Sector sources estimate that the use of raw palm oil by Dutch power plants will reach about 400,000 MT for the full calendar year 2005. The Dutch company BIOX bv plans to build four new power plants producing “green electricity” in The Netherlands. These plants will use raw palm oil as the primary fuel. The electrical power could possibly be exported to other countries in the EU. Sector sources expect that the use of palm oil for electrical power generation could grow to one or two MMTs in the coming two to three years in Northwestern Europe. The availability of palm oil to meet this increased demand does not seem to be a problem considering the

average annual growth of world palm oil production by about 4 percent during the past five years. In 2005, world palm oil production is expected to exceed 31 MMT.

Palm oil fractions as component for biodiesel.
Another potential growth market for palm oil is the production of biodiesel. With the increasing use of rapeseed oil for biodiesel production, rapeseed oil prices are rising. Analysts calculate that for the EC target of 5.75 percent replacement of fossil diesel by biodiesel, subsidies would need to increase to more than EURO 6 billion. Another problem is the limited availability of locally produced oil crops.

An option is to use imported oils, or oils produced from imported crops, such as palm oil and soybean oil. Anticipating the limited availability of domestically produced oils, the Dutch Government is expected to lift the excise tax on biodiesel made from all vegetable oils and animal fats in September 2005. This is in contrast to policies imposed in Germany and France, which in practice restrict excise tax cuts to only rapeseed oil. The proposed Dutch policy will open the way to use any vegetable or animal fat for the production of biodiesel. Palm oil, however, does not meet the EN14214 standard, and the German requirement of an iodine number between 100 and 120 g/100g [(a)] (see table). But palm oil could be fractionized to fractions with a lower melting point and mixed with fossil diesel. For blends of mineral diesel and vegetable oils, the EN590 standard has been imposed.

The Dutch company Unimills, a subsidiary of the Malaysian company Golden Hope Plantations, plans to build a refinery plant for producing palm oil fractions as component for biodiesel. For this project Unimills cooperates with the Dutch company BIOX bv. At the moment, both companies are conducting a feasibility study for the biodiesel project, which is expected to be ready in Augustus 2005. The feasibility study reportedly examines the production of palm oil fractions with low melting points. A part of this research has reportedly already been conducted in Malaysia. These fractions could be mixed with fossil diesel at an inclusion rate of 3 to 4% in petro-chemical refineries located in the Rotterdam port. The feasibility study possibly includes an analysis of the export potential of this product depending on the biodiesel policies in the neighboring countries.

Blending of palm oil and other vegetable oils to produce pure biodiesel.
Another option is blending of palm oil with other vegetable oils, such as soybean oil to produce pure biodiesel. A problem for soybean oil for use in biodiesel is the high price and high iodine number [(b)]. A blend of soybean oil and palm oil, however, would approach the technical properties of rapeseed oil, and could reportedly meet the EN14214 standards and the German iodine limits.

	Iodine Number (g/100g)	Melting Point (ºC)
Soybean oil	125-140	–12
Sunflower oil	125-135	-18
Rapeseed oil	97-115	5
Palm oil	44-58	30-38

(a) The iodine number is an indication of the content of unsaturated fatty acids. Due to the low content of unsaturated fatty acids, and low iodine number, palm oil has a high melting point, which makes it unusable for the climate in Europe.
(b) A high iodine number indicates a high content of unsaturated fatty acids, which have the tendency to polymerize and result in damage to the engine.