EUROPEAN SOY MONITOR

Insights on European responsible and deforestation-free soy consumption in 2018

the sustainable trade initiative

Colophon

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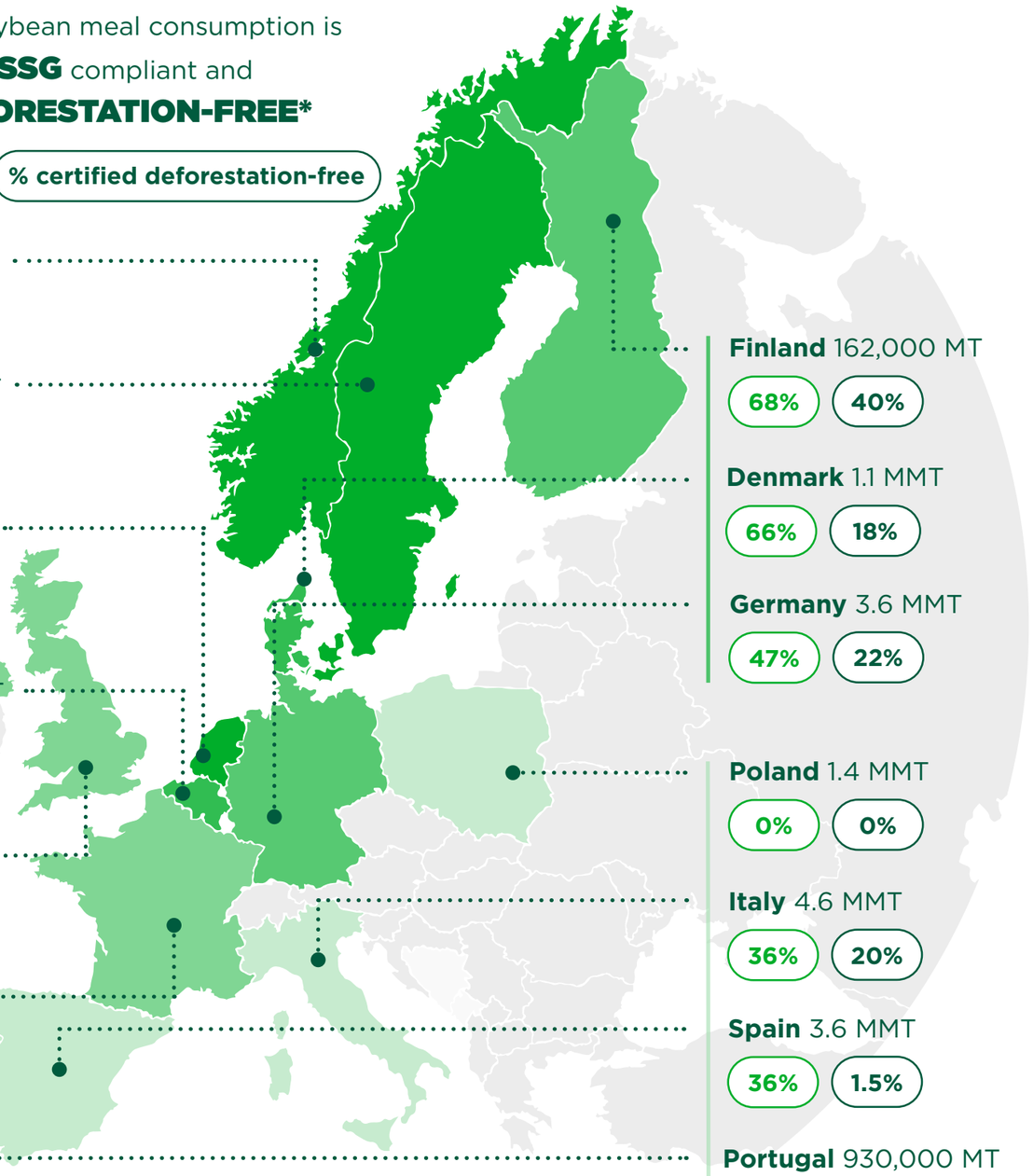
The cover photo is a matured, ready-to-harvest RTRS certified soy field in Sorriso, Mato Grosso in Brazil.

European consumption of responsible and deforestation-free soy in 2018

38% of EU+ soybean meal consumption is **FEFAC SSG** compliant and **19%** is **DEFORESTATION-FREE***

% FEFAC SSG | % certified deforestation-free



Norway 239,000 MT
>100% | >100%

Sweden 368,000 MT
78% | 78%

Netherlands 1.1 MMT
>100% | 99%

Belgium 568,000 MT
>100% | 64%

UK 2.9 MMT
34% | 27%

France 3.5 MMT
43% | 20%

Finland 162,000 MT
68% | 40%

Denmark 1.1 MMT
66% | 18%

Germany 3.6 MMT
47% | 22%

Poland 1.4 MMT
0% | 0%

Italy 4.6 MMT
36% | 20%

Spain 3.6 MMT
36% | 1.5%

Portugal 930,000 MT
18% | 18%

Due to methodological differences a one-on-one comparison with last year's report is not entirely possible.

*For the calculation of deforestation-free we only took into account the volumes under the schemes which have been benchmarked by IUCN/ Profundo as deforestation-free (RTRS, ISCC+, Danube / Europe Soy, CRS/BFA and SFAP- Non Conversion). **Net import soybeans 15.5 MMT (*0.8) + net import soybean meal 18 MMT + EU soybean production 2.9 MMT (*0.8). All calculated in soybean meal equivalent.

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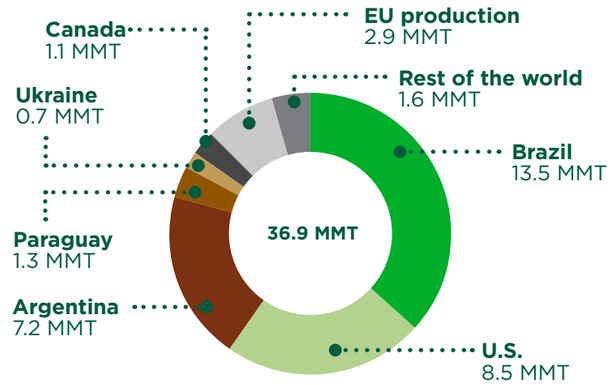
EUROPE OVERVIEW

Origins of EU+ soy



34 MMT in imports + EU production 2.9 MMT

Source: Comtrade

32.7 MMT
Soybean meal available**

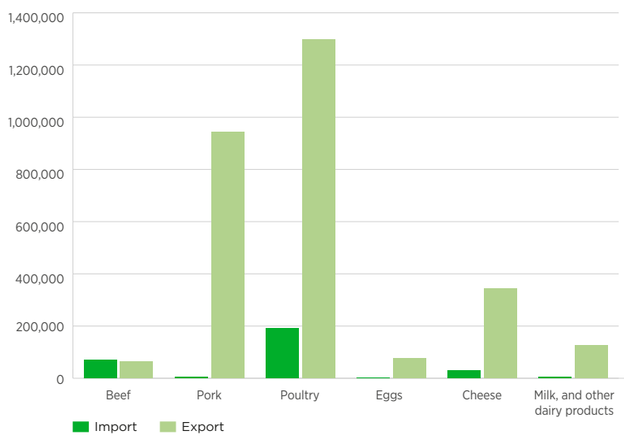
2.55 MMT
EU+ net export embedded soy

30.15 MMT
EU+ soybean meal consumption

32.7 - 2.55 = 30.15

Import and export of embedded soy in EU+

Total Import of embedded soy: 0.3 MMT | Total Export of embedded soy: 2.8 MMT



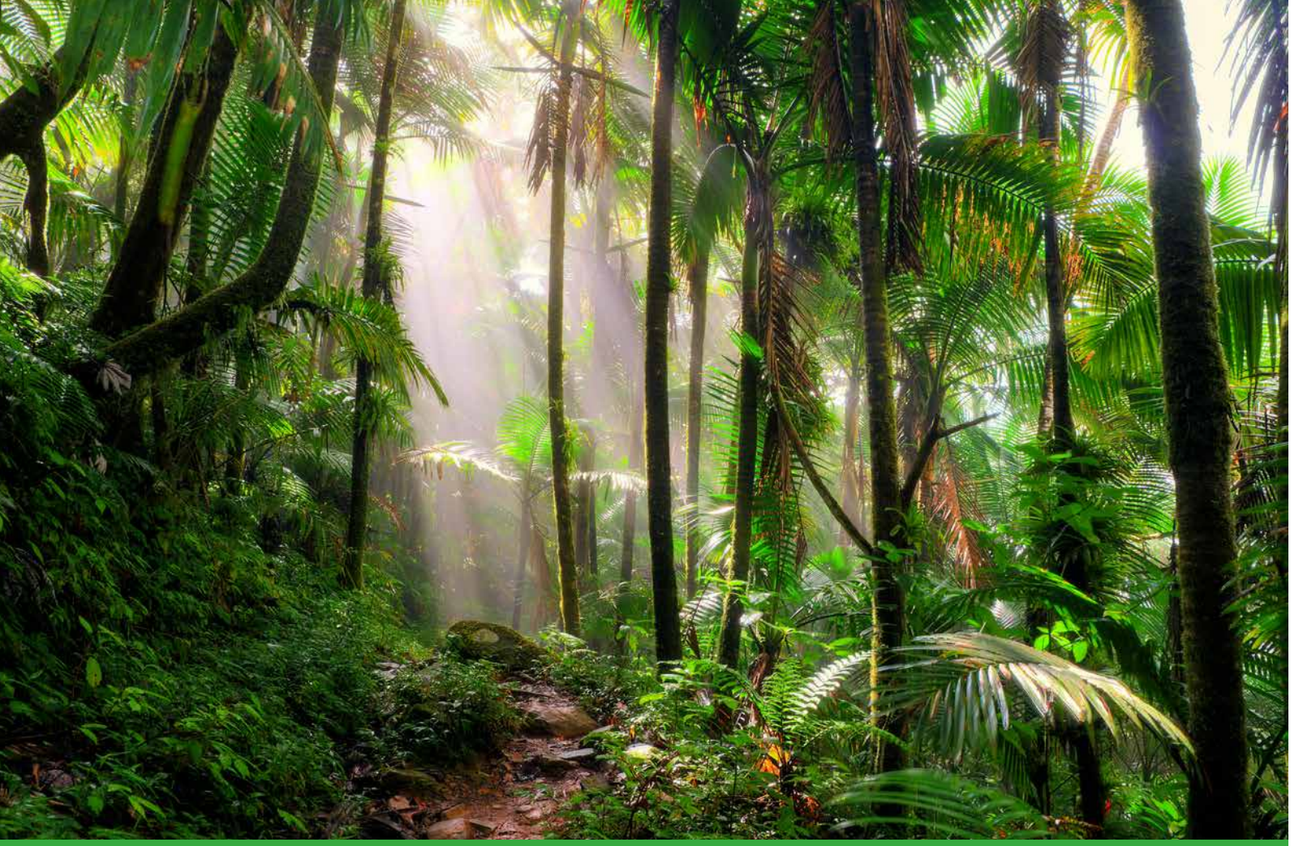
FEFAC estimated that **77%** of EU soy imports are from **low deforestation risk areas**

GLOBAL OVERVIEW

359 MMT
global soy production

22.5 MMT
is FEFAC SSG compliant soy

125 M
hectares total production



Executive Summary

This second European Soy Monitoring Report gives an update on the transition towards responsible and deforestation-free soy in the EU-28, Norway and Switzerland (EU+). In 2018, 38% of all soybean meal consumed in EU+ was compliant with the FEFAC Soy Sourcing Guidelines and 19% was certified deforestation-free. One-on-one comparison with the 2017 report is not entirely possible due to methodological differences, but an increase in the uptake of FEFAC-compliant soy and deforestation-free soy can be observed from 2017. We also present an alternative method (developed by FEFAC) that is based on deforestation risks in specific regions that shows that 77% of all soybean meal imported to the EU+ are sourced from regions with low deforestation risks.

In 2018, world soybean production continued to grow to 359 million tonnes. Major production areas for soy imported to the EU are linked to important biomes at risk for conversion such as the Amazon, Cerrado, and Gran Chaco. European countries, consumers, and companies must continue to take responsibility for the externalities of soy imports. We've seen great success from national legislation and jurisdictional approaches, but the work is not done. The recommendations section of this report explores specific ways that supply-chain actors can support the growth of sustainable soy.

In 2018, the EU+ imported 15.5 million tonnes of soybeans and 18 million tonnes of soybean meal. Brazil is the main producer of soy imported to Europe, followed by the United States and Argentina. In 2018, soy trade was impacted by the trade war between China and the United States, resulting in lower Chinese soybean imports from the US and higher European imports of US soybeans. These shifts benefited the European crushing industry. Europe is also increasingly producing soybeans domestically, albeit on a modest scale. In 2018, soy production on the European continent reached 10.4 million tonnes compared to 4.7 million tonnes in 2011.

This report assesses the current state of responsible and deforestation-free soybean meal consumption at EU+ level and the level of 13 individual European countries. FEFAC-compliant soy scheme owners reported data on the volume of certified soy that was destined for EU+, showing that certified imports totaled 11.33 million tonnes (38% of total European soybean meal consumption). Deforestation-free soy was calculated (like last year) using data from a subsection of schemes benchmarked by Profundo as deforestation-free (RTRS, ISCC+, ProTerra, Europe Soy/Danube Soy, SFAP, and CRS). A total of 5.8 million tonnes of soybean meal equivalent was certified deforestation-free (19% of total European soybean meal consumption).

There are clear areas of growth for consuming countries and supply chain actors:

- The country reports show that national soy dialogues designed to jointly make the transition to responsible and deforestation-free soy have great impacts. Frontrunners such as the Netherlands, Norway, Belgium, and Sweden reached impressive results via close cooperation throughout supply chain, setting verifiable time-bound commitments, and working with governments. Accelerating multi-stakeholder efforts in other countries will be crucial to achieving deforestation-free goals.

- With the EU committed to carbon neutrality by 2050, the soy sector should leverage this interest to bolster support for the transition towards responsible deforestation-free soy. Some schemes are already collecting data for certified products coming from Brazil in anticipation of greater focus on decarbonization. FEFAC also aims to make it more transparent which schemes offer LCA deforestation-free in its updated guidelines.

- In several countries retailers and food manufacturers have already covered their soy footprint with deforestation or conversion-free soy or have shared clear timebound commitments. Other retailers and food manufacturers in the EU+ must follow this example and translate their long-term deforestation commitments into time-bound purchasing commitments for domestic and imported dairy, cheese, poultry, pork, eggs, and beef.

- Building G2G relationships — a priority action in the EU Communication on Stepping up EU Action to Protect and Restore the World's Forests — is key to EU efforts to level the playing field and make sustainable production the norm. Several countries in the Amsterdam Declaration Partnership are currently working on their procurement guidelines and post-2020 strategies, and we urge these countries to strengthen their relationships with Brazil, Argentina, and Paraguay. We must support and challenge producers in these countries to improve production practices.

Contents

Preface

We present our annual update on the data on the consumption and usage of responsible soy in Europe with the aim of supporting Europe in addressing the sustainability issues linked to its soy consumption. This report comes to you at one of the most difficult moments we have faced globally. COVID-19 has impacted each of us individually, and also affects the global food production system as a whole. It is too early to comment on the exact consequences for sustainability in soy, however current signals make us hopeful that more resiliency, and sustainability may be lasting results of this crisis.

The report provides an overview on the current soy statistics and the state of relevant initiatives in producer countries and in Europe. Notably, last year's report examined total soy use while this version only calculates soybean meal consumption, so readers should avoid direct comparisons. The report does indicate an increase in the uptake of FEFAC-compliant soy and deforestation-free soy from 2017 to 2018. Our analysis shows that 38% of soybean meal consumption was FEFAC-compliant soy and 19% deforestation-free in 2018. As the end of 2020 nears, this trend is expected to increase. Production of responsible soy also continues to rise.

However, the rates of deforestation from Brazil still grow. As the second largest global importer of soybeans and soybean meal, Europe has an indispensable role to play in supporting responsible soy production practices.

The objective of this report is to support the alignment of various soy-related initiatives, and provide a space to monitor progress. Combined with our latest report on tackling deforestation, we aim to provide the industry with a complete picture on the current status of commodity-driven deforestation. We hope these insights can accelerate and improve collaboration among our partners throughout the sector and supply chain. Only by knowing where we stand, will we know where to improve.

The ongoing EU process of developing regulatory and non-regulatory measures to reduce imported deforestation is key to halting global deforestation. It is crucial that these measures actually incentivize sustainable practices in deforestation-risk areas, not merely shift risks to other regions. And incentives must be inclusive, supporting both farmers and governments in their transitions. An attitude of continuous improvement – measures that incentivize all (especially those lagging behind the curve) to ramp up their sustainability initiatives – is necessary to turn the tide on deforestation.

As downstream players, we need to collectively work to improve the situation in high deforestation risk areas. We call upon stakeholders to pool efforts and resources in the regions that most need it. We need to leverage the many initiatives that are out there, and spread transparency.

These reports are a learning process and we greatly appreciate the input from many stakeholders. Thanks to a broader stakeholder consultation and new insights on the methodology (see Annex 1), we feel the report has improved compared to last year. Please also review our Urgency of Action on Tackling Deforestation report, which clarifies the deforestation landscape for several commodities and countries and offers nine key recommendations that we build on in this report.

Joost Oorthuizen
Executive Director
IDH, The Sustainable Trade Initiative

1 Soybeans – key to the global food supply chain

Soy is a crucial component in our everyday diet. Global soybean production continues to increase each year as a result of ever-growing demand. This first chapter gives an overview of the relevant developments in global soy markets.

1.1 Versatile and efficient protein crop

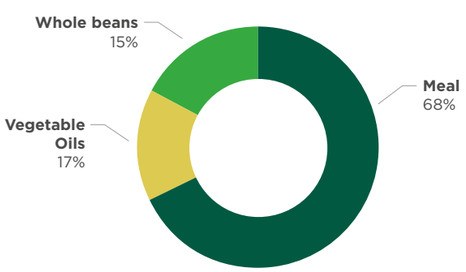
Processed soybeans are the world's largest source of animal protein feed and the second largest source of vegetable oil. Highly versatile in usage and extremely efficient in yield, soy has witnessed a significant expansion in recent decades. But this came at a cost: environmental and social externalities that affect ecosystems and communities in soy-growing regions. Responsibly produced soy can help meet growing global demand for protein while preserving crucial ecosystems.

Soy is an important part of our daily diet. Soybeans are not only processed into food products like tofu, soy sauce, and meat substitutes – in fact most are processed into soybean oil and soybean meal. The majority of soybeans processed into soybean meal is used for animal feed (98% of the soybean meal is used for animal feed) and therefore enters the human diet indirectly via meat and dairy products, considered 'embedded' soy in the food supply chain.[1] Soybean oil is used in various processed food products, other consumer goods like cosmetics and soaps, and in biofuels.

1.2 Development of global soy production

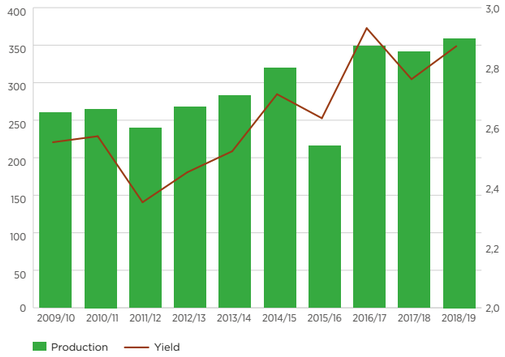
Soybeans produce more protein per hectare than any other major crop. Global soy production has shown continuous growth. During the last 10 years global soy production has increased by 100 million tonnes,[2] and land used for soy increased from 97 million hectares in 2008 to 125 million hectares in 2019.[3] In addition to an increase in production area, the yield produced per hectare has grown significantly as well (see Figure 2).

Figure 1 End use of soy in 2018



Source: Engage the Chain[6]

Figure 2 Worldwide production of soybeans (in million tonnes), and yield (in tonnes per hectare)



Source: Oilworld / USDA

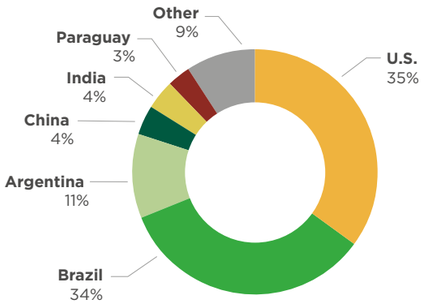
Soybean cultivation is highly concentrated geographically. The United States, Brazil, and Argentina are the biggest soy producers, and combined account for more than 80% of the global soy production.

Other large soy producers are China (14 million tonnes), India (13.8 million tonnes), Paraguay (11 million tonnes), Canada (7 million tonnes), and Ukraine (4.5 million tonnes). The EU-28 produced about 3 million tonnes in 2018, less than 1% of global soy production.

Figure 4 shows that total production especially in the US and Brazil has increased in the past ten years by 49% and 102% respectively. On a smaller scale, production in Paraguay has also shown significant growth in the last ten year period (142%), while Chinese production has remained more or less the same (1.6%).

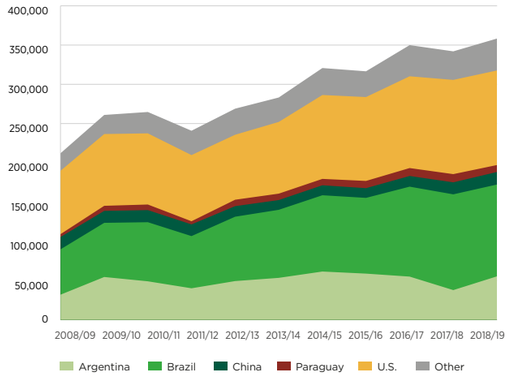
Increases in yield per hectare over the past ten years can be attributed to intensification and improved production methods. Among the largest soy producing countries, the US and Brazil have achieved the strongest yield increases. Argentina and Paraguay have shown greater year-to-year variations, while China realized only a minimal yield increase (see Figure 5).

Figure 3 Soybeans: key production countries 2018



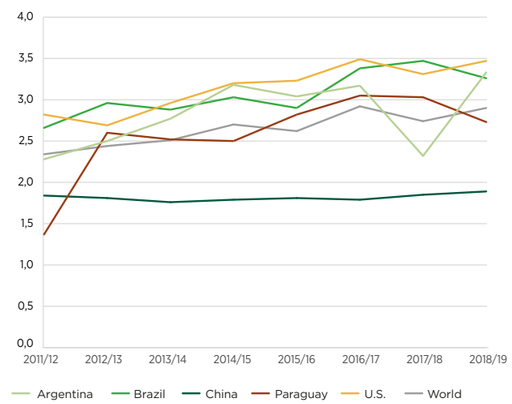
Source: FAO Stat

Figure 4 Soy production in key countries, 2008/09 to 2018/19 (1,000 tonnes)

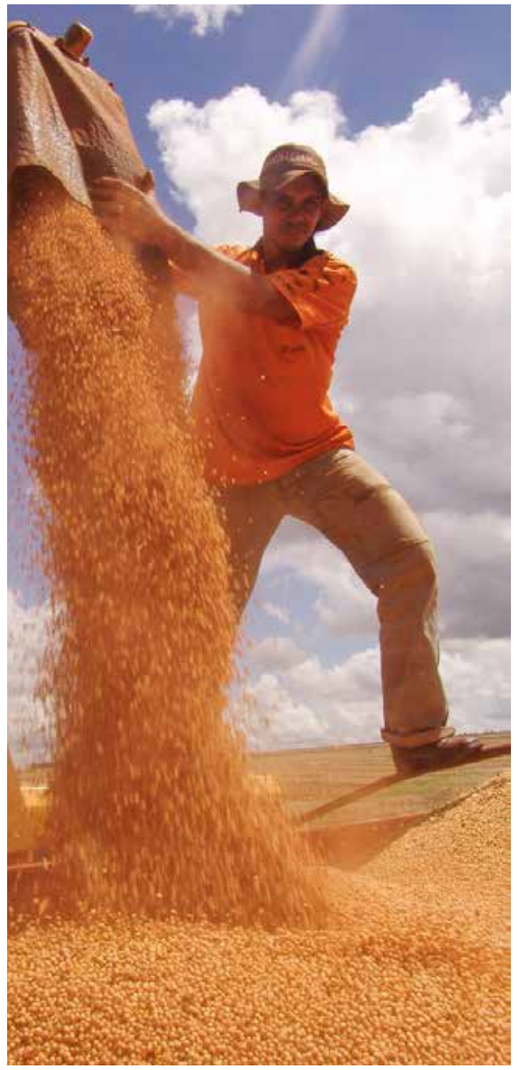


Source: USDA

Figure 5 Soy yield in key countries, 2011/12 to 2018/19 (tonnes/hectare)



Source: USDA

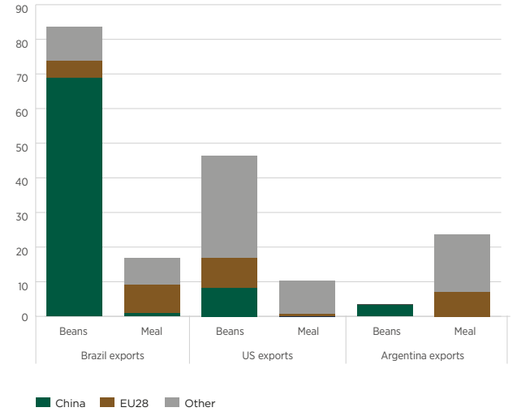


1.3 Global soy trade

Soy is one of the most widely traded crops globally. Figure 6 highlights the three largest soy-producing countries, and shows the trade flows of whole soybeans and soybean meal between these countries and the main export destinations. China imports mainly whole soybeans and small quantities of soybean meal.[4]

China is the main export market for Brazilian soybeans, while Brazil's soybean meal is primarily exported to the EU. The figure also shows that the EU and China are the most important markets for US soybeans. Soybean meal from the US is exported to many different countries worldwide. Argentina exports far more soybean meal than soybeans as a result of differential export taxes that disincentivize exporting unprocessed material. The EU is an important destination for Argentine soybean meal.

Figure 6 Trade flows of soybeans and meal to China, the EU, and the rest of the world in 2018 (million tonnes)

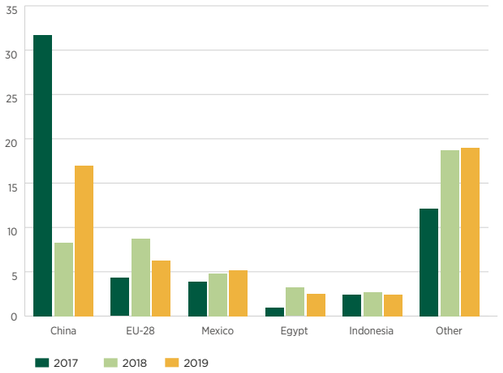


Source: ITC Trade Map

The trade war between China and the United States has significantly impacted the worldwide trade of soybeans in recent years. The Chinese government imposed an import tariff of 25% on US soybeans in retaliation against increased US tariffs on Chinese goods that began July 1st 2018. As a result, Chinese soybean imports from the United States dropped in 2018, and China's sourcing shifted to other producing countries such as Brazil and Canada at higher premiums. At the same time, US soybeans flowed at a huge discount to other markets such as the European Union in 2018. The European crushing industry greatly benefited from this shift. Figure 7 shows that soybean exports from the US to China rose again in 2019, a result of tariff waivers (allowing tariff-free soybean imports from the US) issued by the Chinese government to firms importing soybeans. US soybean exports to China in 2019 were still half the volume that went to China in 2017.

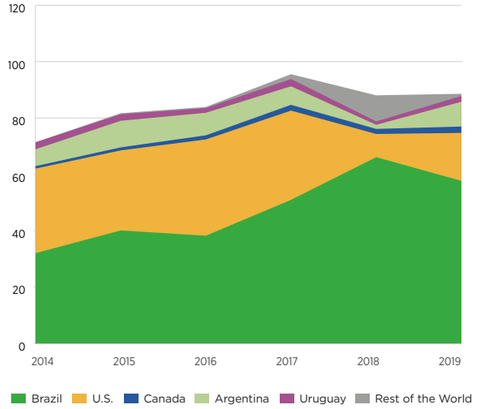
Another important development in 2018 was the major outbreak of the African swine fever in China, which led to a decrease in China's soy imports due to a smaller pig population. Figure 8 shows that China's soy imports dropped from 95 million tonnes in 2017 to 88 million tonnes in 2018, and only slightly rebounded in 2019. China's pork imports began to soar in April 2019 when the full extent of the African swine fever became clear.[5]

Figure 7 US soybean exports in 2017-2019 (million tonnes)

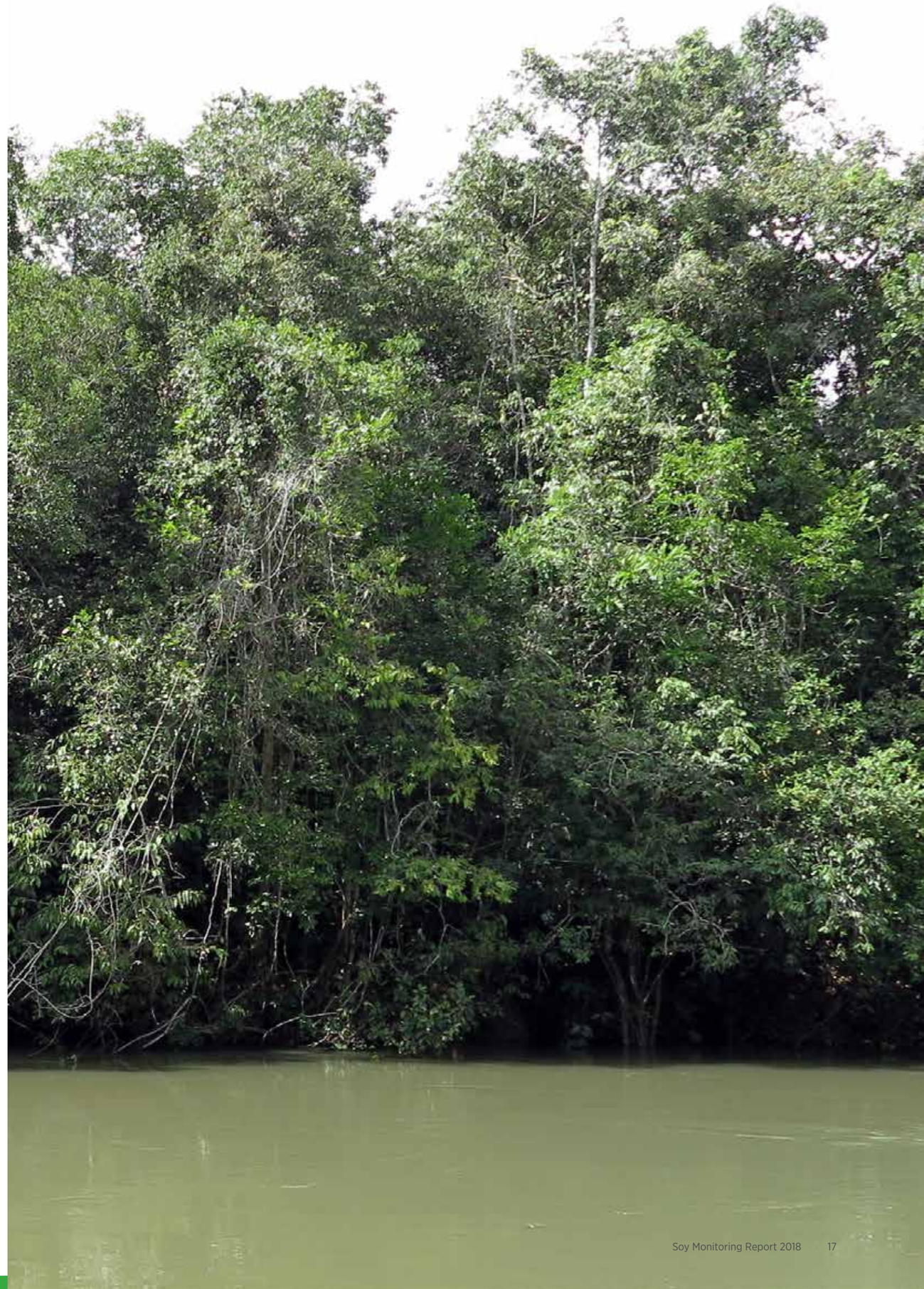


Source: ITC Trade Map

Figure 8 Chinese soybean imports in 2014-2019 (million tonnes)



Source: ITC Trade Map



2 Towards more sustainability in the soy supply chain

In the main soy producing countries, soy production contribute significantly to the total economic value added by the agricultural sector. In certain countries, especially in Latin-America, soy production is of crucial importance for the economy as a whole. At the same time, the production of soy is associated with multifaceted environmental and social concerns including deforestation and land use conflicts. Consumers are becoming increasingly aware of these issues. This has sparked various public and private initiatives in soy producing countries, initiated both by supply and demand side actors. This chapter highlights those initiatives and also presents challenges to ensuring the responsible production and consumption of soy.

2.1 Soy production in relation to deforestation and land conversion

This section discusses the link between soy production and land conversion in the most important soy production countries, and highlights specific biomes in these countries.

2.1.1 Amazon

The Amazon biome is mostly dense tropical rainforests with small intrusions of other types of ecosystems such as savannas, floodplain forests, grasslands, swamps, bamboos, and palm forests. It encompasses 670 million ha (twice the size of India) and is shared by eight countries (Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, and Suriname), as well as the overseas territory of French Guiana. Nearly 60% of the Amazon biome lies within the Brazilian border (400 million hectares). In the Brazilian Amazon about 45 million hectares are pasture land and about 5 million hectares are used as cropland primarily for soybean cultivation (4.7 million hectares).

Deforestation in the Amazon dominated the news in the summer of 2019. Most of the forest clearing, however, is related to cattle ranching. As a result of the Amazon Soy Moratorium, in place since 2006, deforestation caused by soybean cultivation has decreased dramatically. In the 2017/2018 crop year, slightly more than 1% of the deforestation in the Amazon biome was attributable to soybean cultivation according to the annual Amazon Soy Monitoring Report by Agrosatélite (for more details see paragraph on Soy Moratorium in this chapter).

2.1.2 Cerrado

The Cerrado is a unique ecosystem home to over 5% of global biodiversity and a store of nearly 13.7 billion tonnes of carbon. It is also one of the most important Brazilian regions for water production, responsible for 40% of Brazil's freshwater and essential for agriculture.

The Cerrado encompasses 204 million hectares of which about 88 million is used as pasture land or crop land. Soy is a key commodity for the Cerrado, grown on 18 million hectares and representing over 50% of the total area used for soybean cultivation in Brazil. Soy represents more than 80% of the current Cerrado cropland.

The Cerrado biome in Brazil has the world's highest annual land-conversion rates. In the next decades Brazilian soy production is expected to increase in the Cerrado. There is at least 25 million hectares of already converted land in the Cerrado that is suitable for agriculture.[7] According to a study done by Agrosatélite, 201,000 hectares of native vegetation in the Cerrado were converted into soy crops between 2014 and 2017.[8] Soybean cultivation in the Cerrado expanded by 1.4 million hectares during that period, suggesting that

Figure 9 Important biomes in Latin-America with a link to soy production

Source: WWF, 2014

the significant majority (1.2 million hectares) of soy expansion in the Cerrado was not linked to conversion of native vegetation.

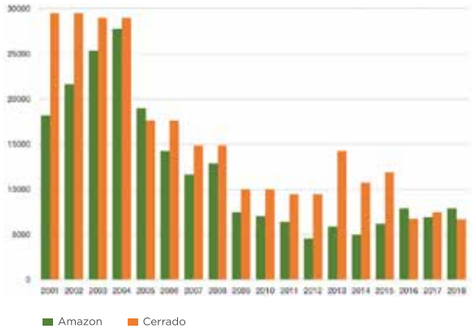
2.1.3 Gran Chaco

The Gran Chaco region is expansive (110 million ha), stretching across Argentina, Paraguay, and Bolivia. After the Amazon it is the second largest forest in Latin America. It is a biodiversity hotspot, hosting a variety of diverse ecosystems including savannas, wetlands, and tropical dry forests, each with their own unique plants and animals. According to Global Forest Watch, deforestation has been and remains a serious threat. NASA's Earth Observatory[9] reported that 20% of the Gran Chaco forest disappeared between 1985 and 2016 and deforestation continues today. Deforestation is especially widespread in Paraguay, mainly due to the expansion of cattle farms, land grabbing, and other illegal activities. Unlike the smallholders that cut forests in the Amazon, the deforestation pattern in the Gran Chaco seems to be more large scale. Soy production does play a role in land conversion – Argentina, Paraguay, and Bolivia heavily depend on soy exports to earn foreign currency and there is still little external pressure to protect this valuable ecosystem.[10] Trase data show that in 2018 around 2 million tonnes of soybeans were exported from the Chaco biome. With an estimated productivity of 2.5 tonnes/ha this indicates that at least 5 million hectares were dedicated to soy production.

2.1.4 Deforestation in the Amazon and Cerrado

Figure 10 shows the levels of deforestation (not soy-specific deforestation) in square kilometers in both the Amazon Biome (green bars) and the Cerrado Biome (orange bars) since 2001. In both regions, deforestation levels have drastically decreased since 2005, but in recent years the deforestation-rates have begun gradually increasing again.

Figure 10 Deforestation in the Amazon and Cerrado biomes 2001-2018 (sq km)



Source: INPE, 2018

Brazil's president Jair Bolsonaro's proclamations against conservation, indigenous rights, and climate change have pervaded discussions on deforestation and conservation of Brazilian landscapes. As the president of Brazil has put economic (agricultural) development above conservation efforts, nature conservation has come under pressure. Satellite data from Brazil's National Institute for Space Research (INPE) shows that the area under threat of deforestation has risen significantly in 2019. The deforestation alert area was 917,000 hectares in 2019, compared to 494,000 hectares in 2018.[11]

According to Trase estimates, the European Union imports considerable volumes of soy from the Amazon and the Cerrado, and to a much lesser extent from the Argentinian Chaco.[12] As hardly any soy is grown in the Paraguayan Chaco[13] and the entire country is considered high risk, figures for the country as a whole are included. Most of Paraguayan production is exported to Argentina and from there re-exported, so the figures are somewhat distorted. As a comparison point for these numbers, China sourced over 48 million tonnes from the Brazilian Cerrado and 15 million tonnes from the Brazilian Amazon.

EU soy import from biomes:

- Brazil, (2017)
  Cerrado: 5,323,360 tonnes;
  Amazon: 2,627,637 tonnes.
- Paraguay, (2018)
  1,581,024 tonnes.
- Argentina, (2018)
  Chaco seco: 276,043 tonnes.

Source: Trase

Importing from these biomes does not mean that all soy is linked to deforestation (e.g. when the Amazon Moratorium rules are followed) or is not responsibly produced, however it does mean that some of this soy is at a higher risk. The parties using soy from these regions – whether importing it directly or using it further down the chain – have a responsibility to support and incentivize improved production practices.

2.1.5 Soy production in the United States

A large percentage of European soy imports come from the United States. American soy production is not associated with deforestation, but that doesn't mean that there are no risks of land conversion in the US. The World Wildlife Fund publishes an annual Plowprint report about the loss of high-biodiversity grasslands in the United States with a focus on the Great Plains. The Great Plains is the name of an immense region (half a million square miles) of steppe/prairie type grasslands ranging all the way from Canada down to the southern US. The fact that farmers in the region can tap into one of the worlds largest subterranean water bodies, the Ogallala Aquifer, makes irrigated agricultural possible on a large scale. The dominant crop in the area is wheat – soy is the number three crop (11% of cultivated land). Conservation of the Great Plains is important to protect biodiversity and water access.[14]

In 2019 the State of Mato Grosso launched an Action Plan to control illegal deforestation and forest fires in its territory. The Plan for the Prevention and Control of Deforestation and Forest Fires requires that an action plan be set up annually to guide the state's command and control actions. The yearly Action Plan is prepared by a Strategic Committee bringing together a number of bodies involved in fighting deforestation including the Civil House, State Secretariat for the Environment, the Public Security Secretariat, the Civil and Military Police, the Fire Department, and the Agricultural Defense Institute. Investments are made on six fronts: planning and management, monitoring, inspection, accountability, preventing and combating forest fires, and communication. Since August 2019, Mato Grosso has been using a Planet Satellite Image Monitoring Platform as a preventive environmental control tool. Featuring high spatial resolution images and alerts generated by daily real-time monitoring, the platform is powered by images from more than 120 planetary satellites with 3-meter spatial resolution that cover the entire territory of the state. The large number of daily images enables monitoring of critical areas. The fight against illegal deforestation is one of the pillars of the Produce, Preserve, and Include Strategy of the State of Mato Grosso.

2.2 National legislation to preserve forests in soy producing countries

Given the concern about deforestation, adequate legislation and law enforcement in soy producing countries is of major importance.[15] In principle, legislation in these countries is quite stringent – it is enforcement capacity that is the problem, especially in the three Latin American countries.

2.2.1 Brazil

The Brazilian Forest Code provides for two types of forest protection on private land: Permanent Protection Areas like slopes, mangroves, and riparian areas in which deforestation is prohibited; and the Legal Forest Reserve for which land owners must set aside a percentage of their property for forest conservation (ranging from 20% outside the Amazon biome, to 80% in the Amazon biome area). The legislation for protecting forest is based on a systematic registration of farmers with claims to forested lands. These claims are legitimized via an independent validation process as requested by the state – the CAR. After validation landowners have the option of either restoring land or compensating the state for previous deforestation if applicable.

2.2.2 Argentina

The Argentinian 'Forest Law' requires each province to create a land zoning map which categorizes areas into three types of land-use to protect forested areas of high conservation value: red areas where conversion to crop land is prohibited; yellow areas where low-impact activities and sustainable agriculture is allowed in mixed use; green areas where new crop land can be created.

2.2.3 Paraguay

The main forestry law in Paraguay requires owners of rural properties exceeding 20 hectares to maintain at least 25% of their land forested. Non-compliance must be addressed through reforestation or certificates of environmental services of other properties in which natural forests have been certified above the legal obligation. The law also requires an environmental impact assessment for all use of native forests. For the country's eastern region – excluding the Gran Chaco – the law prohibits land-use changes of natural forests.[16] Despite the legislation, illegal deforestation continues to some extent in this region, and the legislation has transferred to the country's western part.[17]

2.2.4 Summary of progress in Latin-America

Despite good intentions regarding reforestation and strong legislation in Latin American soy producing countries, unclear and insufficient legal protections against deforestation and weak law enforcement leave room for improvement. According to a recent IUCN study, the risk that deforestation increases further in the Cerrado and Chaco regions is high.[18] In the Paraguayan section of the Chaco, an additional 7 million hectares of forested land is at risk of legal deforestation. Argentina and Brazil have even larger land-areas at risk of legal deforestation according to IUCN reports. Governments must improve implementation and enforcement of legislation, while the private sector should empower and incentivize farmers shift to sustainable farming practices.

2.2.5 The United States

In the United States the Farm Bill is the major instrument for supporting nature conservation as it relates to agriculture. The Farm Bill is renewed every five years, with the most recent iteration signed into law in December 2018. The Conservation section allocates US$ 450 million to the Agricultural Conservation Easement Program. This money helps private landowners, tribes, land trusts, and other groups wanting to restore and protect critical wetlands and grasslands.[19]

2.3 Supply side initiatives

Since the mid-2000s various public and private initiatives have been launched in South American producing countries in order to address the adverse effects of soy cultivation while harnessing its positive impact. In this section we highlight some of the most important initiatives that are taking place in soy producing countries. We largely focus on Brazil as a key producer associated with tropical deforestation and land conversion, and as the leading global exporter of soy.

2.3.1 Amazon Soy Moratorium

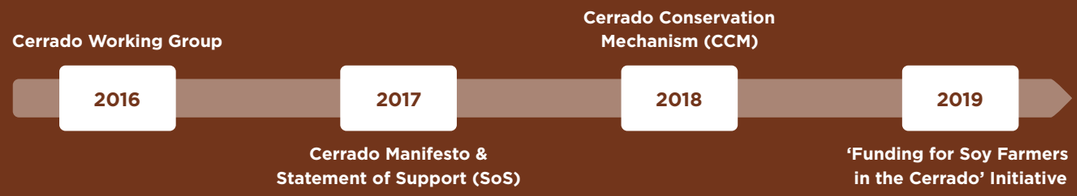
The Amazon Soy Moratorium is an agreement between the Brazilian Association of Vegetable Oil Industries (ABIOVE), the National Grain Exporters Association (ANEC), the government, and civil society. The industry-led voluntary agreement prevents deforestation in the Amazon by blocking financing and access to export markets for soy grown on land deforested after 22 July 2008. The Soy Moratorium seeks to reconcile environmental preservation with the region's economic development through the responsible and sustainable use of natural resources. Initially extended annually, an indefinite renewal was agreed upon in May 2016.

The Soy Moratorium is generally considered a major success by industry and civil society, strongly decreasing deforestation caused by soy cultivation in the Amazon biome. The annual Amazon Soy Moratorium Report by Agrosatélite concludes that based on satellite images of 2017/18 crops, 64,300 hectares of soy were identified as having been planted in areas of the Amazon Biome deforested since 22 July 2008.[20] Soy-related deforestation was just over 1% of total deforestation during this time period.

Since the beginning of the Soy Moratorium, the soy area in the Amazon Biome has more than quadrupled, going from 1.14 million hectares in 2006/07 to 4.66 million hectares in 2017/18. Soy has primarily expanded into pasture areas that were deforested before the Soy Moratorium was implemented. Amazon soy now makes up 13% of Brazilian land under soy cultivation.

In the past year there have been heated debates on the Moratorium. In November 2019 the Brazilian Farmers Organization (Aprosoja) called upon ABIOVE and the government to end the Amazon Soy Moratorium. Aprosoja opposes the Moratorium on the grounds that landowners in the Amazon region are entitled to clear up to 20% of the land for agricultural activities according to Brazil's Forest Code. ABIOVE in turn warned that such a move would hurt farmers, creating a serious backlash against Brazilian soy in European markets, where consumer demand for environmentally sustainable farming continues to grow. The Brazilian government has not taken a clear stance yet. In December 2019, a coalition of 95 investment institutions and global corporations (the majority European) exposed to the Brazilian soy sector published an open letter directed at the Brazilian Government calling for the protection of the Amazon Soy Moratorium.[21]

Figure 11 Overview of Initiatives for the Cerrado 2016-2019



2.3.2 Initiatives for the Cerrado

Cerrado Manifesto
In September 2017 over 60 Brazilian and international NGOs, foundations, and scientific institutes published the Cerrado Manifesto. It calls for *"immediate action in defense of the Cerrado by companies that purchase soy and meat from within the biome, as well as by investors active in these sectors. This includes the adoption of effective policies and commitments to eliminate deforestation and conversion of native vegetation and disassociate their supply chains from recently converted areas."*[22]

In October 2017, 23 global companies including Ahold Delhaize, Marks & Spencer, METRO, Tesco, McDonald's, Nando's, Unilever, and Walmart launched the Statement of Support (SoS) for the Cerrado Manifesto.[23] The SoS supports the objectives defined in the Cerrado Manifesto and signatories "commit to working with local and international stakeholders to halt deforestation and native vegetation loss in the Cerrado" associated with soy and cattle production. By the end of 2019, 140 companies including retailers, manufacturers, livestock producers, and the financial sector had pledged to support the SoS. In July 2019 an implementation roadmap was launched to encourage alignment of goals and objectives among the SoS signatories.[24] The roadmap includes the development of a Theory of Change and prioritizes strengthening partnerships with key international stakeholders, developing financial incentives, and supporting Brazilian initiatives in the Cerrado with a current focus on the Cerrado Working Group or Grupo de Trabalho do Cerrado (GTC – a Brazilian multi-stakeholder forum led by the Brazilian soy industry and civil society).

Since 2017, the GTC has been working on an effective plan for what it will take to halt deforestation from soy in the Cerrado. The GTC's plan includes the need for financial incentives for soy farmers to implement an effective industry-wide solution. At the end of 2018, a Brazilian-led Financial Task Force was set up with representatives from the GTC and several SoS signatories to develop the financial incentives needed to support farmers. It resulted in the development of the Cerrado Conservation Mechanism (CCM). Designed to ensure that soy-related deforestation is halted, it denies financing and export markets to soy produced on land deforested after a set date, and provides financial incentives for soy farmers who elect to go beyond current legal requirements (and protect forest even though where conversion would be legally allowed). The CCM is one possible model for Brazilian stakeholders in other regions and industries in the face of growing global demand for deforestation-free commodities. However, while the CCM demonstrates how a theoretical mechanism could work, funding will be crucial for its implementation.

'Funding for Soy Farmers in the Cerrado' initiative
Recognizing the need for private-sector leadership to develop funding, Tesco, Nutreco, and Grieg Seafood publicly announced their commitment to the Funding for Soy Farmers in the Cerrado initiative in December 2019.[25] This initiative is designed to provide funding for Brazilian mechanisms that provide effective and fair financial incentives to soy farmers to protect native vegetation and biodiversity in the Cerrado, and promote the expansion of soy only on existing agricultural land. Under this initiative farmers would preserve more land than they are legally required to under the Brazilian Forest code.

Tesco's contribution to the Cerrado fund is £10m over the next five years. Nutreco has committed to giving €1m to the fund over the coming five years. Grieg Seafood has pledged to contribute US$2 per ton of Brazilian soy it uses in its fish feed for the next five years. Initial forecasts and modeling indicate that approximately US$ 250 million in funding will be needed over an initial five-year period to ensure farmers produce soy only on existing agricultural land.[26] Beyond the initial five years, complementary incentives such as green bonds and carbon financing will be needed. Funding under this initiative will only be disbursed when an effective mechanism to deliver the outcomes is designed and agreed upon. Donors will be expected to contribute beginning about one year after the mechanism is launched.

Continued stakeholder collaboration in the Cerrado is needed
The Cerrado Conservation Mechanism (CCM) has not been without controversy and struggle. While some farmers have indicated their support for financial incentives for conservation, further engagement of industry associations is needed to ensure sufficient buy-in.

An essential part of any jurisdictional/landscape approach is the need for consensus from all key stakeholders on effective and fair solutions to global challenges such as climate change, food security, and deforestation. The CCM and the Funding for Soy Farmers in the Cerrado are potentially game-changing initiatives to end deforestation from soy and grow the sustainable soy sector in Brazil. A renewed sense of collaboration and partnership between Brazilian soy stakeholders and the international market is crucial to maintaining this momentum.

2.3.3 Soft Commodities Forum

The Soft Commodities Forum (SCF) is a global platform for leading soft commodities traders (including ADM, Bunge, Cargill, COFCO International, Glencore, and LDC) convened by the World Business Council for Sustainable Development (WBCSD) to advance collective action around common sustainability challenges. SCF member companies have each pledged to eliminate deforestation from their supply chains beginning with soy in the Cerrado. They are working to increase traceability across their supply chains and address key sustainability risks.

In June 2019, the SCF published its first progress report providing details on a common framework for reporting and monitoring traceability of soy from the Cerrado in its members' supply chains.[27] In addition to improved traceability, the aim is to identify priority municipalities in which to leverage and scale existing interventions. A total of 25 municipalities have been identified based on strong SCF member presence and high rates of native vegetation conversion. In 2020 the SCF plans to develop and implement a series of landscape initiatives working together with local stakeholders and existing initiatives in the 25 selected municipalities. These interventions may include supporting the implementation and roll-out of jurisdictional approaches to encourage better land use practices and compliance with the Forest Code, engaging with leading growers to identify and encourage the uptake of more effective production and land use practices, and scaling existing landscape level initiatives. In the SCF's December 2019 progress report, members also reported on the percentage of directly sourced soy that is traceable to farm level. The SCF will continue reporting on progress throughout 2020, with the goal that at least 95% of direct soy volumes will be traceable by the end of 2020.

Figure 12 Map of priority municipalities in Brazil

Priority municipalities

A Balsas
B Baixa Grande do Ribeiro
C Formosa do Rio Preto
D Uruçuí
E Carolina
F Peixe
G Lagoa da Confusão
H Porto Nacional
I Mirador
J Goiatins
K Correntina
L Riachão das Neves
M Pium
N Sambaíba
O Santa Rosa do Tocantins
P Jaborandi
Q Ribeiro Gonçalves
R Mateiros
S Aparecida do Rio Negro
T Planalto da Serra
U Campos Lindos
V Monte do Carmo
W São Desidério
X Currais
Y Campos de Júlio

Source: Soft Commodities Forum, report 2019[28]

2.3.4 Verified Sourcing Areas: Landscape approaches evolve into a transparent market mechanism

The soy sector is one of many agri-commodity sectors where sustainability efforts have strongly diversified over the past decade. Complementary to the large number of farm-level certification schemes, landscape approaches are important to achieving regional sustainability.

IDH has developed a landscape approach built around coalitions of key landscape stakeholders including governments, businesses, farmers, communities, and civil society organizations. IDH focuses on landscapes in Africa, Asia, and Latin America that are major producers of globally traded commodities. Local actors jointly develop sustainable land-use plans, regulatory frameworks, and business models to achieve three interlinked goals: the creation of areas where commercial and food crops are grown sustainably (Production); the sustainable use and protection of forests and other natural resources (Protection); and enhancement of farmers' and communities' livelihoods (Inclusion). These goals directly contribute to the UN 2030 Sustainable Development Goals (SDGs). In Mato Grosso, Brazil landscape agreements have been signed in Juruena, Cotriguaçu, Sorriso, and Barra do Garças (all four are municipalities).

Sustaining and scaling innovations across landscapes requires financing. IDH co-funds innovations to reduce investor risks, helps projects become investable, and creates new international investment vehicles specifically to scale up sustainable landscape management.

As IDH's landscape initiatives (and those of like-minded organizations such as Conservation International, WWF, GIZ, CIFOR, Earth Innovation Institute, and Solidaridad) start to bear fruit, a new challenge is emerging – scale. To make landscape initiatives truly successful in countering deforestation, improving working conditions, and creating more inclusive value chains, broader and more structural support from purchasing companies and investors is needed. Landscape approaches must cover large areas of land in order to effectively avoid displacing unsustainable production to adjacent areas.

This need for scale is the impetus for a new IDH development called Verified Sourcing Areas (VSAs). VSAs are a new market for responsibly sourcing agri-commodities at scale and empowering local sustainability action. The VSA model offers a digital platform for landscape initiatives to work on local sustainability deals (Compacts) and connects these Compacts to Committed Buyers along the supply chain – from traders to retailers. The Compact stakeholders agree to ambitious local sustainability priorities and indicators on topics such as forest protection, labor conditions, land tenure, and livelihoods. After setting targets they develop and implement projects that drive these goals forward, and report annually on progress. Companies can connect to a Compact and support it by funding projects, offering preferential sourcing, or providing technical assistance. The VSA online platform acts as an interactive clearinghouse for producers and committed buyers, and provides relevant, accurate, and reliable data on sustainability throughout entire jurisdictions.

For soy specifically, the development of the VSA model ties in with industry and NGO efforts to look more holistically at supply chain transparency beyond end-to-end traceability, and to put more emphasis on 'on the ground' initiatives. The VSA model directs supply chain actor's efforts to the regions of origin and allows purchasing companies to demonstrate tangible support for regions they source from. Linking the VSA model to other initiatives in the soy supply chain such as Trase and supply chain mapping will provide a smarter way of achieving transparency while maximizing the impact of local interventions.

The VSA model was developed by IDH alongside a group of NGOs, businesses, and government representatives (see www.verifiedsourcingareas.org for more information). In 2020, the full VSA model will be made public and a beta VSA online platform will be released. Interested buyers can join in one of the current VSA Readiness Pilots across the globe and take part in testing the online platform. The VSA model will be rolled out gradually with the support of a group of partners in landscape initiatives, demand markets, and technology. With these efforts, IDH and partners are taking a critical step forward in addressing supply chain sustainability at scale.

2.4 Demand side initiatives

The urgency for the sustainable production and sourcing of soy is not only felt by producing countries – downstream supply chain actors have begun to collaborate to encourage sustainable production and sourcing of soy. This is reflected in new deforestation-free soy targets by retailers, food manufacturers, and traders in their supply chains, and pre-competitive, multi-stakeholder soy roundtable initiatives established in several European countries to support and drive uptake of sustainable soy (see Chapter 4). This section highlights some of the private and public commitments and initiatives aimed at tackling sustainability issues in the soy supply chain.

2.4.1 FEFAC Soy Sourcing Guidelines

In August 2015 the association of the European feed industry (FEFAC) presented its Soy Sourcing Guidelines (FEFAC SSG), setting 59 baseline criteria (37 essential and 22 desirable) for responsible soy cultivation, and specific verification requirements. Through a customized self-assessment tool, responsible soy program owners are able to self-assess their compliance with the Guidelines and can apply for a formal benchmark performed independently by the International Trade Center (ITC). To date the ITC has approved 19 schemes as FEFAC SSG compliant. The Guidelines are currently being reviewed and the new version is expected by December 2020.

2.4.2 Responsible Soy Declaration

In 2019, FEFAC and the ITC launched the FEFAC Responsible Soy Declaration, a commitment to source according to the FEFAC SSGs. Signed by 11 of the top European compound feed companies in April 2019, it commits them to purchasing 100% FEFAC SSG soy by 2025. Approximately 250 companies including all members of the BFA, NEVEDI, and DAKOFO have since signed the declaration.

2.4.3 Sustainable Soy Trade Platform (SSTP)

The Sustainable Soy Trade Platform (SSTP) was launched in 2015 by the Paulson Institute, Solidaridad, The Nature Conservancy, and World Wildlife Fund For Nature (WWF). It aims to encourage Chinese soy stakeholders to engage in sustainable soy sourcing. At the 2018 RTRS Conference in France, SSTP presented its progress towards developing the first Responsible Soy Sourcing Guidelines.[29] which would encourage Chinese supply chain actors to import deforestation-free soy from South America. In December 2019, the SSTP Soy Purchasing Guidelines were officially approved by the Chinese government. Current circumstances in China including the Corona Crisis and the trade war with the US have delayed further articulation of the guidelines.[30]

The SSTP is supported by more than 60% of the soy purchasing power of China including COFCO, Sinograin, and Yihai Kerry. China accounts for almost 70% of global soy trade, and Brazil and Argentina account for 60% of China's soy imports, meaning China must play a key role in supporting these regions and the world in reducing and eventually eliminating deforestation from the soy supply chains.[31]

2.4.4 The Collaborative Soy Initiative

The Collaborative Soy Initiative is the result of brainstorm sessions with 31 experts from the soy sector, initiated by RTRS and facilitated by the Malik Institute using the Syntegration methodology (see Malik Syntegration Report). In 2016, discussions focused on how supply chain stakeholders could collaborate to achieve 100% sustainable soy in food, feed, and other applications.

The idea of the Collaborative Soy Initiative is to build a neutral, credible, transparent, and inclusive soy community (no legal structure, only a collaboration framework). Presented to supply chain stakeholders on 11 June 2019 during the Round Table for Responsible Soy RT#14, the long-term objective of the initiative is 100% conversion-free sustainable soy production and market uptake. A key part of the work is information sharing and alignment of initiatives to streamline the numerous soy-related sustainability initiatives.[32]

2.4.5 Consumer Goods Forum

The Consumer Goods Forum (CGF) is a global, parity-based industry network that is driven by its members to encourage the global adoption of practices and standards that serve the consumer goods industry worldwide. In 2010, the 400+ members of the CGF committed to achieving zero net deforestation in their supply chains of key commodities (soy, palm oil, pulp/paper, and cattle) by 2020. CGF set up sustainable soy sourcing guidelines and required companies to create a time-bound implementation plans to remove deforestation from their supply chains by 2020.[33] In 2019 the CGF decided to review its deforestation strategy acknowledging that a more comprehensive solution is needed to end deforestation. Against this backdrop, the CGF is currently convening a Deforestation Coalition of Action bringing together committed member companies to work on a common roadmap and joint actions. The CGF is expected to announce the release of its roadmap, participating members, and a structure to measure and report progress in early 2020.[34]

2.4.6 Tropical Forest Alliance 2020

The Tropical Forest Alliance (TFA) is a multi-stakeholder platform in which partners take voluntary actions to reduce and ultimately halt the tropical deforestation associated with the sourcing of commodities such as palm oil, soy, beef, and paper and pulp. TFA and its partner countries, companies, and civil society organizations work together to improve monitoring, planning, and management related to tropical forest conservation, and share best practices on reforestation and the use of degraded lands as they relate to commodity production.

2.4.7 Retail Soy Group

Founded in 2013 by seven leading European retailers, the membership of the Retail Soy Group (RSG) has grown to more than ten international Retailers (with more members expected to join soon) that are committed to making sustainable soy the norm.[35] The group was established out of the recognition that soy-related environmental and social impacts in their supply chains could pose a significant risk to their business. The RSG aims to address the sector-wide gap in addressing demand for sustainably produced soy by working on four focus areas: identifying and supporting responsible suppliers; implementing regional approaches to address biome-level solutions; enhancing the credibility of certification standards; and unlocking transparent supply chains.[36]

In October 2019 many members of the RSG contributed to the publication of a report that quantified and mapped soybean meal used in retail products sold within the UK. The report showed that 26% of the UK's soybean meal supply chain for animal feed was sourced from deforestation-free regions or certified to not contribute to land conversion in South-America.[37] With ambitions to achieve net deforestation-free in their supply chains by 2020, current efforts by retailers need to be scaled.

2.4.8 National initiatives ADP countries

The seven national signatories (DK, FR, DE, IT, NL, NO, UK) of the two Amsterdam Declarations (The Amsterdam Declaration on Deforestation and The Amsterdam Palm Oil Declaration) have joined forces in the Amsterdam Declarations Partnership (ADP). Their overall ambition is to guarantee deforestation-free, sustainable commodity supply chains, with soy one of the three priority crops. The ADP stimulates the creation of European National Soy Initiatives, which are discussed in more detail in chapter 4. Under the umbrella of the ADP these national initiatives aim to work together to exchange knowledge and experience and strengthen the call for sustainably produced, deforestation free soy.

2.5 European Policy Initiatives

In July 2019, the European commission adopted the Communication on Stepping up EU Action to Protect and Restore the World's Forests, detailing five priorities (with underlying actions) to curb deforestation associated with the EU's footprint.[38] While the timber industry already has legislation creating a level playing field (the EUTR), this is a development for other 'deforestation-exposed' commodities such as soy. The sector recognizes that certain levels of due diligence will be obligatory in the future.

The priorities are:

- Reduce the footprint of EU consumption on land and encourage the consumption of products from deforestation-free supply chains in the EU;
- Work in partnership with producer countries to reduce pressures on forests and to "deforest-proof" EU development cooperation;
- Strengthen international cooperation to halt deforestation and forest degradation, and encourage forest restoration;
- Redirect finance to support more sustainable land-use practices;
- Support the availability and quality of information on forests and commodity supply chains, the access to that information, and support research and innovation.

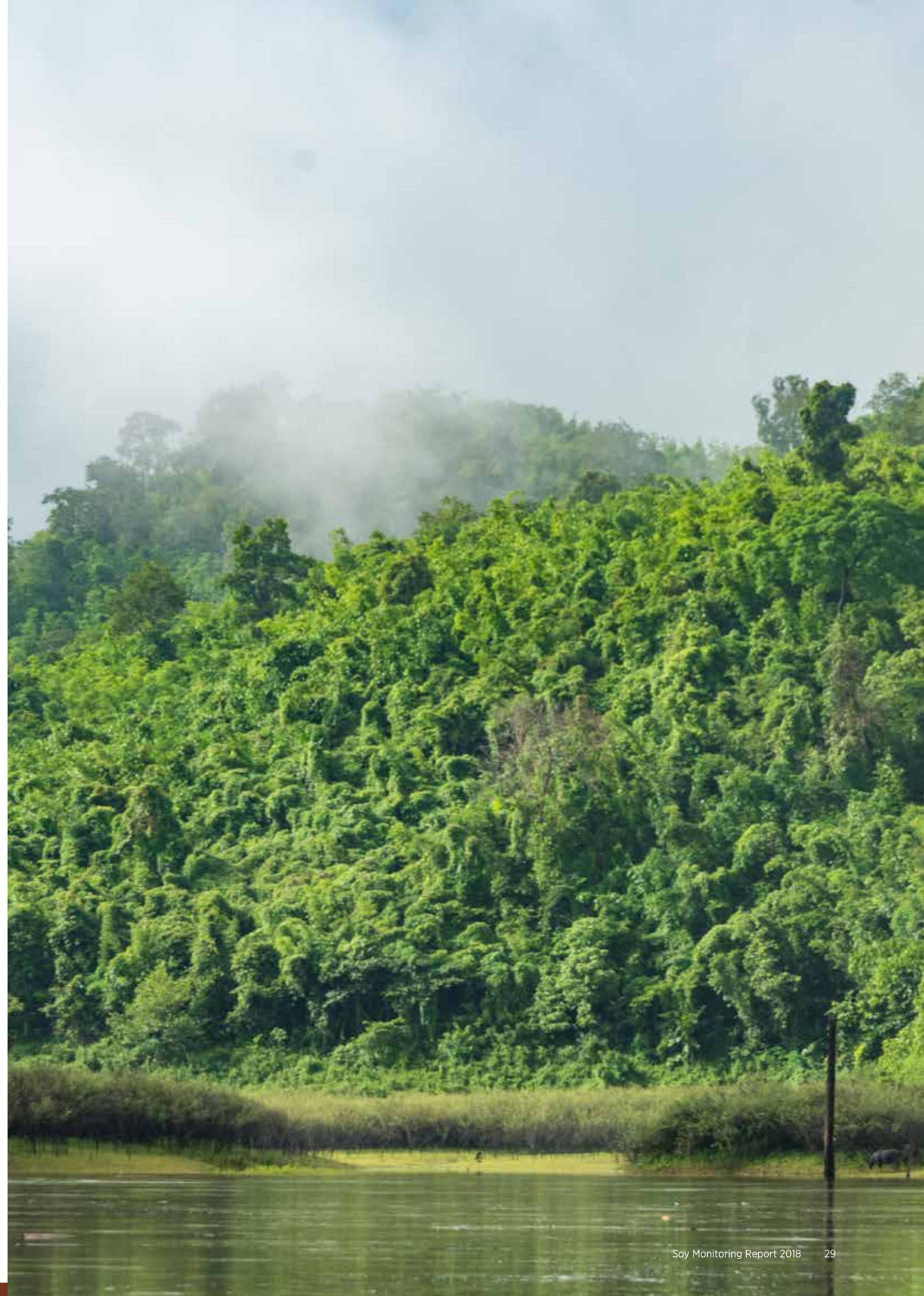
Unveiled in December 2019, the European Green Deal is an ambitious plan that includes a roadmap and timeline to make the EU's economy sustainable and transform Europe into the first climate-neutral continent.[39] The aforementioned Communication fits into this strategy. The Commission has been asked to present a proposal for a European framework on due diligence to ensure sustainable and deforestation-free supply chains for products placed on the EU market as soon as possible.

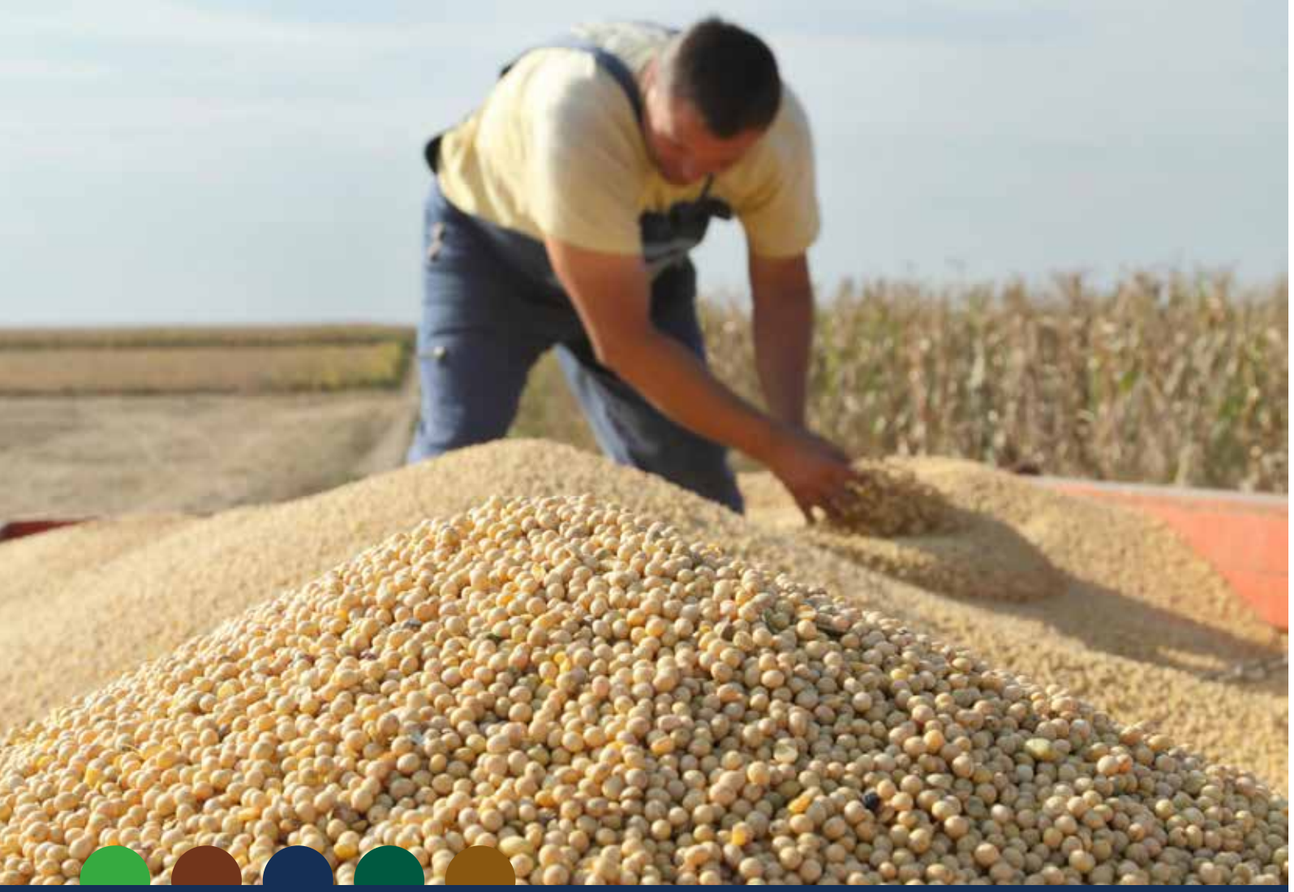
Two things will result from this communication in 2020/2021:

1. A fitness check of measures already in place to combat illegal logging (the Forest Law Enforcement, Governance and Trade or FLEGT Regulation and the EU Timber Regulation).

2. An impact assessment of regulatory and non-regulatory policy options. Possible instruments could include mandatory labeling, voluntary commitments and labeling, due diligence, verification schemes, and methods such as the Product Environmental Footprint and Organizational Environmental Footprint. Approaches used to address illegal, unreported, and unregulated fishing, the Action Plan on Financing Sustainable Growth, and bilateral agreements will serve as models for future recommendations. Options may include introducing thresholds based on the size of an operator.

A public consultation on the impact assessment is expected in the second half of 2020, though the timeline for completion of the impact assessment itself is unclear. The Commission's proposals will be based on this assessment and is expected in the first quarter of 2021. The Tropical Forest Alliance will develop position papers on policy recommendations and submit them to the European Commission in June 2020 to complement this assessment.





3 Progress in the European soy supply chain

This chapter provides insights on the consumption of responsible and deforestation-free soy in European supply chains. We review EU+ soy production, direct soy flows to and from Europe, and assess the impact of 'embedded soy' on the EU+. We analyze EU+ net soybean meal consumption, and calculate consumption of responsible soy and deforestation-free soy in accordance with the definitions laid out in the '2017 European Soy Monitor.'[40]

34 MMT IMPORT
of soybeans, -meal, and -oil to EU+
Key **supplying** countries: Brazil, US and Argentina

1.2 MMT EXPORT
of soybeans, -meal, and -oil from EU+
Key **destination** countries: Morocco and Algeria

2.9 MMT
SOYBEAN PRODUCTION in EU+
Key **producing** countries: Italy and France

10 MMT SOYBEAN PRODUCTION
(Continental Europe)
Key **producing** countries: Ukraine and Russia

2.55 MMT
EU+ net export embedded soy

30.15 MMT
EU+ soybean meal consumption

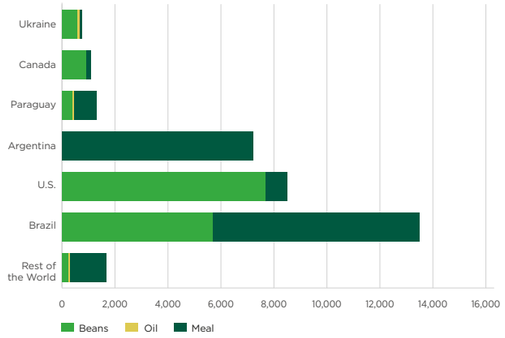
38% of EU+ soybean meal consumption is covered by FEFAC SSG compliant standards and **19%** is covered by deforestation-free standards.

3.1 European soy import and soy export

The EU+ is a large importer of soybeans, -oil, and -meal. In 2018, the EU+ imported 15.54 million tonnes of soybeans, 263,000 tonnes of soybean oil, and 18 million tonnes of soybean meal. Imports have been stable for the last five years. The production of compound feed in EU+ has also been more or less stable with a slight upward trend since 2009, meaning that the relative use of soy as a feedstock has declined.[41]

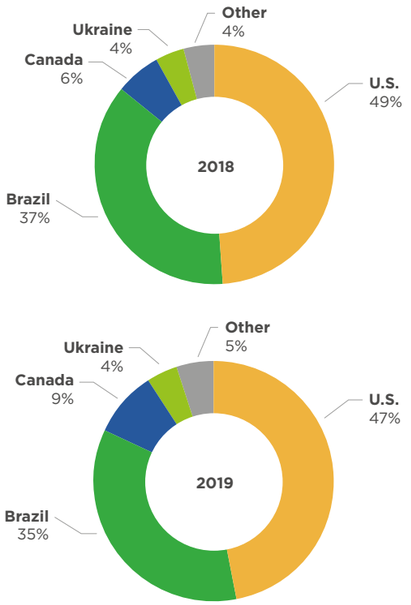
Brazil, the United States, and Argentina are by far the biggest soy exporters to the EU. Soybeans are mainly imported from the United States and soybean meal is predominantly sourced from Brazil and Argentina.

Figure 13 EU+ soybean, -meal, and -oil imports by exporting country in 2018 (1,000 tonnes)



Source: Comtrade

Figure 14 Key countries of origin of soybean imports to EU+ (2018 and 2019)

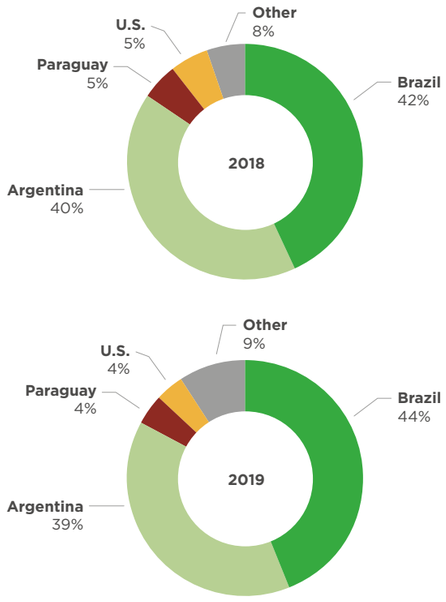


Source: Comtrade

While the total volume of imported soy has remained relatively stable over time, the relative share of the different exporting countries has varied. Figures 14 and 15 show the relative share of EU+ soybean and soybean meal imports by producing country in 2018 and 2019. The recent trade conflict between China and the United States has resulted in increased European uptake of soy from the United States over the past two years. During this time period the US share of the EU+ soybean imports has risen to nearly 50%. As mentioned in Chapter 1, this has been driven by low prices for US soy due to diminished demand from China. Since the imports from the US are mainly soybeans, this shift is less visible in the import of soybean meal.

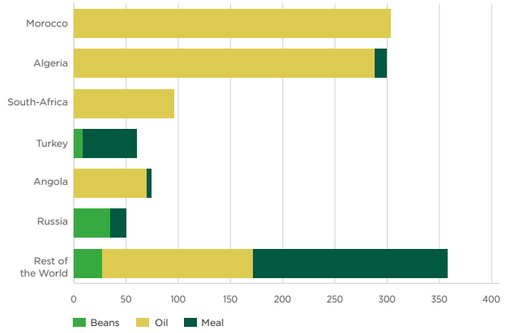
The EU+ exports only a limited volume of soybeans, -meal, and -oil. In 2018 the EU+ exported 69,000 tonnes of soybeans, 902,000 tonnes soybean oil, and 268,000 tonnes of soybean meal – a total of 1.24 million tonnes of soy products.

Figure 15 Key countries of origin of soybean meal imports to EU+ (2018 and 2019)



Source: Comtrade

Figure 16 EU+ soybean, -meal, and -oil exports by destination country in 2018 (1,000 tonnes)



Source: Comtrade

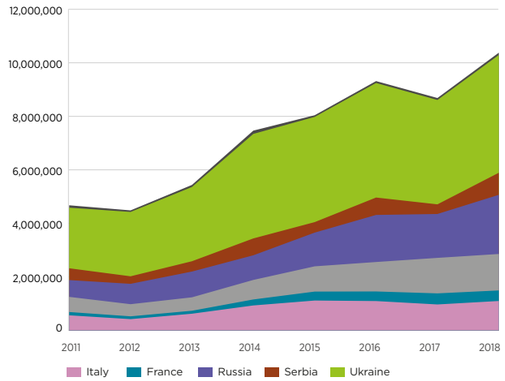
3.2 European soy production

Europe has a protein deficit in high protein feed materials.[42] The European Union launched a Protein Report in 2018[43] to stimulate the production of local protein crops including oilseeds (rapeseed, sunflower seeds, and soybeans) and pulses (beans, peas, lentils, lupins etc.). Although soy production in the EU+ more than doubled to 3 million tonnes from 2011-2018, it is still relatively small on a global scale. Italy and France are the most important producers in the EU+.

Productivity per hectare is relatively low compared to the Americas. Soy breeding continues to evolve to enable soybean cultivation in large parts of Europe where the climate is colder and wetter, but there is still a limited availability of soy varieties adapted to such climate conditions.

Considering a broader definition of Europe that includes countries in the southeastern and eastern regions of the European continent, the soy cultivation area and production volumes in Europe are considerably larger. In 2018, soy production on the European continent reached 10.4 million tonnes, up from 4.7 million tonnes in 2011. Ukraine is the biggest producer of soy (4.4 million tonnes in 2018), followed by the European part of Russia (2.2 million tonnes).

Figure 17 Soy cultivation in continental Europe 2011-2018 (tonnes)



Source: Danube Soy Statistics

Table 1 EU+ soy import, export, and domestic soy production

in 1,000 tonnes	Import	Export	Net import	Production
Soybeans	15,540	69	15,471	2,900
Soybean meal	18,252	268	17,984	
Soybean oil	263	902	-639 (net-export)	

Source: Comtrade / Danube Soy

Table 2 EU+ import and export of livestock products

in tonnes	Import	Export	Net export
Beef	242,669	220,329	-22,341
Pork	9,404	2,144,292	2,134,888
Poultry	233,541	1,580,069	1,346,529
Eggs	7,561	192,891	185,330
Cheese	86,055	963,195	877,140
Other dairy products	166,098	3,534,709	368,610

Source: Comtrade / Danube Soy

Table 3 EU+ net export of embedded soy in 2018

in tonnes	Net export	Conversion factor	Embedded soy
Beef	-22,341	0.29	-6,479
Pork	2,134,888	0.44	939,351
Poultry	1,346,529	0.8217	1,106,443
Eggs	185,330	0.3935	72,927
Cheese	877,140	0.3574	313,490
Milk, and other dairy products	368,610	0.03574	13,147
Total			**2,546,126**

Source: Comtrade / Danube Soy

3.3 European soybean meal consumption

Table 1 shows that the net EU+ import of soybeans was 15,471,000 tonnes and net soybean meal import was 17,984,000 tonnes. Additionally, the EU+ also produced 2.9 million tonnes of soybeans. This means that in 2018 a total of 32.7 million tonnes of soybean meal was available for the livestock sector in the EU+.[44]

Apart from the European import of soybeans and soybean meal, embedded soy enters the EU+ as dairy products, poultry, beef, and eggs. The EU+ is also a producer and exporter of meat, dairy, and eggs. These products have a 'soy footprint' that must be accounted for in assessing the total soy consumption of the EU+.

Table 2 shows the EU+ net import/export of animal products. The EU+ is a large net exporter of all of these products except for beef.

Table 3 calculates the net export of embedded soy based on volumes and the soy conversion factors for each product.[45]

Accounting for soy and embedded soy flows, the net soybean meal consumption of the EU+ is 30.15 million tonnes of soybean meal (32.7 million tonnes - 2.55 million tonnes).

3.4 Responsible soybean meal consumption in Europe

In this section we aim to increase transparency on the progress towards achieving a responsible European soy supply chain. We examine uptake of responsible soy benchmarked to FEFAC Soy Sourcing Guidelines, and the share of deforestation-free soy within these schemes using the 2019 Profundo benchmark study. The data used has been collected from a range of sources including country-level information provided by the European compound feed industry, information provided by different certification schemes, and individual company reporting. Overall, a lack of detailed data from industry and standard owners means that at this stage only minimum estimates can be provided.

3.4.1 Consumption of FEFAC-compliant soy

Currently 19 soy standards are positively benchmarked against the FEFAC Soy Sourcing Guidelines.[46] When feed companies buy soy that is certified to these standards, they ensure that a basic level of responsibility of soy production is guaranteed. Based on the available information on the production and destinations of FEFAC SSG compliant soy presented in table 4, 22.5 million tonnes of FEFAC-SSG compliant soybeans were produced globally in 2018 (an increase of 3.1 million tonnes since 2017). An estimated 14.16 million tonnes were destined for the EU+ market. Converting the figures collected from the certification schemes to soybean meal shows a total of 11.33 million tonnes of FEFAC compliant soybean meal (0.8 x 14.16 million tonnes). This means that 38% of EU+ soybean meal consumption in 2018 was FEFAC-SSG compliant (11.33 / 30.15 million tonnes).

Additional data is available from the 13 national feed associations in Europe that coordinated with the European Feed Manufacturers' Federation (FEFAC). This data shows that in total 11.9 million tonnes of soybean meal in the EU+ were compliant with the FEFAC-SSG guidelines in 2018. This matches to a large extent with the numbers of the certification schemes.

Table 4 Overview of soy production under FEFAC-SSG compliant soy schemes and volumes destined for EU+ in 2018

Name	Producing countries	Total volume certified globally (tonnes)	Destined for EU+ (tonnes)
Agricultura Sustentable Certificada	Argentina	400,000 tonnes	240,000[47] tonnes
Amaggi Responsible Soy Standard	Brazil	415,000[48] tonnes	415,000 tonnes
BFA mv-soja	See CRS/RTRS/SFAP	See CRS/RTRS/SFAP	*365,000 tonnes (CRS, RTRS and SFAP).*
Cargill Triple S	Brazil and Paraguay	540,000 tonnes	3,000 tonnes
Certified Responsible Soy (CRS)	Paraguay and Brazil	680,200 tonnes	680,200 tonnes
Danube Soy / Europe Soy	Ukraine, Italy, Austria, Serbia, Russia, Croatia, Romania, Hungary, Germany, and Switzerland	600,000 tonnes	600,000 tonnes
ProTerra	Brazil, Argentina, Canada, Indonesia, Ukraine, Italy, Uruguay, Germany, and Russia	3.4 million tonnes	2.8 million tonnes
RTRS[49]	Brazil, Argentina, India, China, and Paraguay	4.5 million tonnes of certified soy was available to the market; 2.8 million tonnes were sold as RTRS certified.[50]	2.4 million tonnes
Sustainable Farming Assurance Program	Brazil and US	495,000 of which 425,000 SFAP-non-conversion and 70,000 tonnes SFAP.	495,000 tonnes
US Soy Sustainability Assurance Protocol (SSAP)	US	10.7 million tonnes	6.2 million tonnes (certified)
ISCC	Argentina, Brazil, Paraguay, and 10 European countries	748,000 tonnes	324,000 tonnes
Sustainable Feed Standard		0	0
ADM responsible soybean standard	No info	No info	No info
Bunge Pro-S	No info	No info	No info
Louis Dreyfus Company (LDC)	No info	No info	No info
Programa Coamo	Brazil	Does not want to provide figures because of non-disclosure agreements.	No info
Total		**22,478,200 tonnes**	**14,157,200 tonnes soy-beans destined for EU+** x 0.8 = 11,325,760 tonnes soybean meal destined for the EU

3.4.2 Consumption of deforestation-free soy

Several companies have shared ambitious statements about deforestation-free supply chains. The FEFAC Soy Sourcing Guidelines criteria currently only require legal compliance with national forest laws, meaning that legal deforestation could still be taking place. In the previous monitoring report, a subset of the total 19 benchmarked soy standards were identified as guaranteeing deforestation-free soy. Note that the FEFAC Soy Sourcing Guidelines will soon be revised in the direction of deforestation-free soy. Several of the trader schemes have already been updated to include criteria guaranteeing deforestation-free soy. For the next monitoring report it is recommended to take the renewed trader schemes into account.

Based on available information, table 5 shows that at least 7.2 million tonnes of soybeans in the EU+ countries were certified under deforestation-free standards identified by Profundo's benchmark study (RTRS, ISCC +, Proterra, Danube / Europe Soy, CRS / BFA, and SFAP-Non Conversion).[51] This 7.2 million tonnes of soybeans converted to soybean meal (x 0.8) leads to 5.78 million tonnes deforestation-free soybean meal, 19% of the total EU+ soybean meal consumption (5.78 million tonnes /30.15 million tonnes). As indicated before, this does not mean that the remaining 81% is necessarily tied to deforestation or conversion – a significant share of the soy is imported from low-risk areas such as the US, the Amazon biome, and southern Brazil (see annex 3).

Table 5 Certified deforestation-free soybean volumes sold in EU+ in 2018

Name of the standard	Estimated volume sold to EU+ (tonnes)
RTRS	2,400,000
SFAP-Non-Conversion	425,000
ProTerra	2,800,000
Danube Soy / Europe Soy	600,000
ISCC+	324,000
CRS	680,200
Total	**7,229,200** (soybeans)

4

European initiatives on responsible soy - country profiles

In this chapter the 2018 domestic consumption of FEFAC SSG compliant and deforestation-free soy is calculated for 13 European countries (Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden and United Kingdom). These countries represent the top European soy consumers/processors and countries with interesting initiatives on responsible soy.

Calculation soybean meal consumption in a specific country

IMPORT OF SOYBEANS
(x 0.8 = soybean meal)

+

IMPORT OF SOYBEAN MEAL

+

DOMESTIC SOYBEAN CULTIVATION
(x 0.8 = soybean meal)

–

EXPORT SOYBEANS
(x 0.8 = soybean meal)

–

EXPORT SOYBEAN MEAL

=

SOYBEAN MEAL AVAILABLE FOR LIVESTOCK SECTOR IN SPECIFIC COUNTRY

Import of beef, pork, poultry, eggs, cheese and other dairy products multiplied with soy conversion factor per product category

=

IMPORT EMBEDDED SOY

Export of beef, pork, poultry, eggs, cheese and other dairy products multiplied with soy conversion factor per product category

=

EXPORT EMBEDDED SOY

IMPORT EMBEDDED SOY

–

EXPORT EMBEDDED SOY

=

NET IMPORT OR NET EXPORT EMBEDDED SOY

SOYBEAN MEAL AVAILABLE FOR LIVESTOCK SECTOR

+

NET IMPORT (OR - NET EXPORT) OF EMBEDDED SOY

=

DOMESTIC SOYBEAN MEAL CONSUMPTION

% of domestic soybean meal consumption FEFAC SSG complaint
% of domestic soybean meal consumption deforestation-free

4.1 Belgium

1,994,000 MT IMPORT

825,000 MT EXPORT

of soybeans, -meal, and -oil

1,020,000 MT SOYBEAN MEAL
available for the Belgian livestock sector

–

452,000 MT NET EXPORT
embedded soybean meal

=

568,000 MT DOMESTIC
soybean meal consumption

>100%
of domestic soybean meal consumption **FEFAC SSG complaint**.

64%
of domestic soybean meal consumption **deforestation-free**.

4.1.1 Soy trade

In 2018 Belgium imported 1,994,000 tonnes of soybeans, -meal, and oil. Soybean imports accounted for 679,000 tonnes and soybean meal for almost 1.2 million tonnes. By far the largest supplier was the Netherlands (primarily soybean meal).

Belgium exported a total of 825,000 tonnes of soybeans, - meal, and -oil. The main destination was France, followed by the Netherlands.

Figure 18 Belgian soy imports by country in 2018 (1,000 tonnes)

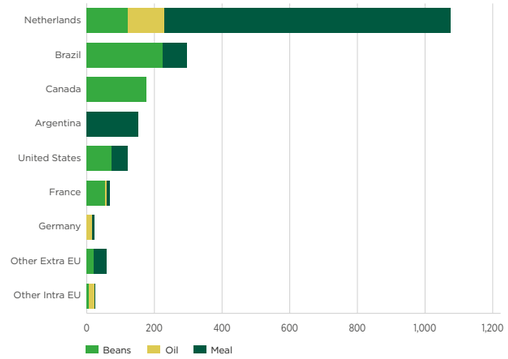
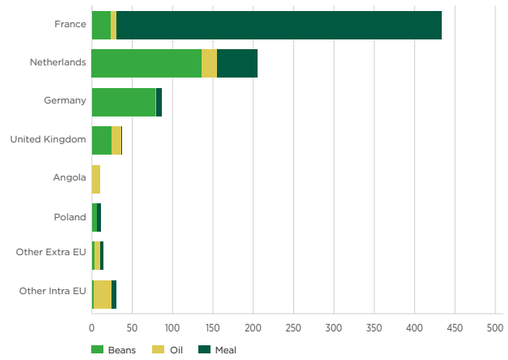


Figure 19 Belgian soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

Table 6 Calculation of Belgium's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import
Soybeans	679,000	273,000	406,000
Soybean meal	1,169,000	474,000	695,000
Soybean oil	146,000	78,000	68,000

Source: Comtrade

4.1.2 Domestic soybean meal consumption

Table 6 shows that in 2018 Belgium was a net importer of soybeans, -meal, and oil. This means that (406,000 x 0.8) + 695,000 = 1,020,000 tonnes of soybean meal was available for the Belgian livestock sector.

In 2018 Belgium imported 598,000 tonnes of embedded soy and exported 1,050,000 tonnes. This means that the net export of embedded soy was 452,000 tonnes.[52]

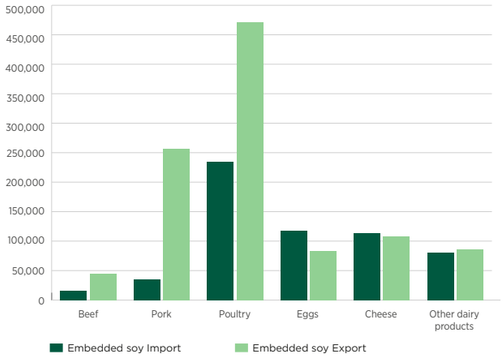
This results in an estimated total domestic soybean meal consumption of 568,000 tonnes (1,020,000 tonnes - 452,000 tonnes).

This aligns with figures from the Belgian Feed Association (BFA). According to the BFA, 365,000 tonnes of soybean meal was used for the production of compound feed destined for the Belgian market. Apart from that, compound feed is imported from the Netherlands containing 215,000 tonnes of soybean meal.

Figure 20 gives an overview of the embedded soy flows. It shows that Belgium is a large importer and exporter of embedded soy via poultry, and large exporter of embedded soy via pork.

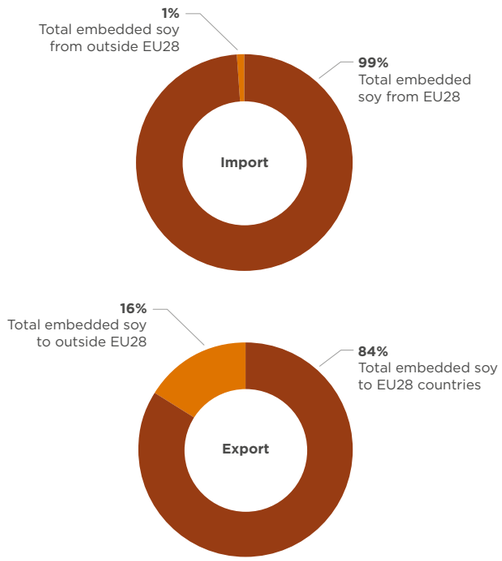
Figure 21 shows that only 1% of the embedded soy import came from outside the EU, while 16% of the embedded soy exports went to countries outside the EU. The Netherlands, France, Poland, the United Kingdom and Germany were the main countries exporting poultry to Belgium. Belgian poultry exports were mainly destined for France and the Netherlands. Outside the EU, Ghana was the main destination for poultry. Belgian pork went primarily to Germany and Poland.

Figure 20 Belgian import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 21 Belgian import and export of embedded soy in 2018



Source: Comtrade

4.1.3 Share of FEFAC SSG compliant soy and deforestation-free soy

In 2009 the BFA bought certificates representing a guaranteed volume of 100,000 tonnes of responsible soy under the BFA-standard. Since 2011 BFA-members have also purchased RTRS-certificates, and in 2018 began purchasing responsible soy under the SFAP-standard. Over the years the volume of responsible soy has grown, resulting in certificates totaling 365,000 tonnes of responsible soy in 2018. According to the BFA this volume represents the soybean meal used in the supply chain for pork and poultry for the domestic Belgian market and the total use in cattle farming (including production for export markets). Of the total responsible soy, RTRS-certified soy accounted for 70,000 tonnes and BFA- and SFAP-standard certificates accounted for 295,000 tonnes. RTRS-certificates are purchased via the book & claim-principle, while the BFA-certificates are bought via the Area Mass Balance-system. In addition to these credits, imports of compound feed from the Netherlands containing 215,000 tonnes of FEFAC SSG compliant soybean meal must be accounted for.

In short, this means that 102% of the domestic soybean meal consumption was FEFAC SSG compliant (580,000 tonnes / 568,000 tonnes).

All three standards (RTRS, BFA, and SFAP) used by the Belgian feed industry require deforestation-free. The percentage of the imported soybean meal volume in compound feed coming from the Netherlands that is deforestation-free is unknown. As a result, we estimate that at least 64% of the domestic soybean meal consumption is deforestation-free (365,000 tonnes / 568,000 tonnes).

4.1.4 Initiatives for responsible soy sourcing

In 2006 the BFA initiated the 'Maatschappelijk Verantwoorde Diervoederstromen' Platform (Socially Responsible Feed Flows Platform). The platform, comprising representatives of farmers, dairy producers, food processors, and retailers, designed the BFA mv-soja standard (Responsible Soy Standard). Since the creation of the BFA Responsible Soy Standard in 2009, BFA-members jointly buy responsible soy certificates.

4.2 Denmark

1,800,000 MT IMPORT

98,000 MT EXPORT

of soybeans, -meal, and -oil

1,624,960 MT SOYBEAN MEAL
available for the Danish livestock sector

–

526,885 MT NET EXPORT
embedded soybean meal

=

1,098,075 MT DOMESTIC
soybean meal consumption

66%
of domestic soybean meal consumption **FEFAC SSG complaint**.

18%
of domestic soybean meal consumption **deforestation-free**.

4.2.1 Soy trade

In 2018 Denmark imported 1.8 million tonnes of soybeans, -meal, and, -oil. Soybean meal accounted for 1.7 million tonnes, and the largest suppliers were Germany and Argentina.

The total Danish export of soybeans, -meal, and -oil was 98,000 tonnes, of which soybean meal accounted for 96,000 tonnes.

Figure 22 Denmark soy imports by country in 2018 (1,000 tonnes)

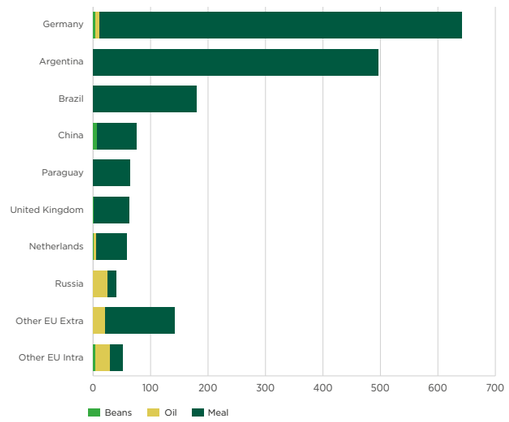
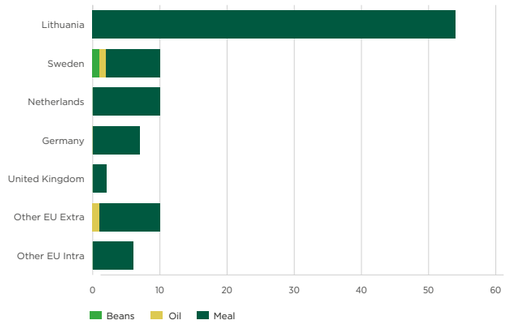


Figure 23 Denmark soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

Table 7 Calculation of Denmarks net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import
Soybeans	17,000	1,000	16,000
Soybean meal	1,708,000	1,600	1,612,160
Soybean oil	84,000	1,600	82,000

Source: Comtrade

4.2.2 Domestic soybean meal consumption

Table 7 shows that Denmark was a net importer of soybeans and soybean meal in 2018. In total 1,624,960 tonnes (0.8 x 16,000 + 1,612,160) of soybean meal was available for the Danish livestock sector.

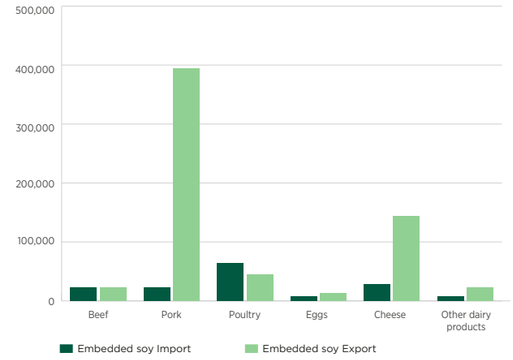
In 2018 Denmark imported 152,193 tonnes and exported 642,075 tonnes of embedded soy. This means that the net export of embedded soy was 489,882 tonnes.[53]

This results in an estimated total domestic soybean meal consumption of 1,098,075 tonnes (1,624,960 tonnes – 526,885 tonnes) in Denmark.

Figure 24 gives an overview of the embedded soy flows. It shows that Denmark is a large exporter of embedded soy via its pork exports.

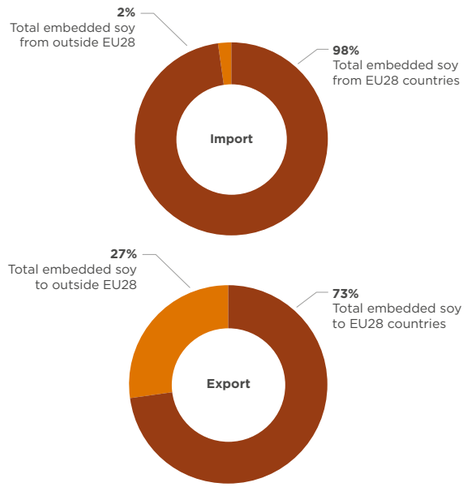
The UK and to lesser extent Japan, China, and the US were important destinations for Danish pork. Figure 25 shows that 98% of the embedded soy imports came from other EU-countries, and 73% of the embedded soy exports went to countries within the EU.

Figure 24 Danish import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 25 Danish import and export of embedded soy in 2018



Source: Comtrade

4.2.3 Share of FEFAC SSG compliant soy and deforestation-free soy

The Danish Feed Association (Dakofo) estimates that at least two-third of all soy used by the Danish feed industry is sourced under reference to the FEFAC Soy Sourcing Guidelines. Based on the Danish RTRS certified soy figures from dairy producer Arla and other companies, the volume of deforestation-free soy is estimated at 200,000 tonnes. This would mean that the soy volume verified as deforestation-free corresponds to 18% of the Danish domestic soybean meal consumption (200,000 tonnes/1,098,075 tonnes).

4.2.4 Initiatives for responsible soy sourcing

In September 2019, environmental organizations, government agencies, businesses and business associations joined forces to fight against the importation of unsustainable soy, forming the Danish Alliance for Responsible Soy under the Danish Ethical Trading Initiative. The Alliance includes Dakofo, some of Denmark's largest retailers including COOP, Salling Group, Dagrofa, REMA 1000, Lidl, Aldi, and Danish Crown (a large meat processing company). They all committed to a publishing plan of action to secure sustainable soy use and submit yearly reports on their progress. The Danish Alliance for Responsible Soy aims to ensure that all imports of soy to Denmark is responsibly produced. All organizations that are part of the alliance must deliver an action plan in the first half of 2020 that includes the purchase of responsible soy.

In Summer of 2019 Dakofo and the gathered Danish feed companies signed the FEFAC 2025 declaration.

The Danish feed industry also joined forces in the partnership Danish Protein Innovation (DPI). DPI fosters and supports development of new feed proteins, e.g. from biorefinery of grass biomass, faba beans and even starfish-meal. This in order to increase self-supply of protein from local/regional origin. Several Danish feed companies have invested heavily in these projects.[54]

4.3 Finland

145,000 MT IMPORT

2,300 MT EXPORT

of soybeans, -meal, and -oil

135,600 MT SOYBEAN MEAL
available for the Finnish livestock sector

+

26,283 MT NET IMPORT
embedded soybean meal

=

161,883 MT DOMESTIC
soybean meal consumption

68%
of domestic soybean meal consumption **FEFAC SSG complaint**.

40%
of domestic soybean meal consumption **deforestation-free**.

4.3.1 Soy trade

In 2018 Finland imported 145,000 tonnes of soybeans, -meal, and -oil. Soybean imports accounted for 47,000 tonnes and soybean meal for 98,000 tonnes. By far the largest supplier was Germany (primarily soybean meal). The Netherlands was a major supplier for soybeans.

Finland's exports are relatively small, limited to 2,300 tonnes of soybean oil. Exports go primarily to Lithuania, though a small portion go to Latvia.

Figure 26 Finnish soy imports by country in 2018 (1,000 tonnes)

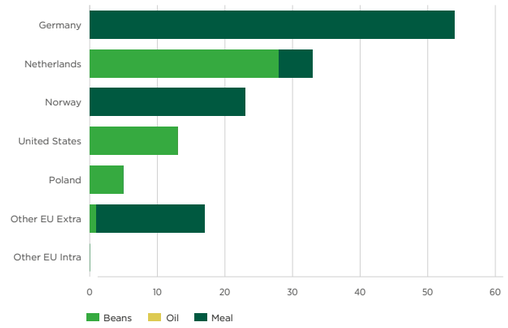
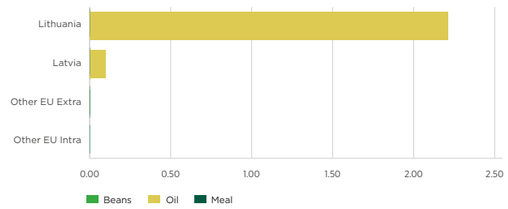


Figure 27 Finnish soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

4.3.2 Domestic soybean meal consumption

Table 8 shows that in 2018 Finland was a net importer for soybeans and soybean meal. This means that (47,000 x 0.8) + 98,000 = 135,600 tonnes of soybean meal was available for the Finnish livestock sector.

In 2018 Finland imported 49,108 tonnes of embedded soy and exported 22,825 tonnes of embedded soy, leading to a net import of 26,283 tonnes.[55]

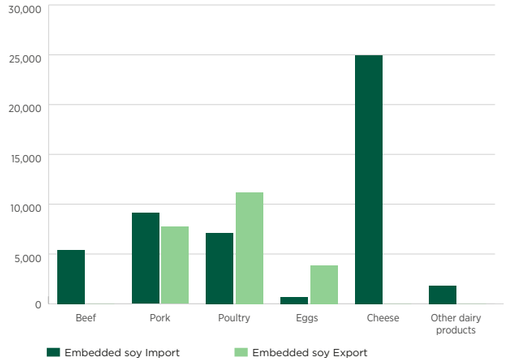
This results in an estimated domestic soybean meal consumption of 161,883 tonnes (135,600 tonnes + 26,283 tonnes).

Table 8 Calculation of Finland's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Net export
Soybeans	47,000	0	47,000	
Soybean meal	98,000	0	98,000	
Soybean oil	0	2,300		2,300

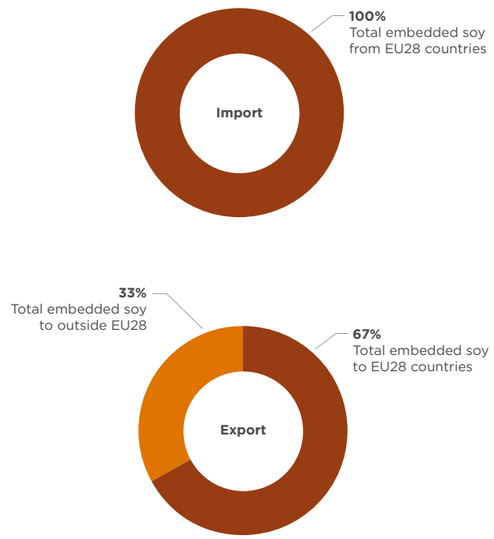
Source: Comtrade

Figure 28 Finnish import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 29 Finnish import and export of embedded soy in 2018



Source: Comtrade

Figure 28 gives an overview of the embedded soy flows. It shows that Finland is a relatively large importer of embedded soy via its cheese import.

As figure 29 shows, Finland imported all its embedded soy from other EU countries, and it exported 33% of its embedded soy to countries outside the EU. Korea, New Zealand, and China were important destinations for Finnish pork, while Estonia, Lithuania, and Belarus were important destinations for poultry.

4.3.3 Share of FEFAC SSG compliant soy and deforestation-free soy

According to the Finnish Feed Association, 110,000 tonnes of soy was FEFAC SSG compliant. This means that 68% of the domestic soybean meal consumption was FEFAC SSG compliant (110,000 tonnes/161,833 tonnes). The Finnish Feed Association regards about 40% of the domestic soybean meal consumption as deforestation-free.

4.3.4 Initiatives for responsible soy sourcing

In 2016 HKScan Finland, Kesko, Arla Finland, and Unilever Finland signed a pledge to use only responsibly produced soy in collaboration with WWF Finland. The Finnish soy pledge covers both the domestic production chain and imported soy. All the signatories are committed to ensuring that the soy used throughout their production chain will be responsibly produced by 2020.

For HKScan Finland the commitment was fulfilled by 2017. Currently the Finnish efforts focus on increase of local protein production to meet the countries' needs.

4.4 France

3,658,000 MT IMPORT

291,000 MT EXPORT

of soybeans, -meal, and -oil

398,000 MT DOMESTIC
soybean cultivation

3,558,800 MT SOYBEAN MEAL
available for the French livestock sector

–

32,384 MT NET EXPORT
embedded soybean meal

=

3,526,416 MT DOMESTIC
soybean meal consumption

43%
of domestic soybean meal consumption **FEFAC SSG complaint**.

20%
of domestic soybean meal consumption **deforestation-free**.

4.4.1 Soy trade

France imported a total of 3.7 million tonnes of soybeans, -meal, and -oil in 2018. Soybean meal accounted for almost 2.9 million tonnes with the largest share coming from Brazil (1.6 million tonnes).

France exported a total of 291,000 tonnes of soy products (soybeans, -meal, and -oil). The main export destination was Spain, followed by Belgium.

Figure 30 France's soy imports by country in 2018 (1,000 tonnes)

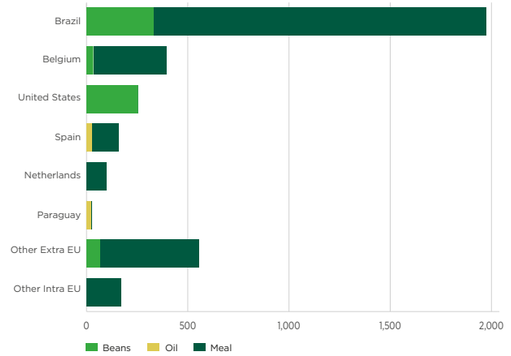
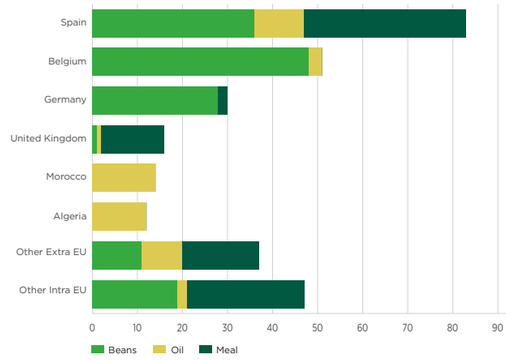


Figure 31 France's soy exports by country in 2018 (1,000 tonnes)

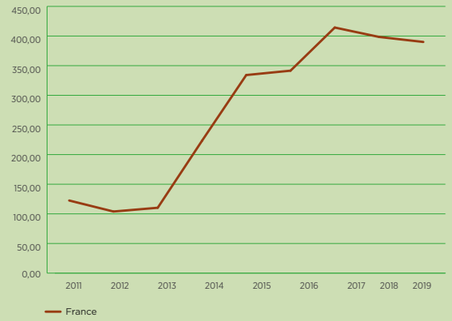


Source: Eurostat

4.4.2 Domestic soybean cultivation

France produced 398,000 tonnes of soybeans in 2018. The country aims to ban deforestation-linked imports by 2030. As part of its 2022 protein crop, France aims to replace imported non-GM soy by increasing domestic soy production. In the last 10 years French soybean production has increased from 100,000 tonnes to 400,000 tonnes.

Figure 32 French soy production in 1000 t – 2011 - 2019



Source: Eurostat

4.4.3 Domestic soybean meal consumption

Table 9 shows that the net French import of soybeans was 553,000 tonnes and the net soybean meal import was 2,798,000 tonnes. Accounting for domestically produced soybeans, this means that in total (553,000 x 0.8) + 2,798,000 + (398,000 x 0.8) = 3,558,800 tonnes of soybean meal were available for the livestock sector. Eurofac (the European coalition of French animal feed producers comprised of three feed associations: La Coopération Agricole Nutrition Animale, SNIA, and AFCA-CIAL) reported 2.5 million tonnes of soybean meal used in compound feed in 2018. The difference can be explained by high soy volumes added directly to feed at farm level. A limited volume of soybeans goes to human consumption.

In 2018 France imported 861,482 tonnes of embedded soy and exported 893,866 tonnes, leading to a net embedded soy export of 32,384 tonnes.[56]

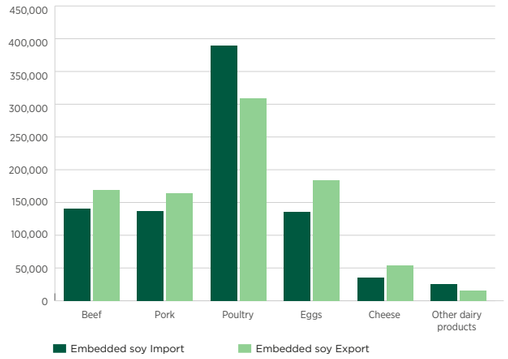
This results in an estimated domestic soybean meal consumption in France of 3,526,416 tonnes (3,558,800 tonnes - 32,384 tonnes).

Table 9 Calculation of France's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Domestic production
Soybeans	697,000	144,000	553,000	398,000
Soybean meal	2,893,000	52,000	2,798,000	
Soybean oil	68,000	95,000	-27,000	

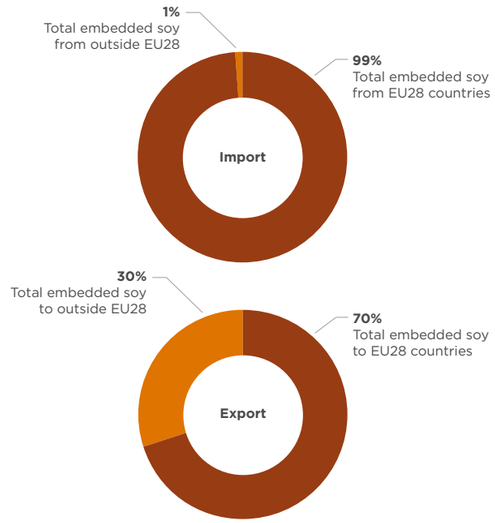
Source: Eurostat

Figure 33 French import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 34 French import and export of embedded soy in 2018



Source: Comtrade

Figure 33 gives an overview of the embedded soy flows. It shows that France is a large importer and exporter of embedded soy via poultry and to a lesser extent also via beef, pork, and cheese.

Figure 34 shows that only 1% of embedded soy imports came from outside the EU, while 30% of embedded soy exports went to countries outside the EU. The most important sources for poultry are Poland, Belgium, and the Netherlands. Brazil is the largest source (0.7%) of Non-EU poultry imports.

4.4.4 Share of FEFAC SSG compliant soy and deforestation-free soy

According Eurofac, 1,514,000 tonnes of soy used by the French market was compliant or could be considered as compliant with the FEFAC SSG. The soy compliant with the FEFAC SSG (462,000 tonnes) was certified by either Proterra, RTRS, or SSAP. The soy that can be considered as compliant with the FEFAC SSG (1,052,000 tonnes) includes soybeans cultivated in France, 2BSvs certified soy, and soy traced to origin by import companies with sustainability policies in line with the FEFAC SSG (may be sold as conventional soy due to lack of demand for responsible soy). Proterra and French soy are bought by the French market as a result of demand for non-GM soy – there is little demand specifically for sustainably produced soy.[57]

According to RTRS reporting, France-based companies purchased 107,575 RTRS credits in 2018, with poultry processor Moy Park France accounting for 45%, and cheese producer Fromagerie Bel for 44%.[58]

Soybean meal consumption adds up to 3,526,416 tonnes, which means that an estimated 43% of total French soybean meal consumption is FEFAC SSG compliant (1,514,000 tonnes / 3,526,416 tonnes). Eurofac estimates that about 20% can be regarded as deforestation-free and non conversion soy.

4.4.5 Initiatives for responsible soy sourcing

The debate on responsible soy sourcing is prominent in French political discourse. The French government approaches responsible sourcing by focusing on deforestation-free products. In November 2018 the French government adopted the French 'National Strategy to Combat Imported Deforestation' (Stratégie Nationale du Lutte Contre la Déforestation Importée – SNDI), an initiative launched by the Ministry of Environment aimed at ending all imports of commodities linked directly or indirectly to deforestation by 2030. The SNDI focuses on soy, but also includes beef and its inputs, palm oil, rubber tree, cocoa, and wood and its by-products. It brings together NGOs, importers, initiatives such as Duralim, retailers, animal production organizations, the ministry of agriculture and food, and the ministry of Foreign Affairs.

In 2018 Duralim (the French initiative to promote and improve the sustainability of animal feed) committed to reaching '100% sustainable supplies' in the animal feed sector including a 'deforestation-free target' by 2025. A Duralim working group has set up a program for operationalizing the commitment to sustainable soy. Focus points include working with importers to better understand soy flows and their sustainability policies, identifying effective and accepted interventions on the ground to fight deforestation/conversion, and developing a methodology to monitor sustainable sourcing (mapping of flows and available tools).

4.5 Germany

6,143,000 MT IMPORT

2,057,000 MT EXPORT

of soybeans, -meal, and -oil

62,000 MT DOMESTIC
soybean production

3,628,800 MT SOYBEAN MEAL
available for the German livestock sector

+

14,663 MT NET IMPORT
embedded soybean meal

=

3,614,137 MT DOMESTIC
soybean meal consumption

47%
of domestic soybean meal consumption **FEFAC SSG complaint**.

22%
of domestic soybean meal consumption **deforestation-free**.

4.5.1 Soy trade

In 2018 Germany imported 6,143,000 million tonnes of soybeans, -meal, and oil. Soybean imports accounted for 3.65 million tonnes and soybean meal imports for 2.4 million tonnes. The US was the largest supplier of soybeans, followed by the Netherlands and Brazil. The Netherlands and Brazil were also the main suppliers of soybean meal.

Germany exported a total of 2 million tonnes of soybeans, -meal, and -oil. Soybean meal was the primary export (1.6 million tonnes), of which more than 95% went to other EU countries.

Figure 35 Germany's soy imports by country in 2018 (1,000 tonnes)

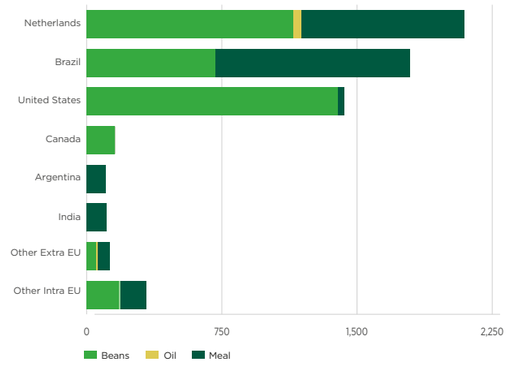
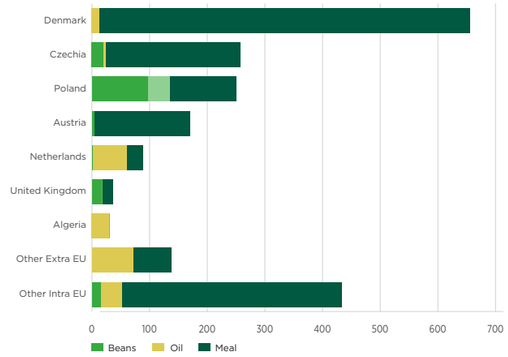


Figure 36 Germany's soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

4.5.2 Domestic soybean cultivation

Local soybean production is growing but does not play a significant role in Germany. Local production increased from 41,000 tonnes in 2016 to 62,000 tonnes in 2018.

4.5.3 Domestic soybean meal consumption

Table 10 shows that in 2018 Germany was a net importer of soybeans and soybean meal and produced a limited volume of soybeans domestically. This means that in total (3,498,000 x 0.8) + 788,000 + (62,000 x 0.8) = 3,628,000 tonnes of soybean meal was available for the German livestock sector. According to the German Feed Association (DVT) 2.7 million tonnes of soybean meal was used for the production of compound feed. The difference can be explained by home mixing of soybean meal in animal feed by German farmers.

In 2018 German embedded soy imports totaled 1,681,695 tonnes and exports summed to 1,698,358 tonnes, leading to a net export of 14,663 tonnes.[59]

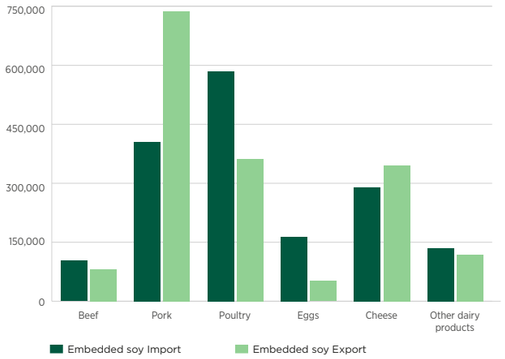
This results in an estimated domestic soybean meal consumption in Germany of 3,614,137 tonnes (3,628,800 tonnes - 14,663 tonnes).

Table 10 Calculation of Germany's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Net export	Domestic production
Soybeans	3,648,000	159,000	3,489,000		62,000
Soybean meal	2,433,000	1,645,000	788,000		
Soybean oil	62,000	253,000		191,000	

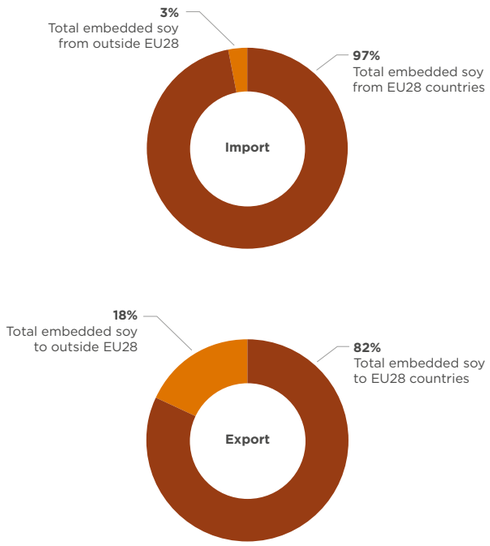
Source: Eurostat

Figure 37 German import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 38 German import and export of embedded soy in 2018



Source: Comtrade

Figure 37 gives an overview of the embedded soy flows. It shows that Germany is a large importer and exporter of embedded soy via pork, poultry, and to a lesser extent cheese.

Denmark, Belgium, the Netherlands, Poland, and Spain are collectively responsible for 90% of all pork imports to Germany. The main non-EU destinations for German pork exports were China and Korea. Within the EU, the Netherlands, Poland, and Austria were the main destinations for pork from Germany. The Netherlands and Poland are by far the biggest exporters of poultry to Germany. Germany imports its cheese primarily from the Netherlands, France, Denmark, Austria, and Italy. Figure 40 shows that only 3% of embedded soy imports came from outside the EU, while 18% of embedded soy exports went to countries outside the EU.

4.5.4 Share of FEFAC SSG compliant soy and deforestation-free soy

According to DVT (the German Feed Association) a total of 1.7 million tonnes soybean meal was FEFAC SSG compliant in 2018. With a domestic soybean meal consumption of 3,614,137 tonnes, this means that 47% was FEFAC SSG compliant. Based on RTRS credits bought by German market players and an estimate of the Proterra soy used in Germany, the percentage of certified deforestation-free soy is 800,000 / 3,614,137 = 22%.

4.5.5 Initiatives for responsible soy sourcing

The Forum Nachhaltigere Eiweissfuttermittel (Forum on More Sustainable Protein Feeds), coordinated by the Federal Office for Agriculture and Food, aims to reach 100% certified soy use in animal feed. Forum members from the animal feed, livestock production, and retailing sectors have published individual statements with different levels of soy-related commitments. Optimizing feed ratios (substituting raw materials) is seen as one means of reducing soy content in feed. Substituting overseas soy imports with local production or European protein is considered another option. A deforestation benchmark of the FEFAC SSG compliant schemes and programs was commissioned in 2018

EDEKA, a major German retailer, committed to switching to domestic/European feed or GM-free certified soy in its pig, cattle, and poultry feed. EDEKA will phase this transition, aiming for 85% certified soy in milk and yoghurt products and 50% certified soy in cheese by 2020.

4.6 Italy

3,771,000 MT IMPORT

210,000 MT EXPORT

of soybeans, -meal, and -oil

1,186,410 MT DOMESTIC
soybean production

4,256,728 MT SOYBEAN MEAL
available for the Italian livestock sector

+

391,103 MT NET IMPORT
embedded soybean meal

=

4,647,831 MT DOMESTIC
soybean meal consumption

36%
of domestic soybean meal consumption **FEFAC SSG complaint**.

20%
of domestic soybean meal consumption **deforestation-free**.

4.6.1 Soy trade

In 2018 Italy imported 3.8 million tonnes of soybeans, -meal, and -oil. United States, Brazil, and Canada were the main suppliers of soybeans. Argentina was the most important supplier of soybean meal. Italy exported 209,000 tonnes of soy in 2018, mainly soybean meal to Algeria and soybean oil to Austria and Germany.

Figure 39 Italian soy imports by country in 2018 (1,000 tonnes)

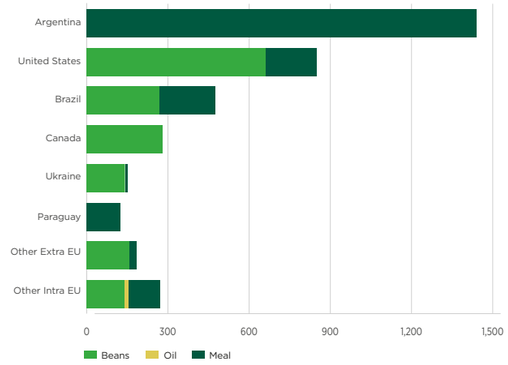
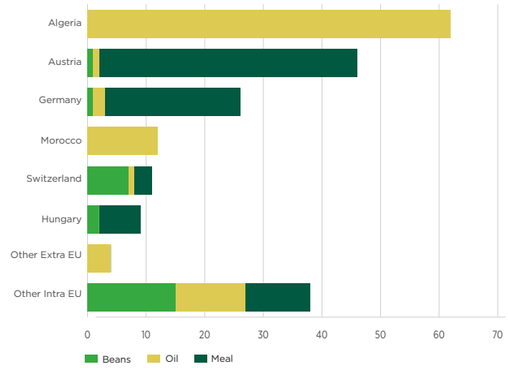


Figure 40 Italian soy exports by country in 2018 (1,000 tonnes)

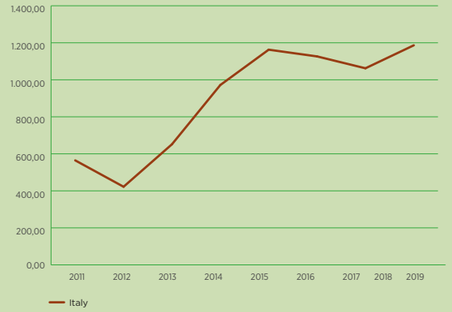


Source: Eurostat

4.6.2 Domestic soybean cultivation

Italy is the largest producer of soy in the EU. In 2018 Italy produced 1.2 million tonnes of soy, which has doubled since 2011.

Figure 41 Italian soy production in 1000 t – 2011 - 2019



Source: Eurostat

4.6.3 Domestic soymeal consumption

Table 11 shows that in 2018 Italy was a net importer of soybeans and soybean meal, while it was a net exporter of soybean oil. Additionally, Italy produced 1,186,410 tonnes of soybeans in 2018. This means that in total (1,627,000 x 0.8) + (1,186,410 x 0.8) + 2,006,000 = 4,256,728 tonnes of soybean meal were available for the Italian livestock sector in 2018.

In 2018 the Italian embedded soy import totaled 894,798 tonnes and the exports summed up to 503,695 tonnes leading to a net import of 391,103 tonnes.[60]

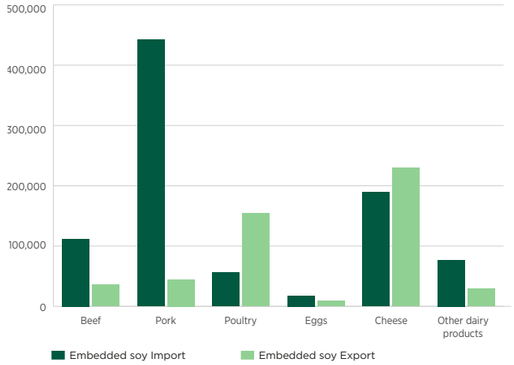
This results in an estimated domestic soybean meal consumption of 4,647,831 tonnes (4,256,728 tonnes + 391,103 tonnes).

Table 11 Calculation of net Italian import/export of soybeans, -meal and -oil (tonnes)

in tonnes	Import	Export	Net import	Net export	Domestic production
Soybeans	1,653,000	26,000	1,627,000		1,186,410
Soybean meal	2,101,000	95,000	2,006,000		
Soybean oil	17,000	89,000		72,000	

Source: Eurostat

Figure 42 Italian import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 43 Italian import and export of embedded soy in 2018

Source: Comtrade

Figure 42 gives an overview of the embedded soy flows. It shows that Italy is a large importer of embedded soy, especially via the import of pork.

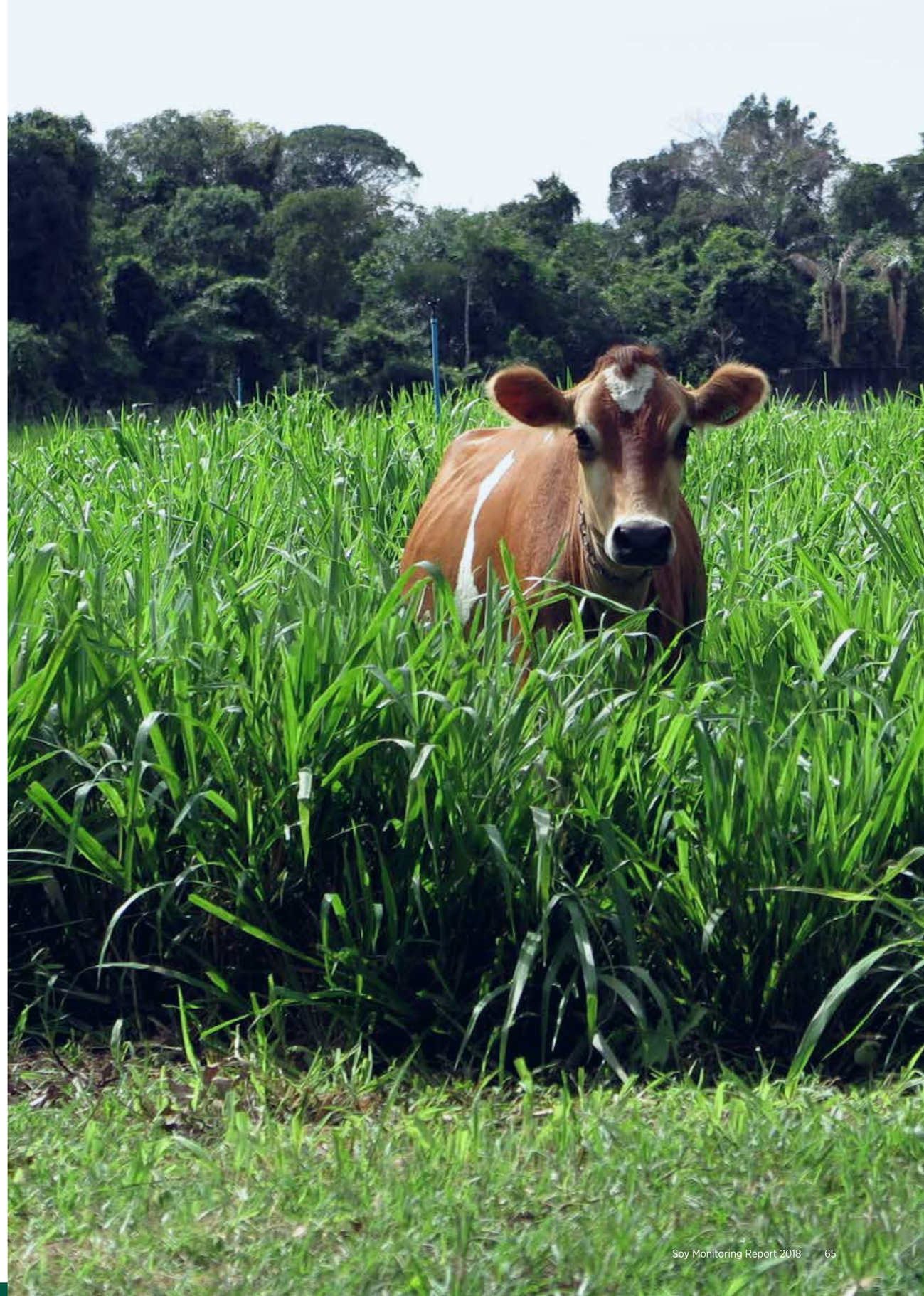
Italy exports its poultry mainly to Germany. France, Germany, and US are the main destinations for cheese.

4.6.4 Share of FEFAC SSG compliant soy and deforestation-free soy

According the Italian Feed Association, a total of 1,679,000 tonnes of soybean meal was FEFAC SSG compliant in 2018. With a domestic soybean meal consumption of 4,647,831 tonnes, this would mean that 36% of the Italian soybean meal consumption was FEFAC SSG compliant (1,679,000 / 4,647,831). Based on the volume of the Italian domestic soybean production, the percentage of deforestation-free soy is 20%.

4.6.5 Initiative for responsible soy sourcing

Italy does not report any action on the sourcing of responsible soy.



4.7 Netherlands

7,117,000 MT IMPORT

4,674,000 MT EXPORT

of soybeans, -meal, and -oil

2,199,200 MT SOYBEAN MEAL
available for the Dutch livestock sector

–

1,116,676 MT NET EXPORT
embedded soybean meal

=

1,082,524 MT DOMESTIC
soybean meal consumption

>100%
of domestic soybean meal consumption **FEFAC SSG complaint**.

99%
of domestic soybean meal consumption **deforestation-free**.

4.7.1 Soy trade

In 2018 the Netherlands imported 7.1 million tonnes of soybeans, -meal, and -oil. Soybean imports accounted for 4.3 million tonnes, mainly originating from the US (3 million tonnes) and Brazil (almost 1 million tonnes). The Netherlands imported almost 2.7 million tonnes of soybean meal, the majority of which was sourced from Brazil (2 million tonnes).

The Netherlands exported a total of 4.6 million tonnes of soybeans, -meal, and -oil in 2018. Germany was the main destination (2 million tonnes), followed by Belgium (1 million tonnes) and the UK (470,000 tonnes).

Figure 44 Dutch soy imports by country in 2018 (1,000 tonnes)

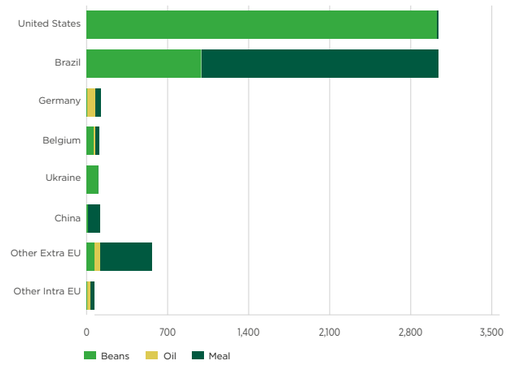
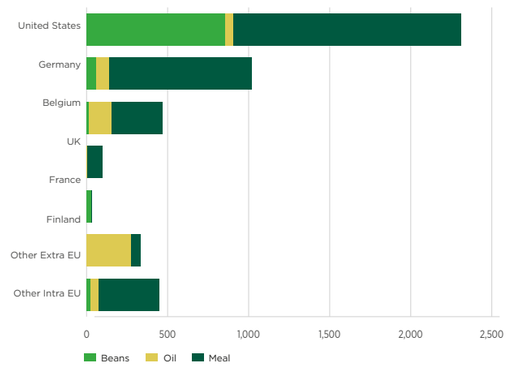


Figure 45 Dutch soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

4.7.2 Soybean cultivation

Soy cultivation in the Netherlands is still in an initial stage of development. In 2013 the Dutch-based agricultural cooperative Agrifirm started a program to encourage Dutch farmers to produce soy. In 2016 the Green Deal for Dutch Soy set the ambition of growing soy on 10,000 hectares of Dutch cropland in the near future. Signatories of this Green Deal for Dutch Soy are Agrifirm, the Dutch Ministries of Economic Affairs and of Environmental Affairs, and three provinces in the North of the Netherlands. In 2018, 91 participating farmers grew soy on 475 hectares of cropland. Total production in 2018 was 1,200 tonnes, nearly equal to 2017 production levels. This production volume is negligible and hence not included in the calculations below.

4.7.3 Soybean meal consumption

Table 12 shows that in 2018 the Netherlands was a net importer of soybeans and a net exporter of soybean meal and soybean oil. This means that (3,2999 x 0.8) - 440,000 = 2,199,200 tonnes of soybean meal[61] was available for the Dutch livestock sector. According to the Dutch Feed Association Nevedi, 2 million tonnes of soybean meal (including soybean hulls) were used for compound feed production in 2018. The difference can be explained by home mixing of soy in animal feed directly at the farm level.

The Netherlands imported 983,630 tonnes embedded soybean meal and exported 2,100,306 tonnes, leading to a net export of embedded soybean meal of 1,116,676 tonnes.[62]

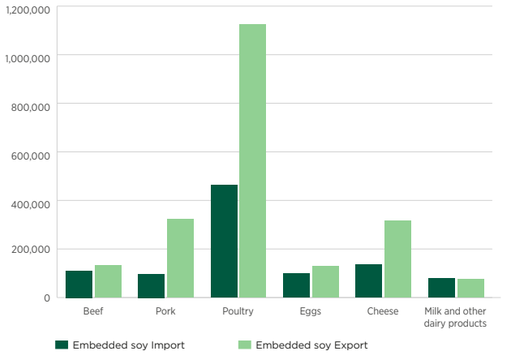
Total domestic soybean meal consumption in the Netherlands was 1,082,524 tonnes (2,199,200 tonnes - 1,116,676 tonnes).

Table 12 Calculation of the Netherlands' net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Net export
Soybeans	4,275,000	976,000	3,299,000	
Soybean meal	2,695,000	3,135,000		440,000
Soybean oil	147,000	563,000		461,000

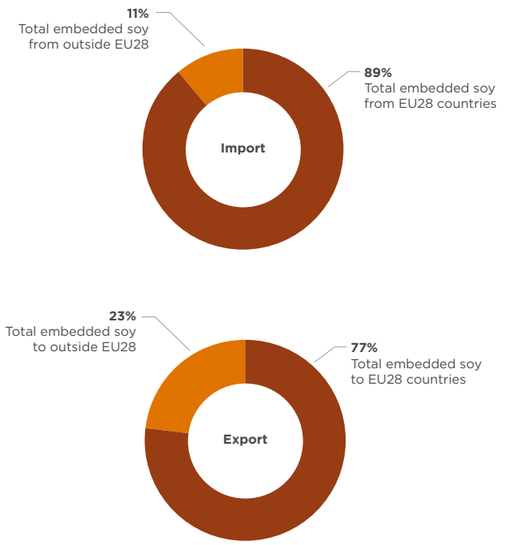
Source: Eurostat

Figure 46 Dutch import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 47 Dutch import and export of embedded soy in 2018



Source: Comtrade

Figure 46 gives an overview of the embedded soy flows. It shows that the Netherlands is a large importer of embedded soy via poultry and an even bigger exporter of embedded soy via poultry. The export volumes of embedded soy in pork and cheese are also considerable. Most of the Netherlands imported poultry comes from Germany, Belgium, the United Kingdom, and Poland. The major non-EU sources of Netherlands poultry imports are Ukraine and Brazil.

Figure 47 shows that 11% of the embedded soy imports came from countries outside the EU. Of the embedded soy exports, 23% went to countries outside the EU. The Philippines and Ghana were important export destinations for poultry. Within the EU, Germany, Belgium, and the UK were the key export destinations for all livestock products.

4.7.4 Share of FEFAC SSG compliant soy and deforestation-free soy

According to the Dutch Feed Association (Nevedi), 1.5 million tonnes of soybean meal was compliant with the FEFAC soy sourcing guidelines. With a total domestic soybean meal consumption of almost 1.1 million tonnes, this means that 400,000 tonnes of FEFAC compliant (embedded) soybean meal was exported. In 2018 Dutch companies bought large volumes of RTRS soy credits, of which at least 1.070.000 tonnes was destined for the Dutch market. This means that domestic soybean meal consumption was 99% deforestation-free (1,070,000 / 1,082,524 tonnes).

4.7.5 Initiatives for responsible soy sourcing

In 2015 the Dutch feed sector and producers of dairy, meat, and eggs reached an agreement to use only RTRS-certified soy (or soy from equivalent certificat ion standards) for livestock products consumed in the Dutch market. All members of the CBL – the Dutch association for food retailers and food service organizations – are committed to this. RTRS soy is also required for dairy products destined for export and Dutch dairy production is fully covered by purchases of RTRS credits. All other soy used in Dutch feed for livestock production must be certified by standards compliant with FEFAC SSG guidelines.

In 2018, IUCN NL initiated the Dutch Soy Platform to further strengthen responsible deforestation-free soy use by Dutch producers and international supply chains in which Dutch producers are represented. Participants aim to cover more composite products such as pizza with RTRS-credits as well, stimulating the connection of credits with risk-landscapes. They also want to implement sourcing of physical soy streams from pilot jurisdictions. The Platform supports cooperation with other European country partners to increase the demand for responsible and deforestation-free soy. The goal is to increase the level of deforestation-free soy shipped to Dutch ports to 8 million tonnes by 2025.

4.8 Norway

447,317 MT IMPORT

238,153 MT EXPORT

of soybeans, -meal, and -oil

188,196 MT SOYBEAN MEAL
available for the Norwegian livestock sector

+

2,730 MT NET IMPORT
embedded soybean meal

=

190,926 MT DOMESTIC
soybean meal consumption for livestock products

+ additonal

48,127 MT DOMESTIC
SPC (Soy protein concentrate) consumption for farmed fish

=

239,053 MT DOMESTIC
soybean meal consumption

>100%
of domestic soybean meal consumption **FEFAC SSG complaint**.

>100%
of domestic soybean meal consumption **deforestation-free**.

4.8.1 Soy trade

In 2018 Norway imported 447,317 tonnes of soybeans, -meal, and -oil. Soybean imports accounted for the largest share, mainly coming from Brazil and to a lesser extent from Canada. Norway primary export was soybean meal to Sweden.

Figure 48 Norwegian soy imports by country in 2018 (1,000 tonnes)

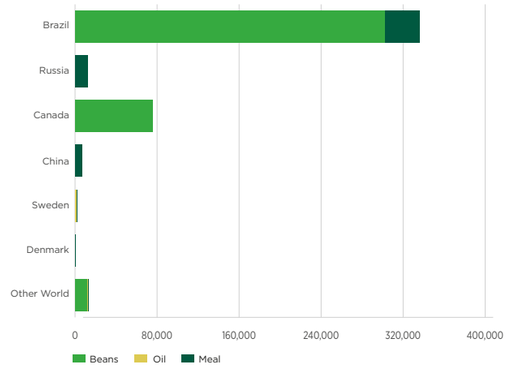
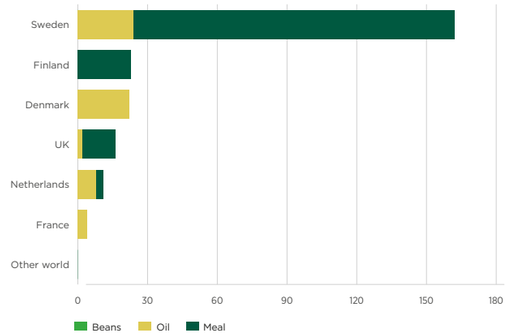


Figure 49 Norwegian soy eports by country in 2018 (1,000 tonnes)



Source: Eurostat

4.8.2 Soybean meal consumption

Table 13 shows that in 2018 Norway was a net importer of soybeans and a net exporter of soybean meal and soybean oil. This means that a total of (390,786 x 0.8) - 124,433 = 188,196 tonnes soybean meal were available for the Norwegian livestock sector.

Additionally, in 2018 Norway imported 10,098 tonnes embedded soybean meal and exported 7,368 tonnes of embedded soybean meal, leading to a net import of 2,730 tonnes embedded soybean meal.[63]

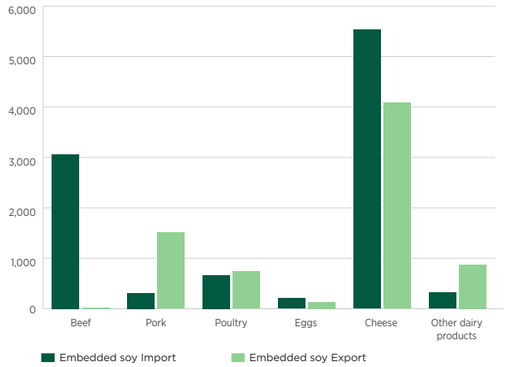
This results in an estimated total of 190,926 tonnes (188,196 tonnes + 2,730 tonnes) soybean meal used for livestock in Norway.

Table 13 Calculation of Norway's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Net export
Soybeans	390,786	0	390,786	
Soybean meal	53,074	177,507		124,433
Soybean oil	3,457	60,646		57,189

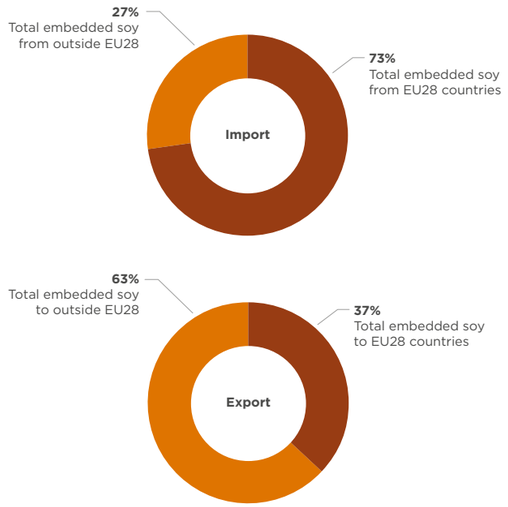
Source: Eurostat

Figure 50 Norwegian import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 51 Norwegian import and export of embedded soy in 2018



Source: Comtrade

Cheese and beef are mainly imported from other EU countries: Germany, Denmark, France for cheese and Germany, Botswana and Namibia are important sources for Norway's beef import.

Norway's soy-related imports are cheese and beef. They are mainly imported from other EU countries. Germany, Denmark, France are major sources of cheese, and Germany, Botswana, and Namibia are important sources of beef.

In addition to use in livestock products, soy is also used in Norway for aquaculture (farmed fish).

In total 1,345,939 tonnes farmed fish (salmon and rainbow trout) was produced in 2018. Of this production 1,264,368 tonnes were exported,[64] meaning that 81,571 tonnes were domestically consumed. Using a soy conversion factor of 0.59 for farmed fish leads to a domestic soy consumption for farmed fish of 48,127 tonnes.[65]

The total domestic soybean meal linked to consumption of livestock products and farmed fish is therefore 190,926 + 48,127 = 239,053 tonnes.

4.8.3 Share of FEFAC SSG compliant soy and deforestation-free soy

All Norwegian soy imports from Brazil are ProTerra certified (300,000 tonnes). A 3rd party verified that all Canadian imports in 2018 (104,600 tonnes) were compliant with the requirements set by the Swedish Soy Dialogue – they are considered responsible soy in this analysis. About 5,000 tonnes were sourced from Ukraine (low deforestation risk). With a soy footprint for domestic soy consumption of 239,000 tonnes this means that more than 100% of Norway's domestic consumption is FEFAC SSG compliant and deforestation-free.

4.8.4 Initiatives for responsible soy sourcing

In 2015 animal feed companies started the Dialogue on Resonsible Soy and committed themselves to sourcing deforestation-free with no links to violations of human rights (making use of Proterra certified soy or an equivalent standard).[66] In 2018 the fish feed sector joined and committed to buying deforestation-free soy (Proterra).

Denofa (a major crushing facility) and Norwegian feed companies are engaged in dialogue with the Green Climate Fund (GCF), Norway's International Climate and Forest Initiative (NICFI), the European Soy Initiative, and members of the steering committee of the Tropical Forest Alliance.

4.9 Poland

2,760,505 MT IMPORT

44,000 MT EXPORT

of soybeans, -meal, and -oil

10,270 MT DOMESTIC
soybean cultivation

2,584,000 MT SOYBEAN MEAL
available for the Polish livestock sector

–

1,168,066 MT NET EXPORT
embedded soybean meal

=

1,407,000 MT DOMESTIC
soybean meal consumption

0%
of domestic soybean meal consumption **FEFAC SSG complaint**.

0%
of domestic soybean meal consumption **deforestation-free**.

4.9.1 Soy trade

In 2018 Poland imported a total of 2,760,505 tonnes of soybeans, -meal, and -oil. Soybean meal was the primary import with supplies largely coming from Argentina, Brazil, and Paraguay.

Poland's soy product exports totaled just 44,000 tonnes. Germany was the most important destination for Polish exports of soybeans, -meal, and -oil.

Figure 52 Polish soy imports by country in 2018 (1,000 tonnes)

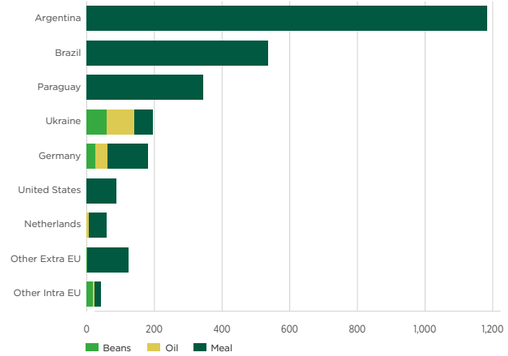
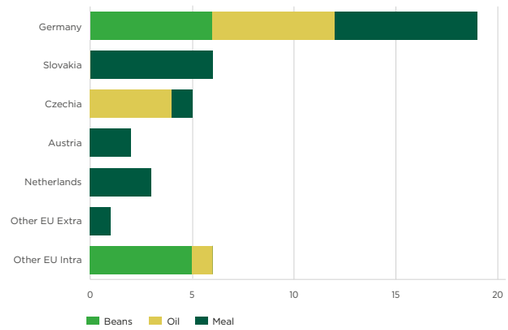


Figure 53 Polish soy exports by country in 2018 (1,000 tonnes)

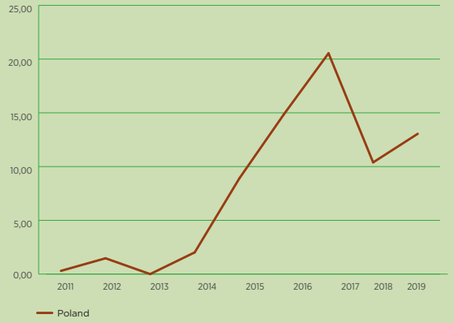


Source: Eurostat

4.9.2 Domestic soybean cultivation

Soybean cultivation in Poland increased from 2,000 tonnes in 2014 to more than 20,000 tonnes in 2017 before decreasing again to 10,270 tonnes in 2018. Production growth has been driven by growing demand for non-GM soybeans.[67]

Figure 54 Polish soy production in 1000 t – 2011 - 2019



Source: Eurostat

4.9.3 Domestic soybean meal consumption

Table 14 shows that in 2018 Poland was a net importer of soybeans and soybean meal. Additionally, Poland produced a total of 10,270 tonnes soybeans in 2018. This means in that in total (94,252 x 0.8) + (10,270 x 0,8) + 2,499,686 = 2,584,000 tonnes of soybean meal was available for the livestock sector in 2018. The Polish feed association claims that 2.4 million of soybean meal was used in compound feed in 2018, with soy mixed directly into animal feed at farm level explaining the difference.

Poland imported 462,813 tonnes embedded soybean meal and exported 1,630,879 tonnes, leading to a net export of embedded soybean meal of 1,168,066 tonnes.[68]

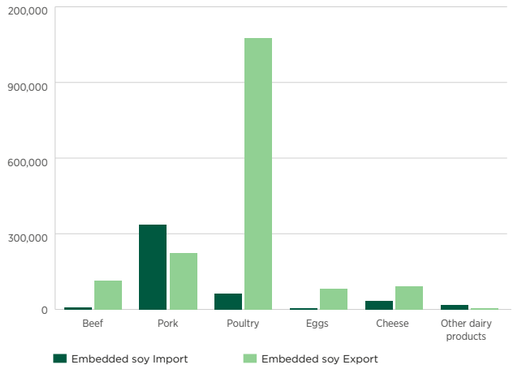
This results in a total domestic soybean meal consumption of livestock products of 1,415,934 tonnes (2,584,000 tonnes - 1,168,066 tonnes) in Poland.

Table 14 Calculation of Poland's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Domestic production
Soybeans	106,252	12,000	94,252	10,270
Soybean meal	2,520,686	21,000	2,499,686	
Soybean oil	133,567	11,000	122,567	

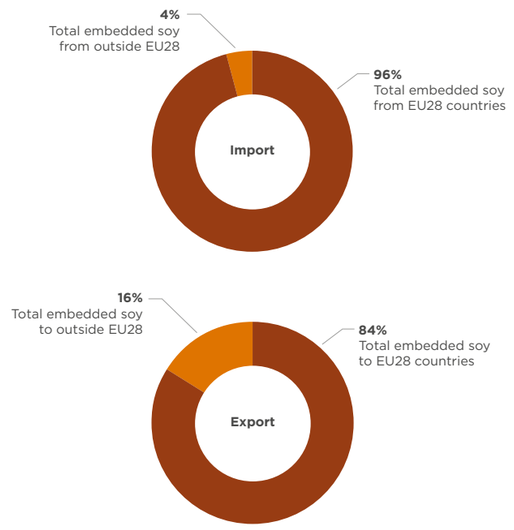
Source: Eurostat

Figure 55 Polish import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 56 Polish import and export of embedded soy in 2018



Source: Comtrade

Figure 55 gives an overview of the embedded soy flows. It shows that most embedded soy is exported via poultry.

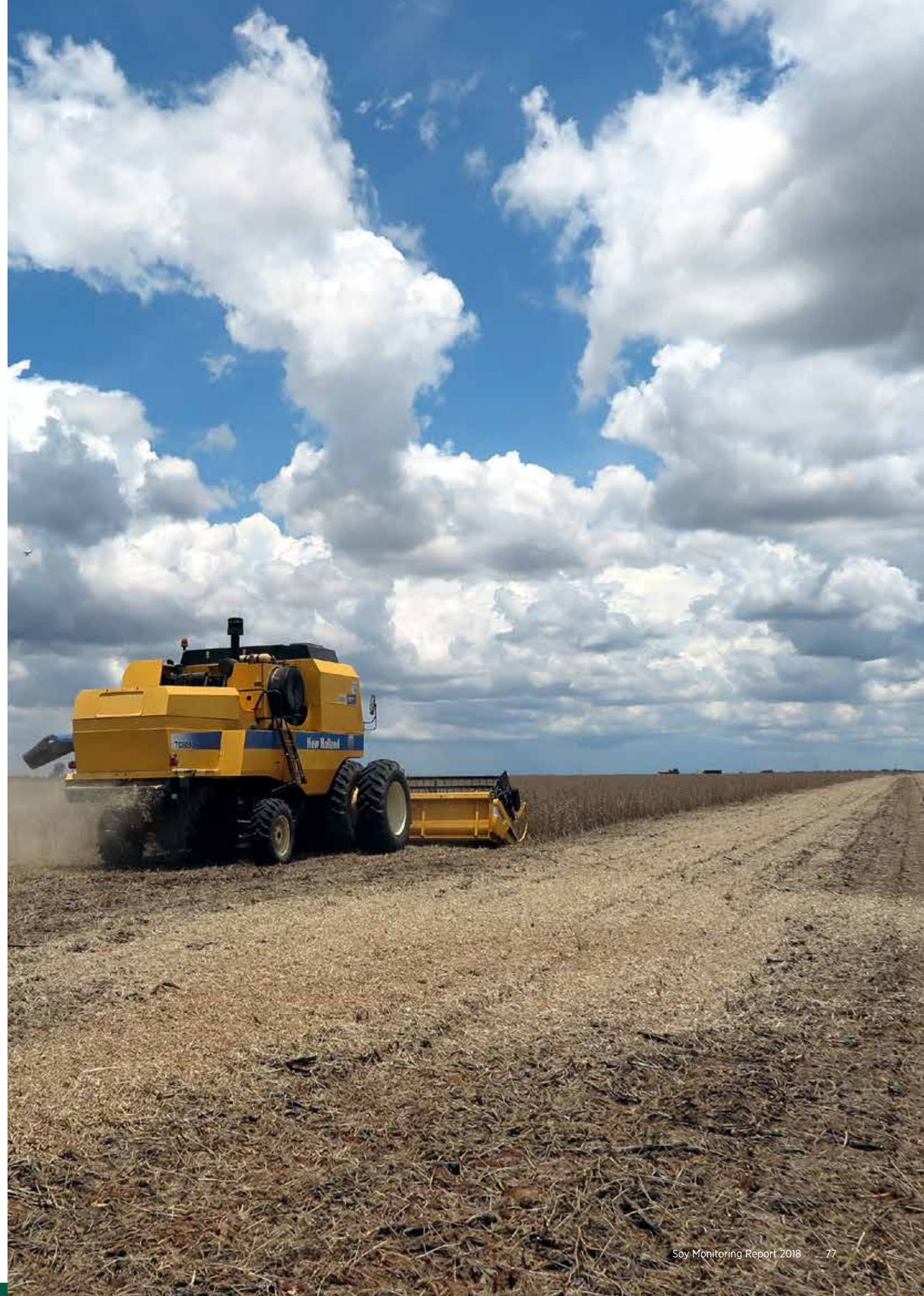
Figure 56 shows that 16% of Poland's embedded soy export goes to countries outside EU28. The main destinations outside the EU are the US for pork and China for poultry. Within the EU, Germany, the UK, and the Netherlands and the main destinations for poultry, and Germany and Italy are the main destinations for pork.

4.9.4 Share of FEFAC SSG compliant soy and deforestation-free soy

The Polish Feed Association did not report on the volume of responsibly sourced soy in 2018.

4.9.5 Initiatives for responsible soy sourcing

Poland did not report any action on the sourcing of responsible soy.



4.10 Portugal

1,136,792 MT IMPORT

177,766 MT EXPORT

of soybeans, -meal, and -oil

822,393 MT SOYBEAN MEAL
available for the Portugese livestock sector

+

107,596 MT NET IMPORT
embedded soybean meal

=

929,989 MT DOMESTIC
soybean meal consumption

18%
of domestic soybean meal consumption **FEFAC SSG complaint**.

18%
of domestic soybean meal consumption **deforestation-free**.

4.10.1 Soy trade

Portugal imported 1,136,792 tonnes of soybeans, -meal, and -oil in 2018. Soybean imports accounted for nearly 1.1 million tonnes, largely coming from the US, Brazil, and Paraguay.

Portugal's soy exports totaled 177,766 tonnes in 2018, primarily as soybean meal and soybean oil. Spain was the most important buyer of soybean meal and Angola was the most important destination for soybean oil.

Figure 57 Portugal's soy imports by country in 2018 (1,000 tonnes)

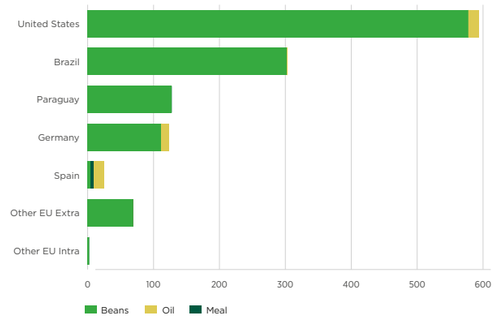
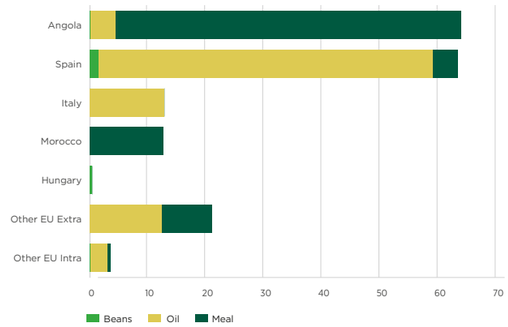


Figure 58 Portugal's soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

4.10.2 Domestic soybean meal consumption

Table 15 shows that in 2018 Portugal was a net importer of soybeans, and a net exporter of soybean meal and soybean oil. A total of (1,087,005 x 0.8) – 47,211 = 822,393 tonnes of soybean meal was available for the Portuguese livestock sector. According to the Portuguese feed association, 512,000 tonnes of soybean meal were used in the compound feed industry in 2018. The difference between the two figures can partly be explained by home mixing of soybean meal at farm level.

Portugal imported 189,922 tonnes embedded soybean meal and exported 82,326 tonnes, leading to a net import of embedded soybean meal of 107,596 tonnes.[69]

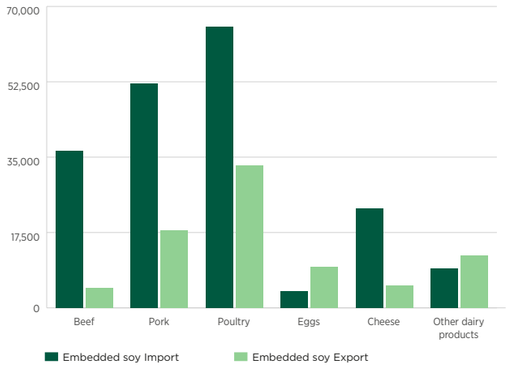
This results in a total domestic soybean meal consumption of 929,989 tonnes (822,393 tonnes + 107,596 tonnes).

Table 15 Calculation of Portugal's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Net export
Soybeans	1,089,060	2,055	1,087,005	
Soybean meal	42,972	90,183		47,211
Soybean oil	4,760	85,528		80,786

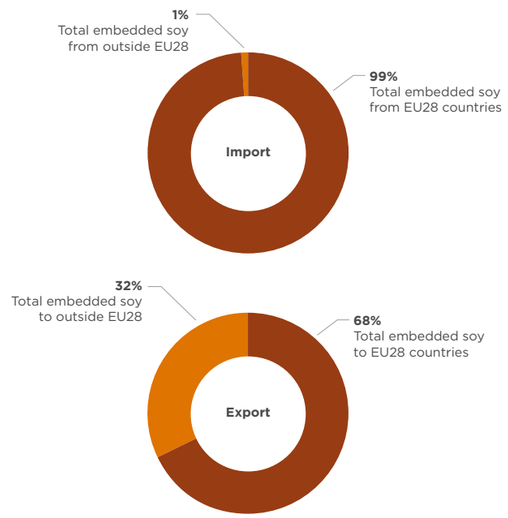
Source: Eurostat

Figure 59 Portugese import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 60 Portugese import and export of embedded soy in 2018



Source: Comtrade

Figure 59 gives an overview of the embedded soy flows. It shows that embedded soy entered the country primarily via the import of beef, pork, and poultry.

Figure 60 shows that 99% of the embedded soy imports came from other EU countries, and 68% of exports went to other EU countries. Spain, Angola and France were the most important export destinations for Portuguese pork and poultry.

4.10.3 Share of FEFAC SSG compliant soy and deforestation-free soy

According to the Portuguese animal feed association IACA (Associação Portuguesa dos Industriais de Alimentos Compostos para Animais), 171,645 tonnes of soybean meal used in compound feed were compliant with the FEFAC-SSG (ProTerra and other non GM standards benchmarked by ITC). With a total domestic soybean meal consumption of 929,989 tonnes, this means that 18% was FEFAC SSG compliant and sourced under deforestation-free schemes in 2018.

4.10.4 Initiatives for responsible soy sourcing

The urgency of sustainable sourcing is gradually growing in Portugal, pushed both by the market and politics. Some developments to highlight are: supermarkets demanding the use of responsible soy in meat and milk production, and the Portuguese animal feed association connecting with AproSoja and Abiove to reach out to SojaPlus to assess which steps can be taken to increase responsible sourcing.

4.11 Spain

5,668,936 MT IMPORT

396,093 MT EXPORT

of soybeans, -meal, and -oil

4,400 MT DOMESTIC
soybean cultivation

4,556,320 MT SOYBEAN MEAL
available for the Spanish livestock sector

–

899,615 MT NET EXPORT
embedded soybean meal

=

3,656,705 MT DOMESTIC
soybean meal consumption

36%
of domestic soybean meal consumption **FEFAC SSG complaint**.

1.5%
of domestic soybean meal consumption **deforestation-free**.

4.11.1 Soy trade

In 2018 Spain imported 5.7 million tonnes of soybeans, -meal, and -oil. Soybean imports accounted for almost 3.4 million tonnes, and came mainly from Brazil and the United States. Argentina was the most important supplier of soybean meal.

Spain's soy exports totaled 396,093 tonnes, with soybean meal going primarily to France and soybean oil to Algeria and Morocco.

Figure 61 Spain's soy imports by country in 2018 (1,000 tonnes)

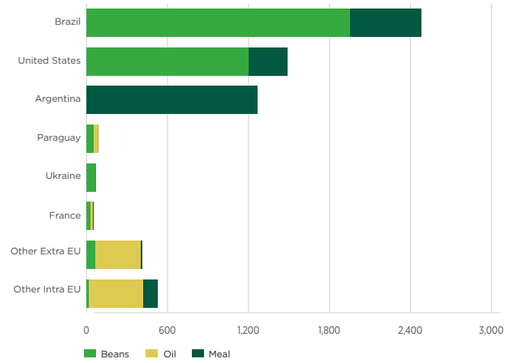
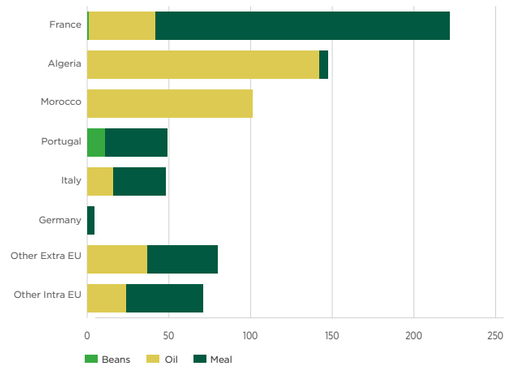


Figure 62 Spain's soy exports by country in 2018 (1,000 tonnes)

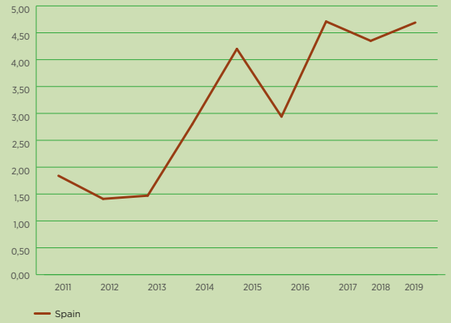


Source: Eurostat

4.11.2 Domestic soybean cultivation

Spain produced 4,400 tonnes of domestic soybeans in 2018, making it one of the smaller European producers.

Figure 63 Spanish soy production in 1000 t – 2011 - 2019



Source: Eurostat

4.11.3 Domestic soybean meal consumption

Table 16 shows that in 2018 the net Spanish import of soybeans was 3,386,000 tonnes and the net soybean meal import was 1,844,000 tonnes. Additionally, Spain produced 4,400 tonnes of soybeans in 2018. This means that in total (3,386,000 * 0.8) + 1,844,000 + (4,400 * 0.8) = 4,556,320 tonnes of soybean meal was available for the livestock sector in 2018.

In 2018 Spanish embedded soy imports summed to 361,232 tonnes and exports totaled 1,260,847 tonnes, leading to a net embedded soy export of 899,615 tonnes.[70]

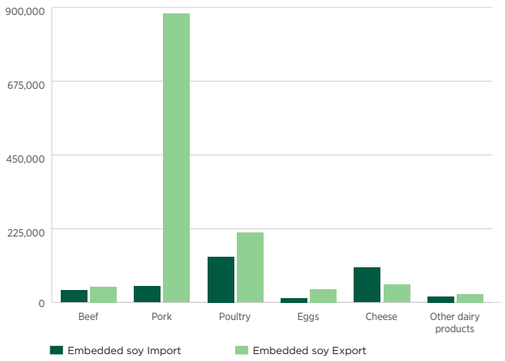
This results in an estimated total for domestic soybean meal use in livestock products of 3,656,705 tonnes (4,556,320- 899,615) in Spain.

Table 16 Calculation of Spain's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import	Domestic production
Soybeans	3,398,000	12,000	3,386,000	4,400
Soybean meal	2,192,000	348,000	1,844,000	
Soybean oil	78,936	36,093	28,199	

Source: Eurostat

Figure 64 Spanish import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 65 Spanish import and export of embedded soy in 2018

Source: Comtrade

Figure 64 gives an overview of the embedded soy flows. It shows that Spain is a large exporter of embedded soy mainly via pork.

Figure 65 shows that the majority of embedded soy (94%) is imported from other EU countries, and 65% is exported to other EU countries. In 2018 the main export destinations for pork were France, China, and Italy, and poultry mainly traveled to France, Portugal, and Benin.

4.11.4 Share of FEFAC SSG compliant soy and deforestation-free soy

In total 1.25 million tonnes of soybean meal equivalents are imported from the United States. This can be considered as SSAP compliant. Apart from that, the Spanish Feed Association (CESFAC) stated that another 50,000 tonnes can also be considered as FEFAC compliant and deforestation-free, although not officially benchmarked. No specific information is available on soy imported under other FEFAC compliant schemes. With a total domestic soybean meal consumption of 3,656,705 tonnes, this means that 35.5% was FEFAC SSG compliant and 1.5% can be considered as deforestation-free in 2018.

It should be noted that according to CESFAC the percentages of FEFAC SSG compliant and deforestation-free soy are significantly higher than stated above.

4.11.5 Initiatives for responsible soy sourcing

The Spanish government is rethinking its strategy concerning sustainable sourcing as it begins to recognize that it will be increasingly important to meet future demands for protein products, but hasn't reported any concrete progress.

4.12 Sweden

270,694 MT IMPORT

10,398 MT EXPORT

of soybeans, -meal, and -oil

219,037 MT SOYBEAN MEAL
available for the Swedish livestock sector

–

149,400 MT NET IMPORT
embedded soybean meal

=

368,437 MT DOMESTIC
soybean meal consumption

78%
of domestic soybean meal consumption **FEFAC SSG complaint**.

78%
of domestic soybean meal consumption **deforestation-free**.

4.12.1 Soy trade

In 2018 Sweden imported 271,000 tonnes of soybeans, -meal, and -oil. The Swedish climate is not suitable for soy production, requiring that all soy be imported. Soybean meal imports accounted for about 219,000 tonnes of the total with Norway the most important supplier (135,000 tonnes).

Sweden exported in total only about 10,000 tonnes of soybean oil, primarily to other European countries.

Figure 66 Swedish soy imports by country in 2018 (1,000 tonnes)

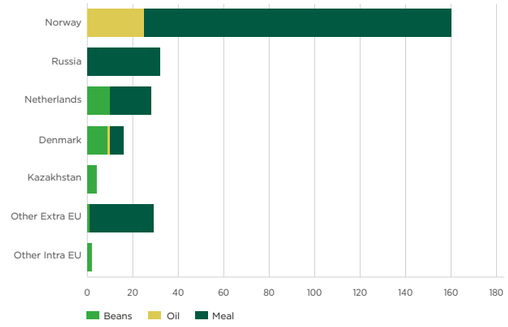
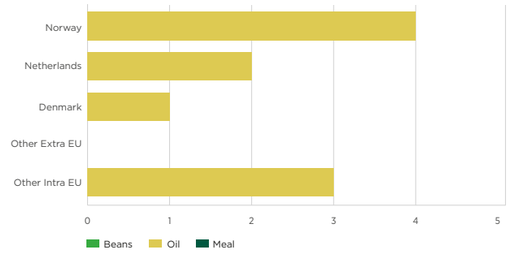


Figure 67 Swedish soy exports bu country in 2018 (1,000 tonnes)



Source: Eurostat

Table 17 Calculation of Sweden's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import
Soybeans	25,917	47	25,870
Soybean meal	219,037	0	219,037
Soybean oil	25,740	10,354	15,386

Source: Eurostat

4.12.2 Soybean meal consumption

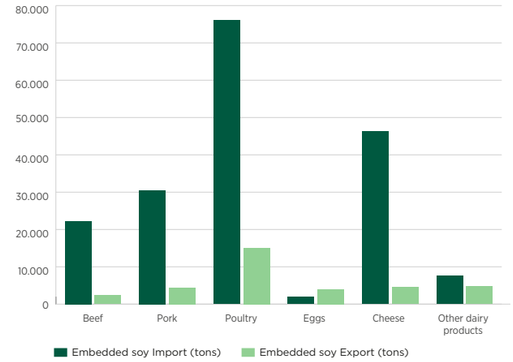
Table 17 shows that in 2018 Sweden was a net importer of soybeans, -meal, and -oil. In total 219,037 tonnes of soybean meal was available for the Swedish livestock sector. This aligns with the figures provided by the Swedish feed association, which claimed that 204,000 tonnes of soybean meal was used for compound feed production in 2018. The small difference is likely explained by soy consumption for aquaculture. Sweden has no crushing facilities meaning that all soybeans imports were destined for human consumption.

In 2018 Sweden imported 184,400 tonnes embedded soybean meal and exported 35,000 tonnes. This means that the net import of embedded soybean meal was 149,400 tonnes.[71]

This results in a total domestic soybean meal consumption of 368,437 tonnes (219,037 tonnes + 149,400 tonnes).

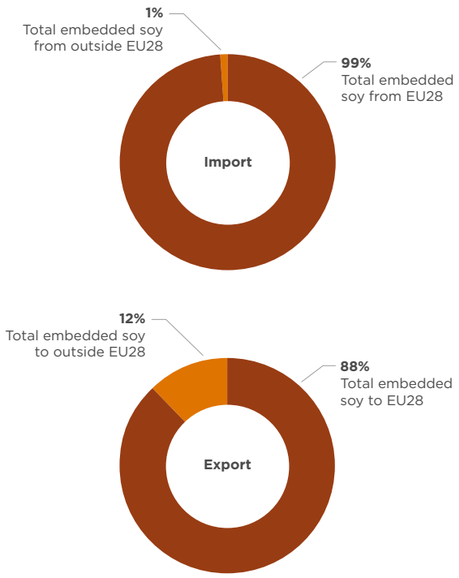
Figure 68 gives an overview of the embedded soy flows. It shows that most embedded soy was imported as poultry and cheese. Figure 69 shows that almost all embedded soy imports came from other EU-countries (mainly from Denmark, the Netherlands, and Germany). Of the embedded soy exports, 12% went to countries outside the EU (mainly to Malaysia, Rep. of Korea, and China).

Figure 68 Swedish import and export embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 69 Swedish import and export of embedded soy in 2018



Source: Comtrade

4.12.3 Share of FEFAC SSG compliant soy and deforestation-free soy

According to the Swedish feed association 204,000 tonnes of soybean meal for compound feed production was FEFAC SSG compliant. In total 142,000 tonnes came from schemes that are officially benchmarked by ITC as FEFAC compliant (RTRS, Proterra), 22,000 tonnes was also responsible soy (from verified sourcing areas in Canada), and another 40,000 tonnes of soy was produced according to organic standards (IFOAM) and sourced from countries considered to have low risk for deforestation. Swedish food companies also bought 83,250 credits in 2018.

This means that in total 78% of Swedish soybean meal consumption was FEFAC SGG compliant and deforestation-free: (204,000 tonnes + 83,250 tonnes) / 368,437 tonnes = 78%.

4.12.4 Initiatives for responsible soy sourcing

The Swedish Soy Dialogue (www.sojadialogen.se) was initiated in 2014 as a cross-industry collaboration between Swedish feed companies, food companies, food retailers, associations, and NGOs. The network's purpose is to highlight the issues around soy production and to contribute to the development of responsible production of soy. The Soy Dialogue is working to ensure that by all soy that reaches Swedish consumers via its network's members is responsibly produced by 2025.

More than 50 companies and organizations have signed and are implementing the Swedish Soy Dialogue Commitment, committing to ensuring that all soy used directly or indirectly (via feed) in the production/trade of animal protein products and products for human consumption shall be responsibly produced (this includes all products that companies can be held accountable for such as private labels).

The commitment is voluntary and comprises products produced in Sweden and outside Sweden. By signing, the member needs to fulfill the commitment within one year. The progress towards the commitment is publicly reported on the member's websites and in their sustainability reports.

The Swedish Soy Dialogue has committed to source soy that is produced responsibly, as defined in the criteria listed below:

- Relevant legislation is enforced.
- The production is subject to solid environmental considerations, including protection of endangered species, wetlands and riparian zones, soil conditions, water, and air quality.
- The production does not contribute to deforestation or conversion of other natural habitats of high conservation value.
- Continuous improvement of better management practices.
- Safe handling of agrochemicals and the use of highly toxic chemicals are forbidden or under a phase out program. This includes chemicals listed in the Stockholm and Rotterdam conventions.
- The elimination of all forms of forced or compulsory labor; the effective abolition of child labor; and the elimination of discrimination in respect to employment and occupation. There are secure labor conditions, freedom of association, and decent wages.
- Respect for legal and customary land rights.

To meet the Swedish Soy Dialogue Commitment, the member organizations have two choices for sourcing responsible soy:

1. Buying certified soy from certification standards which are considered credible by the Swedish Soy Dialogue: RTRS, Proterra, Danube Soy / Europe Soy, EU-organic, or IFOAM;
2. Certified soy from verified regions approved through the Swedish Soy Dialogue's methodology for verification.

Soy volumes that are not traceable to a certified or verified source must be covered by certificates (RTRS credits).[72]

4.13 United Kingdom

2,900,000 MT IMPORT

160,000 MT EXPORT

of soybeans, -meal, and -oil

2,511,000 MT SOYBEAN MEAL
available for the UK livestock sector

+

395,682 MT NET IMPORT
embedded soybean meal

=

2,906,682 MT DOMESTIC
soybean meal consumption

34%
of domestic soybean meal consumption **FEFAC SSG complaint**.

27%
of domestic soybean meal consumption **deforestation-free**.

4.13.1 Soy trade

The UK imported a total of 2.9 million tonnes of soybeans, -meal, and -oil in 2018, with soybean meal accounting for more than 1.9 million tonnes. The largest share of the imported soybean meal (1.15 million tonnes) came from Argentina.

About 160,000 tonnes of soybeans, -meal, and -oil were exported from the UK, almost entirely to Ireland.

Figure 70 UK soy imports by country in 2018 (1,000 tonnes)

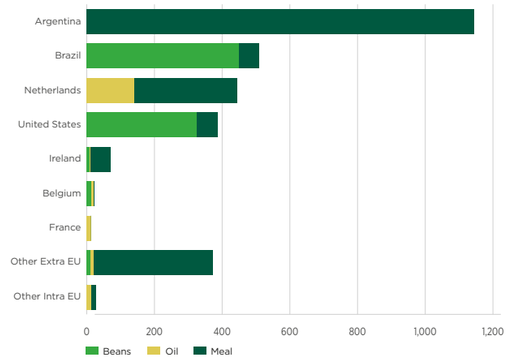
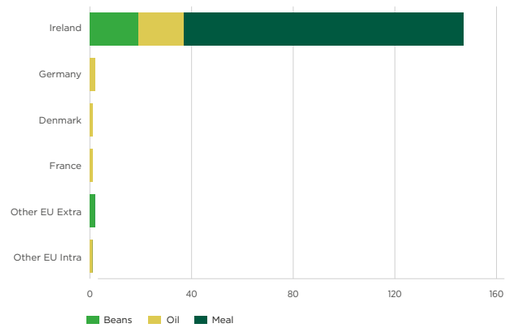


Figure 71 UK soy exports by country in 2018 (1,000 tonnes)



Source: Eurostat

Table 18 Calculation of UK's net import/export of soybeans, -meal, and -oil in 2018 (tonnes)

in tonnes	Import	Export	Net import
Soybeans	811,432	21,090	790,342
Soybean meal	1,989,002	110,477	1,878,525
Soybean oil	185,316	23,980	161,336

Source: Eurostat

4.13.2 Domestic soybean meal consumption

Table 18 shows that in 2018 the UK was a net importer of soybeans (790,342 tonnes) and soybean meal (1,878,525 tonnes). This means that in total (79,342 x0.8) + 1,878,525 = 2,511,000 tonnes soybean meal was available for the livestock sector. This aligns with the reported soybean meal usage by UK Feed Association (AIC) of 2.4 million ton. The difference can be explained by home mixing of soy in feed practiced by pig farmers.

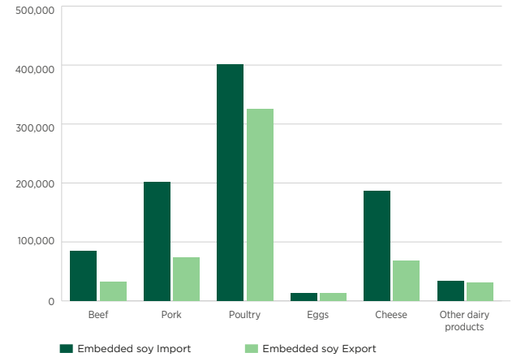
In 2018 the UK imported 920,436 and exported 524,754 tonnes of embedded soy, resulting in a net import of 395,682 tonnes.[73]

This results in an estimated total domestic soybean meal consumption in the UK of 2,906,682 tonnes (2,511,000 tonnes + 395,682 tonnes).

Figure 72 gives an overview of the embedded soy flows. It shows that most embedded soy is imported and exported via poultry. Considerable volumes of embedded soy are also being imported via pork and cheese. Poultry is mainly imported from the Netherlands, and Poland; pork from Denmark, Germany, and the Netherlands; and cheese from Ireland, France, and Germany.

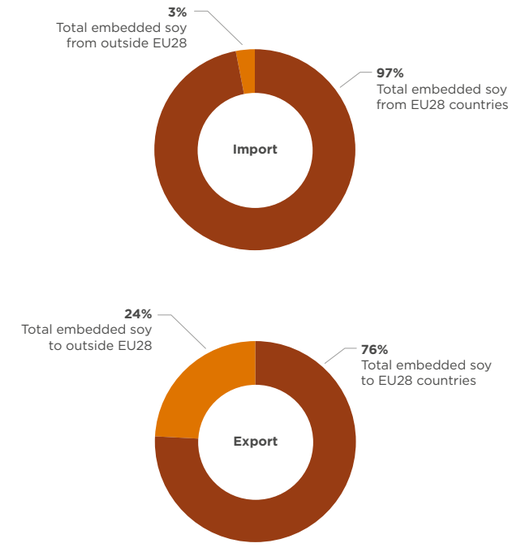
Figure 73 shows that only 3% of the embedded soy import came from outside the EU, while 24% of the embedded soy export went to countries outside the EU. The most important non-EU export destinations were China (pork and poultry), and to a lesser extent the Philippines, Angola, and Vietnam (poultry).

Figure 72 UK import and export of embedded soy in 2018 (tonnes)



Source: Comtrade

Figure 73 UK import and export of embedded soy in 2018



Source: Comtrade

4.13.3 Share of FEFAC SSG compliant soy and deforestation-free soy

According to the UK feed association, 1 million tonnes of soy was FEFAC SSG compliant. This means that in total 34% of UK domestic soybean meal consumption was FEFAC SSG compliant (1 million/2.9 million).

Consultancy firm EFECA gathered confidential data from UK soy buyers on the extent to which soy was covered by deforestation-free standards for the UK Round Table on Sustainable Soya. The EFECA report[74] showed that RTRS was the most commonly used scheme, representing 22% of the soya directly consumed in the UK, followed by Proterra (3%) and the trader owned standards (2%) like Cargill Triple S, Cefetra Responsible Soy (CRS), and ADM Responsible Soybean Standard 2nd edition. Of this soy, nearly all was purchased within a credits-based system. Calculations by EFECA show that 27% of the soy usage in the UK was covered by a deforestation and conversion-free standards.

4.13.4 Initiatives for responsible soy sourcing

The UK Sustainable Soya Initiative, which includes the UK Roundtable on Sustainable Soya, brings together major UK retailers, food producers, relevant industry associations from the agri-food sector, and the WWF.[75] The UK Roundtable was convened by the UK government through the Partnerships for Forests Programme in March 2018. It provides a pre-competitive space for companies and industry associations to work together to achieve a shared goal of sustainable soy supply chains, with joint progress monitoring and reporting.

During the inaugural UK Roundtable meeting on July 2018, UK retail and industry committed to producing time-bound action plans for sourcing sustainable soy. As of October 2019, major supermarket retailers (including Aldi UK, Sainsbury's, and Tesco's) have published time-bound commitments to support and source deforestation and conversion-free soy, along with action plans outlining how they plan to get there.[76]

5 Trends & Recommendations

This section describes the trends in responsible soy consumption in a broader context, and makes recommendations for increasing responsible soy uptake. While the data analyzed in this report is from 2018, we do refer to high-level trends from 2019 to give context for present day.

Trends

COVID-19 will likely impact the soy supply chain

It is still too early to assess all the effects of COVID-19. The following analysis is based on info available at the time of writing (mid-May 2020), and trends may change. The pandemic hit South America during the soy harvest, so little can be said about the impact on production. While there were logistical concerns, there were no major disruptions in transportation from South America and the US to Europe or intra-European transport.

While the scenarios differ by country, the COVID-19 lockdowns in Europe are reducing demand for feed, and potentially increasing demand for soy. Reduced feed demand is driven by closure of restaurants and food services, resulting in consumers eating less meat, eggs, and dairy products. Increased soy demand may result from a reduction in the supply of European vegetable proteins. Animal feed often contains coproducts or byproducts of other industrial food and energy processes that have slowed. Demand for rapeseed, maize, and wheat to produce biodiesel and bioethanol is reduced significantly by low oil prices, and reduced European consumption of beer and other grain-based products (bakery wares, pizza etc) and vegetable oils (sunflower oil in restaurants & food services) has slowed production. This translates to smaller volumes of co-products like brewer grains and wheat bran available to the feed industry. Soybean meal is an easy substitute for these missing EU vegetable proteins, and an early prognosis is that the percentage of soybean meal used by the feed industry will increase along with relative dependency on imported feed as a result of the pandemic.

Production and EU+ consumption of FEFAC compliant and deforestation-free soy

Production of FEFAC-compliant soy increased by 3.1 million tonnes from 2017 (19.4 million tonnes) to 2018 (22.5 million tonnes). This was an increase from 5.7% to 6.3% of global production, so FEFAC compliant soy production, as an initiative geared towards the European market, is still niche on a global scale.

Unlike in 2017, we accounted for certified soy not sold as certified, and new schemes not benchmarked by FEFAC SSG (such as Italian CSQA and Canadian soy) in this report, raising the rates of sustainable consumption. However we also only accounted for soybean meal (80% of soybean mass), which reduced overall figures. These methodological differences make a one-on-one comparison impossible, but there is an observable increase in the uptake of FEFAC compliant-soy and deforestation-free soy from 2017 (22% SSG compliant, 13% deforestation-free) to 2018 (38% SSG compliant, 19% deforestation-free).[77] As the end of 2020 nears, growth is expected to increase. For the first time in its history, RTRS has sold all the credits produced in 2019. Danube Soy and Proterra have not sold all certified volumes, but market demand seems to be rising with new commitments made by UK retailers.

Two key events in 2019 are expected to contribute to the continued increase in demand for responsible deforestation-free soy. The Amazon fires in the summer of 2019 sparked an intense debate on agricultural production and exports from the region. The soy moratorium means soy is not the driver of this deforestation, however it has still intensified debates about buyer's responsibility for these fires. The European commission's adoption of the Communication on Stepping up EU Action to Protect and Restore the World's Forests in July, and the presentation of the European Green Deal in December 2019 will also drive uptake. It seems legislation – most likely in the form of due diligence legislation – will seriously affect sourcing requirements for soy. These two events have had feedback effects with the discussions on the Amazon forest fires broadening support for a level playing field in Europe.

Deforestation-free commitments will impact the supply chain more intensively in the coming years

Despite the current pandemic, it is still expected that deforestation-free commitments by upstream and downstream parties will boost the uptake of responsible soy. Companies' increased awareness of deforestation risks, desire to lower their CO_2 footprint, and anticipation of future EU measures could lead to increased demand for deforestation-free soy. Several certification systems have followed RTRS in including clear deforestation-free or non-conversion criteria as a result of growing deforestation-free commitments, and FEFAC is expected to revise its Soy Sourcing Guidelines in 2020 and add deforestation-free (desired) criteria.

However, it is clear public and private actors need to cooperate more intensively to tackle large-scale commodity-related deforestation. The multitude of existing initiatives – including the Soft Commodities Forum, SoS Cerrado, Amsterdam Declaration Partnership, and European National Initiatives – already overlap, but without true collaboration or transparency between them, a great deal of time and resources will be lost. Financial sector involvement is also an increasingly important part of the equation, with the power to drive the sustainability performance of its clients.

Imbalance between supply and demand of responsible soy persists

Demand for responsible soy still lags behind supply. Despite market drivers, the volume of certified soy produced continues to increase – most notably volumes of Proterra, Danube Soy, and Agricultura Certificada. Farmers are keen to produce sustainable products, however there is a limit to how far investments can go without being rewarded. The non-monetary benefits of certification, such as better farm management, are large but have not been quantified, making it difficult to pinpoint this as a driver. Expectation of future market demand may be supporting this growth.

Substantial volumes of certified soy (including Danube Soy, Proterra, CRS, and SSAP) are not being sold with sustainable labels. Although 2019 figures are slightly more positive, certified soy continues to end up in conventional supply chains without recognition for the efforts made by the farmer. For the non-GM schemes, this partially had to do with the US-China trade war, as American soy suddenly became much cheaper than Brazilian soy and sourcing shifted. In this report we included soy that was not sold as certified in Europe's figures. Of the 38% (11.3 million tonnes) SSG compliant soy consumed in Europe, an estimated 6 million tonnes were not sold as certified.

The increasing number of certificates sold at rock-bottom prices that don't cover costs is a worrying trend. While selling increased certified volumes is a positive, sustainability must not be devalued or we risk the long-term sustainability of the model.

Sourcing of European cultivated soy will further increase

Parallel to the actions in the main soy production countries, there is a trend towards increased European soy production and sourcing. Soy production in the EU+ more than doubled to 3 million MT between 2011 and 2018, and several countries including France, Germany, and Denmark have rolled-out protein strategies to increase domestic protein production. The European Union has also formulated objectives to increase self-sufficiency in plant protein as part of the European Protein Plan. Companies in the food and feed chain are looking for alternatives to sensitive soy from South-America and are working on an aligned definition of European feed and food ingredients. Whether it is to meet climate demands, move away from high-risk sourcing countries, close nutrient cycles, or stimulate the local economy, the trend towards local sourcing is a serious one.

Growing importance of national soy dialogues

The country chapters show that national soy dialogues designed to guide joint transitions to responsible and deforestation-free soy have seen great successes. Frontrunners such as the Netherlands, Belgium, and Sweden achieved impressive results through close cooperation throughout the entire supply chain and setting verifiable time-bound commitments. Efforts in other European countries are also gaining momentum – retailers in the United Kingdom have played a leading role in developing clear time-bound commitments. That said, many European countries haven't launched joint industry/ government initiatives to transition to responsible soy, and most European countries still have much work to do.

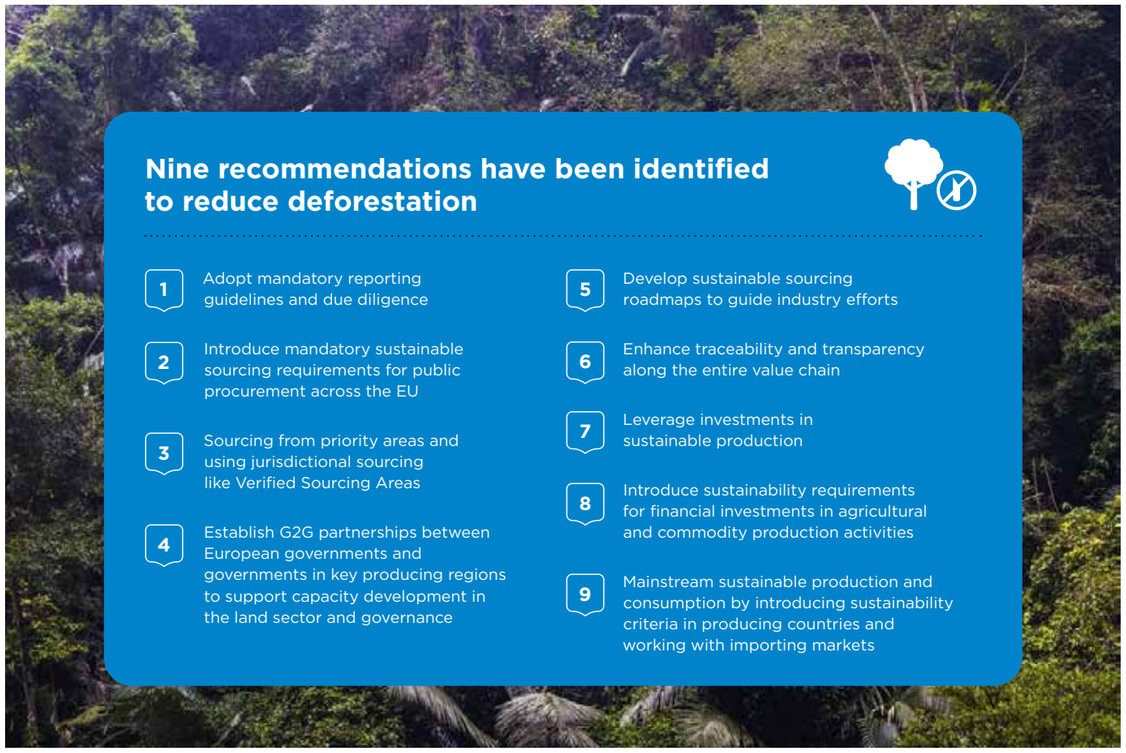
Reducing the carbon footprint

With the EU committed to carbon neutrality by 2050, reducing the carbon footprint of food products is increasingly important.[78] The soy sector must leverage decarbonization to accelerate the transition towards responsible deforestation-free soy. Land use change (LUC) has the greatest impact on many food commodity footprints.

The European feed industry uses a methodology based on Life Cycle Assessments (LCA) for carbon footprint calculations. Implemented at scale, it enables schemes to differentiate and create additional value for their producers and buyers. LCA faces several barriers to widespread application/integration in soy. Limited data makes comparing the footprint of (certified) responsible production with conventional production impossible. LCA also has a cut-off date of 20 years for soy to be recognized as conversion-free, while the cut-off date used in the soy sector is generally 2008/2009.

Some schemes, including RTRS, ProTerra and CRS, are, in various degrees, already collecting data for the certified products coming from Brazil. With the update of the Soy Sourcing Guidelines and the accompanying ITC website, FEFAC will aim to increase transparency on which schemes offer this data. Collecting the LCA data happens regionally, which may incentivize buyers to invest in the regions they have data for and promote continuous improvement.

We must ensure that the objective of reducing carbon footprints doesn't lead to a narrow definition of responsible sourcing that focuses exclusively on the no-conversion element and excludes other reponsible production practices that are currently embedded in the Soy Sourcing Guidelines and in landscape initiatives such as the Verified Sourcing Area model. But if the sector does not take advantage of global focus on GHG emissions, it will lose a leveraging tool to mainstream responsible soy.



Nine recommendations have been identified to reduce deforestation

1. Adopt mandatory reporting guidelines and due diligence
2. Introduce mandatory sustainable sourcing requirements for public procurement across the EU
3. Sourcing from priority areas and using jurisdictional sourcing like Verified Sourcing Areas
4. Establish G2G partnerships between European governments and governments in key producing regions to support capacity development in the land sector and governance
5. Develop sustainable sourcing roadmaps to guide industry efforts
6. Enhance traceability and transparency along the entire value chain
7. Leverage investments in sustainable production
8. Introduce sustainability requirements for financial investments in agricultural and commodity production activities
9. Mainstream sustainable production and consumption by introducing sustainability criteria in producing countries and working with importing markets

Recommendations

Several reports on deforestation with all-encompassing recommendations for next steps have been published in the first quarter of 2020 alone. Two main reports – the UK Global Resource Initiative Final Recommendations report (directed at the UK government) and IDH's Urgency of Action to tackle tropical deforestation – provide important next steps.

The following recommendations aim to build on previously published recommendations, and provide specific guidance for the soy sector.

General recommendations

> **European national initiatives are key**

Increasing the number of European countries with national soy dialogues and strengthening existing initiatives are crucial to accelerating uptake of responsible soy. Cooperation between government, civil society, and private actors in the entire food chain (commodity suppliers, feed industry, livestock producers, and retail) to formulate common goals and realize time bound commitments is paramount. The experiences of front-runner countries can guide development of new dialogues in line with each country's specific situation (e.g. more of a non-gm push in Germany, or a very large variety of players in Spain versus a concentrated market in Switzerland). IDH will support the launch of a secretariat to strengthen and coordinate this work. Variations in national initiatives create challenges for multinationals, and the secretariat could help streamline policy, even convening actors on a European/ global scale.

We call upon all stakeholders to join their respective national soy initiative to learn from each other, share updates and challenges, and develop plans to improve impact.

> **Urgent need for more alignment in myriad international initiatives on responsible soy**

The creation of (multi-stakeholder) initiatives in the soy supply chain has been on the rise. This positive trend brings actors together across the supply chain. The challenge lies in finding ways for these myriad initiatives to align goals, prevent reinventing the wheel,

overcome fragmentation, and increase impact. Where should one invest, how do all these initiatives relate to one another and strengthen one another? A key recommendation is to pool efforts and resources in the regions that most need it. As downstream players, we need to collectively work on improving the situation in high-deforestation risk areas. Let us leverage the initiatives that are out there and focus on a few key regions. The Verified Sourcing Area platform will be key to providing oversight of actual results and facilitating buyers' support of locally driven targets.

To enable this, more collaboration between all initiatives is required. The Collaborative Soy Initiative (launched in June 2019) could potentially play a key role in bringing all initiatives and information together.

Specific recommendations

> **Deforestation-free and non-conversion requirements key to revitalizing FEFAC Soy Sourcing Guidelines**

The FEFAC Soy Sourcing Guidelines with its ITC benchmarking system plays an important role in comparing the different responsible soy schemes in a transparent way. As deforestation-free and non-conversion requirements begin to play a dominant role in the market in the coming years, it is crucial that the FEFAC Soy Sourcing Guidelines be amended with a long term and ambitious vision. FEFAC recognition would make it much easier for the market to source from schemes providing deforestation-free and non-conversion soy.

> **Retail and food manufacturers are called to translate their generic deforestation commitments into timebound purchasing actions**

In several countries retailers and food manufacturers have already covered their soy footprint with deforestation-free or conversion-free soy, or have shared clear timebound commitments on getting there. Other retailers and food manufacturers in the EU+ must follow this example and translate their long-term deforestation commitments into time-bound purchasing commitments for dairy, cheese, poultry, pork, eggs, and beef. Both domestically produced and imported livestock products must be covered in order to mitigate externalities from embedded soy imports.

> **Several major trading and crushing companies have their own responsible soy schemes. Improving transparency and ensuring that responsible volumes are shared with trade associations will improve monitoring and uptake.**

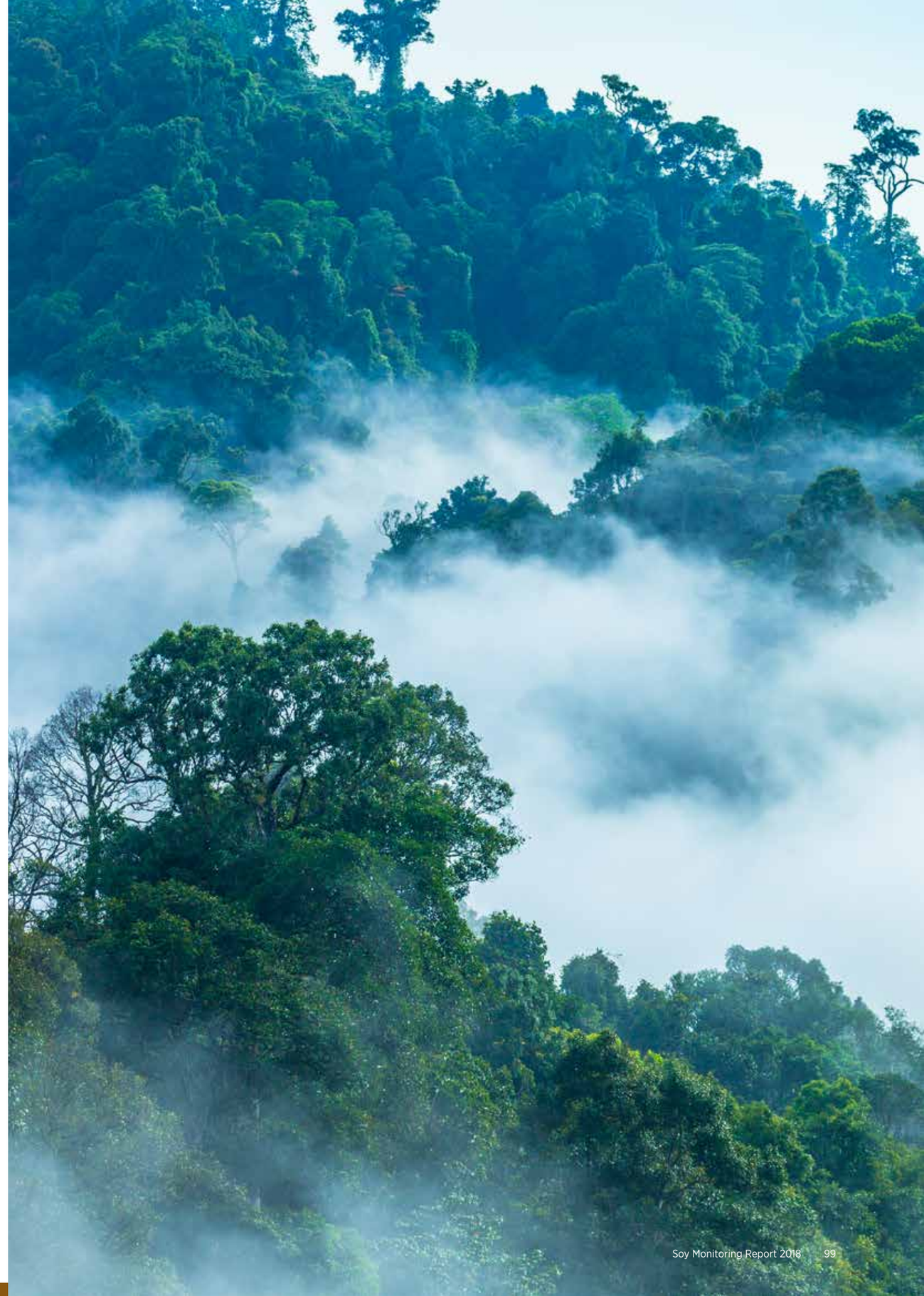
For commercial reasons most traders are reluctant to share information on volumes produced and sold under proprietary schemes. This makes it difficult to assess the progress these companies make in transitioning towards responsible soy. Respecting the confidentiality of this data, it is recommended that the traders share the data with their European associations to improve the aggregated data.

> **Ensure that smart ESG criteria[79] are embedded in financial products**

These criteria should include conditions that stimulate the entire value chain to transition. The initial focus should be on sustainable production, starting in high-deforestation risk regions. The criteria could include carbon conservation/capture in soil and vegetation. Sustainability-linked loans, blended finance solutions, investments, and insurance products could all incentivize farmers to go beyond legal minimums. The commercial finance sector cannot do this alone. We also call upon national governments and development banks both in the Amsterdam Declaration Partnership outside of the Partnership to (further) support blended finance mechanisms. Several examples including the &Green Fund, the Land Degradation Neutrality Fund, Agri3 Fund, and the Farmfit fund offer key learnings and insights.

> **Governments, step up bilateral relationships**

A priority action in the EU Communication on Stepping up EU Action to Protect and Restore the World's Forests is partnerships with producing countries. While the EU can help level the playing field via mandatory sourcing requirements, building G2G relationships is key. Several countries in the Amsterdam Declaration Partnership are currently working on their procurement guidelines as well as on post-2020 strategies, and we urge these countries to strengthen their relationships with Brazil, Argentina, and Paraguay and support and challenge these countries to improve production practices.



Annex 1 Methodology

This annex further explains the methodology used to arrive at the figures for consumption of FEFAC compliant and deforestation-free soy in individual countries, the European Union, and EU+ (EU28 + Switzerland and Norway). Definitions and data sources are also included.

Calculations

FEFAC compliant soybean meal consumption and the deforestation-free soybean meal consumption in the EU+ and individual countries were calculated as a percentage of the total soybean meal consumption.

Calculation of soybean meal consumption in EU+ and individual countries

Soybean meal available to the livestock sector in both specific countries and at EU+ level was calculated. The net import or net export of embedded soybean meal from animal-based products at country level and EU+ level was also calculated.

The domestic soybean meal consumption in a specific country and at EU+ level was subsequently calculated by adding the volume of soybean meal available to the livestock sector and the net import of the embedded soybean meal. If a specific country (or EU+) was a net exporter of embedded soybean meal, this volume was subtracted from the available volume of soybean meal for the livestock sector in that country.

Soybean oil used for biofuels and soybeans and soy derivatives for direct food consumption (e.g. soy milk, meat replacers) are not included in this study.

Calculation of soybean meal available to the livestock sector

To calculate the volume of soybean meal available to the livestock sector we summed the imported soybean meal, the soybean meal equivalent of the soybeans imported, and the domestic soybean production (expressed in soybean meal equivalent). We subtracted the soybean meal equivalent of the exported soybeans and the exported soybean meal to calculate the total volume of soybean meal available for the livestock sector in a specific country.

We used a crushing ratio of 0.8 to convert whole soybeans to soybean meal equivalent, meaning the figure available for soybeans was multiplied by 0.8 to arrive at the volume of soybean meal obtained. We assumed that the total volume of soybeans was used for crushing. This may produce a minor overestimate as soybeans can be used for soymilk, soy yoghurt, and meat substitutes as well, but this volume is relatively low.

Calculation of embedded soy import and export

In order to calculate the embedded soy in animal products, we used trade statistics on major products: beef, pork, poultry, cheese, non-cheese dairy products (see table below for categories), and eggs.

Product	HS-code	Description
Beef	0201	Meat of bovine animals; fresh or chilled
	0202	Meat of bovine animals; frozen
Pork	0203	Meat of swine; fresh, chilled or frozen
Poultry	0207	Meat and edible offal of poultry; of the poultry of heading no. 0105, (i.e. fowls of the species Gallus domesticus), fresh, chilled or frozen
Other dairy products	0401	Milk and cream; not concentrated, not containing added sugar or other sweetening matter
	0402	Milk and cream; concentrated or containing added sugar or other sweetening matter
	0403	Buttermilk, curdled milk and cream, yoghurt, kephir, fermented or acidified milk or cream, whether or not concentrated, containing added sugar, sweetening matter, flavoured or added fruit or cocoa
	0404	Whey and products consisting of natural milk constituents; whether or not containing added sugar or other sweetening matter, not elsewhere specified or included
	0405	Butter and other fats and oils derived from milk; dairy spreads
Cheese	0406	Cheese and curd
Eggs	0407	Birds' eggs, in shell; fresh, preserved or cooked

We used the total import and export of the following HS codes:

For the calculation of the embedded soy used to produce these products, we used conversion factors in line with the previous European soy monitor reports. We applied R. Hoste's (Wageningen University & Research, 2016) calculations for 5 different animal-based product categories in 10 European countries. For the import of animal-based products from outside the European Union, we use the average conversion factor for a given product category because data on non-EU animal products is scarce. For exports from European countries, the conversion ratio for a specific country is used where available, and the average of the 10 countries is used where country-specific data is not available. For cheese, we assumed that 10 liters of milk are needed to produce 1 kilo of cheese, and multiplied the conversion factor for milk by 10. See Annex 2 for the calculations of the import and export of embedded soy (including conversion factors used) in specific countries.

Calculation of FEFAC compliant soy as a percentage of total domestic consumption

There is no specific trade data on EU+ responsible soy imports and exports, requiring data from soy buyers and scheme owners. Both groups have been involved in this research.

FEFAC collected data from its member associations, which in turn collected data on certified soy from their member companies. The quality of the data still varies by country, but the data quality has improved since last year. The member association data is provided in each country chapter.

We approached all standard owners for information on certified volumes, the volume exported to the European Union, the total volume under the different supply chain models, and the fraction of the certified soy sold as sustainably certified soy. Most scheme owners provided detailed information. Some scheme owners were unable or unwilling (for commercial reasons) to provide information. Private company schemes are the main 'black boxes'.

In order to calculate the percentage of FEFAC compliant soy, we summed the data provided by the 17 standard owners and divided it by the domestic soy consumption. The challenges encountered are discussed below.

Calculation of deforestation-free soy as a percentage of total domestic consumption

From the FEFAC compliant schemes, only a subset explicitly include criteria on non-conversion/deforestation-free and are considered deforestation-free. In line with the previous Soy Monitoring Reports, RTRS, ISCC Plus, ProTerra, SFAP-non conversion, Danube & Europe Soy, and CSRS are classified as guarantying deforestation-free soy. Best estimates of the country-specific soy volumes certified under these 6 schemes were added together and divided by the total domestic soy consumption to arrive at the percentage of deforestation-free soy.

Since the last report, most traders have updated their standards to include deforestation-free requirements. They are not included in this report as no data was provided and the deforestation-free criteria and the verification requirements have not yet been assessed. We hope to include these volumes in future reports. Several market experts have indicated that the volumes bought under these schemes are still relatively low.

Differences in methodology compared to the 2017 Soy Monitor

The method applied in this report differs from the previous report. The percentage of FEFAC compliant soy and deforestation-free soy is calculated as a percentage of the net domestic soy consumption. The net domestic soybean meal consumption in a specific country and at EU+ level was calculated by adding the volume of soybean meal available for the livestock sector and the net import of the embedded soybean meal. In the previous report the focus was on domestic soy use for the production of livestock in a specific country (or in the EU+ as a whole), regardless of whether the resulting meat, eggs, or dairy were consumed domestically or exported.

As a result of the differing methodologies, the percentages for SSG compliant and deforestation-free soy are not fully comparable to those in the previous report, especially for those countries with a high net export of embedded soy.

Data challenges

Two assumptions/limitations regarding the data used are important for contextualizing this report. Firstly, far more certified soy is available than is currently sold as certified. A large percentage ends up in conventional soy supply chains so even soy bearing no certification may in fact come from a certified sustainable operation. Secondly, transparency and traceability in this highly complex commodity chain are often difficult to achieve. Transparency is greatest before the crushing phase, at which point many flows are mixed. Transparency is also not in the commercial interest of all actors, limiting efforts to improve it. Combined, these two points hinder accurate estimations of the consumption of FEFAC compliant and deforestation-free soy. Since the national associations did not always break-down the total SSG compliant volume into the underlying specific schemes, it is extra difficult to make an estimation of the percentage of soy that was deforestation-free. In addition to the difficulty in obtaining detailed comparable information, we also encountered a number of other challenges discussed below.

Calendar year versus agricultural season

Soy is harvested at different times of the year in the Northern and Southern hemisphere, and may be sold in a different year than it was produced. In the report, we worked with calendar years. For those standards that provided information about the agricultural season 2018/19, we discussed which figures to use for the calendar year 2018.

Certified versus sold as certified

A number of standard owners reported that more soy was certified than sold as certified. In other words, sustainable soy was sold as conventional soy. Although all certified tonnes matter from a sustainability perspective, it is unlikely that farmers continue to invest in certification if they don't receive a premium for producing certified products. We dealt with this variation in volume produced versus sold in two different ways. For RTRS we used the volume of Book & Claim and Mass Balance certified soy sold in the European Union, and not the 4.5 million tonnes of certified soy produced. Given that certified soy in conventional chains can go practically anywhere, it can't be included in European Union estimates. Danube Soy is treated differently – produced in Europe, it is very likely that the soy remained in European supply chains. It is important to note that large certified volumes ending up in conventional chains will limit the growth of sustainable production.

Data sources

The main trade figures used in this study are obtained from the statistical database of Eurostat, specifically the database called: EU Trade Since 1988 by HS 2, 4, 6, and CN8. If Eurostat data was not available, Comtrade (the database of the United Nations) or ITC trade statistics were used. We used the data for 2018. Both trade between European Union countries and the rest of the world (EU EXTRA) and trade in the European Union (EU INTRA) are taken into account.

For soy and its products we referred to the following HS-codes, using the overarching category including all subcategories.

In order to identify the volumes of soy available to the livestock sector in the European Union, EU+, and individual countries, the reported exports of soybeans and soybean meal are deducted from the sum of imports and soy production.

In addition, FEFAC member associations also reported their data on soymeal volumes used for compound feed production in 2018.

The different standard owners were consulted on the total volumes certified under their programs in 2018 and the volumes sold to the European Union and EU+. It became clear that significant certified volumes were sold as conventional soy due to a lack of market demand.

Product	HS-code	Description
Soybeans	1201	Soya beans whether or not broken.
Soybean oil	1507	Soya-bean oil and its fractions, whether or not refined (excluding chemically modified).
Soybean meal	2304	Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soybean oil.

Definitions applied

The following definitions are used throughout the entire report. A short overview of all relevant terms is given in the definition list at the beginning of the report.

Soy and soy products

The term soy is frequently used in the report as the overarching term for soybeans and the products resulting from soybean crushing: soybean meal and soybean oil. When soybeans are crushed, the percentage of oil is around 20 of mass. For this report a crushing ration of 0.8 is used, meaning 80% of crushed soybean mass becomes soybean meal. Soybean meal and soybean oil can be sold and processed together or separately. Soy products are specified as soybeans, soybean meal, or soybean oil, though most numbers are translated to soybean meal as the main ingredient in animal feed. In this report no distinction was made between hulls and soybean meal.

Embedded soy

In addition to the soy itself, we also refer to embedded soy. Embedded soy is the soy used in animal feed to produce a certain amount of animal based product such as meat, eggs, and dairy products. We use these figures to calculate net consumption of soy.

European Union and Europe

Europe, European Union (EU), and European Union Plus (EU+) are all used in the report. Europe refers to the European continent. The European Union refers to the 28 Member States of the European Union had in 2018 (the United Kingdom is included as the report mainly deals with 2018). The European Union Plus includes the 28 Member States and Norway and Switzerland.

Deforestation and land conversion

The Accountability Framework has been important to aligning definitions in sustainable and ethical agriculture and forestry supply chains, and is used in this report. It is a reference of commonly agreed upon definitions. The framework includes the following definitions:

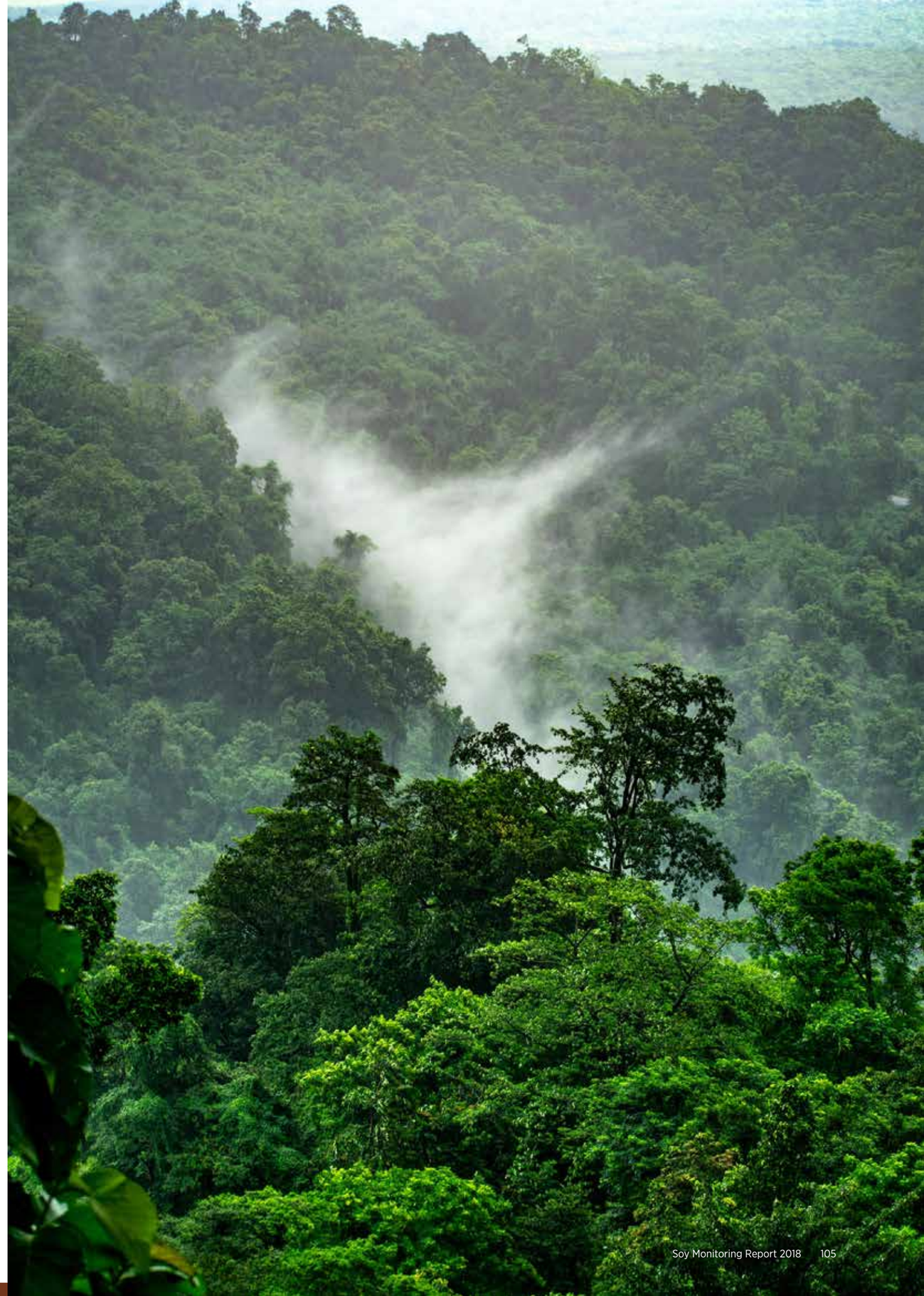
- **Conversion**: Change of a natural ecosystem to another land use or profound change in a natural ecosystem's species composition, structure, or function.

- **Deforestation**: Loss of natural forest as a result of:
  - conversion to agriculture or other non-forest land use
  - conversion to a plantation forest
  - severe and sustained degradation.

- **Deforestation-free** (synonym: no-deforestation): Commodity production, sourcing, or financial investments that do not cause or contribute to deforestation of natural forests.

FEFAC Compliant Soy

FEFAC compliant soy refers to the 19 sustainability schemes benchmarked by the International Trade Center to meet the FEFAC Soy Sourcing Guidelines (SSG). The Soy Sourcing Guidelines referred to are the Guidelines set in 2015, which reference legal compliance as the main route to agricultural expansion and forest and ecosystem protection. Note that the FEFAC Soy Sourcing Guidelines are currently (2020) being revised to also include requirements in the area of deforestation-free soy.



Annex 2

Calculations of import and export of embedded soy in different European countries

Belgium

Overview of Belgian import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	55,940	0.29	16,223	155,883	0.29	45,206
Pork	81,057	0.44	35,665	689,040	0.373	257,012
Poultry	285,510	0.8217	234,604	572,003	0.824	471,330
Eggs	298,144	0.3935	117,320	204,670	0.405	82,891
Cheese	317,969	0.3574	113,642	241,241	0.447	107,835
Other dairy products	2,245,369	0.03574	80,249	1,915,059	0.0447	85,603
Total			**597,703**			**1,049,878**

Source: UN Comtrade

Denmark

Overview of Danish import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	77,260	0.29	22,405	68,083	0.335	22,808
Pork	51,483	0.44	22,653	1,029,078	0.383	394,137
Poultry	78,321	0.8217	64,356	115,376	0.390	44,997
Eggs	18,607	0.3935	7,321	30,177	0.433	13,067
Cheese	78,596	0.3574	28,090	345,485	0.418	144,413
Other dairy products	206,142	0.03574	7,368	541,929	0.0418	22,653
Total			**152,193**			**642,075**

Source: UN Comtrade, University of Copenhagen

Finland

Overview of Finnish import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	18,539	0.29	5,376	3,447	0	0
Pork	20,728	0.44	9,120	17,578	0.44	7,735
Poultry	8,646	0.8217	7,104	13,655	0.8217	11,220
Eggs	1,803	0.3935	709	9,836	0.3935	3,870
Cheese	69,893	0.3574	24,980	15,278	0	0
Other dairy products	50,861	0.03574	1,818	176,223	0	0
Total			**49,108**			**22,825**

Source: UN Comtrade | The finnish compound feed industry does not use soy in their feed for cattle

Germany

Overview of German import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	354,168	0.29	102,709	271,916	0.3	81,575
Pork	922,686	0.44	405,982	1,791,068	0.412	737,920
Poultry	711,977	0.8217	585,032	448,177	0.806	361,231
Eggs	414,610	0.3935	163,149	134,484	0.382	51,373
Cheese	809,638	0.3574	289,365	1,224,270	0.282	345,244
Other dairy products	3,790,108	0.03574	135,458	4,220,381	0.0282	119,015
Total			**1,681,695**			**1,696,358**

Source: UN Comtrade

France

Overview of French import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal Products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	482,655	0.29	139,970	581,607	0.29	168,666
Pork	312,290	0.44	137,408	357,151	0.458	163,575
Poultry	473,368	0.8217	388,966	456,831	0.675	308,361
Eggs	63,768	0.3935	25,093	48,648	0.326	15,859
Cheese	378,477	0.3574	135,268	689,178	0.267	184,011
Other dairy products	973,054	0.03574	34,777	1,999,782	0.0267	53,394
Total			**861,482**			**893,866**

Source: UN Comtrade

Italy

Overview of Italian import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	386,273	0.29	112,019	123,567	0.29	35,834
Pork	1,004,721	0.44	442,077	77,544	0.578	44,821
Poultry	68,725	0.8217	56,471	158,102	0.978	154,624
Eggs	45,551	0.3935	17,924	18,392	0.497	9,141
Cheese	529,929	0.3574	189,397	423,732	0.543	230,087
Other dairy products	2,151,909	0.03574	76,909	537,556	0.0543	29,189
Total			**894,798**			**503,695**

Source: UN Comtrade

Netherlands

Overview of Dutch import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	381,168	0.29	110,539	445,018	0.3	133,505
Pork	220,287	0.44	96,926	911,821	0.354	322,785
Poultry	561,855	0.8217	461,678	1,489,100	0.755	1,124,271
Eggs	252,805	0.3935	99,479	494,827	0.263	130,139
Cheese	380,824	0.3574	136,106	875,140	0.36	315,050
Other dairy products	2,207,732	0.03574	78,904	2,071,003	0.036	74,556
Total			**983,630**			**2,100,306**

Source: UN Comtrade

Norway

Overview of Norwegiam import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	10,555	0.29	3,061	68	0.29	20
Pork	712	0.44	313	3,427	0.44	1,508
Poultry	813	0.8217	668	899	0.8217	739
Eggs	531	0.3935	209	352	0.3935	139
Cheese	15,469	0.3574	5,529	11,425	0.3574	4,083
Other dairy products	8,885	0.03574	318	24,597	0.03574	879
Total			**10,098**			**7,368**
Aquaculture	0	0	0	1,264,368	0.59	745,977

Source: UN Comtrade

Poland

Overview of Polish import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	22,401	0.29	6,496	390,505	0.29	113,246
Pork	763,432	0.44	335,910	505,611	0.44	222,469
Poultry	77,687	0.8217	63,836	1,310,795	0.8217	1,077,080
Eggs	514,105	0.03574	18,374	1,231,116	0.03574	44,000
Cheese	12,841	0.3935	5,053	205,999	0.3935	81,061
Other dairy products	92,737	0.3574	33,144	260,278	0.3574	93,023
Total			**462,813**			**1,630,879**

Source: UN Comtrade

Portugal

Overview of Portugese import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	125,668	0.29	36,444	15,623	0.29	4,531
Pork	118,588	0.44	52,179	31,498	0.571	17,985
Poultry	79,515	0.8217	65,337	37,474	0.882	33,052
Eggs	9,624	0.3935	3,787	25,513	0.371	9,465
Cheese	64,509	0.3574	23,055	9,516	0.543	5,167
Other dairy products	255,163	0.03574	9,120	223,312	0.0543	12,126
Total			**189,922**			**82,326**

Source: UN Comtrade

United Kingdom

Overview of UK import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	289,964	0.29	84,090	110,479	0.29	32,039
Pork	457,790	0.44	201,428	217,800	0.335	72,963
Poultry	488,544	0.8217	401,437	373,044	0.874	326,041
Eggs	956,352	0.03574	34,180	1,178,035	0.0263	30,982
Cheese	33,059	0.3935	13,009	35,131	0.361	12,682
Other dairy products	521,245	0.3574	186,293	190,293	0.263	50,047
Total			**920,436**			**524,754**

Source: UN Comtrade

Spain

Overview of Spanish import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	124,390	0.29	36,073	163,453	0.29	47,401
Pork	112,150	0.44	49,346	1,541,577	0.571	880,241
Poultry	168,893	0.8217	138,780	240,835	0.882	212,417
Eggs	509,781	0.03574	18,219	473,304	0.0543	25,700
Cheese	32,017	0.3935	12,599	109,974	0.371	40,800
Other dairy products	297,189	0.3574	106,215	99,977	0.543	54,288
Total	**1,244,420**		**361,232**			**1,260,847**

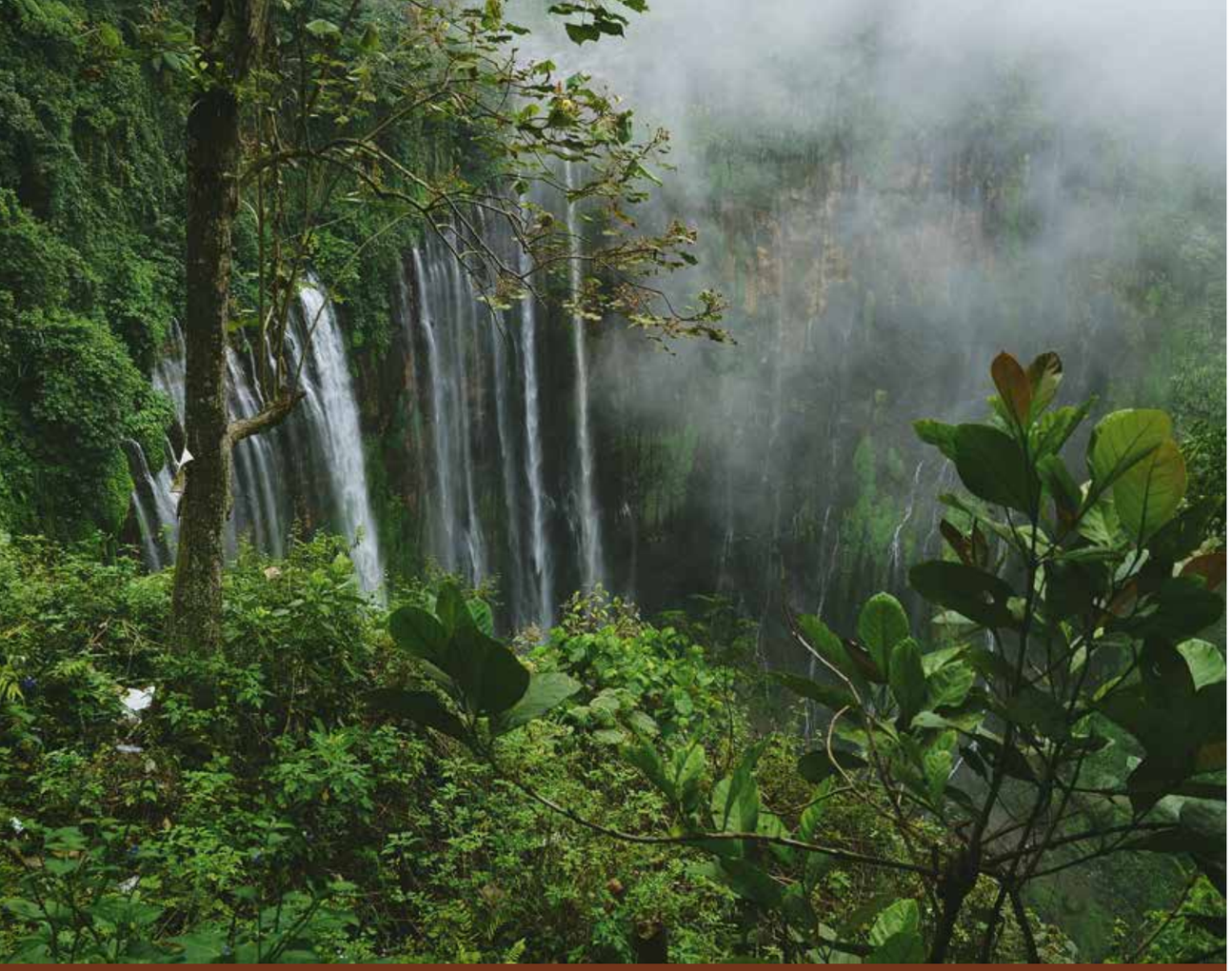
Source: UN Comtrade

Sweden

Overview of Swedish import and export of animal products in 2018 converted to soy

	Import			Export		
	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)	Animal products (tonnes)	Soy conversion factor	Embedded soy (tonnes)
Beef	76,595	0.29	22,213	8,205	0.29	2,380
Pork	69,304	0.44	30,494	18,750	0.232	4,350
Poultry	92,500	0.8217	76,007	24,300	0.619	15,041
Eggs	4,822	0.3935	1,898	11,823	0.337	3,984
Cheese	129,313	0.3574	46,216	17,581	0.259	4,553
Other dairy products	211,735	0.03574	7,567	183,639	0.0259	4,756
Total			**184,395**			**35,064**

Source: UN Comtrade | Official trade data for 2019, the Swedish National Board of Agriculture



Annex 3

FEFAC estimates of EU imported low deforestation risk soy

FEFAC proposed a geographical approach to estimating the percentage of soy that is not exposed to a deforestation risk. This approach is introduced below and compared to Trase statistics of soy exported to the European Union from different biomes.

FEFAC started with an analysis of soybeans and soybean meal imported to the European Union using trade data, and estimated the exposure to risk of deforestation linked to these imports. In this analysis it is assumed that soy originating from areas with low deforestation risk exposure should be considered "deforestation-free soy." The determination of a deforestation risk exposure does not mean that that soy is seen as a driver of deforestation, but it is a risk that should be managed. Soybean meal production in Europe is not included to avoid double counting of crushed imported soybeans in EU. FEFAC's experts, CIARA and ABIOVE, have provided an estimation of the percentage of soybeans/soybean meal coming from areas with a high-deforestation risk exposure. FEFAC developed the methodology that produced these percentages. The following percentages are used:

- Brazil: It is assumed that 50% of imports are exposed to deforestation risk. This is based on the fact that roughly 50% of all soy is cultivated in the Cerrado (ABIOVE). Soy sourced from other regions in Brazil such as the Amazon biome is not considered a driver of deforestation because of the Amazon Soy Moratorium.

- Argentina: It is estimated that 3% of imports are exposed to deforestation risk. This is based on the extremely low likelihood that soy cultivated in the Gran Chaco region is destined for Europe (CIARA). Though unlikely, there is a non-zero chance that Gran Chaco soy does arrive in Europe, accounting for the 3% figure.

- Paraguay: It is estimated that 100% of Paraguayan imports are exposed to deforestation risk. The lack of information from Paraguay makes it a safe option to consider all soy from this country at risk of driving deforestation.

- United States, Ukraine, Canada and the European Union: Based on expert opinions, it is estimated that 0% of imports are exposed to deforestation risks. This does not mean that there is no conversion of other biomes (e.g. biodiverse grasslands).

Table 19 shows 2018/19 European soybean imports. Of the total 15,127,000 tonnes, 4.8 million tonnes came from Brazil and 155,000 tonnes from Paraguay. Of the 4.8 million tonnes, 50% is estimated to be exposed to deforestation risk. Imports from Argentina were small, and 3% were exposed to deforestation risk.

The following formula is used to arrive at the percentage of soy originating from a deforestation risk area:

((0.5*Brazilian soy) + Paraguay soy + (0.03 * Argentinean soy)) / (European soybean import) = Percentage of soy with deforestation risk.

Table 19 Calculation of percentage of EU soybean imports linked to deforestation risk

Import			
Soybeans to EU (tonnes)	**2016/17**	**2017/18**	**2018/19**
Brazil	5,217,280	5,887,651	4,840,171
Paraguay	1,312,132	1,170,042	155,220
Argentina	179,162	521	9,009
Other	7,404,435	7,068,086	10,122,601
Total	14,113,008	14,126,299	15,127,001
Soybeans (tonnes)	**2016/17**	**2017/18**	**2018/19**
Eu imports	14,113,008	14,126,299	15,127,001
Of which from def. risk areas	3,926,146	4,113,883	2,575,576
% Def. Risk	**28%**	**29%**	**17%**
% No deforest. Risk	**72%**	**71%**	**83%**

This formula shows that 2.6 million tonnes of soybeans (17% of import) were exposed to deforestation risk. Conversely, 83% of the total soybeans imported and produced in Europe were not linked to deforestation risk.

In addition to soybeans, Europe also imports soybean meal. Table 20 shows Europe's 2018/19 soybean meal imports. Of the total 18 million tonnes, 7.1 million tonnes came from Argentina, 7.4 million from Brazil, and 847,000 tonnes from Paraguay. Using the percentages as stated above, 4.8 million tonnes of soybean meal are exposed to deforestation risk, 26% of all imported soybean meal. The other 74% is not exposed to deforestation-risk.

To sum the percentages for soybeans and soybean meal, the soybeans are converted into soybean meal at a 0.8 conversion factor.

((2,575,576 x 0.8) + 4,761,814) / ((15,127,001 x 0.8) + 18,021,453) = 6,822,275 / 30,123,054 = 23%

This means that according to the FEFAC approach, 77% of total EU soybean meal equivalent imported in Europe is deforestation-free and 23% is exposed to deforestation risk.

Comparing the FEFAC estimations with the Trase data available for Brazil (2017), Argentina (2018), and Paraguay (2018), reveals that a total of 7.32 million tonnes of soybean equivalent are exported from the biomes identified by FEFAC as high-deforestation-risk (Cerrado, Chaco, and all biomes in Paraguay) to the European Union. Table 21 gives the total imports from the specific biomes to the European Union, and each biome's exports as a percentage of total producing country exports. Compared to the FEFAC estimations this leads to a slightly lower estimation for the Cerrado (41% rather than 50%) and a slightly higher percentage for the Chaco (6.7% rather than 3%). Note that due to availability the figures for Brazil are from 2017 instead of 2018.

Since Trase works with soybean equivalents, we translate the Trase figures into soybean meal equivalents to make the comparison with the FEFAC figures. Transforming the Trase soybean data into soybean meal figures shows that ((7,320,000 x 0.8) / ((15,127,001 x 0.8) + 18,021,453)) = 19% is exposed to deforestation risk and 81% is not.

Table 20 Calculation of percent of EU soybean meal imports linked to deforestation risk

Import			
Soybean meal to EU	**2016/17**	**2017/18**	**2018/19**
Brazil	6,734,609	7,685,466	7,401,644
Argentina	8,768,933	8,456,581	7,112,431
Paraguay	1,305,249	880,347	847,619
Other	1,434,793	1,784,155	2,659,759
Total	18,243,585	18,806,550	18,021,453
Soybean meal (tonnes)	**2016/17**	**2017/18**	**2018/19**
EU imports	18,243,585	18,806,550	18,021,453
Of which from deforestation risk areas	4,935,622	4,976,777	4,761,814
% Def. Risk	**27%**	**26%**	**26%**
% No deforest. Risk	**73%**	**74%**	**74%**

Source: FEFAC, Eurostat

Table 21 Import of soybean (equivalent) to the European Union from different biomes

From	**EU imports (tonnes)**	**EU import of soybean equivalents from biomes with deforestation risk**
Cerrado (Brazil)	5,323,360	5,323,360 / 12,932,942 = 41.2%
Chaco Seco (Argentina)	276,043	276,043 / 6,235,639 = 4.4%
Chaco Humido (Argentina)	146,465	146,465 / 6,235,639 = 2.3%
Paraguay (all biomes)	1,581,024	1,581,024 / 1,581,024 = 100%
Total	7,320,000	

Source: Trase

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72. The Swedish Soy Dialogue has developed a methodology for self-assessment/verification of low risk sourcing regions. The verification methodology applies to soy production for animal feed and is based on several evaluation steps. Currently, the Swedish Soy Dialogue accepts soy feed from parts of Canada sourced via Norway, through this methodology. For a summary of the verification method (in Swedish) see this website link.

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EUROPEAN SOY MONITOR

Insights on European responsible and deforestation-free soy consumption in 2018

the sustainable trade initiative