



# **Oil Crops Outlook: November 2024**

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## U.S. Soybean Production Falls on Lower Yields

This month, USDA, National Agricultural Statistics Service (NASS) in its *Crop Production* report reduced the 2024/25 national average soybean yield to 51.7 bushels per acre from the previous month's forecast of 53.1 bushels per acre. The lower yield forecast has reduced the 2024/25 U.S. soybean production estimate by 120.7 million bushels to 4.5 billion bushels. Soybean crush is lowered 15.0 million bushels to 2.4 billion bushels. Exports are also reduced to 1.8 billion bushels on smaller production and sales to date. With lower soybean production only partially offset by lower usage, soybean ending stocks for marketing year (MY) 2024/25 are forecast at 470 million bushels. The 2024/25 U.S. season-average soybean price forecast is unchanged this month and stands at \$10.80 per bushel.

Global soybean production for MY 2024/25 is forecasted at 425.4 million metric tons, 3.5 million metric tons lower than last month's forecast. Reductions to the U.S. and India's soybean production contributed to this change. The global soybean trade forecast is raised this month as higher exports from Brazil, Canada, and Benin more than offset a reduction of U.S. soybean exports. Global soybean crush is forecast lower due to lower U.S. crush partially offset by higher crush in Pakistan. Global soybean ending stocks for MY 2024/25 are reduced this month by 2.9 million metric tons to 131.7 million metric tons, but the forecasted stocks are 19.3 million metric tons higher than estimated soybean stocks for MY 2023/24.

# **Domestic Outlook**

## Lower Soybean Yield Impacts 2024/25 Stocks Outlook

USDA, NASS's November *Crop Production* report forecasts the MY 2024/25 soybean yield at 51.7 bushels, down 3 percent from last month's forecast. Yields were reduced this month in several soybean growing States: Illinois, Iowa, Kansas, Kentucky, Minnesota, Missouri, Mississippi, South Dakota, Tennessee, and Wisconsin. This was partially offset with higher soybean yields in Indiana, Georgia, North Carolina, and Pennsylvania. The estimate of U.S. harvested area is unchanged at 86.3 million acres, so the yield reduction trims the 2024/25 forecast of the soybean crop by 120.7 million bushels to 4.5 billion bushels. As of November 3, 94 percent of the U.S. soybean harvest had been completed, ahead of the 5-year average of 85 percent. October was warmer than normal for most of the country. Large parts of the upper Midwest, Great Plains, Rockies, and Southwest recorded temperatures 6°F or higher above normal for the month.

The MY 2024/25 soybean export forecast is lowered this month by 25 million bushels to 1.83 billion bushels on lower supply and sales to date. As of October 31, USDA, Foreign Agricultural Service (FAS) reported U.S. outstanding soybean sales at 15.6 million metric tons, 3.3 million metric tons higher than a year earlier but down 37 percent from the prior 3-year average of 24.6 million metric tons. With lower U.S. exports but higher global import demand—particularly from Pakistan—Brazil's export forecast for MY 2024/25 is raised 0.5 million metric tons to a record-high 105.5 million metric tons.

The domestic soybean crush forecast for MY 2024/25 is reduced by 15 million bushels this month to 2.4 billion bushels on the lower soybean meal domestic disappearance and lower soybean meal exports. The soybean meal export forecast is reduced this month by 0.1 million short tons to 17.4 million short tons. If this forecast materializes, U.S. soybean meal exports would reach a new record. Domestic soybean meal demand is reduced on lower prospects for domestic livestock growth. The soybean meal price forecast for MY 2024/25 is unchanged this month and stands at \$320.00 per short ton.

The U.S. domestic soybean oil supply forecast is lowered this month by 251 million pounds to 30.3 billion pounds on lower carry-in from MY 2023/24 and lower production. Partially offsetting is higher soybean oil imports, raised this month to 500 million pounds.

With unchanged soybean oil demand, U.S. soybean oil ending stocks for MY 2024/25 are forecast at 1.5 billion pounds, 251 million pounds lower than last month's forecast and a similar level as in MY 2023/24. The seasonal average soybean oil price forecast for MY 2024/25 is raised to 43 cents per pound on a tighter global vegetable oil stocks outlook.

# Soybean Meal and Soybean Oil Balance Sheet Estimates for MY 2023/24 Almost Complete

The latest USDA, NASS *Fats and Oils: Oilseed Crushings, Production, Consumption and Stocks* report finalized soybean meal and soybean oil production and stocks. Soybean meal production for MY 2023/24 totaled 54.1 million short tons, slightly lower than last month's forecast on marginally lower crush. In September 2024, U.S. soybean processors processed a record high soybean volume for the month at 186.5 million bushels of soybeans, up nearly 19.0 million bushels from August and up 12.0 million bushels from the same period last year. The slightly lower soybean meal production was offset by higher soybean meal imports that totaled 687,000 short tons for MY 2023/24. Overall, the total soybean meal supply for MY 2023/24 was 3,600 short tons higher than last months' forecast. USDA, NASS reported the soybean meal ending stocks at the end of September at 453,000 short tons. Domestic soybean meal disappearance finalized at 38.64 million short tons, marginally down compared with last month's forecast. With September soybean meal exports at 1.24 million short tons, the annual soybean meal exports for MY 2023/24 totaled 16.11 million short tons.

The soybean oil production for MY 2023/24 is at 27.13 billion pounds, 14.6 million pounds higher than last month's forecast on the higher soybean oil yield. Soybean processors were able to extract 11.8 pounds per bushel of soybean. USDA, NASS indicated that soybean oil stocks stood at 1.5 billion pounds at the end of September 2024, 106 million pounds lower than same period last year. With the higher supply and lower ending stocks, domestic soybean oil disappearance for MY 2023/24 is 139.6 million pounds higher at 27.2 billion pounds. Soybean oil use for food, feed, and other industrial use is raised this month by 139.6 million pounds. The soybean oil demand for this category also captures the ending soybean oil stocks stored at the end users (i.e., food and biofuels facilities). Soybean oil use for biofuels is unchanged at 13.0 billion pounds. The U.S. Department of Energy's U.S. Energy Information Administration's (EIA) *Feedstocks Consumed for Production of Biofuels* report showed that 1.2 billion pounds of soybean oil were used in biofuels during August 2024. For the October 2023–August 2024

period, soybean oil use in biofuels totaled 11.9 billion pounds, up 5 percent from the same period during MY 2022/23.

### Strong Canola Use is Forecast to Continue in MY 2024/25

In MY 2024/25, canola exports are forecast at 496 million pounds, up nearly 100 million pounds driven by strong shipments in the first quarter of the marketing year. According to the U.S. Department of Commerce, Bureau of the Census, canola exports from June 2024 through September 2024 were at 229 million pounds, over double the same period last year. Canola imports are also forecast to increase to 714 million pounds. Crush and residual use are both lowered and ending stocks are left unchanged at 500 million pounds. Canola season-average farm price is lowered to \$20.50 per hundredweight due to lower prices in the first quarter averaging \$20.00 per hundredweight.

Canola oil production is unchanged at 2.0 billion pounds, up 4 percent from last year's revised estimate. MY 2023/24 canola oil and meal production and stocks were finalized this month according to the USDA, NASS crush report. MY 2023/24 canola oil production was lowered to 1.9 billion pounds. Canola oil stocks for MY 2023/24 were reported at 121 million pounds, the lowest since MY 2003/04. With lower production and lower carry out stocks, canola oil domestic use in MY 2023/24 is revised down 0.1 billion pounds to 9.1 billion pounds. Canola oil food and other use is lowered 0.2 billion pounds to 4.7 billion pounds and is partially offset by higher biofuel use to 4.4 billion pounds. According to EIA's *Monthly Biofuel Capacity and Feedstocks Update* report, canola oil used for biofuel in August 2024 was 440 million pounds, 58 percent higher than August 2023 (figure 1). Canola oil use in biofuels totaled 4.0 billion pounds from October 2023 through August 2024.





Note: The netterned Contember 2024 is

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Source: USDA, Economic Research Service using data from U.S. Department of Energy, U.S. Energy Information Administration.

This strong use of canola oil for biofuel production is forecast to continue in MY 2024/25. Use of canola oil in biofuel production is forecast to increase to 5.0 billion pounds, up 0.2 billion pounds from last month. The canola oil for food and other use is forecast down to 4.9 billion pounds, which results in ending stocks being reduced to 141 million pounds, but this is an increase from the MY 2023/24 stocks.

## Peanut Production is Raised on Higher Yields

The USDA, NASS *Crop Production* report forecast peanut production up to 6.5 billion pounds on higher yields and unchanged harvested area. As of November 3, 73 percent of peanuts were harvested which is 4 percentage points behind the 5-year average but has caught up from being behind 10 percentage points last month due to heavy rains from the hurricanes. The peanut yield forecast is at 3,723 pounds per acre, up 1 percent from last month's forecast on the higher yields in Georgia and South Carolina. With higher production and unchanged use categories, peanut stocks are raised 55 million pounds to 1.6 billion pounds. Seasonal average price for peanuts is forecast at 26.5 cents per pound, unchanged from last month's forecast.

## International Outlook

# Pakistan Authorizes Imports of Genetically Modified Soybeans

Pakistan's soybean import forecast for MY 2024/25 is raised this month by 0.3 million metric tons to 1.5 million metric tons as Pakistan's Government authorized the imports of genetically modified soybeans. Furthermore, the soybean import estimate for MY 2023/24 is revised to 0.8 million metric tons, up 0.3 million metric tons from last month's forecast. Pakistan imported more soybeans from non-traditional soybean exporting countries like Nigeria, Benin, and Togo in MY 2023/24 (figure 2).



Marketing year (Oct.-Sep.)

MY = Marketing year. ROW = Rest of world. Est. = Estimate. Asterisk (\*) denotes forecast. Note: 2023/24 uses Pakistan's reported imports while 2021/22 and 2022/23 uses derived trade from major exporters. Pakistan's latest available trade data is through April 2024. Source: USDA, Economic Research Service using data from Trade Data Monitor, LLC.

Pakistan's soybean imports in MY 2022/23 and 2023/24 were significantly impacted by the ban on genetically modified soybeans that Pakistan's Government imposed in October 2022. Before the ban, Pakistan had imported more than 2.0 million metric tons annually, mostly from the United States and Brazil. With the lower soybean imports in the last 2 years and the decline in the soybean crush, domestic feed availability declined significantly, impacting the livestock sector, especially poultry.

> **6** Oil Crops Outlook: November 2024, OCS-24k, November 13, 2024 USDA, Economic Research Service

At the end of October 2024, Pakistan's Government approved the import of genetically modified soybeans and granted import licenses to 39 companies. This decision will likely help poultry producers maintain a steady soybean meal supply and rebuild the poultry sector. Pakistan's soybean meal equivalent demand for MY 2024/25 is forecast to increase by 7 percent from MY 2023/24 but oilseed meal demand is still below the level before the ban.

# Special Article: U.S. Olive Oil Consumption in the 21st Century

#### Bryn Swearingen, Catharine Weber, and Maria Bukowski

## Summary

Olive oil consumption in the United States has grown in the 21st century due to its healthy nutrition attributes and unique flavor and taste. The United States is the second largest consumer of olive oil in the world behind the European Union (EU) and the leading global importer of olive oil. Domestic production in the United States covers only about 2 percent of domestic consumption. In the last 2 years, olive oil prices have been at a record high following drought restricted production in the EU. Despite higher prices in MY 2022/23 and MY 2023/24, the United States continued to import olive oil and only marginally decreased consumption. This special article looks at production, consumption, and trade trends in the U.S. olive oil market and how trade flows have been impacted in recent years.

## Olive Oil Consumption Rises in Popularity

Olive oil consumption in the United States has grown from 28,000 metric tons in 1970/71 to over 400,000 metric tons in the 2020s (figure 1sa) and has accounted for just under 5 percent of total vegetable oils used for food in the United States. In marketing year (MY) 2024/25 (October-September), the United States is forecast to be the second largest consumer of olive oil, accounting for 13 percent of global consumption in the last decade (2014/15-2023/24). U.S. olive oil consumption has trended upwards since the mid-1990s due to its healthy nutrition attributes. Olive oil has more monounsaturated fats compared with other vegetable oils. In addition, olive oil is a less processed oil retaining more antioxidants and vitamins compared with vegetable oils. Furthermore, olive oil is valued for its unique flavor and taste, and it is not easily substitutable. With such unique attributes, olive oil is a premium oil over other vegetable oils. The popularity of olive oil as a culinary ingredient and its association with a "Mediterranean diet" has contributed to growing consumption (U.S. International Trade Commission (USITC), 2013). As a result of growing consumption both in the United States and globally, global olive oil production has more than doubled since MY 1990/91, largely driven by higher production in the EU. The United States is not a major olive oil producer as it is ranked 14th in global olive oil production.

#### Figure 1sa U.S. olive oil domestic consumption, MY 1970/71–2024/25

Thousand metric tons



MY=Marketing year. Asterisk (\*) denotes forecast.

Source: USDA, Economic Research Service using USDA, Foreign Agricultural Service, *Production, Supply and Distribution* data.

## U.S. Olive Oil Production Grows but Remains Limited

The majority of commercial olive production in the United States occurs in California. The cultivated olive tree (*Olea europaea*) is well suited to the Mediterranean-like climate in California's Central Valley with mild winters and long, hot, dry summers. In 2023, California olive bearing acreage totaled 40,000 acres with about 30 percent of acreage dedicated to table olive production and the larger remaining share was planted for olive oil production. In the past two decades, an increase in planted acreage of high-yielding olive oil type cultivars and a decrease in acreage planted for table olives has represented a fundamental shift in California's olive industry that was almost exclusively producing table olives throughout the 20th century.

About 70 percent of California's oil olive acreage implements a super-high-density (SHD) production system according to University of California, Davis (Flynn et al., 2024). Compared with more traditional production systems, the SHD orchards are characterized by high-density plantings, higher yields, suitability for mechanical harvesting and pruning, and higher establishment costs. The SHD system was pioneered in Spain in the 1990s and the most popular olive oil tree variety (Arbequina olives) in California's SHD olive orchard is native to Spain (Flynn et al., 2024).

This increase in bearing acreage for oil type olives coincided with a sharp increase in the share of California's olive production crushed for oil. This share increased from less than 10 percent in 2007 to nearly 70 percent in 2023 (figure 2sa). During this period, production of olives crushed for oil increased from 12,000 short tons to over 83,000 short tons in 2023. U.S. olive oil production volume increased from 2,000 metric tons in the early 2000s to 12,000 metric tons in MY 2023/24.<sup>1</sup> However, this increase in domestic olive oil production still represents a small share of domestic consumption (less than 2 percent) with imports continuing to account for most of the available supply. While domestic olive oil production reached 14,000 metric tons in 2015/16 through 2017/18, annual production over the past five seasons had fluctuated between 7,000 and 12,000 metric tons. Year-over-year changes in domestic olive oil production vary due in part to the alternate bearing nature of olive trees. For more information, see the March 2024, USDA, ERS *Fruit and Tree Nuts Outlook* report.



Astrisk (\*) denotes forecast.

Source: USDA, Economic Research Service using USDA, National Agricutlural Statistics Service, *Noncitrus Fruits and Nuts Summary* data; and USDA, Foreign Agricultural Service, *Production, Supply and Distribution* data.

### U.S. Olive Oil Imports Rise to Meet Olive Oil Demand

With limited domestic production, the United States has relied on olive oil imports to meet the growing demand. U.S. olive oil imports rose from 100,000 metric tons in MY 1990/91 to a record-high 410,000 metric tons in MY 2021/22. The increase in U.S. olive oil imports in the past two decades has been driven by virgin olive oils (includes both extra virgin and virgin) as opposed to refined olive oil or olive oil blends (figure 3sa). U.S. olive oil imports are categorized by oil extraction method, chemical composition, and quality factors. Both virgin and extra virgin

<sup>&</sup>lt;sup>1</sup> United States olive oil production is derived from olive crush statistics from the USDA, National Agricultural Statistics Service, *Noncitrus Fruits and Nuts Summary* report with an average extraction rate of 15.3 percent.

olive oils imports are obtained solely by mechanical or other physical means "that do not lead to alterations in the oil, and which have not undergone any treatment other than washing, decanting, centrifuging and filtration" (Codex Alimentarius, 2021). Compared with virgin olive oil, extra virgin olive oil is considered higher quality based on chemical composition (e.g., lower free fatty acids) and organoleptic characteristics (taste and odor). Refined olive oil is obtained from virgin olive oil. The refining process usually consists of heating the oil and, under a vacuum, pulling off all the volatile components (Vossen, 2005). Refined olive oil is usually odorless, tasteless, and colorless.

#### Figure 3sa

#### U.S. olive oil import volume by category, 2001/02–2023/24

Thousand metric tons



Note: Marketing year starts in October and ends in September of the following year. Virgin and extra virgin olive oil imports represent Harmonized System (HS) 6- digit codes 150910, 150920, 150930, and 150940. Refined olive oil imports represent HS 6- digit code 150990. Olive oil blends and pomace oil imports represent HS-4 code 1510. Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.

The smallest olive oil import category is olive oil blends and olive pomace oil reported under the Harmonized System (HS) four-digit heading 1510. Olive pomace oil is a blend of refined olive pomace oil and virgin oils (Codex Alimentarius, 2021). Olive pomace is the solid byproduct (skin, pulp, seeds, etc.) left over from olive oil extraction (Vossen, 2005). Pomace can be combined with solvents to create crude pomace oil that can be further refined and blended with virgin oils for consumption. Compared with virgin olive oils, olive pomace oil is considered a lower value product. In 2023/24, the average import value of a metric ton of extra virgin olive oil was 181 percent higher than crude pomace oil.

#### **Organic Olive Oil Imports**

In 2013, the U.S. Department of Commerce, Bureau of the Census (Census Bureau) added HS codes that distinguish between organic and conventional extra virgin and virgin olive oil imports. Extra virgin olive oil makes up the vast majority of virgin olive oil import volume for both conventional and organic (figure 4sa). The share of imported virgin olive oils by country is also similar with Italy, Spain, and Tunisia accounting for more than 80 percent of conventional and 90 percent of organic volume over the last 3 marketing years.







Thousand metric tons

Note: Marketing year starts in October and ends in September of the following year. Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.

U.S. import volume of organic olive oil peaked in 2019/20 at 74,000 metric tons, representing 26 percent of total extra virgin and virgin olive oil import volume as well as value. Since MY 2019/20, U.S. imports of organic olive oil declined for 3 consecutive marketing years with 2023/24 marking the lowest import volume since 2015/16. According to the U.S. Department of Commerce, Bureau of the Census, the U.S. import unit values indicate the organic olive oil price premium has trended down in the last 3 years as both conventional and organic olive oil prices rose to reflect the overall tighter global supply situation (figure 5sa). For extra virgin olive oil (in containers less than 18 kilograms), the organic price premium has shrunk from above 10 percent through most of the last decade (2013/14–2018/19) to closer to zero in MY 2023/24.

#### Figure 5sa

## Organic price premium shrinks: U.S import value for conventional and organic extra virgin olive oil in containers less than 18 kilograms (kg)



Note: Conventional import unit value represents Harmonized System (HS) codes 1509102050 and 1509202090. Organic import unit value represents HS codes 1509102030 and 1509202030. Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.

## U.S. Olive Oil Outlook for MY 2024/25

In MY 2022/23 and 2023/24, EU countries battled drought issues that resulted in lower supplies, especially Spain, the top olive oil producing country. Global production dropped to 2.4 million metric tons in MY 2023/24, pushing stocks down to a record-low 325,000 metric tons. U.S. unit import prices reached record-high levels of \$8,310.00 per metric ton in MY 2023/24, more than doubling over the last 5 years, due to tighter global olive oil production. With record olive oil prices, both the EU and the United States decreased consumption in MY 2022/23 (figure 6sa). Consumption in the EU dropped 18 percent from MY 2021/22 to MY 2022/23, while the United States only decreased 10 percent over the same period as the United States was able to seek alternative suppliers.



MY=Marketing year. EU = European Union. Asterisk(\*) denotes forecast. Source: USDA, Economic Research Service using USDA Foreign Agricultural Service, *Production, Supply and Distribution* data and Global Agricultural Trade Systems data.

U.S. imports of olive oil declined only slightly in MY 2022/23 but the share from the EU declined to 70 percent. Despite the loss in imports from the EU, the United States sourced olive oil from Turkey, Argentina, and the rest of the world (figure 7sa). In MY 2023/24, U.S. consumption saw 4-percent growth while the EU's consumption declined further impacted by high prices and tighter supplies. This showcases that the U.S. olive oil consumers are less price sensitive than the EU's and can source larger shipments from Tunisia, Argentina, and Chile.



#### Figure 7sa U.S. olive oil import volume by country, MY 2017/18–2024/25

MY=Marketing year. EU = European Union. ROW = Rest of world. Asterisk(\*) denotes forecast. Source: USDA, Economic Research Service using data from Trade Data Monitor, LLC.

In MY 2024/25, global olive oil production is forecast to reach 3.1 million metric tons as the EU's olive oil production is expected to recover to 2.0 million metric tons. Global stocks remain relatively tight at 506,000 metric tons due to high demand but recovered from the record low last year. With a forecasted recovery in olive oil production, prices are projected to decline, incentivizing consumption growth. The EU's domestic olive oil consumption is projected to grow 18 percent in MY 2024/25 to 1.3 million metric tons, while the United States is projected to grow 6 percent to 0.4 million metric tons. This growth in U.S. consumption is supplied by an increase in imports to 0.4 million metric tons, even with the record-high imports in MY 2021/22.

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