

# Climate protection in pork production

*thanks to Donau Soja / Europe Soja*

**The carbon footprint of pork production is largely determined by the choice of animal feed. A recent study by the Research Institute of Organic Agriculture (FiBL) Austria proves this based on the feed for pigs under the German retailer EDEKA's program *Hofglück* ("Farm-Happiness"). By using Donau Soja / Europe Soja-certified soya feed, *Hofglück*-pork avoids around 40% of CO<sub>2</sub> emissions.**

## Background

In German-speaking countries, food consumption accounts for one quarter of individual greenhouse gas emissions per year [1] Food choices play a crucial role in consumers' personal carbon footprint. In the production of animal-based food, relevant amounts of greenhouse gas emissions already emerge during animal feed production. Globally, the change in land use - for example from grassland or forest to agricultural land - accounts for large amounts of greenhouse gases.[2] Data from INPE, the Brazilian national institute for space research, show that between 2000 and 2016 approximately 5.3 million hectares of native vegetation in the Amazon and Cerrado have been transformed for soya production. This corresponds to about one third of the arable area in Germany.

Brazil is the source of about 40 % of the European Union's soya imports. They are mainly used as protein-rich animal feed in livestock production. Due to land transformations, soya feed from the Amazon as or from the Cerrado is often contaminated with high CO<sub>2</sub> emissions and therefore has a carbon footprint about 10 times higher than that of Donau Soja / Europe Soja-certified European soya feed.



EDEKA Hofglück-pigs are fed with DONAU SOJA / EUROPE SOYA.  
Photo: Helmut Fischer

## Results of the study: Carbon footprint in pork production

The study by FiBL Austria shows how feeding *Hofglück*-pigs with regionally produced soya feed impacts the emission of greenhouse gases (see figure below). *Hofglück*-pork\* produced with Donau Soja / Europe Soja causes 2.16 kg CO<sub>2</sub> per kg of pork, while a comparable production with soya from overseas (estimated to be 50:50 from USA and Brazil) causes 3.42 kg CO<sub>2</sub> per kg of pork. That translates to a reduction of 1.26 CO<sub>2</sub> per kg of pork, an emission reduction of 40 %.

The study illustrates the significant contribution of protein feed to the carbon footprint of pork production. Land use change at the level of soya production is a key factor for emissions: Soyabeans in the *Hofglück*-feed mix cause 0.320 kg CO<sub>2</sub> per kg of beans, while the same

amount of soya beans from overseas (USA, Brazil) cause 4.225 kg CO<sub>2</sub>.

A further climate benefit of using regionally produced soya lies in transport emissions. The share of emissions from ships, trains or trucks

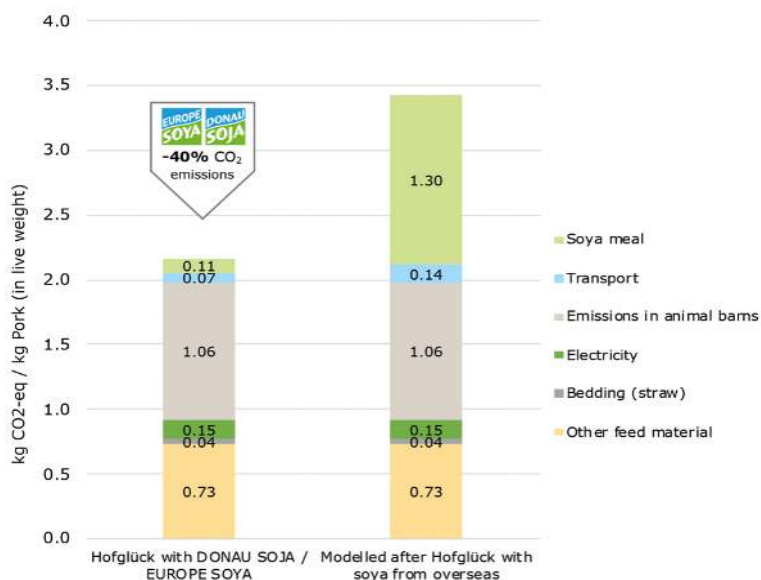


Figure: Global warming potential of 1 kg pork\* - comparison of feed with Donau Soja / Europe Soja versus soya from overseas (50:50 from USA and Brazil). Soya meal is a very common soya feed. In addition to cereals and grain maize, the feed mix also contains other protein-rich components. On average these are: soya meal (10 %), rapeseed meal (1.4 %), faba beans (1.1 %), peas + soya cake (1 %).

\*Pork refers to 1 kg of live weight pig. Further processing steps after the pig farm are not considered.

### Why the feed of EDEKA´s Hofglück-pigs is something special

The European Union is heavily dependent on soya imports. In 2018 these amounted to almost 40 million tonnes, mainly from overseas. About 12 million hectares are needed to meet this demand. According to the Sustainable Trade Initiative (IDH), only 19% of the EU's soya consumption come from certified deforestation-free production. In Germany 3.6 million tons of soya are consumed annually, of which 22% come from certified deforestation-free production.

The German food retailer EDEKA is a pioneer and relies on regional and deforestation-free animal feed. A large proportion of the feed components in EDEKA´s *Hofglück*-pig feed comes from the farmers´ own production or from regional producers. As well, the critical soya meal comes from regional European production: Since 2019 *Hofglück*-pigs are fed primarily European Donau Soja / Europe Soja -certified feed as protein feed. In individual cases the pig farmers even produce their own soya feed.



Soya field in the vicinity of Vienna  
Photo: Mirjam Lichtenberger, Donau Soja

The quality labels DONAU SOJA / EUROPE SOYA guarantee non-GM, sustainably produced soya of European origin. DONAU SOJA / EUROPE SOYA-certified supply chains protect valuable ecosystems: Soya is only cultivated on land that was dedicated for agricultural use not later than 1 January 2008. By relying on DONAU SOJA / EUROPE SOYA, EDEKA actively contributes to the preservation of forests and other valuable ecosystems and thus to climate protection.



The quality labels EUROPE SOYA / DONAU SOJA stand for quality- and origin-controlled soya feed

### About the study

In March 2020, DONAU SOJA commissioned the Research Institute of Organic Agriculture (FiBL) Austria to investigate how using DONAU SOJA / EUROPE SOYA-certified soya products impacts the carbon footprint of food and feed products. Hofglück-pork (in live weight at farmgate) is one of the investigated products. Carbon footprint data on the level of soybean production are an essential part of the study and were collected by Footprint-consult e.U. DONAU SOJA thanks the Hofglück-farmers and suppliers, the soya processing companies Oleificio San Giorgio and Cereal Docks (both IT), BAG Güssing (AT) and the partaking soybean producers for their support in data collection.

### About the EDEKA Hofglück-program

The *Hofglück* brand stands for premium quality meat. It is marked with two of two possible stars of the animal welfare label „Für Mehr Tierschutz“ (“For more animal protection”) of the German Animal Welfare Association. In addition, *Hofglück*-products received the highest level 4 of the certification „Haltungsform“ (“form of livestock farming”). The animals do not receive genetically modified feed and are kept in the region. The suppliers are from the southwest of Germany.

**Website:** [www.suedwestfleisch.de/html/content/hofglueck1413.html](http://www.suedwestfleisch.de/html/content/hofglueck1413.html)

## About DONAU SOJA

DONAU SOJA is a non-profit, independent and member-based organisation based in Vienna. The vision of DONAU SOJA is a sustainable, safe and European protein supply. To achieve this, DONAU SOJA supports, among other things, the sustainable production of soya in Europe and the development of regional value chains. The two labels DONAU SOJA / EUROPE SOYA stand for non-GM soya products of controlled origin and quality from the Danube region and from Europe. DONAU SOJA unites over 270 members in 25 countries.

**Website:** [www.donausoja.org](http://www.donausoja.org)

## References

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