

U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

*A Sustainability System
That Delivers*

MAY 2014





95% of U.S. soybean producers participate in the U.S. Farm Program and are subject to audit. Each year approximately 8 to 11% are audited by extensively trained inspection agents.

U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

U.S. soybean production is based on a national system of sustainability and conservation laws and regulations combined with careful implementation of best production practices by the nation's 279,110 soybean farms. In addition, most U.S. soybean producers participate in certified and audited voluntary sustainability and conservation programs.

This Sustainability Assurance Protocol is a certified aggregate approach audited by third parties that demonstrates sustainable soybean production at a national scale.

The U.S. approach is quantifiable and results driven with mass balance international certification available.

The U.S. Sustainability Assurance Protocol describes the regulations, processes and management practices that ensure sustainable soybean production. This Sustainability Protocol is one part of the overall U.S. soybean producer sustainability program which includes a national measurement system of the positive environmental outcomes by producers.

Since 1980
U.S. farmers
increased soy
production by 96%
while using 8%
less energy

PROTOCOL

DIRECTIVE 1 Biodiversity and High Carbon Stock Production Control Measures and Regulations

DIRECTIVE 2 Production Practices Control Measures and Regulations

DIRECTIVE 3 Public and Labor Health and Welfare Control Measures and Regulations

DIRECTIVE 4 Continuous Improvement of Production Practices and Environmental Protection Control Measures and Regulations

AUDIT PROCEDURES

1. 95% of U.S. soybean producers participate in the U.S. Farm Program and are subject to audit. 8 to 11% are audited each year.
 2. Annual Internal Audit by Producers
 3. Third-Party Independent Audits of Producers
- To ensure the accuracy of internal audits made by producers, third-party audits are conducted annually by the U.S. Department of Agriculture (USDA) with inspection agents in over 2,800 offices in agricultural production areas.



CERTIFICATE OF SUSTAINABILITY

Assuring U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

This is to certify that soybeans
or soy products described herein
were produced in compliance
with U.S. laws, regulations,
production practices and
audit process as listed in the
U.S. Soybean Sustainability
Assurance Protocol.

EXPORTER/IMPORTER

NAME OF CERTIFICATE HOLDER

PRODUCTION OR COMMERCE IDENTIFICATION

REGISTRATION YEAR

NAME OF CERTIFICATE COMPANY

NAME OF SHIPMENT

PRODUCT

QUANTITY

PORT OF ORIGIN/DESTINATION

SHIPPER/COMMERCE NAME

SHIP OR EXPORT

SOY EXPORT
SUSTAINABILITY, LLC
1400 Empire State Dr.
Suite 200
Baltimore, MD 21202
USA

DATE

INTERNATIONAL CERTIFICATION

Soy Export Sustainability, LLC will provide shipment-specific recordkeeping and documentation information for U.S. soy and ensure proper accounting of mass balance of U.S. soy compliant with this Protocol up to the point where certificates are issued for batches of compliant soybeans and soy products at point of export.

U.S. Soybean Sustainability Assurance Protocol

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www.ussec.org/ssap

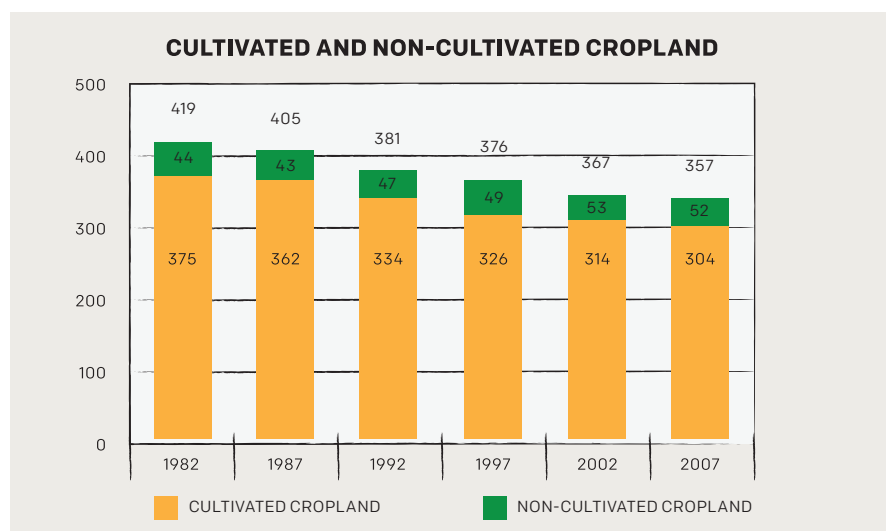


U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

U.S. SOYBEAN PRODUCER SUSTAINABILITY PERFORMANCE INDICATORS

The following reports document producer performance:

- Environmental and Socioeconomic Indicators for Measuring Outcomes of On-Farm Agricultural Production in the United States
<http://bit.ly/10d3T52>
- Life Cycle Impact of Soybean Production and Soy Industrial Products (peer reviewed according to ISO 14040/44 Life Cycle Inventory)
<http://bit.ly/11atESq>



10% of available U.S. cropland is taken out of production to protect sensitive areas

Soy is a part of a diverse crop rotation plan produced on 23% of U.S. cropland





**78 million hectares
in protected U.S.
National Forest and
Grasslands**

**USDA commits over
\$6.0 billion in
conservation funding
each year**

DIRECTIVE 1

BIODIVERSITY AND HIGH CARBON STOCK PRODUCTION CONTROL MEASURES AND REGULATIONS

Soybean production limited after January 1, 2008 in following areas:

- 1.1 Soybeans are not produced on highly biodiverse grassland
 - 1.1.1 Producers are in compliance with U.S. laws that prohibit altering the habitat where endangered or threatened species are found in such a way that disrupts essential behavioral patterns including but not limited to: breeding, feeding, sheltering
 - 1.1.2 Producers are in compliance with U.S. Endangered Species Act
 - 1.1.3 Producers are in compliance with Highly Erodible Land Conservation program
- 1.2 Soybeans are not produced on wetlands
 - 1.2.1 Producers are in compliance with Section 404 of Clean Water Act regarding agricultural impacts on wetlands
 - 1.2.2 Producers are in compliance with U.S. Wetlands Conservation provisions
- 1.3 Soybeans are not produced on continuously forested land
 - 1.3.1 Producers are in compliance with U.S. laws regarding conversion of primary forests to other uses
 - 1.3.2 Producers are in compliance with U.S. laws prohibiting the conversion of public lands in National Forests and Grasslands
- 1.4 Soybeans are not produced on peatland
 - 1.4.1 Producers are in compliance with Section 404 of Clean Water Act regarding agricultural impacts on wetlands
 - 1.4.2 Producers are in compliance with U.S. Wetlands Conservation provisions that prohibit production of an agricultural commodity of peatland converted after December 23, 1985
 - 1.4.3 Producers are in compliance with applicable state laws that prohibit changing peatland in any way without a regulated permit
- 1.5 Soybeans are not produced on land that was primary forest
 - 1.5.1 Producers are in compliance with U.S. laws regarding conversion of primary forests to other uses
 - 1.5.2 Producers are in compliance with U.S. laws prohibiting the conversion of public lands in National Forests and National Grasslands
- 1.6 Soybeans are not produced on designated protected areas
 - 1.6.1 Producers are in compliance with U.S. laws that prohibit the production of soybeans on land under federal protected status, land designated Wilderness or Research Natural Areas, protected land in National Forests and Grasslands, and land in the National Landscape Conservation System
 - 1.6.2 Producers are in compliance with U.S. laws that prohibit production of soybeans on land protected by National Park Service
- 1.7 Producers are in compliance with Federal Migratory Bird Treaty for protection of shared migratory bird resource
- 1.8 Soybean producers file appropriate AD-1026 form with authorized auditing body certifying adherence to all applicable laws and regulations



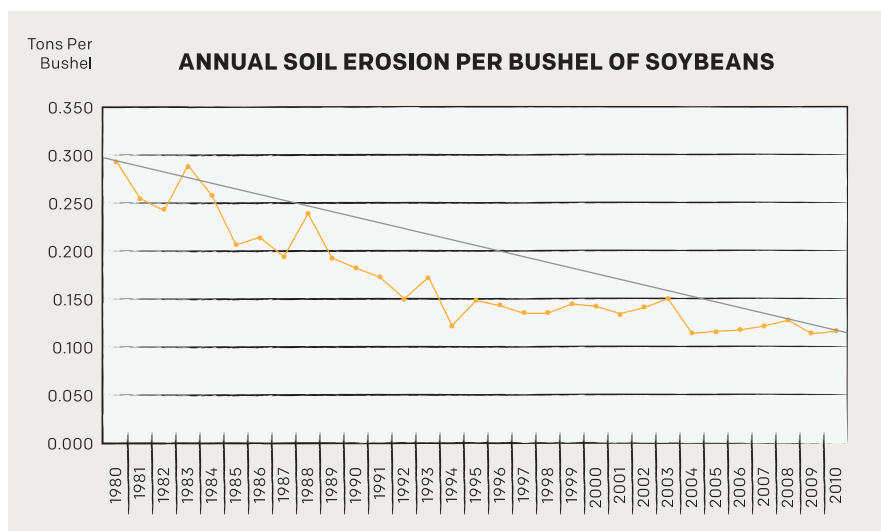
Precision farming using GPS technology allows producers to precisely apply field inputs within millimeters

Soil erosion decreased 66% per tonne of U.S. soy production since 1980

DIRECTIVE 2

PRODUCTION PRACTICES CONTROL MEASURES AND REGULATIONS

- 2.1 Producers will consider conservation tillage methods as appropriate. Conservation tillage control measures will:
 - 2.1.1 increase soil health and organic matter
 - 2.1.2 increase moisture retention
 - 2.1.3 reduce soil compaction and soil erosion
 - 2.1.4 reduce water and nutrient runoff
 - 2.1.5 reduce energy use
- 2.2 Soybean seed commerce is in compliance with the Federal Seed Act regarding fair trade and proper labeling
- 2.3 Producers are in compliance with Plant Protection Act regulation importation of plants and plant products
- 2.4 Producers will consider crop rotation to improve soil health and biodiversity
- 2.5 Producers will consider Precision Farming Techniques as appropriate utilizing Global Positioning System (GPS) and other advanced technologies
 - 2.5.1 variable rate fertilizer and herbicide application
 - 2.5.2 field mapping for seed planting and herbicide and pesticide application
 - 2.5.3 field mapping for fertilizer application
 - 2.5.4 grid soil sampling
 - 2.5.5 yield mapping



DIRECTIVE 3

PUBLIC AND LABOR HEALTH AND WELFARE CONTROL MEASURES AND REGULATIONS

- 3.1 Producers are in compliance with U.S. Environmental Protection Agency (EPA) Worker Protection Standard for Agriculture Pesticides meeting regulations for: pesticide safety training, notification of pesticide application, use of personal protective equipment, restricted-entry intervals after pesticide application, decontamination supplies, and emergency medical assistance
- 3.2 Producers are in compliance with Federal Insecticide, Fungicide and Rodenticide Act
 - 3.2.1 All pesticides are registered with EPA with proper labels and used in accordance with specifications
 - 3.2.2 Certification and training required for pesticide applicators using restricted use pesticides
- 3.3 U.S. is signatory to Rotterdam Convention of the Prior Informed Consent (PIC) Procedure for Certain Hazardous Chemicals and Pesticide in International Trade
- 3.4 Producers are in compliance with Fair Labor Standards Act which prescribes standards for basic minimum wage and prohibits the employment of children under age 16 during school hours and in certain jobs deemed dangerous
- 3.5 Producers are in compliance with Federal Equal Employment Opportunity Law
 - 3.5.1 Prohibits discrimination against:
 - 3.5.1.1 prohibits employment discrimination based on race, color, religion, sex, or national origin
 - 3.5.1.2 protects men and women who perform substantially equal work in the same establishment from sex-based wage discrimination
 - 3.5.1.3 protects individuals who are 40 years of age or older
 - 3.5.1.4 prohibits employment discrimination against qualified individuals with disabilities
 - 3.5.1.5 prohibits employment discrimination based on genetic information
- 3.6 Producers are in compliance with Occupational Health and Safety Act to assure safe and healthful working conditions
- 3.7 Producers are in compliance with Migrant and Seasonal Agricultural Worker Protection Act which provides safeguards to migrant and seasonal agricultural workers
- 3.8 Producers are in compliance with the Clean Air Act and its amendments to protect and enhance air resources to promote public health and welfare
- 3.9 Producers are in compliance with the Resource Conservation and Recovery Act which controls hazardous waste, non-hazardous solid waste, and underground storage tanks
- 3.10 Producers are in compliance with Safe Drinking Water Act to protect public health by preventing contamination of surface and ground sources of drinking water



10.3 million hectares removed from production to protect environment in Conservation Reserve Program

More than 20 million hectares of production land enrolled in Conservation Stewardship Program



91% of U.S. soy travels to export position by barge or rail

DIRECTIVE 4

CONTINUOUS IMPROVEMENT OF PRODUCTION PRACTICES AND ENVIRONMENTAL PROTECTION CONTROL MEASURES AND REGULATIONS

To ensure producers continually seek improvement to production practices and environmental protection, a variety of regulated Conservation programs and technology transfer systems for best management practices shall be established.

- 4.1 Conservation Reserve Program to protect the most sensitive areas by providing financial assistance to set aside on a long-term basis for cropland vulnerable to soil erosion or critical to wildlife habitat
- 4.2 Conservation Stewardship Program to reward producers for overall conservation performance across entire operations
- 4.3 Environmental Quality Incentive Program to provide financial and technical assistance to increase environmental quality of farmland still in production
- 4.4 Agricultural Water Enhancement Program to provide financial and technical assistance to conserve ground and surface water and improve water quality on agricultural lands
- 4.5 Wildlife Habitat Incentive Program to provide cost share assistance to producers who develop habitat for wildlife on their farm operations
- 4.6 Conservation Effects Assessment Project to quantify the environmental effects of conservation practices and programs on the environment and develop the science base for managing the agricultural landscape for environmental quality
- 4.7 Cooperative Conservation Partnership Initiative to provide financial assistance for partnerships between producers and Indian Tribes, state and local government units, producer associations, farmer cooperatives, institutions of higher education, and NGOs
- 4.8 The National Sustainable Soybean Initiative will develop Best Management Practices (BMP) by region and determine BMP adoption rates
- 4.9 Technology transfer of Best Management Practices is available in numerous informational mechanisms such as: Certified Crop Advisors, Discovery Farms, on-line crop rotation data for specific geographies and soil types, plot tours, experimental field and research field days, Tactical Agriculture Programs
- 4.10 Producers and grain handlers will consider transportation methods such as barge and rail to reduce greenhouse gas emissions.
- 4.11 Technology transfer and conservation programs should be available to all producers regardless of size
- 4.12 Field Office Technical Guides customized for local soil and conditions are available in most counties
- 4.13 Development of Additional Performance Metrics
Scalability of Performance Metrics – raw data used to provide aggregated national data can be scaled down to state, or even district level crop reporting. Additional information is available to customers of U.S. soy willing to collaborate on development of quantifying smaller scale sustainability metrics
- 4.14 The National Association of Conservation Districts represents the United States' 3,000 conservation districts and the 17,000 men and women who serve on their boards. Conservation districts are local units of government established under state law to carry out natural resource management programs at the state level.



AUDIT PROCEDURES

1. ANNUAL INTERNAL AUDIT BY PRODUCERS

Each producer in the group is required to conduct an annual internal audit of compliance. The producer must submit documentation of this audit to USDA-Farm Service Agency (FSA) which must review the audit and approve this documentation prior to the participant's inclusion in the group.

2. THIRD-PARTY INDEPENDENT AUDITS OF PRODUCERS

To ensure the accuracy of internal audits made by producers, third-party audits are conducted annually.

Third-party audits are conducted by the USDA-Natural Resource Conservation Service (NRCS) with inspection agents in over 2,800 offices in agricultural production areas.

Each year, USDA selects at random a specified percentage of group producers for an audit. The percentage of group producers currently specified for an independent audit is not less than 5% of producers. As further described below, additional audits are carried out if USDA questions the compliance of any group producer.

The list of group producers selected for an audit will be broken down by state and county. Under each county, the following information will be displayed:

- Group producer's first and last name and/or business name
- Last four digits of the producer's tax ID number

Group producers will be listed in every state/county where they are participating.

USDA-FSA employees based in each county print and maintain the list of group producers selected in their county. USDA-NRCS employees will perform audits on producers listed in their county throughout the year for compliance.

Only the group producers identified on the national selection list are required to be audited. However, USDA employees at the state and county levels may spot check any group producer not identified on the national selection list if there is reason to question the producer's compliance.

Based on these processes - annual auditing of 8 to 11% of producers is conducted by the USDA by extensively trained inspection agents. This audit selection pool includes approximately 95% of U.S. soybean producers participating in the USDA Farm Program.



The regulations specifying how to carry out audits are set forth in the NRCS document, National Food Security Act Manual, and are subject to further review and oversight, as deemed necessary, from USDA's Office of the Inspector General (OIG) and the U.S. Government Accountability Office (GAO).

USDA employs over 12,000 people in conservation programs and compliance

U.S. government established conservation programs in 1940s and Food Security Act of 1985 greatly increased conservation efforts monitored by USDA



INTERNATIONAL CERTIFICATION

Soy Export Sustainability, LLC will provide shipment-specific recordkeeping and documentation information for U.S. soybeans.

To ensure proper accounting of mass balance of U.S. soybeans compliant with this Protocol up to the point where certificates are issued for batches of compliant soy at point of export, the Protocol requires the following:

1. Soy Export Sustainability, LLC, acting as the developer/owner/operator of the Protocol, will determine annually the total amount of U.S. soy that is in compliance with the Protocol, based on information provided by the authorized audit bodies.
 - A. This determination will be based on a calculation of the total number of soybean-producing acres that the group has entered into the Protocol, and the average yield per acre recorded by the group.
2. This information will be maintained via a recordkeeping system that resides on an internet accessible database (the Database).
3. A unique certificate will be produced for each batch of U.S. soy exported under this Protocol that is compliant and recorded in the Database.
4. Shippers using the Database will establish and maintain a firm-specific record that will provide the necessary information for a uniquely-identified shipment-specific document to accompany individual U.S. soy exports.
5. In order to receive the certificate of compliance with this Protocol, a shipper or exporter desiring to transport certified soy must:
 - A. Register as a user of the U.S. Soybean Sustainability Assurance Protocol.
 - B. Establish a Shipper-specific and secure record on the Database.
 - C. Document shipment-specific information on the Shipper-specific secure record. The record created and maintained by the Shipper will include, at a minimum, the volume and date of shipment of soy from the U.S. Additional information may be recorded by the Shipper.
 - D. Agree to allow Soy Export Sustainability, LLC access to the volume and date of shipment of soy from the U.S.
6. Each shipment of soy certified by this Protocol will be accompanied by a uniquely identified (numbered) shipment-specific document containing selected information from the shippers' record, and a Soy Export Sustainability, LLC attestation that the specific batch of soy follows a mass balance accounting method chain of custody from a volume of Protocol-compliant soy verified by the authorized audit body.
7. In no circumstance will a Shipper be issued a certificate if the batch in question did not follow a mass balance accounting method chain of custody from a volume of Protocol-



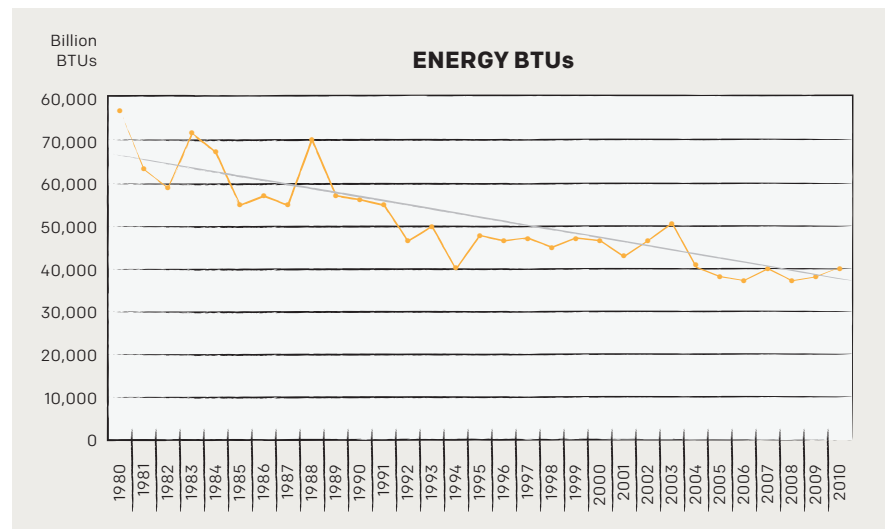
**Land use per
tonne of U.S.
soybean production
decreased 35%
since 1980**

compliant soy verified by the authorized audit body, or if the certificate would result in that soy shipment exceeding the volume of Protocol-compliant soy verified by the authorized audit body. This ensures that the volume of Protocol-compliant soy as claimed by SES-issued certificates never exceeds the total volume of Protocol-compliant soy entered into the system (recorded in point 1, above).

8. Soy Export Sustainability, LLC will use the volume and date of shipment of soy from the U.S. to manage and provide necessary reporting on the Protocol. Soy Export Sustainability, LLC will also maintain the website and an alternative/back-up system for document issuance and recordkeeping should the web-based system not be available.

For reference, the Database can be accessed at www.ussec.org

Energy use decreased 42% per tonne of U.S. soybean production since 1980



OVERVIEW OF U.S. SOY PRODUCTION AND EXPORTS

- Soybeans are produced on approximately 30 million hectares annually
- U.S. soybean production is approximately 87 million tonnes annually
- U.S. annually exports approximately 55% of total soybean production
- U.S. annually exports approximately 48 million tonnes of soy
- Soy is the largest value U.S. agricultural export with annual exports of approximately US\$20 billion
- Additional information on U.S. soy facts and figures is available at www.soystats.com

U.S. AGRICULTURE CONSERVATION PROGRAMS

- Approximately 95% of U.S. soybean producers participate in the USDA Farm Program and are subject to audit
- Additional information on U.S. natural resources conservation is available at www.nrcs.usda.gov

Please visit www.ussec.org/ssap for additional information on sustainable U.S. soy production and web links.



**Greenhouse gas emissions decreased
41% per tonne of U.S. soybean production
since 1980**



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