

## Observations on Biodiesel Usage Trends in European Union

YEW FOONG KHEONG<sup>1</sup> AND YEW MEI LEE

*Agro Planten Sdn Bhd, 82, Jalan SS2/105, 47300 Petaling Jaya, Selangor Darul Ehsan, Malaysia*

*Vegetable oils, used cooking oils (UCO), pine, tallow and animal oils were the main feedstocks to produce biodiesel in EU in 2011-2020. Rapeseed, palm oil, soya and sunflower were the four vegetable oils feedstocks and contributed to 67- 87 per cent of the total biodiesel usage. Although the amounts of biodiesel usage increased over time, the share of biodiesel from these four feedstocks relative to the total amount, decreased from 87 per cent in 2012 to 78 per cent in 2020. This loss was filled up by, principally, UCO, tallows, animal waste oils and greases; their amounts used increased by 2.5 times over the period. They will continue to be used in larger quantities in 2021-2030 and will cause the share of palm, soya and sunflower oils as biofuel feedstocks to decrease.*

*It is anticipated that vegetable oils will still be needed as biofuel feedstock in 2021-2030. With a significantly large share of 78 per cent of the total amount of biodiesel used in 2020, it will take some time before they can be replaced completely by UCO, tallows/animal waste oils and second to third generation biofuels. The call to determine the sustainability status of UCO more thoroughly in the future will also be expected to put some brakes on the accelerated use of UCO to replace these crop-based feedstocks.*

*The price of feedstock was of secondary importance when choosing the feedstock in 2012-2020. Rapeseed oil was the most expensive vegetable feedstock and yet it was the main feedstock used. This showed that other factors e.g., feedstock sustainability status as stipulated in the Renewable Energy Directive (RED) and local availability were also important; the European Union (EU) being the world's largest rapeseed oil producer. Besides, RED also stressed the importance of energy security and to provide jobs and economic development of the local people when executing the RE programme. As such, it is foreseen that rapeseed oil will remain the dominant feedstock.*

*However, vegetable oils have competing uses for food, feed, oleochemicals and biofuels. The ability to use rapeseed as the primary feedstock in huge amounts indefinitely has limitations. As a resource, rapeseed ranked third in quantity produced globally. Palm oil, followed by soya had the largest amounts of resource available for use in the world. Sunflower had the lowest resource availability among the four vegetable oils. As such, overstressing the use of rapeseed and sunflower for biofuel can have other dire consequences such as supply shortages and price increases.*

*Rapeseed alone cannot meet the total demand of EU's biodiesel needs. The study showed that even if the entire production of rapeseed oil from locally grown crop in EU was used for biodiesel production, it could only meet 58 per cent of its biodiesel demand in 2020. Since rapeseed feedstock cannot meet the total demand of biodiesel in EU, it is anticipated that in 2021-2030, it will have to be supplemented with other feedstocks particularly palm and soya oils. Under the Delegated Regulation, palm oil is classified as an unsustainable biofuel feedstock with high ILUC-risk. Incidentally, it is the only feedstock classified as such. It is, thus, envisaged that soya will be used in larger and larger amounts at the expense of palm oil. Under the Delegated Regulation the use of palm oil will be restricted starting in 2020 and continue until its use is phased out completely by 2030 at the latest. However, the tide may still change in favour of palm oil if its trade discrimination by EU can be stopped by World Trade Organisation where a trade dispute is ongoing currently.*

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<sup>1</sup> email: fkyew49@yahoo.com