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Oil Crops Outlook: September 2023

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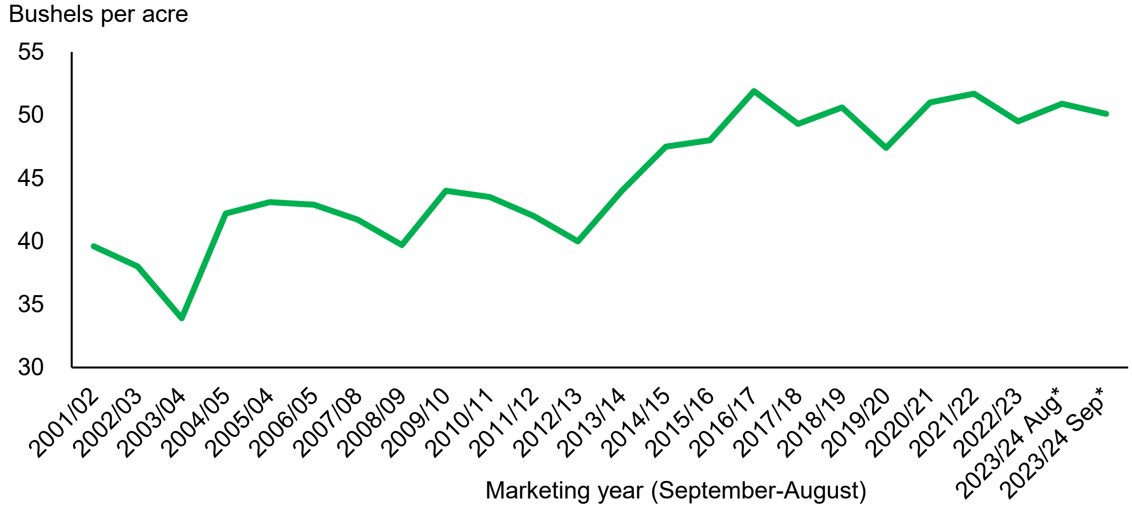
2023/24 U.S. Soybean Production Forecast Declined on Lower Yield

This month, USDA, National Agricultural Statistics Service (NASS) lowered the 2023/24 national average soybean yield from the previous forecast of 50.9 bushels per acre to 50.1 bushels per acre in its *Crop Production* report, reducing the 2023/24 U.S. soybean production forecast to 4.15 billion bushels (figure 1). The harvested area is 95,000 acres higher at 82.79 million acres. The lower soybean production combined with lower beginning stocks from 2022/23 brings the total soybean supply forecast for marketing year (MY) 2023/24 to 4.23 billion bushels, down 70 million bushels from last month's forecast and 154 million bushels from last year. Soybean crush forecast is reduced by 10 million bushels to 2.29 billion bushels on lower soybean meal demand. Soybean exports are reduced by 35 million bushels to 1.79 billion bushels on lower supplies and increased competition from Brazil. Ending stocks for MY 2023/24 are estimated at 220 million bushels, down 25 million bushels from last month's forecast. The 2023/24 season-average soybean price forecast is increased from the previous forecast of $12.70 per bushel to $12.90 per bushel.

Approved by USDA's World Agricultural Outlook Board

Figure 1
U.S. soybean yield



Note: An asterisk (*) represents yield forecasts.
Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, QuickStats.

Domestic Outlook

Lower Yield Outlook for Soybean

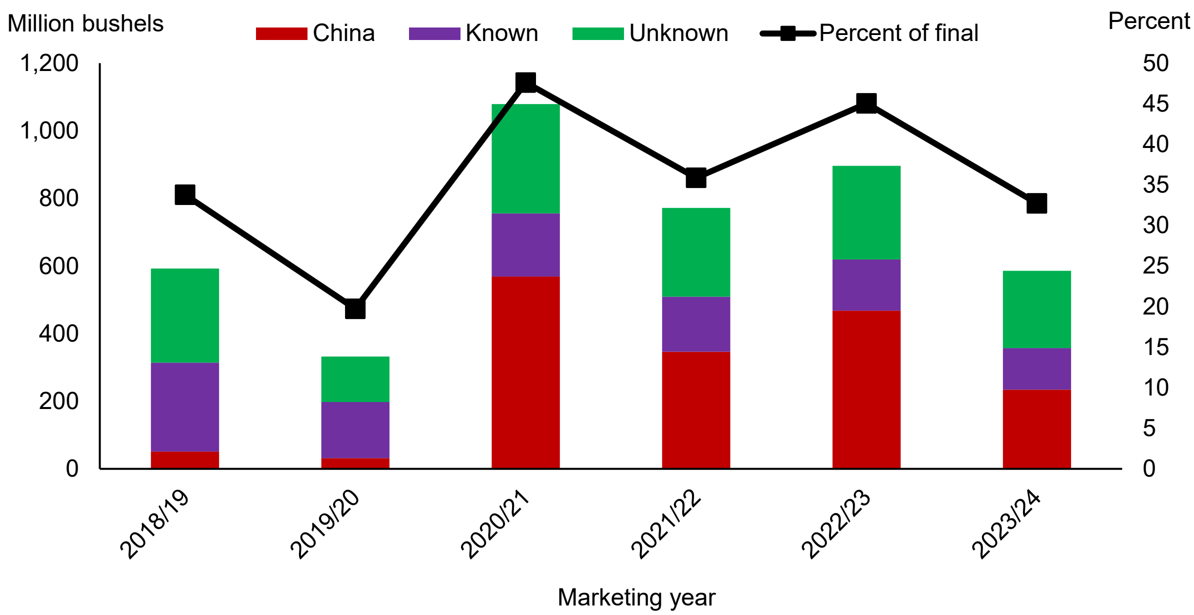
Based on a lower soybean yield forecast, this month's USDA, NASS *Crop Production* report has forecast the 2023/24 soybean production down 59 million bushels to 4.15 billion bushels. This season's national average yield is forecast at 50.1 bushels per acre, compared with 50.9 bushels last month. The outlook for lower soybean yields in Illinois, Nebraska, Kansas, Minnesota, Louisiana, and Wisconsin is partially offset by forecasts for higher yields in Ohio, Kentucky, and South Dakota. If realized, the yield forecast in Arkansas, Indiana, Kentucky, Mississippi, New York, Ohio, and Tennessee will be a record high.

The harvested soybean acreage is forecast at 82.8 million acres, up 0.1 million acres from last month with a significant gain in harvested acreage in North Dakota and Illinois. Reduced soybean production combined with lowered beginning stocks brings total soybean supply for MY 2023/24 at 4.4 billion bushels, down 70 million bushels from last month and down 154 million bushels from last year.

August is the key period for the development and filling of soybean pods. The second half of August was warmer than average for much of the growing regions. As of September 3, 53 percent of soybeans were rated in good-to-excellent condition, unchanged from the previous month but down from last year. USDA, NASS's objective yield surveys for 11 major soybean-producing States (Arkansas, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, and South Dakota) found that number of pods per 18 square feet was nearly 4 percent above final counts for 2022 but 2 percent below the last 3-year average. The finishing weather will determine the final pod weights and yield. Soybean harvesting in many areas will soon commence as 16 percent of the U.S. crop dropping leaves as of September 3, 7 percentage points ahead of last year and 3 percentage points ahead of average.

The demand for U.S. soybeans is likely to be affected by the outlook for lower new-crop supplies. U.S. export soybean sales have been slow to pick up in the face of formidable international competition. U.S. soybean exports for 2023/24 are reduced by 35 million bushels to 1.79 billion bushels, well below the revised 2022/23 export estimate of 1.99 billion bushels. As of August 31, soybean export sales commitments for 2023/24 are reported at 586 million bushels, 35 percent lower than last year. Sales to China, a top market, are at 234 million bushels, down 50 percent from last year (figure 2).

Figure 2
U.S. soybean new-crop outstanding sales at the end of August



Source: USDA, Economic Research Service using data from USDA, Foreign Agricultural Service, *U.S. Export Sales* report.

This summer, Brazil's soybean exports have been at a record high, supported by the large 2023 crop. While exports historically tend to decline from September to January, Brazil's soybean supply is large. Robust exports are expected to continue and compete with U.S. shipments this fall. Brazil's 2023/24 soybean export forecast is raised this month by 0.5 million metric tons to a record of 97.0 million metric tons.

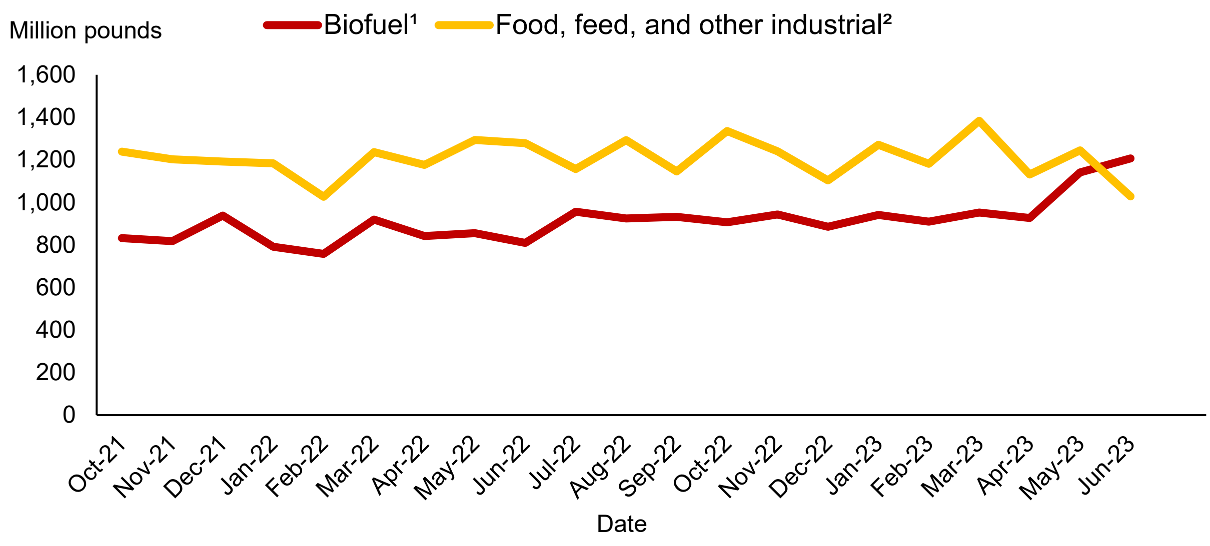
The 2023/24 soybean crush forecast is reduced this month by 10.0 million bushels to 2.29 billion bushels on lower soybean meal demand. The total U.S. soybean meal demand for 2023/24 is estimated at 54.5 million short tons, 0.2 million short tons lower than last month. The lowered domestic demand is partially offset by a higher soybean meal export forecast that stands at 15.1 million short tons. The domestic soybean meal forecast is lowered by 0.3 million short tons to 39.4 million short tons due to a slower growth of livestock sector, especially poultry. In addition, soybean meal is facing a strong competition from alternative feeds. Soybean meal prices in Central Illinois in August 2023 averaged $438.80 per short ton, a 1-percent decrease from July. Elevated soybean meal prices affected the soybean meal consumption for MY 2022/23, which is reduced this month by 0.2 million short tons to 38.8 million short tons. The average soybean meal price forecast for MY 2023/24 is unchanged this month, at $380.00 per short ton and compared with the average prices of $455.00 per short ton for MY 2022/23.

The soybean oil supply for MY 2023/24 is forecast at 29.2 billion pounds, down 110.0 million pounds from last month on slightly lower beginning stocks and production. The decreased production is slightly offset by a higher soybean oil import forecast, which grew by 25 million pounds to 400 million pounds this month. The soybean oil demand for MY 2023/24 is reduced this month by 100.0 million pounds to 27.4 billion pounds on lower domestic disappearance and lower exports. The season ending stocks forecast is reduced slightly. Given the forecast decline in soybean oil supplies, the 2023/24 price forecast is lifted this month to $0.63 per pound.

Biofuel Update

The U.S. Department of Energy's U.S. Energy Information Administration's (EIA) *Feedstocks consumed for production of biofuels* report, dated August 31, revealed that 1.2 billion pounds of soybean oil were used in biofuels during June 2023. This is a monthly record high and the use of soybean oil in biofuels exceeded the monthly use of soybean oil in food, residual, and other categories for the first time on record. Data from the U.S. Department of Energy's EIA illustrates the recent growth in use of soybean oil in biofuels production (figure 3).

Figure 3
Marketing year 2022/23 U.S. monthly soybean oil domestic disappearance



[1] Use of soybean oil in biofuel reported by U.S. Department of Energy, U.S. Energy Information Administration.
[2] "Food, feed, and other industrial" equals total monthly domestic disappearance minus biofuel.
Source: USDA, Economic Research Service using data from U.S. Department of Energy, U.S. Energy Information Administration.

The soybean oil share of total oils and fats used as feedstocks for biofuels in June 2023 increased to almost 42.0 percent, up 1.0 percent from May and up 1.4 percent from June 2022.

In June 2023, EIA reported the U.S. annual renewable diesel capacity at 3.7 billion gallons, up 422.0 million gallons from May and up 1.8 billion gallons from last year. Biodiesel capacity is relatively stable at 2.08 billion gallons. With the existing capacity and potential expansion, monthly usage of soybean oil for biofuel is expected to remain historically high. Consequently, soybean oil use in biofuels for 2022/23 increased by 100.0 million pounds to 11.8 billion pounds.

The MY 2023/24 forecast for the use of soybean oil in biofuels is unchanged at 12.5 billion pounds from last month's forecast. In contrast, the use of canola oil in biofuel production for 2023/24 has increased this month by 300.0 million pounds to 3.3 billion pounds. In addition, the MY 2022/23 canola use for biofuels is increased to 2.9 billion pounds, up 300.0 million pounds. The canola oil used as feedstock in biofuel production is on the rise after its approval to be used in renewable diesel production by the U.S. Environmental Protection Agency (EPA) in December 2022. To meet growing demand for canola oil, the forecast for the 2023/24 canola oil imports is raised by 342.0 million pounds to a record high 6.6 billion pounds.

U.S. Peanut Supply Increases on Higher Area and Cottonseed Declines on Lower Area

The MY 2023/24 peanut production forecast is raised this month by 104.0 million pounds to 6.3 billion pounds on higher area. The harvested acreage is increased this month by 0.1 million acres to 1.6 billion acres due higher harvested acreage in Georgia, Texas, Mississippi, and Alabama. The national average peanut yield forecast is modestly lower at 3,953 pounds per acre, compared with the 2022/23 average of 4,019 pounds per acre. A lower yield forecast for Alabama, Florida, and North Carolina contributed to this month's decline. The peanut yield for Georgia, a major peanut producing State, is unchanged this month and stands at 4,300 pounds per acre. The peanut crop conditions declined during month of August in most of the peanut-producing States. By September 3, 56 percent of the U.S. peanut acreage was rated in good-to-excellent condition, 14 percentage points below the same time last year.

USDA, NASS's *Peanut Stocks and Processing* report indicated that the MY 2022/23 season-ending stocks on July 31 totaled 2.0 billion pounds, a sharp decrease from last year's carryout of 2.4 billion pounds. When the carryover stocks are combined with the gains in this year's peanut harvest, the 2023/24 total supply is forecast at 8.5 billion pounds, 440.0 million pounds higher than last year.

With higher supply, U.S. peanut exports in MY 2023/24 are raised this month by 50.00 million pounds to 1.35 billion pounds. A 4-percent increase is also forecast for the domestic use of peanuts after 2 years of decline. Despite higher demand, season-ending peanut stocks for 2023/24 are forecast to increase to 2.2 billion pounds.

The cottonseed production forecast for MY 2023/24 is reduced by 0.2 million short tons from last month to 4.0 million short tons. Cotton harvested area is reduced in Texas and Oklahoma resulting in the cottonseed production loss. The cottonseed import forecast is raised this month, marginally offsetting the loss in production. With a reduced cottonseed supply forecast for MY 2023/24, the cottonseed crush volume and other use are reduced.

International Outlook

Hot and Dry Weather Reduces Global Rapeseed Supply

The MY 2023/24 global rapeseed production forecast is reduced this month by 0.9 million metric tons to 85.2 million metric tons on lower production in the European Union (EU), Canada, and the United Kingdom (U.K.), which is offset slightly by a higher rapeseed crop in Ukraine and Australia. The global rapeseed supply forecast for MY 2023/24 is unchanged as lower rapeseed production is almost offset higher beginning stocks. The 2023/24 beginning stocks are estimated at 7.5 million metric tons, up 0.7 million metric tons mainly on higher stocks reported by Statistics Canada and higher-than-anticipated rapeseed imports and stocks by China for MY 2022/23. Global rapeseed trade is forecast at 17.5 million metric tons for 2023/24, marginally lower than last month's forecast with lower exports from Canada partially offset by higher shipments from Ukraine and Australia. Canada's rapeseed exports for MY 2023/24 are reduced this month by 0.5 million metric tons to 7.9 million metric tons.

Global rapeseed crush for MY 2023/24 is forecast at a record high of 81.4 million metric tons, 0.1 million metric tons higher than last month's forecast and 0.9 million metric tons higher than MY 2022/23. China's rapeseed crush for MY 2023/24 is raised this month by 0.4 million metric tons to 18.7 million metric tons on higher rapeseed supply and oil demand. The rapeseed crush forecast for Japan and Canada is reduced this month on lower supply. With a record global rapeseed crush for 2023/24, the global rapeseed oil and rapeseed meal production and consumption are forecast to increase and compete with alternative oils and proteins. The global 2023/24 rapeseed ending stocks are marginally down this month and estimated at 6.1 million metric tons, 1.4 million metric tons lower than MY 2022/23 stocks.

The EU's rapeseed production is projected at 19.7 million metric tons, down 0.5 million metric tons from last month's forecast due to lower yields. Rapeseed yields are reduced this month by 2 percent to 3.19 tons per hectare. The hot and dry weather throughout the growing season in the EU—especially in France, Spain, and Croatia—has contributed to a lower yield forecast. The EU's rapeseed imports for MY 2023/24 are forecast at 5.4 million metric tons, up 0.3 million metric tons from last month's forecast and down 1.4 million metric tons from the MY 2022/23 imports estimate. The EU's rapeseed crush volume is unchanged this month at 24.4 million metric tons.

Canada's rapeseed production forecast for 2023/24 is reduced this month by 0.8 million metric tons to 18.2 million metric tons on lower yields. The yields are reduced this month by 4 percent to 2.07 tons per hectare. The precipitation and soil moisture levels in Canada's Prairie Provinces, particularly in Alberta and Saskatchewan, remain below normal levels for August.

Additionally, in line with the latest reports from Statistics Canada, Canada's 2021/22 and 2022/23 rapeseed production estimates were revised to 14.2 million metric tons and 18.7 million metric tons, respectively.

Canada's 2023/24 rapeseed supply is forecast at 19.8 million metric tons, down 0.5 million metric tons from last month on lower production partially offset by higher rapeseed carryover from MY 2022/23. With lower supplies, the total demand for Canadian rapeseed is reduced. Exports are reduced by 0.5 million metric tons to 7.9 million metric tons and crush is lowered by 0.1 million metric tons to 10.1 million metric tons. Canada's rapeseed ending stocks for MY 2023/24 are reduced to 1.2 million metric tons compared with 1.5 million metric tons for MY 2022/23.

Australia's rapeseed production for MY 2023/24 is raised this month by 0.2 million metric tons to 5.1 million metric tons on higher rapeseed yields as reported by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES). The rapeseed yields are forecast at 1.46 tons per hectare, 4 percent higher than last month. Rapeseed sowing commenced early in April and continued until June with sufficient moisture. Early planting allowed the crop to withstand the dry conditions in August, but the September weather will determine final yield. With more exportable supplies, the MY 2023/24 rapeseed exports are forecast at 4.2 million metric tons, 0.2 million tons higher than last month's forecast.

Favorable Weather Boosts Oilseed Output in Ukraine

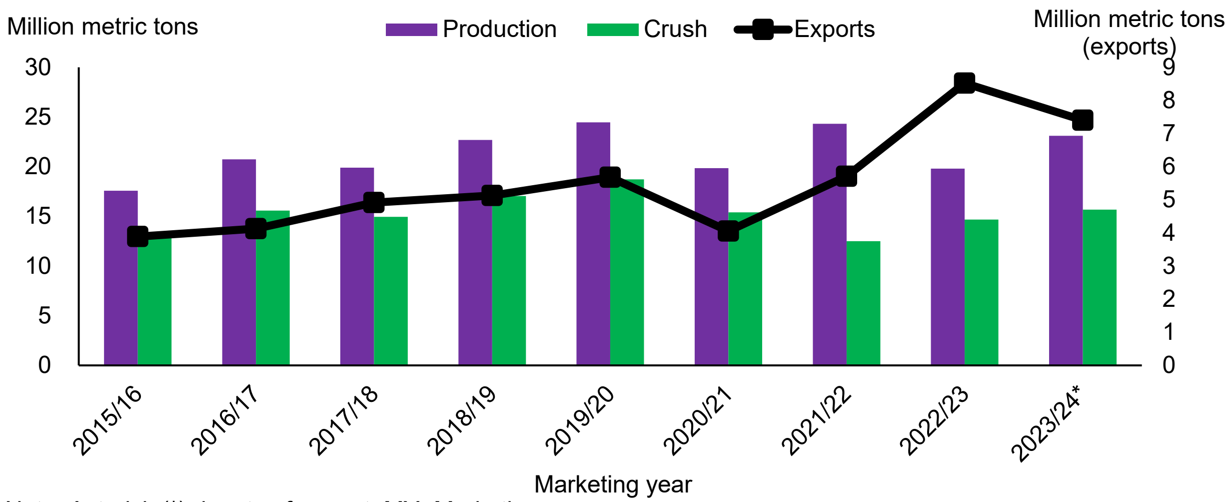
Sunflowerseed production in Ukraine for MY 2023/24 is forecast at 14.0 million metric tons, up 0.5 million metric tons from last month's forecast on higher yields. The yields are increased this month by 4 percent to 2.33 tons per hectare on favorable growing conditions in July and August for almost all major sunflower producing oblasts.

The rapeseed harvest in Ukraine is nearly finished and yield results are higher than expected. The rapeseed yields are forecast at 2.87 tons per hectare, up 5 percent from last month. Consequently, rapeseed production for 2023/24 is increased by 0.2 million metric tons this month to a record 4.3 million metric tons.

Ukraine's soybean production for MY 2023/24 is forecast at 4.8 million metric tons, up 4 percent from last month due to higher yields.

With Ukraine's higher forecast for total oilseed production, the oilseed crush volumes and exports forecasts are increased by 0.8 million metric tons and 0.6 million metric tons, respectively (figure 4). Total crush volumes are projected to recover from the start of the war in 2021/22 and are only slightly below the drought-impacted crush in 2020/21. The total oilseed exports forecast is down from 2022/23, but it remains above pre-war levels driven by demand from neighboring countries.

Figure 4
Total oilseed production, crush, and exports in Ukraine, MY 2015/16–2023/24



Note: Asterisk (*) denotes forecast. MY=Marketing year
Source: USDA, Economic Research Service using data from USDA, Foreign Agricultural Service, *Production, Supply and Distribution* database.

The sunflowerseed exports forecast is expected to reach 1.0 million metric tons, 0.2 million metric tons higher than last month. Ukraine's sunflowerseed crush is forecast to reach 13.3 million metric tons, up 0.6 million metric tons from last month and up 0.3 million metric tons from last year's revised crush. Notably, the 2022/23 sunflowerseed crush forecast is revised up 0.9 million metric tons to 13.0 million metric tons on higher sunflower processed volume than anticipated. Consequently, 2023/24 sunflowerseed oil and sunflowerseed meal production and export forecasts are increased this month. The EU and Turkey will benefit from Ukraine's higher crush as Ukraine continues to ship through the EU's Solidarity Lanes. The EU's sunflowerseed oil imports are forecast up 0.2 million metric tons from last month to 2.2 million metric tons. In addition, sunflowerseed meal imports are forecast up 0.1 million metric tons to 2.4 million metric tons. Turkey's sunflowerseed oil imports forecast for MY 2023/24 is increased by 0.1 million metric tons to 1.2 million metric tons. With recovery in Ukraine's sunflowerseed crush operations and export logistics, the MY 2023/24 ending stocks are forecast at 0.6 million metric tons, significantly down from 2021/22 and 2022/23 levels.

Ukraine’s 2023/24 rapeseed crush and rapeseed exports are forecast to reach a record-high volume. Rapeseed crush is forecast up 3 percent from last month to 0.5 million metric tons and rapeseed exports are forecast at 3.8 million metric tons, up 7 percent from last month. Rapeseed oil and rapeseed meal are pushed to record highs of 0.2 million metric tons and 0.3 million metric tons, respectively. Rapeseed exports are raised by 0.3 million metric tons to 3.8 million metric tons with more exports flowing to the EU. The EU’s imports are raised this month due to lower-than-expected rapeseed production in 2023/24.

With near-record soybean production in Ukraine, crush was raised 0.2 million metric tons to 1.9 million metric tons for MY 2023/24, the highest since MY 2019/20 and up 23 percent from 2022/23. Ukraine’s soybean exports are projected at 2.7 million metric tons, up 0.2 million metric tons from last month but down 0.6 million metric tons from 2022/23.

Soybean Crush on the Rise in China

China’s soybean crush forecasts for MYs 2022/23 and 2023/24 are raised this month by 1.0 million metric tons for both years and they are projected to reach 93.0 million metric tons and 96.0 million metric tons, respectively. In recent months, soybean crush margins have improved on recovery in domestic meal demand and higher soybean imports. China’s soybean imports in August totaled 9.4 million metric tons, bringing the year-to-date soybean imports to 93.7 million metric tons, a 12-percent increase compared with last year. Consequently, MY 2022/23 soybean import estimates are revised upwards to 102.0 million metric tons, 2.0 million metric tons higher than last month and 10.4 million tons higher than MY 2021/22. China’s soybean imports forecast for MY 2023/24 is increased by 1.0 million metric tons this month to 100.0 million metric tons.

With higher soybean crush, China’s soybean meal production forecast for MY 2023/24 increased this month by 0.8 million metric tons to 76.0 million metric tons. A higher domestic supply of soybean meal will be consumed domestically and exported. China’s soybean meal export forecast for 2023/24 is raised this month by 0.5 million metric tons to 1.0 million metric tons on higher soybean meal demand from neighboring countries. This month, soybean meal ending stocks for China have been added for 2008/09 through 2023/24 to adopt data from China National Grain and Oils Information Center (CNGOIC) as reported by AgriCensus. As a result, soybean meal consumption was adjusted slightly down across several years.
China’s soybean oil production forecast for MY 2023/24 increased by 0.2 million metric tons to 7.3 million metric tons on higher crush. Furthermore, the domestic soybean oil consumption

forecast is raised by 0.1 million metric tons to 17.3 million metric tons. A higher projection of China’s domestic consumption of soybean oil is offsetting lower use of other minor oils. In addition, China’s soybean oil exports forecast for MY 2023/24 has increased to 0.2 million metric tons.

With the 2022/23 rapeseed imports estimate raised to a record high (5.1 million metric tons), a larger carryover of rapeseed into the new marketing year will allow for higher rapeseed crush and domestic products output, shrinking rapeseed meal and rapeseed oil import demand. The rapeseed crush for MY 2023/24 is raised this month by 0.4 million metric tons to 18.7 million metric tons, on increased domestic demand for rapeseed oil and rapeseed meal. The rapeseed oil import forecast for MY 2023/24 is reduced by 0.1 million metric tons to 1.4 million metric tons.

Suggested Citation

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