

JUNE 2023



STATISTICAL REPORT 2023

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01

INTRODUCTION

We are delighted to present the first EBB statistical report, which provides a comprehensive overview of the biodiesel industry in Europe and around the world. This report highlights the latest data and trends on biodiesel production, feedstocks, and GHG savings associated with biodiesel use. In addition, to the biodiesel production (HVO and FAME) of the EBB members. We will be looking to improve this report and include more information, for example on trade flows and production of food and feed.

We have used a number of sources to compile this data, in addition to input from our members. For biodiesel production and feedstock statistics, we worked with AMI (Agricultural Market Information), based in Germany, which provides UFOP (Union zur Foerderung von Oel und Protein Pflanzen E.V.) with its own global survey. For greenhouse gas savings, in the absence of internal data, we have used the expertise of Studio Gear Up and public data from the European Environment Agency. We believe that our industry's ability to demonstrate the 'real' savings made by our products is key to our advocacy work and we will continue to build on this work.



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BIODIESEL PRODUCTION

1. Global outlook of biodiesel

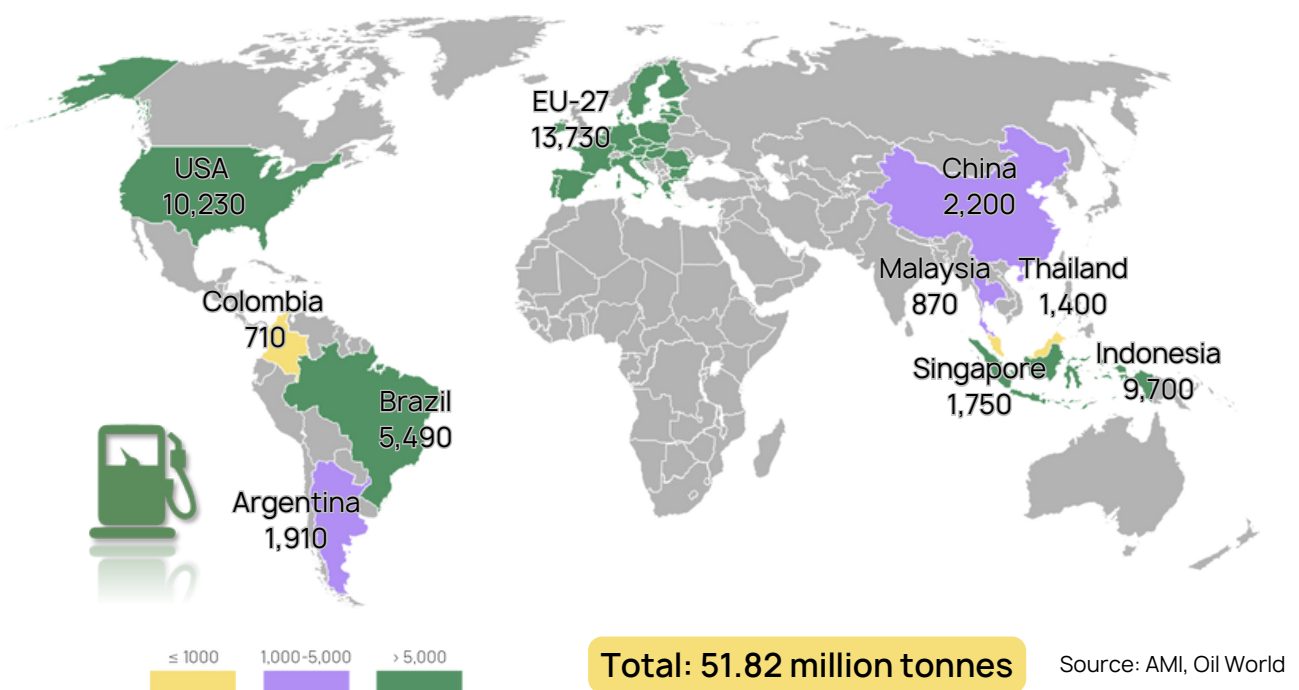
In 2022, global biodiesel production was nearly 52 million tonnes, with the European Union (excluding the United Kingdom) accounting for the largest share, approximately 25% of the total global output, or approximately 13.7 million tonnes.

The United States was the second-largest biodiesel producer, with production reaching 10.2 million tonnes. Soybean oil is the US primary feedstock for biodiesel production, with the Midwest region being the largest producer.

Indonesia is the third-largest biodiesel producer, with production reaching 9.7 million tonnes based on palm oil. The government implemented a quota policy to address supply surpluses and price pressures in vegetable oil markets. By raising national blending quota requirements, they aim to stabilize producer prices and reduce foreign exchange spending on mineral oil imports.

Brazil is the fourth-largest biodiesel producer, with production reaching 5.4 million tonnes. Other significant biodiesel producers include China, Argentina and Singapore.

Overall, biodiesel production is expected to continue to grow globally as governments implement policies to increase the use of renewable energy sources in the transport sector and reduce greenhouse gas emissions.



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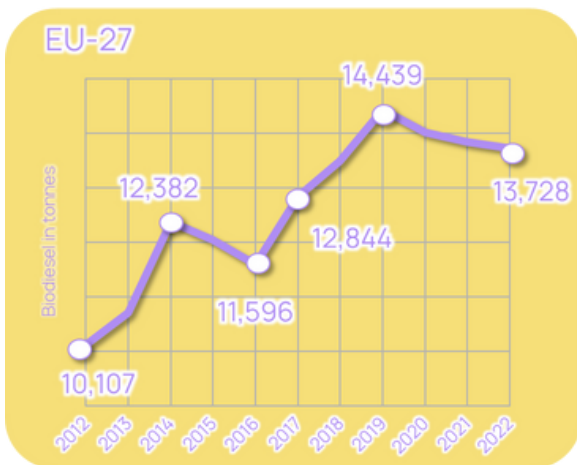
BIODIESEL PRODUCTION

2. Germany largest producer of biodiesel in Europe

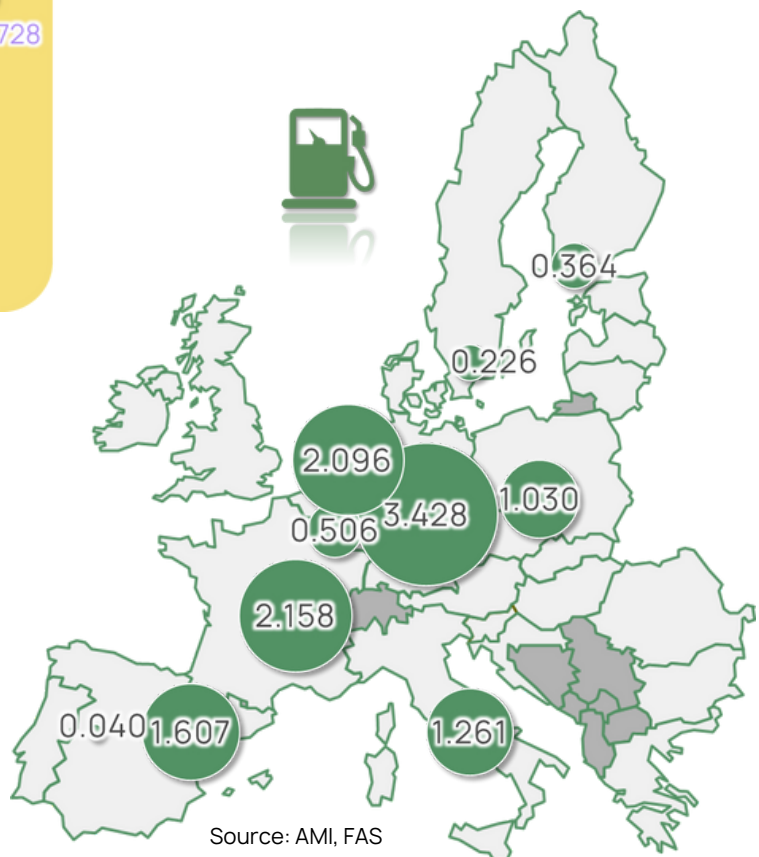
Biodiesel production in Europe had been steadily increasing over the years, with the EU setting targets for member states to increase their use of renewable energy sources, including biofuels.

However, after a peak in 2019, EU production has decreased gradually to reach 13,7 in 2022.

Germany is the largest producer of biodiesel in Europe, followed by France and Spain. Other significant biodiesel producers in Europe include Italy, Poland, and the Netherlands.



3,428	Germany
2,158	France
1,261	Italy
1,607	Spain
1,030	Poland
0,506	Belgium
2,096	the Netherlands
0,040	Portugal
0,226	Sweden
0,364	Finnand

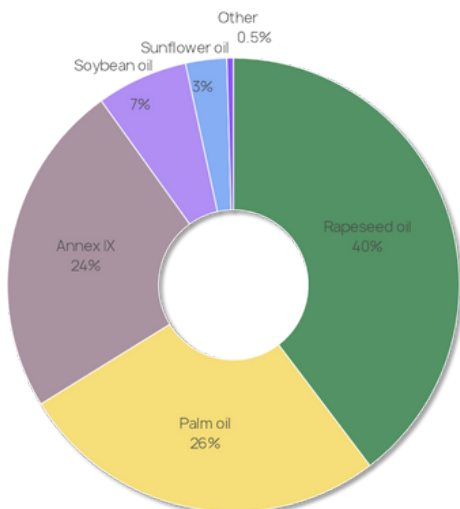
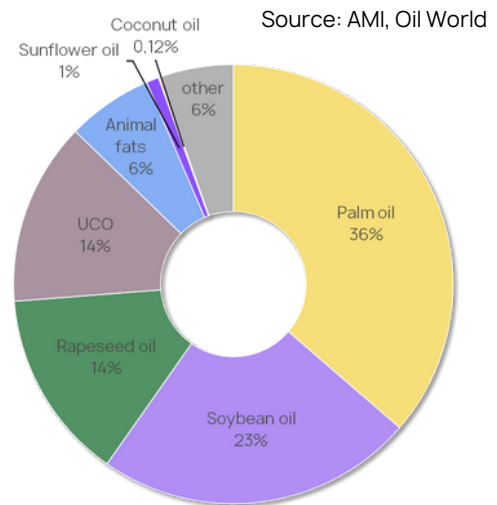


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BIODIESEL PRODUCTION

3. Feedstock used in world's and Europe's biodiesel production

The primary feedstock used in the production of biodiesel varies by region, but globally, vegetable oils are the most frequently used. Palm oil accounts for 36% of the global resource basis, soybean oil for 23% and rapeseed oil for 14%, whereas waste (UCO and others) make up 14% and animal fats 5%



Source: AMI, Oil World

In the United States, soybean oil is the primary feedstock, accounting for around 50% of biodiesel production. In Brazil, soybean oil is also the primary feedstock, but the country is also investing in the production of biodiesel from other sources such as animal fat and used cooking oil. In Asia, particularly in Indonesia and Malaysia, palm oil is the primary feedstock for biodiesel production.

In the EU, agricultural crops remain the main biodiesel feedstock, accounting for 76% of the total. Rapeseed oil is the primary feedstock, accounting for around 40% of biodiesel. The marginal role of sunflower oil has even decreased due to the reallocation of oil to the food market as a result of the Ukrainian crisis and the consequent drastic reduction in exports of this feedstock. The EU oilseed crushing industry has reacted quickly to reallocate all available sunflower oil to the food market, illustrating the synergies that exist between biodiesel production and the food and feed market. The share of palm oil is gradually decreasing in anticipation of the end of the phase-out foreseen in the EU Delegated Act on High ILUC. On the other hand, the share of Annex IX feedstocks is increasing. Finally, the share of soybean oil is stable at a low level and its consumption is concentrated in a few EU countries, such as Spain, which has not introduced a ban on its use for biodiesel production.



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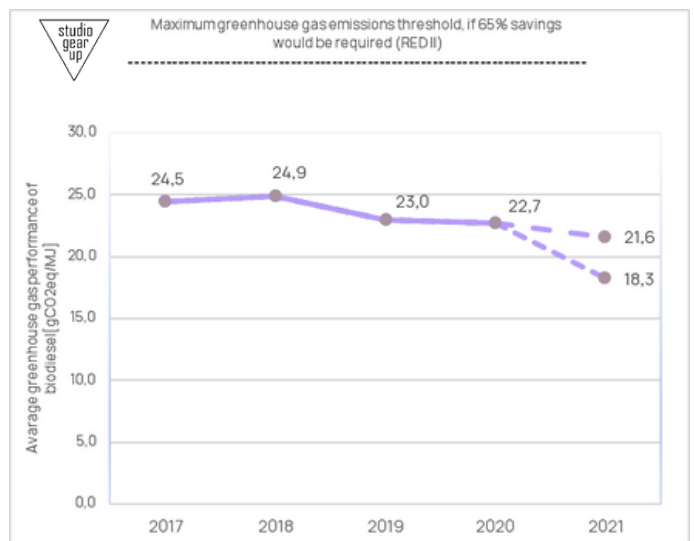
GHG PERFORMANCE OF BIODIESEL

1. GHG emissions from biodiesel

Note: The emissions data presented in both graphs covers the period from 2017 to 2020 and was sourced from the European Environment Agency (EEA). For the year 2021, a preliminary estimate was made based on public submissions from 11 Member States to the EEA under the Fuel Quality Directive. Additional national data from Sweden, Spain, and the Netherlands were included to represent 68% of the EU biodiesel volume.

As the first graph shows, greenhouse gas (GHG) emissions of biodiesel in the EU market have gradually decreased in the past few years.

The low estimate for 2021 assumes that the sample data is representative of the average greenhouse gas emissions from biodiesel across all 27 EU Member States. The high estimate for 2021 conservatively assumes that the remaining 32% of biodiesel volume achieves typical greenhouse gas savings as required by the EU Renewable Energy Directive, with a minimum threshold of 60%. The feedstock composition for this remaining biodiesel volume was based on USDA estimations of EU biofuel production.



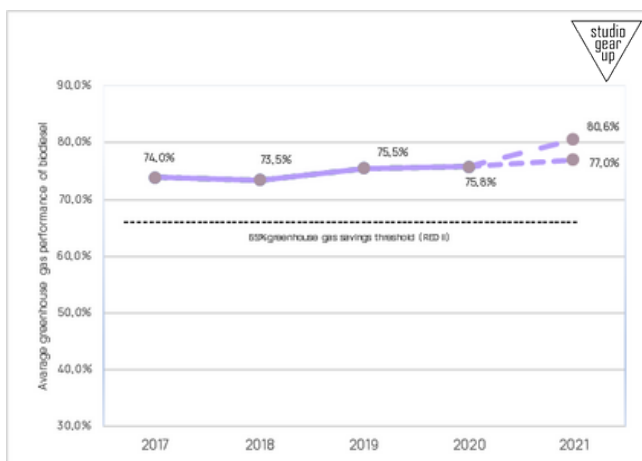
2. GHG emission savings

Similarly, the average emission savings per unit of biodiesel (FAME and HVO collectively) increases slowly over time and continues to grow in the year 2021.

The use of biodiesel in 2021 saved between 77% to 81% using the official fossil fuel comparator of 94 gCO₂eq/MJ. As a result, about 45 Mtonne CO₂eq emissions were saved by biodiesel in 2021.

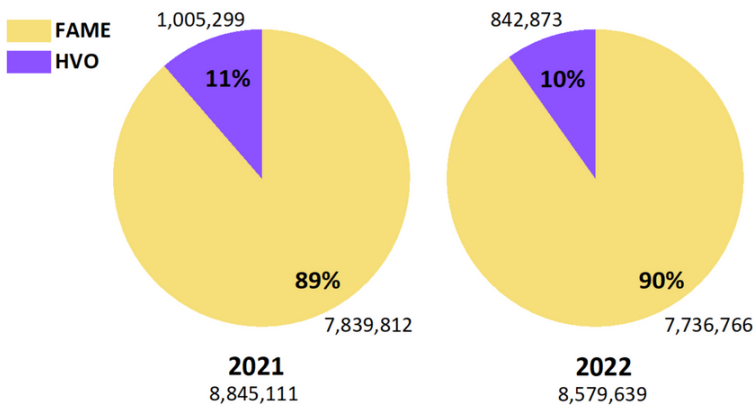
The gradual increase in savings can be explained by:

- An increasing share of waste-based FAME and HVO
- The improving performance of crop-based biodiesel, from about 36 to possibly 28 g/MJ
- An increasing interest in reporting actual greenhouse gas emission reduction instead of default values



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EBB MEMBERS' PRODUCTION



The two pie charts show the total biodiesel production including HVO from EBB members in 2021 and 2022.

Total 2021 production amounts to 8,845,111 tons, of which 1,005,299 is HVO (approx. 11%).

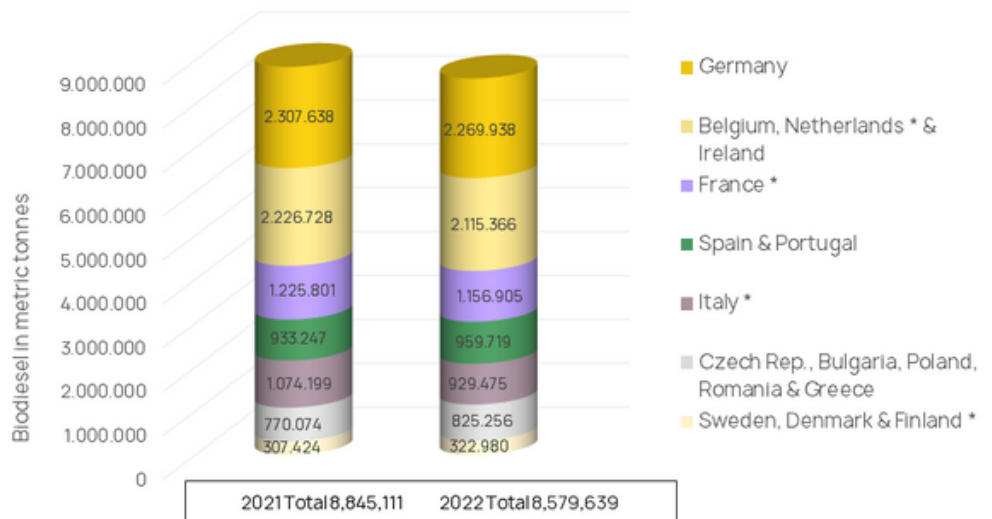
Total 2022 production amounts to 8,579,639 tons, of which 842,873 is HVO (approx. 10%).

The histogram illustrates the EBB members' production by EU Member States in 2021 and 2022.

To improve the confidentiality of the production data provided by our members, we have grouped the data from countries with a single EBB member by geographic location.

In both years, Germany is the biggest production country, followed by other Western countries such as Belgium, the Netherlands, and France.

It is interesting to note that biodiesel production decreased slightly in all countries in 2022 compared to 2021. However, it increases by around 7% in the eastern countries and by 2% in the northern countries.



*represents figures that include HVO.
All EBB Statistics are subject to a +/- 5% margin of error.

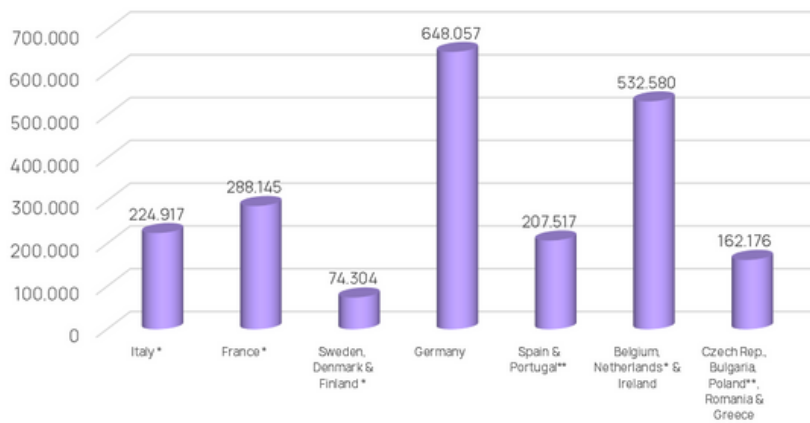


04

EBB MEMBERS' PRODUCTION

This chart shows the EBB member production including HVO in the first quarter of 2023.

Germany, Belgium, the Netherlands, and France continue to be the biggest producers.



* represents figures that include HVO.

**represent incomplete submission.

All EBB Statistics are subject to a +/- 5% margin of error.





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European Biodiesel Board

The European Biodiesel Board (EBB) is an association representing biodiesel producers using all kind of feedstocks (waste, residues, crops, etc.). Biodiesel is used primarily as a substitute for fossil fuels in transport. Biodiesel production has the double benefit of developing the energy independence of the EU while generating income for EU farmers. Thanks to European policies, the EU is now the largest global biodiesel producer and market.



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