SOYBEAN OIL BENEFITS:
A Guide for Health Professionals

U.S.-GROWN SOYBEAN OIL IS HEART HEALTHY

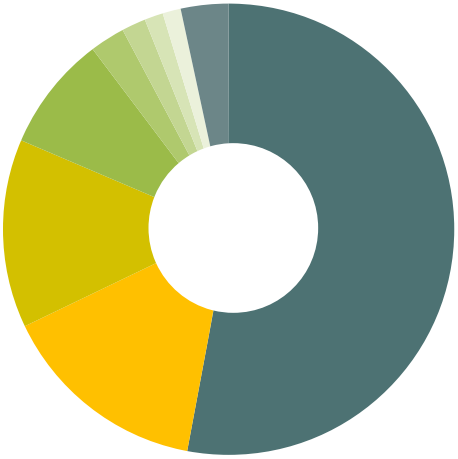
Soybean oil is one of the most abundant vegetable oils in the world. In fact, most "vegetable oil" available on grocery store shelves is 100 percent soybean oil made with U.S.-grown soybeans. Conventional soybean oil contributes 0 grams trans fat per serving and is a principal source of alpha-linolenic acid (ALA), an omega-3, in the U.S. diet.1-2 In 2017, the Food and Drug Administration (FDA) authorized the use of a qualified health claim confirming soybean oil's ability to reduce the risk of coronary heart disease.3

Continued improvements in the health profile of U.S. grown soybean oil could positively impact the public due to its anticipated extensive use in the foodservice and food manufacturing industries. It is important for health professionals to be aware of these improvements and the impact they have on their patients and clients.

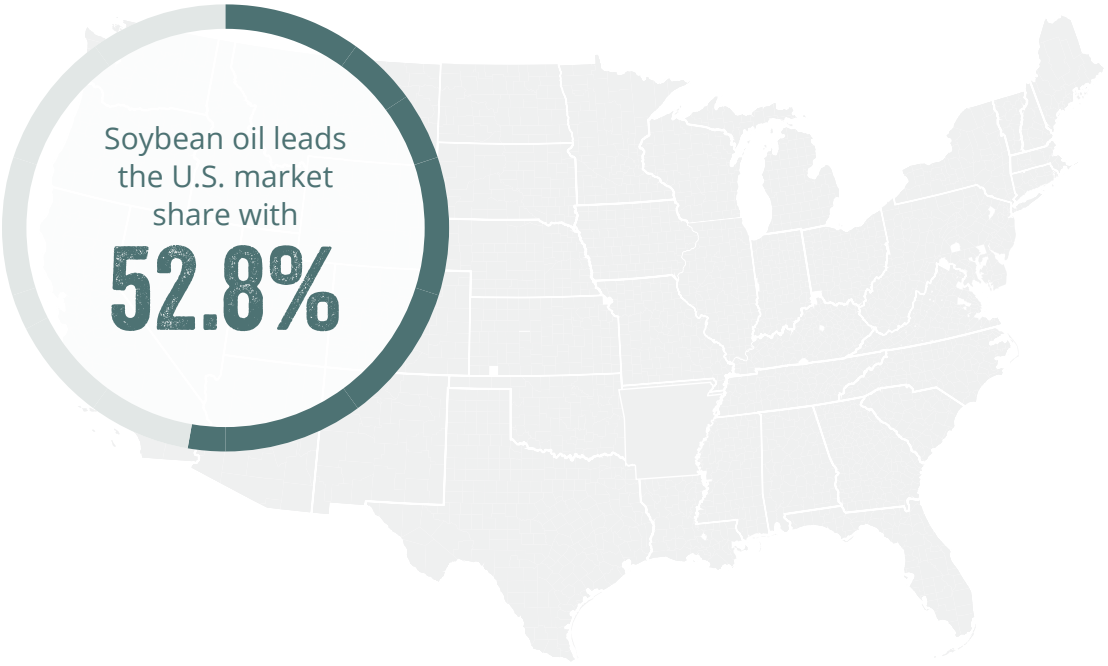
Qualifying soybean oil-containing products can now be labeled as heart healthy.[3]

OF CONSUMERS would be more likely to purchase U.S.-Grown 100% soybean oil if it were labeled as heart healthy.[4]

U.S. EDIBLE VEGETABLE OIL CONSUMPTION[5]



OIL	LBS (IN MILLIONS)	% MARKET SHARE
Soy	21,000	52.8%
Canola	6,040	15.2%
Corn	5,342	13.4%
Palm	3,350	8.4%
Coconut	1,004	2.5%
Olive	723	1.8%
Sunflower	526	1.3%
Cotton	504	1.3%
All Other	1,310	3.3%



CREATING A CLEANER AND HEALTHIER LABEL

Consumers are actively searching for simple ways to eat healthier, and the U.S. soy industry is committed to making it easier for food companies to deliver products that meet consumer health and nutrition needs – starting with better-for-you oil solutions. New soybean varieties produce oils with an improved fat profile and functionality.

In addition, 78 percent of customers said it is important to them to support domestic agriculture by purchasing foods made with U.S.-grown ingredients.[4] Most soybean oil is 100 percent U.S. grown and sustainably grown.

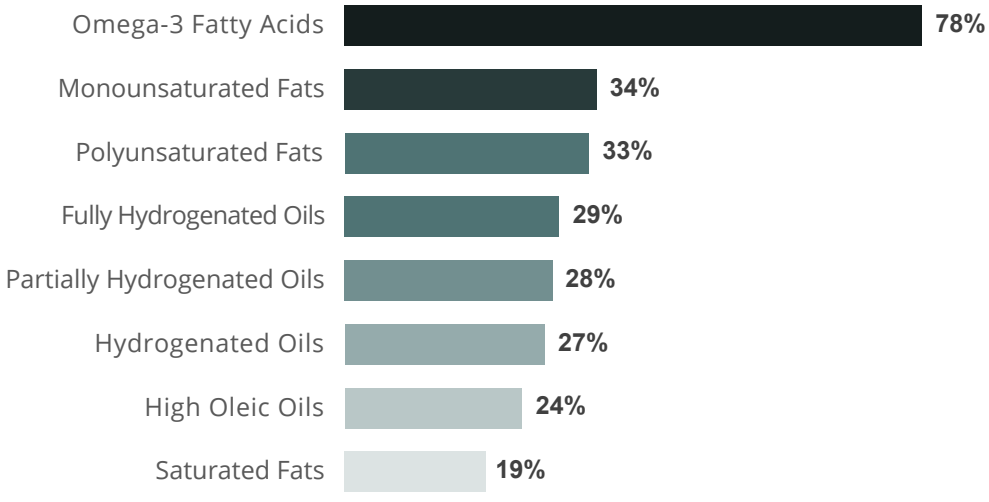
While industry professionals understand the healthfulness of different oils, consumers continue to be confused about healthy fats.

OF CONSUMERS state that nutrition is very or somewhat important when selecting grocery items.[4]

OF CONSUMERS are concerned about the nutritional content of the food they eat.[4]

OF CONSUMERS of consumers have changed their eating habits due to health and nutrition concerns.[4]

FATS CONSUMERS VIEW AS VERY OR SOMEWHAT HEALTHY [4]



U.S.-GROWN HIGH OLEIC SOYBEAN OIL IMPROVES PRODUCT NUTRITION

High oleic soybeans, a newer soybean variety, produce an oil with an improved fat profile that allows foodservice operations and food manufacturers to improve the nutrition of their products while providing superior performance.

High oleic soybean oil delivers three times the amount of beneficial monounsaturated fatty acids (MUFAs) compared to conventional soybean oil. A high MUFA content makes the oil extremely stable, eliminating the need for partial hydrogenation.[6-7]

In addition, a recently completed human feeding study suggests that high oleic soybean oil acts similarly to conventional soybean oil in lowering LDL cholesterol and total cholesterol, when compared to palm olein. The findings of the study suggest that replacing oils high in saturated fats with high oleic soybean oil would have favorable effects on overall coronary heart disease risk.[8]

HIGH OLEIC SOYBEAN OIL FEATURES LOWER SATURATED FAT* WHILE MAINTAINING 0 GRAMS TRANS FAT PER SERVING.[1]

**Compared to conventional and other high-stability oils*

BENEFITS OF INCREASED MONOUNSATURATED FATS

MUFAs, such as oleic acid, benefit heart health when eaten in moderation and used to replace saturated fats or trans fats. MUFAs may also help reduce LDL levels in the blood, reducing the risk of heart disease and stroke.[9]

Studies have shown that MUFAs reduce blood pressure. It has been demonstrated that the oleic acid component contributes to this hypotensive effect.[10]

Substituting saturated fat with MUFAs improves insulin sensitivity and reduces plasma triglycerides, making it an important dietary modification for those at risk of metabolic syndrome.[11]

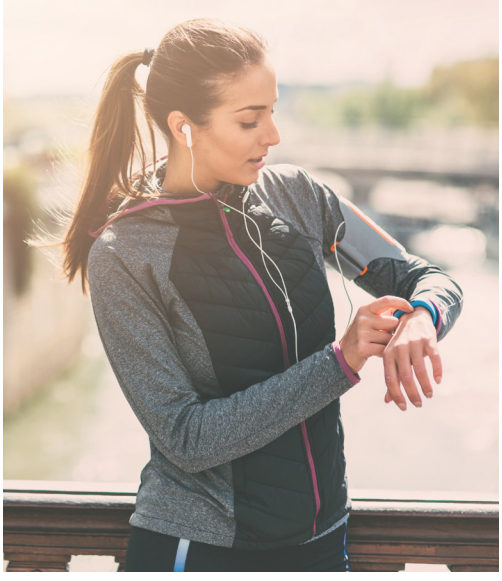
ENHANCED SOYBEAN OILS IN THE PIPELINE: INCREASED OMEGA-3

Omega-3 fatty acids are both essential and beneficial for human health. Research shows diets rich in omega-3 fats reduce inflammation and may help lower risk of chronic diseases, such as heart disease.[12]

The long-chain omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), found primarily in marine sources, are most readily used by the body. Although ALA, the type of omega-3 found in soybean oil, is the principal source of omega-3s in the U.S. diet13, ALA is not efficiently converted to EPA and DHA in the body.

The U.S. soy industry is developing a soybean variety that contains stearidonic acid (SDA), an omega-3 fatty acid. SDA omega-3s are more efficiently converted by the body into EPA than the ALA omega-3s found in plant sources. This variety of soybeans will result in an affordable, land-based, renewable source of omega-3s.

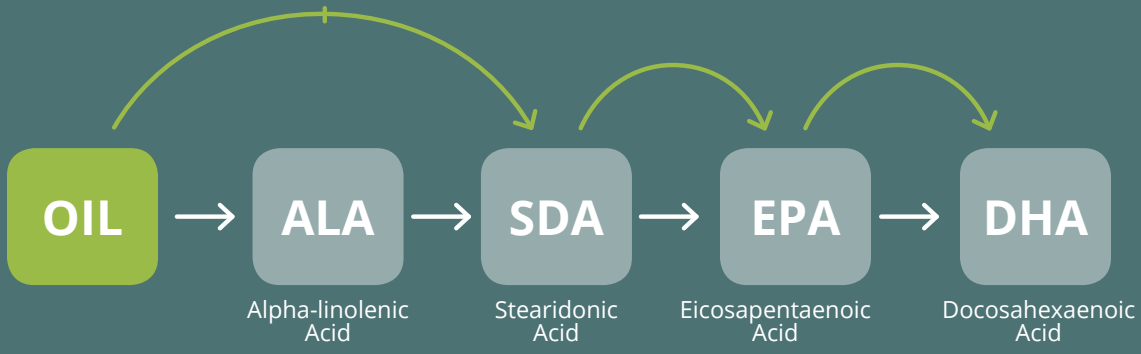
The aim is to produce neutral-flavored soybean oil with 18 to 20 percent SDA. This SDA omega-3 soybean oil will provide the food industry with a functional ingredient that can be added to a variety of foods, such as soups, sauces, beverages, yogurts and breads Incorporating this type of omega-3 in foods could have tremendous public health benefits.[14-15]



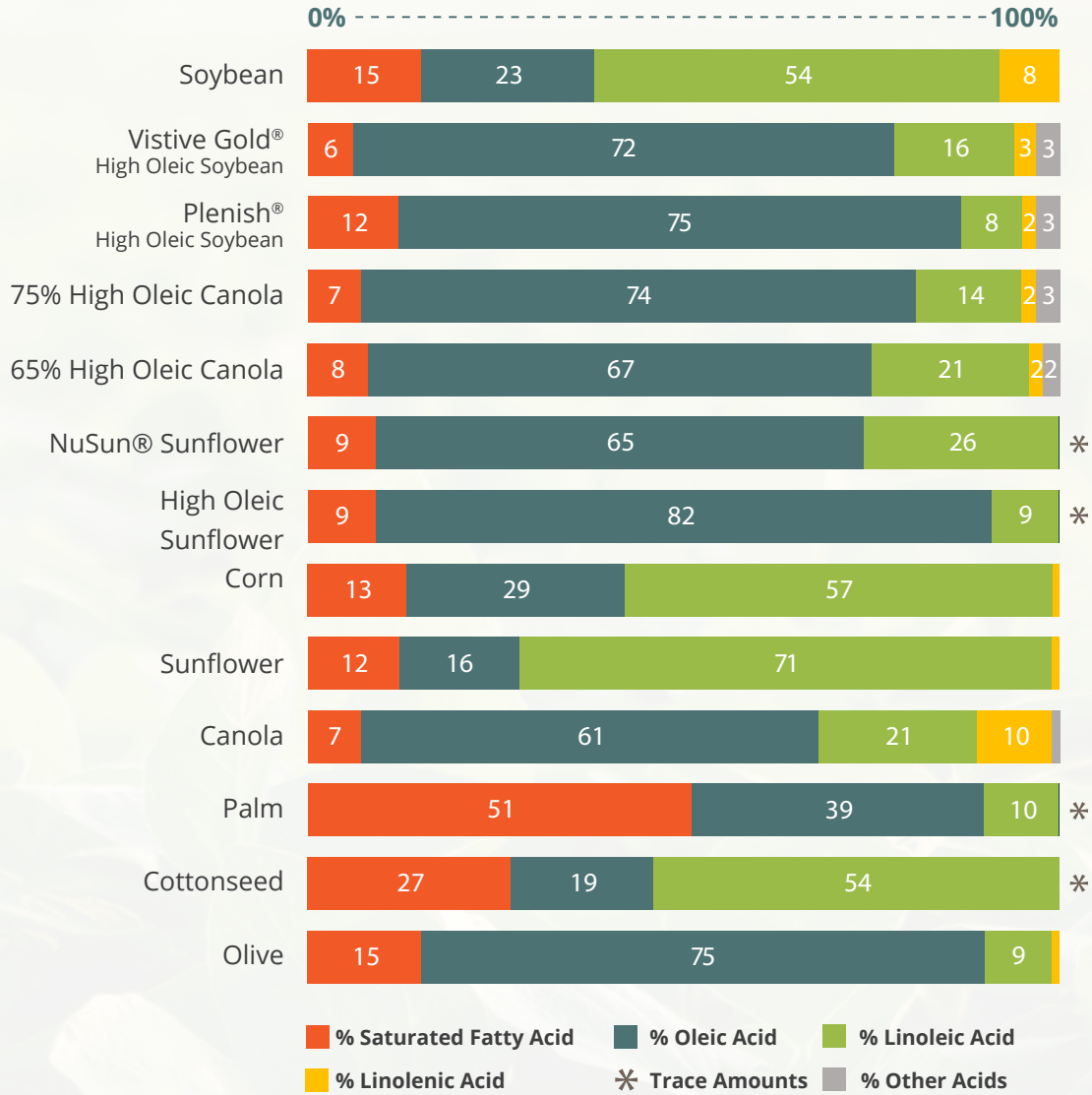
ALA CONVERSION CHART

The body skips the ALA conversion step when consuming products made with SDA omega-3 soy.

— SDA Omega-3 Soybean Oil
— Conventional Soybean Oil



COMPARISON OF FATTY ACID PROFILES



TODAY

FUTURE TRAITS

High Oleic

Omega-3

Increased Oil

Low-Phytate Phosphorus

INCREASED OMEGA-3 OIL HIGHLIGHTS

Companies developing enhanced soybean varieties aim for an omega-3 content of 18 to 20 percent.

Omega-3 fatty acids have potent anti-inflammatory effects that guard against coronary heart disease and autoimmune diseases.[19]

SDA omega-3 soybean oil is an effective and environmentally sustainable approach to increasing heart-healthy levels of EPA in the body.[20]

HEALTH AND ENVIRONMENTAL BENEFITS THROUGH BIOTECHNOLOGY

Enhanced soybean oils developed through agricultural biotechnology can help consumers lead a healthier lifestyle; for example, enhanced soybean oil increases omega-3 fatty acid consumption and reduces saturated fat consumption. In addition to helping the food industry provide consumers with healthier ingredients, biotechnology also helps farmers provide a sustainable future for the world's agriculture systems. Studies show that biotechnology significantly reduces agriculture's impact to the environment, contributing to increased use of conservation tillage, improved water quality, conservation of topsoil and reduced pesticide use.[21]

THE SOYBEAN INDUSTRY IS CONTINUALLY WORKING TO IMPROVE THE NUTRITIONAL PROFILE AND FUNCTIONAL CHARACTERISTICS OF SOYBEANS.

QUALISOY BRINGS IMPROVED OILS TO MARKET

QUALISOY® is an independent, third-party collaboration that promotes the development of and builds the market for the latest soybean traits. QUALISOY provides the foodservice and food manufacturing industries with enhanced soybean oils that offer an improved fat profile and functionality. QUALISOY is guided by representatives from all sectors of the soybean industry.

QUALISOY IS YOUR PARTNER IN OIL INNOVATIONS AND SERVES AS YOUR SOURCE FOR INFORMATION ON THE LATEST SOYBEAN OIL TRAITS.

QUALISOY STAKEHOLDERS

The diverse group behind QUALISOY ensures the entire soybean value chain is involved in the development of enhanced soybean oils. This unique partnership also drives research, evaluates new and emerging technologies, facilitates stakeholder relations, and encourages adoption of beneficial soybean varieties.

U.S. soybean farmers are collaborating with seed technology companies to ramp up crop production and accelerate the supply of high oleic soybeans.

HIGH OLEIC SOYBEAN OIL IS AVAILABLE NOW.

Recently approved for global use, quantities are increasing and expected to reach an estimated nine billion pounds by 2027.[22]

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