

Rice Outlook: January 2024

Nathan Childs, coordinator
Bonnie LeBeau, contributor
Kate Vaiknoras, contributor

In this report:

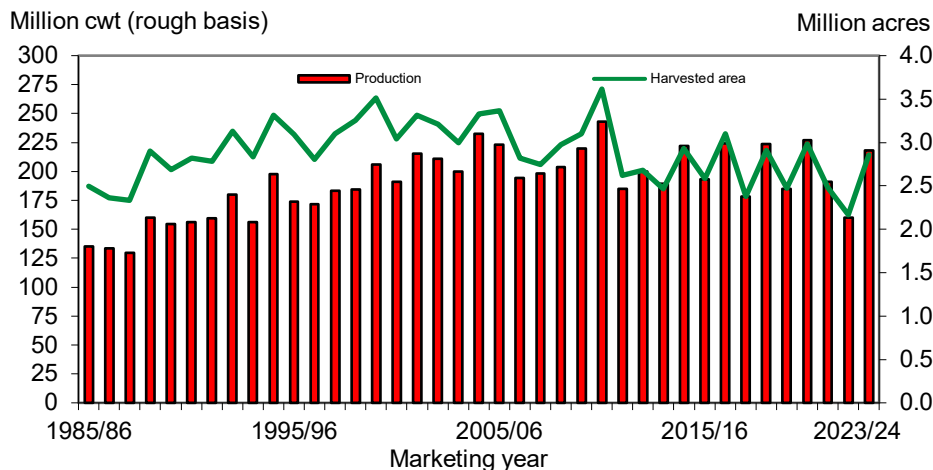
- [Domestic Outlook](#)
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Rice Outlook monthly tables, in Excel format, can be found on the Rice Outlook report page on USDA's Economic Research Service website.

U.S. 2023/24 Rice Production Estimate Lowered 1.4 Hundredweight to 218.3 Million Cwt

This month there are several revisions to the U.S. 2023/24 rice balance sheet. On the supply side, production is lowered 1.4 million hundredweight (cwt) to 218.3 million, still 36 percent larger than a year earlier. The downward revision is based on a slightly lower yield reported by USDA, National Agricultural Statistics Service (NASS). Imports are raised 2.0 million cwt to a record 42.0 million cwt. The higher import forecast more than offset a smaller crop, raising the total supply forecast 0.6 million cwt to 290.5 million. On the 2023/24 use side, exports are lowered 1.0 million cwt to 85.0 million, while total domestic and residual use remains forecast at a record 162.0 million cwt. These supply and use revisions resulted in a 1.6-million cwt increase in the 2023/24 ending stocks forecast to 43.5 million cwt, 44 percent above a year earlier.

Figure 1
U.S. rice production increased 36 percent in 2023/24



Cwt = Hundredweight.

Source: USDA, Economic Research Service, *Rice Yearbook* dataset, 1985/86–2020/21; USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*, 2021/22–2023/24.

Based on data from the NASS January 12 released *Rice Stocks* report, U.S. stocks of rice (rough- and milled-rice stocks on a rough-rice basis) on December 1 are estimated at 146.8 million cwt, 29 percent larger than a year earlier. The 2023/24 California season-average farm-price (SAFP) forecast was raised \$4.00 to \$30.00 per cwt, which raised the all-rice SAFP forecast 60 cents to \$18.40 per cwt. On January 9, NASS released revised U.S. rice area, yield, and production estimates for 2018/19–2022/23 by State and class that are reported in the NASS *Quick Stats* database. All NASS production revisions were small, and the data were from the 2022 Census of Agriculture.

In the 2023/24 global rice market, production is lowered 4.5 million tons to 513.5 million (milled basis), still the highest on record. Production forecasts were lowered for Bangladesh, China, and the United States, with China accounting for the bulk of the reduction. Total global rice supplies in 2023/24 are projected at 689.35 million tons, down 3.5 million tons from the previous forecast and 6.9 million tons below a year earlier and the second consecutive year of declining global rice supplies. The 2023/24 global domestic and residual forecast was reduced 2.95 million tons to 522.1 million, also still a record high. These revisions resulted in a 513,000-ton decrease in the 2023/24 global ending stocks forecast to 167.25 million tons, 8.6 million tons below a year earlier and the smallest in 6 years.

The 2024 calendar year global trade forecast of 52.2 million tons is nearly unchanged from a month earlier but is 223,000 tons below 2023 trade. There were numerous export and import revisions for 2023 this month that were nearly offsetting, mostly based on final or near-final trade data. Rice trade in 2023 of 52.4 million tons was down 3.7 million tons from the year earlier record high, mostly due to India's continued export bans and restrictions.

Over the past month, quotes for trading prices for most grades of regular (neither parboiled nor aromatic) whole-grain milled rice from Thailand increased 3–4 percent, while Vietnam's prices were unchanged from the previous month's 15-year high. Price quotes for Pakistan, Argentina, Brazil, and Uruguay also rose over the past month. U.S. long-grain milled-rice prices were unchanged over the past month and remain the highest since 2008. Price quotes for California medium-grain milled rice were also unchanged from a month earlier and are 42 percent below the September record-high.

Table A. U.S. all-rice supply and use at a glance, 2021/22–2023/24								
Balance sheet item	2021/22	2022/23 December	2022/23 January	2022/23 changes from previous year	2023/24 December	2023/24 January	2023/24 changes from previous month	2023/24 comments and analysis on month-to-month changes
Supply Million hundredweight August–July marketing year								
Beginning stocks	43.7	39.7	39.7	-4.0	30.3	30.3	0.0	
Production	191.1	160.4	160.0	-31.0	219.7	218.3	-1.4	Reduction based on a slightly lower yield reported by USDA, National Agricultural Statistical Service (NASS) in its January <i>Crop Production 2023 Summary</i> . Yield estimates are lowered for California and Texas.
Imports	37.8	39.9	39.9	2.1	40.0	42.0	2.0	Raised based on stronger than expected imports of jasmine rice from Thailand for August–November and expectations regarding imports the remainder of the market year. Imports are forecast to be a record high.
Total Supply	272.5	240.0	239.7	-32.8	289.9	290.5	0.6	The stronger import forecast more than offset a smaller crop.
Demand Million hundredweight August–July marketing year								
Domestic and residual use	149.3	145.4	145.1	-4.2	162.0	162.0	0.0	Record high.
Exports	83.5	64.3	64.3	-19.2	86.0	85.0	-1.0	Lowered, as a smaller milled-rice export forecast more than offset a larger rough-rice export forecast.
Rough	28.2	18.1	18.1	-10.0	29.0	31.0	2.0	Raised based on stronger-than-expected sales and shipments to Latin America from August through early January and expectations regarding shipments for January–July.
Milled	55.3	46.2	46.2	-9.1	57.0	54.0	-3.0	Lowered based on weaker-than-expected shipments and sales to Northeast Asia for August through early January and expectations regarding shipments for the remainder of the market year.
Total use	232.8	209.7	209.4	-23.4	248.0	247.0	-1.0	Lowered due to a smaller export forecast.
Ending stocks	39.7	30.3	30.3	-9.5	41.9	43.5	1.6	Raised due to a slightly larger total supply forecast and a smaller total use.
Price Dollars per hundredweight August–July marketing year								
Season-average farm price (SAFP)	\$16.10	\$19.20	\$19.20	\$3.10	\$17.80	\$18.40	0.60	Raised based on an increase in the U.S. medium- and short-grain SAFP forecast.

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

Table B. U.S. rice supply and use at a glance, by class, 2021/22 to 2023/24

Balance sheet item	2021/22	2022/23 December	2022/23 January	2022/23 changes from previous year	2023/24 December	2023/24 January	2023/24 changes from previous month	2023/24 comments and analysis on month-to-month changes
Long-grain								
Supply								
				Million hundredweight			August–July marketing year	
Carryin	29.7	24.6	24.6	-5.1	21.2	21.2	0.0	
Production	144.0	128.2	128.5	-15.5	152.1	153.9	1.8	Raised based on a larger production estimate reported by USDA, National Agricultural Statistics Service in its January 2024 <i>Crop Production 2023 Summary</i> .
Imports	30.7	31.9	31.9	1.2	33.0	35.0	2.0	Increased based on stronger-than-expected imports of jasmine rice from Thailand for August–November and expectations regarding imports for the remainder of the market year. Imports are forecast to be a record high.
Total supply	204.4	184.7	185.0	-19.4	206.2	210.0	3.8	Raised due to a larger crop estimate and an increased import forecast.
Demand								
				Million hundredweight			August–July marketing year	
Domestic and residual use	117.7	113.7	114.0	-3.7	124.0	125.0	1.0	Raised based on reports of lower-than-average milling rates across most of the South. A lower milling rate means that more rough rice is needed to produce a given quantity of milled rice compared with a higher milling rate.
Exports	62.0	49.8	49.8	-12.2	61.0	61.0	0.0	
Total use	179.7	163.5	163.8	-15.9	185.0	186.0	1.0	Raised due to a stronger domestic and residual use forecast.
Ending stocks	24.6	21.2	21.2	-3.5	21.2	24.0	2.8	An increase in the total supply forecast more than offset a larger domestic and residual use.
Price 1/								
				Dollars per hundredweight				
Season-average farm price (SAFP)	\$13.60	\$16.70	\$16.70	\$3.10	\$16.00	\$16.00	0.00	

Continued--

Table B. U.S. rice supply and use at a glance, by class, 2021/22 to 2023/24--Continued								
Balance sheet item	2021/22	2022/23 December	2022/23 January	2022/23 changes from previous year	2023/24 December	2023/24 January	2023/24 changes from previous month	2023/24 comments and analysis on month-to-month changes
Medium- and short-grain								
Supply								
Million hundredweight								August–July marketing year
Carryin	11.5	13.0	13.0	1.6	6.8	6.8	0.0	
Production	47.1	32.2	31.6	-15.5	67.6	64.4	-3.2	Reduced based on a smaller production estimate reported by NASS in its January 2024 <i>Crop Production 2023 Summary</i> .
Imports	7.1	8.0	8.0	0.9	7.0	7.0	0.0	
Total Supply	66.1	53.0	52.4	-13.7	81.4	78.2	-3.2	Lowered based on a smaller production forecast.
Demand								
Million hundredweight								August–July marketing year
Domestic and residual use	31.6	31.7	31.1	-0.5	38.0	37.0	-1.0	Reduced based on a slightly smaller crop estimate and reports of above average milling rates in California.
Exports	21.5	14.5	14.5	-7.0	25.0	24.0	-1.0	Lowered based on weaker-than-expected sales to Northeast Asia for August through early January and expectations regarding sales for the remainder of the market year.
Total use	53.1	46.2	45.6	-7.5	63.0	61.0	-2.0	Reduced based on a smaller export forecast and a weaker domestic and residual use forecast.
Ending stocks	13.0	6.8	6.8	-6.2	18.4	17.2	-1.2	The smaller production forecast more than offset a reduced total use forecast.
Price 1/								
Dollars per hundredweight								August–July marketing year
Southern medium- and short-grain	\$13.90	\$18.20	\$18.20	\$4.30	\$17.50	\$17.50	\$0.00	
California medium- and short-grain	\$31.90	\$36.00	\$36.00	\$4.10	\$26.00	\$30.00	\$4.00	Raised based on reported monthly cash prices and marketings for October–November and expectations regarding prices and marketings for the remainder of the market year.
U.S. medium- and short-grain	\$26.40	\$29.40	\$29.40	\$3.00	\$23.30	\$26.00	\$2.70	Raised based on the higher California medium- and short-grain SAFP forecast.

1/ Season-average farm price.

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

Table C. U.S. rice harvested area, yield, and production, by State and U.S. total

State and U.S. total	2018	2019	2020	2021	2022	2023	Change from previous year	
							Quantity	Percent
Harvested area	----- 1,000 acres -----							
Arkansas	1,422	1,125	1,434	1,188	1,080	1,417	337	31.2
California	504	501	514	405	252	512	260	103.2
Louisiana	436	412	473	413	412	462	50	12.1
Mississippi	137	114	167	98	86	120	34	39.5
Missouri	221	175	211	194	151	200	49	32.5
Texas	189	148	179	180	186	143	-43	-23.1
U.S. total	2,909	2,475	2,978	2,478	2,167	2,854	687	31.7
South	2,405	1,974	2,464	2,073	1,915	2,342	427	22.3
Yield	----- Pounds per acre -----							
Arkansas	7,520	7,480	7,500	7,630	7,410	7,550	140	1.9
California	8,620	8,460	8,720	9,050	8,770	8,590	-180	-2.1
Louisiana	7,130	6,380	6,820	6,870	6,660	6,800	140	2.1
Mississippi	7,350	7,350	7,420	7,540	7,370	7,470	100	1.4
Missouri	7,770	7,370	7,250	8,040	7,940	7,990	50	0.6
Texas	7,970	7,350	8,150	6,860	6,510	7,670	1,160	17.8
U.S. average	7,692	7,474	7,620	7,710	7,385	7,649	263	3.6
South	7,498	7,225	7,391	7,448	7,203	7,443	240	3.3
Production	----- 1,000 hundredweight -----							
Arkansas	106,947	84,185	107,586	90,680	80,051	106,968	26,917	33.6
California	43,425	42,362	44,810	36,653	22,103	43,971	21,868	98.9
Louisiana	31,094	26,281	32,237	28,380	27,453	31,431	3,978	14.5
Mississippi	10,068	8,374	12,389	7,388	6,338	8,964	2,626	41.4
Missouri	17,167	12,894	15,305	15,599	11,991	15,985	3,994	33.3
Texas	15,060	10,880	14,597	12,352	12,105	10,972	-1,133	-9.4
U.S. total	223,761	184,976	226,924	191,052	160,041	218,291	58,250	36.4
South	180,336	142,614	182,114	154,399	137,938	174,320	36,382	26.4

Note: These 6 States account for almost 100 percent of U.S. rice acreage and production. Production and yield are rough basis.
Source: USDA, Economic Research Service; USDA, National Agricultural Statistics Service.

U.S. 2023/24 Rice Production Estimated at 218.3 Million Cwt, 36 Percent Above a Year Earlier

The 2023/24 U.S. rice production estimate is lowered 1.4 million cwt to 218.3 million, still 58.3 million cwt larger than a year earlier and the largest since 2020/21. This month's downward revision is due to a 58-pound per acre reduction in the yield to 7,649 pounds more than offsetting a 4,000-acre increase in harvested area to 2.854 million acres. The revised harvested area, yield, and production estimates are reported by the USDA, National Agricultural Statistics Service (NASS) in its *Crop Production 2023 Summary* released on January 12. These yearend estimates are based on surveys conducted the first 2 weeks of December.

By class, the U.S. 2023/24 long-grain crop is estimated at 153.9 million cwt, up 1.8 million from the previous forecast and almost 20 percent larger than a year earlier. The year-to-year production increase is largely due to a 15-percent expansion in harvested area to 2.05 million acres, as well as a 4-percent increase in the yield to 7,524 pounds per acre. Long-grain harvested area expanded in all southern rice producing States except for Texas—where it declined by 34 percent due primarily to water restrictions—with Arkansas accounting for 84 percent of the total increase. The U.S. long-grain area expansion was due to strong rice prices at planting time, reduced input prices, and generally favorable weather compared with a year earlier. Long-grain yields are higher than a year earlier in all reported southern States, with Texas reporting the largest yield increase. Almost all long-grain rice is grown in the South.

U.S. 2023/24 medium- and short-grain production is estimated at 64.4 million cwt, down 3.2 million from the previous forecast but still up 104 percent from the year-earlier abnormally low level and the largest since 2011/12. The substantial year-to-year production increase is due to a 108-percent expansion in harvested area to 809,000 acres that more than offset a 2-percent decline in the yield to 7,963 pounds per acre. California accounted for 61 percent of the expansion in medium- and short-grain harvested area, after recovery from 2 years of severe drought that sharply reduced rice acreage. Medium-grain harvested area increased in the South as well, with Arkansas—the largest medium-grain grower in the South—accounting for more than two-thirds of the southern area expansion.

Total rice harvested area increased in all reported States in 2023/24, except for Texas where area declined due primarily to water restrictions along the lower Colorado River. Arkansas reported the largest harvested area increase, up 337,000 acres, while California reported the largest percentage increase of 103 percent. Yields are higher than a year earlier in all reported States except California, where yields dropped 2 percent, largely due to the substantial area expansion. Texas reported the largest increase in yield, up almost 18 percent from a year earlier. Production is higher than a year earlier in all reported States except Texas, where the rice crop declined 9 percent due to a substantial area reduction.

U.S. 2023/24 Rice Import Forecast Raised 2.0 Million Cwt to a Record 42.0 Million Cwt

For the second consecutive month, the USDA raised its 2023/24 rice import forecast, now forecast at a record 42.0 million cwt, 5 percent larger than a year earlier. Long-grain rice accounts for all of this month's upward revision in imports. Long-grain imports were raised 2.0

million cwt to a record 35.0 million, up 10 percent from a year earlier. The upward revision is largely based on stronger-than-expected imports of jasmine rice from Thailand for August–November and expectations regarding purchases for the remainder of the market year. Thailand supplies almost two-thirds of U.S. long-grain rice imports, with its premium jasmine accounting for the bulk of these shipments. Through November, Thailand’s shipments of long-grain rice to the United States were up almost 28 percent from a year earlier. Shipments from India—the second largest supplier of long-grain rice to the United States—were up 17 percent from a year earlier. Almost all of India’s rice sales to the United States are basmati rice, also a premium aromatic. The United States does not currently produce the Asian aromatic varieties sold by Thailand and India.

U.S. 2023/24 medium- and short-grain imports remain forecast at 7.0 million cwt, down 13 percent from the year earlier record-high. Through November, the United States had imported 72,046 tons (milled basis) of medium- and short-grain rice, down 29 percent from a year earlier, with China accounting for nearly all of the decline. China is currently the largest supplier of medium- and short-grain rice to the United States, followed by Thailand and then India. Nearly all of the rice imports from China are purchased by Puerto Rico, a U.S. territory. Through November, China has provided one 21,000-ton shipment to Puerto Rico this market year, with three more such shipments expected by July 2024. Italy regularly ships much smaller quantities of its arborio rice to the United States.

The higher rice import forecast more than offset the slightly smaller production estimate, increasing total supplies 628,000 cwt to 290.5 million, 21 percent larger than a year earlier. Long-grain accounted for all of the upward revision in supply, raised 3.8 million cwt to 210.0 million cwt, 13.5 percent above a year earlier.

U.S. 2023/24 Medium- and Short-Grain Export Forecast Lowered 1.0 Million Cwt to 24.0 Million Cwt

Total U.S. rice exports for 2023/24 are forecast at 85.0 million hundredweight (cwt), down 1.0 million from the previous forecast but still 32 percent above a year earlier and the highest since 2020/21. Medium- and short-grain accounts for all of this month’s reduction in the U.S. rice export forecast.

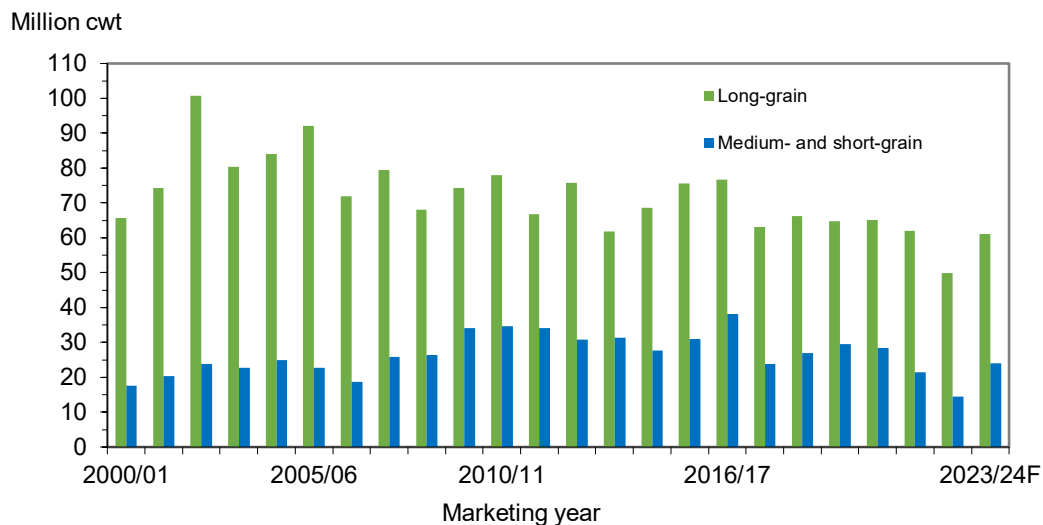
For the second consecutive month, the 2023/24 U.S. medium- and short-grain export forecast is lowered, this month down 1.0 million cwt to 24.0 million cwt, still 66 percent larger than a year earlier. The downward revision is primarily based on weaker-than-expected sales and shipments through January 4 to Northeast Asia, the largest export market for U.S. medium- and short-grain rice. Although sales and shipments to Japan—the largest buyer of U.S. medium- and short-grain rice—were ahead of a year ago through January 4, they remain below pre-California drought levels. Sales to Northeast Asia were limited in 2022/23 by a second-consecutive drought-reduced harvest in California. In 2023/24, the bumper California harvest is expected to eventually boost U.S. exports, as prices for California milled rice have already dropped more than 40 percent since their mid-September record highs. California supplies the bulk of U.S. medium- and short-grain exports.

U.S. long-grain exports remain forecast at 61.0 million cwt, 22 percent larger than a year earlier. Combined shipments and outstanding sales to Mexico—the largest market for U.S. long-grain rice—are up sharply from last year’s abnormally low level, mostly due to a strong production rebound and more competitive prices. Long-grain shipments and outstanding sales to Venezuela, Senegal, Haiti, El Salvador, the Dominican Republic, Nicaragua, and Panama are

also well ahead of a year earlier. For all U.S. markets, larger supplies and more competitive prices are behind this year's faster pace of U.S. long-grain exports to date.

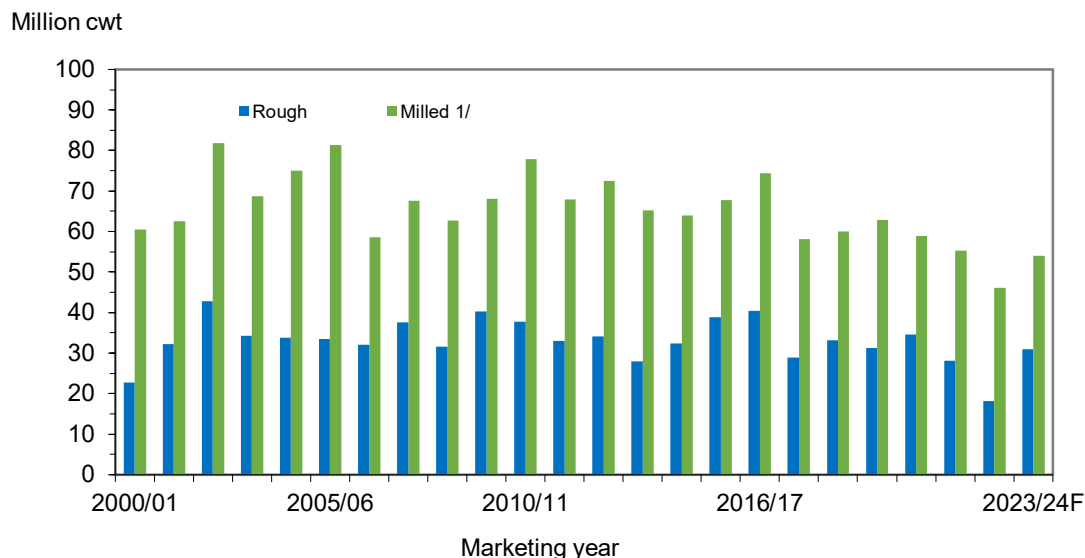
For the second consecutive month, the U.S. rough-rice export forecast was raised 2.0 million cwt, now forecast at 31.0 million, up 71 percent from a year earlier. The upward revision is based on stronger-than-expected sales and shipments through January 4, and expectations regarding sales and shipments for the remainder of the marketing year. Stronger-than-expected sales and shipments to Mexico account for most of this month's upward revision in rough-rice exports. Mexico, Central America, and Venezuela account for nearly all of the expected year-to-year increase in rough-rice exports. In 2022/23, the United States lost much of its market share in Mexico to South American suppliers, mostly Brazil, due to their more competitive prices and also partly due to temporarily lower tariff rates for South American suppliers to Mexico.

Figure 2
U.S. 2023/24 long-grain rice exports projected to increase 22 percent 1/



Cwt = Hundredweight. 2023/24 are forecasts. 1/ Milled-, brown-, and rough-rice exports on a rough-rice basis. F = forecast. Source: USDA, Economic Research Service, Rice Yearbook dataset, 2000/01–2020/21; USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*, 2021/22–2023/24.

Figure 3
U.S. 2023/24 rough-rice export forecast raised 2.0 million cwt; milled-rice export forecast lowered 3.0 million cwt



Cwt = Hundredweight. 2023/24 are forecasts. 1/ Milled- and brown-rice exports on a rough-rice basis. F = forecast. Source: USDA, Economic Research Service, *Rice Yearbook* dataset; 2000/01–2020/21; USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*, 2021/22–2023/24.

Although total U.S. 2023/24 domestic and residual use remains forecast at a record 162.0 million cwt, up 12 percent from a year earlier, there is a 1.0-million cwt shift to long-grain from medium- and short-grain based on information regarding milling rates by region. Long-grain domestic and residual use is raised 1.0 million cwt to a record 125.0 million, nearly 10 percent larger than a year earlier. The upward revision is based on reports of lower-than-average milling rates this year across the South, implying more rough rice is needed to produce a given quantity of milled rice. The substantial year-to-year increase in long-grain domestic and residual use is based on larger supplies and increased post-harvest losses due to a larger crop. In contrast, the medium- and short-grain domestic and residual use forecast is lowered 1.0 million cwt to 37.0 million, still up 10 percent from a year earlier, due to reports of above-average milling rates in California which produces more than two-thirds of the U.S. medium- and short-grain crop. Similar to long-grain, the substantial year-to-year increase in medium- and short-grain domestic and residual use is based on larger supplies and expected increased post-harvest losses.

Based on data released by NASS on January 12 in its *Rice Stocks* report, U.S. stocks of rice (combined rough- and milled-rice stocks on a rough basis) on December 1 are estimated at 146.8 million cwt, up 29 percent from a year earlier and the highest since 2016/17. Long-grain stocks on December 1 are estimated at 94.6 million cwt, up 18 percent from a year earlier and the highest since 2020/21. Combined medium- and short-grain stocks on December 1 are estimated at 49.39 million cwt, up 59 percent from a year earlier, also the highest since 2016/17. Stocks of brokens, not classified by grain length, are estimated at 2.85 million cwt, up more than 17 percent from a year earlier. For both classes of rice, the substantial increase in rice stocks on December 1 is primarily due to a much larger harvest in 2023/24 compared with 2022/23.

The 2023/24 California medium- and short-grain season-average farm-price (SAFP) is raised \$4.00 per cwt to \$30.00, still \$6.00 below the year earlier record-high. The substantial upward revision is based on NASS reported monthly cash price for October and November, and

expectations regarding cash prices and markings the remainder of the market year. The higher California medium- and short-grain SAFP raised the U.S. medium- and short-grain SAFP by \$2.70 to \$26.00 per cwt, still almost 12 percent below a year earlier. U.S. all-rice season-average farm-price (SAFP) forecast for 2023/24 is raised 60 cents to \$18.40 per cwt, still 4 percent below the year-earlier record-high.

On January 9, NASS released revised U.S. rice area, yield, and production estimates by State and class for market years 2018/19–2022/23 that are available from the NASS *Quick Stats* database. For each of the 5 market years, any revision to production was completely offset by a revision to total domestic and residual use in the rice balance sheet. All area and production revisions were small and from data reported in the 2022 Census of Agriculture.

International Outlook

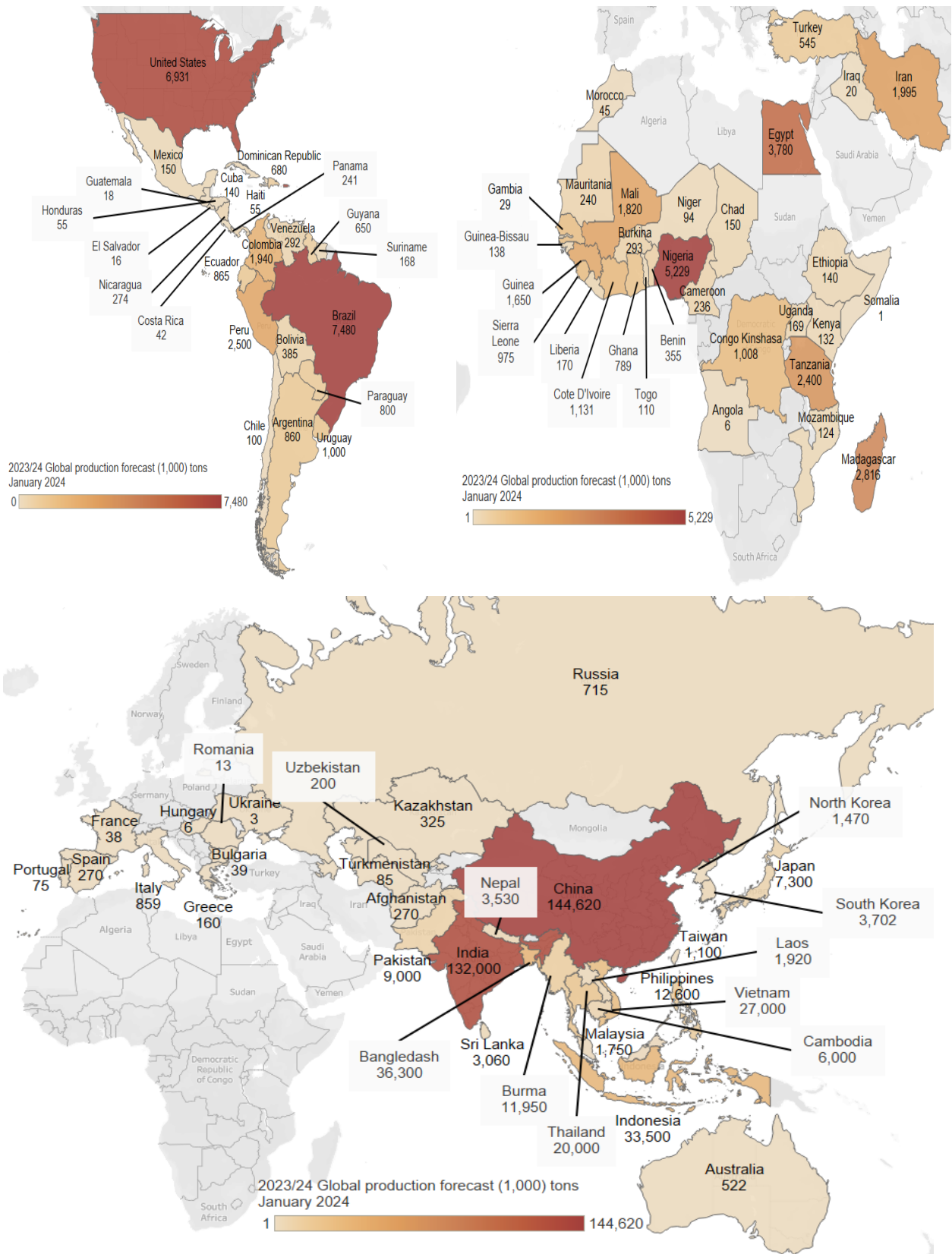
Production Forecasts for 2023/24 Lowered for Bangladesh, China, and the United States

Global rice production in 2023/24 is projected at a record 513.5 million tons (milled basis), down 4.5 million from last month's forecast but still fractionally above a year earlier. This month, production forecasts for 2023/24 were lowered for Bangladesh, China, and the United States, with China accounting for the bulk of the reduction (table D, following maps 1 and 2).

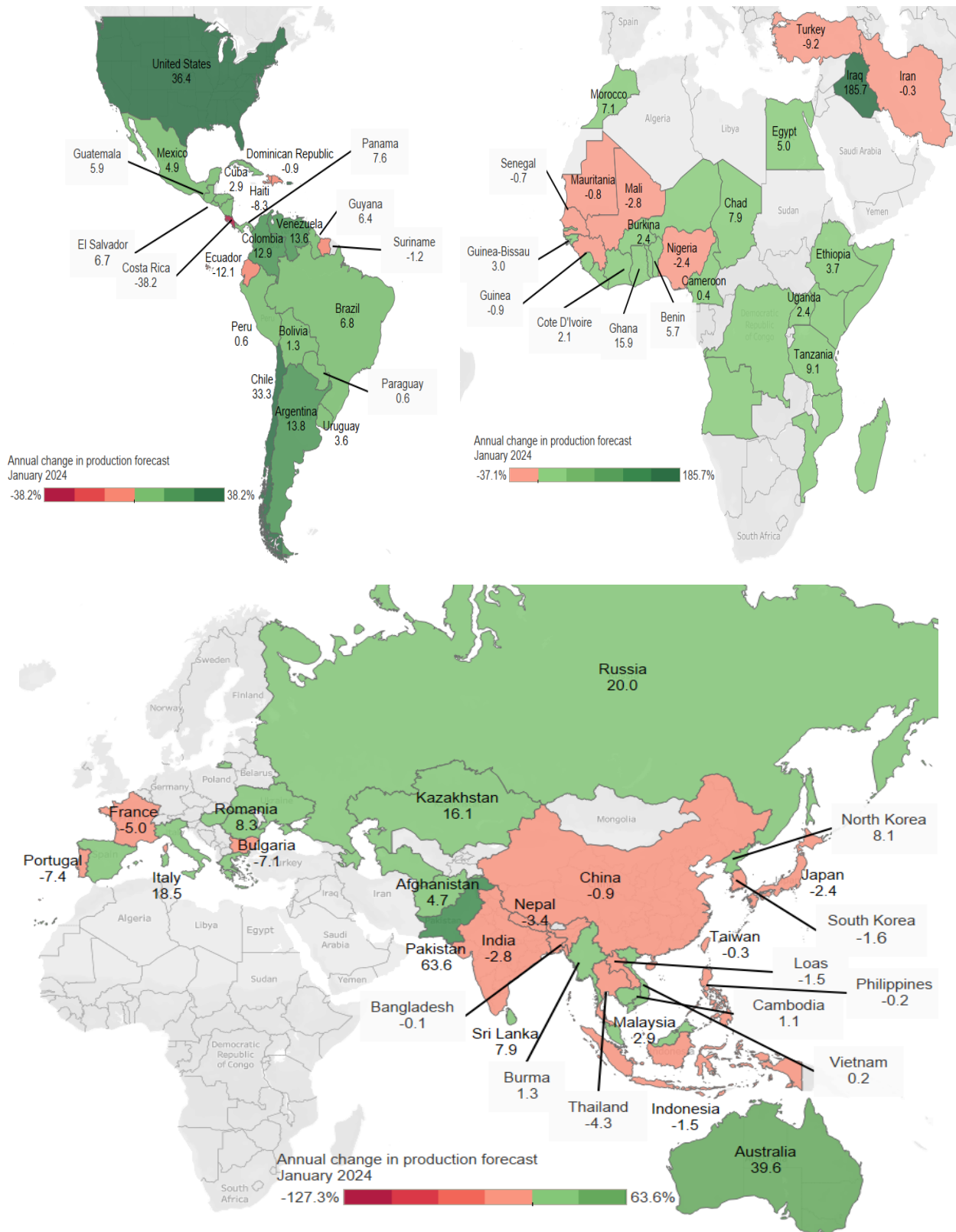
On an annual basis, Argentina, Australia, Brazil, Burma, Cambodia, Colombia, Egypt, the European Union, Ghana, Guyana, Kazakhstan, North Korea, Malaysia, Pakistan, Russia, Sri Lanka, Tanzania, the United States, Uruguay, and Vietnam account for the bulk of the expected increase in global rice production in 2023/24 (see maps 1 and 2 for additional details). Pakistan and the United States are projected to achieve the largest production gains in 2023/24. Both countries harvested abnormally small crops in 2022/23 due to adverse weather.

In contrast, rice production in 2023/24 is projected to decline almost 3.8 million tons in India to 132.0 million—though this is still the second highest projected harvest on record. China's 2023/24 production is projected to decline 1.3 million tons from a year earlier to 144.6 million due to smaller harvested area. Thailand's 2023/24 rice production is projected to decline 0.9 million tons to 20.0 million due to a delayed start to the rainy season. Indonesia's 2023/24 rice production is projected to decline 500,000 tons to 33.5 million, also due to a delayed start to the rainy season. Rice production is projected to continue to decline in Japan and South Korea due to diet diversification and declining and aging populations. Weaker crops are also projected in 2023/24 for Bangladesh, Costa Rica, Ecuador, Laos, Mali, Nepal, Nigeria, Turkey, and Uzbekistan (maps 1 and 2).

Map 1: Production forecasts (milled basis) 2023/24.



Map 2: Annual percent change in production forecasts, 2023/24.



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

Table D. Global rice production, selected monthly revisions, and year-to-year changes, January 2024						
Country or region	Current forecast	Change from previous month	Percent change from previous year	Month-to-month direction	Year-to-year direction	Explanation and comments on month-to-month change
Rice production in 2023/24, 1,000 metric tons (milled basis)						
Bangladesh	36,300	-100	-0.1	↓	↓	Small reduction in the production estimate is due to a weaker yield. The aman crop harvest was adversely impacted by Cyclone Midhili in mid-November. The aman crop is the last and the smallest of the three rice crops harvested annually in Bangladesh, with harvest typically November–December. The crop is rained.
China	144,620	-4,380	-0.9	↓	↓	Reduced the production estimate based on data released by China's National Bureau of Statistics on December 11 reporting yearend estimates for 2023/24 harvested area, yield, and production. Harvested area was lowered 901,000 hectares to 28.95 million, almost 2 percent below a year earlier. China's 2023/24 rice crop was adversely impacted by heavy rains and strong winds caused by several storms and typhoons between July and September 2023 that resulted in localized crop losses in northeastern producing areas, especially in Jilin, Heilongjiang, and Liaoning provinces. The slight year-to-year decline in production is due to smaller harvested area; the yield was up almost 1 percent.
United States	6,931	-44	36.4	↓	↑	Lowered the production estimate based on a slightly lower yield reported by USDA's National Agricultural Statistics Service. Yield estimates were lowered for both California and Texas, but raised for Louisiana, Mississippi, and Missouri.
Rice production in 2022/23, 1,000 metric tons (milled basis)						
Iraq	7	-13	-97.5	↓	↓	Production estimate is reduced to the lowest level since at least 1960/61. This month's downward revision is due to a 4,000-hectare reduction in the harvested area estimate to 4,000 hectares, also the smallest since at least 1960/61. On an annual basis, the extremely small rice crop is due to a 96-percent reduction in harvested area caused by Government water restrictions. The revised harvested area, yield, and production estimates are reported by the Government of Iraq's Central Statistical Organization.
United States	5,082	-10	-16.2	↓	↓	Reduced the production estimate based on a slightly lower harvested area reported by USDA's National Agricultural Statistics Service.

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

Total global rice supplies in 2023/24 are projected at 689.3 million tons, down 3.5 million tons from the previous forecast and 6.9 million tons below a year earlier and the second consecutive year of declining global rice supplies (table E). The downward supply revision is the result of a 4.5-million-ton decrease in the 2023/24 global production forecast more than offsetting a 1.1-million-ton increase in the 2023/24 carryin estimate. China accounts for most of the reduction in the 2023/24 global production forecast. Bangladesh, Indonesia, Malaysia, and Saudi Arabia account for most of the increase in the 2023/24 carryin estimate.

The year-to-year decline in global rice supplies in 2023/24 is the result of a 7.5-million-ton decrease in the 2023/24 carryin to 175.8 million tons, more than offsetting a 583,000-ton projected increase in global production. China accounts for the bulk of the decline in global carryin in 2023/24, with China's 2023/4 carryin dropping 6.4 million tons to 106.6 million.

Table E. Global rice balance sheet for 2021/22–2023/24 (in million metric tons, milled basis)

Balance sheet item	2021/22 January	2022/23 December	2022/23 January	2022/23 change from previous month	2023/24 December	2023/24 January	2023/24 change from previous month	Percent change from previous year
Supply								
Beginning stocks	187.8	182.7	183.3	0.5	174.7	175.8	1.1	-4.1
Production	513.1	513.0	513.0	0.0	518.1	513.5	-4.5	0.1
Total supply	700.9	695.7	696.2	0.5	692.8	689.3	-3.5	-1.0
Trade year imports 1/	56.1	52.4	52.4	0.0	52.1	52.2	0.0	-0.4
Demand								
Consumption and residual use:	517.6	521.0	520.4	-0.6	525.0	522.1	-2.9	0.3
Trade year exports	56.1	52.4	52.4	0.0	52.1	52.2	0.0	-0.4
Ending stocks	183.3	174.7	175.8	1.1	167.8	167.2	-0.5	-4.9
Trade year 2022/23 is calendar year 2023. 1/ Includes imports not assigned to a specific country. Source: USDA, Foreign Agricultural Service, <i>Production, Supply, and Distribution</i> database.								

Global domestic and residual use in 2023/24 is projected at a record 522.1 million tons, down 2.95 million tons from the previous forecast but up almost 1.7 million tons from a year earlier, exceeding production by 8.6 million tons (table E). Domestic and residual use forecasts are lowered this month for Bangladesh, China, and Madagascar, but raised for Algeria, Paraguay, and Saudi Arabia. China's 2023/24 domestic and residual use forecast is lowered almost 2 million tons to 149.9 million as the use of rice for feed has declined. China's imports of low-priced broken from India have virtually ceased due to India's ban on exports of broken announced in September 2022, and the decline of prices for corn and other feed grains.

Global ending stocks in 2023/24 are projected at 167.25 million tons, 513,000 tons below the previous forecast and 8.6 million tons smaller than a year earlier and the smallest in 6 years. China accounts for the bulk of the downward revision in 2023/24 global ending stocks, lowered 2.5 million tons to 102.0 million, down 4.6 million from a year earlier. Ending stocks forecasts were also lowered this month for Bangladesh, Burma, Iraq, and Paraguay, but raised for India, Indonesia, Malaysia, Saudi Arabia, South Africa, Sri Lanka, Thailand, and the United States.

China and India account for the bulk of the year-to-year decline in global ending stocks. China's 2023/24 ending stocks are projected to decline 4.6 million tons to 102.0 million, and India's are projected to decrease 2.0 million tons to 33.0 million. Despite these expected declines in stocks, China and India together still account for nearly 81 percent of global ending stocks. Ending stocks are also expected to decline in 2023/24 in Bangladesh, Japan, Nigeria, Sri Lanka, Thailand, and Vietnam. These expected declines in ending stocks in 2023/24 are partially offset by projections for rising stocks for Indonesia, South Korea, Pakistan, and the United States. The 2023/24 global ending stocks-to-use ratio is estimated at 32.0 percent, down from 33.8 percent a year earlier and the smallest since 2016/17.

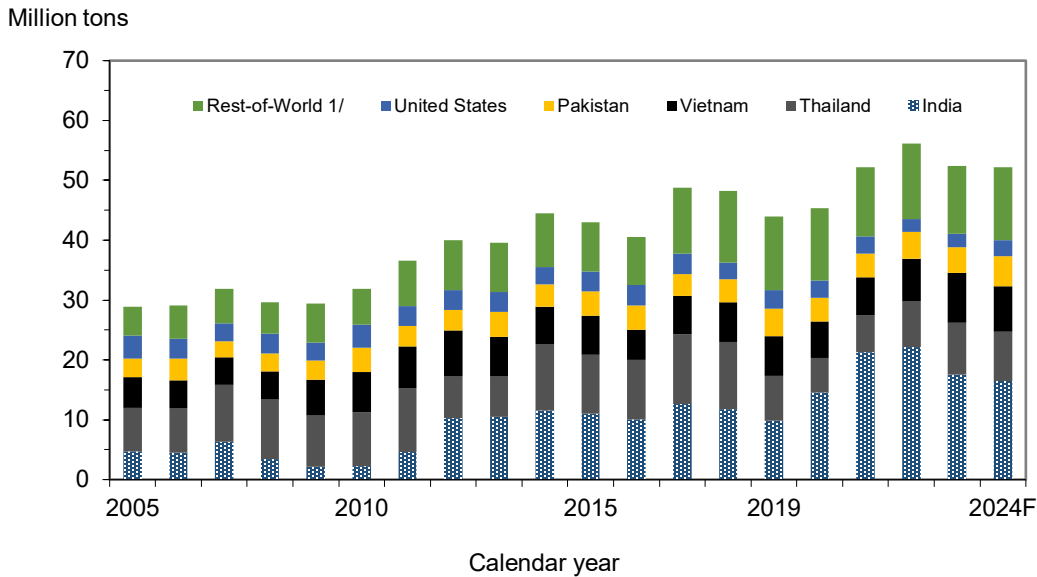
India's 2023 Export Forecast Lowered; Export Forecasts for 2023 for Burma, Pakistan, and Thailand Raised

Global rice trade in calendar year 2024 is projected at 52.2 million tons (milled basis), virtually unchanged from a month earlier but 223,000 tons smaller than the year-earlier forecast of 52.4

million tons. Global rice trade in 2023 was 3.7 million tons below the year-earlier record-high (tables F and G). The substantial decline in global rice trade in 2023 and small projected decrease in 2024 are largely due to export bans and other export restrictions implemented by the Government of India in 2022 and 2023.

Export revisions this month for 2024 are small and nearly offsetting, with increases for Malaysia and South Africa slightly exceeding reductions for Paraguay and the United States. On an annual basis, in 2024, exports are projected to decline from a year earlier for India, Paraguay, Thailand, and Vietnam, but are projected to increase for Argentina, Brazil, Burma, Cambodia, China, Pakistan, the United States, and Uruguay.

Figure 4
Rice exports from India, Thailand, and Vietnam projected to decline in 2024



Rice exports are reported on a milled basis for each calendar year; 2023 and 2024 are forecasts. F = forecast.
 1/ Primarily Burma, China, Cambodia, Argentina, Brazil, Paraguay, Uruguay, and Australia.
 Source: USDA, Foreign Agricultural Service, *Production, Supply, and Distribution* database.

Table F. Selected rice importers at a glance (1,000 metric tons), January 2024

Country or region	Current forecast	Change from previous month	Percent change from previous year	Month-to-month direction	Year-to-year direction	Explanation of month-to-month change in forecast
Rice importers, 2024						
Algeria	175	25	-22.2	↑	↓	Raised the import forecast based on a recent stronger-than-expected pace of purchases through November.
China	2,800	-500	7.7	↓	↑	Reduced the rice import forecast despite a lower 2023/24 production estimate due to declining domestic rice prices and record corn production. Forecasts for 2023/24 for both rice consumption and residual use and for rice ending stocks are lowered this month due to the smaller rice crop, record corn production, and weaker rice imports.
Ethiopia	500	-100	11.1	↓	↑	Lowered the import forecast based on a recent slower-than-expected pace of purchases, especially from main-supplier India.
Indonesia	2,500	500	-19.4	↑	↓	Raised the import forecast based on purchases of about 500,000 tons to date for delivery in 2024 and discussions with Thailand for 2.0 million tons and with India for 1.0 million tons.
Madagascar	450	-50	5.9	↓	↑	Lowered the import forecast based on weaker-than-expected purchases in late 2023, especially from main-supplier India.
Saudi Arabia	1,400	50	0.0	↑	→	Raised the import forecast based on a recent stronger-than-expected pace of purchases from top-suppliers India, Thailand, and the United States.
Sri Lanka	75	50	150.0	↑	↑	Raised the import forecast based on the December 19 approval by the Cabinet of Ministers for the private sector to import 50,000 tons of rice in 2024.
United States	1,325	50	1.9	↑	↑	Raised the import forecast to a record high based on recent stronger-than-expected purchases of jasmine rice from Thailand. Thailand is the largest supplier of rice to the United States, with its premium jasmine rice--an aromatic--the bulk of U.S. rice purchases from Thailand.

Continued--

Table F. Selected rice importers at a glance (1,000 metric tons), January 2024--Continued						
Country or region	Current forecast	Change from previous month	Percent change from previous year	Month-to-month direction	Year-to-year direction	Explanation of month-to-month change in forecast
Rice importers, 2023						
Algeria	225	50	26.4	↑	↑	Raised the import forecast to a record high based on an unexpected shipment of 50,000 tons from Thailand in November.
Bangladesh	400	-100	-57.9	↓	↓	Lowered the import forecast based on a slower-than-expected pace of purchases through late-2023. The slower-than-expected pace of purchases is largely due to the Government of Bangladesh's decision this year not to reduce the rice import tariff in November and December when domestic rice prices typically rise.
Brazil	983	-17	19.0	↓	↑	Reduced the import estimate based on yearend trade data. Paraguay is the largest supplier of rice to Brazil, followed by Uruguay.
China	2,600	-100	-57.8	↓	↓	Lowered the import forecast based on a slower-than-expected pace of purchases through November. Imports have recently slowed as domestic rice prices are now lower than global trading prices.
Congo (Kinshasa)	230	-30	-12.9	↓	↓	Reduced the import estimate based on near-final yearend trade data. China is the largest supplier of rice to the Democratic Republic of the Congo.
Ethiopia	450	-100	-52.6	↓	↓	Lowered the import estimate based on a recent slower-than-expected pace of purchases, especially from main-supplier India.
European Union	2,250	-150	-9.7	↓	↓	Lowered the import forecast based on a recent slower-than-expected pace of purchases.
Ghana	825	25	33.1	↑	↑	Raised the import estimate based on near-final yearend trade data. Vietnam is the largest supplier of rice to Ghana.
Indonesia	3,100	100	318.9	↑	↑	Increased the import forecast based on unexpected imports from Pakistan, Cambodia, and Burma in the final quarter of 2023. Despite these additional purchases, Thailand and Vietnam still provide the bulk of Indonesia's rice imports.
Iraq	1,900	-100	-10.5	↓	↓	Lowered the import estimate based on near-final yearend trade data. Thailand, India, and the United States are the main suppliers of rice to Iraq.
Jordan	200	30	-11.1	↑	↓	Raised the import estimate based on near-final yearend trade data. India, the United States, and Australia are the top suppliers of rice to Jordan.
South Korea	260	-40	-39.5	↓	↓	Lowered the import forecast based on trade data through November. These are the lowest rice imports for South Korea since 2012.
Madagascar	425	-25	-37.5	↓	↓	Reduced the import estimate based on near-final yearend trade data. India is the largest supplier of rice to Madagascar.
Malaysia	1,300	150	4.8	↑	↑	Record-high imports are based on larger-than-expected purchases in the final quarter of 2023, with Pakistan and Burma accounting for most of the increase. Rice production in Malaysia remains below the record-high crops harvested in 2018/19 and 2019/20.
Saudi Arabia	1,400	100	5.7	↑	↑	Increased the import forecast based on continued strong purchases from India, Pakistan, and the United States.
South Africa	1,200	100	16.1	↑	↑	Raised the import forecast based on continued strong purchases from Thailand and India.
United States	1,300	25	-1.1	↑	↓	Raised the import forecast based on stronger-than-expected purchases of jasmine rice from Thailand during August–November 2023 and expectations regarding purchases in December. Jasmine accounts for the bulk of U.S. purchases of rice from Thailand.

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

Table G. Selected rice exporters at a glance (1,000 metric tons), January 2024						
Country or region	Current forecast	Change from previous month	Percent change from previous year	Month-to-month direction	Year-to-year direction	Explanation of month-to-month change in forecast
Rice exporters, 2024						
Malaysia	100	50	-20.0	↑	↓	Raised the export forecast based on recent stronger-than-expected sales, primarily to Indonesia. Indonesia accounts for the bulk of Malaysia's rice exports.
Paraguay	780	-20	-11.4	↓	↓	Lowered the export forecast based on tight supplies of rice following record high exports in 2023. Brazil is the largest market for Paraguay rice.
South Africa	160	20	-5.9	↑	↓	Increased the export forecast based on stronger-than-expected sales in 2023. Botswana, Eswatini, and Namibia are the largest markets for rice exports from South Africa.
United States	2,675	-25	18.9	↓	↑	Lowered the export forecast based on recent slower-than-expected sales of medium- and short-grain milled rice to Northeast Asia and expectations regarding these sales in early 2024. The decline in U.S. sales to Northeast Asia is partially offset by recent stronger sales of U.S. rough rice to Latin America, primarily Mexico.
Rice exporters, 2023						
Brazil	1,208	-42	-16.4	↓	↓	Reduced the export estimate based on yearend trade data. Mexico, Senegal, Venezuela, and Costa Rica are the largest rice export markets for Brazil.
Burma	1,500	100	-35.8	↑	↓	Raised the export forecast based on very strong shipments in November. Burma shipped 173,000 tons of rice in November, the largest since February.
India	17,500	-500	-20.9	↓	↓	Reduced the export forecast based on a slower-than expected pace of shipments through November. India's exports are limited by bans and restrictions on rice exports. Most of these restrictions and bans were implemented by the Government of India last summer.
Malaysia	125	25	8.7	↑	↑	Increased the export forecast based on recent stronger-than-expected sales, primarily to Indonesia. Indonesia accounts for the bulk of rice exports from Malaysia.
Pakistan	4,300	100	-5.0	↑	↓	Raised the export forecast based on stronger-than-expected sales in November, which were reported at 666,000 tons.
South Africa	170	20	17.2	↑	↑	Increased the export estimate to a record-high based on near-final yearend trade data. Botswana, Eswatini, and Namibia are the largest markets for South Africa's rice exports.
Thailand	8,700	200	13.3	↑	↑	Raised the export forecast based on very strong shipments in November, reported at 1.0 million tons. Sales in November were especially strong to Southeast Asia.
Uruguay	975	75	-0.7	↑	↓	Export forecast is raised based on stronger-than-expected sales through November. Brazil, Central America, and Mexico are the main markets for rice exports from Uruguay.

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

On the 2024 import side, forecasts are lowered this month for China, Ethiopia, and Madagascar, but raised for Algeria, Indonesia, Saudi Arabia, Sri Lanka, and the United States. On an annual

basis, Brazil, Egypt, Ghana, Indonesia, Kenya, Mozambique, North Korea, Singapore, Tanzania, Togo, and Vietnam account for the bulk of the projected decline in global rice imports in 2024. In contrast, imports are projected to increase in 2024 in Afghanistan, Angola, Bangladesh, China, the Democratic Republic of the Congo, Cuba, Ethiopia, Iran, South Korea, Liberia, Libya, Madagascar, Malaysia, Mexico, Nepal, the Philippines, Saudi Arabia, Sierra Leone, the United Arab Emirates, the United Kingdom, the United States, and Yemen. The Philippines is projected to remain the number one global rice importer—taking a record 3.8 million tons—in 2024, followed by China, Indonesia, the European Union, Nigeria, and Iraq.

There are numerous export and import revisions for 2023 this month, mostly based on final or near-final trade data. On the 2023 export side, India's exports are again reduced, with Burma, Pakistan, and Thailand gaining sales from India's export restrictions. On the 2023 import side, the largest reduction is for the European Union and the largest increase is for Malaysia. On an annual basis, the near-7-percent drop in global exports in 2023 was largely due to a substantial decline in shipments from Brazil, Burma, China, India, Pakistan, and the United States more than offsetting increased exports from Cambodia, Paraguay, Thailand, and Vietnam.

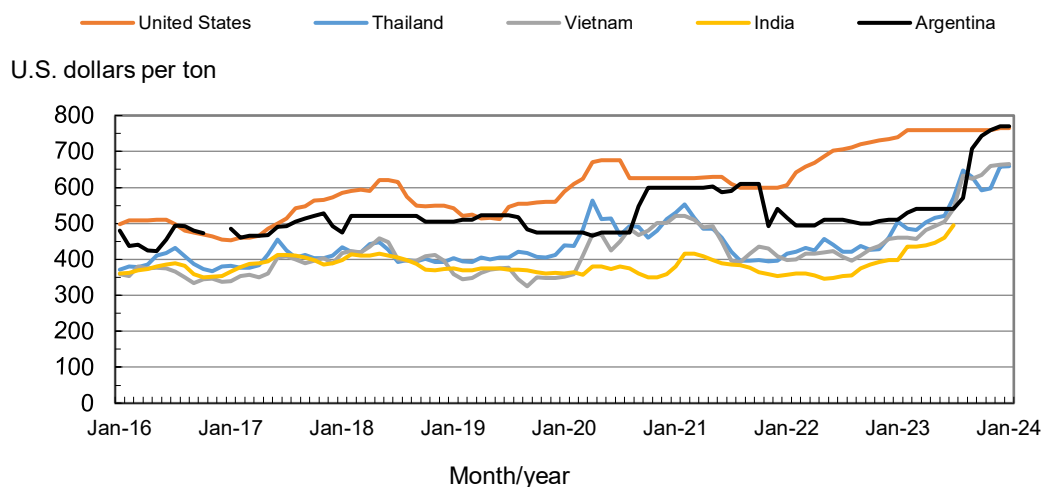
The decline in 2023 global imports was largely due to substantial reductions in purchases by Angola, Bangladesh, Benin, Cameroon, China, Cote d'Ivoire, Egypt, Ethiopia, South Korea, Madagascar, Nepal, Nigeria, Senegal, Somalia, Sri Lanka, and the United Arab Emirates. Most of these import declines in 2023 were due to India's export bans and restrictions.

Over the past month, quotes for trading prices for most grades of regular (neither parboiled nor aromatic) whole-grain milled rice from Thailand increased 3–4 percent, mostly due to the strengthening of the Thai *baht* and strong demand from Southeast Asian buyers. For the week ending January 9, Thailand's 100-percent Grade B long-grain milled rice for export was quoted at \$659 per ton, up \$18 from the week ending December 5 but \$20 below price quotes reported for the week ending December 26. Global rice trading prices continue to be supported by India's export bans and restrictions.

Price quotes for 5-percent brokens from Vietnam for the week ending January 9 were \$665 per ton, unchanged from the week ending December 5. These are the highest price quotes since July 2008. Price quotes for rice from Pakistan were reported at \$620 per ton for the week ending January 9, up \$42 from the week ending December 5 due to strong demand. Price quotes for regular-milled white rice from India have been unavailable since the country's imposition of an export ban on July 20. In South America, price quotes for 5-percent brokens from Argentina for the week ending January 9 were reported at \$770 per ton, unchanged since late November. These are the highest prices reported for Argentina since September 2008. Argentina's prices are supported by tight domestic supplies and high global trading prices (figure 5). Price quotes from Brazil and Uruguay also rose over the past month and, along with Argentina, are now higher than U.S. prices.

Figure 5

Argentina's rice trading prices now slightly exceed U.S. prices



Note: January 2024 = through January 9 only. No India quotes after July 2023. Free on Board local port. Monthly average of weekly milled-rice price quotes. Quotes used: Thailand, 100-percent grade B; India, 5-percent broken, container since February 2021, bulk prior months; Vietnam, 5-percent broken; Argentina, 5-percent broken; United States, No. 2, 4-percent broken. Source: Thailand: *Rice Price*, U.S. Embassy, Bangkok; United States, India, Argentina, and Vietnam prices: *Creed Rice Market Report*.

U.S. trading prices for long-grain and medium-grain milled rice were unchanged over the past month. Prices for U.S. long-grain milled rice, Number 2 Grade, 4-percent broken kernels (Iraqi specifications) were quoted at \$765 per ton for the week ending January 9, unchanged since late-November and the highest since early November 2008. U.S. price quotes for Latin American markets are also unchanged from a month earlier, quoted at \$730 per ton for the week ending January 9. Price quotes for California medium-grain milled-rice, Number 1 Grade, 4-percent broken, were quoted at \$950 per ton (free on board at a domestic mill) for the week ending January 9, unchanged from the week ending December 5. The California price quote is down \$700 per ton from the mid-September record-high and is the lowest since early May 2021. For listings of trading prices by exporter and grade of rice, see table 10 in the Rice Outlook Monthly Table file that is posted on the Rice Outlook web page concurrently with the most recent issue of the *Rice Outlook* report.

Special Article:

Rice Production Costs and Returns Have Increased Over Time, and Are Highest in California

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USDA, Economic Research Service (ERS) publishes Commodity Costs and Returns estimates for 12 U.S. agricultural commodities. They are developed using data from the Agricultural Resource Management Survey (ARMS), which surveys farmers on their production practices, costs, and yields. Annual commodity costs and returns estimates are based on ARMS producer surveys conducted every 4 to 10 years for each commodity on a rotating basis. These survey year estimates account for the full economic cost of producing the commodity, based on current production practices and technologies. In-between commodity survey years, the ERS Commodity Costs and Returns estimates are updated using price indices and other data. For rice, the most recent survey years are 2013 and 2021. Commodity Costs and Returns estimates are provided for four rice-producing regions in the United States: California, the Gulf Coast (which includes parts of Louisiana and Texas), the Mississippi River Delta (which includes parts of Mississippi, Louisiana, and Arkansas), and the Arkansas Non-Delta (which includes parts of Arkansas and a small area in southeastern Missouri).

On October 2, 2023, ERS released the most recent Commodity Costs and Returns estimates for rice for the 2021 survey year and updated estimates for 2022. For each year, an estimate is provided for the gross returns, or value, of rice production, which are equal to the field yield times the farm price of rice. All estimates are provided on a per-planted-acre basis. In 2022, the national average for estimated gross returns to 1 acre of rice was \$1,439.19. Returns were the highest in California, at \$2,723.28 per acre, primarily due to higher prices (\$31.39 per hundredweight, or cwt) for its rice, which is almost entirely short- and medium-grain. By contrast, prices were around \$16.00 per cwt in the other regions, which primarily produce long-grain rice. Yields were also relatively higher in California, at about 8,700 pounds per acre, compared with 8,400 pounds per acre in the Arkansas Non-Delta, 7,800 pounds per acre in the Mississippi River Delta, and 7,200 pounds per acre on the Gulf Coast.

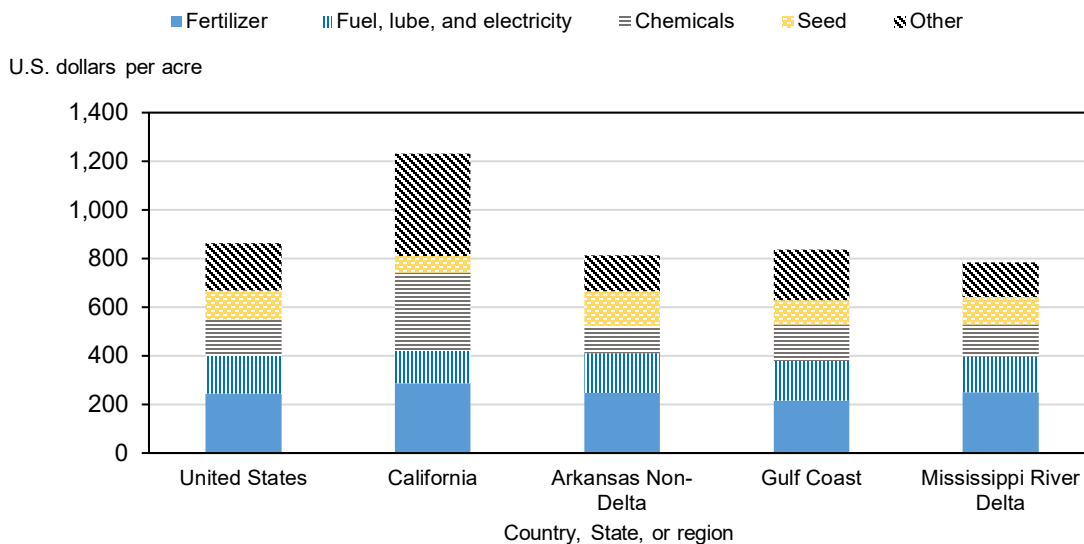
Total costs include operating costs and allocated overhead costs. In 2022, the total estimated operating cost per acre of rice in the United States was \$863.76 (figure 1). Operating costs include the costs for seed; fertilizer; chemicals; custom services; fuel, lube, and electricity; repairs; commercial drying; purchased irrigation water; and interest on operating capital. The largest of these cost categories was fertilizer, at \$243.28 per acre. This was followed by fuel, lube, and electricity (\$157.18 per acre); chemicals (\$150.15 per acre); and seed (\$118.04 per acre). Total operating costs were highest in California, at \$1,230.65 per acre and lowest in the Mississippi River Delta, at \$783.15 per acre.

The average estimated allocated overhead cost of producing an acre of rice in the United States was \$472.98 in 2022 (figure 2). The largest allocated overhead cost categories were capital recovery of machinery and equipment (\$183.70 per acre) and the opportunity cost of land (\$163.69 per acre). The other allocated overhead cost categories were each under \$45.00 per acre; these include hired labor, opportunity cost of unpaid labor, taxes and insurance, and

general farm overhead. Total allocated overhead costs were the highest in California, at \$780.23 per acre, and the lowest on the Gulf Coast, at \$387.32 per acre.

Figure 1

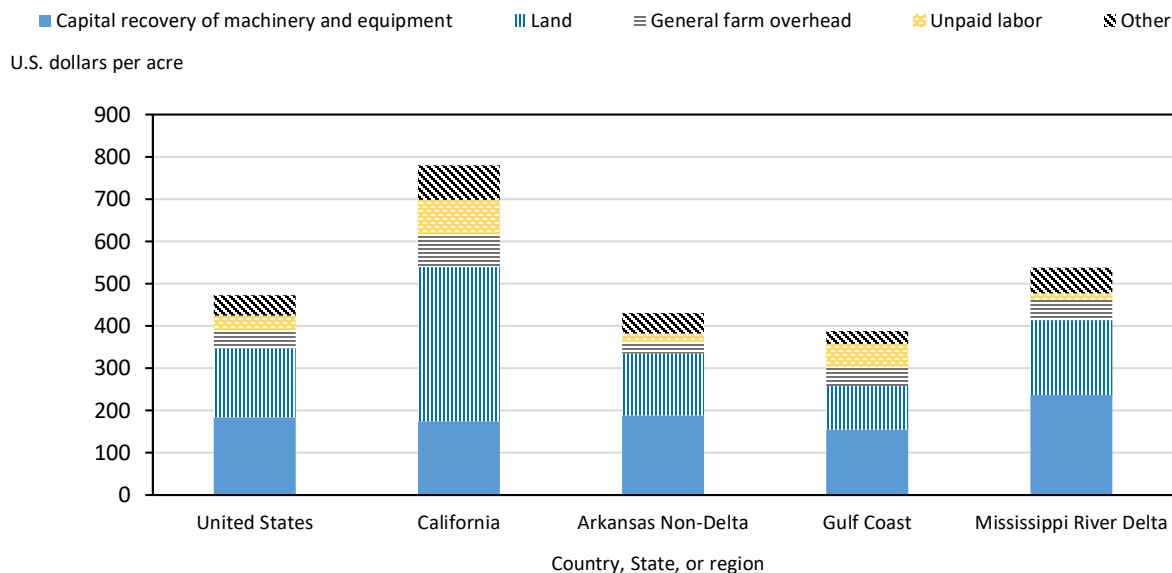
Operating costs of producing rice in 2022 were higher in California than other rice-producing areas



Note: "Other" includes repairs, commercial drying, purchased irrigation water, and interest on operating capital.
Source: USDA, Economic Research Service, Commodity Costs and Returns.

Figure 2

Allocated overhead costs of producing rice in 2022 were highest in California and lowest in the Gulf Coast region



Note: "Other" includes hired labor, and taxes and insurance. Land and unpaid labor represent opportunity costs.
Source: USDA, Economic Research Service, Commodity Costs and Returns.

Over the last decade, the nominal cost of producing rice has fluctuated, but it has increased since 2020 (figure 3). A decade ago, average U.S. operating costs were \$534.32 per acre and

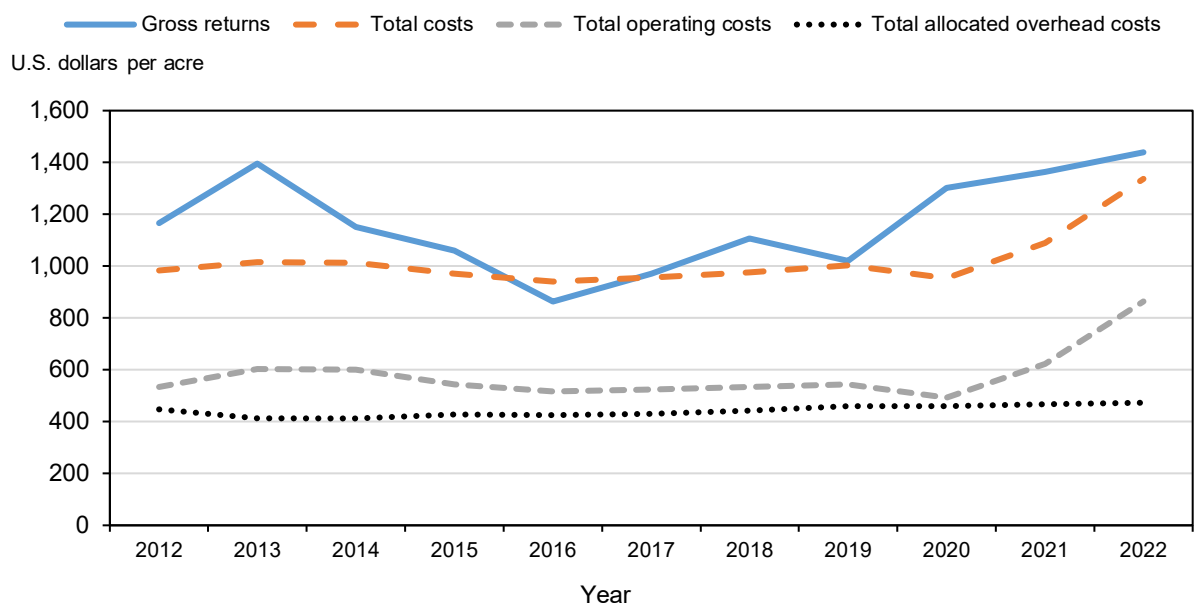
allocated overhead costs were \$448.06 per acre. Most of the increase in costs has stemmed from increases in operating costs, particularly fertilizer costs, which more than doubled from \$92.53 in 2020 to \$243.28 in 2022. Gross returns have fluctuated more widely than total costs: after increasing in 2013 to \$1,395.23, these returns fell each year through 2016, dropping to a low of \$863.46. Since then, they have increased in most years, reaching \$1,439.19 in 2022. Variations in returns are partly the result of fluctuations in rice prices. Prices were the lowest in 2016, which had the lowest returns, whereas prices were the highest in 2022, which had the highest returns. Yields were also lower in 2016, at about 7,800 pounds per acre. Yields were the highest in 2020, at about 8,800 pounds per acre.

Net returns, a measure of profitability, is the difference between gross returns and total costs. As gross returns fluctuate, so do net returns. Between 2012 and 2022, net returns were the highest in 2013, at \$378.85 per acre.

The costs and returns associated with rice production vary by region and have changed over time. This has important implications for the production and profitability of rice within these producing regions. USDA's ERS Commodity Costs and Returns estimates provided on the USDA, ERS website can be used by stakeholders, such as policymakers and researchers to better understand the trends in costs and returns affecting U.S. commodity producers.

Figure 3

Gross returns from rice production fluctuated over the past decade, while production costs rose sharply in 2021 and 2022



Source: USDA, Economic Research Service, Commodity Costs and Returns.

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