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# **NOPA Members**







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Organized in 1930, the National Oilseed Processors Association (NOPA), is a national trade association, that represents the United States' (U.S.) soybean, canola, flaxseed, safflower seed, and sunflower seed crushing industries.

NOPA is well positioned to respond to industry's needs during times of crisis and seeks proactive solutions to current and future challenges that impact America's essential food, feed, and fuel sectors.

NOPA's membership includes 12 companies that are engaged in the processing of oilseeds for meal and oil that are further utilized in the manufacture of food, feed, and renewable fuels. NOPA's member companies operate a total of five softseed and 60 soybean solvent extraction plants across 21 states.

NOPA represents its members' interests in the areas of federal legislative and regulatory policies, as well as international trade policies impacting the global flow of oilseeds and oilseed products. NOPA also publishes model Trading Rules for the purchase and sale of soybean meal and oil. Additionally, the association reports monthly NOPA members' aggregated crush data to the marketplace through Refinitiv, a global financial market services provider.

In cooperation with its value chain partners, NOPA advocates for market-based solutions that promote the U.S. oilseed industry including international trade agreements and elimination of tariff and non-tariff trade barriers, efficient transportation infrastructure, and federal programs that benefit oilseed processors and their up- and downstream value chain partners. In doing so, NOPA leads in providing industry information about U.S. oilseed processing to federal legislators, regulators, policymakers and trade negotiators.

# **NOPA PROMISE**

Cultivate a thriving operating environment for the U.S. oilseed industry through advocacy and strategic collaborations

# Oilseed Processing Increases the Value of U.S. Crops

NOPA members' oilseed processing operations yield protein-rich meal for human and animal nutrition, as well as vegetable oil for use as an ingredient in food manufacturing and as a feedstock for renewable fuels. Crude vegetable oil may be further refined for use in a wide array of industrial applications.

# A variety of oilseeds can be crushed into meal and oil:



SOYBEAN Soybeans consist of

approximately 20 percent oil and 80 percent meal. Soybean meal is the world's most important source of vegetable-based protein. It is used primarily in animal feed. A small percentage of soybean meal is also used in human food products including soy milk, soy flour, soy protein, tofu and many retail food products. Soybean oil is the world's most widely produced and widely consumed vegetable oil. In addition to its use by food manufacturers for baking and frying, soybean oil is also a feedstock for biofuels (biodiesel/renewable diesel) and may be further refined for use in a variety of industrial products.



CANOLA

Canola seeds contain approximately 45 percent oil. Canola oil is widely used for cooking, baking, sauteing, frying, marinating and salad dressings. It is also a feedstock for biofuels (biodiesel/ renewable diesel) and bioplastics. Canola meal is highly valued for livestock feed, especially for beef cattle and dairy cows.



OILSEEDS

FLAX/LINSEED

Flax seeds are typically cultivated for their fiber for use as linen yarn and fabric, rope and netting, whereas linseed is primarily used to generate oil. Oil cake residues are further used in livestock feed. Linseed oil is also used in the production of paints, printing inks, linoleum, varnish, and oilcloth.



#### SAFFLOWER

Safflower oil contains nearly 75 percent linoleic acid, an essential fatty acid for nutrition, and is used primarily for edible oil products such as salad oils and soft margarines. It is also used in industrial applications including paints and other surface coatings. The meal that remains after oil extraction is used as a protein supplement for livestock.



#### SUNFLOWER

Sunflowers are cultivated for their nutritious seeds and oil. Sunflower oil supplies more Vitamin E than any other vegetable oil and is used in food manufacturing. It may also be further refined and de-waxed for use as a feedstock for biodiesel. Sunflower meal, a by-product of the oil extraction process, may be used in livestock feed, particularly for ruminant species.



spe NOPA Members crush 94% of all soybeans processed in the United States, which amounts to approximately two billion bushels of soybeans annually.

# **NOPA Members' Annual Soybean Crush**

MARKETING YEARS: 2001/02 - 2019/20 (OCTOBER-SEPTEMBER)



# **NOPA Members' Annual Softseed Crush**

MARKETING YEARS: 2001/02 - 2019/20 (OCTOBER-SEPTEMBER)

CANOLA, FLAXSEED, SAFFLOWER & SUNFLOWER SEEDS



# **Global Soybean Consumption**

MARKETING YEARS: 2000/01 - 2020/21 (TREND TO MY 2030/31)



#### NOPA publishes members' aggregated soybean crush volume on a monthly basis.

Annualized data from the Marketing Years 2001/02 through 2019/20 shows the annual soybean crush continually trending upwards for the past twenty years, and, for the past three years, well above the trend line. Likewise, the annual softseed crush has been trending upwards for the past two decades; however, the last two marketing years for softseeds have been slightly below the 20-year trend line.

#### ABBREVIATIONS USED IN CHARTS:

Pounds – LBS Bushels - BU Short Ton – ST Thousand Metric Tons – TMT Million Metric Tons – MMT Billion Metric Tons – BMT

The global demand for soybeans has increased steadily over the past twenty years. Due to the development of middle-class consumers around the world, it is anticipated that another 80 million metric tons of soybean production will be needed over the next decade to keep up with the world's consumption of this essential product used for feed, food, and fuel.

# Oilseed Processing Benefits America's Soy Farmers and Their Familes

### The U.S. Soy Sector generates approximately \$116 billion (USD) in revenue.

First introduced into the United States in 1804 as a feed crop for cattle production, soybeans have become one of the most important crops in the United States thanks to their high yields and nutritional quality. Today, the U.S. Soy Sector plays a critical role in today's economy by providing thousands of jobs to rural workers and contributing to America's gross domestic product (GDP). The U.S. crushing industry alone contributes approximately \$8 billion annually and provides jobs to nearly 18,000 workers.



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Soy Sector Value Chain Business Segment	Jobs	Wages (\$ million)	Revenue (\$ billion)
Soybean Production	144,910	6,170	86.5
Soybean Delivery	19,340	630	2.1
Elevators	41,430	1,425	3.3
Crushing	17,860	593	8.3
Soy Oil Refining	6,140	375	1.0
Soy Biodiesel Production	7,120	325	4.9
Port	3,030	283	2.6
Feed Milling	22,440	910	1.1
Rail	11,350	595	3.9
Barge	790	40	0.9
Food Production	5,980	260	1.5
U.S. SOY SECTOR TOTAL	280,390	11,606	116

Photo courtesy of CHS, Inc.

# As an essential commodity both domestically and abroad, U.S. soybeans and end products create a thriving economy in the top 39 soybean-producing states across the country.

According to a recent LMC International study, jointly commissioned by the United Soybean Board (USB) and NOPA, America's soybean value chain employs approximately 280,000 full-time workers and supports an additional 78,000 farm family members. Importantly, America's oilseed processing companies offer a variety of employment opportunities for America's rural workers.



\* Jobs and farm family members are presented on a soy-related full-time equivalent basis. For production, time is often split between soybeans and other crops, so LMC used number of hours invested in soybeans, instead of number of farms.

LMC Report: The Economic Impact of U.S. Soybeans and End Products of the U.S. Economy, November 2019

\*\* Revenues represent the value added to soy at each stage. This avoids double-counting the value of preceding stages.

# **U.S. Soybean Meal: Crush & Disappearance**

MARKETING YEARS: 2019/20 - 2021/22



USDA reporting of U.S. crush and disappearance data indicate U.S. soybean meal production has shown a steady increase. Similarly, domestic use and exports of soybean meal have also increased over this period.

# **U.S. Soybean Meal: Estimated Use by Livestock**

APPROXIMATELY 97% OF SOYBEAN MEAL IS USED FOR ANIMAL/LIVESTOCK FEED.

Poultry	18.5 million metric tons
Swine	8.5 million metric tons
Beef	2.7 million metric tons
Dairy	2.3 million metric tons
Pet Food	0.7 million metric tons
Other Feed	0.7 million metric tons
2019 TOTAL	33.4 million metric tons



# **U.S. Soybean Oil: Production & Disappearance**

MARKETING YEARS: 2019/20 - 2021/22



Source: USDA/WASDE June 2021

USDA reporting indicates U.S. soybean oil production is on the rise. Further, USDA anticipates that demand for biofuels will increase over the next two years, whereas demand for food and feed will rise slightly in 2020/21 and then decrease in 2021/22. Correspondingly, exports of soybean oil are projected to fall dramatically over the next two years.

# U.S. soybean products are the gold standard for animal/livestock feed globally. No other processed oilseed delivers a more complete protein full of essential amino acids and energy.

### Pounds of Soybean Meal (SBM) Used to Produce **One Metric Ton of Meat**

- 1,621.7 pounds of SBM yields one metric ton of turkey meat
- 1,611.85 pounds of SBM yields one metric ton of broiler meat
- 1,450.58 pounds of SBM yields one metric ton of pork
- 395.58 pounds of SBM yields one metric ton of beef

Source: Decision Innovation Solutions - Soybean Meal Demand Assessment

In addition to serving as a plant-based feedstock for biodiesel and industrial applications such as inks, waxes, coatings, paints and solvents, advancements in vegetable oil refining have led to the use of soybean oil in the production of renewable diesel.

### MY 2019/20 Soybean Oil Use by Sector

**4**% Biofuels (Biogueser & Normalian Biofuels (Biogueser & Normalian Biofuels) 8.6 billion pounds (1.03 billion gallons) Biofuels (Biodiesel & Renewable Diesel) =

**54.3%** 

Food Manufacturing & Industrial Applications = 13.6 billion pounds (1.63 billion gallons)

11.3% Exports = 2.8 billion pounds (335.51 million gallons)

Source: UDSA/WASDE June 2021

Source American Sovbean Association 2020 SovStats: Based on industry estimates from USB 2008 soymeal market study, USDA, (NASS)

# Oilseed Processing Supports the Global Economy

Today, the U.S. Soy Sector produces over four billion bushels of soybean annually. About 50 percent of that crop is exported as whole beans to various markets abroad. The other half is sent to U.S. oilseed processing plants to be crushed into meal and oil before reaching downstream markets for use in human food, animal feed, transportation fuels and industrial applications, as well as exported to foreign markets.

Total Value of U.S. Soybean Meal Exports:



# Top 5 Export Markets for U.S. Soybean Meal

2020 Rank	Market	Value (\$ Thousand)	Quantity (Metric Tons)
1	Philippines	\$846,954	2,381, 812
2	Mexico	\$635,975	1,794,471
3	Colombia	\$465,385	1,394,730
4	Canada	\$382,007	1,080,498
5	Ecuador	\$186,382	540,802

MARKETING YEAR 2019/20 (OCT. 1 - SEPT. 30)

# U.S. Exports accounted for 19% of total global soybean meal exports.

TOTAL GLOBAL SOY MEAL EXPORTS TOTAL U.S. SOY MEAL EXPORTS TOP FIVE MARKETS SOY MEAL EXPORTS 66.96 MILLION MT 12.63 MILLION MT 7.12 MILLION MT

## Total Value of U.S. Soybean Oil Exports:

# \$980.5 Million

# Top 5 Export Markets for U.S. Soybean Oil

MARKETING YEAR 2019/20 (OCT. 1 - SEPT. 30)

2020 Rank	Market	Value (\$ Thousand)	Quantity (Metric Tons)
1	South Korea	\$247,791	353,037
2	Mexico	\$112,486	129,530
3	Dominican Republic	\$111,344	150,744
4	Colombia	\$102,276	136,815
5	Guatemala	\$76,540	105,182

# U.S. Exports accounted for 11% of total global soybean oil exports.

TOTAL GLOBAL SOY OIL EXPORTS	11.91 MILLION MT
TOTAL U.S. SOY OIL EXPORTS	1.28 MILLION MT
TOP FIVE MARKETS SOY OIL EXPORTS	0.87 MILLION MT

# **NOPA's Strategy for Success**

# NOPA capitalizes upon the collective knowledge and expertise of its members and staff to achieve our goals in three core areas: Collaboration, Advocacy and Organizational Effectiveness.

## Collaboration

NOPA's Collaboration Committee works on building industry alliances along the oilseed processing supply chain to strengthen the industry's operating environment. For example, to ensure alignment on key policy issues impacting the U.S. Soy Sector, NOPA partners with the American Soybean Association (ASA), U.S. Soybean Board (USB), U.S. Soybean Economic Council (USSEC), and the North American Export Grain Association (NAEGA), among others. We also maintain long-standing relationships with the National Grain & Feed Association (NGFA), Institute of Shortening & Edible Oils (ISEO), Corn Refiners Association (CRA) and North American Millers' Association (NAMA), as well as National Biodiesel Board (NBB) and others; and we're always exploring new opportunities for engagement with our downstream organizations including the National Chicken Council (NCC) and National Pork Producers Council (NPPC) on common interests.

### **Organizational Effectiveness**

NOPA's Organizational Effectiveness Committee ensures that the industry's trade association remains agile, flexible and able to achieve its strategic objectives. Importantly, the Committee's two subcommittees maintain NOPA's Soybean Meal and Soybean Oil Trading Rules. First developed in 1930 and 1933 respectively, NOPA's Trading Rules for the purchase and sale of soybean oil and soybean meal serve as a guide only for transactions. It is understood that the parties to such transactions are free to adopt, modify, or disregard any or all of these Trading Rules. It is the function of NOPA's Soybean Meal and Soybean Oil Subcommittees to review the rules and amend them, as necessary and appropriate, when modern commercial practices warrant changes.

### Advocacy

Leveraging the organization's trade, legislative, and regulatory expertise, NOPA's Advocacy Committee, in collaboration with its Regulatory, and Government & Public Relations Subcommittees, focuses on federal legislative, regulatory and international trade initiatives that impact the health and prosperity of the oilseed processing industry's value chain.

#### NOPA MEMBER POLICY INTERESTS

- Environmental Affairs (Climate Change, Renewable Fuels, Air/Water/Waste Permitting, Risk Management)
- Transportation Infrastructure (Waterways, Ports, Rail, Highways, Bridges and Broadband)
- Worker Health & Safety (COVID Response, Process Safety Management, Performance Standards)
- Farm Policy (Oilseed Commodity Programs, Conservation Programs, Biofuels, Biotechnology, Market Access and Promotion/Market Development Programs)
- Market Access (Elimination/Reduction of Tariff and Non-Tariff Barriers through Multilateral, Regional and Bilateral Free Trade Agreements)
- Food/Feed Safety & Quality (Food Safety Modernization Act Implementation)
- Facility Security (Critical Infrastructure Protection, Supply Chain Stability)

# STRATEGIC GOALS

**BECOME THE LEADING ADVOCATE** for U.S. oilseed processors by leveraging the expertise of NOPA's members to advance regulatory, legislative and trade policies impacting plant operations

**INCREASE AWARENESS AND THE PERCEIVED VALUE** of NOPA by collaborating with other stakeholders across the supply chain to develop key alliances that strengthen the industry's operating environment

**PROVIDE GREATER VALUE TO MEMBERS** by improving NOPA's agility, identifying opportunities for growth, and allocating resources more effectively

# NOPA in Action

The oilseed industry was tested throughout 2020 as the world shut down in response to the COVID-19 pandemic. Outreach to our significant up- and downstream customers was critical from the start. NOPA's Collaboration and Advocacy Committees, in concert with its Government & Public Relations and Regulatory Subcommittees, went to work to develop strategies and resources to deal with this global crisis. Thanks to the commitment and dedication of NOPA members and staff, the oilseed processing industry responded quickly to a rapidly changing market environment.

# Leading Voice for U.S. Oilseed Processors

## **Industry Engagement**

- Joined USB in commissioning an LMC International study to assess the impact of COVID-19 on the U.S. Soy Sector. In addition to \$2.9 billion loss in soybean sales, there was a \$1.5 billion loss of value for soybean oil and \$220 million loss of value for soybean meal, with the two components totaling \$1.7 billion, a 7.2 percent decline in value.
- Reached out to NOPA's downstream customers, including NPPC and NCC, to discuss market challenges stemming from the pandemic and determine future needs.
- Met with USB and USSEC to support the development of their FY2022 strategic and marketing plans, respectively, providing input and identifying opportunities where NOPA can work together with our soybean grower partners to address challenges that impact the oilseed industry.

## **Federal Legislation**

- Leveraged NOPA's network of agricultural and manufacturing coalitions to attain passage of the United States, Mexico and Canada Agreement, which entered into force on July 1, 2020.
  Bilateral and multilateral trade agreements are critical to the U.S. oilseed industry to increase market access for U.S. oilseeds, meal and oil, as well as meat and meat products; address tariff and non-tariff barriers to trade; and support a rules-based trading system.
- Partnered with the NBB and ASA to secure a five-year retroactive extension of the \$1.00 per gallon biodiesel tax credit from January 1, 2018 through December 31, 2022. Established in 2005, this credit ensures farmers remain competitive in the global protein market as demand for biodiesel supports U.S. soybean processing and export opportunities. Without biodiesel production, surplus soy oil would be a drag on soybean prices, which would impact the entire soy value chain.
- Joined the Waterways Council and Agriculture Transportation Working Group to obtain a more favorable cost-share ratio for the Inland Waterways Trust Fund beginning in 2021, reducing industry's cost-sharing burden from 50 percent to 35 percent through 2027. Maintaining America's inland waterways, locks, dams and ports, as well as other transportation modes, ensures efficient transportation of goods and is vitally important to the U.S. oilseed value chain's competitive advantage.

### **Regulatory Compliance**

- Collaborated with the U.S. Food & Ag Sector Coordinating Council to issue timely guidance on the use and availability of personal protective equipment at the onset of the pandemic, helping to ensure safe working conditions at oilseed processing plants across the country. Today, NOPA continues its engagement with the Council to ensure vaccines are made available to critical infrastructure workers operating in the Food & Ag Sector.
- Engaged domestic and international partners to address non-tariff barrier issues stemming from Vietnam Circular 04/2020 policy which set a zero tolerance for Salmonella in soybean meal product imports. Coordinated outreach across North and South American countries resulted in the removal of the criteria for Salmonella from Vietnam's product import standards.
- Partnered with NGFA, NAEGA, and USSEC to address compliance issues with new International Maritime Organization (IMO) requirements for seedcake exports to undergo a self-heating test prior to being shipped in a vessel or container, which became effective on January 1, 2021. Outreach to the U.S. Coast Guard resulted in the development of preliminary guidance on the IMO requirements for vessel shipments. NOPA continues to work with USSEC and its industry partners to address seedcake exporter concerns related to the self-heating requirements for container shipments.
- Issued industry guidance to aid NOPA members in complying with the Food & Drug Administration's (FDA) facility security requirements under the Food Safety & Modernization Act. Developed by food safety, quality control and regulatory compliance professionals working for NOPA member companies, the guidance included a review of compliance obligations with FDA's Mitigation Strategies to Prevent Against the Intentional Adulteration rule, a sample Food Defense Plan for a soybean processing plant, as well as considerations for assessing risk and identifying mitigation strategies.

# **NOPA Member Plant Locations**

#### ALABAMA (2)

- Decatur, AL Bunge
- Guntersville, AL Cargill, Inc.

#### ARKANSAS (1)

• Stuttgart, AR - Riceland Foods, Inc.

#### GEORGIA (2)

- Gainesville, GA Cargill, Inc.
- Valdosta, GA ADM

#### ILLINOIS (7)

- Bloomington, IL Cargill, Inc.
- Cairo, IL Bunge
- Decatur, IL (2) ADM
- Gilman, IL Incobrasa Industries, Ltd.
- Quincy, IL (2) ADM

#### INDIANA (6)

- Claypool, IN Louis Dreyfus Company LLC
- Decatur, IN Bunge
- Frankfort, IN ADM
- Lafayette, IN Cargill, Inc.
- Morristown, IN Bunge
- Mt. Vernon, IN
- Consolidated Grain & Barge Company
- Seymour, IN Benson Hill, Inc.

#### IOWA (13)

- Cedar Rapids, IA (2) Cargill, Inc.
- Council Bluffs. IA Bunge
- Creston, IA Benson Hill, Inc.
- Des Moines, IA ADM
- Eagle Grove, IA Ag Processing Inc
- Emmetsburg, IA Ag Processing Inc
- Iowa Falls, IA Cargill, Inc.
- Manning, IA Ag Processing Inc
- Mason City, IA Ag Processing Inc
- Sergeant Bluff, IA Ag Processing Inc
- Sheldon, IA Ag Processing Inc
- Sioux City, IA Cargill Inc.
- KANSAS (2)
  - Emporia, KS Bunge
  - Wichita, KS Cargill, Inc.

#### **KENTUCKY (1)**

- Owensboro, KY - Owensboro Grain Company, LLC

#### LOUISIANA (1)

• Destrehan, LA - Bunge

#### MARYLAND (1)

• Salisbury, MD - Perdue Agribusiness

PLEASE NOTE: Softseed Processing Plant Locations Indicated in BLUE.



Soybean Processing Softseed Processing

Map indicators designate the U.S. cities where NOPA members operate, not actual facilities.

#### MICHIGAN (2)

- Ithaca, MI ZFS
- Zeeland, MI ZFS

#### **MINNESOTA (6)**

- Dawson, MN Ag Processing Inc
- Fairmont, MN CHS Inc.
- Hallock. MN CHS. Inc.
- Mankato, MN ADM and CHS Inc.
- · Red Wing, MN ADM

#### **MISSOURI (4)**

- Deerfield, MO ADM
- Kansas City, MO Cargill, Inc.
- Mexico, MO ADM
- St. Joseph, MO Ag Processing Inc

#### NEBRASKA (3)

- Fremont, NE ADM
- Hastings, NE Ag Processing Inc
- Lincoln, NE ADM

#### NORTH CAROLINA (3)

- Cofield, NC Perdue AgriBusiness
- Fayetteville, NC Cargill, Inc.
- Raleigh, NC Cargill, Inc.

#### NORTH DAKOTA (3)

- Enderlin, ND ADM
- Velva, ND ADM
- West Fargo, ND Cargill, Inc.

#### OHIO (4)

- Bellevue, OH Bunge
- Delphos, OH Bunge
- Fostoria, OH ADM
- Sidney, OH Cargill, Inc.

#### **PENNSYLVANIA (1)**

- Bainbridge, PA Perdue AgriBusiness
- **SOUTH CAROLINA (1)** 
  - Kershaw, SC ADM

#### SOUTH DAKOTA (1)

• Aberdeen, SD - Ag Processing Inc

#### VIRGINIA (1)

• Chesapeake, VA - Perdue AgriBusiness

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# Did You Know...

Soybeans originated from China in 2853 BC.

During the U.S. Civil War, soybeans were used in place of coffee beans, which were scarce.



In 1935, Henry Ford's engineers developed a soybased plastic which was used for the frame of his cars.



Soybean oil lubricates the elevators for the Statue of Liberty.

Christened "canola" from "can" for Canada and "ola" for oil low acid, Canola was developed in the early 1970s by Canadian

plant breeders. Canola oil has the least saturated fats and the most plant-based Omega-3 fats among all common cooking oils. Even bees love canola: the yellow flowers of the canola plant are an ideal habitat and food source for honeybees.



Originally cultivated in Babylonia and prehistoric Europe, humans have been consuming flax in some form for its nutritional and medicinal value for thousands of years. Even Hippocrates, the "Father of Medicine," prescribed it to treat a variety of ailments. Flaxseed oil contains Omega 3 fatty acids (twice as much as fish) and Omega 6 fatty acids.

Safflower oil is used for preventing heart disease, including "hardening of the arteries" (atherosclerosis) and stroke. It is also used to treat fever, tumors, coughs, breathing problems, clotting conditions, pain, heart disease, chest pain, and traumatic injuries.



Native Americans developed the sunflower plant as a food source. According to a University of Arizona report, sunflower cultivation is thought have to begun over 8,000 years ago. Sunflower oil contains more Vitamin E than any other vegetable oil.

# One acre of processed soybeans =



82,368 crayons



2,500 gallons of soy milk



40,000 servings of tofu

# Oilseeds = Clean Energy

Soy and canola oils are converted into biodiesel fuel through a process called "transesterification." These vegetable oils may also be converted into renewable diesel through various processes such as hydrotreating, gasification, pyrolysis and other biochemical and thermochemical technologies. These eco-friendly biofuels burn cleaner than traditional petroleum-based fuels and help to reduce America's carbon footprint.

According to the U.S. Energy Information Administration (EIA), as of reporting in June 2021, there are five plants that produce renewable diesel in the United States, with a combined capacity of nearly 400 million gallons per year. Production is expected to grow rapidly in the coming years due to expansions at existing plants and construction of new plants.

EPA estimates that, compared to traditional petroleum-based diesel, soy- and canola-based biodiesel reduces lifecycle greenhouse gas emissions by 57 and 50 percent, respectively.

According to NBB, biodiesel, compared to petroleum-based diesel, also lowers particulate matter by 47 percent and reduces hydrocarbon emissions by 67 percent. And, for every unit of fossil energy it takes to produce biodiesel, 3.5 units of renewable energy are returned, the best of any U.S. fuel.

# Feedstock Inputs to U.S. Biodiesel Production

(2020 TOTAL: 13.6 BILLION LBS)



Source: EIA Monthly Biodiesel Production Report, February 2021

# Processors are Vitally Important to the Oilseed Industry Value Chain

# NOPA member processing facilities play a critical role in the oilseed industry value chain by connecting upstream agricultural producers with downstream consumers.

Decisions into which market a grower should sell his crop are complex and generally determined by location, the size of the operation and the prices being paid by each market outlet. For example, U.S. soybean growers generally sell their crops to elevators, soybean processors, food processors or directly to the export market. Additionally, bean exports may be transported through elevators as beans or sent to processing plants to become meal and oil before being moved by rail, truck or barge to export grain terminals located in the Pacific Northwest, the Gulf of Mexico or the East Coast. Most soybean processing plants are designed and maintained to operate 24/7 utilizing three shifts for approximately 345 days a year.

# NOPA members process nearly 50% of all soybeans grown in the U.S.

The U.S. Department of Agriculture forecasts for Marketing Year (MY) 2019/20 that the domestic soybean crush will amount to about 48.4 percent of total use of U.S. soybeans, with almost an identical percent going to the export market. The remaining three percent goes to seed production with a fraction for residual use. Thus, almost one-half of the U.S. soybean crop is purchased by domestic crushers—the rest is mainly exported to over 50 other countries to be processed into meal and oil.

Of the soybean meal that is projected to be used in MY 2019/20, over 70 percent will be consumed in the U.S., largely by poultry and pork producers. The remainder will be used in other livestock feeds and 27 percent of the U.S. soybean meal will be exported to over 60 foreign countries.

With respect to soybean oil, 54.3 percent of total usage for MY 2019/20 will go to food, feed and industrial uses, while approximately 34.4 percent will be used for domestic biodiesel and renewable diesel production. The remaining 11.3 percent will be exported to almost 40 countries.

# NOPA members provide value-added soybean products to essential agricultural and industrial markets.

Soybean meal is a high protein vegetable product that is used by animal feed millers and the soy protein industry. Soybean meal provides the protein for these animals and is fed mostly to poultry and hogs. The soy protein industry uses meal to produce protein concentrates and soy protein isolates used for human consumption. Soybean meal in the U.S. is sold to animal feed mills, aquaculture operators, feed lots, soy protein producers and the export market.

Soybean oil, the other processing by-product, is a vegetable oil used in cooking, biodiesel production and making of biodegradable plastics and adhesives. Processed oil, commonly referred to as crude soybean oil, is sold to refiners, food processors with refineries, biodiesel refiners and industrial markets. Refiners buy the crude oil and further refine it into soybean oil that can be bottled and sold to food processors and used in foods like mayonnaise or salad dressings. Biodiesel producers also use soybean oil as a feedstock and industrial companies use it to produce biodegradable plastics, adhesives and other industrial products.

Many NOPA members have co-located processing plants and refineries. This allows them to sell refined oil products directly to food processors and customers for frying and baking, as well as crude oil to biofuel refiners and industrial manufacturers.

## NOPA facilitates coordinated partnerships across the oilseed processing industry value chain.

NOPA's members and their professional staff are often either leading the charge or providing able assistance on a range of policy matters and initiatives to promote the oilseed processing industry's interests. Continual engagement with the various industry segments on federal regulatory, legislative and trade issues is key to NOPA's success. Our partners include domestic growers and end-users, such as livestock and poultry producers, consumer-branded companies, and biodiesel distributors as well as countless industry suppliers.

# **U.S. Oilseed Processing Value Chain**





TRANSPORT MODES: TRUCK/RAIL

# PROCESSORS



TRANSPORT MODES: TRUCK/RAIL/BARGE

# NOPA MEMBERS



### OILSEED PRODUCTS



### ANIMAL FEED

Hulls and meal used in animal feed for livestock, pet food, and aquaculture – gums used as fat additives in animal feed

### FOOD

Flour used in human foods and as a protein source in a variety of products intended for human consumption

Crude vegetable oil may be refined for use in food products (frying/baking/ salad dressings) – lethicin used as a texturizer in a variety of products intended for human consumption



#### INDUSTRIAL USES

Refined oil products are used in industrial applications such as plastics, fibers, inks, and wax



BIOFUELS

Vegetable oil used as a feedstock

production

for U.S. biodiesel and renewable diesel



#### TRANSPORT MODES: TRUCK/RAIL/MARINE (BARGES & TANKERS)

**Domestic Markets** 

Exports

# **Soybean Processing Basics: Operations**

NOPA members produce meal and oil from oilseeds through a solvent extraction process, employing modern technologies to meet food safety and federal permitting requirements and ensure worker safety. Below is a standard flow chart that illustrates the various stages of a soybean as it journeys through a processing plant to become meal and oil.



# **Soybean Processing Basics: Products**

While most soybean production ends up as components for animal feeds, a notable and growing percentage of the product is used in consumer goods and industrial applications.

Soybean Meal

**FEED USES:** Poultry Feed, Swine Feed, Cattle/Dairy Feed, Aquaculture, Fish Feed, Pet Foods, Fox/Mink Feed

#### Loose, Ground or Pelleted Hulls

Animal Feed, Filler Material

Soy Protein Isolates / Soy Flours / Textured Flours / Textured Concentrates / Soy Protein Concentrates

**EDIBLE USES:** Baby Food, Bakery Ingredients, Beer & Ale, Candy Products, Cereals, Coffee Creamers, Crackers, Diet Food Products, Grits, Hypo-Allergenic Milk, Meat Products, Noodles, Powdered Beverages, Prepared Mixes, Sausage Casings, Yeast

**INDUSTRIAL USES:** Adhesives, Analytical Reagents, Antibiotics, Asphalt Emulsions, Binders - Wood/Resin, Calf Milk Replacers, Cleansing Materials, Cosmetics, Fermentation Aids/Nutrients, Films for Packaging, Inks, Leather Substitutes, Paints - Water Based, Paper Coatings, Particle Boards, Pesticides/Fungicides, Pharmaceuticals, Plastics, Polyesters, Textiles

### **Biofuels / Food Additives / Dietary Supplements**

**EDIBLE USES:** Coffee Creamers, Cooking Oils, Margarine, Mayonnaise, Powdered Milks, Salad Dressings, Salad Oils, Sandwhich Spreads, Shortenings

**INDUSTRIAL USES:** Anti-Corrosion Agents, Anti-Static Agents, Biofuels, Caulking Compounds, Core Oils, Disinfectants, Dust Control Agent, Electrical Insulation. Epoxies, Fungicides, Inks-Printing, Linoleum Backing, Lubricants, Metal-Casting/Working, Oiled Fabrics, Paints, Pesticides, Pharmaceuticals, Plasticizers, Protective Coatings, Putty, Soap/Shampoo/Detergents, Solvents, Vinyl Plastics, Wallboard, Waterproof Cement

#### Lecithin

**EDIBLE USES:** Emulsifying Agents — Bakery Products, Candy, Chocolate, Coatings; Nutritional Uses — Dietary, Medical

INDUSTRIAL USES: Anti-Foam Agents — Alcohol, Yeast; Anti-Spattering Agent — Margarine; Dispersing Agents — Inks, Insecticides, Paint; Stabilizing Agent — Shortening; Wetting Agents — Calf Milk Replacers, Cosmetics

# Securing a Future for the U.S. Oilseed Industry

The oilseed processing industry remains vigilant ensuring it is well equipped to respond to, and proactively address, current and future opportunities and challenges confronting America's essential food, feed and fuel sectors.

### **Plan-Driven**

NOPA prioritizes industry's needs and the role it serves in promulgating federal legislative and regulatory policies that promote economic growth, operational excellence and a thriving oilseed processing industry. NOPA's strategic plan defines a clear approach to identifying and addressing key issues impacting America's oilseed processors. Importantly, it provides a framework that is nimble enough to guide the organization through change as world events and circumstances affect crushing operations.

### **Member-Led**

NOPA members remain ready to work with legislators, policymakers, regulators and our value chain partners, as well as others, to ensure industry's success. NOPA's members play a significant role in setting annual priorities and project objectives for the organization. Under the leadership of NOPA's Board of Directors, member-led committees, subcommittees and advisory groups, NOPA's dedicated staff will continue to engage on federal legislative and regulatory policy initiatives as well as global trade issues that significantly impact oilseed value chain operations. NOPA will also seek to expand its membership so that it can better identify industry needs and develop resources that promote a thriving operating environment for the industry.

### **Team-Oriented**

NOPA's member representatives and staff often rely on other allied industry leaders to enhance our advocacy efforts and proactively pursue opportunities for collaboration. To that end, NOPA seeks to connect industry leaders with federal policymakers, elected officials, value chain partners and others as we continue to build strong alliances with national oilseed organizations and develop deeper ties with our meat and livestock customers as well as consumer-facing groups. NOPA's aim is to leverage our collective resources to provide the oilseed value supply chain—from the growers to the retailers and exporters with the strongest voice possible to influence federal legislative, regulatory and trade policies and eliminate barriers to our collective success.

# NOPA STAFF

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