

SOY SUSTAINABILITY



U.S. Soy is Sustainable

Verified by protocol, carbon footprint data
and stable forests



Guided by U.S. Soy
Sustainability 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.

➤ [SOLUTIONS.USSEC.ORG/SUSTAINABILITY](https://solutions.ussec.org/sustainability)

 **SOY**

U.S. Soy Sustainability Assurance Protocol

The U.S. Soy Sustainability Assurance Protocol (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 300,000 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 the environmental, social and economic sustainability outcomes.

SSAP DIRECTIVES

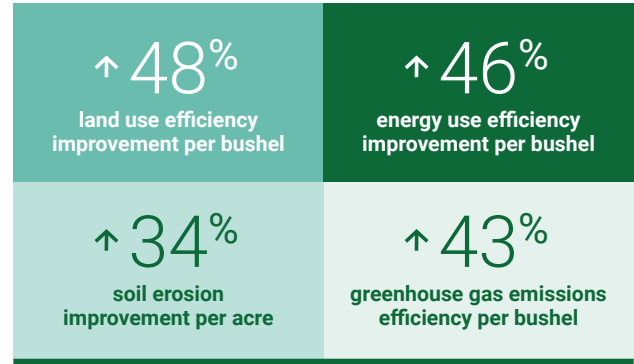
- **Biodiversity and High Carbon Stock.** To enhance biodiversity, soybeans are not produced on wetlands, grasslands, forests and other designated protected areas.
- **Production Practices.** Production practices work to enhance the environment as well as protect natural resources while increasing production 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 (CWA) 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 86 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



U.S. SOY SUSTAINABILITY GOALS

U.S. Soy farmers' commitment to sustainability is a long-term promise rooted in conservation programs created over 75 years ago and defined by continuous improvement. In 2014, the U.S. Soy industry created a national strategy for further enhancing sustainability and set goals to achieve by 2025. Using Field to Market National Indicators Report data from 2020 as a baseline, 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 10%** (measured as pounds of CO₂-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 four 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 records 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 ussec.org.



Third-Party Independent Review

The International Trade Centre (ITC) provides third-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.



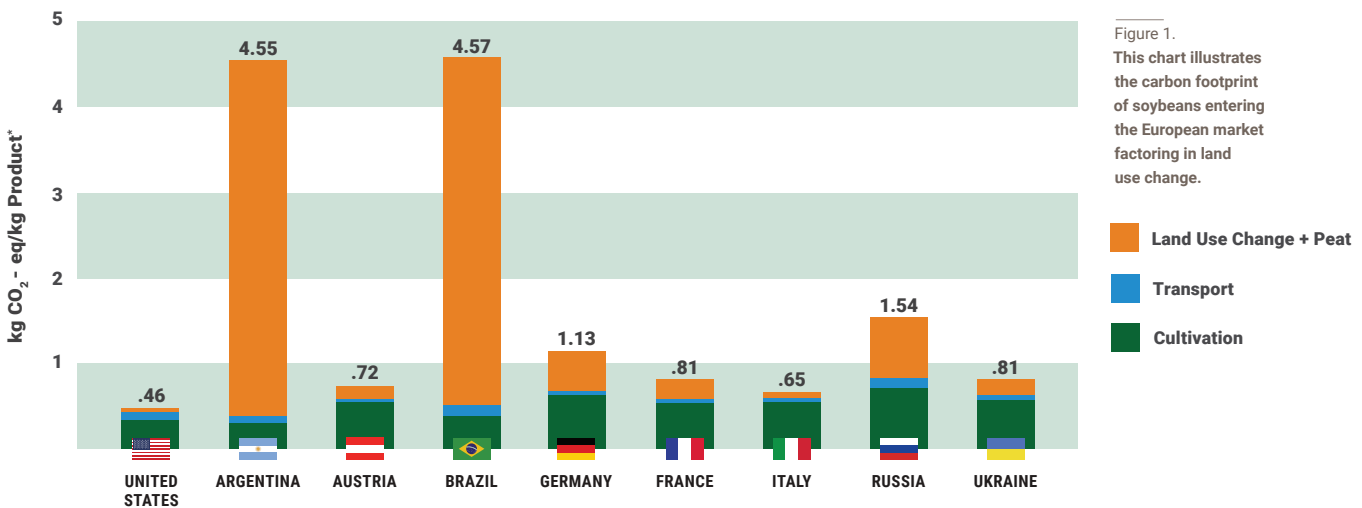
U.S. SOY'S CARBON FOOTPRINT

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 and Peat)*



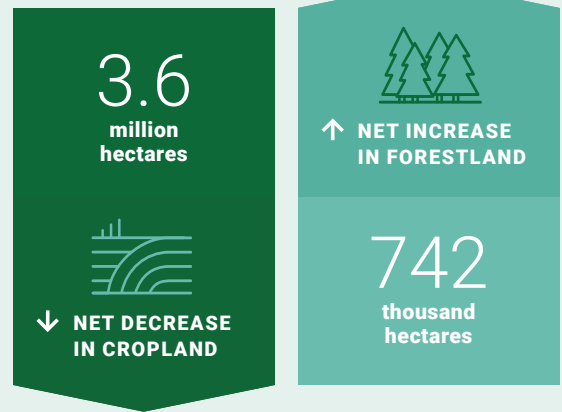
Source: Mérieux NutriSciences | Blonk, Agri-footprint™
 *Results based on default emission modeling, including land use change emissions, according to the rules of the PEFCR-Feed guidance document (European Commission, 2018) as implemented in the Agri-footprint™ 6.3 database. Input data rely on country 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 the 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](https://www.ussec.org)

U.S. SOY'S SUSTAINABILITY SOLUTIONS
➤ [SOLUTIONS.USSEC.ORG/SUSTAINABILITY](https://solutions.ussec.org/sustainability)

U.S. SOY'S CARBON FOOTPRINT ASSESSMENT
➤ [USSEC.ORG/RESOURCES](https://www.ussec.org/resources)



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