



## Contents

### Feature article:

Impact of rising interest rates on grain markets **2**

World supply-demand outlook **3**

Crop monitor **5**

Policy developments **8**

International prices **10**

Futures markets **12**

Market indicators **13**

Fertilizer outlook **15**

Ocean freight markets **16**

Explanatory notes **17**

## Markets at a glance

	FROM PREVIOUS FORECASTS	FROM PREVIOUS SEASON
WHEAT	▲	■
MAIZE	▲	▲
RICE	■	▼
SOYBEANS	■	▲

Rice continues to be in the news. Since India banned non-Basmati rice exports in July, rice prices have risen markedly, raising concerns that other countries might follow suit and also restrict trade. As a case in point, Myanmar, the world's sixth largest rice exporter, announced new export licensing requirements while the Philippines has put in place price ceilings to cap retail rice prices. All of these actions have occurred as a strengthening El Niño threatens to cut rice production of key Asian suppliers and push prices higher. ASEAN leaders have recognized the threat to food security and recently confirmed their commitment to keep the flow of agricultural products unimpeded and refrain from using "unjustified" trade barriers. AMIS will continue working with its participating countries to promote the open flow of food commodities.

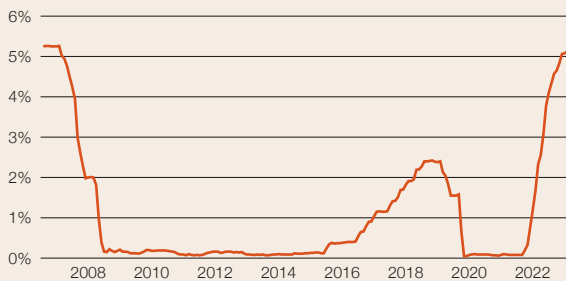
The **Market Monitor** is a product of the Agricultural Market Information System (AMIS). It covers international markets for wheat, maize, rice and soybeans, giving a synopsis of major market developments and the policy and other market drivers behind them. The analysis is a collective assessment of the market situation and outlook by the ten international organizations and entities that form the AMIS Secretariat.

## Feature article

# Tightening the financial leash: What's the impact of rising interest rates on grain markets?

After years of cheap money, central banks around the world have been tightening the financial leash in an effort to combat persistent inflation. In the United States, for example, benchmark interest rates currently stand at 5.5 percent (Fig. 1), up from 0.25 percent during most of 2020 and 2021. On the other side of the Atlantic, the European Central Bank raised the interest rate on its main refinancing instrument for the tenth time in a row to now reach 4 percent; a record high since the introduction of the Euro. Why does all this matter for global grain markets? Let's explore a bit further the impact channels of increasing interest rates.

Figure 1: Federal Funds Effective Rate



Source: Board of Governors of the Federal Reserve System (US)

### Credit impact

One of the immediate effects of escalating interest rates is the restriction they impose on credit access for market participants. In the United States, farm lending softened considerably in the first half of 2023, according to a recent update from the Federal Reserve Bank of Kansas City. While agricultural production is unlikely to be affected this season, the elevated borrowing costs add to already high farm expenditures in view of still inflated input prices. If these trends persist, high interest rates could thus stifle long-term production growth.

Grain traders are also experiencing the ripples, as banks are becoming increasingly cautious about granting loans. Grain traders rely heavily on external financing to manage the time gap between grain procurement and sales. Higher interest rates thus raise the costs associated with grain storage, as the increased cost of capital makes it more expensive to hold unsold grains. A similar situation occurred during the 2008-2011 financial crisis when cash-strapped grain merchants had difficulty accessing credit, which caused supply chain disruptions and a reduction of the overall grain volume being traded. While alternative lenders, such as private equity funds, may close some of the funding needs of traders, these are unlikely to fully replace traditional bank financing. Also, these fi-

ancial resources tend to be limited to larger firms, so smaller and medium-sized traders risk to be left out.

### Liquidity impact

Rising interest rates also reduce liquidity in financial markets, including those for agricultural derivatives. Lower liquidity can in turn prompt investment funds to liquidate positions. This may result in a sell-off in grain markets and a consequent dip in grain prices, as observed earlier this year. The impact of the sell-off in March was particularly significant as it occurred amidst persistently high price volatility in markets, which tends to increase margin calls by grain clearing houses that further strain market liquidity. Adequate liquidity is pivotal for the smooth operation of markets, including price discovery mechanisms.

### Differentiated impact on international and local markets

Higher interest rates also impact grain markets through a currency effect as they tend to appreciate the value of the corresponding currency. For example, the FED raising rates can be expected to lead to a stronger US dollar, alongside reduced overall demand, including for grains, as businesses and households cut back on spending. A strengthening of the US dollar will drive up the cost of dollar-denominated grain imports, which is particularly problematic for low-income food deficit countries that rely on these imports to feed their populations.

### High interest rates seem here to stay

Are these temporary phenomena that will subside soon? While the initial reversal in monetary policy was to respond to "transitory price inflation", central banks now emphasize that the return to price stability - usually defined as a year-on-year increase of consumer prices of around 2 percent - might require longer-term efforts. In its most recent board meeting, the Federal Reserve therefore underscored that elevated interest rates can be expected for an extended period of time, and that another increase might be possible by year-end. Similarly, the European Central Bank declared that the current high interest rates will be effective in bringing down inflation only if they are maintained for a "sufficiently long period". Thus, high interest rates seem here to stay, and with them the potential adverse impacts on agricultural markets described in this article. AMIS will of course continue monitoring these developments to help safeguard global food security.

## World supply-demand outlook

	Wheat	FAO-AMIS			USDA		IGC		IN MILLION TONNES
		2022/23 est	2023/24 f'cast		2022/23 est	2023/24 f'cast 12 Sep	2022/23 est	2023/24 f'cast 21 Sep	
			7 Sep	5 Oct					
<p><b>WHEAT</b> production in 2023 raised m/m on higher yields in Ukraine and the Russian Federation thanks to continued favorable weather, but still falling by 2.3 percent below last year's level.</p> <p>Utilization in 2023/24 trimmed m/m but still rising slightly above the 2022/23 level due to rising food consumption which is seen offsetting a decline in feed use.</p> <p>Trade in 2023/24 (July/June) still set to decline from the 2022/23 level and unchanged this month as an upward revision to the Russian Federation's expected sales was offset by downwards revisions to Australia and Canada's exports.</p> <p>Stocks (ending in 2024) lifted m/m on upward revisions to inventories in Ukraine and the Russian Federation stemming from higher production forecasts.</p>									
Prod.	802.8	781.1	784.7	790.6	787.3	804.6	783.5		
	665.1	644.5	648.2	652.9	650.3	666.9	647.0		
Supply	1098.5	1095.5	1098.2	1063.3	1054.5	1077.9	1066.0		
	826.8	817.4	820.1	788.8	778.7	808.4	790.3		
Utiliz.	779.5	784.9	783.3	796.1	795.9	795.4	803.4		
	636.8	641.9	640.3	648.1	642.9	652.6	653.9		
Trade	200.3	193.3	193.3	215.4	209.8	207.8	195.9		
	186.8	183.3	183.3	202.1	198.8	194.2	184.2		
Stocks	313.7	315.2	319.3	267.1	258.6	282.5	262.6		
	172.2	170.6	174.8	128.3	125.7	142.2	124.7		
<p><b>MAIZE</b> production forecast for 2023 lifted slightly m/m, mostly on a higher estimate for Brazil, and set to surpass last year's output by 4.3 percent.</p> <p>Utilization in 2023/24 unchanged m/m and forecast to increase by 1.6 percent largely reflecting a rise in feed use (especially in China, Brazil, and the US).</p> <p>Trade in 2023/24 (July/June) forecast to fall by 1.6 percent and little changed this month as an upward revision for sales by Brazil was balanced by downward revisions for Paraguay and the US.</p> <p>Stocks (ending in 2024) raised slightly m/m, on higher inventories in Brazil and the US, pointing to a rise of 6.8 percent above opening levels, with most of the increase concentrated in the US.</p>									
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Prod.	1165.7	1214.9	1216.2	1155.6	1214.3	1162.1	1222.4		
	888.5	933.9	935.2	878.4	937.3	884.9	945.0		
Supply	1473.4	1501.3	1501.2	1466.2	1513.8	1448.6	1497.0		
	1039.5	1065.9	1065.7	979.8	1030.9	983.3	1043.6		
Utiliz.	1184.2	1203.1	1202.7	1166.7	1199.8	1174.0	1208.2		
	886.8	900.7	900.3	867.7	895.8	865.5	902.8		
Trade	180.9	177.9	178.1	180.6	194.1	179.7	171.5		
	161.9	157.9	158.1	162.1	171.1	160.6	149.5		
Stocks	286.4	304.5	305.7	299.5	314.0	274.6	288.7		
	131.9	152.4	153.6	93.7	112.2	98.6	118.8		
<p><b>RICE</b> production in 2023/24 essentially unchanged m/m, as small downgrades namely for Bangladesh, Nigeria and the Philippines are compensated by improved output prospects mostly for the US and Cote d'Ivoire.</p> <p>Utilization in 2023/24 still seen stagnating at the 2022/23 reduced level, as continued cuts in non-food uses offset a population-led increase in food intake.</p> <p>Trade in 2024 trimmed m/m, largely on lower than previously anticipated imports by African countries, in particular Cote d'Ivoire and Niger.</p> <p>Stocks (2023/24 carry-outs) raised marginally and now seen expanding by 1.7 percent y/y to a fresh peak. Regionally, however, stock replenishments predicted to be largely confined to Asia (India in particular) and Northern America (namely in the US).</p>									
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Prod.	517.7	523.2	523.1	513.6	518.1	514.3	522.7		
	374.9	380.1	380.0	367.6	369.1	368.4	373.8		
Supply	714.9	718.5	718.4	696.0	690.3	689.9	691.0		
	471.5	475.8	475.7	437.1	434.7	437.7	439.0		
Utiliz.	520.5	520.9	520.5	523.8	522.7	521.6	522.6		
	373.6	376.1	375.7	368.8	370.7	370.2	371.6		
Trade	52.5	53.3	53.0	53.1	52.1	52.4	50.6		
	48.5	49.0	48.7	49.6	48.6	48.0	46.8		
Stocks	195.3	198.1	198.6	172.2	167.6	168.3	168.4		
	95.7	97.9	98.4	65.6	62.5	63.0	63.6		
<p><b>SOYBEAN</b> 2023/24 production lowered further this month on reduced crop prospects in the US following persistent unfavourable growing conditions, more than offsetting higher forecasts for Argentina and Ukraine.</p> <p>Utilization in 2023/24 raised marginally m/m, chiefly reflecting upward revisions for China and Mexico, thus confirming a 6 percent y/y growth in global consumption.</p> <p>Trade in 2023/24 (Oct/Sep) downgraded slightly, largely reflecting expectations of smaller shipments from the US that coincide with decreased import forecasts for China.</p> <p>Stocks (2023/24 carry-out) trimmed on lower forecasts for Brazil and the US, yet global inventories still pointing to a 12 percent recovery from its opening levels.</p>									
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Prod.	372.1	400.0	399.2	370.1	401.3	367.5	396.0		
	351.8	379.0	378.4	349.8	380.8	347.2	374.5		
Supply	416.0	445.7	446.0	469.2	504.3	413.1	449.5		
	376.7	403.7	402.3	418.6	446.0	364.7	393.2		
Utiliz.	369.5	389.5	390.4	363.4	382.6	359.5	387.9		
	253.6	271.1	271.3	248.7	263.6	245.0	268.5		
Trade	170.5	168.9	168.1	170.1	168.4	168.7	169.2		
	70.9	69.4	69.5	68.1	68.4	67.7	69.7		
Stocks	46.8	52.9	52.6	103.0	119.2	53.5	61.6		
	23.9	29.9	29.5	65.2	80.0	18.7	25.2		

### +i World Balances

Data shown in the second rows refer to world aggregates without China; world trade data refer to exports; and world trade without China excludes exports to China. To review and compare data, by country and commodity, across three main sources, go to <https://app.amis-outlook.org/#/market-database/compare-sources>. Estimates and forecasts may differ across sources for many reasons, including different methodologies. For more information see [Explanatory notes](#) on the last page of this report.

## World supply-demand outlook

## Revisions (FAO-AMIS) to 2023/24 forecasts since the previous report

	WHEAT					MAIZE					RICE					SOYBEANS				
	Production	Imports	Utilization	Exports	Stocks	Production	Imports	Utilization	Exports	Stocks	Production	Imports	Utilization	Exports	Stocks	Production	Imports	Utilization	Exports	Stocks
<b>WORLD</b>	3658	-43	-1673	-39	4121	1303	206	-389	205	1249	-67	-327	-399	-302	469	-831	-800	817	-765	-311
<b>Total AMIS</b>	3574	-	-1556	-200	4087	2119	-	-215	500	1357	177	35	97	50	270	-1014	-900	454	-865	-331
Argentina	-1000	-	-200	-200	-	-	-	-	-	-	-	-	-	-	500	-	100	200	400	-
Australia	-827	-	-602	-1000	-913	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brazil	408	-	208	-	200	1904	-	4	1000	900	-	-	-	-150	-	-	-	-400	-	-600
Canada	-3374	-	-429	-3000	-100	-368	-	-218	-	-	-	-50	40	-	190	-13	-	-13	-	-
China Mainland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-200	-900	700	-	100
Egypt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indonesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan	-2000	-	-	-	-2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mexico	-	-	-	-	-	-	-	-	-	-	-	-	-10	-	-	-81	200	517	-15	369
Nigeria	-	-	-	-	-	-	-	-	-	-	-240	-	-40	-	-200	-	-	-	-	-
Philippines	-	-	-	-	-	-	-	-	-	-	-124	-	-123	-	-100	-	-	-	-	-
Rep. of Korea	30	-	30	-	-	-4	-	-	-	-4	-	-	-	-	-	-	-	-	-	-
Russian Fed.*	9200	-	-	4000	5200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-100	-300	-	-
Türkiye	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-10	-100	-120	-	-20
Ukraine**	1700	-	-	-	1700	-	-	-	-	-	-7	35	8	-	2	400	-	-50	500	100
UK	-563	-	-563	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
US	-	-	-	-	-	587	-	-1	-500	461	548	50	222	200	378	-1610	-	20	-1550	-680
Viet Nam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

In thousand tonnes

**+i Note**

Only significant changes (of more than 1 000 tonnes) are displayed in the table.

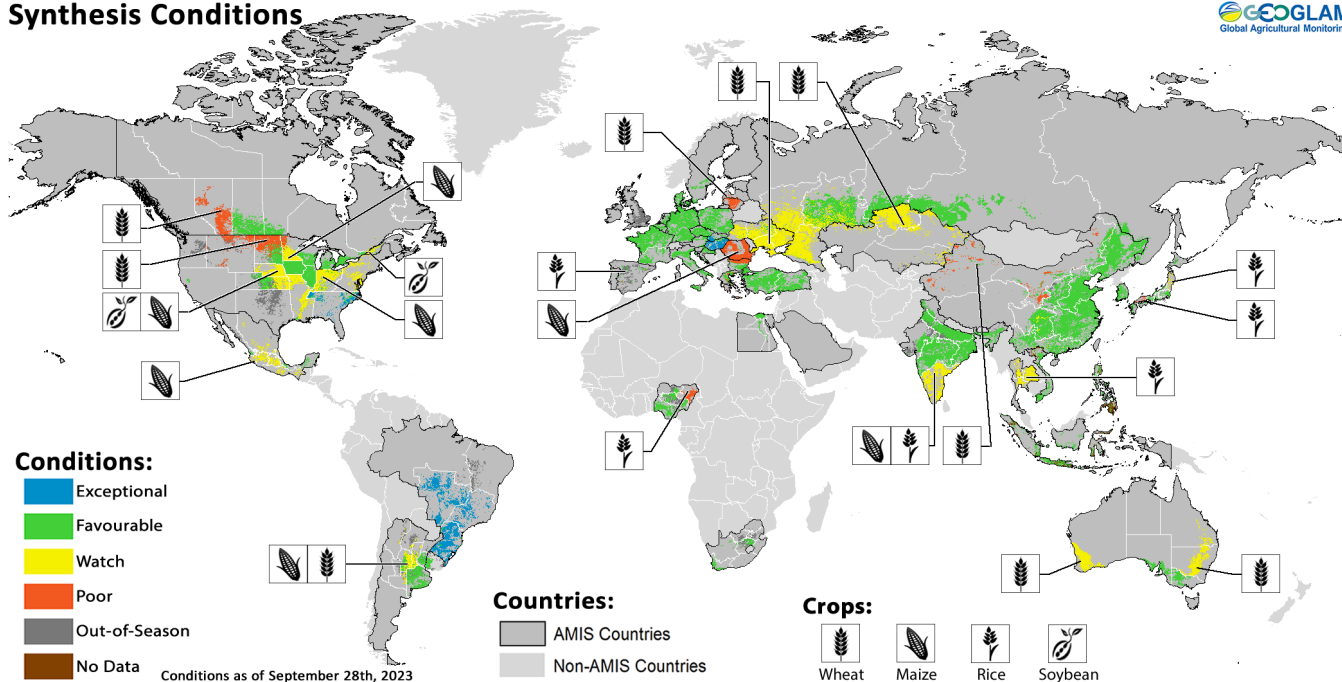
\*Information for the Russian Federation includes statistical data for the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine, temporarily occupied by the Russian Federation.

\*\*Information for Ukraine excludes statistical data concerning the Autonomous Republic of Crimea, the city of Sevastopol and the Donetsk, Luhansk, Kherson and Zaporizhzhia regions. The information is presented without prejudice to relevant UN General Assembly and UN Security Council resolutions, which reaffirm the territorial integrity of Ukraine.

# Crop monitor

## Crop conditions around the world

### Synthesis Conditions



Crop condition map synthesizing information for all four AMIS crops as of 28 September. Crop conditions over the main growing areas for wheat, maize, rice, and soybean are based on a combination of national and regional crop analyst inputs and earth observation data. Only crops that are in other-than-favourable conditions are displayed on the map with their crop symbol

### Conditions at a glance

#### Wheat

In the northern hemisphere, spring wheat harvesting is wrapping up with poor conditions in Canada, the US, and China. In the southern hemisphere, there are ongoing dry conditions in Argentina and Australia.

#### Maize

In the southern hemisphere, conditions are mostly favourable with exceptional outcomes expected in Brazil for the larger season crop. In the northern hemisphere, conditions remain mixed as harvesting ramps up.

#### Rice

In China, recent rains improved vegetation in the south and southwest. In India, the Kharif harvest begins with concern for below-average monsoon rains in the south. In Southeast Asia, conditions remain favourable except in Thailand.

#### Soybeans

In the northern hemisphere, harvesting begins under mixed conditions with dry and hot weather in the US, Romania, the Russian Federation, and China.

## El Niño Advisory and Positive IOD

The ongoing El Niño event will likely reach peak intensity during October 2023 to January 2024, and then remain active into March to May 2024 (78 percent chance), according to the IRI/CPC forecast. Very warm sea surface temperatures in the Niño3.4 region indicate this is already a strong event.

El Niño events tend to enhance precipitation in Central Asia, southern North America, south-eastern South America, southern Europe, east and southern East Africa, and south and eastern China. Drier-than-average conditions tend to occur in Central America, the Caribbean, northern South America, parts of

west and northern East Africa, Southern Africa, India, Northern China, the Maritime Continent, and Australia.

A positive Indian Ocean Dipole (IOD) event is also underway and will likely be strong and impactful with a peak in October and November and lasting until January, according to the Australian Bureau of Meteorology. Positive IOD conditions typically enhance the drying influences of El Niño in Australia and the Maritime Continent, and substantially increase the chances of a wet and intense East Africa short rains season during El Niño.

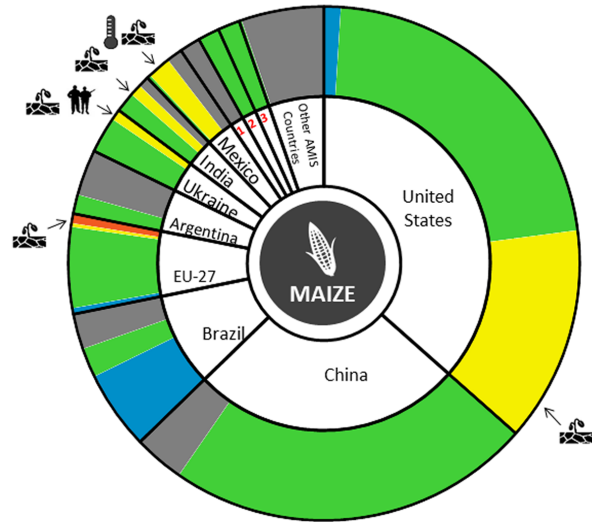
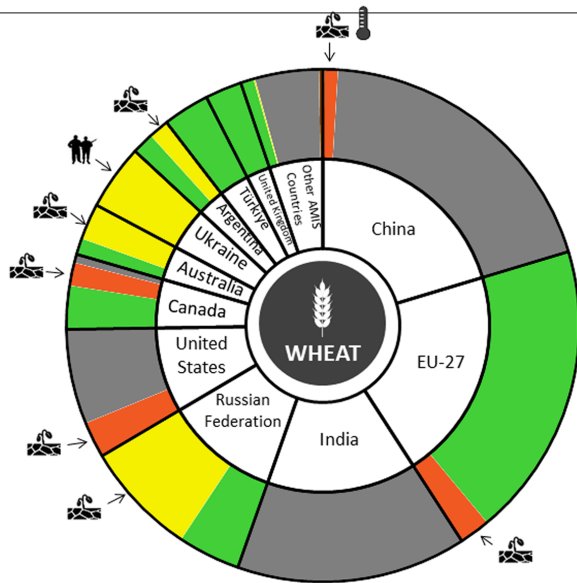
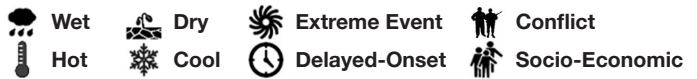
Source: UCSB Climate Hazards Center

Crop monitor

Conditions



Drivers



South Africa<sup>1</sup>, Russian Federation<sup>2</sup>, Canada<sup>3</sup>

Summaries by crop

Wheat

In the **EU**, winter wheat harvesting finalized with poor yields in parts of the north. Planting begins in some northern countries under favourable conditions. In **Türkiye**, conditions are favourable for the start of planting. In **Ukraine**, summer-autumn drought is impacting timely sowing activities, and rainfall outcomes in early October will determine the possibility of improvement. In the **Russian Federation**, harvesting of the spring crop finalized under favourable conditions despite previous drought. Spreading dryness is impacting winter wheat planting, particularly in the Volga region. In **China**, harvesting finalized under mixed conditions for the spring-planted crop due to impacts of drought and heat stress along the north and northwest. In the **US**, spring harvesting is mostly complete with below-average yields expected as much of the west experienced drier-than-normal weather late in the season. In **Canada**, spring wheat harvesting finalized under mixed conditions in the Prairie region due to dry weather, with a large drop in national yields. In **Australia**, concern remains for winter crops in much of the east and west, and rainfall is needed soon to sustain yield potential. In **Argentina**, winter crops are under mixed conditions with insufficient rains in the north and west while crops in the east remain favourable.

Maize

In **Brazil**, harvesting of the summer-planted (larger season) crop is wrapping up under exceptional conditions, and planting of the spring-planted (smaller season) crops begins in the main producing South region. In **Argentina**, sowing of the early-planted (usually larger season) crop is progressing in the eastern provinces, with recent rains benefitting crop emergence. In the **US**, dry weather is emerging in parts of the Midwest and Northeast while other areas have recovered from prior drought. In **Mexico**, drought and heat stress are impacting crop development except along northwest and southeastern coastal regions. In **Canada**, conditions are favourable as Ontario benefitted from good rains since the beginning of the season. In **China**, recent rains benefitted prior deficit areas for the ongoing harvest. In **India**, crops in the centre and west have improved from prior dry impacts while concern remains in the south. In the **EU**, conditions are mostly favourable with poor yields expected in Bulgaria and Romania due to dry and hot weather and in Greece due to the passage of Tropical Storm Daniel. In **Ukraine**, conditions remain favourable with the exception of conflict-affected areas. In the **Russian Federation**, harvesting continues under mixed conditions with some dryness now impacting parts of the Volga region.

+i Pie chart description

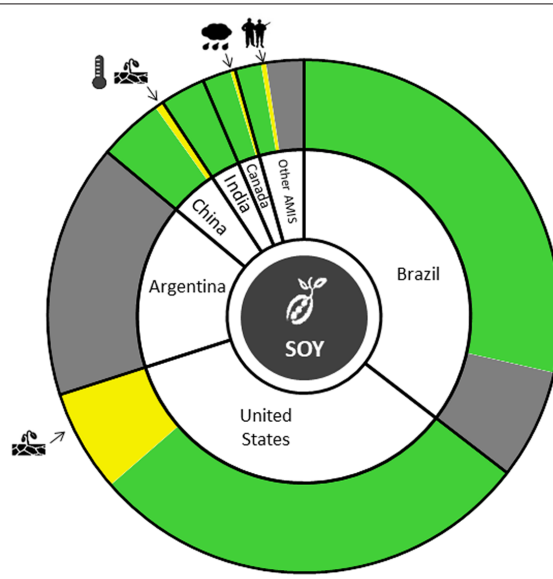
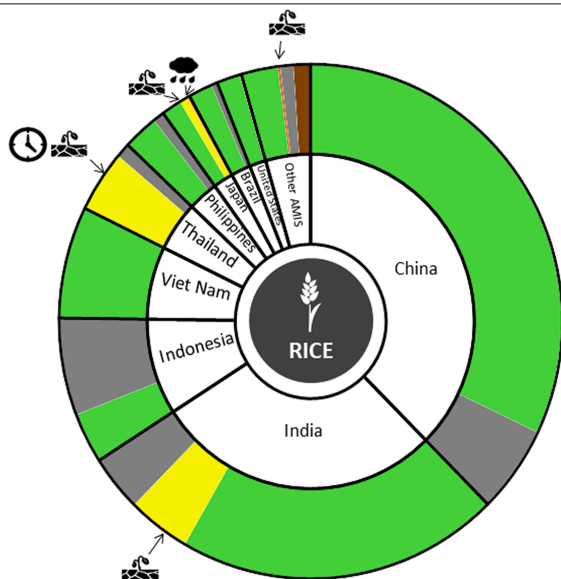
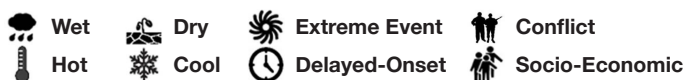
Each slice represents a country's share of total AMIS production (5-year average), with the main producing countries (95 percent of production) shown individually and the remaining 5 percent grouped into the "Other AMIS Countries" category. Sections within each country are weighted by the sub-national production statistics (5-year average) of the respective country and account for multiple cropping seasons (i.e. spring and winter wheat). The late vegetative to reproductive crop growth stages are generally the most sensitive periods for crop development.

Crop monitor

Conditions



Drivers



Rice

In **China**, conditions are favourable for both the single and late-season crop as recent rains improved vegetation in the south and southwest. In **India**, the Kharif harvest begins under mostly favourable conditions except in the south where monsoon rains were below-average. In **Indonesia**, dry-season rice harvesting continues with a favourable yield despite less precipitation received during the growing season. In northern **Viet Nam**, wet-season rice is under favourable conditions with adequate irrigation preparation. In the south, conditions remain favourable for the wet-season crops (both summer-autumn and autumn-winter). In **Thailand**, there is ongoing concern for wet-season rice due to seasonal drought that continued through the end of August. In the **Philippines**, earlier planted wet-season rice is now fully harvested with a slightly lower production output compared to last year due to the passage of three tropical cyclones and the enhanced southwest monsoon. In **Japan**, harvest conditions are mixed with rainfall inundation in the southwest and dry soils in the north. In **Brazil**, despite slow planting progress, excessive rains have contributed to improved reservoir levels for irrigation, and conditions are favourable. In the **US**, conditions are favourable for rice harvesting.

Soybeans

In the **US**, soybeans are developing under mostly favourable conditions except in the Central Plains and Delta Region where dry weather and heat stress continues. In **China**, recent dry and hot weather is causing concern for crops in the south and southwest. Elsewhere, harvesting conditions remain favourable. In **India**, crops have recovered from the limited precipitation received in August. In **Canada**, harvesting conditions are favourable except in Quebec due to concerns about excess moisture. In **Ukraine**, harvesting conditions remain favourable in unoccupied territories, and yield is higher than last year. In **Brazil**, sowing is beginning under favourable conditions in irrigated areas and in some regions with sufficient soil moisture.

Information on crop conditions in non-AMIS countries can be found in the GEOGLAM Early Warning Crop Monitor, published 28 September.

**+i Sources and disclaimers**

The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners (in alphabetical order): Argentina (Buenos Aires Grains Exchange, INTA), Asia Rice Countries (AFSIS, ASEAN+3 & Asia RiCE), Australia (ABARES & CSIRO), Brazil (CONAB & INPE), Canada (AAFC), China (CAS), EU (EC JRC MARS), Indonesia (LAPAN & MOA), International (CIMMYT, FAO, IFPRI & IRRI), Japan (JAXA), Mexico (SIAP), Russian Federation (IKI), South Africa (ARC & GeoTerraImage & SANS), Thailand (GISTDA & OAE), Ukraine (NASU-NSAU & UHMC), USA (NASA, UMD, USGS - FEWS NET, USDA (FAS, NASS)), Viet Nam (VAST & VIMHEMARD). The findings and conclusions in this joint multiagency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts. More detailed information on the GEOGLAM crop assessments is available at <https://cropmonitor.org>.

## Policy developments

### Highlights

The European Commission's decision to lift temporary restrictions on the export of Ukrainian grain and other foodstuffs has led three of its members to impose unilateral bans, prompting Ukraine to initiate dispute proceedings at the World Trade Organization (WTO). Meanwhile, policymakers in Asia continue to react to upward price pressure in rice markets.

### Wheat

- On 14 September, **India** announced that traders, wholesalers, and large retailers would be allowed to maintain no more than 2 000 tonnes of wheat - down from a prior stock limit of 3 000 tonnes that was set in June. Firms with stock levels that exceed the new limit have been granted thirty days to come into compliance. A government official said India has no immediate plans to eliminate the import duty on wheat, but that it will consider releasing additional wheat stocks on the open market to control prices during the upcoming festive season in October and November.
- On 27 September, the National Development and Reform Commission of **China** increased the wheat minimum purchase price for 2024 to CNY 2 360 per tonne (USD 323 per tonne), an increase of CNY 20 (USD 2.7) per tonne compared to 2023.
- On 12 September, **Japan** announced that the selling price of imported wheat intended for millers would be set at JPY 68 240 (USD 461) per tonne from 1 October, a decrease of 11.1 percent compared to the previous six months - JPY 76 750 (USD 519) per tonne (see AMIS Market Monitor, April 2023). The decrease, which is the first in three years, reflects lower international prices for the commodity.
- On 19 September in the **EU**, Slovakia introduced additional financial assistance, which the government said was to compensate domestic wheat farmers affected by imports from Ukraine. The Agricultural Paying Agency will automatically disburse these payments until the end of 2023, utilizing data from the Integrated Administration and Control System to identify farmers who grew wheat on their land in 2022. If these farmers applied for direct area payments in 2023, they will now receive a minimum of EUR 38.42 (USD 43) per hectare.
- On 1 September, the General Authority for Supply Commodities (GASC) in **Egypt** procured about 480 000 tonnes of Russian wheat at USD 270 per tonne, including freight costs, which traders said appears to be below the level of an unofficial price floor that the Russian Federation is trying to enforce.

- On 26 September, **Kazakhstan** extended a ban on wheat imports by road and rail, which will apply for a six-month period beginning on 11 October. The measure extends a similar six-month ban on wheat imports by road which initially entered into force on 11 April (see AMIS Market Monitor, May 2023). The restrictions apply to third countries and to Eurasian Economic Union countries, but exempts imports by rail destined for licensed elevators, grain processors, and poultry companies.

### Rice

- On 31 August, **Indonesia** confirmed it is due to launch the second phase of a programme distributing rice aid to low-income households, to enable poor consumers to cope with rising prices. The programme will make available 10 kilos of rice per month to each of the country's 21.35 million low-income households in September, October, and November. The government indicated the stock release would be equivalent to about 7-8 percent of national rice consumption. INR 8 trillion (USD 96 billion) are budgeted for the scheme, in addition to the existing INR 476 trillion (USD 5 735 billion) under the 2023 social assistance programme.
- On 5 September, the **Philippines** started to apply price ceilings for regular-milled rice and well-milled rice, set at PHP 41 (USD 0.72) per kilogramme and PHP 45 (USD 0.79) per kilogramme respectively. These price caps were introduced to reduce retail prices and prevent hoarding (see AMIS Market Monitor, September 2023). On 18 September, the President lifted the purchasing price of dry palay (unhusked) rice from PHP 19 (USD 0.33) per kilogramme to PHP 23 (USD 0.40) per kilogramme, while also raising the purchase price for wet palay from PHP 16 (USD 0.28) per kilogramme to PHP 19 (USD 0.33) per kilogramme. The measure is intended to secure farmers' incomes and ensure adequate supplies. The government also indicated that, under the sustainable livelihood programme of the Department of Social Protection and Development, small retailers will be eligible to receive cash assistance of PHP 15 000 (USD 264) each, to compensate them for losses incurred as a result of the price caps.
- On 7 September, the **Philippines** and **Vietnam** indicated their intention to work towards a five-year agreement on rice trade. The initiative follows a surge in rice prices that has prompted the Philippines to introduce price ceilings on the staple food (see AMIS Market Monitor, September 2023).
- On 27 September, the National Food Agency in **Indonesia** approved the import of 1 million tonnes of rice from China. This decision aims to bolster the government's rice reserves for 2024. The Ministry of Agriculture reported a 5 percent decline in rice production, largely attributed to the adverse



## Policy developments

effects of severe drought associated with the El Niño climate pattern .

### Biofuels

- On 12 September, the **US** Department of Energy announced it is allocating USD 18.6 million in funding for eight projects, across universities and industries, to support the development of biomass feedstocks for the manufacture of cost-effective biofuels and bioproducts aimed at reducing greenhouse gas emissions.

### Fertilizers

- On 1 September, the **Russian Federation** implemented a 7 percent export duty rate for nitrogen, phosphate, and potash, with a minimum specific tariff of RUB 1 100 (USD 11) per tonne, RUB 2 100 (USD 22) per tonne and RUB 1 800 (USD 19) per tonne respectively. This duty is scheduled to apply to exports until 31 December 2024.
- On 7 September, reports indicated that **China** had requested certain fertilizer manufacturers to suspend urea exports in response to a significant increase in domestic prices.

### Across the board

- On 15 September, in the **EU**, the European Commission announced that, following an internal market assessment, it was lifting temporary restrictions that it had previously im-

posed on Ukraine's exports of wheat, maize, rapeseed, and sunflower seeds to Bulgaria, Hungary, Poland, Romania, and Slovakia (see AMIS Market Monitor, May and July 2023). Of these countries, Hungary, Poland, and Slovakia subsequently announced they would impose unilateral bans on imports of certain foodstuffs from **Ukraine**. All three of them banned imports of Ukrainian wheat, maize, rapeseed, and sunflower seeds, with Poland also restricting imports of products such as wheat flour, bran, and oilcake, and Hungary banning imports of 25 different categories of Ukrainian foodstuffs. On 18 September, Ukraine initiated dispute consultations at the World Trade Organization (WTO) with Hungary, Poland, and Slovakia, regarding the continued imposition of import bans by the three countries. On 21 September, the agriculture ministers of Slovakia and Ukraine agreed to establish a licensing system for trade in grains, which would allow the import bans to be lifted once the system is set up.

- On 20 September in the **EU**, Romania outlined a 30-day work plan with **Ukraine** on a grain export control strategy to safeguard the interests of Romanian farmers. The government indicated that, within this timeframe, it would establish a clear import-licensing procedure, with licenses granted exclusively to Romanian farmers and food processors for stock replenishment, and not to intermediaries. All imports would also be subject to comprehensive food safety inspections. The initiative follows the decision of the European Commission on 15 September to lift temporary restrictions on exports of Ukrainian grain and other foodstuffs to five Eastern European nations, including Romania (see AMIS Market Monitor, May and July 2023).

#### +i Note

Only AMIS participants are marked in **bold**.

# International prices

## International Grains Council (IGC) Grains and Oilseeds Index (GOI) and GOI sub-Indices

	Sep 2023 Average*	Change	
		M/M	Y/Y
<b>GOI</b>	266.4	-0.2%	-13.1%
<b>Wheat</b>	231.9	-1.5%	-22.7%
<b>Maize</b>	243.3	+7.0%	-20.9%
<b>Rice</b>	249.1	+1.6%	+38.8%
<b>Soybeans</b>	267.0	-1.9%	-12.0%

\*Jan 2000=100, derived from daily export quotations

### Wheat

The GOI wheat sub-Index touched a two-year low in early September and averaged 1 percent lower month-on-month. However, trends were two-sided as pressure from sustained Black Sea competition contrasted with tightening supply prospects, notably for high protein wheats. News of intensified attacks on Ukraine's ports added support, albeit there was cautious optimism about the country's temporary seaborne corridor. Tight Gulf logistics contributed to firmer US quotations, while Australian values drew support from dwindling local production forecasts. EU prices were buoyed by renewed buying by China. Bucking trends at other origins, the Russian Federation's quotations for private business declined, with more talk that the unofficial price floor was only applicable to public tenders.

### Maize

Following seven consecutive monthly losses, average world maize export quotations strengthened in September; the GOI sub-Index rebounding by 7 percent. US quotations worked higher, boosted by tightening nearby Gulf loading capacity and complications caused by low water levels along Midwest

rivers. Values in Brazil increased on solid overseas demand, slow country movement and difficult logistics in southern areas. Values in Argentina were similarly firm on slow farmer selling interest, competition from domestic consumers and concerns about dry planting weather.

### Rice

Supported by earlier restrictions on Indian exports, average global rice prices were stronger in September, with the GOI sub-index up by 2 percent month-on-month. However, gains were pared by subdued international demand, with some buyers reluctant to conclude purchases at current prices. Currency movements weighed on dollar-denominated offers in Thailand, while Vietnamese quotes were little changed amid slow activity ahead of tenth-month crop arrivals. Seasonal pressure was also seen in Pakistan, albeit quotes were supported by an uptick in buying interest amid competitive prices. In India, parboiled quotes were firmer, in the wake of the imposition of a 20 percent export duty.

### Soybeans

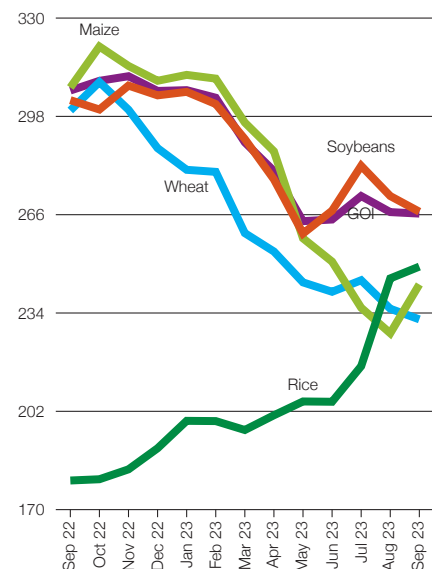
Average world soybean prices were 2 percent weaker month-on-month. US values eased on tepid overseas demand amid stiff late-season competition from Brazil. Seasonal pressure also featured as local harvesting got underway, albeit as worries about yields offered support. Softer soya product values, most notably soya oil, added to the negative tone. Quotations in Brazil eased, as seeding of the 2023/24 crop got underway amid early outlooks for another bumper crop. In Argentina, a renewed preferential exchange rate scheme saw an uplift in farmer selling, albeit as tight supplies continued to underpin prices.

## IGC commodity price indices

		GOI	Wheat	Maize	Rice	Soybeans
2022	September	<b>306.4</b>	299.9	307.4	179.5	303.3
	October	<b>309.6</b>	309.2	320.7	179.9	300.2
	November	<b>311.1</b>	300.2	314.4	183.1	308.0
	December	<b>306.3</b>	287.7	309.6	190.0	304.8
2023	January	<b>306.5</b>	280.6	311.5	198.9	306.0
	February	<b>304.1</b>	279.9	310.3	198.8	302.0
	March	<b>289.5</b>	260.0	296.0	195.9	290.6
	April	<b>280.2</b>	254.0	286.6	200.7	277.5
	May	<b>263.9</b>	244.0	258.3	205.2	259.9
	June	<b>264.4</b>	240.9	250.7	205.1	267.3
	July	<b>272.1</b>	244.7	235.7	216.7	281.9
	August	<b>266.8</b>	235.4	227.4	245.3	272.1
	September	<b>266.4</b>	231.9	243.3	249.1	267.0

(..... January 2000 = 100 .....)

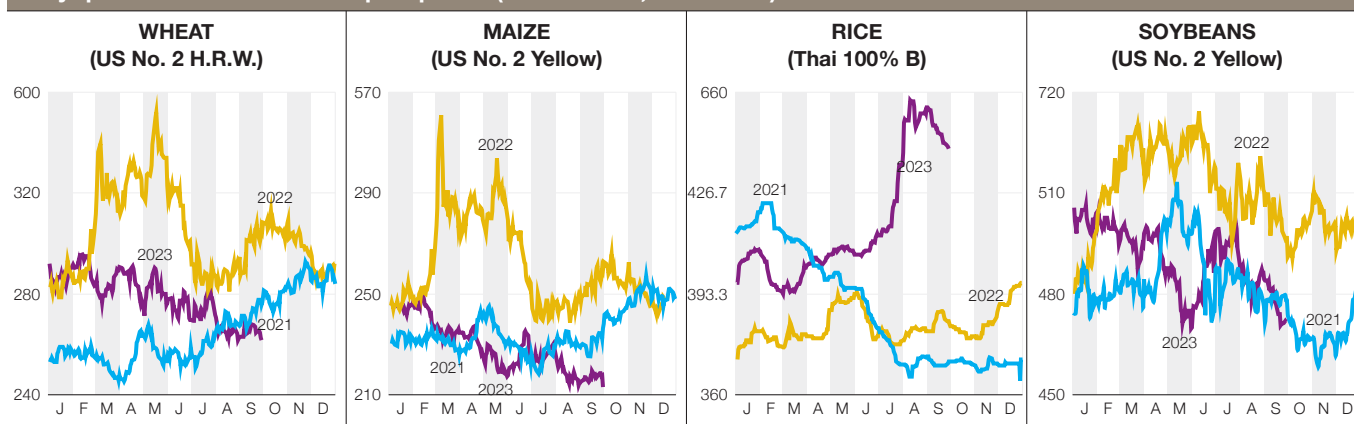
## IGC commodity price indices



International prices

Selected export prices, currencies and indices

Daily quotations of selected export prices (USD/tonnes, 2021-2023)



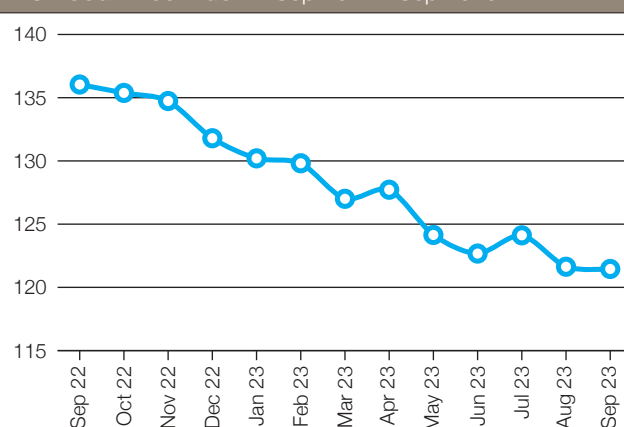
Daily quotations of selected export prices

	Effective date	Quotation	Month ago	Year ago	% change M/M	% change Y/Y
	USD/tonne					
Wheat (US No. 2, HRW)	28-Sep	305	309	445	-1.3%	-31.5%
Maize (US No. 2, Yellow)	29-Sep	219	224	368	-2.3%	-40.5%
Rice (Thai 100% B)	28-Sep	604	645	428	-6.4%	+41.1%
Soybeans (US No. 2, Yellow)	28-Sep	515	553	573	-6.9%	-10.1%

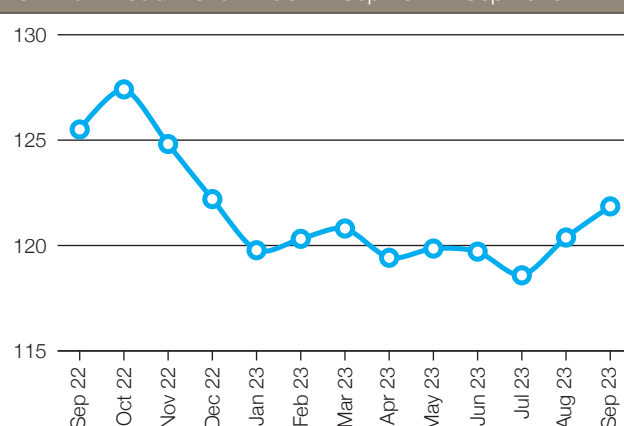
AMIS countries' currencies against US Dollar

AMIS Countries	Currency	Sep 2023 Average	Monthly Change	Annual Change
Argentina	ARS	349.9	-7.6%	-59.0%
Australia	AUD	1.6	-1.0%	-3.8%
Brazil	BRL	4.9	-0.8%	5.9%
Canada	CAD	1.4	-0.5%	-1.5%
China	CNY	7.3	-0.7%	-3.9%
Egypt	EGP	30.9	0.0%	-37.3%
EU	EUR	0.9	-2.2%	7.8%
India	INR	83.0	-0.3%	-3.4%
Indonesia	IDR	15361.7	-0.8%	-2.5%
Japan	JPY	147.9	-2.0%	-3.2%
Kazakhstan	KZT	468.6	-3.4%	1.5%
Rep. of Korea	KRW	1333.7	-0.8%	4.6%
Mexico	MXN	17.3	-1.9%	15.9%
Nigeria	NGN	767.9	-0.4%	-44.3%
Philippines	PHP	56.8	-0.8%	1.6%
Russian Fed.	RUB	96.0	-0.9%	-38.4%
Saudi Arabia	SAR	3.8	0.0%	0.2%
South Africa	ZAR	19.0	-1.1%	-7.3%
Thailand	THB	35.9	-2.3%	3.3%
Türkiye	TRY	27.0	-0.3%	-32.1%
UK	GBP	0.8	-2.5%	9.4%
Ukraine	UAH	36.9	-0.1%	-0.6%
Viet Nam	VND	24220.5	-1.4%	-2.5%

FAO Food Price Index Sep 2022 - Sep 2023



Nominal Broad Dollar Index Sep 2022 - Sep 2023



## Futures markets

### Overall market sentiment

- Wheat prices remain bearish due to abundant supplies from the Russian Federation and the broader Black Sea region.
- High implied volatility in wheat indicates expectations of further market fluctuations, with markets keeping a close eye on Black Sea developments.
- US soybean and maize prices are on a declining trend in view of low export demand as a result of stiff competition from Brazil and logistical bottlenecks for US barge shipments.
- Trading behavior of hedge funds reflect prevailing downward market sentiment.

### MONTHLY PRICE TREND



### Futures prices

Wheat prices declined further in September, driven by a consistent export flow from the Black Sea, with CME and Euronext wheat futures approaching three-year lows. Wheat from the Russian Federation is still offered at very competitive prices, suggesting that the country's floor price policy is not rigorously enforced. Adding to the downward pressure, Russian exporters now face competition from their Ukrainian counterparts who use a new shipping corridor through the Black Sea called "UkriCor" that is protected by Ukraine's defense system. However, high freight costs in view of low availability of vessels and high insurance costs continue to limit Ukrainian shipments. The market is closely monitoring any potential restrictions on Russian exports as well as developments in new insurance options for voyages to and from Ukraine.

Soybean and maize prices on the CME decreased last month. With a substantial US harvest and an anticipated favorable stocks-to-use ratio in the case of maize, the evolution of US exporting sales has emerged as a critical determinant of pricing dynamics. US quotations were less competitive in view of high freight costs for barge shipments while Brazil's exports were outperforming. This led to a widening price gap between Brazil and the US, which have weighed on US export demand. Brazilian cash prices currently incentivize soy selling over maize, so pressure can particularly be expected on US soybean prices.

### Volumes & volatility

Both the maize and soybean markets are experiencing historical volatility levels close to their 10-year averages, at around 21 percent and 15 percent, respectively. Implied volatility aligns with these levels, suggesting subdued expectations of increased volatility.

In contrast, the wheat market appears more susceptible to volatility as illustrated by a brief intraday surge of over 2 percent in wheat futures prices after a Ukraine-bound cargo ship in the Black Sea reportedly hit a mine. Although the surge was short-lived, market participants seem to expect further fluctuations, with implied volatility for wheat standing at the upper end of its 10-year average.

### Forward curves

Low water levels in the Mississippi River are causing logistical challenges in the US, affecting near-term delivery prices and increased export costs. With export sales thus at relatively low levels, grain traders need increased storage and face raising carrying costs. This intricate dynamic is discernible in the forward curves for the soybean and maize markets, which exhibit a steepened contango pattern compared to the previous month, with progressively higher prices in longer-dated maturities.

### Investment flows

Market sentiment leans towards a prolonged downward trend, with short positions in the wheat market reaching a three-month high. Hedge funds are divesting from soybean and maize futures as non-commercial traders liquidate positions, driven by the Federal Reserve's commitment to maintain high interest rates and the overall limited US export opportunities linked to the country's logistics challenges highlighted above.

#### Euronext futures volumes and price evolution

Average daily volume (1000 tonnes)	Sep 2023	M/M	Y/Y
Wheat	3 341.1	-2.6%	+30.0%
Maize	98.6	+71.2%	-18.8%

Prices (USD/t)	Sep 2023	M/M	Y/Y
Wheat	253.7	-4.3%	-23.9%
Maize	225.8	-6.0%	-30.7%

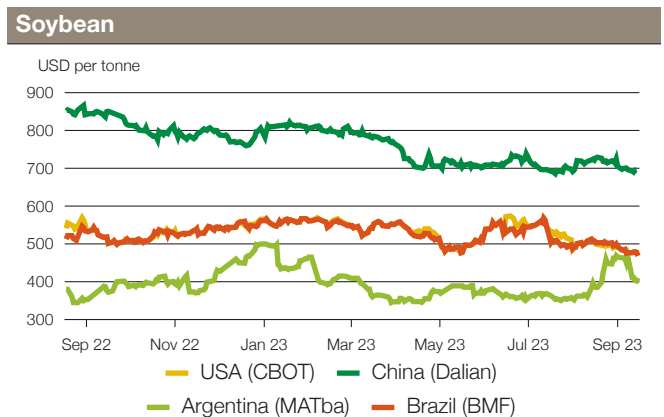
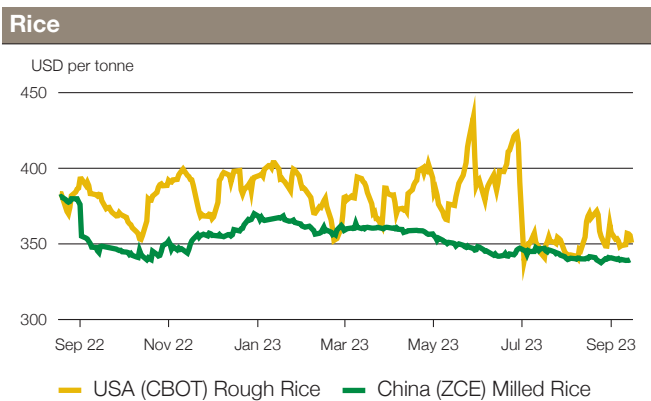
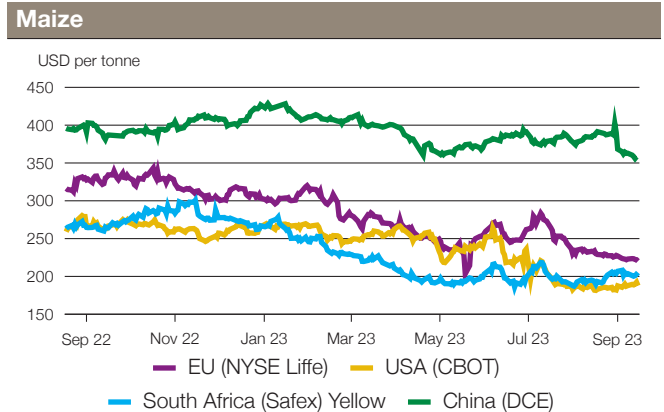
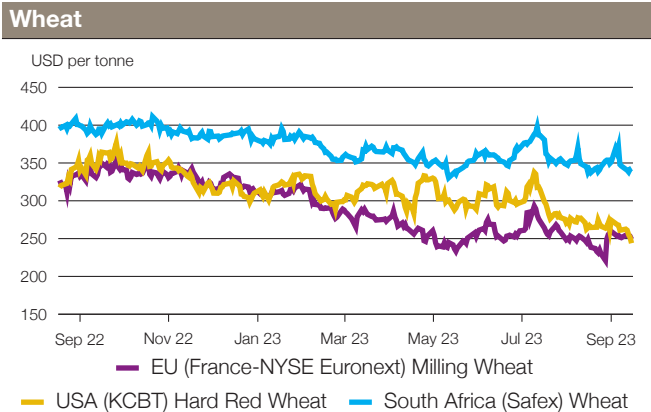
#### CME futures volumes and prices evolution

Average daily volume (1000 tonnes)	Sep 2023	M/M	Y/Y
Wheat	11 707.2	-33.0%	-1.9%
Maize	26 923.6	-33.9%	-6.1%
Soybean	30 473.9	+18.3%	+14.1%

Prices (USD/t)	Sep 2023	M/M	Y/Y
Wheat	217.2	-6.5%	-31.4%
Maize	189.2	-1.8%	-28.9%
Soybean	490.8	-0.5%	-6.4%

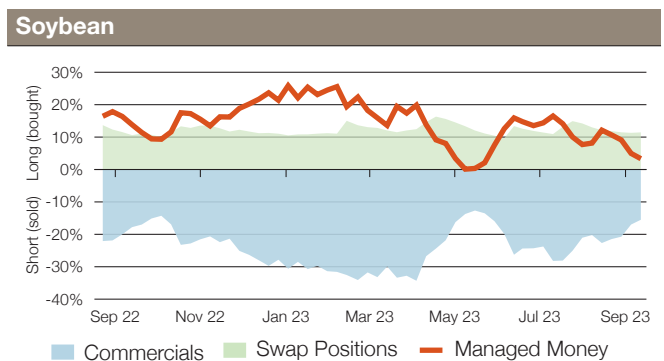
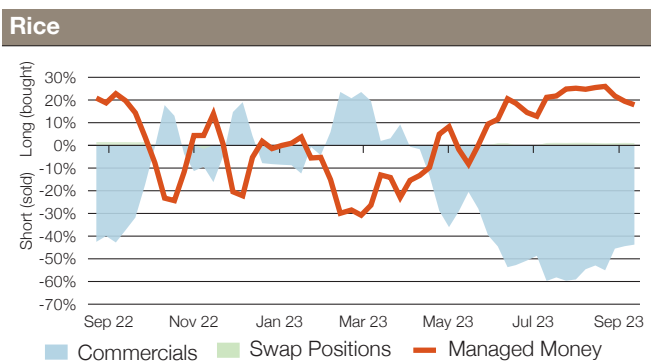
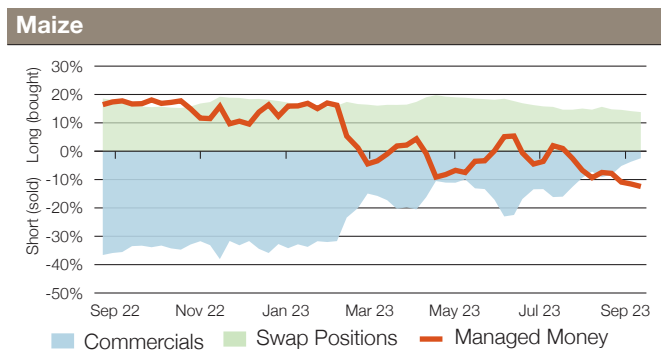
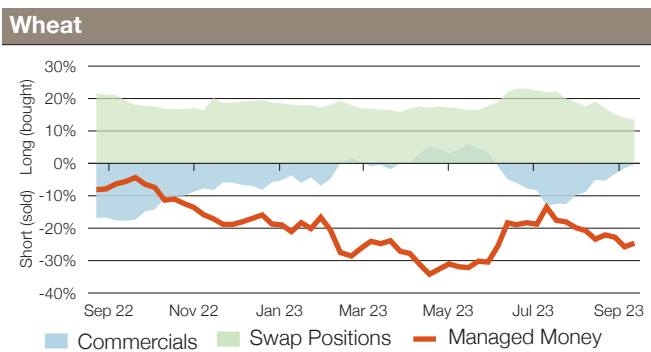
# Market indicators

## Daily quotations from leading exchanges - nearby futures



## CFTC commitments of traders

Major categories net length as percentage of open interest\*

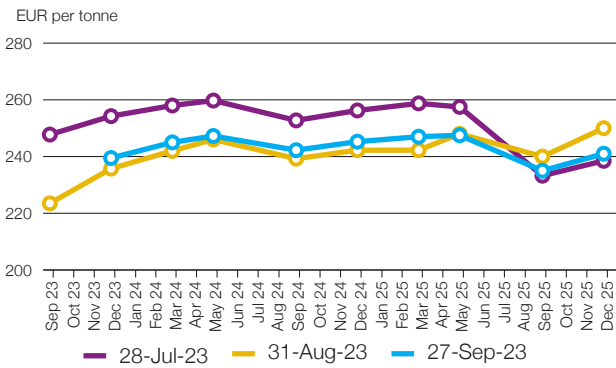


\*Disaggregated futures only. Though not all positions are reflected in the charts, total long positions always equal total short positions.

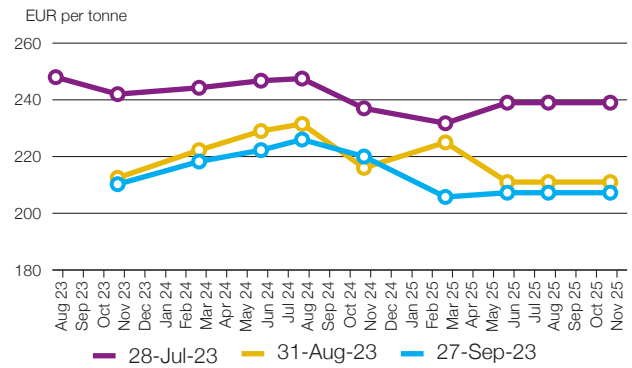
Market indicators

Forward curves

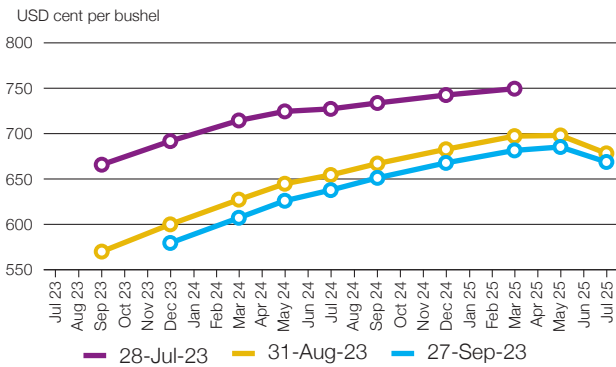
Euronext wheat (EBM)



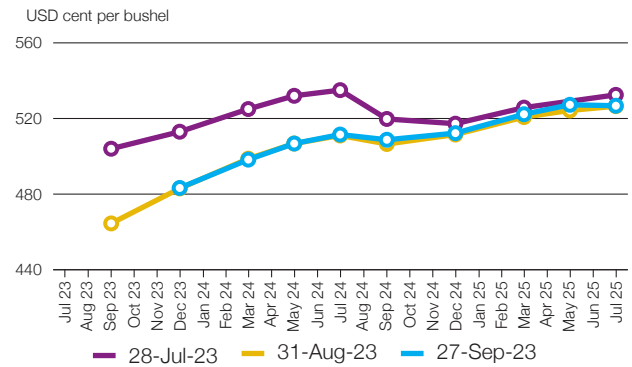
Euronext maize (EMA)



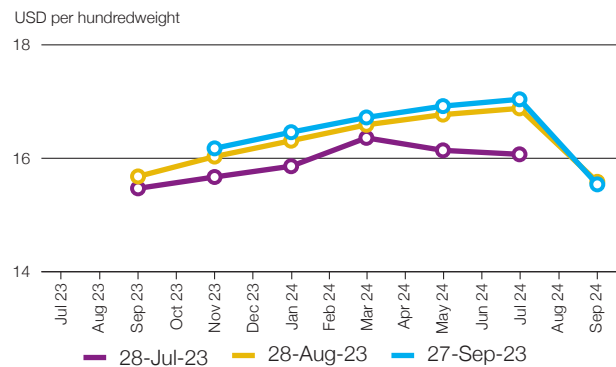
CBOT wheat



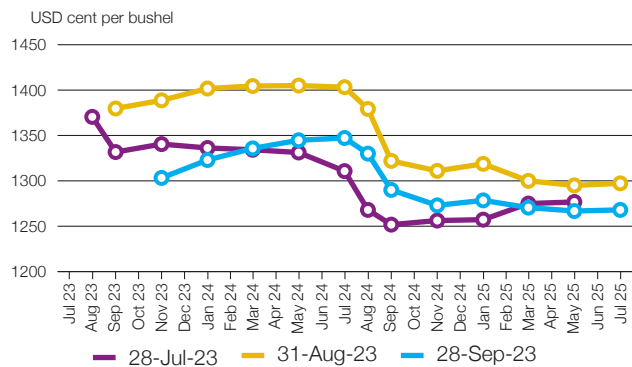
CBOT maize



CBOT rice

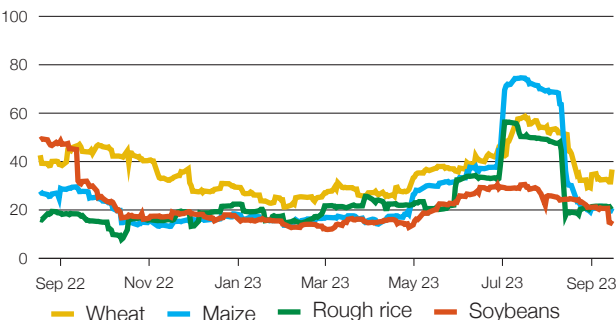


CBOT soybean

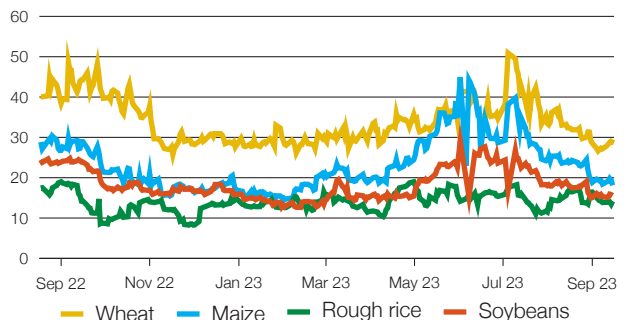


Historical and implied volatilities

Historical Volatility (30 days)



Implied Volatility (Daily)

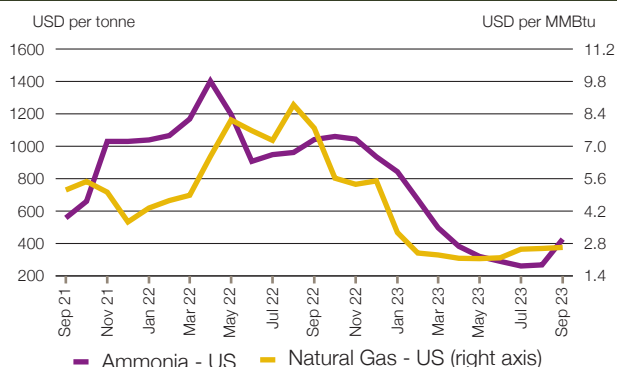


+i AMIS market indicators

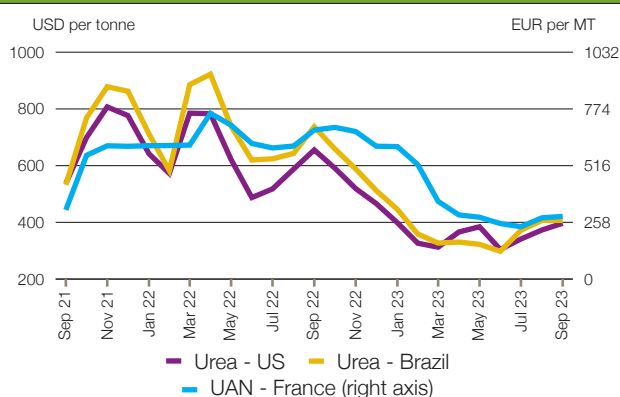
Several of the indicators covered in this report are updated regularly on the AMIS website. These, as well as other market indicators, can be found at: <https://www.amis-outlook.org/amis-monitoring/indicators/>. For more information about forward curves see the feature article in AMIS Market Monitor no. 75, February 2020.

# Fertilizer outlook

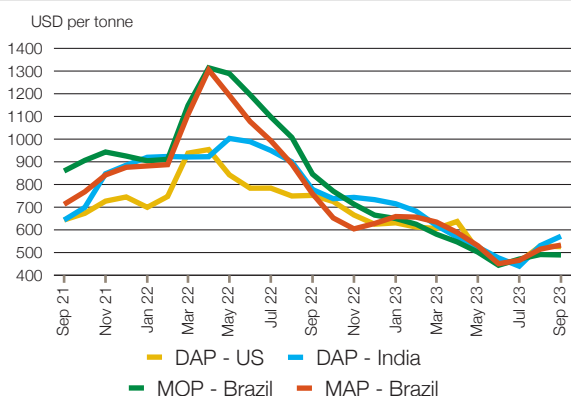
## Input prices



## Nitrogen prices



## Potash and phosphate



## Major market developments

Fertilizer prices were mostly up in September along with prices for main fertilizer inputs. Price movements for several fertilizer categories were influenced by strength in the Indian market and uncertainty around exports from China. Market developments in the near term will be impacted by these two major actors as well as by demand for the fall application season in the Northern Hemisphere.

- **Fertilizer input prices** increased in September. In the case of natural gas, the previous concerns on liquified natural gas (LNG) exports out of Australia have dissipated but extensions of the maintenance schedule for plants in Norway supported European gas futures. Markets should be focused on monitoring stock levels in Europe, currently near capacity. Following an upward trend that started in August, ammonia prices surged in September, supported by major plant outages, while buyers showed unusually strong interest during this normally rather quiet time of the year.
- **Nitrogen fertilizer prices** increased in September. Urea price increases were driven by uncertainty around the Chinese export levels, as authorities limited the distribution of export licenses to control domestic pricing. In this context, the unexpected purchase tender of Indian Potash Ltd. (IPL) on 15 September also provided support. Developments in China and India will continue shaping market sentiment in other nitrogen markets around the globe.
- **Phosphorus fertilizer prices** increased in several major markets with particular strength in the Indian market and uncertainty around export restrictions from China linked to the customs inspection process. On the other hand, the earthquake in Morocco did not trigger major supply issues as initially anticipated. Current discussions on the nutrient-based subsidy rates in India are a major factor to watch, while demand is slow in Brazil and uncertain in the United States in view of the phosphate to grain price ratio that will determine application rates in the fall.
- **Potash prices** in major importer Brazil were down slightly in September due to abundant availabilities. Global values show signs of stability.

	Sep-23 average	Sep-23 std. dev.	% change last month*	% change last year*	12 month high	12-month low
Ammonia - US (USD/ST)	427.0	84.3	+59.3	-59.0	1060.5	261.2
Natural Gas - US (USD/MMBtu)	2.6	0.1	+1.8	-66.2	5.6	2.1
Urea Ammonium Nitrate (UAN) - France (EUR/MT)	285.0	2.0	+2.2	-58.0	690.0	238.1
Urea - US (USD/ST)	396.8	27.2	+6.3	-39.5	590.6	304.5
Urea - Brazil (USD/MT)	406.9	43.9	+0.0	-44.8	658.8	298.0
Di-ammonium Phosphate (DAP) - India (USD/MT)	572.0	16.0	+7.8	-26.5	743.1	440.0
Di-ammonium Phosphate (DAP) - US (USD/ST)	526.1	7.2	-0.5	-30.0	725.0	454.6
Mono-ammonium Phosphate (MAP) - Brazil (USD/MT)	533.1	1.2	+3.5	-29.8	658.8	451.0
Muriate of Potash (MOP) - Brazil (USD/MT)	489.4	4.7	-0.4	-42.1	770.6	444.0

Source: Own elaboration based on Bloomberg. Units: MT = Metric Tonne; ST = Short Ton; MMBtu = Million British Thermal Unit  
\*Estimated using available weekly data to date.

**+i** The Fertilizer Outlook has been upgraded to facilitate the understanding of market changes and their impacts on major grain producing countries. The text now includes a section on costs of raw materials for fertilizer manufacturing, as well as separate sections for the three major nutrients: nitrogen, phosphates and potash. The charts and tables present monthly average of prices for key import references, to help tie fertilizer market evolutions with their implications for grain production potential.

# Ocean freight markets

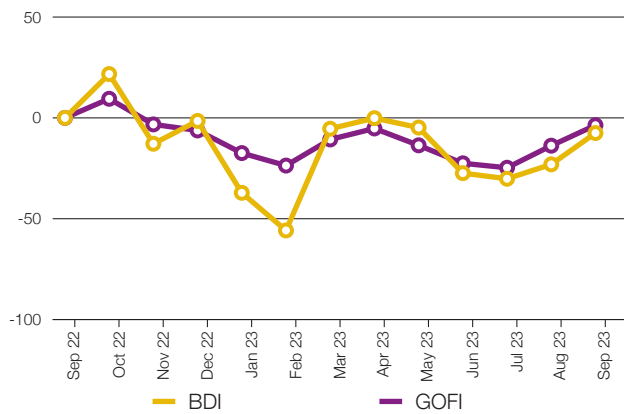
## Dry bulk freight market developments

	Sep-23 average	Change	
		M/M	Y/Y
<b>Baltic Dry Index (BDI)</b>	<b>1378.0</b>	<b>+20.2%</b>	<b>-7.5%</b>
sub-indices:			
Capesize	1662.8	+7.7%	+16.7%
Panamax	1605.8	+18.0%	-13.5%
Supramax	1190.2	+47.0%	-23.9%
<b>Baltic Handysize Index (BHSI)</b>	<b>619.4</b>	<b>+38.1%</b>	<b>-32.4%</b>

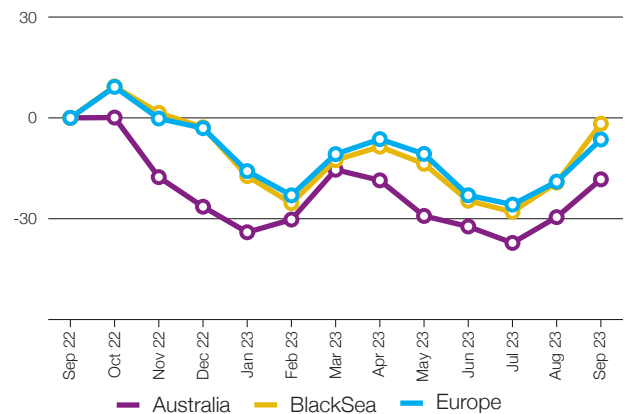
Source: Baltic Exchange, IGC. Base period for BDI: 4 January 1985 = 1000; for BHSI: 23 May 2006 = 1000; for GOFI: 1 January 2013 = 100

	Sep-23 average	Change	
		M/M	Y/Y
<b>IGC Grains and Oilseeds Freight Index (GOFI)</b>	<b>153.3</b>	<b>+11.8%</b>	<b>-3.6%</b>
sub-Indices:			
Argentina	192.3	+10.9%	-5.1%
Australia	98.5	+16.0%	-18.3%
Brazil	205.1	+8.1%	-0.8%
Black Sea	162.7	+21.7%	-1.7%
Canada	112.9	+17.2%	-3.1%
Europe	123.0	+15.5%	-6.4%
US	120.3	+11.7%	-6.3%

**BDI and IGC GOFI**



**Selected IGC GOFI sub-indices**



- The dry bulk freight complex sustained upward momentum during the past month. Reflecting this, the benchmark **Baltic Dry Index (BDI)** averaged one-fifth higher month-on-month, led by gains for smaller-sized carriers. Still, time-charter values in the grains and oilseeds carrying sectors remain below their year-ago levels.
- While maize and soybean flows from Brazil continued to bolster freight rates, recent vessel tracking data indicated strong progress in global wheat trade. Total seaborne wheat deliveries in the first two and a half months of the 2023/24 (Jul/Jun) season were estimated at around 30 million tonnes, up by 14 percent year-on-year, mainly owing to larger dispatches from the Russian Federation and Canada.
- While congestion at the Panama Canal, tied to low water levels, eased in recent weeks, vessel movement remained slower than normal, offering support to voyage costs on some routes.

- Robust transatlantic mineral demand, paired with sustained cargo flows from South America, contributed to stronger **Panamax** earnings. An uptick in enquiries from the northern Pacific to Asia was also noted, amid seasonally increasing maize and soybean availabilities in the US.
- Average **Supramax** values posted a solid 47 percent monthly rise. The increase was partly tied to spillover demand from the Panamax sector in the Atlantic, coupled with limited tonnage availability in the eastern Mediterranean, rising enquiry levels for that vessel class at the US Gulf, and fresh coal business from Indonesia to India.
- The **Handysize** market benefitted from solid demand for smaller bulkers in Europe and the Mediterranean.
- **Capesize** rates were underpinned by brisk fixing for coal shipments from Australia to Asia.
- The **IGC Grains and Oilseeds Freight Index (GOFI)** averaged 12 percent higher month-on-month, with the largest gains seen on Black Sea routes.

**+i Source: International Grains Council**

**Baltic Dry Index (BDI):** A benchmark indicator issued daily by the Baltic Exchange, providing assessed costs of moving raw materials on ocean going vessels. Comprises sub-Indices for three segments: Capesize, Panamax and Supramax. The Baltic Handysize Index excluded from the BDI from 1 March 2018. **IGC Grains and Oilseeds Freight Index (GOFI):** A trade-weighted composite measure of ocean freight costs for grains and oilseeds, issued daily by the International Grains Council. Includes sub-Indices for seven main origins (Argentina, Australia, Brazil, Black Sea, Canada, the EU and the USA). Constructed based on nominal HSS (heavy grains, soybeans, sorghum) voyage rates on selected major routes. **Capesize:** Vessels with deadweight tonnage (DWT) above 80,000 DWT, primarily transporting coal, iron ore and other heavy raw materials on long-haul routes. **Panamax:** Carriers with capacity of 60,000-80,000 DWT, mostly geared to transporting coal, grains, oilseeds and other bulks, including sugar and cement. **Supramax/Handysize:** Ships with capacity below 60,000 DWT, accounting for the majority of the world's ocean-going vessels and able to transport a wide variety of cargos, including grains and oilseeds.



## Explanatory note

The notions of **tightening** and **easing** used in the summary table of "Markets at a glance" reflect judgmental views that take into account market fundamentals, inter-alia price developments and short-term trends in demand and supply, especially changes in stocks.

All totals (aggregates) are computed from unrounded data. World supply and demand estimates/forecasts are based on the latest data published by FAO, IGC and USDA. For the former, they also take into account information provided by AMIS focal points (hence the notion "FAO-AMIS"). World estimates and forecasts produced by the three sources may vary due to several reasons, such as varying release dates and different methodologies used in constructing commodity balances. Specifically:

**PRODUCTION:** Wheat production data from all three sources refer to production occurring in the first year of the marketing season shown (e.g. crops harvested in 2016 are allocated to the 2016/17 marketing season). Maize and rice production data for FAO-AMIS refer to crops harvested during the first year of the marketing season (e.g. 2016 for the 2016/17 marketing season) in both the northern and southern hemisphere. Rice production data for FAO-AMIS also include northern hemisphere production from secondary crops harvested in the second year of the marketing season (e.g. 2017 for the 2016/17 marketing season). By contrast, rice and maize data for USDA and IGC encompass production in the northern hemisphere occurring during the first year of the season (e.g. 2016 for the 2016/17 marketing season), as well as crops harvested in the southern hemisphere during the second year of the season (e.g. 2017 for the 2016/17 marketing season). For soybeans, the latter approach is used by all three sources.

**SUPPLY:** Defined as production plus opening stocks by all three sources.

**UTILIZATION:** For all three sources, wheat, maize and rice utilization includes food, feed and other uses (namely, seeds, industrial uses and post-harvest losses). For soybeans, it comprises crush, food and other uses. However, for all AMIS commodities, the use categories may be grouped differently across sources and may also include residual values.

**TRADE:** Data refer to exports. For wheat and maize, trade is reported on a July/June basis, except for USDA maize trade estimates, which are reported on an October/September basis. Wheat trade data from all three sources includes wheat flour in wheat grain equivalent, while the USDA also considers wheat products. For rice, trade covers shipments from January to December of the second year of the respective marketing season. For soybeans, trade is reported on an October/September basis by FAO-AMIS and the IGC, while USDA data are based on local marketing years except for Argentina and Brazil which are reported on an October/September basis. Trade between European Union member states is excluded.

**STOCKS:** In general, world stocks of AMIS crops refer to the sum of carry-overs at the close of each country's national marketing year. For soybeans, stock levels reported by the USDA are based on local marketing years, except for Argentina and Brazil, which are adjusted to October/September. For maize and rice, global estimates may vary across sources because of differences in the allocation of production in southern hemisphere countries.

For more information on AMIS Supply and Demand, please view AMIS Supply and Demand Balances Manual.

## AMIS - GEOGLAM Crop Calendar Selected leading producers\*

WHEAT		J	F	M	A	M	J	J	A	S	O	N	D
China (17%)	spring			Planting			C		Harvest				
	winter	C	C	C			Harvest					Planting	
EU (17%)	winter				C	C		Harvest				Planting	
India (14%)	winter	C	C		Harvest							Planting	
Russian Fed. (12%)	spring				Planting		C	C		Harvest			
	winter			C	C		C	Harvest				Planting	
US (6%)	spring				Planting		C	C		Harvest			
	winter				C	C		Harvest				Planting	
MAIZE		J	F	M	A	M	J	J	A	S	O	N	D
US (31%)					Planting		C	C	C		Harvest		
China (23%)	north					Planting		C	C		Harvest		
	south			Planting			C	C			Harvest		
Brazil (11%)	1st crop	C	C		Harvest						Planting		C
	2nd crop		Planting	C	C			Harvest					
EU (5%)					Planting		C	C	C		Harvest		
Argentina (3%)					Harvest						Planting	C	C
RICE		J	F	M	A	M	J	J	A	S	O	N	D
China (27%)	intermediary crop					Planting		C	C		Harvest		
	late crop							Planting		C	C	Harvest	
	early crop			Planting			C	C			Harvest		
India (25%)	kharif							Planting		C	C		Harvest
	rabi		C		Harvest								
Indonesia (7%)	main Java		C	C		Harvest						Planting	
	second Java						Planting		C	C	C		Harvest
	winter-spring		C	C		Harvest						Planting	
Viet Nam (5%)	summer/autumn							Planting		C	C		Harvest
	winter						Planting			C	C		Harvest
Thailand (4%)	main season							Planting		C	C	Harvest	
	second season	Planting	C	C	C		Harvest						
SOYBEANS		J	F	M	A	M	J	J	A	S	O	N	D
Brazil (40%)		C	C		Harvest						Planting		C
US (28%)						Planting	C	C	C		Harvest		
Argentina (11%)		C	C	C		Harvest						Planting	
China (5%)							Planting	C	C		Harvest		
India (3%)							Planting		C	C	Harvest		

\*Percentages refer to the global share of production according to the latest AMIS-FAO estimates available for the most recent season

- Planting (peak)
- Harvest (peak)
- Planting
- Harvest
- Weather conditions in this period are critical for yields
- Growing period

For more information on AMIS Supply and Demand, please view AMIS Supply and Demand Balance Manual

### Main sources

Bloomberg, CFTC, CME Group, FAO, GEOGLAM, IFPRI, IGC, OECD, Reuters, USDA, US Federal Reserve, WTO

### 2023 AMIS Market Monitor release dates

February 2, March 2, April 6, May 4, June 1, July 6, September 7, October 5, November 2, December 7