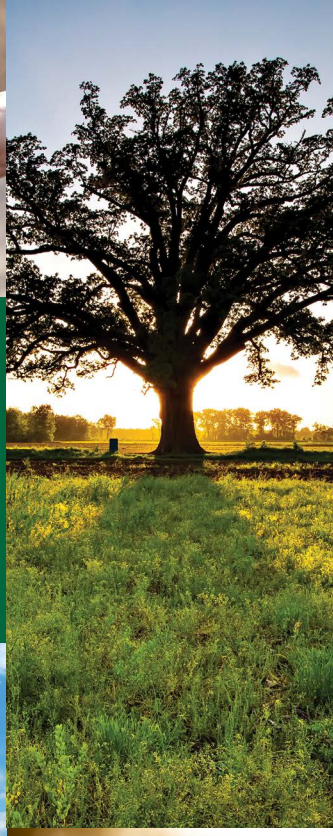
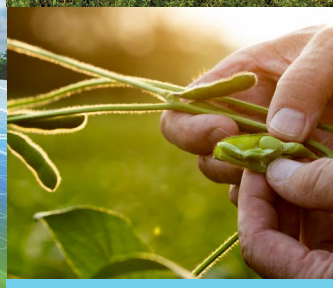




# U.S. Soy is Sustainable

**Verified by protocol, carbon footprint data, and stable forests**

Guided by U.S. Soy Sustainability Assurance Protocol Assurance Protocol

Verification of U.S. Soy Export Shipments

Documenting U.S. Soy's Carbon Footprint

Learn more about how these three efforts verify U.S. Soy as a sustainable product for you and your customers.

↗ USSEC.ORG

USSEC U.S. SOYBEAN EXPORT COUNCIL | USSOY

# U.S. Soy Sustainability Assurance Protocol (SSAP)

The SSAP outlines the regulations, processes, and management practices that ensure sustainable soy production on the vast majority of U.S. soybean farms. It is a national-based system of sustainability and conservation laws and regulations combined with careful implementation of best production practices on more than 270,000 U.S. soybean farms.[1]

Developed through a multi-stakeholder process, the quantifiable and results-driven approach is regularly reviewed and updated. The SSAP aggregates how U.S. Soy farmers contribute to the improvement of environmental, social and economic sustainability outcomes.

### SSAP DIRECTIVES

- **Biodiversity and High Carbon Stock.** To enhance biodiversity, soybeans are not produced on wetlands, grasslands, forests, and other designated protected areas.
- **Production Practices.** Production practices work to enhance the environment as well as protect natural resources while increasing production efficiency.
- **Public and Labor Health and Welfare.** The U.S. public and its workers are protected under U.S. laws providing for fair labor standards, equal employment opportunities, abolition of forced labor, and clean water act laws, amongst others.
- **Continuous Improvement.** Sustainability is more than a result; it is a process. Each year, U.S. Soy farmers become more efficient and environmentally sound through continuous improvement of their farming practices.

The adoption of the SSAP has grown exponentially since its inception with 90 U.S. exporters issuing SSAP certificates for 40 million metric tons of U.S. Soy in the 2024 marketing year, and cumulatively 232 million metric tons from 2014-24.

### U.S. SOY SUSTAINABILITY ACHIEVEMENTS

Since 1980, the U.S. Soy industry has made sustainability improvements:[2]

| | |
|---|---|
| ↑48% land use efficiency improvement per bushel | ↑46% energy use efficiency improvement per bushel |
| ↑34% soil erosion improvement per acre | ↑43% greenhouse gas emissions efficiency per bushel |

### GOALS FOR U.S. SOY: WHERE WE'RE HEADED

U.S. Soy and its partner organizations are dedicated to focusing resources on research, outreach, and measurements in the interest of sustainable farming. These continuous improvement goals were adopted by key U.S. Soy organizations in December 2024 and are based on the Field to Market 2020 benchmark.

By 2030, U.S. soybean farmers aim to:

- **Reduce land use impact by 10%** (measured as acres per bushel)
- **Reduce soil erosion by 25%** (measured as tons per bushel)
- **Increase energy use efficiency by 10%** (measured as BTUs per bushel)
- **Reduce total greenhouse gas emissions by 5%** (measured as pounds $CO_2$-equivalent gasses emitted per year)

# Verified Sustainable U.S. Soy

The U.S. Soy Sustainability Assurance Protocol (SSAP) is a protocol that outlines the regulations, processes, and management practices that ensure sustainable soy production on U.S. soybean farms. An SSAP shipment certificate provides verification to international customers that the soy grown in the United States is produced in a sustainable manner.

With SSAP transferable certificates, exporters of U.S. Soy can transfer certificates to their international customers. Those international customers can transfer certificates as they sell SSAP verified soy through the value chain. SSAP shipment certificates can be transferred to U.S. Soy customers 4 times after the point of export.

Exporters can improve the certificate transparency and record keeping of their own sustainability efforts, while enabling international customers of U.S. Soy to also demonstrate a verifiable commitment to sustainability. With these certificates, customers can keep records of their sustainable U.S. Soy purchases, use these purchases to meet their Environmental, Social, and Governance (ESG) goals, and report on their progress toward their goals. All customers that receive certificates in their names can also access the system at **usses.org** to further transfer certificates to their downstream customers.



[1] 2017 Census of Agriculture, USDA, National Agricultural Statistics Service. Chapter 1, Table 1-Historical Highlights. https://www.nass.usda.gov/Quick_Stats/CDQT/chapter/1/table/1

[2] Field to Market: The Alliance for Sustainable Agriculture, 2021. Environmental Outcomes from On-Farm Agricultural Production in the United States (Fourth Edition). ISBN: 978-0-578-33372-4.

The system maintains record of verified sustainable soy at each transfer and industry processing conversion calculations are incorporated into the system, allowing customers to benefit by receiving an SSAP certificate for the exact product type of their global soy deliveries. Certificate transferability to customers further enables SSAP certificates to be included in a broader range of sustainability reporting.

The SSAP has been positively benchmarked against various sustainable sourcing guidelines as a means of sourcing sustainable soy.

View the SSAP Protocol and register to receive SSAP certificates at **usses.org**.


**Third Party Independent Review**

The International Trade Centre (ITC) provides 3rd party review of sustainable production systems. ITC reviews global programs, including FEFAC Soy Sourcing Guidelines. Site users can compare sustainability schemes using ITC's online tool.

See for yourself how SSAP compares at **standardsmap.org.**

## U.S. SOY'S CARBON FOOTPRINT

U.S. Soy invests in understanding the environmental impact of its industry. This includes Life Cycle Assessment (LCA), incorporating Land Use Change (LUC) impact, to understand U.S. Soy's carbon footprint. Mérieux NutriSciences | Blonk used data from its Agri-footprint™ database to assess the environmental footprint of soy from various origins using the Life Cycle Assessment (LCA) methodology, which takes into account the Land Use Change (LUC) impact according to the Product Environmental Footprint (PEF) standard used by the European Commission to calculate the environmental footprint of a specific product. The study found that U.S. soybeans have the lowest average carbon footprint, including Land Use Change, of the main origin countries supplying soybeans to the global market.

U.S. Soy's low carbon footprint is due to U.S. farmers implementing cultivation practices and techniques to minimize emissions, while U.S. forestland has remained stable for nearly 40 years.

### CARBON FOOTPRINT OF SOYBEANS IN EUROPE *(Including Land Use Change)**

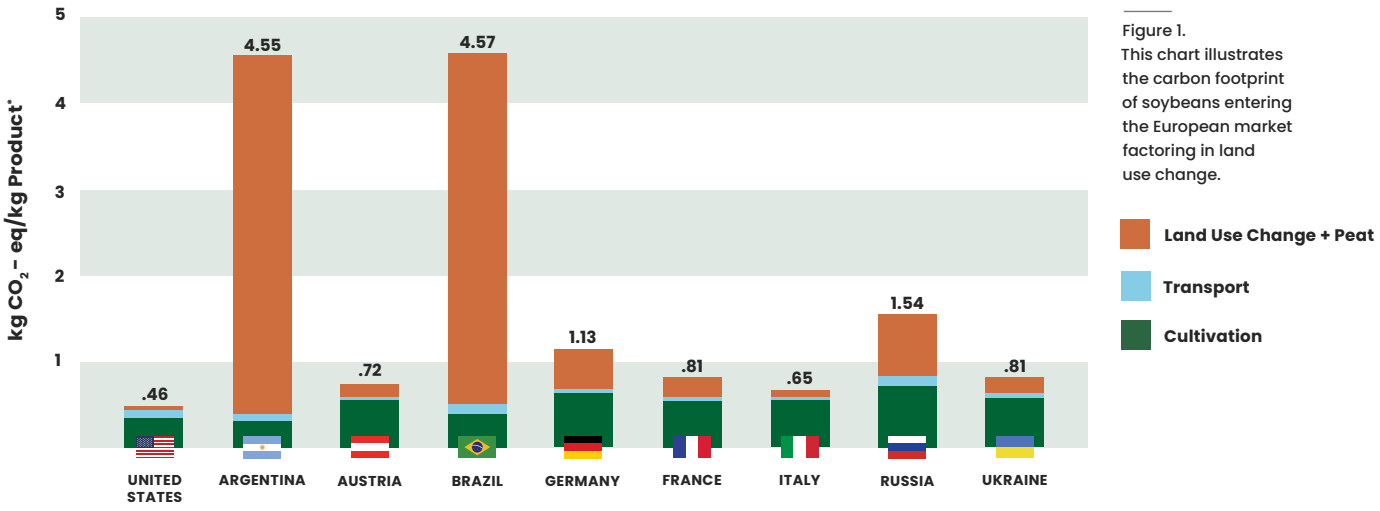



Figure 1.
This chart illustrates the carbon footprint of soybeans entering the European market factoring in land use change.

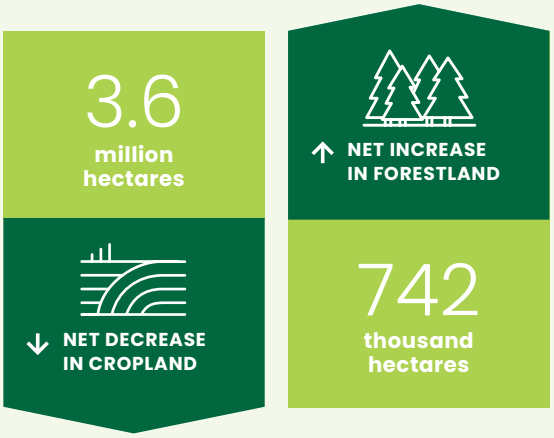
Source: Mérieux NutriSciences | Blonk, Agri-footprint™
* Results based on default emission modeling, including land use change emissions, according to the rules of the PEFCR-Feed guidance document (European Commission, 2018) as implemented in the Agri-Footprint™ 6.3 database. Input data rely on country average FAO statistics and other secondary sources. Supplier specific information would improve data quality and may provide differing results. Comparisons have not been reviewed in the context of ISO 14040/14044 compliance.

## U.S. CROPLAND DECREASED WHILE FORESTLAND INCREASED

Cropland Change 1997-2017

> **Compared to South America, deforestation and land conversion in the past two decades are much less of an issue in the U.S.**

"U.S. Cropland Decreased While Forestland Increased." Please see Natural Resources Conservation Service Results for more information.
Source: 2017 National Resources Inventory Summary Report




### IMPACT OF CULTIVATION

The main sources of carbon emissions from cultivation practices include energy use for irrigation and machinery, fertilizer production and application, and crop residues. Countries with relatively low emissions from cultivation have high yields, low fertilizer use, and low energy use.

In the U.S., high levels of mechanization and precision farming techniques help to minimize emissions. Although not accounted for in the model used for this analysis, conservation farming practices common in the U.S., such as use of cover crops, no till or low till systems, and farmers leaving land plots unfarmed for at least 15 years under the U.S. Department of Agriculture's Conservation Reserve Program also reduce emissions while benefiting soil health and biodiversity.

### IMPACT OF LAND USE CHANGE

Of the countries studied, the U.S. has the lowest emissions attributed to land use change while Brazil and Argentina have the highest. In this context, land use change refers to the conversion of natural lands (such as forests, wetlands, or grasslands) into croplands which can result in carbon emissions, land degradation, and biodiversity loss. Land use change in South America is primarily due to deforestation. When forests are cleared to make way for farming, the carbon that was stored in the trees is released into the atmosphere as carbon dioxide.

## For more information, *visit*:

**U.S. SOY SUSTAINABILITY ASSURANCE PROTOCOL**
↗ USSEC.ORG

**U.S. SOY'S SUSTAINABILITY**
↗ USSEC.ORG

**U.S. SOY'S CARBON FOOTPRINT ASSESSMENT**
↗ USSEC.ORG/RESOURCES

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