

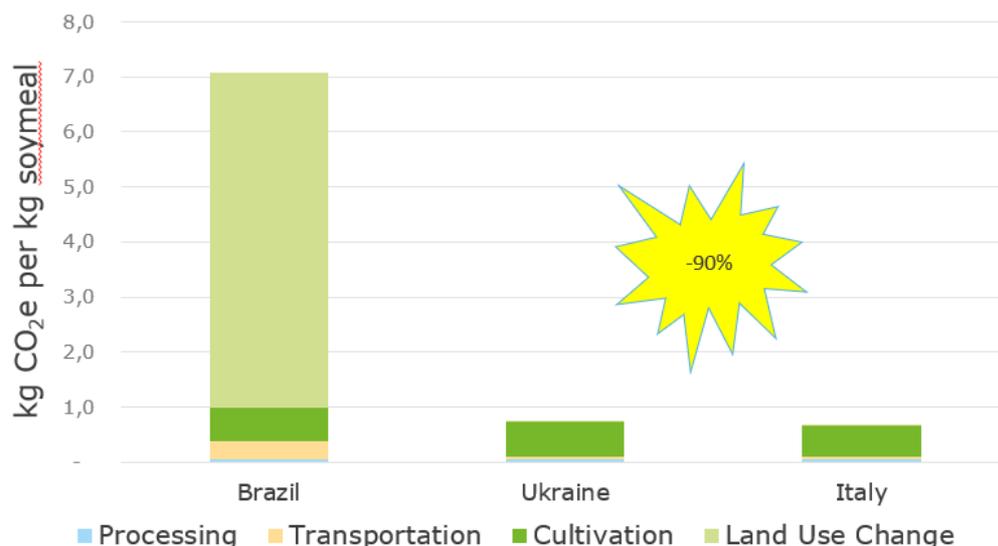
Donau Soja/Europe Soya: A real and climate-saving alternative

Agriculture, Forestry, and Other Land Use (such as deforestation) accounts for 24% of global greenhouse gas (GHG) emissions and is therefore the second biggest emitter after Electricity and Heat Production.¹ While only 18 % of global arable land is used for direct food production, over 70 % are used for feed production.² Soya production has a big share in this system – it accounts for 10 % of arable land and is mainly used in livestock production/animal feed. The European Union is heavily dependent on the imports of soya. In 2018, almost 40 Mio tons of soybeans were imported, mostly from overseas. Approximately 12 million hectares are needed to supply that demand. A great share of that land is located in areas which have been few years ago high conservation value forests, such as the Amazon. According to the International Union for Conservation of Nature (IUCN) in the Netherlands only 13 % of EU’s soya supply is coming from deforestation free production.³

Deforestation - main driver for CO₂ emissions

A comparison of supply chains from different soya production regions to an oil mill in Central Europe reveals clear climate saving potentials: In case of a standard supply-chain from Brazil to Europe, CO₂ emissions of 7 kg CO₂ per kg of soymeal are released. When soybeans are sourced in a certified way from Europe, only 0.8 kg CO₂ per kg of soymeal are emitted. This translates into a reduction of 90% and savings of over 6 kg CO₂.⁴ The main driver to that difference is by far the conversion from forest or natural grassland into arable land (land use change). Donau Soja or Europe Soya certified supply-chains can guarantee no deforestation and no land use change.

Figure 1: CO₂ emissions of supply chains from different soya production regions to an oil mill in Central Europe



Source: Donau Soja (2019), based on the Feedprint database of Wageningen University

¹ IPCC (2014): https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf

² Raschka, A. und Carus, M. (2012): https://www.iwbio.de/fileadmin/Publikationen/IWBio-Publikationen/Stoffliche_Nutzung_von_Biomasse_nova.pdf

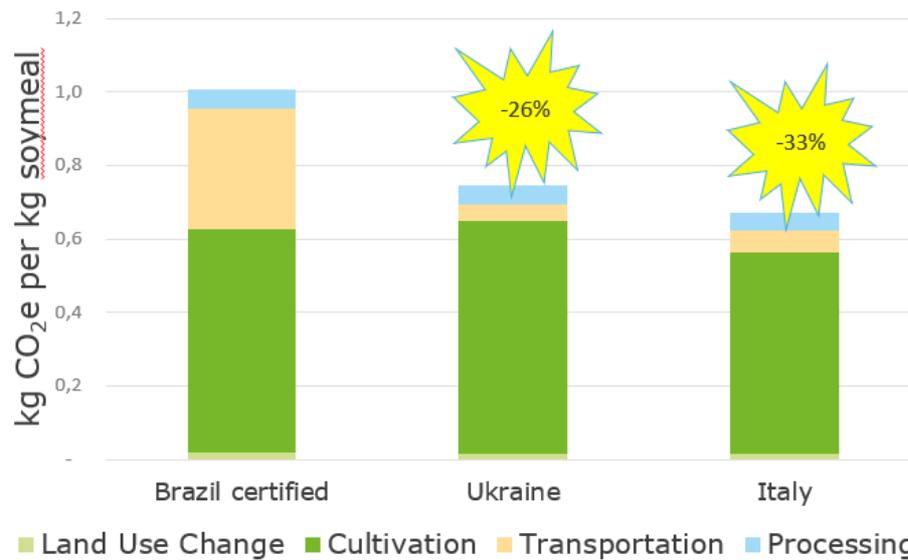
³ IDH and IUCN NL (2019): https://www.iucn.nl/files/publicaties/european_soy_monitor.pdf

⁴ Donau Soja (2019), based on the Feedprint database of Wageningen University

Transport means and distances make a difference

A range of certification schemes enable deforestation-free supply-chains. But aside from land-use change, transport means and distances also cause substantial CO₂ emissions. Short soya supply-chains in Europe result in approximately 30% less CO₂ than supply-chains from certified sources from overseas.⁵

Figure 2: CO₂ emissions of certified deforestation-free supply chains from different soya production regions to an oil mill in Central Europe



Source: Donau Soja (2019), based on the Feedprint database of Wageningen University

Regional Climate Partnerships

By developing short supply-chains in Europe, Donau Soja strengthens rural development and contributes to reducing CO₂ emissions of the agri-food system in Europe. The shift of the Austrian egg production to regional soya (Donau Soja) is seen today by farmers, industry and by retailers as a great success for the whole sector. This case is an outstanding example for a climate-friendly agriculture. Donau Soja aims to support the establishment of these Climate Partnerships across Europe.

How the shift of standard soya from overseas to Donau Soja in the Austrian egg production has realised savings of CO₂ emissions is clearly visible in calculations by Dr Stefan Hörtenhuber, scientist at University of Natural Resources and Life Sciences, Vienna (BOKU). His research indicates that today the Austrian egg production causes 36% less CO₂ emissions compared to the Western European standard model.⁶ This means savings of 1kg CO₂ emissions per kg egg:

- Egg production in Austria (incl. Donau Soja): 1.8 kg CO₂ per kg egg
- Egg production according to Western European standard model (incl. soya from overseas): 2.8 kg CO₂ per kg egg

⁵ Donau Soja (2019), based on the Feedprint database of Wageningen University

⁶ Hörtenhuber, University of Natural Resources and Life Sciences (2019)

Figure 3: CO₂ emissions of 1 kg eggs – comparison of Austrian egg production (Donau Soja) with the Western European standard model (soya overseas)



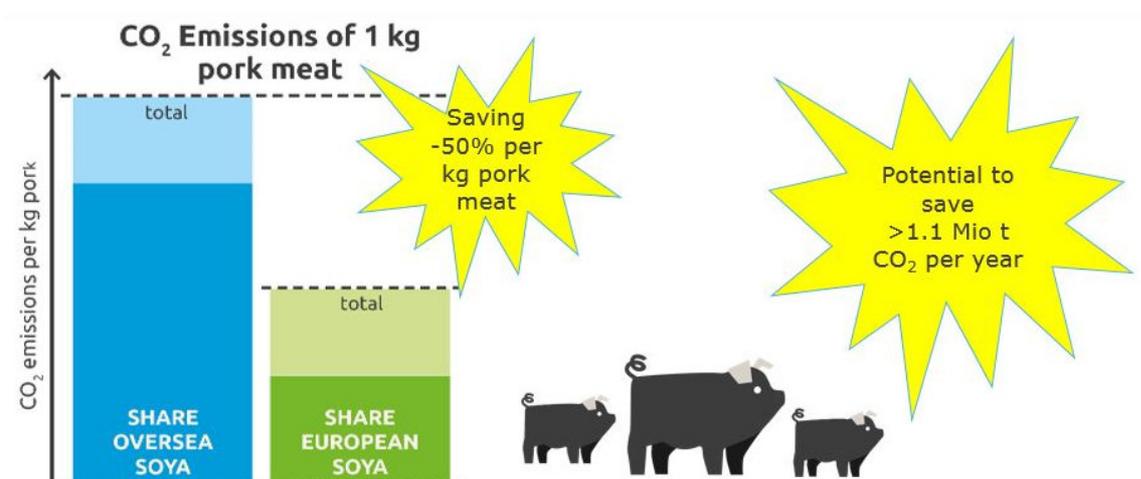
Source: Donau Soja and ZAG, 2019, based on calculations of S. Hörtenhuber (BOKU, Vienna)

By switching to regional and deforestation free soya (Donau Soja), egg producers in Austria save > 100,000 tons of CO₂ per year.

Further potential in the pork sector

In 2011, in a study on pork meat, Sustainable Europe Research Institute (SERI) came to the following conclusion: In the standard Austrian pork production, rainforest deforestation accounts for around 80% of the greenhouse gas emissions. This makes imported soya the biggest lever. Replacing soya from overseas with regionally produced soya would result in a reduction of CO₂ emissions for 1kg of pork by about 50% to 1.8 kg of CO₂.⁷

Figure 4: CO₂ emissions of 1 kg pork meat – comparison of Austrian pork production with overseas soya vs. European soya



Source: SERI, 2011

For Austrian pork producers this means a potential to save > 1.1 Mio tons of CO₂ per year.

⁷ SERI (2011): <https://www.spar.at/content/dam/sparatwebsite/nachhaltigkeit/produkte/regionale-produkte/schweinefleisch-untersuchung-SPAR.pdf>