



Oil Crops Outlook: December 2022

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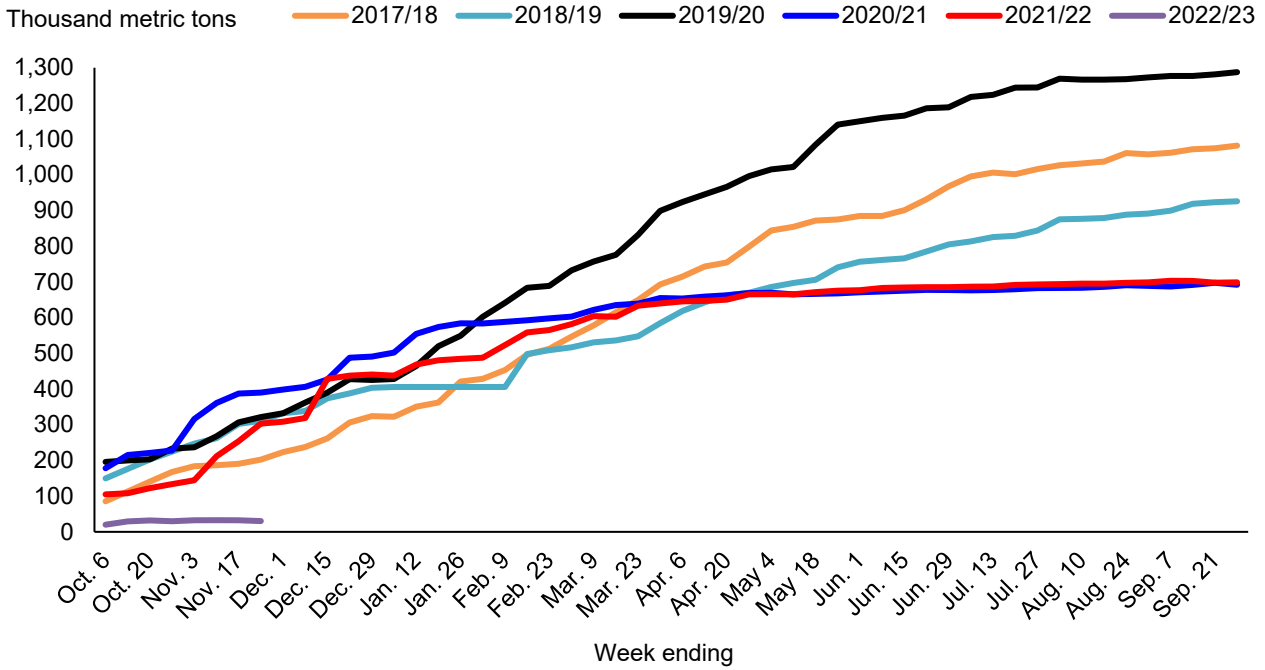
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Lower Demand for U.S. Soybean Oil Lifts 2022/23 Ending Stocks

The 2022/23 U.S. soybean balance sheet remains unchanged this month. Export and crush volumes are in line with current forecasts. Although soybean meal is off to the projected start, the opposite is true for soybean oil. Abysmal export volumes and commitments have resulted in a lower soybean oil export forecast for the 2022/23 campaign. In addition, the U.S. Environmental Protection Agency (EPA) recently released their renewable fuel obligation targets for 2023–2025. Moreover, the EPA approved and finalized a pathway for canola oil use in renewable diesel production. As a result, U.S. soybean and canola oil balance sheets are changed to nearly offset the expected impacts on domestic use. Ultimately, the soybean oil ending stocks forecast is raised to 1.9 billion pounds.

Figure 1

U.S. soybean oil export commitments



Source: USDA, Economic Research Service using data from USDA, Foreign Agricultural Service, *Export Sales*, December 9, 2022.

Domestic Outlook

Foreign Demand for U.S. Soybean Oil Continues to Weaken

No changes are made to the 2022/23 U.S. soybean balance sheet this month. Export volumes and total commitments indicate the United States is on pace to reach the current forecast that sits at just more than 2 billion bushels. Through October, processors have crushed nearly 365 million bushels of soybeans. With capacity expansions set to materialize later in the marketing year, the United States is expected to crush 2.25 billion pounds of soybeans in 2022/23.

Domestic and foreign demand for soybean meal remains strong and steady, providing support for current forecasts that remain unchanged from last month. The soybean meal price forecast for 2022/23 is revised up \$10.00 per short ton to \$410.00.

Conversely, the 2022/23 marketing year is off to an interesting start for soybean oil. Thus far, export volumes are low with a reported soybean oil export volume of 23 million pounds in October—historically low for the month. Total commitments are 90 percent lower as of December 1 than this time last year at 30,700 metric tons. From October through November, the U.S. soybean oil export price premium grew by almost 12 percent relative to Argentine export prices. Combined with a surplus of alternative vegetable oils in the global market, the over \$400.00 per metric ton spread relative to Argentine prices has forced typical U.S. trade partners to import from U.S. competitors. For these reasons, the 2022/23 soybean oil export forecast is reduced by 200 million pounds to 1.1 billion pounds. This export reduction will allow the United States to rely more heavily on domestic supplies of soybean oil to satisfy a relatively unchanged domestic disappearance forecast, lowering the import projection to 300 million pounds.

On December 1, 2022, the U.S. Environmental Protection Agency (EPA) announced a proposed rule to establish renewable fuel standard obligation targets for 2023–2025. Included in these targets is a slight bump in the biomass-based diesel mandate during the first year. In addition, the EPA finalized a pathway for canola oil use in renewable diesel production. These updates are expected to impact domestic use of soybean and canola oil in 2022/23.

Lowered by 200 million pounds from the previous forecast, the United States is expected to use 11.6 billion pounds of soybean oil to produce biofuels in 2022/23. Despite the reduction, this forecast is 1.25 billion pounds higher than in 2021/22. A nearly offsetting increase in the food, feed, and other industrial uses forecast of soybean oil of 150 million pounds to 14 billion pounds

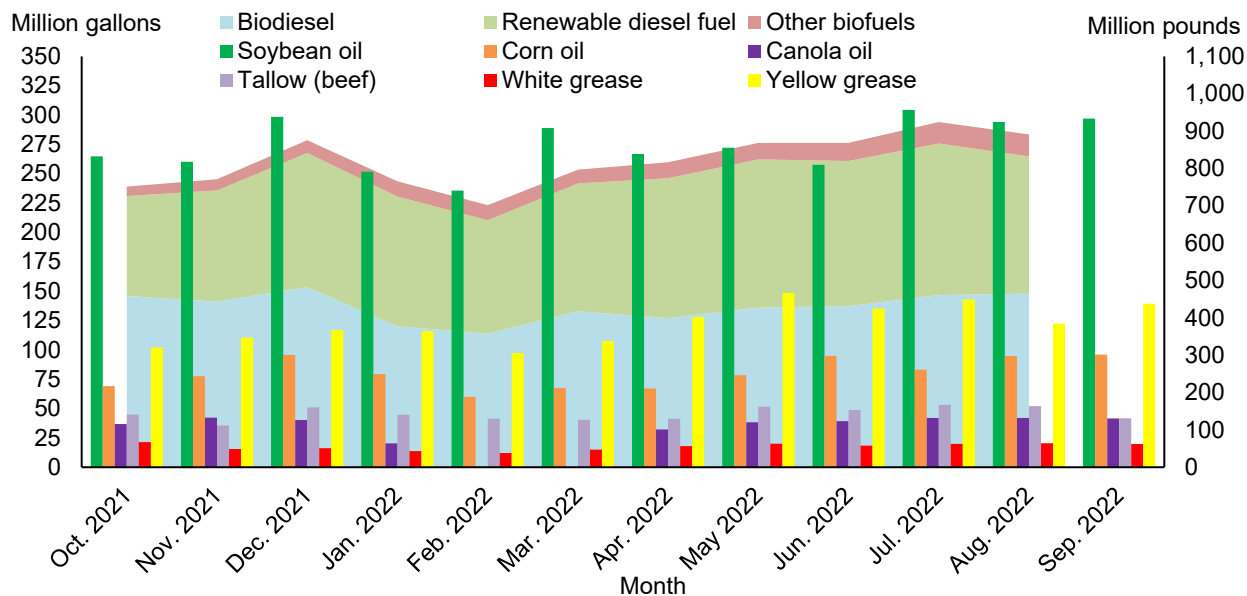
lifts the ending stocks forecast to 1.9 billion pounds. The 2022/23 soybean oil price forecast is slightly reduced this month to \$0.68 per pound.

During the last quarter of the 2021/22 marketing year, biofuel production used an average of about 130 million pounds of canola oil each month. For reference, this is over 15 million more pounds per month than the previous quarter. The recent increase in canola oil use for biofuel production, in conjunction with the new pathway finalized by the EPA, lifts the 2022/23 canola oil biofuel use forecast by 150 million pounds to 1.5 billion pounds. This mostly offsets the lower soybean oil forecast, equating to a nearly net-zero change in projected feedstocks use for biomass-based biofuel production. The increased use of soybean oil for food, feed, and other industrial uses will supplement the resulting decrease in canola oil for such uses, which now sits at 4.7 billion pounds.

In their November 30, 2022, Biofuels operable production capacity report, the U.S. Department of Energy's U.S. Energy Information Administration (EIA) reported that, as of September 2022, the U.S. renewable capacity reached 2,134 million gallons, which eclipses the biodiesel capacity of 2,084 million gallons. In fact, renewable capacity surpassed biodiesel capacity starting in August 2022. Although August renewable diesel and biodiesel production volumes suggest renewable diesel accounts for nearly 45 percent of total biofuel production, increased capacity and renewable identification numbers (RIN) volumes suggest renewable diesel will continue to capture a larger share of total biofuel production in the coming months.

Figure 2

Biomass-based diesel production and feedstock use



Note: Included feedstocks account for 97–99 percent of biofuel production. Poultry waste and other animal feedstock categories are excluded.

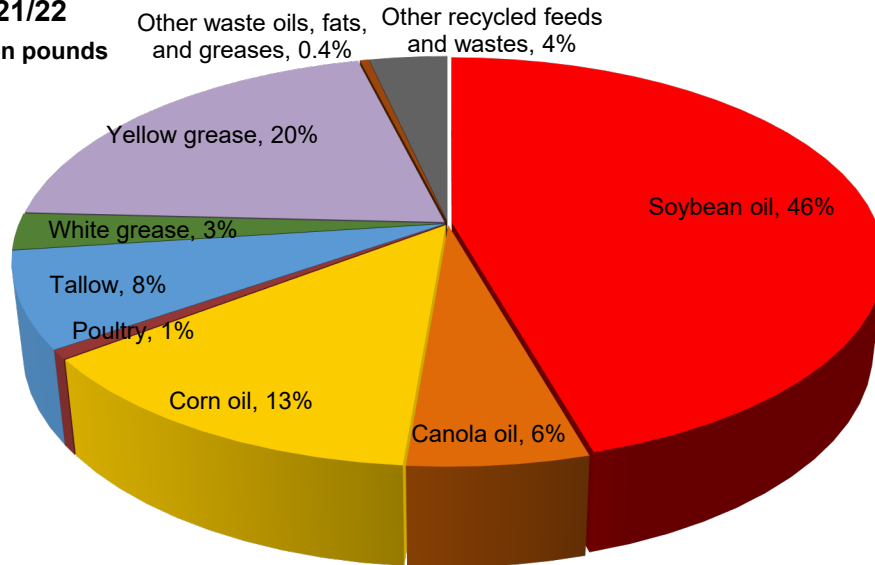
Source: USDA, Economic Research Service using data from U.S. Department of Energy, U.S. Energy Information Administration, *Monthly Energy Review* and *Feedstocks consumed for production of biofuels*, December 2022.

The EIA also published feedstocks consumed for production of biofuels in September, rounding out the 2021/22 marketing year. This report suggests that a total of 22.7 billion pounds of vegetable oils, waste oils, fats, and greases were consumed for biofuel production. Soybean oil accounted for the largest portion of feedstocks consumed at 46 percent. As prices of soybean oil spiked, uses of alternative fats and oils increased. The substitutability of alternative oils, like yellow grease and corn oil, which account for 20 and 13 percent of feedstock consumption, respectively, is influenced by policy structures, market values associated with biofuels produced with these feedstocks, and respective price ratios. The EIA was forced to withhold consumption of canola oil used for biofuel production during 2 months of the 2021/22 marketing year to avoid disclosure of any individual company data. USDA's *World Agricultural Supply and Demand Estimates* calculated that a total of 1.3 billion pounds of canola oil were used to produce biofuels in 2021/22, contributing 6 percent to total feedstocks used in biofuel production.

Figure 3

Vegetable oils, fats, and greases consumed for production of U.S. biofuels in 2021/22

Total = 22.7 billion pounds



Note: EIA withheld canola oil consumption for biofuel production data in February and March 2022 to avoid disclosure of company information. As a result, the percentage was calculated using the official USDA projection.

Source: USDA, Economic Research Service using data from U.S. Department of Energy, U.S. Energy Information Administration (EIA), *Monthly Energy Review* and USDA, Foreign Agricultural Statistics Service, *Production, Supply, and Distribution* database, December 2022.

International Outlook

Global Sunflowerseed Stocks Decline on Lower Russia Production

The 2022/23 global sunflowerseed production forecast was revised down this month by 0.6 million metric tons to 50.7 million metric tons on lower sunflowerseed production in Russia and Ukraine.

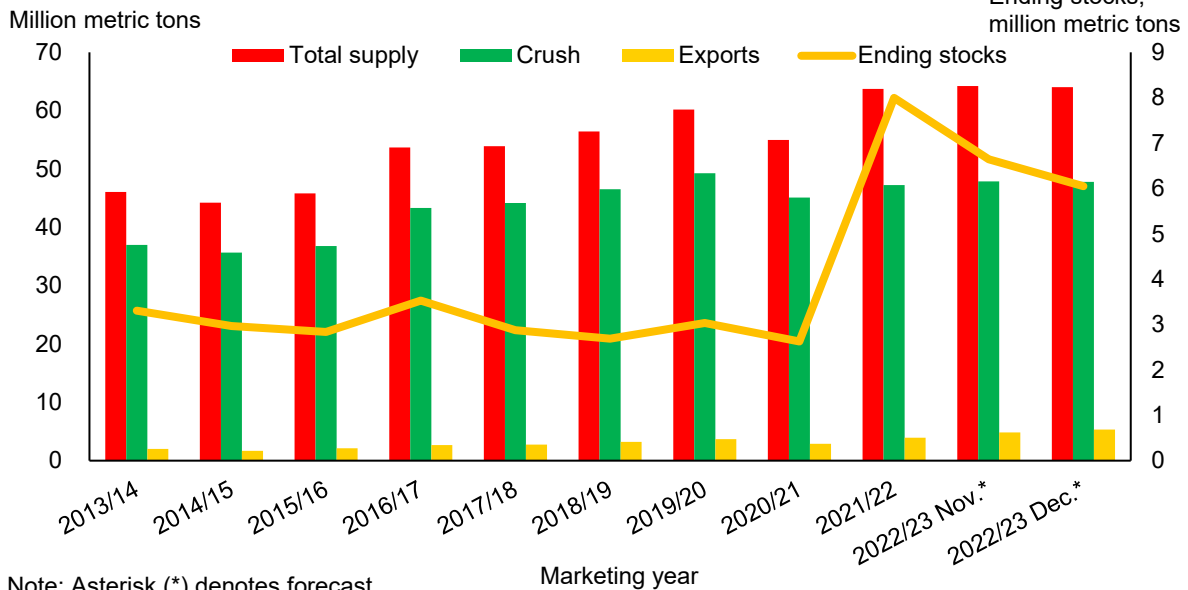
In Russia, the 2022/23 sunflowerseed production declined this month by 0.5 million metric tons to 16.5 million metric tons due to lower harvested area. Unfavorable weather during harvest increased the abandonment rate well above the 5-year average of 2.5 percent to 6 percent. As a result, the harvested area was lowered by 0.3 million hectares to 9.4 million hectares. According to the Russian Ministry of Agriculture, 74 percent of the harvest was completed as of November 27 compared with 99 percent during the same period last year and the 5-year average of 96 percent. Despite the reduced production forecast, this will be a record sunflowerseed crop in Russia if realized.

In contrast, Ukrainian farmers have harvested most of their crop. The Ukraine Ministry of Agriculture reported that Ukrainian farmers had harvested 96 percent of the sunflowerseed crop as of November 24. As harvest nears completion in Ukraine, farmers have reported lower yields than expected, so the yields are adjusted down this month to 2.17 tons per hectare. Consequently, the 2022/23 sunflowerseed production forecast was lowered by 0.1 million metric tons to 10 million metric tons.

Despite a lower production forecast, Ukraine has a healthy supply of sunflowerseed due to a projected carryin of nearly 4.7 million metric tons. Poor domestic demand combined with healthy shipments to members of the European Union (EU) has lowered the crush forecast and lifted the export forecast. A 0.5-million-metric-ton reduction in the crush forecast of 9 million metric tons is offset by a higher export forecast of 2.45 million metric tons. This boosts the EU's import forecast to 2.85 million metric tons. With a higher supply of sunflowerseed, the EU is expected to crush 10.9 million metric tons of sunflowerseed in 2022/23, 0.4 million metric tons more than last month. In summary, the 2022/23 global sunflowerseed crush forecast is relatively unchanged at just over 47.8 million metric tons. Global sunflowerseed ending stocks are projected at 6.05 million metric tons, 0.6 million metric tons lower than last month's forecast.

Figure 4

Global sunflowerseed supply and demand



Note: Asterisk (*) denotes forecast.

Source: USDA, Economic Research Service using data from USDA, Foreign Agricultural Service, *Production, Supply, and Distribution* database, December 2022.

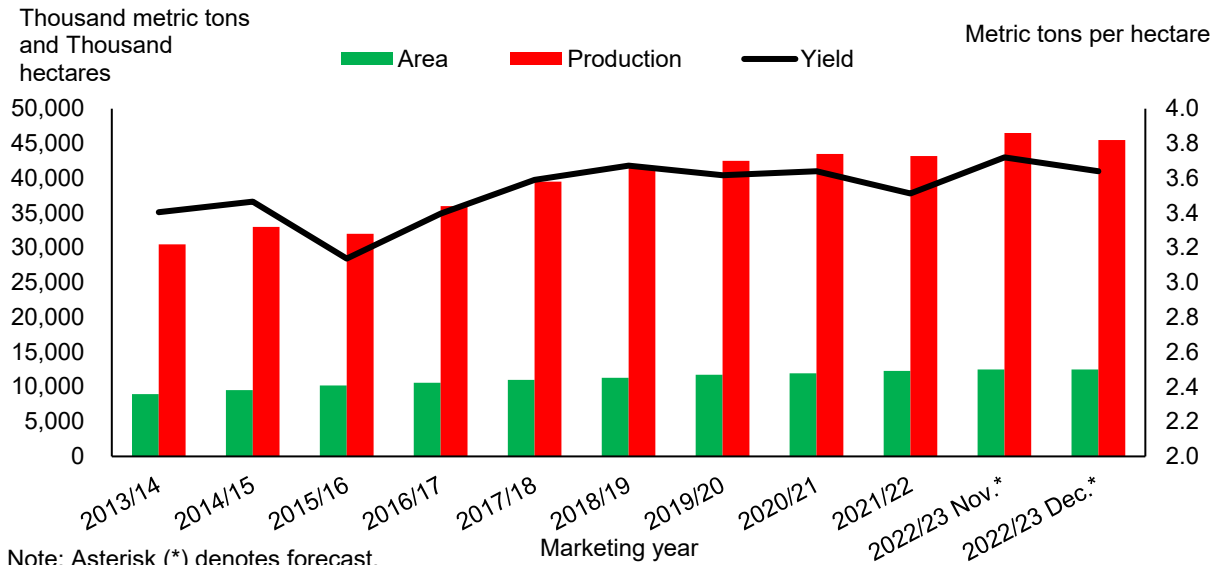
Indonesian Palm Oil Production and Stocks Lowered

The 2022/23 global palm oil production forecast is down from last month’s forecast by 1 million metric tons to 77.2 million metric tons on lower Indonesian palm oil production. The Indonesia palm production forecast is reduced as a result of the lower yields. The palm oil yields were lowered this month to 3.64 tons per hectare in line with the back-year adjustment.

Indonesia’s 2021/22 palm production was revised to 43.2 million metric tons, down by 2.1 million metric tons on less fresh fruit bunches (FFB) processed. At the end of April 2022, Indonesia’s Government implemented export restrictions in an attempt to cool rising domestic prices. Unintended consequences included a processing backlog as mill storages reached maximum capacity. Ultimately, this delayed the harvest of fresh fruit bunches by smallholder farmers who account for 40 percent of the country’s palm oil production. Several plantations eventually had to harvest and directly compost their oil palm fruits to avoid a decline in future yields.

Figure 5

Indonesian palm oil production



Note: Asterisk (*) denotes forecast.

Source: USDA, Economic Research Service using data from USDA, Foreign Agricultural Service, *Production, Supply, and Distribution* database, December 2022.

Indonesia’s palm oil export forecast for the 2022/23 marketing year remains unchanged this month, while domestic consumption is reduced by 0.5 million metric tons. Furthermore, the ending palm oil stocks are projected at 7.58 million metric tons, down 0.5 million metric tons from last month and down 1 million metric tons from last year.

Canadian Canola Crush Reduced on Lower Crop

Canada’s canola output for 2022/23 is reduced this month by 0.5 million metric tons to 19 million metric tons. The reduction is due to lower-than-expected yield as the harvest was completed. The canola yields are reduced by 2.6 percent to 2.2 tons per hectare on lower yields in Saskatchewan.

As a result of lower canola supply, crush and exports for the 2022/23 marketing year are decreased this month by 0.2 and 0.1 million metric tons, respectively. The crush is projected at 10 million metric tons and exports at 7.9 million metric tons. Canola oil and meal exports were lowered this month by 0.1 million metric tons each. Canola oil exports are projected at 3.25 million metric tons, up 0.7 million metric tons from last marketing year. Canola meal exports stand at 4.96 million tons, 0.56 million metric tons higher than the last campaign. In summary, canola ending stocks for the 2022/23 marketing year in Canada are lowered by 0.4 million metric tons this month to 1.65 million metric tons.

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