



Oil Crops Outlook: December 2021

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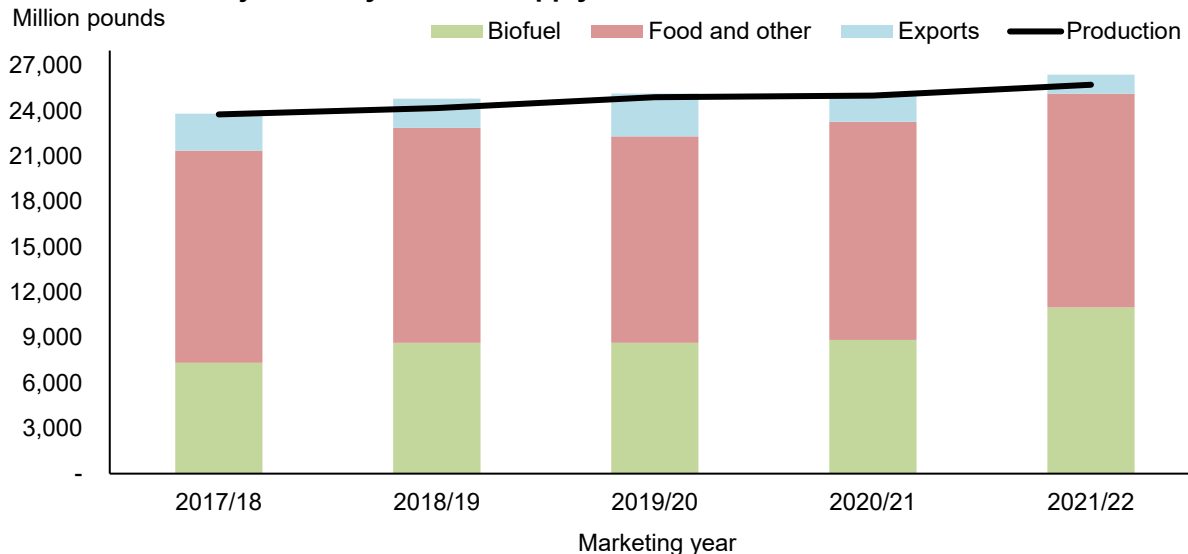
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Soybean Oil Yield Raises Domestic Supply

The reported extraction rate for soybean oil came in near an all-time high in October at 11.92 pounds per bushel. USDA raised the 2021/22 soybean oil extraction rate from 11.66 to 11.75 pounds per bushel, and consequently, the production estimate 200 million pounds to 25.7 billion pounds. In total, soybean oil supply is expected to be nearly 155 million pounds higher than projected last month at 28.32 billion pounds. Accordingly, forecasted domestic food, feed, and other industrial use of soybean oil is raised from last month's estimate to 14.15 billion pounds on elevated alternative vegetable oils prices and lower consumption of canola and cottonseed oil.

Figure 1
Historical and Projected Soybean Oil Supply and Demand



Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

Domestic Outlook

Soybean Oil Domestic Use Expected to Grow

U.S. processors crushed a record 197 million bushels of soybeans in October, nearly 0.5 million bushels higher than the record established in October 2020. This translates to an impressive 6.35 million bushels of soybeans crushed per day. Although soybean meal production increased by 19 percent from September to 4.6 million short tons, a larger increase was realized in soybean oil production—up by 21 percent to 2.35 billion pounds. Thus, 0.5 fewer pounds of soybean meal were extracted per bushel in October (46.6 pounds) while each bushel of soybeans crushed produced an additional 0.10 pound of soybean oil (11.9 pounds per bushel). However, these factors did not alter the 2021/22 soybean crush forecast which remains unchanged at 2.19 billion bushels. U.S. season average soybean and soybean oil price forecasts for 2021/22 remain unchanged this month at \$12.10 per bushel and 65 cents per pound, respectively. The average soybean meal price forecast was raised by \$5 to \$330 per short ton.

In response to the monumental crush volume, the 2021/22 soybean oil extraction rate was raised from 11.66 to 11.75 pounds of oil per bushel. Increased production of soybean oil, projected at 25.7 billion pounds, is expected to be consumed domestically through food, feed, and other industrial uses which is raised 150 million pounds to 14.15 billion pounds. This is largely influenced by surging alternative vegetable oils prices and lower consumption of canola oil and cottonseed oil.

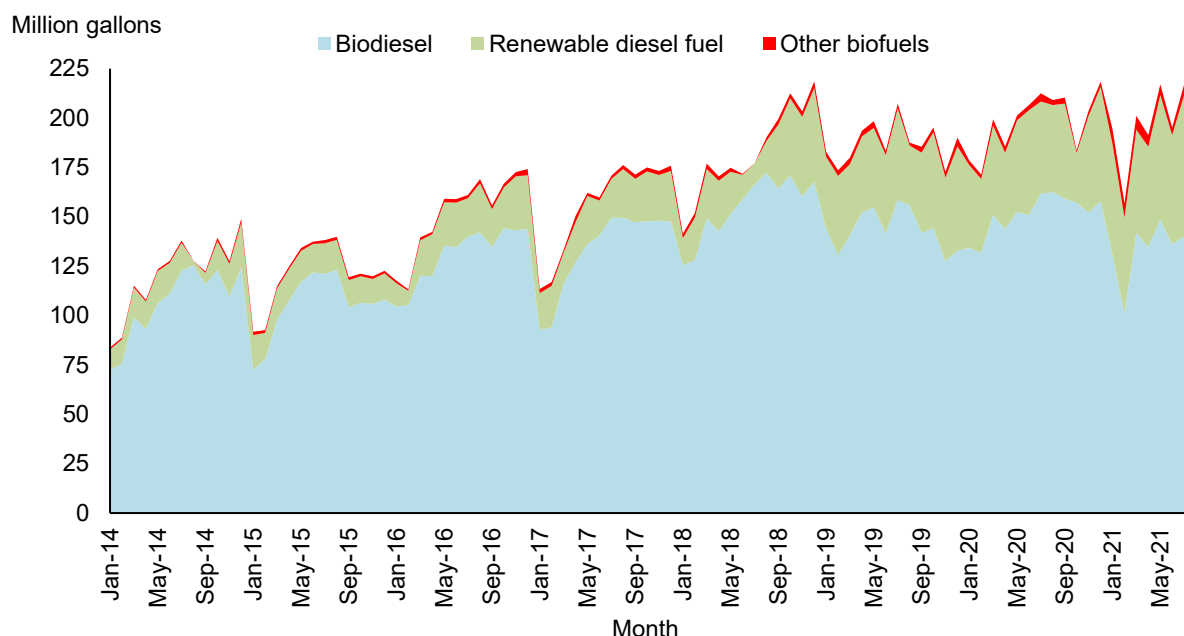
Soybean oil use for 2020/21 biofuel production was finalized this month at 8.85 billion pounds as projected by USDA. After reviewing the Environmental Protection Agency's (EPA) proposed rules for 2020–2022 renewable fuel obligation targets, soybean oil used for biofuels in 2021/22 is unchanged from last month's forecast at 11 billion pounds. This projection is 2.2 billion pounds higher than 2020/21 and considers expansions in renewable diesel production capacity planned in 2022, elevated feedstock prices, and substitution impacts among biofuel categories.

Data from the U.S. Department of Energy's U.S. Energy Information Administration (EIA) in figure 2 shows the recent growth in renewable diesel production. Incentives associated with California's Low Carbon Fuel Standard (LCFS), the Renewable Fuel Standard (RFS), and blender's tax credits have provided production capacity growth opportunities across feedstock categories. Over the past few years, renewable diesel production has grown while total

biomass-based diesel production has remained relatively constant. Thus, renewable diesel now captures a larger share of total biomass-based diesel production. Increased production of renewable diesel has come at the expense of biodiesel (fatty acid methyl ester (FAME)) production, however, as feedstock prices increased dramatically over the last year. In fact, renewable diesel has replaced biodiesel production in a near 1:1 tradeoff throughout 2021. Expectations of large expansions in renewable diesel production capacity point toward greater use of soybean oil in future biofuel production.

Figure 2

Biomass-based Diesel Production

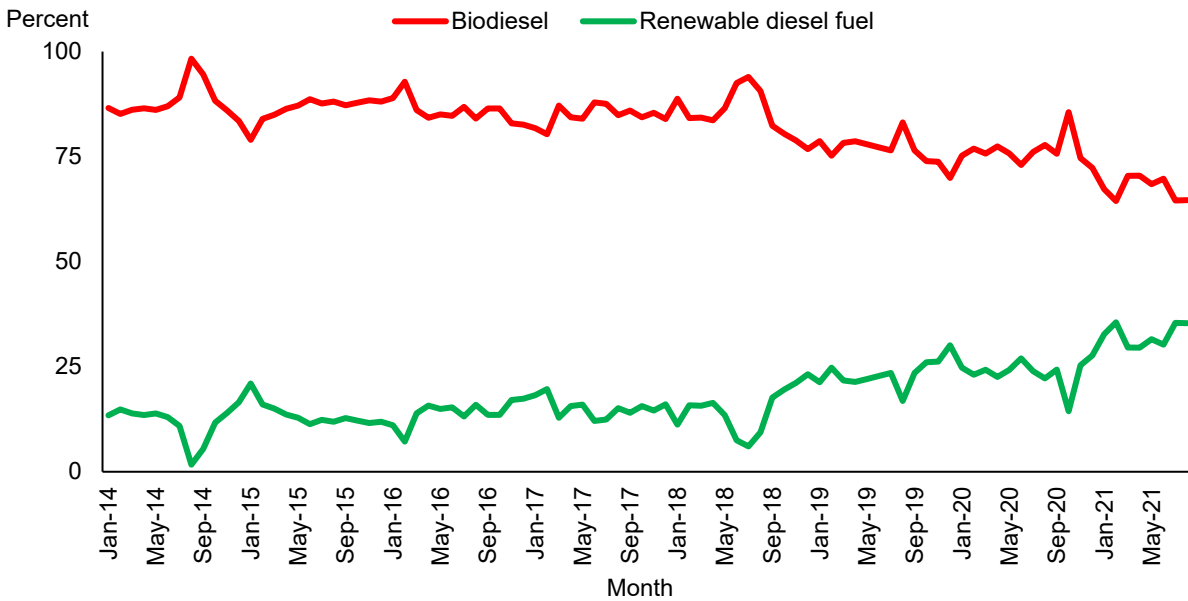


Source: USDA, Economic Research Service using data from U.S. Department of Energy, U.S. Energy Information Administration.

Recent RFS volume obligations proposed by the EPA indicate support for expanded biomass-based diesel production. Markets have evolved such that renewable diesel fuel production currently commands 30 percent of the total biomass-based diesel market. The prospect of a large expansion in 2022 renewable diesel capacity suggests feedstock prices will remain elevated, continuing to foster competition between FAME and renewable diesel producers. As soybean oil looks to expand its share of feedstocks utilized for biofuel production in 2022, profitability opportunities remain a key consideration for producers in future production decisions.

Figure 3

Biodiesel and Renewable Diesel Fuel Share of Total Biomass-based Diesel Production



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

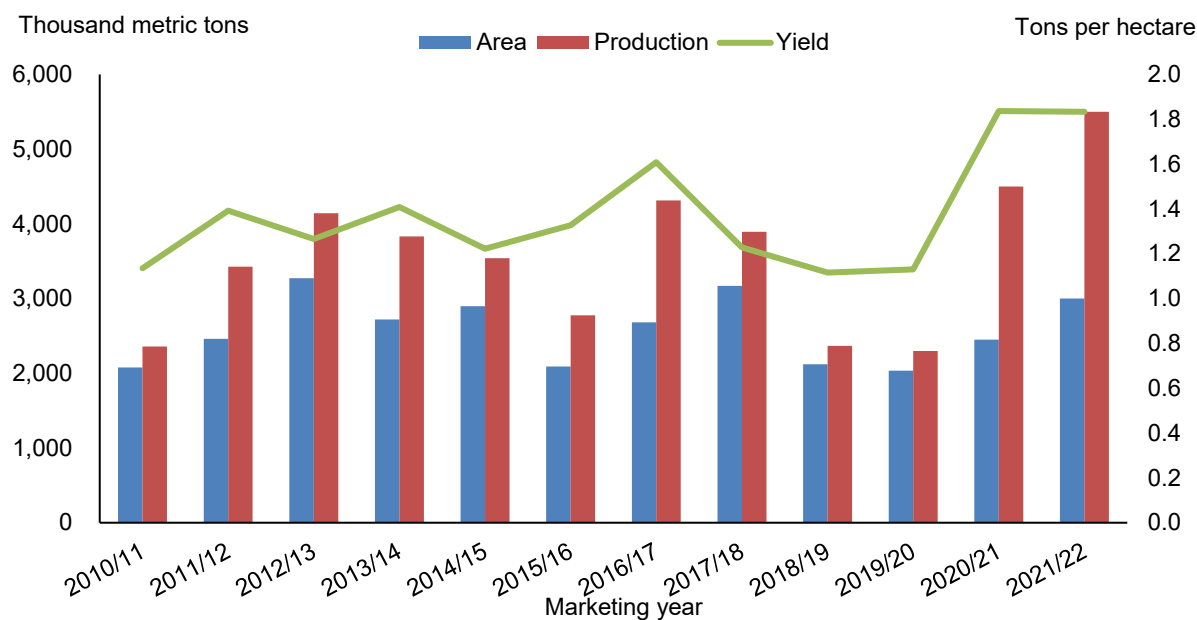
International Outlook

Record Rapeseed Production in Australia Helps to Offset Losses in Canada

The 2021/22 forecast of global rapeseed production is revised upwards 850,000 tons to 68.35 million this month as crops in Australia, the European Union, India, and Russia are revised upwards while the crop in Canada is reduced by 0.4 million metric tons. For Australia, rapeseed production is forecast to reach a new national record of 5.5 million tons, which is 0.7 million tons higher than last month's forecast and 1 million higher than last year's crop. Australian farmers increased harvested area by 550,000 hectares to 3 million hectares. The favorable growing conditions observed in New South Wales, Victoria, and Western Australia contributed to record rapeseed yields in those States and buoy the national rapeseed yield close to a record of 1.83 metric tons per hectare.

Figure 4

Australia Rapeseed Production



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

As a result of a higher rapeseed crop in Australia, 2021/22 exports are revised up by 600,000 tons to a record 4.6 million with Japan and United Arab Emirates receiving the majority of increased shipments. Higher Australian exports will more than offset the 400,000-ton reduction in Canadian rapeseed exports this month, which are now projected at 5.3 million. The reduced

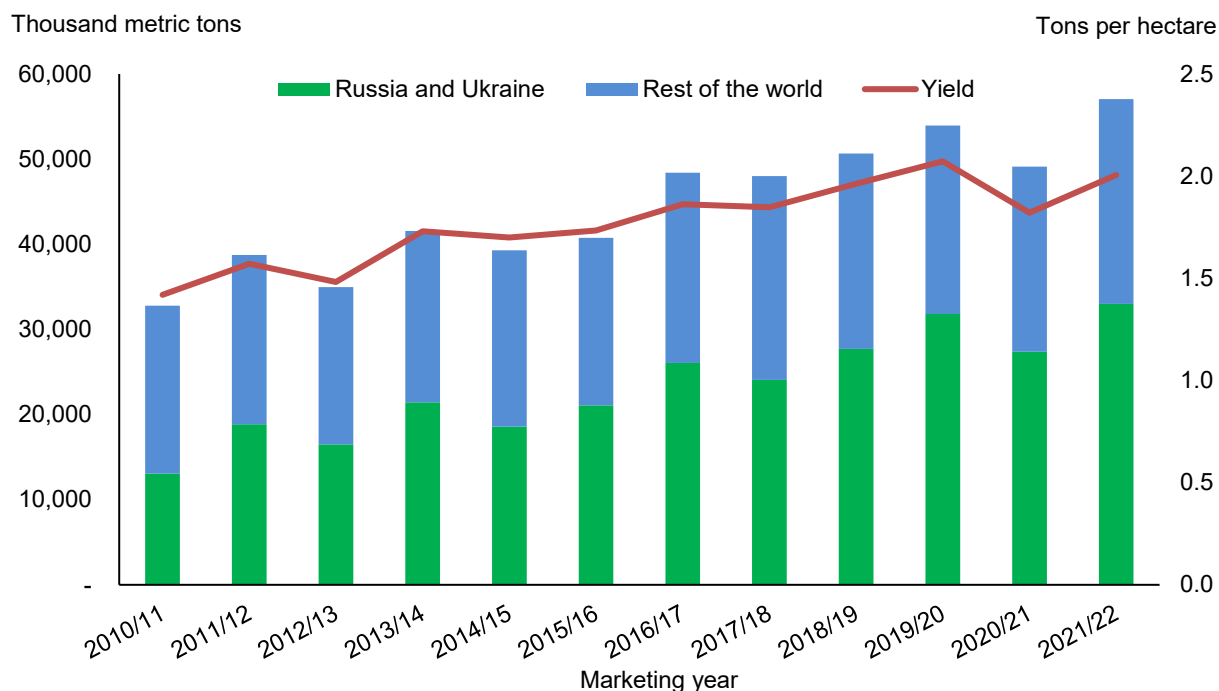
supply of 2021/22 rapeseed portends very tight season-ending stocks for Canada. This outcome is conditioned on a firm outlook for rapeseed demand for crush in Canada that was left unchanged this month at 8.5 million tons.

Sunflowerseed Production in Russia and Ukraine Exceeds Expectations

Global sunflowerseed production for 2021/22 is forecast at 57 million metric tons, up 7.9 million from last year. Output gains for this month total 1 million tons because of higher crop estimates for Russia and Ukraine. For Russia, the sunflowerseed crop is raised 500,000 tons this month to 15.5 million on higher harvested acreage.

Figure 5

Global Sunflowerseed Production



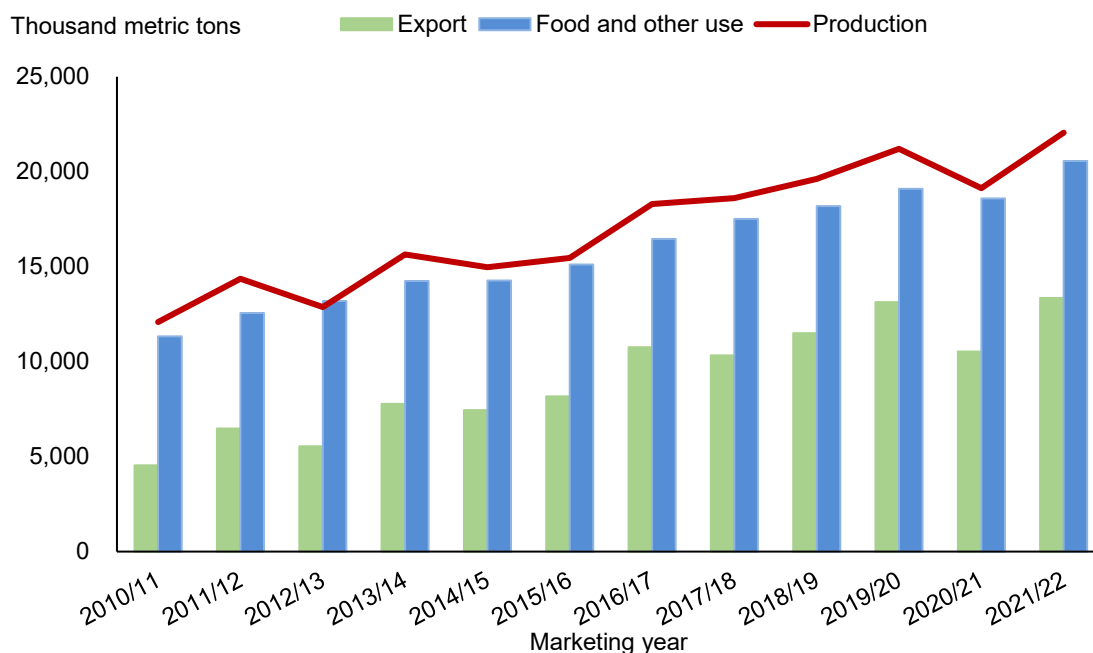
Source: USDA, Economic Research Service using data from USDA, Foreign Agricultural Service, *Production, Supply, and Distribution*.

Additional sunflowerseed production for both Russia and Ukraine would primarily be crushed domestically with the by-products exported. In Russia, the 2021/22 sunflowerseed crush is expected to total 14.15 million tons, well above the 2020/21 total of 12.4 million tons. For Ukraine, the sunflowerseed crop is revised up by 500,000 tons to reach 17.5 million as the final reported yield was better than expected. This year's crop in Ukraine is 3.4 million tons higher than last year and will be a record for the country. This additional supply is expected to prompt

an increase in sunflowerseed crush that is forecast to reach 16.95 million tons, up 400,000 tons from last month and 3.2 million tons higher than last season.

With a record crush forecasted for Ukraine and Russia, world sunflowerseed oil production in 2021/22 is expected to reach 22 million tons, which is 2.9 million tons higher than last year and 258,000 tons higher than last month's forecast. The additional output of sunflowerseed oil is primarily exported to China, the European Union, and Turkey as well as consumed domestically. Sunflowerseed meal production is also revised upwards this month by 243,000 tons and predicted to reach 23.5 million.

Figure 6
Global Sunflowerseed Oil Production and Use



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

China's Soybean Production Revised Down on Lower Sown Area

This month, China's soybean production forecast was reduced by 2.6 million tons to 16.4 million tons, as reported by China's National Bureau of Statistics. The smaller production forecast is mainly due to disadvantaged profits for soybeans when compared with alternative crop profits. For this reason, soybean harvested acreage fell significantly to 8.4 million hectares from

2020/21, down 15 percent, or a net reduction of 1.5 million hectares. Yield is also slightly lower at 1.95 tons per hectare.

Soybean crush is reduced by 1 million ton this month as crush margins are low and does not support the pace forecasted last month. The annual crush forecast now stands at 97 million tons. Both domestic meal and oil production is adjusted downwards to 76.8 million metric tons and 17.4 million metric tons, respectively, based on the slower than anticipated growth in consumption. Soybean imports are unchanged this month at 100 million metric tons. With unchanged imports and lower production, ending stocks are reduced this month by 1.6 million metric tons to 34 million metric tons. The forecasted ending stocks are the second largest after last year.

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