



The Critical Role of Seed Oils in U.S. Agriculture

Intro

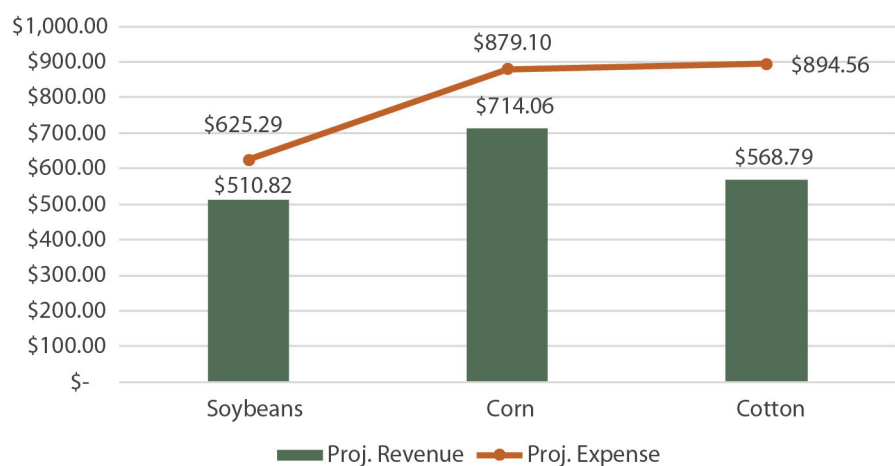
Officials at the U.S. Department of Health and Human Services have raised concerns about the potential health effects of consuming seed oils, despite an existing body of research supporting their nutritional value. While that health debate continues, this article focuses on the potential economic repercussions of a proposed ban on seed oils derived from row crops, especially those produced in Arkansas. The American Soybean Association recently released an economic modeling study by World Agricultural Economic & Environmental Services (WAEES) examining the nationwide effects of removing seed oils — including soybean, canola, corn, cottonseed and sunflower — from the human food supply. Although the study is national in scope, its findings have significant implications for Arkansas, a state with strong ties to both row-crop farming and livestock production. A policy change of this scale could disrupt major sectors of the state's economy, impacting crop prices, food costs, livestock feed availability, and renewable fuel markets.

Current Climate

All three commodities discussed in this article are projected to operate at a loss, with expenses exceeding revenues per acre. Soybeans show the narrowest margin, with projected expenses of \$625.29 per acre against revenues of \$510.82, a shortfall of more than \$114 per acre. Corn and cotton fare even worse, with per-acre losses exceeding \$165 and \$325, respectively. In this tight margin environment, even small disruptions, such as a decline in demand for a specific end-use like edible oil, could further widen the gap between revenue and expenses. Losing even a minor market shrinks demand, depresses prices and threatens already-fragile farm profitability. For growers operating on the edge, preserving all available market channels is essential to remaining viable.

2024 Breakeven (Per Acre)

Fig. 1



Soybean Oil

In 2024, U.S. soybean production totaled approximately 4.37 billion bushels, with Arkansas contributing 166 million bushels in 2024, almost 4% of the national total. This makes Arkansas the largest soybean-producing state in the southern U.S., and 10th nationwide. Soybeans are also the most significant row crop, by both acreage and value in Arkansas. In 2024, Arkansas farmers planted over 3 million acres of soybeans, generating more than \$1.7 billion in farm-level value, according to USDA data, surpassing all other crops in the state. With that in mind, a ban on seed oils for human consumption would impact soybean production more than any other crop, affecting not only Arkansas but the entire U.S.

The Value of U.S. Soybean Oil Production

2023/24 Marketing Year	Arkansas	Nationally
Soybeans Destined For Oil Production	14.6 Million Bushels	45.1 Million Bushels
Monetary Value Of Those Soybeans	\$187.1 Million	\$5.6 Billion
Monetary Value Of Processed Oil	\$422.8 Million	\$12.8 Billion

Source: American Soybean Association

As seen in Figure 2, 50% of U.S. soybean production is crushed domestically, 45% is exported as whole beans, and 5% is used for seed and other uses. Soybeans are made up of approximately 80% meal that is high in protein and primarily used in animal feed, and 20% oil, which is used primarily for human consumption. Despite the state’s high production, Arkansas has just one soybean crush facility and it is privately owned, with no data on processing volume publicly available. However, having only one facility in the state means most Arkansas-grown soybeans are exported rather than processed locally.

The WAEES study estimates that a seed oil ban would lead to a 3.4% average decline in U.S. soybean prices over the next decade and a 6.7% reduction in net returns to farmers. Nationally, soybean acreage could fall by as much as 3 million acres by 2036. For Arkansas growers, who have already seen soybean prices drop from \$12.80 per bushel in 2023 to around \$10 in 2024, the outlook would be especially difficult. Lower prices and decreased demand for soybean oil would reduce profitability and may prompt farmers to pivot to other crops, introducing further economic uncertainty.

With the removal of seed oils from the food supply, consumers would also be affected. Manufacturers would need to switch to alternatives like palm, olive, or animal fats, many of which are imported and more expensive. The WAEES report projects an average 42.8% increase in per capita spending on vegetable oils and fats, with the cost increases likely extending across a wide range of food products. Lower- and middle-income families could feel the brunt of these price hikes, while manufacturers may be forced to reformulate products, affecting flavor, texture, and nutritional value.

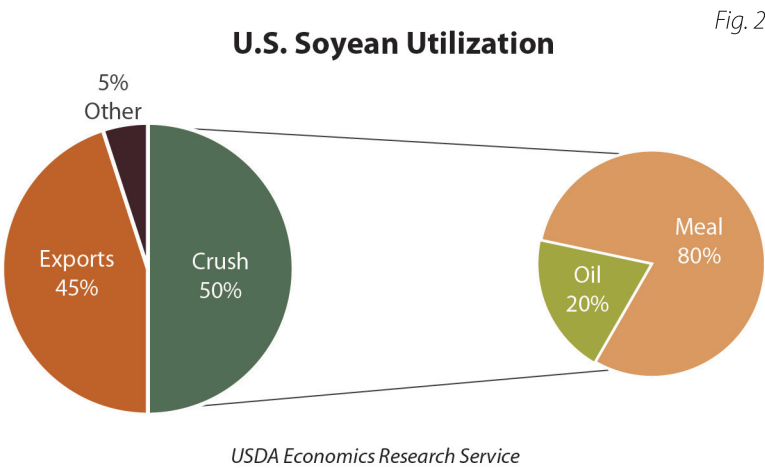


Fig. 2

Livestock production, particularly poultry, would face significant challenges stemming from reduced availability of soybean meal, a direct result of lower soybean crushing volumes triggered by decreased demand for soybean oil. Soybean oil is typically the higher-value product and serves as the primary market driver that makes soybean processing economically viable. When demand for soybean oil falls, as would occur under a seed oil ban, processors would have less financial incentive to crush soybeans. That change could significantly impact the animal feed industry. As crushing activity declines so does the supply of soybean meal. This poses a particular threat to poultry-heavy states like Arkansas, where soybean meal is the dominant protein source in animal feed rations. A reduced supply would drive up feed costs across the livestock sector, squeezing producer margins and increasing the cost of meat, eggs, and dairy for consumers. In response, some producers could be forced to adopt lower-quality or more expensive feed alternatives, which can negatively impact animal health, growth rates, and overall productivity.

The biofuel and renewable energy sectors would also feel the effects of a seed oil ban. As of 2024, more than 30% of U.S. soybean oil is used in biodiesel and renewable diesel production. If domestic crushing slows due to reduced food oil demand, the supply of soybean oil for fuel could decline sharply, tightening feedstock availability. Renewable fuel producers may then face higher costs or be forced to rely on alternative inputs such as used cooking oil, animal fats, or imported palm oil, each with its own limitations and challenges. These disruptions could slow production, deter new investment and hinder national efforts to reduce carbon emissions in transportation.

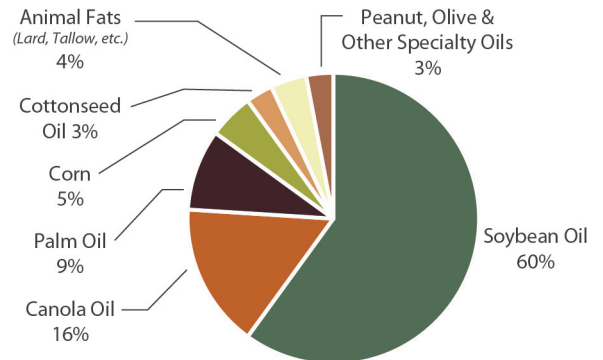
Corn Oil

Edible corn oil plays a modest but important role in the U.S. corn market. While soybeans dominate the edible food oil sector, corn holds a smaller share, estimated at 8.6% of the edible food oil market. This translates to about 1.3 billion bushels of corn used to produce edible corn oil. While precise figures on the volume of corn used exclusively for edible oil are not readily available, national data show that the majority of U.S. corn is allocated in to four categories.

Although corn oil represents only a portion of the broader food-grade corn market, roughly 10% of total U.S. corn use, it serves as a critical component in the food and cooking oil industries. Even small changes in demand for edible corn oil can affect overall corn prices,

U.S. Food Oil & Market Share

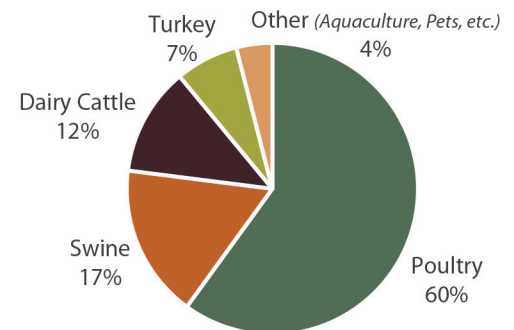
Fig. 3



USDA National Agricultural Statistics Service

U.S. Soybean Meal Utilization by Livestock Sector

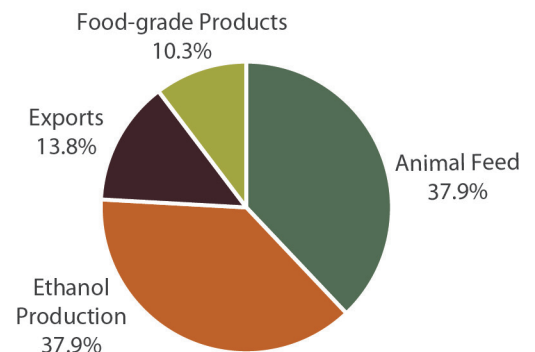
Fig. 4



2022 Soybean Meal Assessment

U.S. Corn Utilization

Fig. 5



particularly because corn is a price-sensitive commodity.

Arkansas is a significant corn-producing state, having harvested about 480,000 acres in 2024, which produced more than 89 million bushels. While the bulk of this corn is used for livestock feed, ethanol, and export, a portion ultimately contributes to corn oil production, primarily after being shipped to processing facilities out of state.

Based on national utilization rates, more than 7 million bushels of Arkansas-grown corn contribute to edible corn oil production. This represents a production value of about \$34 million, a noteworthy contribution to the state’s ag economy despite the lack of local oil processing infrastructure.

Corn oil is extracted from the germ of the kernel, which makes up 3–4% of its total weight. The oil is most often recovered through wet milling, which is not commonly available in Arkansas. Therefore, Arkansas corn destined for oil extraction is typically processed in other states. Some edible-quality oil may also be recovered as distillers corn oil (DCO) from ethanol byproducts, though this is more commonly used in industrial and animal feed markets.

Edible corn oil may not lead the market in volume, but its demand helps stabilize and diversify overall corn usage. If consumer or processor demand for corn oil were to decline, the ripple effects could be felt across the supply chain:

- **Lower ethanol co-product value:** DCO sales help support ethanol plant profitability. Declining oil values may lead to reduced bids for corn.
- **Surplus corn supply:** Even a 1–2% drop in corn oil demand nationally could leave tens of millions of bushels without a clear market, placing downward pressure on corn prices.
- **Price volatility:** Corn prices are highly sensitive to supply-and-demand shifts. Reduced demand for edible oil can affect local grain elevator bids, impacting farmer income.

Edible corn oil may not account for a significant portion of total U.S. corn usage, but its influence on the market should not be underestimated. For Arkansas producers, the indirect value of corn oil helps support prices and market stability. Maintaining strong consumer demand for food-grade corn oil is essential not only for the cooking oil industry but also for the broader health of the corn economy, particularly in regions like Arkansas, where every market outlet counts.

Cottonseed Oil

While cottonseed is a byproduct of cotton lint production, the sale of cottonseed after ginning provides significant income to cotton farmers, subsidizing the value of the lint. The proceeds from the sales of cottonseed are returned to producers through reduced ginning costs and potential gin rebates. The value of cotton lint and cottonseed per planted acre in Arkansas are estimated in the chart below.

Gross Value of Production: Dollars per Planted Acre	2021	2022	2023
Primary Product: Cotton Lint	\$865.73	\$883.23	\$926.03
Secondary Product: Cottonseed	\$235.95	\$348.15	\$242.24
Total Gross Value of Production	\$1,101.68	\$1,231.38	\$1,168.28

**Source: National Cotton Council-Cotton Production Costs and Returns*

On average, the United States crushes 30–40% of all cottonseed production each year, resulting in the production of approximately 400 million pounds of oil. Over 90% of that oil is used domestically. Cottonseed oil is considered a

premium oil by the food industry and is primarily used in prepared food production.

Cottonseed is approximately 16% oil, 45% meal, 27% hulls that can be sold for animal feed, and 8% linters. Linters are small cotton fibers and a source of cellulose, and used to produce plastics, rayon, cosmetics and paper.

Like other row-crop commodities, the cost of production for cotton has been near record highs for several years while the price paid for cotton has moved to the lowest levels in more than five years. Arkansas cotton farmers are estimated to have lost \$91.70/acre for the 2022 crop, \$168.26/acre for the 2023 crop, and \$325/acre for the 2024 crop, resulting in three-year losses of over \$500/acre if realized. Losing a primary market for cottonseed would be another blow to a struggling industry.

Arkansas is home to Planter's Cotton Oil Mill, a cooperative with over 20 gin members from Arkansas, Louisiana, Missouri, and Tennessee. Planter's crushes cottonseed in Pine Bluff and sells the oil to food manufacturers across the country. They sell whole cottonseed, meal and hulls to dairy operations all over the country.

Conclusion

A national ban on seed oils for human consumption would create broad and deeply disruptive consequences for Arkansas agriculture and the state's rural economy. Soybeans, corn, and cottonseed play a critical role in supporting farm income, local agribusinesses, and downstream industries including livestock production and renewable fuels. The economic modeling provided by WAEES makes clear that such a policy shift would lead to lower commodity prices, reduced profitability, and weakened demand for key crop outputs, especially oils and meals tied to food, feed, and fuel sectors.

For a state like Arkansas, where soybeans are the most valuable crop and where cottonseed and corn oil contribute meaningfully to producers' bottom lines, the ripple effects would extend far beyond the farm gate. Livestock operations would see feed costs rise due to diminished soybean meal supplies, while consumers would face higher food prices due to manufacturers having to switch to imported and/or more expensive alternatives like palm, olive, or animal fats. Additionally, renewable fuel producers would be challenged by a tightening supply of domestic feedstocks. In short, a ban on seed oils would threaten the stability and competitiveness of Arkansas's agricultural economy when producers are already grappling with volatile markets and high input costs.



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