

**U.S.- GROWN**  
*High Oleic*  
**SOYBEAN OIL**

**US SOY**



# IMPROVED SOYBEAN OILS MEET MARKET PLACE DEMANDS

The U.S. soybean industry is committed to making it easier for food companies to deliver products that meet consumer health and nutrition demands, as well as business needs. Investing in research to develop trait-enhanced soybean varieties, such as high oleic soybeans, allows the soybean industry to provide oils with an improved fat profile that meet food companies' product performance and functionality needs.

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A large, bold, orange '4X' with a distressed, textured appearance, indicating a fourfold increase in growing acreage.

4X

**MORE GROWING ACREAGE**  
for U.S. soybeans compared to other oilseed crops ensures stable production volume from year to year, regardless of weather.



**OF CONSUMERS**  
find it important to support domestic agriculture by purchasing food made with U.S.-Grown ingredients.<sup>1</sup>

# U.S.-GROWN HIGH OLEIC SOYBEAN OIL

High oleic soybean oil extends shelf life, offers among the longest fry life of any edible oil and provides a neutral flavor profile.

High oleic soybeans are sustainably produced and 100 percent U.S. grown. Its dependable domestic production, efficient supply chain and superior performance meet the economic and functional needs of the food industry. The geographic diversity of U.S.-grown high oleic soybeans helps guarantee a secure supply of high oleic soybean oil and translates to competitive pricing and reliability for food companies.

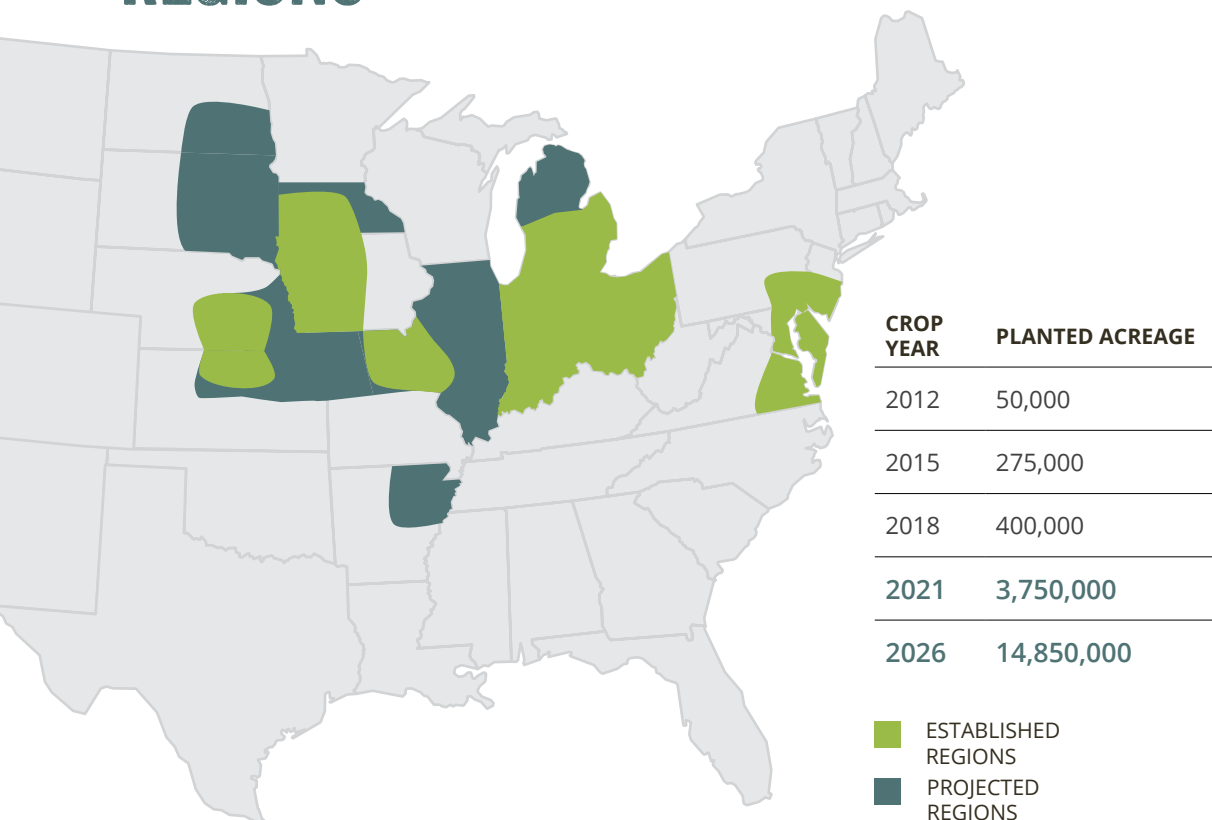
U.S. soybean farmers are collaborating with seed technology companies to ramp up crop production and accelerate the supply of high oleic soybeans for edible and inedible uses and for off-shore export. Recently approved for global use, the supply of high oleic soybean oil is expected to reach two billion pounds in the next three years and nine billion pounds within the next decade.

QUALISOY® projects the supply of high oleic soybean oil will exceed all other high oleic offerings combined by 2027 due to the amount of available soybean acreage in North America.

<sup>1</sup> 2018 United Soybean Board Food Industry Insights consumer study.



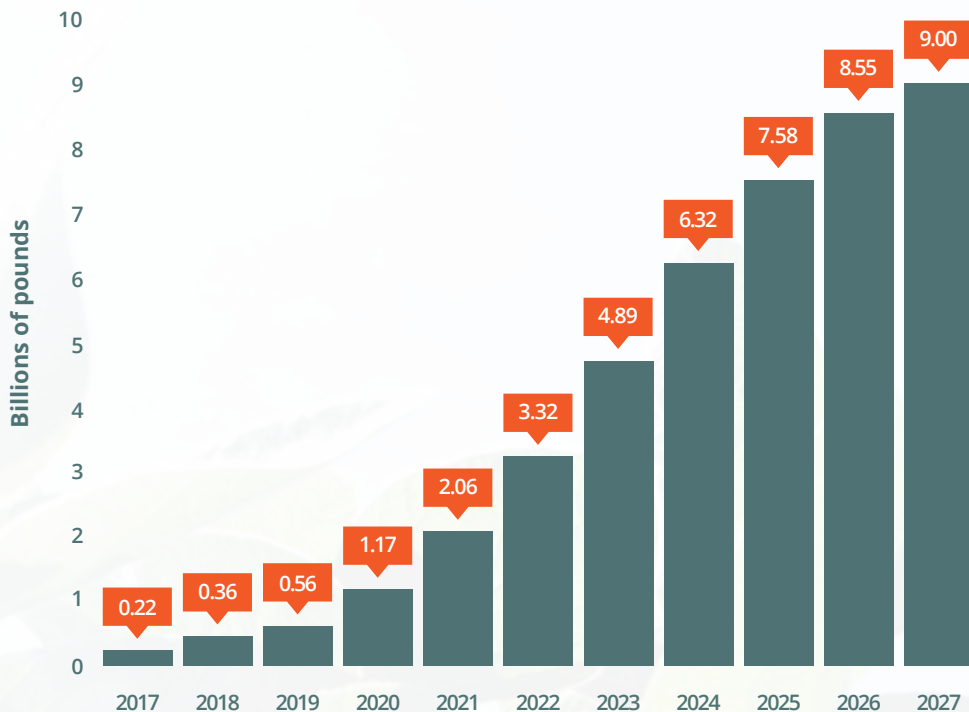
# HIGH OLEIC SOYBEAN GROWING REGIONS



HIGH OLEIC SOYBEAN OIL IS APPROVED FOR GLOBAL USE AND AVAILABLE NOW.

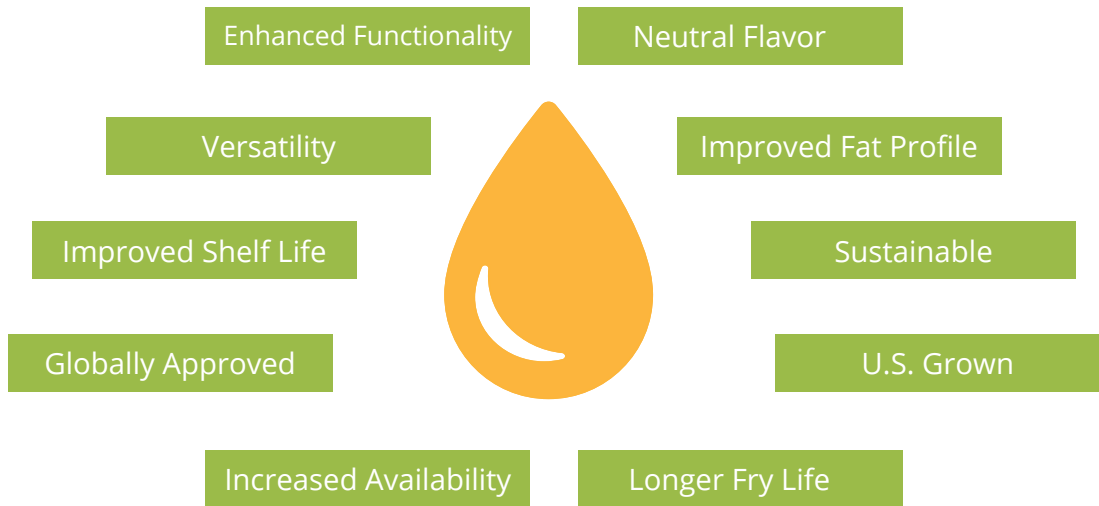


# HIGH OLEIC SOYBEAN OIL AVAILABILITY



THE SUPPLY OF HIGH OLEIC  
SOYBEAN OIL IS EXPECTED TO REACH  
**9 BILLION LBS**  
BY 2027

# BENEFITS OF HIGH OLEIC SOYBEAN OIL AND SHORTENING



## HIGH OLEIC SOYBEAN OIL AND SHORTENING FOOD APPLICATIONS



### **FRYING:**

potatoes  
vegetables  
fish  
donuts  
chicken



### **SAUTÉING:**

stir-frying  
pan-frying  
griddle-cooking



### **BAKED GOODS:**

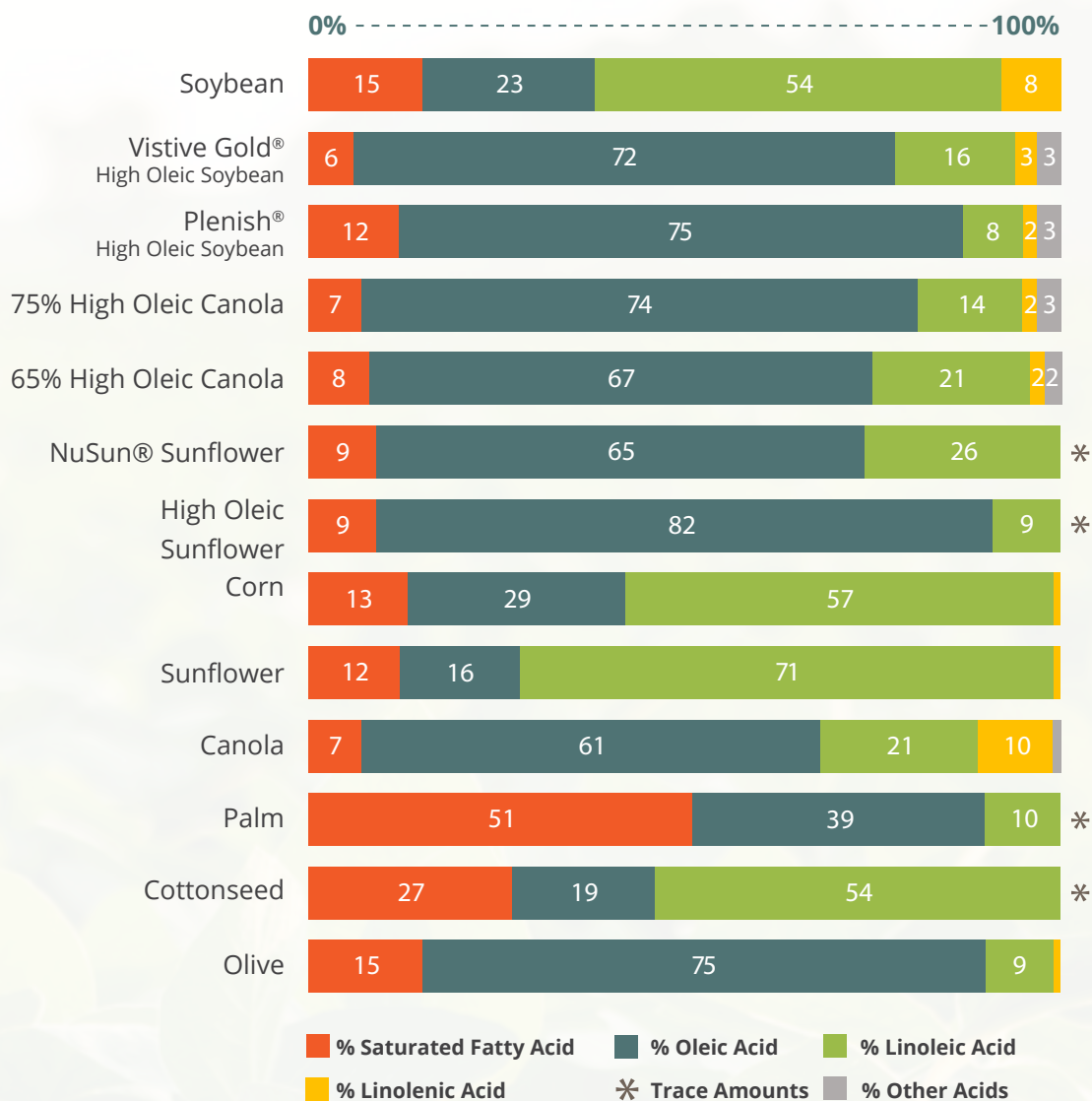
muffins  
quick breads  
brownies  
pie crusts  
cakes




### **SNACK FOODS:**

crackers  
chips  
roasted nuts

# COMPARISON OF FATTY ACID PROFILES







# How Does U.S.-grown High Oleic Soybean Oil and Shortening Benefit You?

## **Superior Performance for Foodservice Professionals**

**ENHANCED FUNCTIONALITY:** High oleic soybean oil has improved resistance to oxidation and reduced build-up of polymers on foodservice equipment in high-heat applications compared to conventional oils and many other high-stability oils. For a customized functional solution tailored to product needs, high oleic soybean oil blends are also available.

**LONGER FRY LIFE:** High oleic soybean oil performs longer than standard vegetable oils in high-temperature and extended-use applications because of the heat and oxidative stability of the oil. The oxidative stability index (OSI) for high oleic soybean oil is greater than 25 hours. This translates to cost savings for foodservice operations.



## Increased Functionality for Food Manufacturers

**IMPROVED SHELF LIFE:** High oleic soybean oil offers superior resistance to oxidation. This resistance extends shelf life for packaged products and fresh baked goods. Recent functionality testing showed that enzymatically interesterified high oleic soybean shortening produced baked goods with increased oxidative stability most similar to products made with partially hydrogenated oils (PHO), making it the perfect drop-in solution for bakery applications.

**DESIRED NEUTRAL FLAVOR:** High oleic soybean oil features a neutral flavor profile, allowing the true and natural flavors of ingredients to stand out.



## Better-for-you Benefits for Everyone

**IMPROVED FAT PROFILE:** High oleic soybean oil's fat profile features lower saturated fat\* while maintaining 0 grams trans fat per serving, which may lower cholesterol and support heart health, and delivers three times the amount of beneficial monounsaturated fatty acids (MUFAs)<sup>2</sup>, which benefits heart health when consumed in moderation.

<sup>2</sup> Compared to conventional and other high-stability oils.



# CREATING A CLEANER LABEL

Natural and synthetic antioxidants are often added to edible oils used in food applications to control oxidation and extend product shelf life. While these food grade chemicals have been used successfully and safely for years, the use of high oleic soybean oil usually eliminates the need for such additives. This is very important for those seeking a simplified ingredient label. The typical OSI of high oleic soybean oil is greater than 25 hours, while the typical OSI of conventional soybean oil is eight hours, conventional canola oil is 10 hours and corn oil is 12 hours.

*Soybean oil can reduce the need for synthetic antioxidants.*

OSI is an American Oil Chemists' Society-approved method that determines the relative resistance of fat and oil samples to oxidation. All fats and oils are prone to oxidation. In the OSI analysis, the rate of oxidation is slow until any resistance

to oxidation is overcome. This time is known as the oxidation induction period measured in hours at 110 degrees centigrade. After the induction period, the rate of oxidation increases dramatically.

The most commonly used synthetic antioxidants are: butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT) and propyl gallate tertiary butylhydroquinone (TBHQ). Soybean oil, both high oleic and conventional, contain natural antioxidants – tocopherols – that contribute to even greater oxidative stability when compared to all other vegetable oils.





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