



CONSERVATION & SOY PRODUCTION

A SUSTAINABLE SOLUTION

Laura Foell, United Soybean Board and U.S. Soybean Farmer



U.S. SOY for a growing world



- In 1880 my husband's great grandfather started our farm
- Today it is 365 ha – a mid-sized U.S. crop farm
- We always use conservation farming practices

FAMILY FARMING

- 48% of farm land is considered as small family farms averaging 93 hectares
- 4% of farm land is considered as large family farms averaging 575 hectares
- 23% of farm land is considered as very large family farms averaging 844 hectares

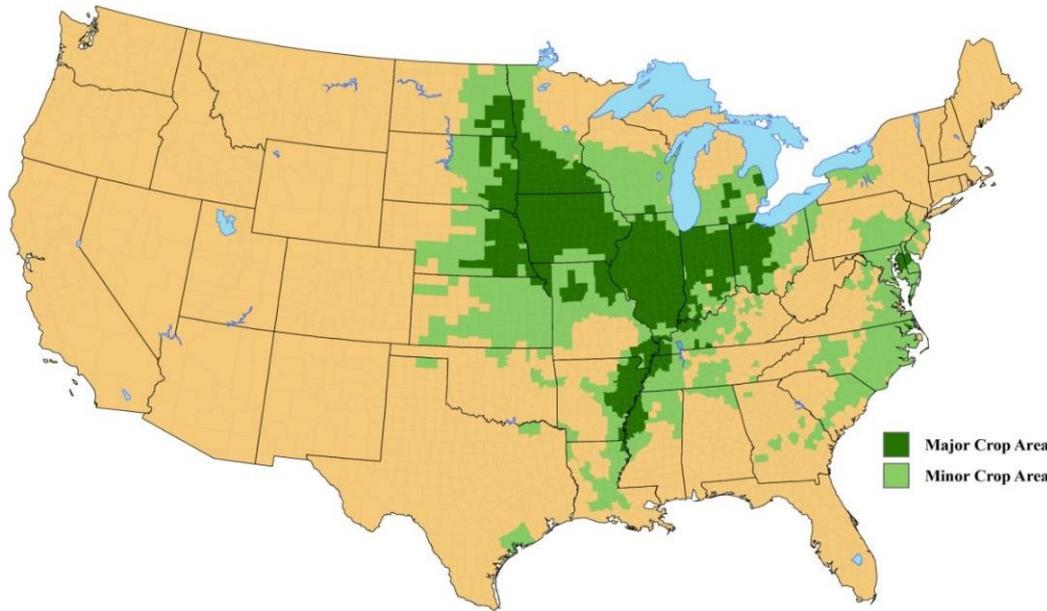


Source: USDA Agriculture Census

Over 84% of farmed land is owned by American families

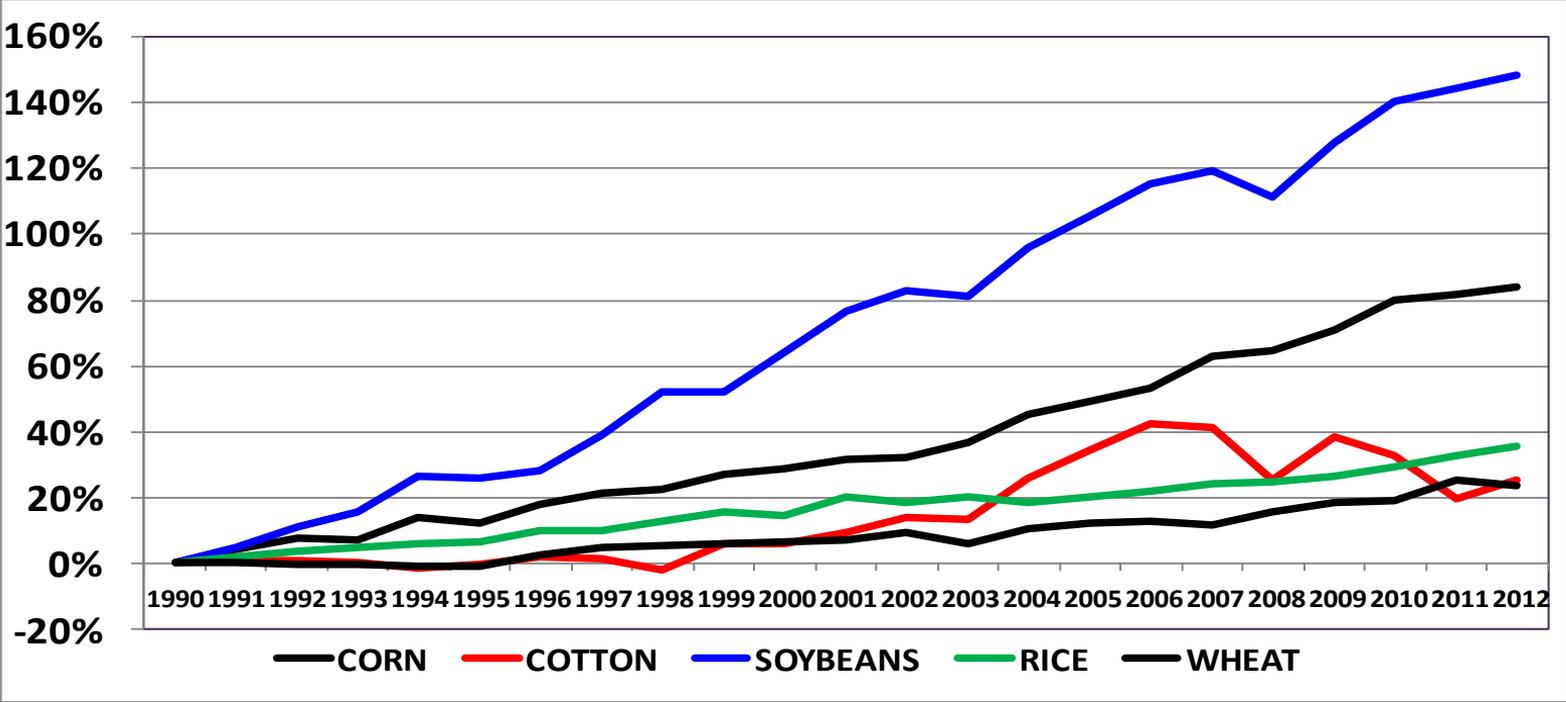
U.S. SOYBEAN PRODUCTION

United States: Soybeans



- Soybeans grown mainly in 29 states
- Approximately 55% of U.S. soy production is exported
- 2012: Biotech Production at 94% on 30 mln ha.
- Non-biotech soybeans are grown primarily for the food export market at premium cost

SOY DEMAND INCREASED FOCUS ON SUSTAINABILITY



Soybean demand up 148%

U.S. SOY for a growing world

WHY DO U.S. FARMERS CHOOSE SUSTAINABLE FARMING?



- Sustainable farming is a way of life - We care about the future
- Family owned businesses
- Crop rotation improves diversity and reduces inputs
- Meeting customer demands
- Improved profitability!

65% of U.S. soy production uses Conservation Tillage

- builds up soil, increases earthworm populations, and is very sustainable



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

CONSERVATION TILLAGE

Sustainability at a National Scale

- **66% decrease in soil erosion**
- **70% reduction in herbicide/pesticide run-off**
- **326 million pound reduction in CO2 emissions**
- **80% reduction phosphorus seepage into surface waters**
- **Annual soil moisture evaporation loss reduction of 18 centimeters, serves to make soybean fields more drought tolerant**
- **Greater than 50% reductions in fuel use**

NO TILL SOY PRODUCTION ON OUR FARM

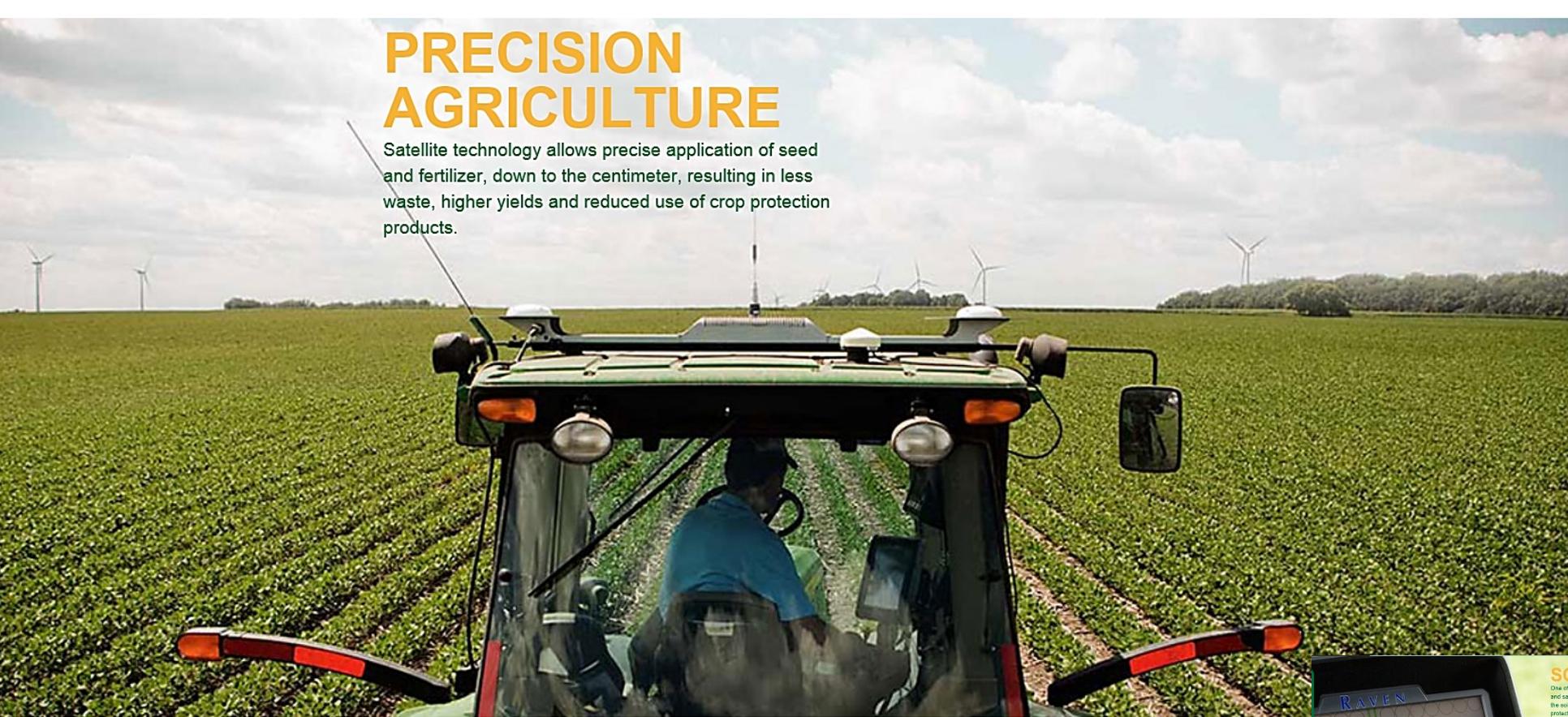
More Profitable And More Sustainable

- No-tillage planting
 - Fuel savings on our farm
 - *approximately 9000 litres a season*
 - Herbicide savings
 - Smaller tractors
 - Narrow row planting
 - *increased soy productivity*
 - Labor savings



PRECISION AGRICULTURE

Satellite technology allows precise application of seed and fertilizer, down to the centimeter, resulting in less waste, higher yields and reduced use of crop protection products.



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WATER MANAGEMENT

I protect water resources by reducing surface water runoff. Buffer filter strips create a natural barrier to soil erosion and provide habitat for wildlife.



BIODIVERSITY

U.S. laws limit crop production on wetlands, peatlands and grasslands. Additional laws protect endangered animals and plants along with their habitat.



USDA COMMITMENT TO CONSERVATION

For Over 75 Years

USDA invests over \$6.5 billion annually in conservation programs with over 12,000 employees in conservation and compliance



Iowa conservation office map

USDA has conservation offices in over 2,200 locations including almost every county in the U.S.

SOY PRODUCTION – MEETS NUMEROUS LAWS AND REGULATIONS



95% percent of U.S. farms participate in U.S. Farm Program and are subject to audit

With more than 95 percent of U.S. soybean hectares participating in USDA conservation programs, the U.S. has a comprehensive auditing and data collection system that verifies our sustainability:

- The Endangered Species Act
- The Highly Erodible Land Conservation Program
- The Food Security Act
- The Conservation Reserve Program (CRP)
- The Environmental Quality Incentives Program
- The Clean Water Act
- The Environmental Quality Incentives Program
- The Conservation Stewardship Program
- The Wildlife Habitat Incentives Program

U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

- Based on U.S. national system of conservation laws
- Includes Best Production Practices by 275,000+ U.S. soybean producers
- Aggregate approach
- Quantifiable results
- Third party audit
- Certification
- Benchmark against RTRS

U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

A Sustainability System That Delivers

MARCH 2013





U.S. SOY SUSTAINABILITY PROTOCOL

Four Directives with Control Measures & Regulations

- **Biodiversity and High Carbon Stock**

- Wetland, grassland, forest, biodiversity

- **Production Practices**

- Conservation tillage, crop rotation, precision farming

- **Public and Labor Health and Welfare**

- EPA, EEO, OSHA

- **Continuous Improvement**

- CRP, Conservation programs, training and info sharing



U.S. SOY SUSTAINABILITY PROTOCOL



Measurement, Audit, Certification

- **Annual measurement system of environmental impacts**
 - Life Cycle Analysis
 - Field To Market reports
- **Audits includes producer self-audit and independent third party audit by USDA-FSA of 8-11% of producers participating in Farm Program**
- **Certification done on mass balance system by Soy Export Sustainability (SES)**

Certification



**SOY EXPORT
SUSTAINABILITY LLC**

U.S. Soy sustainability
certification

U.S. SOY for a growing world

SOY EXPORT SUSTAINABILITY LLC

CERTIFICATE of SUSTAINABILITY

According to **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.

SOY EXPORT SUSTAINABILITY, LLC
16305 Swingley Ridge Rd.
Suite 200
Chesterfield, MO 63017
USA

NAME OF EXPORTING COMPANY

VESSEL/CARRIER NAME/SHIPMENT IDENTIFIER

DATE OF SHIPMENT

PRODUCT

PRODUCTION YEAR

METRIC TONS

CERTIFICATE NUMBER

DATE OF CERTIFICATION

Seller/Exporter

SES

ALL SOY SOURCED IN THE U.S.A.

The U.S. Soy Sustainability Assurance ProtocolA Sustainability System That Delivers



FINALLY WE ALL CARE!



- **Concern for the environment – protect for next generation**
- **Conservation practices also improve competitiveness**
- **Sustainability will assure food availability in the future, and the future calls for huge increases in demand**
- **U.S. farmers provide cost efficient supply of sustainable soy**

