

PURE European renewable ethanol – key figures 2021

In 2021, ePURE members produced **4.4 million tonnes (5.58 billion litres)** of ethanol and **4.48 million tonnes of high-protein animal feed** – in other words, more feed than fuel. All of the crops used were grown by European farmers. 84.2% of the ethanol produced was for fuel use, with an average of **76.9% GHG savings compared to petrol**.

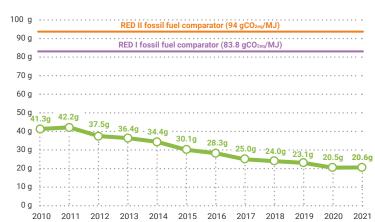
Average certified GHG emission savings in %

Since 2011 the average certified greenhouse gas emission savings of renewable ethanol against fossil fuel have increased continuously, reaching 76.9% in 2021.



Source: Aggregated and audited data of ePURE members for volumes certified under RED I

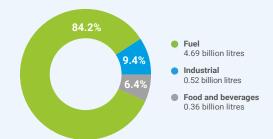
Average certified GHG emissions from the production and use of fuel ethanol in gCO_{2eq}/MJ



Source: Aggregated and audited data of ePURE members for volumes certified under RED I or RED II methodology

Renewable ethanol production by end-use

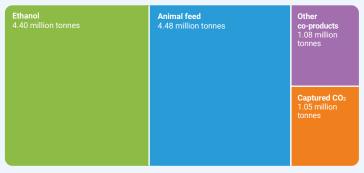
In 2021, ePURE members produced 5.58 billion litres of ethanol, operating at 87.6% of their 6.38 billion litres of installed capacity. Fuel accounted for 84.2% of the use; other markets, such as industrial applications and beverages, represented 9.4% and 6.4% respectively.



Aggregated and audited data of ePURE members. Ethanol volumes in pure alcohol

Main output of European renewable ethanol plants

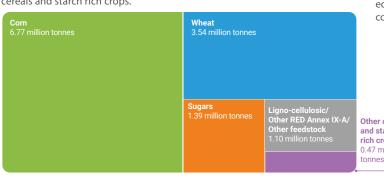
In 2021, ePURE members produced more animal feed than ethanol: of the 6.62 million tonnes of co-products produced by biorefineries, 4.48 million tonnes were animal feed.



Aggregated and audited data of ePURE members. Ethanol – pure alcohol; Animal feed co-products – dry matter equivalent; Other co-products – commercial equivalent

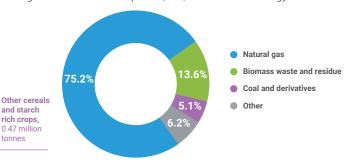
Feedstock used to produce renewable ethanol

All the feedstock used to produce renewable ethanol by ePURE members was grown in Europe. Of the 5.58 billion litres of ethanol produced in 2021, 50.4% was from corn, 21.8% from wheat, 14.5% from sugars, and 3% from other cereals and starch rich crops.



Share of installed production capacity per type of process fuels

ePURE members are improving production processes for renewable ethanol. In 2021, more than 67% of ePURE members' installed production capacity was equipped with a $\rm CO_2$ capture system, and more than 58% had integrated cogeneration of heat and power (CHP) to reduce their energy demand.



Source: Aggregated and audited data of ePURE members. Sugars – sugar equivalent; Ligno-cellulosic/Other RED Annex IX-A/Others – dry matter equivalent



Renewable ethanol market at a glance - 2021

EU27 + UK renewable ethanol installed production capacity (Million litres)

*Includes non-ePURE members. ePURE members account for 6.38 billion litres of total European production capacity.

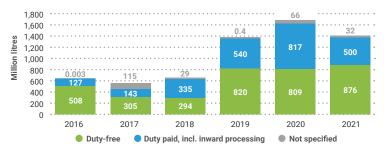


Source: ePURE estimates for ethanol fermentation capacity based on F.O. Licht



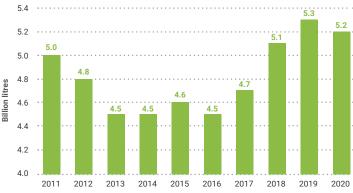
Imports of ethanol into the EU27

EU27 ethanol imports reached 1,408 million litres in 2021, a 17% decrease compared to 2020 with 27 Member States. Imports from countries enjoying duty-free access to the EU accounted for 62% of the imports while imports from countries without preferential access accounted for 36%. Imports from the US decreased by nearly 39% to 273 million litres in 2021 while imports from Peru increased by nearly 60% to 211 million litres in 2021. Imports of fuel ethanol into the EU monitored by EU customs represented 475 MI in 2021.



Source: Eurostat, EU28 imports until 2019, EU27 imports without the UK as of 2020

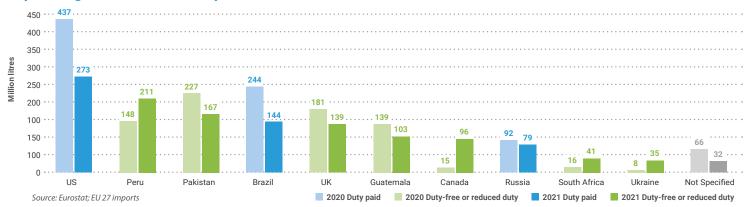
EU27 biogasoline consumption



Source: Eurostat

Biogasoline: liquid biofuels suitable to be blended with or to replace motor gasoline from fossil origin e.g. ethanol, methanol and the share of ETBE and MTBE from biomass

Top 10 origins of EU ethanol imports





For more information: