

# Farming for the Future: Soybean Farmers Grow Nutritious & Sustainable Food

By Laurie Isley & Susan Watkins  
Farmer-Directors, United Soybean Board



**SoyConnection**  
By U.S. Soy

This presentation is brought to you by Soy Connection, a collaboration of health, nutrition and food industry experts with U.S. soybean farmers to educate on the benefits of sustainably grown U.S. Soy, including heart-healthy soybean oil and soy protein.

*Soy Connection is brought to you by the United Soybean Board, a commodity check-off comprised of 77 farmer-directors.*

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# The United Soybean Board

- ✓ The United Soybean Board is governed by 77 volunteer farmer-leaders from across the country with one common goal: increasing return on investment for all U.S. soybean farmers.
- ✓ It works to research production practices, work with the supply chain and find new markets for soy oil and meal both here and abroad to benefit both its farmers and partners.
- ✓ It's overseen by the USDA Agricultural Marketing Service.
- ✓ It aims to anticipate and better meet needs of farmers, processors, developers, the food industry – and ultimately, end users.



Photo credit: United Soybean Board



# Meet the Authors

- ✓ Soy Farming & Sustainability
- ✓ The Soybean's Role in the Food Supply



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Michigan Soybean Farmer



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Virginia Soybean Farmer

Photo credit: United Soybean Board

# Soy Farming & Sustainability: Our Family Farms

Sunrise Farm  
Palmyra, Michigan



Fifth generation farm  
Farming for 150 years

1,100 acres of:

- Soybeans
- Corn

Seventh generation farm

Land granted from the King of England

3,500 acres

- Soybeans
- Corn
- Wheat



Watkins Farm  
Sutherland, Virginia

Photo credits: United Soybean Board

# Why Sustainable Farming Matters

**98%**

of farms in the U.S. are family farms<sup>1</sup>

Farmers have increased yields by

**55%**

on roughly the same amount of land<sup>2</sup>

Our farms are our families' legacies. As farmers, our goal is to leave the land in better condition than when we found it while increasing production to feed our growing population. Through sustainable practices, farmers can work hard to increase our yields to help feed the growing population all while decreasing the impact we have on the land, leading to a more sustainable food supply.



1)<https://www.usda.gov/media/blog/2020/01/23/look-americas-family-farms>

2) <https://ussec.org/resources/sustainability-starts-on-the-farm/>

# U.S. Soybean Farms

The U.S. is a leading producer of soybeans. This versatile ingredient provides many sources of sustenance.

**515,000**

U.S. farmers  
grow soybeans<sup>1</sup>

**86+ million  
acres**

of soybeans  
harvested in  
2021<sup>2</sup>

**Half of the  
U.S.**

is devoted to  
farming<sup>3</sup>

**30+ states**

offering a reliable  
and renewable  
supply of soybeans  
used in both food  
and feed.

**91 million  
acres**

of U.S. Soy are  
projected for the  
2022 growing  
season.



Photo credit: United Soybean Board

1. <https://www.ams.usda.gov/content/soybean-request-referendum-begins>

2. [https://www.nass.usda.gov/Publications/Todays\\_Reports/reports/acrq0621.pdf](https://www.nass.usda.gov/Publications/Todays_Reports/reports/acrq0621.pdf)

3. <https://www.ers.usda.gov/topics/farm-economy/land-use-land-value-tenure/major-land-uses/>

# U.S. Soybean Farmers Prioritize Sustainable Practices

Soybean farmers prioritize sustainability and use a wide variety of traditional sustainable practices on their farms today such as crop rotation, cover crops and no till farming.

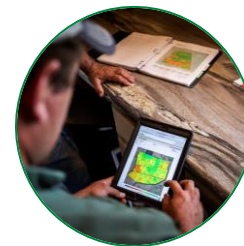
Modern technology has transformed farming in so many exciting ways, bringing innovation to the roots of our food supply chain. Today, farmers are using modern tools like moisture sensors, smart irrigation, autonomous and GPS-enabled tractors, drones and satellite imagery.

Incredible advances in agricultural technology, or AgTech, create a win-win for farmers, food companies and consumers as they allow us to grow more food with less land and fewer resources, while improving the land and environment for the next generation.

We rely on technology and data to make informed decisions to increase our production, sustainability and protect our bottom line.



Photo credit: United Soybean Board



Satellite Imagery



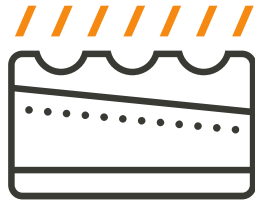
Drones



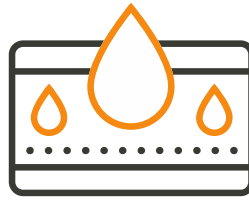
GPS-enabled tractors



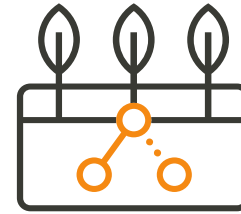
# Traditional and modern farming practices can help farmers:



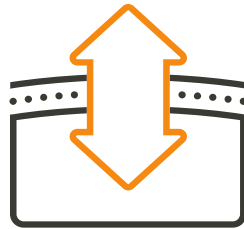
Reduce soil erosion



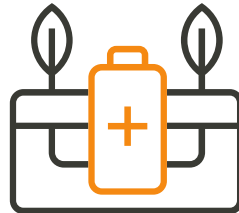
Improve water use efficiency



Increase soil carbon



Reduce greenhouse gas emissions



Reduce energy use



Improve water quality

This allows farmers to become part of the climate solution and reduce the impact they have on the land.



# Soil Health

For farmers, soil health is particularly important.

## Farmers:

- ✓ Practice strip-till and no-till farming to increase organic matter and reduce compaction in soil
- ✓ Conduct frequent soil sampling
- ✓ Use technology to maintain soil health and increase organic matter



Photo credit: United Soybean Board

# Cover Crops

Cover crops are used to:

1. Reduce erosion
2. Maintain and build soil health
3. Retain moisture
4. Suppress weeds
5. Build organic matter

Many farms are 100% no-till and cover crops which builds and maintains the soil while increasing organic matter. We believe that practice will be incorporated into more farms in the future.



Photo credit: Susan Watkins

# Water Management & Quality



- ✓ Farmers implement numerous practices to maintain water quality such as cover crops and filter strips
- ✓ They use filter strips to remove pollutants, reduce soil erosion and provide wildlife habitat
- ✓ Farmers participate in data collection to study the quality of water leaving the farm



Photo credit: United Soybean Board and Susan Watkins



# The Soybean's Role in the Food Supply

# Soybeans Provide Valuable Nutrients

The nutrients in soybeans make it a food supply staple in both food for humans and animals.

Soybean oil, commonly labeled vegetable oil in grocery stores, is the most widely consumed oil in the U.S. The protein in soybeans is a complete protein and one of the few widely available plant-based proteins that provides all essential amino acids in appropriate amounts to meet the needs of children and adults. And both soybean oil and soy protein are recognized as heart healthy by the FDA.

U.S. farmers grow more than 80 million acres of soy annually across 30+ states offering a reliable and renewable supply of ingredients for the food and feed industry. A record 91 million acres of U.S. Soy are projected for the 2022 growing season.

Source:

<https://www.unitedsoybean.org/hopper/value-of-u-s-soybeans-the-proof-is-in-the-nutrients/>

## SOYBEAN COMPOSITION

36% PROTEIN

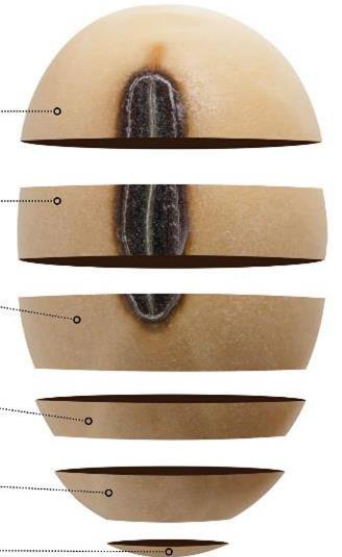
19% OIL

19% INSOLUBLE CARBOHYDRATE (FIBER)

9% SOLUBLE CARBOHYDRATE

13% MOISTURE

4% ASH (MINERALS)



# How are Soybeans Used?

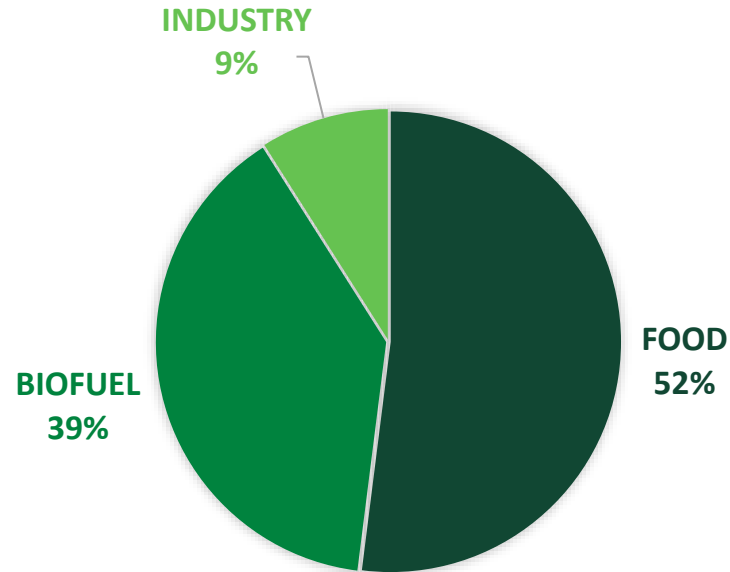
U.S. grown soybeans are processed into oil and protein or soybean meal components. Both the oil and the meal from soybeans is fully utilized, making soybeans a critical part of the U.S. food supply.

Soybean oil is incredibly versatile. It is commonly found in margarine and shortenings, mayonnaise and dairy product substitutes. It blends well with other fats and oils, making it a common ingredient in salad dressings, sauces and baked goods.

Soybean oil is a source of renewable biofuels and used for making plant-based waxes, cosmetics, inks and lubricants.

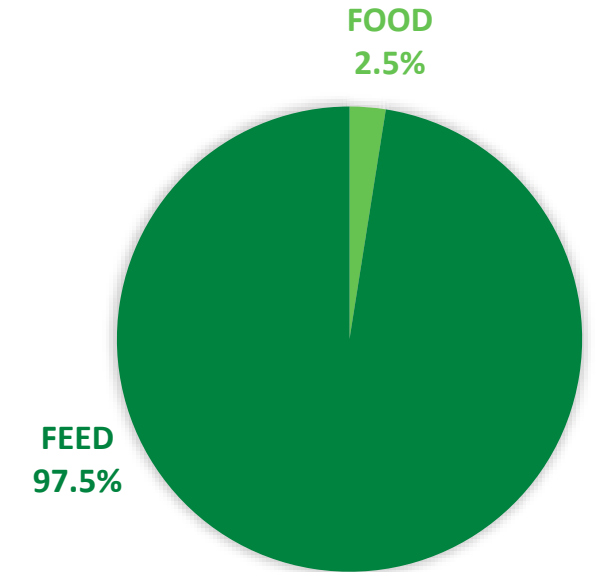
Looking at the meal component of the soybean: poultry and swine are the largest consumers as soybean meal is a high-quality protein source in feed.

U.S. soybean farmers are working hard to provide sustainable ingredients to meet this growing demand and feed families around the nation, and the world.



## SOYBEAN OIL<sup>1</sup>

- ✓ **52% FOOD** – cooking oil and ingredients in food
- ✓ **39% BIOFUELS**
- ✓ **9% INDUSTRIAL** – waxes, oils, lubricants, cosmetics



## SOYBEAN MEAL/PROTEIN<sup>2</sup>

- ✓ **2.5% FOOD** – tofu, soymilk, isolated soy protein, etc.
- ✓ **97.5% FEED** – livestock

1. [http://marketviewdb.unitedsoybean.org/?bi=US\\_Oil\\_IndustrialandFoodUseDetail\\_Annual](http://marketviewdb.unitedsoybean.org/?bi=US_Oil_IndustrialandFoodUseDetail_Annual)

2. [https://marketviewdb.unitedsoybean.org/?bi=Soy\\_ConsumptionDetail\\_Annual](https://marketviewdb.unitedsoybean.org/?bi=Soy_ConsumptionDetail_Annual)

# From Field to Food Industry End Users

Soybean's path to the processing facilities:

Stored after harvest



Sold to grain elevator



Transported to processing facility via road, rail car or river barge



Processed into soybean meal and oil and distributed to end users





# Soybeans Feed the World

U.S. soybean farmers will continue to feed the world in the most sustainable and environmentally friendly manner, available with advancements in technology, paving the way for soybeans to provide a sustainable and nutritious part of the global food supply.



Photo credit: Susan Watkins



**Thank You!**

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