

Soya from Europe: a climate-friendly alternative for our agri-food system



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In which century and country was the first book entirely about soybean published?

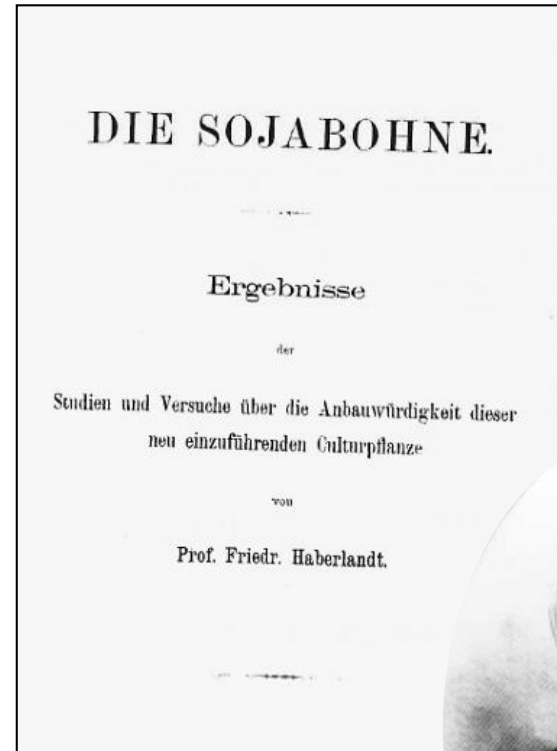


Europe's soybean pioneer: Friedrich Haberlandt

1878

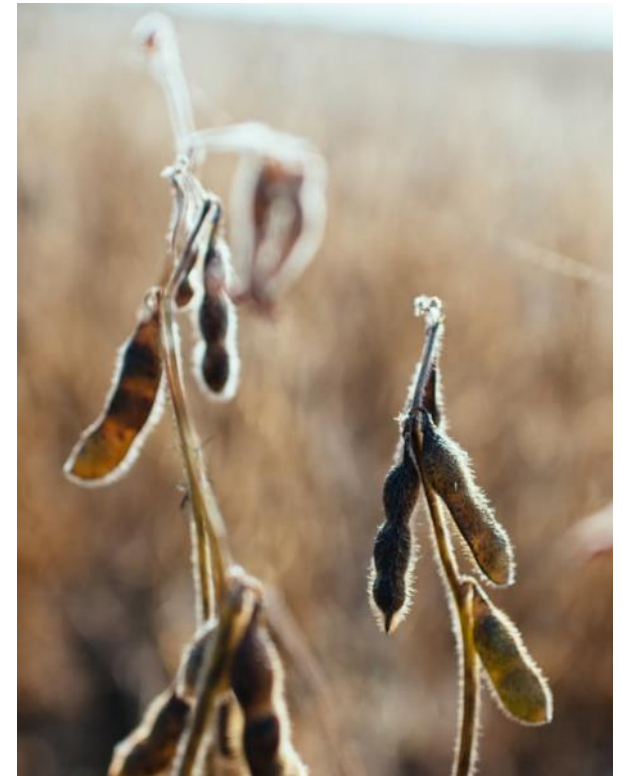
Prof. Haberlandt's magnum opus, *Die Sojabohne* (The Soybean.) is published in Vienna.

This was the world's first book written entirely about the soybean.



Topics

1. About Donau Soja
2. Insight: Soya production and use in Europe
3. Soya from Europe: A climate-friendly alternative



Donau Soja is...

- An independent, non profit, member-based organisation
- More than 280 Members in 25 countries
- Interprofessional: research, plant breeding, farming, processing, food and feed production, distribution, retail and civil society
- Our goals are supported by 24 EU governments through the Donau Soja and Europe Soya Declaration





Our Products:
Donau Soja and Europe Soya
stand for quality- and origin-
controlled soya beans



Certified ingredient for food and feed

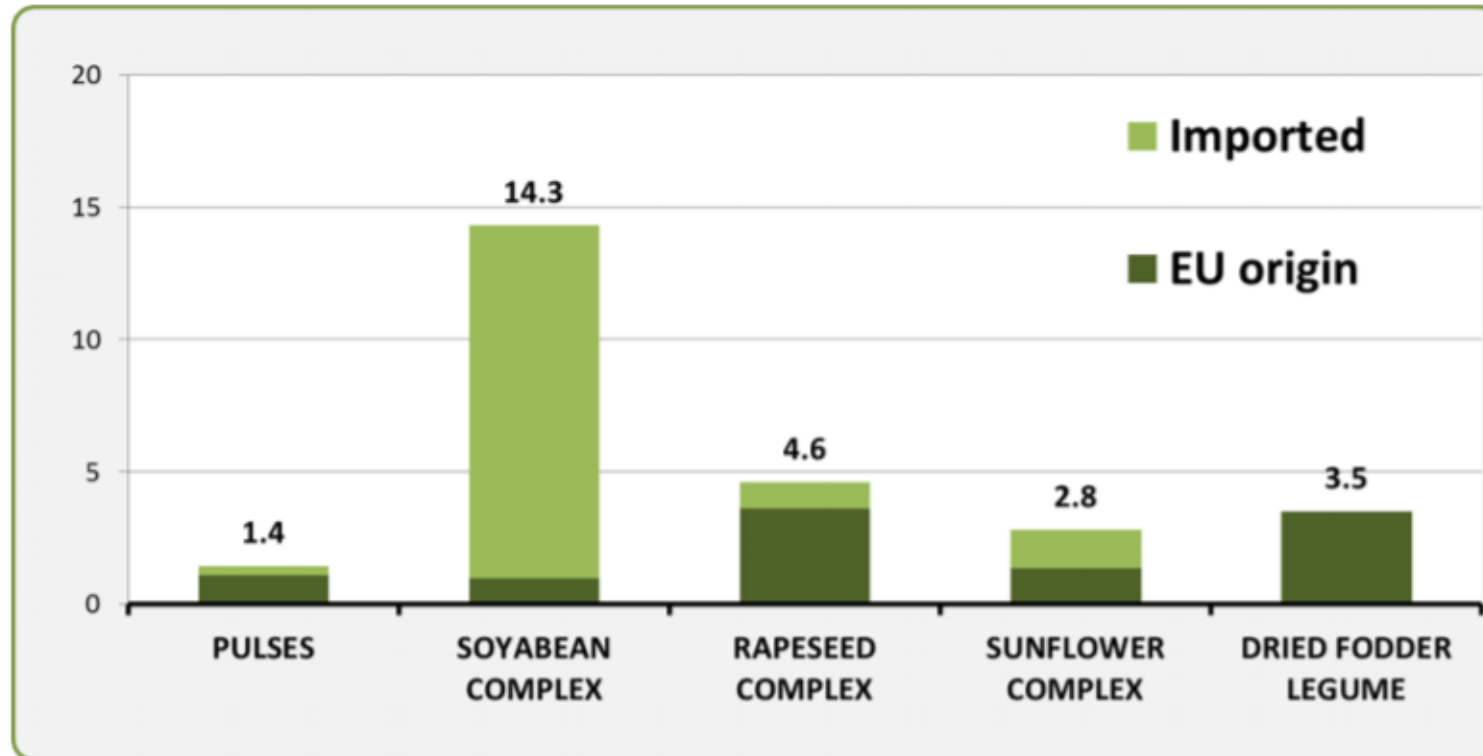


Soya from Europe: Supply and demand



Soya is a key protein source in EU

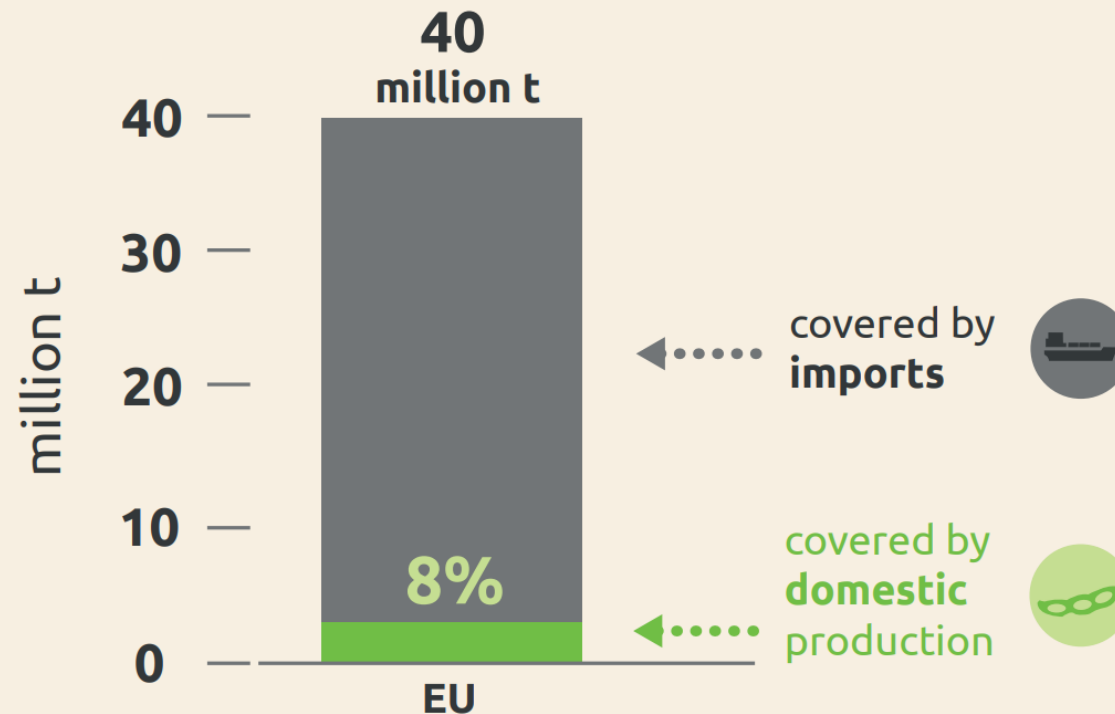
Graph 1 2016/17 EU use of proteins and their sources (in million tonnes of crude protein)



Source: EU Commission. "Complex" includes meals, seeds and beans

Soya supply in EU

Soya bean meal consumption¹ and self-sufficiency ratio² in the EU (2019):



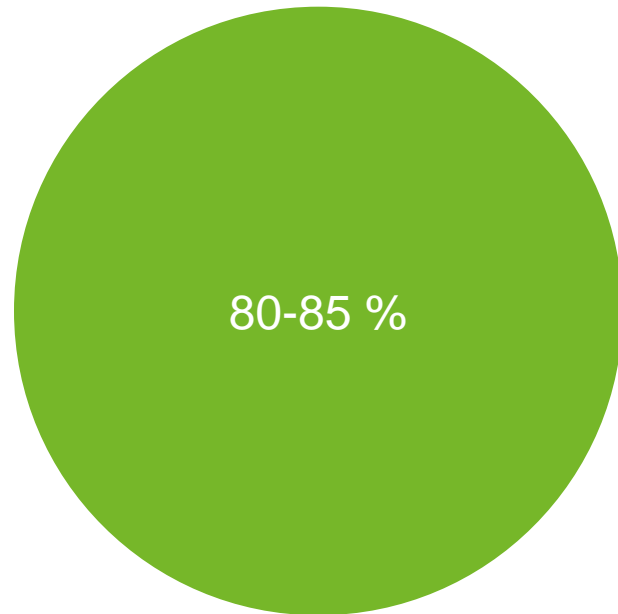
Main soya export countries (average 2015-2019):

Brazil (39 %)
Argentina (28 %)
USA (18 %)

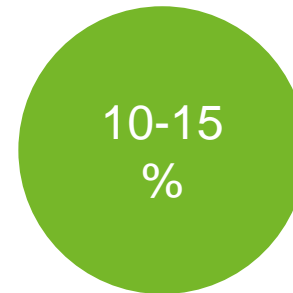
Note:
Soybean and soymeal combined

Soya consumption in European Union

Compound feed



Premium feed non-GM



4 million tons of soymeal used
in Western/Northern Europe
(2018)

Food



Uses:

Tofu, soya drinks,
soy flour, lecithin,
texturised protein

Non-GM HP premium for soymeal



Source: Donau Soja

Location:
Northern Germany

For more information, get the DS Market Report → office@donausoja.org

NON-GM SOYA UPDATE
The overview of the European non-GM soya market
October 2020

Austrian Development Agency

EUROPE SOYA DONAU SOJA

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The Non-GM Soya Update provides information on the soya industry with a special focus on the European non-GM market. The main objective of the publication is to create market transparency and support the decision making of stakeholders operating in the non-GM soya industry. The report includes news on market developments and forecasts as well as price, supply and demand data. The document is published by the Donau Soja Association on a monthly basis.

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Soya from Europe: Cultivation



Main soybean producers in Europe

Development of soya area in Europe:

Harvested area

2X

over 8 years



Corresponds to about **2%** of European arable land

Soya area by main producer countries in Europe (2019):



Soya from Europe: Cultivation sheet (1)

Seeds

- Only non-gm cultivars
- >10 breeding programs are the basis for achieving high yields
- 100-120 kg / ha + inoculation of seeds

Crop management

- Biggest challenge is weed management:
 - 1-3 selective herbicide applications
 - Mechanical weed control
- Fungicides or insecticides very rarely

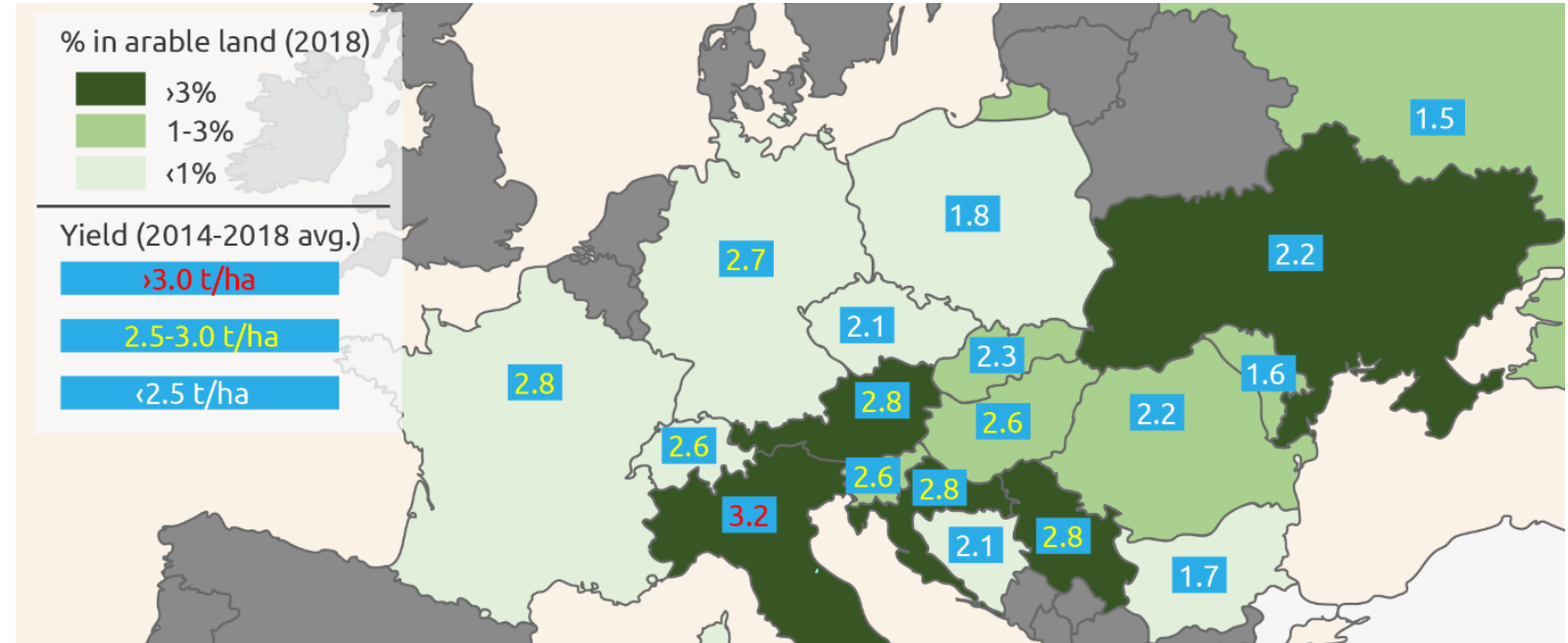


Soya from Europe: Cultivation sheet (2)

Harvest

- Yield levels: 2-5 tons per hectare
- Protein: 30-44 %
- ~10% of area in European Union is organic soya; hotspots in:
 - France
 - Italy
 - Austria

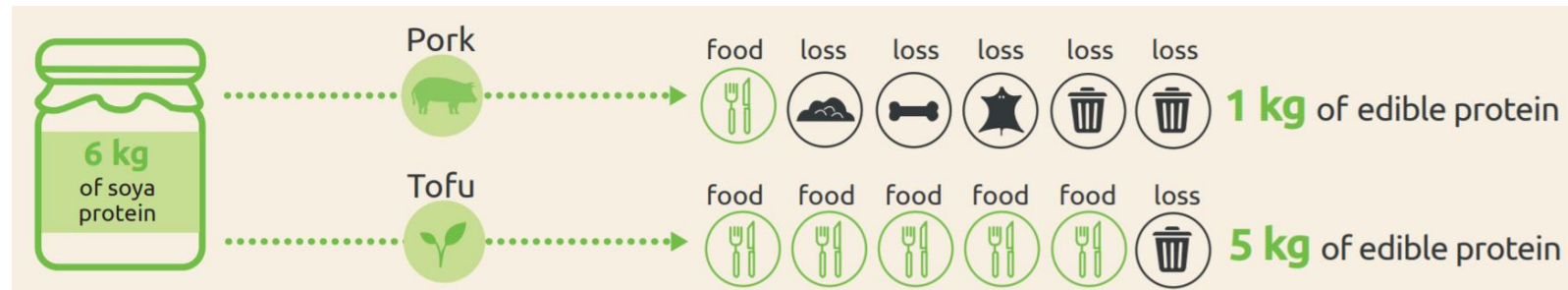
Soybean yield map



Soya from Europe is a climate-friendly alternative

Background

- Agriculture, Forestry, and Other Land Use, incl. deforestation, accounts for **24%** of global greenhouse gas emissions (source: IPCC)
- Pig production needs 6 kg of raw plant-protein to produce 1kg of edible protein, tofu only requires 1.2 kg to achieve the same result*.



- In a conventional pig production system in Germany, about **60%** of the CO₂ emissions are caused by feed provision.

*calculations by
Taifun Sojainfo

Carbon Footprint of DS/ES soybeans

- Estimation of the carbon footprint of soybeans from farms supplying into the DONAU SOJA/EUROPE SOYA (DS/ES) quality program.
- Functional unit: 1 kg soybeans (dry matter of 13%), until point of sale
- Geographical scope based on DS/ES market mix of beans for DS/ES certified oil mill
 - Serbia
 - Romania
 - Croatia



Support for CF calculations
and interpretation:



Results: Carbon footprint of soybeans

Carbon footprint of the DS/ES soybean mix:

0.312 kg CO₂-eq., excl. dLUC

0.712 kg CO₂-eq., incl. dLUC*

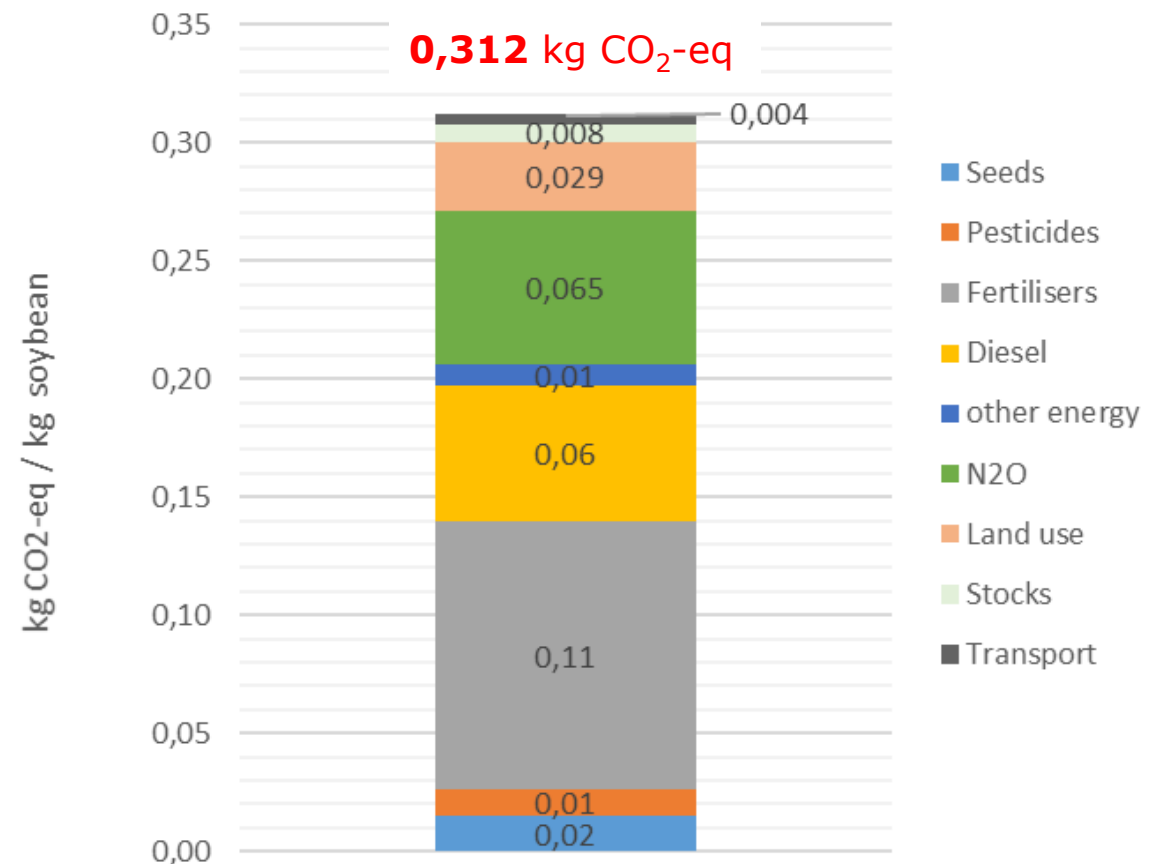
Soybeans Brazil (GFLI database)

0.568 kg CO₂-eq., excl. dLUC

5.202 kg CO₂-eq., incl. dLUC*

*Emissions due to direct land use change (LUC) according to PAS2050-1 methodology. Emissions in SRB, HR and ROM occur only due to conversion from perennial cropland to specific cropland.

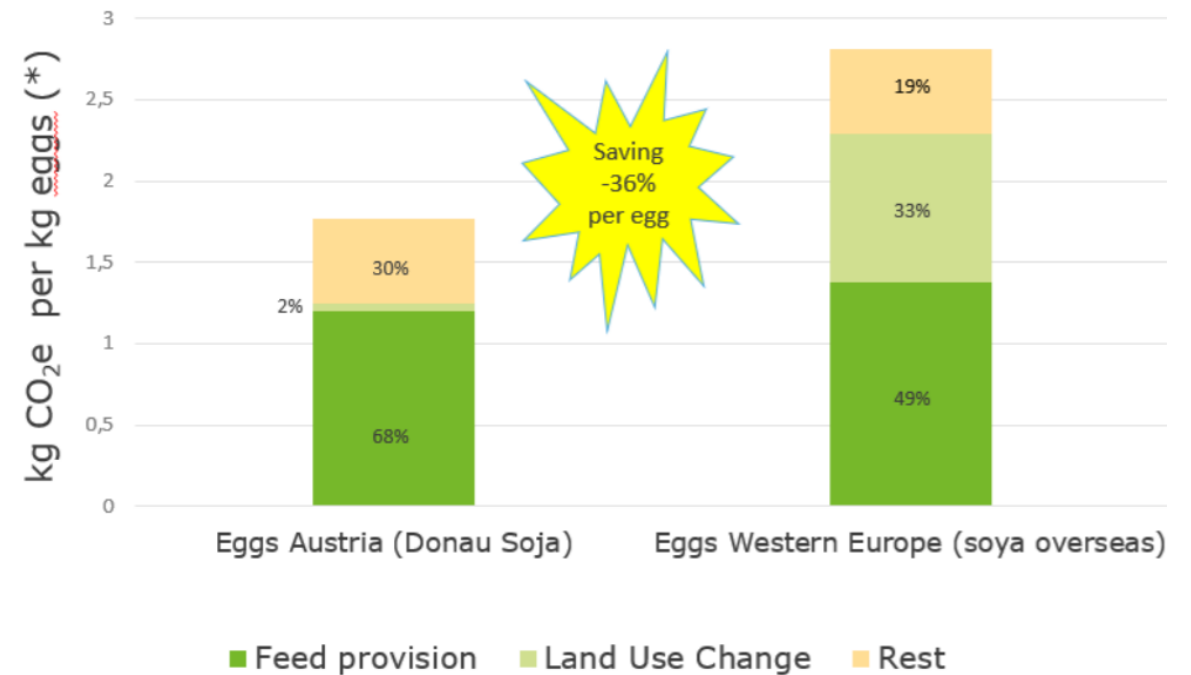
GHG emissions for 1 kg soybean in the supply-chain mix



Clear reduction potentials for food products

Example eggs in Austria

Austrian egg production is by using DS certified soybean causing **36% less CO₂** emissions compared to the standard feed ration which is based on imported soybeans from overseas (50% USA, 50 Brazil).



Calculations by University of Natural Resources and Life Sciences, Vienna (BOKU)

Creating value through climate-friendly feed

Norwegian salmon farmers kiss Brazilian soy goodbye

By Jane Byrne

24-Sep-2019 - Last updated on 24-Sep-2019 at 18:38 GMT



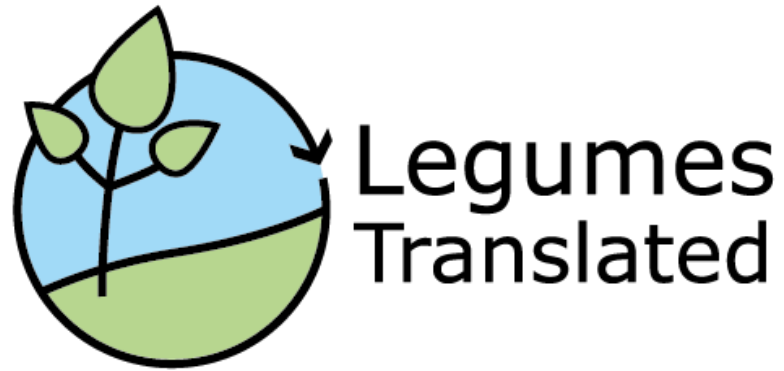
Climate-friendly premium pig program of EDEKA Südwest achieves 40% CO2 reduction compared to standard production system.



Conclusions

- Soybeans grow in Europe very well.
- The outlook for soya from Europe is positive due to positive political, commercial and agronomic aspects
- Soybean feed has a huge impact on the carbon footprint of food products if emissions from land use change are considered.
- Businesses can substantially improve the carbon footprint of their products if they use certified deforestation-free protein sources.
- **BUT** beside the carbon footprint also further sustainability criteria shall be considered: ecology, animal welfare, transparency and traceability in the value-chain

More about legumes from Europe



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Funded by the
European Union

Thanks for your attention

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