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# Fact sheets

The soybean plant has it all. It represents a true triumph like no other cultivated plant in human history. This is because it has a high amount of protein and it binds nitrogen. Soy is now used as a meat substitute around the world. Tofu and soy milk are popular and are now as much a part of a balanced and healthy diet as bread and butter. However, soy is mainly used as animal feed.

# Soy – the miracle plant

## Usable Protein per Acre of Farmland

Source: <http://www.soyfoods.org/good-for-the-planet/soy-and-sustainability>



## Soy can be used in many different ways

The unique composition of substances in the soy plant make it one of the most versatile agricultural crops in the world. It has a number of uses. Soy is used for food (about 5% of global production), for cosmetics and in the chemical industry (20%), and for animal feed (75%).

### Use of soy oil

Chemical Industry	Food Industry	Cosmetic Industry
Ink	Margarine	Soap
Paint	Cooking Fat	Washing Powder
Grease	Mayonnaise	Cosmetics
Technical Oils	Biscuits	...
...	Coffee Cream	...

Source: Danube Soya

## Soy is environmentally valuable

Soy can meet about two-thirds of its nitrogen needs on its own. So it needs less fertilizer. It's also ideally suited for crop rotation. Unlike corn, which results in a loss of topsoil, soy contributes to the enrichment of topsoil. So fields remain fertile, are better aerated and are easier to work.

## Swiss soy cultivation

With the exception of fodder, agricultural crops in Switzerland can only make a very limited contribution to domestic production of sources of protein. About 1,500 hectares of soy were planted in 2014. This resulted in a yield of 3,882 tons of soybeans. Of this, 2,000 tons (i.e., 0.8% of annual demand) was used for fodder.



## Use as food

Some 75% of soy is used for animal feed. Because of its high protein content and favorable composition of essential amino acids soy is ideal for feeding pigs and poultry. The production of chickens and eggs requires the most soy. Chickens need a lot of protein. By nature, they like to eat worms and bugs. Cows, by contrast, prefer to eat mainly grass.

### Average grams of soy used per kilo of product

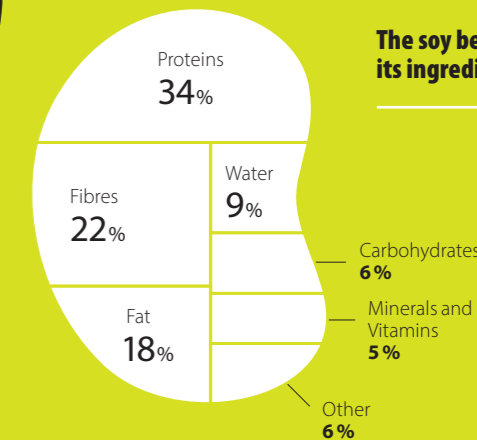
Source: WWF Magazine 3 / 2014, p. 13



## The soybean is unique

Like peas, beans and lentils, soybeans are legumes and they have the highest protein content in this group. Soy has a good fatty acid composition. It contains little saturated fat and a high proportion of polyunsaturated fat. Like other plant-based oils, soy oil contains no cholesterol. These two factors combined have a positive impact on fat metabolism. Soy beans are a good source of fiber. Consuming 50 grams of soybeans will provide you with a third of your daily fiber requirement. Soybeans also contain numerous other vitamins, such as vitamin B1, vitamin B2, folic acid and vitamin E. Soy is also rich in calcium and magnesium.

## The soy bean and its ingredients

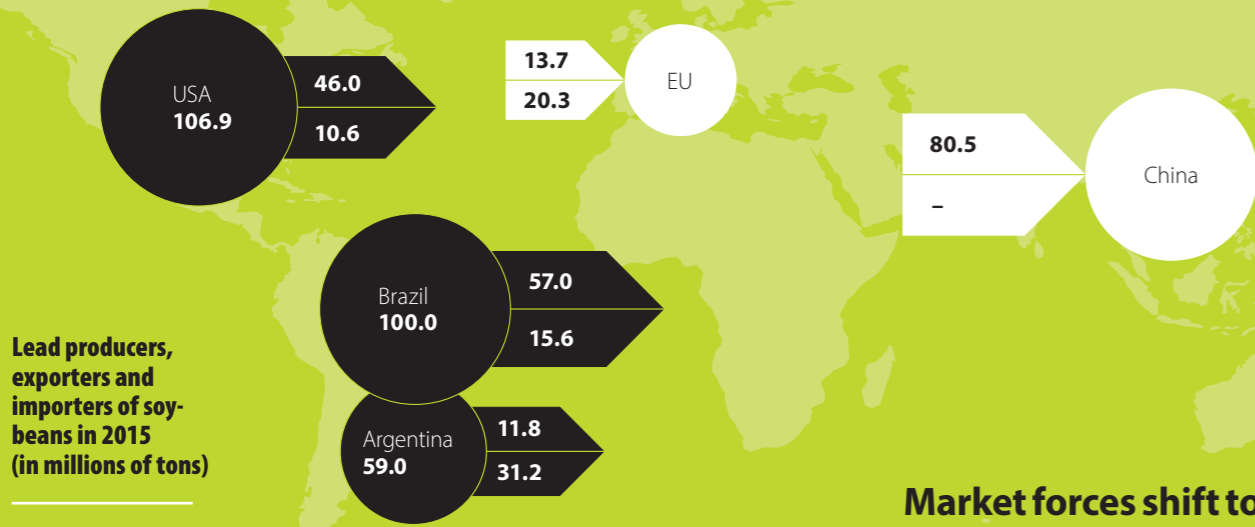


Source: Souci, Fachmann, Kraut

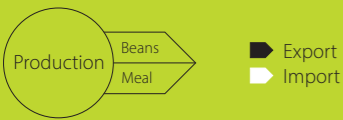
Soy Network Switzerland fact sheet  
As of August, 2020  
[www.soynetwork.ch](http://www.soynetwork.ch)

The global increase in the consumption of meat, eggs and milk products has led to an expansion of soybean production in North and South America. The prohibition against using animal protein as fodder, low production costs in the US, Brazil and Argentina, and genetically modified soy have made the soy plant one of the most important components in feeding our livestock. And this has had negative consequences for the environment and humanity.

# A boom with consequences



Source: <http://www.indexmundi.com>



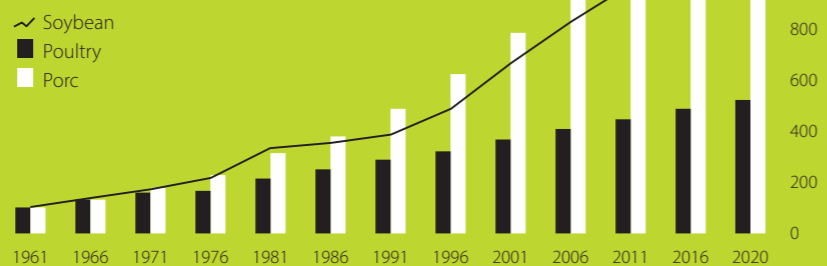
## Market forces shift to Asia

Soy is mainly produced in North and South America. The US, Brazil and Argentina account for 80% of total global production. China is now the largest importer of soy. Until 1990, it imported almost no soy. Europe and Asia's addiction to protein is significant.

## Hunger for soy remains unabated

Demand for and production of soy have increased fivefold over the past 40 years. The main reasons for this development are the pent-up demand for animal protein in Asia and the shift in meat consumption in developed countries toward low-fat poultry. Some 111 million hectares of land were planted with soybeans in 2014. This resulted in a harvest of 312 million tons.

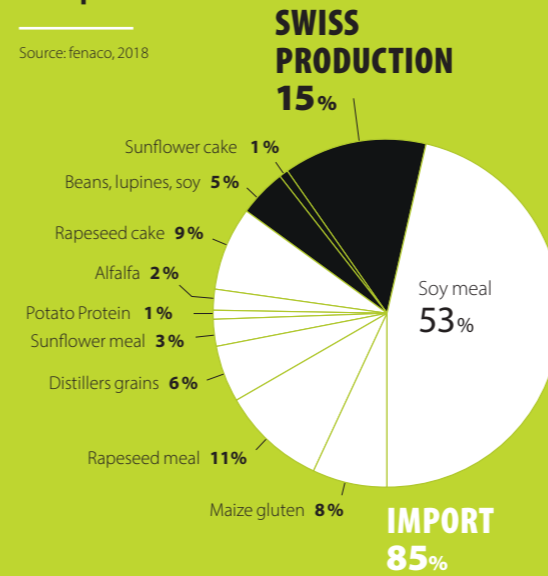
### Development of global soybean and meat production (Index 1961 = 100)



Source: FAOSTAT/FAPRI, in: KPMG International, «A roadmap to responsible Soya», KPMG International, May 2013

## Source of crude protein

Source: fenaco, 2018



## Switzerland's protein needs

Around 78 percent of animal feed in Switzerland is based on grass, hay and cereals. 22 percent is concentrated feed. Switzerland covers 15 percent of its raw protein requirements itself. It doesn't have the varieties, yield stability or climatic and topographical conditions to be able to expand production of protein feed substantially. Switzerland therefore imported 268 000 tons of soybeans and soybean meal for animal feed in 2018.

## GMO-free

According to estimates, 77% of global soy crops have been genetically modified. In the US and Brazil, 94% and 97%, respectively, of soy that is produced has been genetically modified. In Argentina, the figure is 100%. Switzerland has always chosen not to plant or import any genetically-modified soy.

## Europe's importance grows

Since more and more genetically modified soybeans are cultivated in Brazil, Swiss importers are turning to the European markets, for example in Italy, Germany, Austria and the Ukraine. This has reduced the country's dependence on traditional producers. Switzerland has increased the amount of soy it imports from Europe from 1% to around 35% over the past four years.

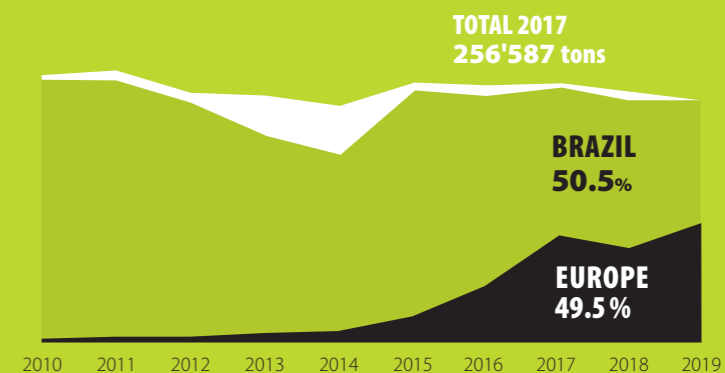
## Deforestation in the Amazon on the decline – Cerrado under pressure

Thanks to the moratorium on the production of soy the deforestation of the Amazon is on the decline. Wholesalers are refusing to buy soy produced on land in Brazil's Amazon region that was cleared after July 2006. Today, some 5,000 square kilometers of forest are cut down each year. Ten years ago it was five times as much. Yet the pressure on Brazil's Cerrado region, with its extraordinary biodiversity, remains unabated. About half of this region has been converted into farmland since the end of 1950.



## Consequences for humanity and the environment

Soy is an important source of protein for people and animals and a crucial source of income and foreign currency for cultivating countries. Yet legumes also have negative consequences for the environment. These range from deforestation through water pollution to soil erosion and decreasing biodiversity. The increase in soy cultivation can also lead to social conflicts and tensions between producers and local populations based on land and worker rights.



### Soy meal import to Switzerland

Source: Reservesuisse, Soy Network

In the global context, Switzerland is not a significant soy producer or consumer. Its share of global production is 0.001%, while it accounts for just 0.1% of worldwide consumption. Yet Switzerland is considered a trailblazer of more sustainable soy production. Swiss stakeholders like Coop and WWF were the first to recognize and deal with the issue of the global boom in soy. Together, they created the “Basel Criteria” in 2004, which seeks to encourage sustainable soy cultivation.

# Exemplary industry solution

## FROM THE “BASEL CRITERIA” TO THE SOY NETWORK SWITZERLAND

### Sustainable standards are part of the solution

In order to achieve environmental and social improvements in the cultivation of soy minimum standards, such as ProTerra, RTRS or Danube Soya, are an important step. Thanks to controls the standards ensure compliance with the law. The common thread of these standards is that they ensure responsible soy production.

#### Environmental criteria

No clearing of old-growth forests and habitats rich in biodiversity.

Application of integrated production methods with the goal of reducing the use of potentially harmful pesticides and fertilizers.

Protection of soil and water.

#### Social criteria

Observance of labor rights (minimum wages, no child labor, fair working conditions, worker protection).

Respect for traditional land rights.

#### GMO-free

Farms and the flow of goods is monitored by independent agencies.

2004

In 2004, the WWF and Coop created the “Basel Criteria” to ensure sustainable soy cultivation and thus contribute to a substantial change in mindset in the soy industry. The Basel Criteria formed the basis for standards such as ProTerra and RTRS.

2006

Import of the first 1,000 tons of certified soy meal by fenaco. Challenges: Establishment of functioning certification organizations, credible and sustainable value added chain, achievement of critical mass.

2011

Foundation of the Soy Network Switzerland. Goal: Increase the percentage of responsible soy production to at least 90%.

2013

Switzerland was one of the first signatories of the Danube Soya Initiative to promote soy cultivation in Europe.

2015

In 2015, the share of imports of responsibly produced soy is 94%.

2016

Foundation of the Soy Network Switzerland with 19 founding organizations.



### Soy network success factors

Cooperation within the industry

Major forces pull together

Ambitious, yet realistic goals

Pragmatic process

No separation of the flow of goods

Use of existing standards

### Switzerland is a role model

The collaboration of key stakeholders from the Swiss agriculture and food industries is having an impact:

#### 96%

Since 2011, the members of the Soy Network have increased the share of responsibly produced soy used as feed from about 40% to 96%.

#### Pesticides

The use of chemical agents such as endosulfan, paraquat and methamidophos has been reduced and banned in Brazil. Since 2016 Danube Soya prohibits the use of desiccants such as glyphosate.

#### Footprint

An environmental balance sheet prepared by Agroscope shows that the environmental footprint can be reduced through the use of European soy.

#### Cargill, ADM

Large agricultural companies, such as Cargill and ADM, now offer certified soy.

#### EU

Other countries, such as Holland, Belgium, Germany and Sweden have created initiatives and objectives similar to Switzerland's.

#### Brazil

In Brazil, suppliers have adapted to the European demand for responsible, certified and GMO-free soy.

### MEMBERS OF SOY NETWORK SWITZERLAND



### The commitment goes on

The import of responsibly produced soy meal is an opportunity to curtail the negative consequences of soy cultivation. But the members of the Soy Network are not stopping there. They are involved in research projects to develop alternative sources of protein. They are looking for alternative sources in Europe and promoting grassland-based milk and meat production.

### Outlook

The share of responsibly produced soy is only about 2% worldwide. Demand for sustainable soy for use as feed previously only came from Europe. Switzerland needs to maintain the high level of quality and help further develop international standards. The focal points are:

- Increase the share of European production of soy further.
- Promote the image of cultivated plants among the broader public.
- Measure, increase and document the positive impact locally for the environment and producers.

## Contact

Soy Network Switzerland  
Stefan Kausch  
Postfach 250, 4001 Basel  
T: 061 261 40 81  
E: [info@sojanetzwerk.ch](mailto:info@sojanetzwerk.ch)  
[www.sojanetzwerk.ch](http://www.sojanetzwerk.ch)

## Members

Agrokommerz AG, ALDI SUISSE AG, Bell Schweiz AG, Bio Suisse, BO Milch, Coop Genossenschaft, Denner AG, Emmi Milch AG, Egli Mühlen AG, Ernst Sutter AG, fenaco Genossenschaft, Fuga Getreide AG, Granovit AG, Heinz & Co. AG, IP-SUISSE, KM Commodities AG, Kunz Kunath AG, Lidl Schweiz, Meliofeed AG, Migros-Genossenschafts-Bund, Schweizer Bauernverband (SBV), Schweizer Milchproduzenten (SMP), Suisseporcs, Transgourmet Schweiz AG, UFA AG, Verband des Schweizerischen Getreide- und Futtermittelhandels (VSGF), Vereinigung Schweizerischer Futtermittelfabrikanten (VSF), Volg Konsumwaren AG, Weber & Hermann AG, WWF Schweiz