



December Market Update

Corn, Soybeans, Rice, and Cotton

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Prices at a Glance

Crop	2022/23 U.S. MYA Price Projection
Corn	\$6.70 per bu.
Soybeans	\$14.00 per bu.
Long Grain Rice	\$16.50 per cwt.
Southern Medium Grain Rice	\$17.40 per cwt.
Upland Cotton	\$0.85 per lb.

WASDE Summary

This month's 2022/23 U.S. corn outlook is for lower exports and greater ending stocks. Exports are lowered 75 million bushels as competition from other exporters and relatively high U.S. prices have resulted in slow sales and shipments through early December. With no other use changes, corn ending stocks are raised 75 million bushels. The season-average corn price received by producers is lowered 10 cents to \$6.70 per bushel based on observed prices to date.

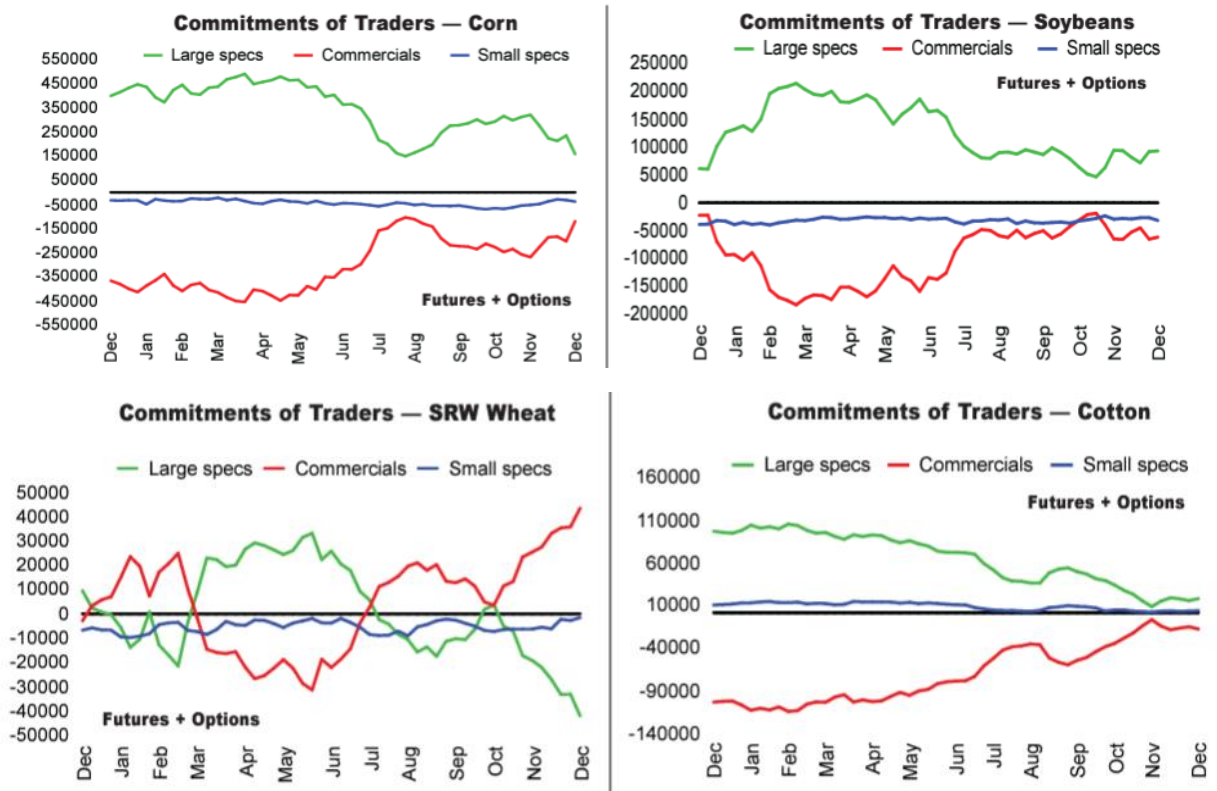
Soybean supply and use projections for 2022/23 are unchanged from last month. Based on a review of EPA's recent proposed rule for renewable fuel obligation targets, soybean oil used for biofuel for 2022/23 is reduced 200 million pounds to 11.6 billion. Soybean oil exports are also reduced on historically low export sales through November. With reduced use of soybean oil for biofuel and exports, food use and ending stocks are raised. The U.S. season-average soybean price forecast is unchanged at \$14.00 per bushel. The soybean oil price is reduced 1 cent per pound to 68 cents. The soybean meal price forecast is increased \$10.00 to \$410.00 per short ton.

The outlook for 2022/23 U.S. rice is for unchanged supplies and domestic use, lower exports, and higher stocks compared with last month. The export forecast is reduced 2.0 million cwt to 69.0 million, all long-

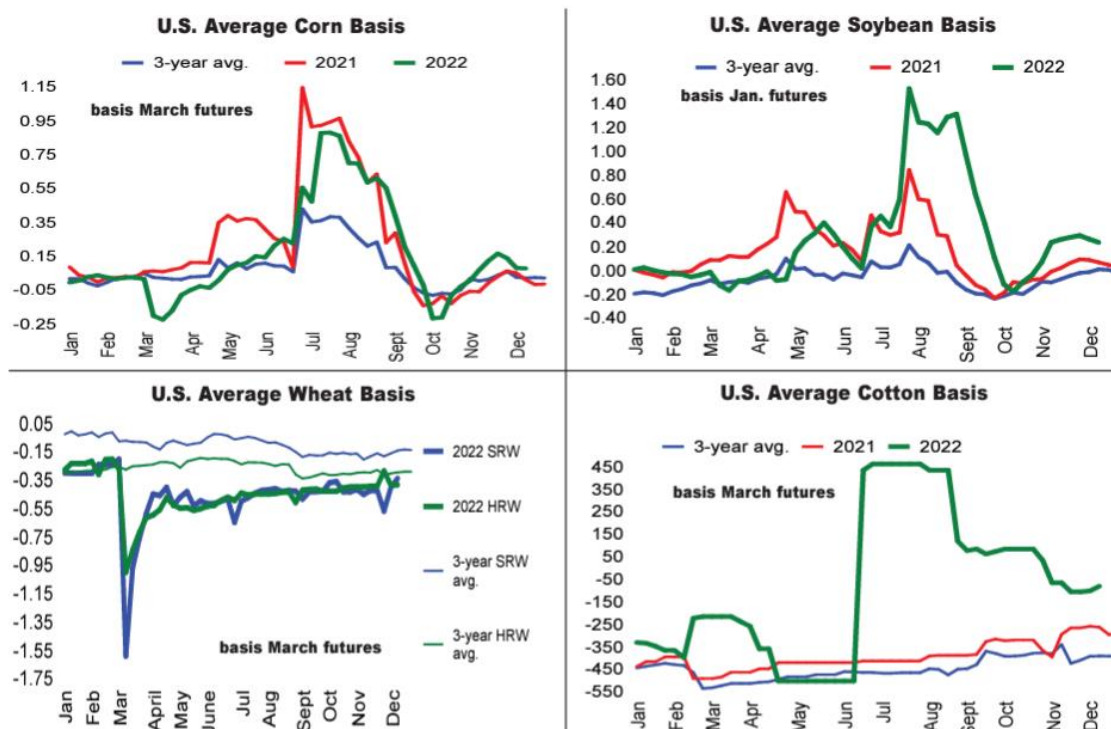
grain, based on a slow pace of shipments and sales and would be the lowest level since 1991/92. Rough rice exports are reduced 2.0 million cwt to 23.0 million, which would be the lowest level since 2000/01. Ending stocks are forecast 2.0 million cwt higher to 38.1 million. The 2022/23 season average farm price (SAFP) forecasts for all medium- and short-grain rice and all-rice were both lowered as the proportion of California rice for 2022/23 is expected to be smaller. The season average farm price (SAFP) for long-grain rice is unchanged at \$16.50 per cwt. The SAFP for southern medium-grain rice is unchanged at \$17.40 per cwt.

This month's 2022/23 U.S. cotton forecasts include higher production and ending stocks but lower mill use and exports. Production is 211,000 bales higher—at 14.2 million bales—mainly due to higher yields in the Delta and Southeast. Mill use is lowered 100,000 bales reflecting reduced spinning levels to date and weaker expectations for future demand. A reduction in expected world demand and trade results in a 250,000-bale decrease for U.S. cotton exports, down to 12.25 million. Ending stocks are now expected to be 500,000 bales higher than they were a month earlier, but the upland cotton season-average farm price is unchanged at 85 cents per pound.

Commitment of Traders Report, Tuesday, December 13, 2022



Cash Market Basis Charts, Wednesday, December 14, 2022



Corn

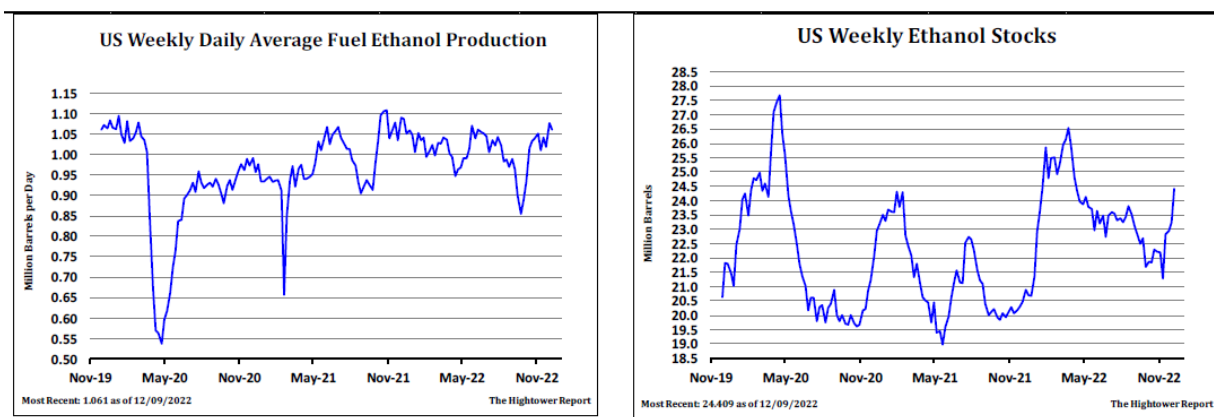
This month, there are no changes to the feed grain production estimate for 2022. Corn and sorghum supplies are steady this month but are down from 2021/22 (at 15,357 million bushels and 289 million bushels, respectively), following a dry growing season—while barley and oat supplies are up from last year, on a return to trendline production following last year's drought.

Corn and sorghum exports for 2022/23 are revised down in the December WASDE report, on limited supplies and a slow pace of sales early in the marketing year. Corn exports (of 2,075 million bushels) are projected down 75 million bushels from last month and sorghum exports (of 155 million bushels) are forecast down 20 million bushels from November. Sorghum consumed for food, seed, and industrial use (FSI) increased in December on strong ethanol production. Corn ending stocks are up 75 million bushels from November at 1,257 million—while sorghum, barley, and oats ending stocks are unchanged from last month.

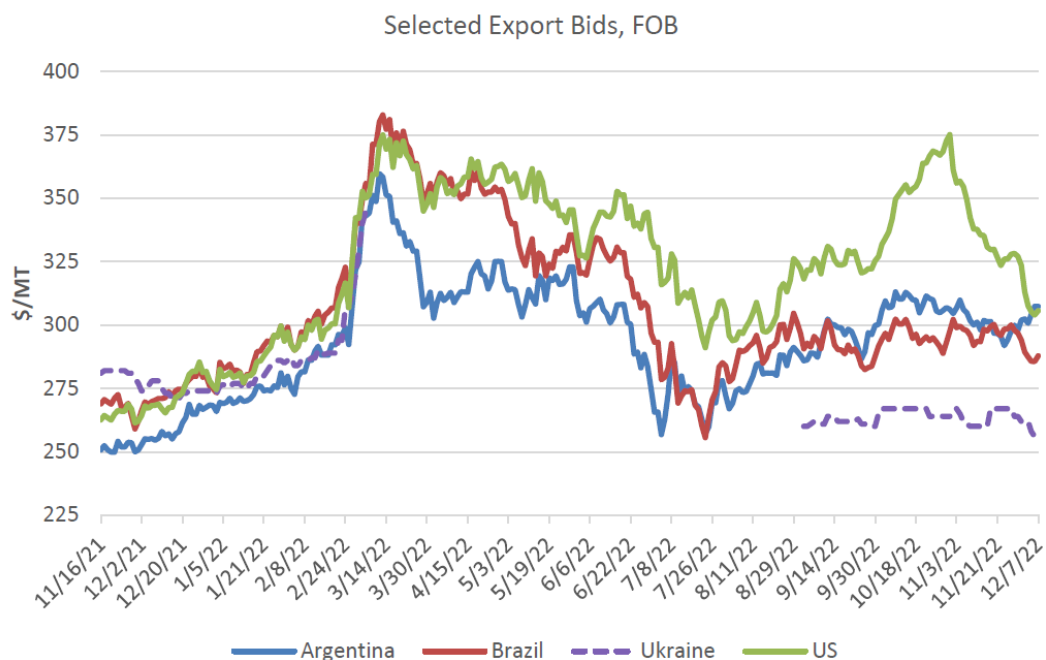
To end the week, corn futures extended weakness amid spillover from weakness in the wheat market, which remains under pressure in part due to grain supplies from Ukraine reaching the global market. However, a decline in the country's shipments could wane as harvest continues and losses are tallied.

March futures traded a 6-3/4 cent range, turning below support at \$6.50 1/2 and making a low just below the 10-day moving average at \$6.47. Both levels will continue to serve as support as the session ended above each level. However, attempts lower will encounter further support at \$6.42 3/4, where a breach of support could find bears pushing towards \$6.34. Efforts to the upside, however, will meet resistance between today's high at \$6.53 1/2, as well as the 20-day moving average at \$6.57 1/4, and \$6.58 1/4. A close above this area will likely increase momentum for bulls looking to inch toward resistance at \$6.63 and the 100-day moving average near \$6.65 3/4.

While poor export demand remains a negative corn market factor, there are also concerns that ethanol production is set to drop off due to poor producer margins. The recent EIA report is expected to peg U.S. ethanol production for the week ended December 9 at 1.050-1.077 mil. barrels per day, compared with the previous week's 1.077 million. Also reported U.S. ethanol stocks are expected to run 23.000-23.857 million barrels compared with the 23.257 mil. a week earlier.

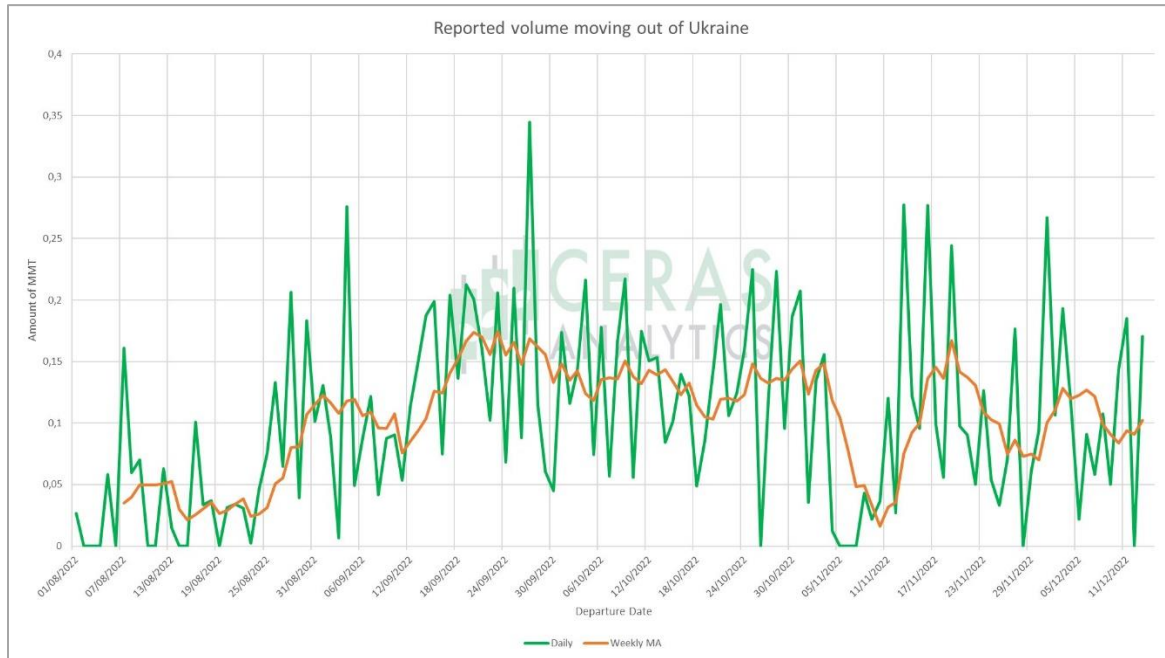


Since the November WASDE, major exporters' bids have generally fallen. U.S. bids were down \$53/ton to \$304 with outstanding sales of U.S. corn less than half of the level from a year ago and modestly improving barge rates on the Mississippi River. Brazilian bids were down \$14/ton to \$286. Brazil has exported a record high monthly volume for each month between August and November 2022. Ukrainian bids are down \$9/ton to \$256. The Black Sea Grain Initiative was extended for another 4 months just prior to its original expiry date on November 19, but long inspection times have reportedly slowed the flow of Ukraine corn exports. Argentine bids are unchanged at \$307/ton.

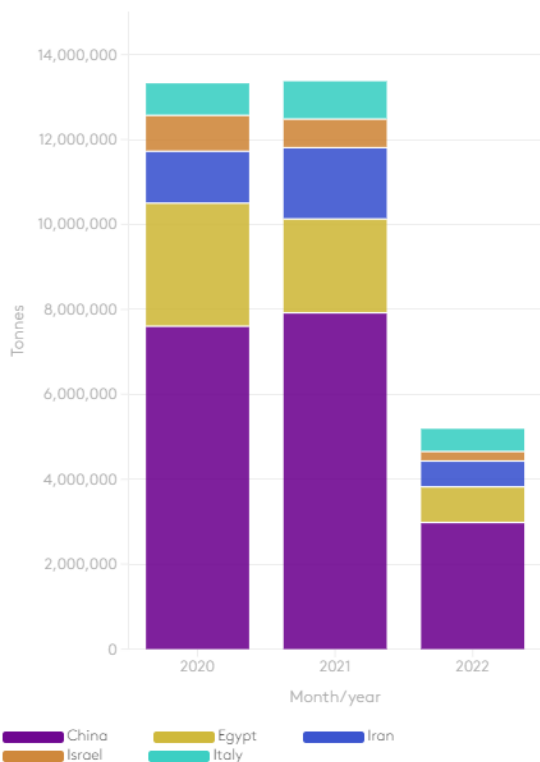


Source: IGC

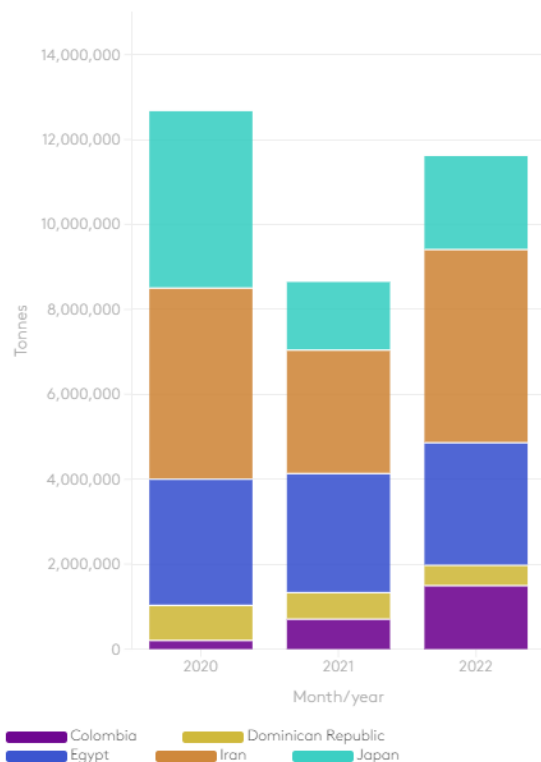
December 20, 2022 will mark 10 months since Russia invaded Ukraine. According to the forecast of the Ministry of Agriculture, this year's harvest was supposed to be 65 to 67 million tons of grain and oil crops. The latest report shows one third of the areas under corn may remain in the fields. Because of the prolonged rainy season, the moisture content of corn is 30% and higher, and the high prices of natural gas make it unprofitable to dry corn. After recent missile strikes in Ukraine, ports did not operate but movement appears to have picked up again as a total reported volume of 170k tonnes moved out of the Ukrainian ports.



Top 5 importers of Ukrainian corn
Imported quantity by country - From Jan 2020 to Aug 2022

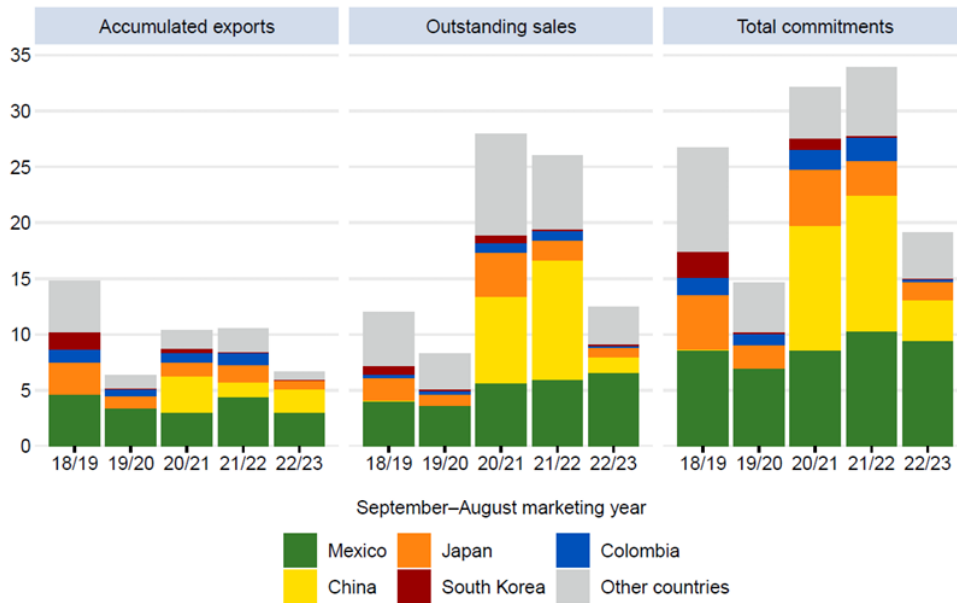


Top 5 importers of Brazilian corn
Imported quantity by country - From Jan 2020 to Aug 2022



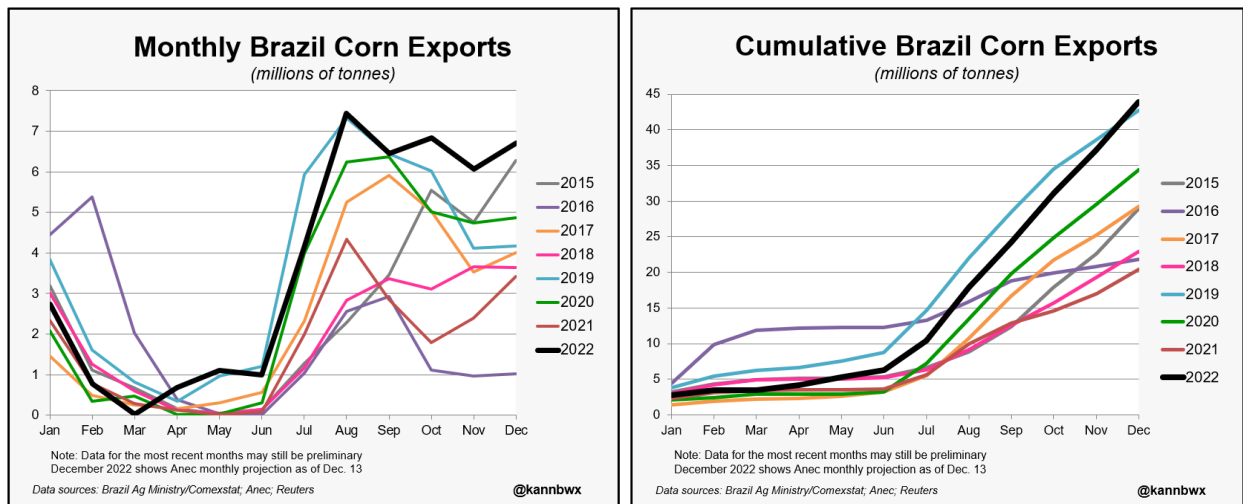
The USDA, Foreign Agricultural Service (FAS) reported total U.S. corn export commitments (shipments plus outstanding sales of December 1, 2022) at 19.0 million metric tons (down 48 percent from last year and 32 percent below the 5-year average). Sales are slow (relative to last year) due to high export prices, driven by limited exportable supplies and difficult inland logistics, resulting from historically low water levels on the Mississippi River—a critical channel that moves corn from the Midwest to export terminals in the Louisiana Gulf.

**U.S. corn accumulated exports, outstanding sales, and total commitments,
September 1 to December 1, 2018–2022**
Million metric tons



Source: USDA, Foreign Agricultural Service.

Export group ANEC sees Brazil's December corn exports at 6.7 mmt (vs 5.4 mmt forecast last week). That would top 2015's record, and it would mark the 5th straight month of records. Several cargos headed to China in December. That would place calendar year 2022 #corn exports just under 44 mmt, edging Brazil's previous best of 42.8 mmt in 2019. 2016 stands out. Brazil shipped too much corn away in late 2015/early 2016, then had a horrendous safrinha crop and they could not afford to export much.



Soybeans

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.

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.

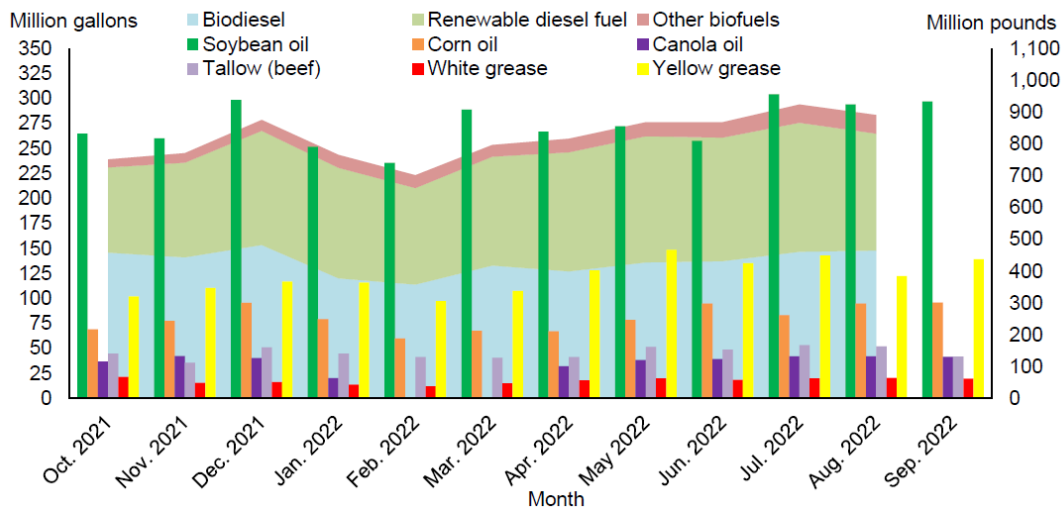
On December 1, 2022, the U.S. Environmental Protection Agency (EPA) announced a proposed rule to establish renewable fuel standard obligation targets for 2023–2025. Included in these targets is a slight bump in the biomass-based diesel mandate during the first year. In addition, the EPA finalized a pathway 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.

Biomass-based diesel production and feedstock use



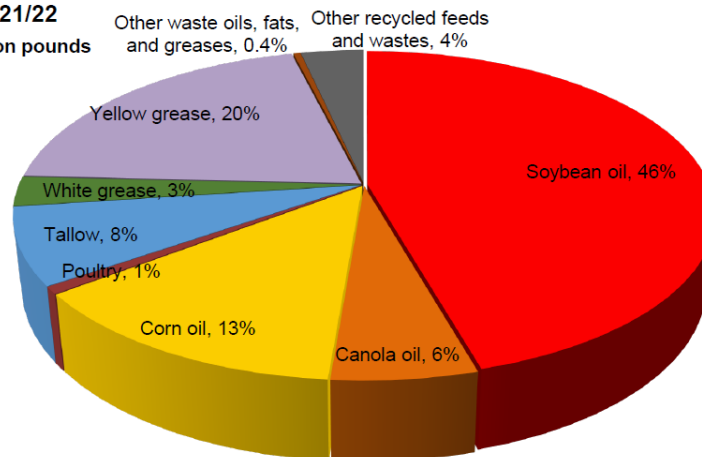
Note: Included feedstocks account for 97–99 percent of biofuel production. Poultry waste and other animal feedstock categories are excluded.

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.

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.

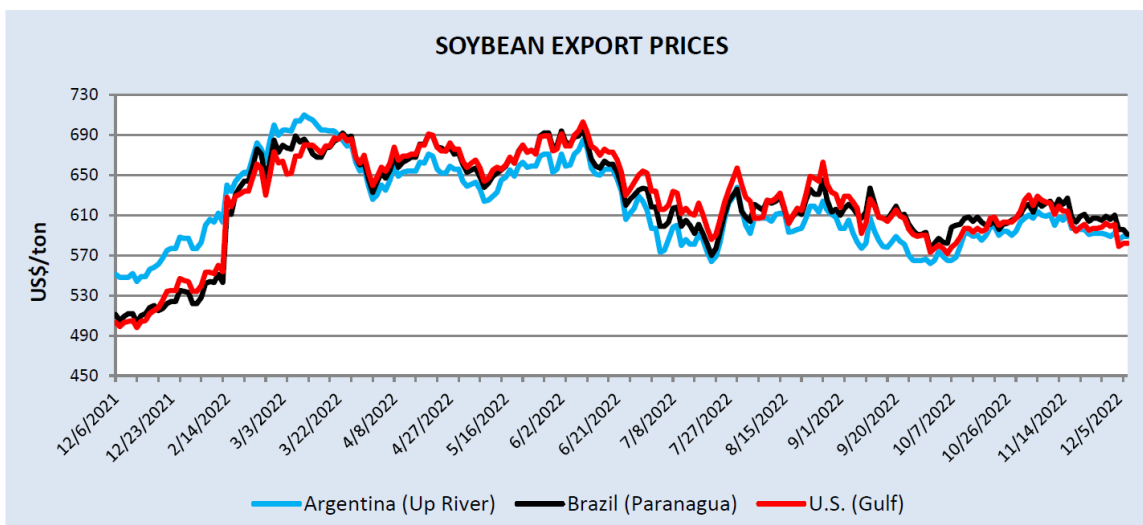
Source: USDA, Economic Research Service using data from U.S. Department of Energy, U.S. Energy Information Administration (EIA), *Monthly Energy Review* and USDA, Foreign Agricultural Statistics Service, *Production, Supply, and Distribution* database, December 2022.

Soybean futures ended higher behind demand optimism, strength in soymeal and crude oil and concerns over dryness in South America. Net drying is expected in Argentina the next 10 days despite some periodic showers and thunderstorms, World Weather Inc. said. Most of the expected rainfall “will not be enough to counter evaporation,” the forecaster said. “Crop moisture stress will be rising once again as the ground firms and any rain would be welcome, but much more is going to be needed.” In Brazil, dryness is intensifying across Rio Grande do Sul as the state continues to miss out on rainfall, World Weather said. Still, soybean and first-season corn prospects “remain highly favorable in the remaining portions of Brazil.” While South American weather remains price-supportive, the strong prospects for a record Brazil crop are for now mitigating bullishness.

Soymeal remains a bullish leader in the soy complex, with January futures still near the contract high of \$474.40 posted last week. U.S. soybean crush in November likely reached 181.473 million bu., the ninth highest on record for any month, based on a Reuters poll of analysts ahead of the monthly National Oilseed Processors Association (NOPA) report.

Soybean futures hold a near-term bullish posture with the January contract extending an eight-week uptrend and closing above most key short- and medium-term moving averages. Key upside objectives for market bulls include last week’s intraday high of \$14.92 3/4. A push above that level may trigger buy stops that could help fuel a continued rally above \$15.00, with additional targets including the August intraday high of \$15.12 1/4 (a break above \$15.00 could also unlock a wave of farmer selling). Initial support comes in at the 10-day moving average at \$14.62 1/2, followed by the 20- and 200-day moving averages at \$14.51 3/4 and \$14.49 1/2, respectively. Further downside support lies at the 40-day moving average at \$14.37 3/4

Soybean prices in November were slightly higher on average compared to the previous month for all top exporters. The higher monthly average was mostly driven by planting delays in Argentina and U.S. demand for soy oil for biodiesel. On the other hand, the downward trend in the second half of the month could be attributed to concerns about weakening demand for soybeans and products in China as a result of uncertainties over COVID-19 restrictions. Additionally, large global rapeseed and sunflowerseed supplies are pressuring soybean prices.



November 2022 Soybean Export Prices

	U.S. Gulf FOB	Argentina Up River FOB	Brazil Paranagua FOB
November Avg Price	\$610/ton	\$601/ton	\$614/ton
Change vs October	+ \$16/ton	+ \$16/ton	+ \$15/ton

Source: International Grains Council. All prices are FOB: U.S. Gulf, Argentina Up River, and Brazil Paranagua.

South American soybean meal saw marginally lower average prices in November. The premium for U.S. soybean meal compared to South American widened slightly this month with U.S. prices increasing modestly, mostly driven by strong domestic disappearance. Soybean meal prices began to rally at the beginning of December on rising concerns about potential crop losses in Argentina which would lead to reduced soybean crush and lower exportable supplies and the announcement of a lower-than-expected U.S. biofuel blending proposal.

Soybean oil prices were up in November based on Ukraine crush concerns and strong demand for biodiesel. The premium for U.S. soybean oil to South America soybean oil widened in November compared to October. Palm oil average prices were higher on weather-induced harvest delays. Additionally, palm oil prices rebounded on strong India imports as well as Indonesia's plans to roll out its B35 biodiesel mandate. In the first week of December, the EPA proposed its biofuel targets with approval of canola oil as feedstock and small targeted growth, depressing soybean oil prices.

Rice

There were no supply-side revisions this month to the 2022/23 U.S. rice balance sheet. Production remains forecast at 164.3 million hundredweight (cwt), 14 percent below a year earlier and the smallest since 1993/94. Total rice harvested area remains estimated at 2.18 million acres, 12.5 percent below a year earlier and the lowest since 1983/84. Harvested area is estimated to be less than a year earlier in all reported States except Louisiana and Texas, where harvested area is up slightly from 2021/22. California's acreage declined the most, a result of long-term drought, low reservoir levels, and resulting water restrictions.

The average yield of 7,549 pounds per acre is 2 percent below the year-earlier record. Average yields in 2022/23 are projected to be lower than a year earlier in all reported rice producing States except Texas, which is expecting a near-record yield.

Long-grain 2022/23 production remains forecast at 131.7 million cwt, 9 percent below a year earlier and the smallest since 2019/20. Medium- and short-grain production remains forecast at 32.7 million cwt, 31 percent smaller than a year earlier and the lowest since at least 1972/73, when NASS first reported U.S. rice production by class. In January, NASS will report yearend area, yield, and production estimates by State and class in its Crop Production 2022 Summary, to be released on January 12, 2023.

U.S. rice imports in 2022/23 remain forecast at a record 45.0 million cwt, 19 percent above a year earlier. Imports are expected to account for more than 30 percent of total domestic and residual use (excluding seed use) in 2022/23, the highest share on record. In October, the United States imported 70,651 tons (product weight) of rice, down 58 percent from the month-earlier near-record. Brazil, China, India, and Thailand account for most of the month-to-month import decline. Almost all U.S. imports from Thailand and India are aromatics classified as long-grain. The bulk of Brazil's exports to the United States are broken kernels, also classified as long-grain, typically used in processed products.

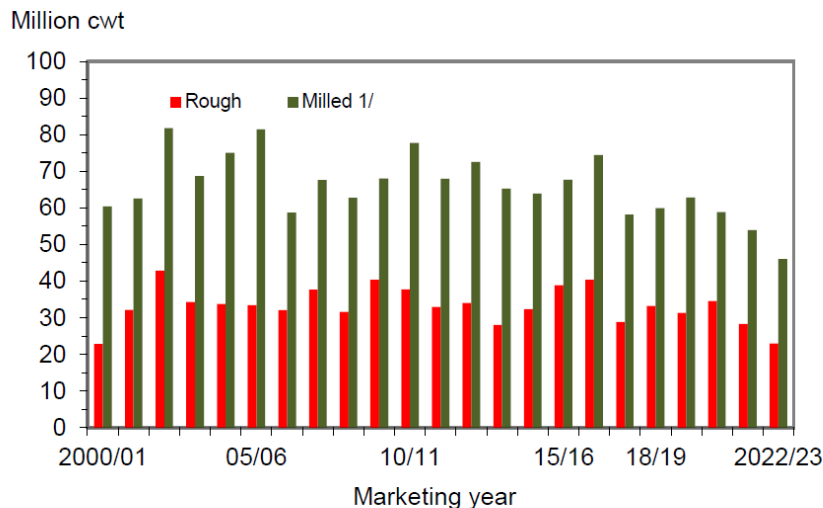
Long-grain imports remain projected at a record 35.0 million cwt, 14 percent larger than a year earlier. The record long-grain import forecast is based on expectations of larger imports of Asian aromatic varieties and increased imports of broken kernel rice due to a smaller U.S. crop and domestic millings. In October, the United States imported 61,335 tons of long-grain rice, with Thailand and India the largest suppliers.

Medium- and short-grain imports remain forecast at a record 10.0 million cwt, up 41 percent from a year earlier, with most of the projected increase due to an extremely weak California harvest. In October, the United States imported 10,189 tons of medium- and short-grain rice, with Thailand and India supplying the bulk and the European Union supplying a much smaller amount. Puerto Rico, an American territory, is expected to import 4 or 5 shipments of 21,000 tons of medium- and short-grain rice in 2022/23, with China the primary supplier. Puerto Rico took one of these shipments in September which was supplied by China.

With carryin also unchanged from the previous estimate, total U.S. rice supplies in 2022/23 remain forecast at 249.1 million cwt, 24.2 million cwt below a year earlier. Long-grain supplies are projected to drop 7 percent to 191.3 million cwt, while medium- and short-grain supplies are projected to decline 15 percent to 55.7 million cwt, the lowest since 1989/90.

U.S. 2022/23 all-rice exports are forecast at 69.0 million cwt, 2.0 million below the previous forecast, 16 percent below a year earlier and the lowest since 1991/92. The downward revision was largely based on sales and shipments through late November, expectations regarding shipments for the remainder of the market year, and uncompetitive prices. The U.S. rough-rice export forecast was again lowered 2.0 million cwt and is now projected at 23.0 million cwt. Rough-rice imports are projected to be almost 19 percent below a year earlier and are the lowest since 2000/01. Long-grain shipments to Latin America are expected to again account for the bulk of these exports. However, the United States is facing increasing competition from South American suppliers in the region, especially in Mexico, the top U.S. rough-rice export market, as well as in several Central American markets.

U.S. milled-rice and rough-rice exports projected to continue to decline in 2022/23



Cwt = Hundredweight. 2022/23 are forecasts. 1/ Milled- and brown-rice exports on a rough-rice basis.

Source: USDA, Economic Research Service, *Rice Yearbook* dataset; 2000/01–2019/20; USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*, 2020/21–2022/23.

U.S. 2022/23 milled-rice exports remain forecast at 46.0 million, nearly 15 percent below a year earlier and the smallest since 1965/66. United States sales through late November to both Haiti—the largest market for U.S. long-grain milled rice—and Japan—the largest market for U.S. medium- and short-grain milled rice—were well below a year earlier. U.S. milled rice exports in 2022/23 are limited by high prices compared with those of suppliers in both South America and Asia.

Long-grain 2022/23 exports are forecast at 51.0 million cwt, 2.0 million below the previous forecast, nearly 16 percent smaller than a year earlier and the lowest since 1987/88. Latin America is the largest market for U.S. long-grain exports, followed by the Middle East and Canada. The United States is facing increasing competition from several South American exporters in key Latin American markets. Medium- and short-grain exports remain forecast at 18.0 million cwt, 16.5 percent below a year earlier and the lowest since 2000/01. The United States is expected to make few sales of medium- and short-grain rice outside of its core markets in Northeast Asia, Jordan, and Canada due to record-high prices and very tight supplies. Through late November, U.S. sales and shipments to both Japan and South Korea were well behind a year earlier, a result of tight supplies in California and record-high U.S. prices.

All-rice total domestic and residual use in 2022/23 remains forecast at 142.0 million cwt, 6 percent below a year earlier. The year-to-year decline is based on reduced supplies of U.S. rice and fewer post-harvest losses resulting from a smaller crop. The U.S. 2022/23 ending stocks forecast was raised 2.0 million cwt this month to 38.1 million cwt, still 4 percent below a year earlier.

The 2022/23 U.S. season-average farm price (SAFP) forecasts for medium- and short-grain and for all-rice were lowered this month. The 2022/23 U.S. medium- and short-grain SAFP is forecast at \$29.10 per cwt, 90 cents below the previous forecast but still 17 percent above a year earlier and highest on record. The SAFP reduction is based on an expected smaller share of total medium- and short-grain marketings accounted for by the higher-priced California rice based on the NASS-reported substantial decline in California production this year. The 2022/23 all-rice SAFP was also lowered 90 cents, to \$19.00 per cwt, still 18 percent above a year earlier and the highest on record. The decline in the all-rice SAFP forecast is

based on an expected smaller share of total all-rice marketings accounted for by the higher-priced medium- and short-grain rice based on the smaller than typical share of production accounted for by medium- and short-grain rice in 2022/23.

The California 2022/23 medium- and short-grain SAFR remains forecast at a record \$36.00 per cwt, up 26 percent above a year earlier. The extremely high California SAFR is due to a second consecutive year of a drought-reduced California harvest. The 2022/23 southern medium- and short-grain SAFR remains forecast at \$17.40 per cwt, 25 percent above a year earlier and the highest since the 2008/09 record. The 2022/23 SAFR forecast for long-grain rice remains at a record \$16.50 per cwt, more than 21 percent above a year earlier.

The strong value of the dollar continues to be a leading factor contributing to the dismal export situation for U.S. long-grain rice. While the increased price of rice makes sense to offset the rise of the input costs required to grow the crop this year, the strength of the dollar is putting additional upward pressure on prices. This further augments the uncompetitive nature of the pricing difference that has befallen U.S. long-grain rice as of late when compared to other origins in the western hemisphere and around the globe. This is not a new phenomenon, and the industry has done a good job finding customers beyond Iraq and Haiti. There is some good news coming from Haiti in that there may be an opportunity to export again as the organization returns- as reported by the USRPA.

Last week we highlighted a GAIN report on Brazil and focused on the direct impact Brazil has had on eroding the share of U.S. business to Mexico. We want to further expand on that as imports account for about 80% of Mexico's total rice consumption, and about 80% of the imports have historically been paddy. In years past, the United States has enjoyed almost a 100% share of those paddy exports. That business has slowly been fading over the years, but in March 2022 Brazil came in strong, and this year the U.S. accounts for closer to only 20% of Mexico's imports. This dynamic has less to do with the strong dollar that we mentioned above, and more to do with a systemic quality problem and tariff issues that have caused Mexico to find alternative sources of rice from the U.S. There is even talk of the Mexican government removing tariffs on all rice imports — not just paddy like we have now — which will open an onslaught of cheaper rice options from Vietnam, Thailand, and even India.

Daily price of paddy United States and Brazil



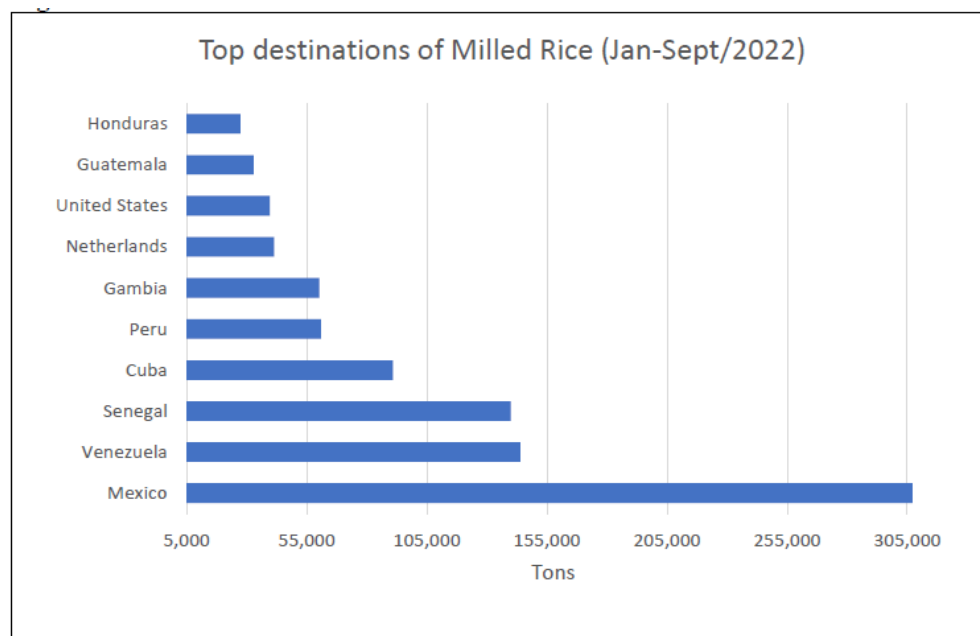
In the United States, rice prices rose again by 1% in a market tending to reactivate, despite strong competition from Mercosur on their traditional Central American markets. Exports rose to 200,000 t against 160,000 t in September. However, they are 20% behind year-on-year. Competition from Mercosur in the Mexican market, the main destination for US rice, is partly offset by good performance in the Caribbean market. The Long Grain 2/4 rose to \$ 695/t from \$ 686 in September. In early November, the price was stable. On the Chicago Board of Trade, paddy futures prices declined by 5% to \$ 367/t from \$ 386 in September. In early November, they tended to firm up significantly to \$ 393.

In Mercosur, export prices rose by a further 2% thanks to an active external market. Exports are increasing especially to Central America. In Brazil, exports would have reached 270,000 t (milled basis) against 123,000 t in September. Exports are expected to reach 1.1 Mt in 2022 (milled basis) against 800,000 t in 2021, up 42% year-on-year. The Brazilian paddy indicative price rose by 2.5% to \$ 299/t against \$ 292 in September due to the weakening of supply. In early November, the price was still firm at \$ 312.

The USDA Post increases Brazil's MY 2022/2023 (April 2022 – March 2023) rice export forecast to 900,00 MT, from the previous 700,000 MT estimate, based on the growing interest for rice in international markets. Post decreases its forecast for rice import for MY 2022/2023 to 850,000 MT from its previous forecast of 900,000 MT, based on the country's production levels and consumption needs.

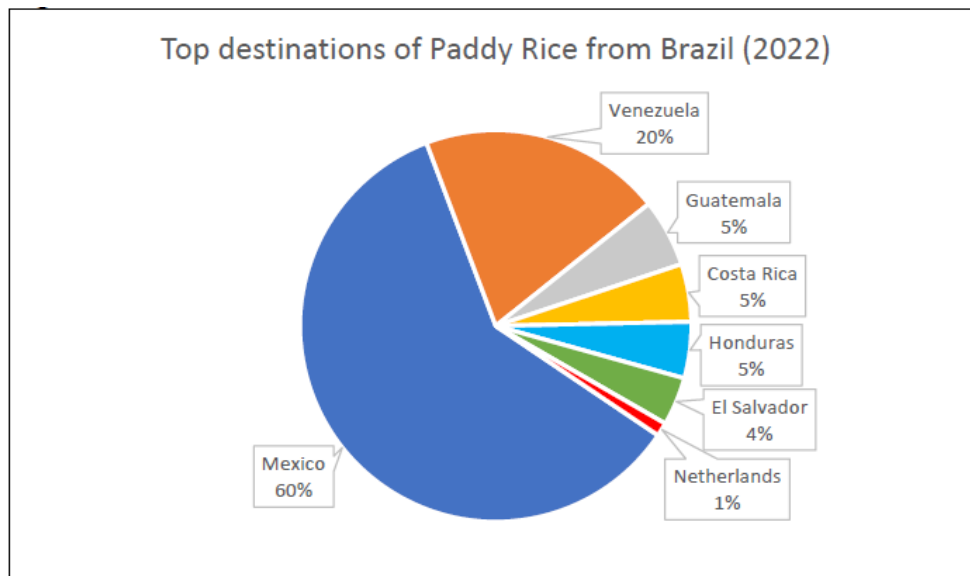
At a recent meeting with the World Trade Organization (WTO), the Brazilian Rice Industry Association (ABIARROZ) said that Brazil is prepared to increase its export capacity by 60 percent in the coming years, including by adding the stocks that come from neighboring Mercosur countries.

For MY 2021/2022 (April 2021 – March 2022), Post increased its estimate for Brazil's rice exports to 1.1 MT, up 29 percent from its previous estimate, and increased its imports from 700,000 MT to 850,000 MT. High demand for rice in the internal market, associated with the failure to increase production, has resulted in the need to increase rice imports. The Brazilian currency and outstanding stocks continue to influence rice trade in the country, as producers traditionally export out of necessity rather than structuring their demands when they can negotiate better deals.



Data Source: Trade Data Monitor; Graph Post Brasilia

However, Brazilian producers have recently benefited from more competitive paddy rice prices compared to the United States and the prospect of exporting broken rice amid the closing of India's market. Brazil has seen its exports of paddy rice to Mexico grow exponentially, as this destination surpassed Venezuela as the leading export country. The increase in exports to Mexico is due to the temporary tax exemption on imports of paddy rice adopted by that country as a measure to combat inflation. The tariff exemption for quotas of paddy rice from Brazil to Mexico ends in February 2023 but experts consulted by Post have indicated that the Brazilian industry is working with the government to request the exemption until the end of 2023.



Data Source: Secretariat of Foreign Trade (SECEX); Graph Post Brasilia

The 2022/23 global rice production forecast was lowered 0.4 million tons to 503.3 million tons (milled basis), more than 2 percent below the year-earlier record and the first year-to-year decline since 2015/16. Global production is the smallest since 2019/20. The month-to-month reduction is due to smaller production forecasts for Australia, Brazil, the European Union, Panama, and South Korea. Australia grows and exports almost exclusively medium- and short-grain rice, and the European Union produces and exports mostly medium- and short-grain rice. Thus, these two production revisions further tighten an already very limited supply situation for this class of rice, as California's production is the lowest since 1977/78 and Egypt no longer exports any significant amounts of rice.

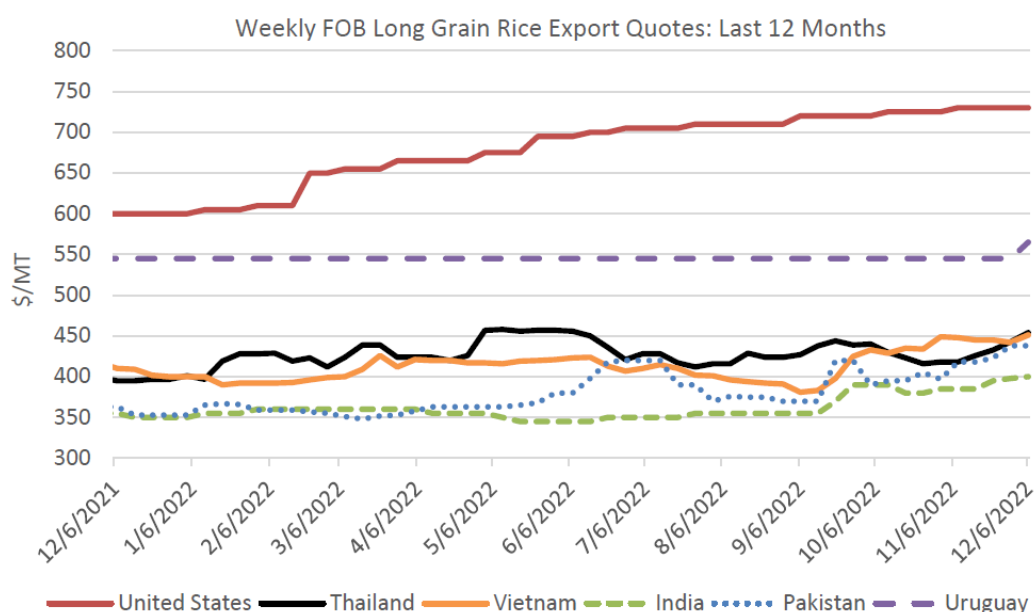
On an annual basis, Argentina, Brazil, Cambodia, China, the European Union, India, Laos, Malaysia, Pakistan, Russia, Senegal, Tanzania, Turkey, and Uruguay are all expected to decrease exports in 2023. India's exports are projected to decrease 1.20 million tons and Pakistan's 0.80 million tons, mostly due to smaller crops. In contrast, Australia, Burma, Guyana, and Thailand are projected to export more rice in 2023. Thailand's exports are projected to increase 0.6 million tons to 8.5 million—the highest since 2018, mostly due to weaker shipments from top competitors India and Pakistan. U.S. 2023 exports are forecast at 2.25 million tons, unchanged from 2022, which are the lowest since 1992.

Over the past month, quotes for Thailand's trading prices for most grades of regular (neither parboiled nor aromatic) milled rice increased 8-9 percent from a month earlier, mostly due to a stronger baht. For the week ending December 6, Thailand's 100-percent Grade B long-grain milled rice for export was quoted at \$454 per ton, up \$36 from the week ending November 8 and the highest since early June. Price quotes for

Vietnam's nearly harvested late-autumn crop in the Mekong River Delta for the week ending December 6 were quoted at \$450 per ton, up \$15 from the week ending November 8 and the highest since June 2021.

India's price quotes for 5-percent broken-kernel rice shipped bulk were \$390 for the week ending December 6, up \$10 from the week ending November 8. Despite the slight increase, India remains the most competitively priced source of Asian rice. Pakistan's price quote for 5-percent broken-kernel rice for the week ending December 6 increased \$30 per ton to \$445 from the week ending November 8. Argentina's 5-percent broken-kernels were quoted at \$510 per ton for the week ending December 6, up \$10 from the week ending November 8.

U.S. trading prices for long-grain milled rice were unchanged over the past month. Prices for U.S. long-grain milled rice, Number 2 Grade, 4-percent broken kernels (free on board a vessel at a Gulf port, Iraqi specifications) remain quoted at \$730 per ton for the week ending December 6, the highest for U.S. milled long-grain rice since early October 2008. U.S. price quotes for Latin American markets were also unchanged over the past month, quoted at \$695 per ton for the week ending December 6. Milled-rice nominal price quotes (no actual offers or sales) for California medium-grain Number 1 Grade, 4-percent broken, remain at \$1,625 per ton (free on board at a domestic mill) for the week ending December 6, unchanged since mid-September and the highest on record for this specification.

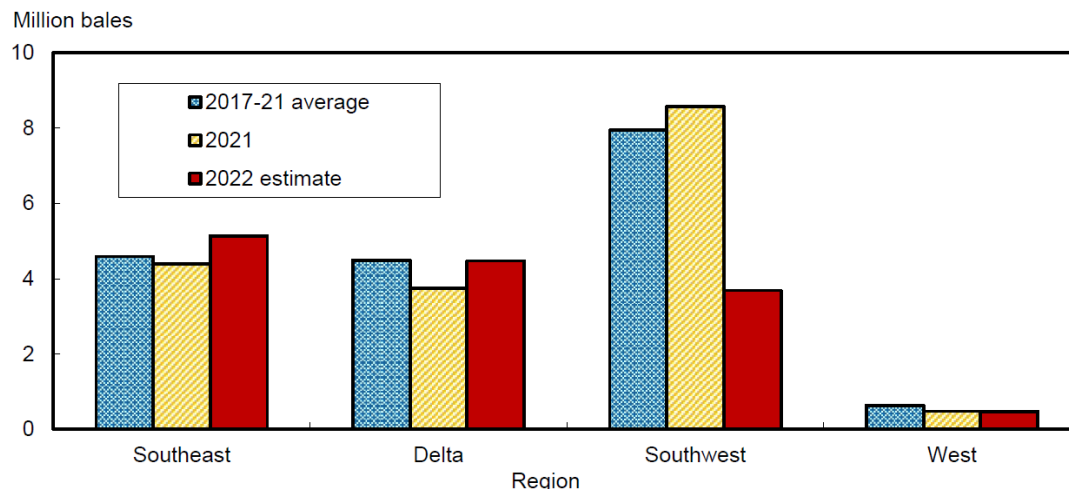


Cotton

USDA's December Crop Production report forecasts 2022 U.S. cotton production at 14.2 million bales, slightly above last month's forecast but 19 percent (3.3 million bales) below the 2021 crop. Harvested area this season is estimated at only 7.9 million acres—the lowest since 2013—as drought conditions in the Southwest reduced the area harvested and crop size significantly. The implied U.S. abandonment rate for 2022 is estimated at a record 43 percent, compared with the previous record of 36 percent in 2011. The 2022 national yield, however, is forecast at a relatively high 868 pounds per harvested acre, the highest in 4 years. Upland cotton production is estimated at approximately 13.8 million bales, while the extra-long staple (ELS) crop is forecast at 470,000 bales.

Upland cotton production is forecast higher compared with 2021 in two of the four Cotton Belt regions, dramatically lower in one region, and unchanged in the fourth region. In the Southeast, 2022 cotton production is projected at 5.1 million bales—17 percent (745,000 bales) above 2021 and one of the largest crops on record. Cotton harvested area in 2022 is estimated above the 5-year average at 2.6 million acres. Meanwhile, the Southeast yield is projected at 941 pounds per harvested acre in 2022, the third highest on record behind 2012's 1,033 pounds and 2019's 946 pounds. For the 2022 Delta cotton crop, production is estimated at nearly 4.5 million bales, 20 percent above a year ago but similar to the 5-year average. Despite this season's harvested area—2 million acres—at its highest in 3 years, the region's yield—the lowest in 5 years—kept production from rising further this season. The Delta yield is forecast at 1,094 pounds per harvested acre in 2022, compared with 1,131 pounds in 2021.

U.S. regional upland cotton production



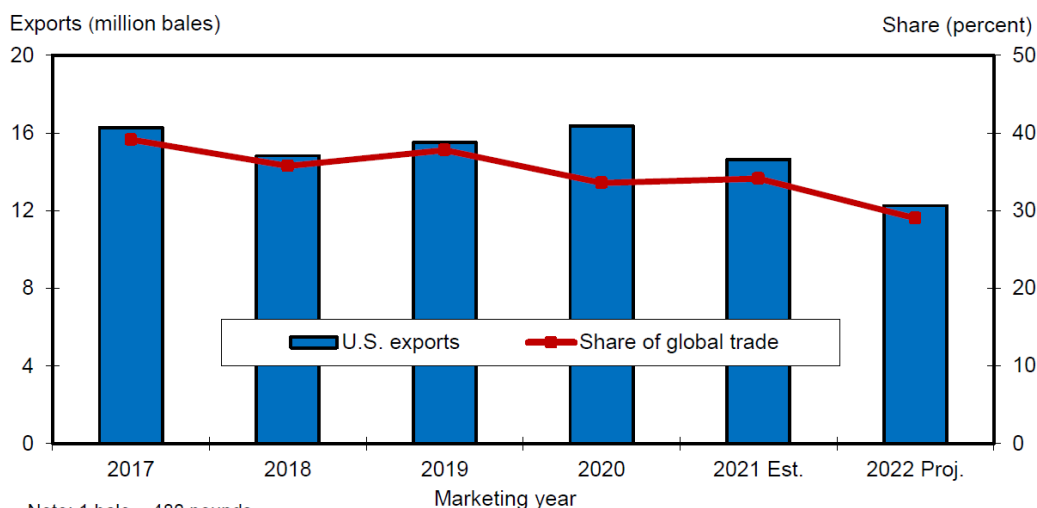
Note: 1 bale = 480 pounds.

Source: USDA, Economic Research Service based on USDA, National Agricultural Statistics Service, *Crop Production* reports.

In the Southwest, the 2022 upland crop is projected at 3.7 million bales, the lowest since a similar crop was produced in 2011. Although 2022 planted area (8.7 million acres) was the highest since 1954, this season's drought conditions raised abandonment substantially and lowered crop prospects. Harvested area in 2022 is estimated at approximately 3 million acres, a record low. As a result, 2022 Southwest abandonment is projected at a record 66 percent, compared with last season's 12 percent. The 2022 Southwest upland yield is forecast lower at 597 pounds per harvested acre, compared with last season's 676 pounds and the lowest since 2011's 588 pounds.

U.S. cotton demand for 2022/23 is projected at 14.45 million bales in December, 16 percent below 2021/22 and the lowest level since 2015/16. U.S. cotton exports account for most of the demand and are projected at 12.25 million bales in 2022/23, with mill use forecast to contribute the remaining 2.2 million bales. Uncertainties regarding world cotton mill use prospects amid current global economic conditions have reduced cotton trade expectations for 2022/23. In addition, increased foreign competition and the smallest U.S. cotton supply in 7 years is expected to limit U.S. exports this season. Based on the December projections, the 2022/23 U.S. share of global trade is forecast at 29 percent—5 percentage points below last season and the smallest in 7 years.

U.S. cotton exports and share of global trade



Note: 1 bale = 480 pounds.

Source: USDA, Economic Research Service based on USDA, *World Agricultural Supply and Demand Estimates* reports.

With both U.S. cotton export and mill use projections for 2022/23 reduced this month and a slight increase in the production estimate, the U.S. ending stocks forecast rose 500,000 bales to 3.5 million, compared with last season's 3.75 million bales. The stocks-to-use ratio is estimated at 24 percent at the end of 2022/23, slightly above last season but below the 5-year average of nearly 26 percent. Based on the U.S. and world cotton supply and demand estimates and recent prices, the 2022/23 average U.S. upland cotton farm price is forecast at 85 cents per pound, below last season's record of 91.4 cents per pound but still one of the highest averages ever recorded.

This week's release of the December USDA WASDE explained cotton's price struggles over the past four to five months, as stated by Dr. O.A. Cleveland on December 13. The world cotton picture included lower production, lower consumption, lower exports, and a price depressing increase in world carryover to 90 million bales. The U.S. picture was even more troublesome with higher production coupled with lower domestic consumption and lower exports. Together, these gave way to a further increase in domestic carryover stocks.

Prior to this new USDA estimate, the possibility of lower carryover stocks had given rise to an improved price for old crop (2022) production. The fact that the estimate of 2022 ending stocks was increased suggests the March-May-July 2023 futures contracts will trend lower before possibility moving into the high 80s. The mid-to-high 70s is unfortunately on the horizon for old crop.

Value should return to new crop once the economy can begin to strengthen, at least six months and probably 12 months away. Inflation continues as a major problem, and inflation has historically hit the farm sector with both fists. Thus, the potential for a significant rebound in cotton prices awaits the March-May-July 2024 futures contracts – that is, the latter half of the marketing season for the 2023 crop.

Due to food shortages around the globe, there is no reason to expect grain and oilseed prices to come down. Thus, cotton will struggle to claim acreage. Further supporting high (and even higher) grain and oilseed prices is Washington's determination to convert production of those crops to aviation and automobile fuel and away from human and animal consumption. Surprisingly, that fact has been flying under the radar.

The week's only positive news came from China where government authorities issued a new Covid-19 policy which moves away from lockdowns and mass testing. Their previous zero-tolerance policy had caused economic turmoil. An example, Chinese imports fell 10.6 percent in November, the steepest decline in two years. Hopefully this change will reopen trade and spark commerce with China, something cotton desperately needs.

Nearby cotton futures fell slightly in subdued activity as traders monitored outside markets and awaited the Federal Reserve's interest rate decision and economic update. Weakness in the U.S. dollar and strength in crude oil were price-supportive, but cotton remains burdened by sluggish exports. Traders will study USDA's weekly export sales report for a read on demand from China and other top buyers. China recently lifted Covid restrictions, fostering ideas the country's growth may improve. However, some believe relaxed Covid restrictions will produce a surge in infections in China. Buying interest in cotton futures remains limited after USDA last week unexpectedly raised its U.S. cotton production estimate.

Cotton futures bears have the overall near-term technical advantage. Prices are in a four-week-old downtrend on the daily bar chart. The next upside price objective for the cotton bulls is to produce a close in March futures above technical resistance at the November high of 89.92 cents. The next downside price objective for the cotton bears is to close prices below solid technical support at 75.00 cents. First resistance is seen at today's high of 82.55 cents and then at 83.75 cents. First support is seen at today's low of 80.63 cents and then at 80.00 cents.

Global cotton consumption is projected down 3.3 million bales this month to 111.7 million. Declining supplies, lower profit margins for spinning mills, falling yarn orders from fabric and apparel companies, and higher inflation levels are all pressuring consumption.

Significant challenges for the three largest consumers – China, India, and Pakistan – are expected to lower global consumption significantly below the previous 2 years. India's consumption is projected down 1.0 million bales this month to 23.0 million, falling more than 2.0 million from the previous year and the largest year-over-year decline for all cotton consumers. Significantly lower beginning stocks, falling exports of textiles (yarn and fabric) and cotton products, and less competitive yarn export prices are pressuring consumption prospects. Higher spot prices for cotton relative to other major spinners have eroded India's stature as a competitive yarn exporter to China.

China's consumption is also projected down 1.0 million bales this month to 35.5 million, marginally above the previous year but more than 5.0 million below 2 years prior. As the world's largest cotton consumer and importer of cotton yarn, China's supply and use situation is normally indicative of the overall direction and vitality of the global cotton supply chain.

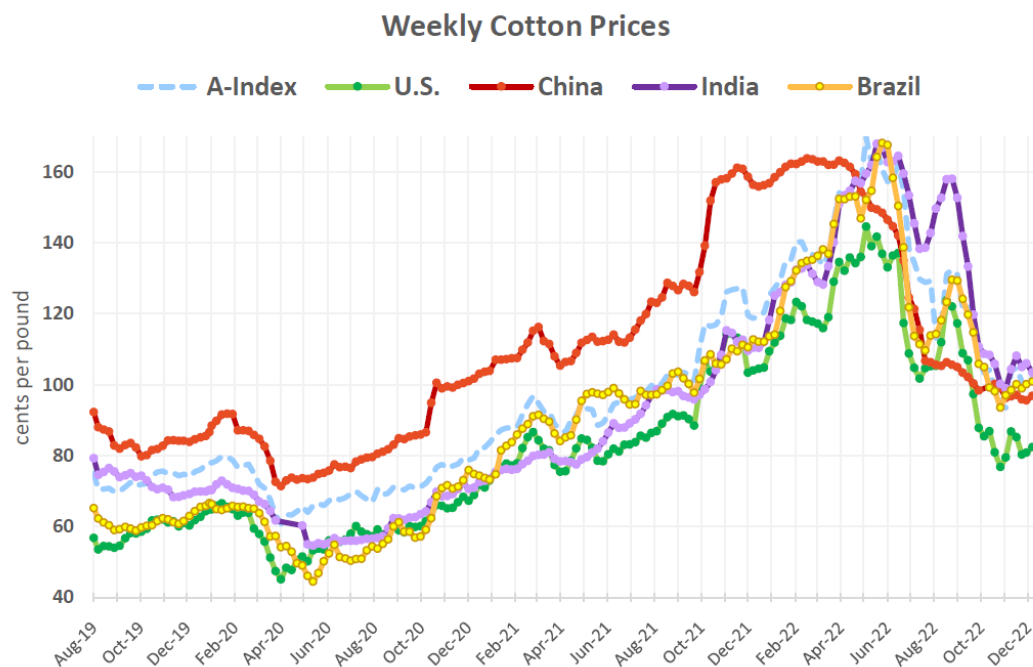
Ongoing COVID-19 lockdowns, slowing domestic purchases of apparel, declining yarn prices relative to cotton lint, and significantly lower cotton product exports have drastically slowed China's consumption over the past 2 years. The United States, the world's largest importer of cotton products, showed lower imports of products from China by more than 40 percent during the first 3 months of the marketing year (August – October 2022).

Pakistan's consumption is estimated at its lowest level in over 20 years, forecast down 700,000 bales this month to 9.0 million, dropping nearly 2.0 million from the previous year mostly because of lower supplies. Pakistan's production is projected at the lowest level in nearly 40 years at 3.7 million bales. Although imports are projected above the previous year at 5.0 million bales, mills in Pakistan have had

issues with the stronger U.S. dollar, opening Letters of Credit, and finalizing older contracts which were negotiated at significantly higher prices earlier this year.

Global cotton consumption is now projected at its second-lowest level in nearly a decade. If realized, this would reduce annual cotton use by nearly 6.0 million bales below the previous year and more than 11.4 million below 2 years prior.

Global cotton prices were mostly unchanged since last month's *WASDE* outside the United States. Lower prices on the Intercontinental Exchange (ICE) pressured U.S. spot prices owing partly to extremely low reported USDA export sales. For the last four USDA reports, the total sum of net sales did not exceed 30,000 bales and this is contrary to seasonal trends.



Changes Since November WASDE (cents per pound)					
	A-Index	U.S.	China	India	Brazil
7-Nov	104.1	87.3	96.8	102.2	98.0
7-Dec	102.8	80.8	96.8	103.2	101.5
Change	-1.3	-6.5	0.1	1.0	3.5

PLC Farm Program Payment Projections – 2022/23 CY

The table below projects the national marketing year average prices for purposes of the Price Loss Coverage (PLC) program. A PLC program payment is triggered when the national Marketing Year Average (MYA) price for a commodity falls below that commodity's effective reference price. The payment rate is then multiplied by the farm's program yield and made on 85% of base acres.

<i>Covered Commodity</i>	<i>2022/23 MYA Price**</i>	<i>Effective Reference Price</i>	<i>2022/23 CY PLC Payment Rate</i>
Corn	\$6.70	\$3.70	--
Grain Sorghum	\$6.70	\$3.95	--
Long Grain Rice	\$16.50	\$14.00	--
Medium Grain Rice	\$17.40	\$14.00	--
Seed Cotton	\$0.4646	\$0.3670	--
Soybeans	\$14.00	\$8.40	--
Wheat	\$9.10	\$5.50	--

**national marketing year average (MYA) prices reflect the prices contained in the USDA WASDE report on December 9, 2022.

Sources: USDA Agriculture Market Service (AMS), USDA Foreign Agriculture Service (FAS), USDA Farm Service Agency (FSA), USDA National Agriculture Statistics Service (NASS), USDA Economic Research Service (ERS), USDA FAS GAIN Report, USDA Office of Communications, USDA World Supply Demand Estimates (WASDE), ADM Investor Services, AgDay, Ag Fax Media, Ag Market Network, Agri-Pulse, AgRural, Ag Resource Company, Ag Web, Agricultural Market Information System (AMIS), Allendale, American Farm Bureau Federation, Bloomberg News, Brock Report, CME Group, Cotton Grower, Cotton Incorporated, Cotton Outlook, Creed Rice Report, O.A. Cleveland, Daniels Trading, Delta Farm Press, DTN Progressive Farmer, Farm Futures, Fastmarkets, Fiber 2 Fashion, Gro Intelligence, Hightower Report, Intercontinental Exchange, International Grains Council, Iowa State University, INTER-RICE, Lakefront Futures and Options, LSU AgCenter, Mississippi State University, National Cotton Council, NOAA, Peterson Institute of International Economics, Plains Cotton Cooperative Association, Plexus Cotton, Pro Farmer, Refinitiv, Reuters (Karen Braun), Rice Market Letter, Southeast Farm Press, Sovecon, StoneX, Successful Farming, Texas A&M University (John Robinson), University of Arkansas, University of Georgia, University of Illinois, University of Tennessee, U.S. Grains Council, U.S. Rice Producers Association, USA Rice Federation, U.S. Soybean Export Council, United Nations Food and Agriculture Organization (FAO), VanTrump Report, and the Wall Street Journal.



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