The fate of the Black Sea Grain Initiative is again in jeopardy. The collapse of the Nova Kakhovka dam last month has flooded crop-land along the Dnipro River and disrupted irrigation. Meanwhile, the ammonia pipeline from the Russian Federation to the Ukrainian port of Pivdennyi has also been damaged. The pipeline has not been in operation since the start of the war; however, its reopening has been a key demand of the Russian Federation to renew the grain deal. While these events are not likely to have major impacts on grain supplies in the short term, they further increase tensions that could result in a termination of the agreement later this month. This would reduce Black Sea exports and further reduce Ukraine production incentives.
Destruction of Ukraine’s Kakhovka Dam Spells Trouble for Regional Agriculture

On 6 June 2023, the Kakhovka dam in southeastern Ukraine catastrophically collapsed causing widespread flooding, threatening drinking water supplies and raising alarm for the agricultural areas in this region that are dependent on irrigation from the reservoir.

Kakhovka Reservoir’s Importance to Agriculture

The Kakhovka dam and reservoir are of critical importance to agriculture. Four major irrigation canals snake from the Kakhovka reservoir, carrying water into the semi-arid surrounding land - a necessity for croplands on both sides of the Dnipro river.

Water from the Kakhovka reservoir fills more than 12,000 km of canals to irrigate more than 500,000 hectares of farmland. The croplands surrounding the reservoir produced about two million tonnes of grains and oilseeds in 2021, mostly wheat, soybean, sunflower and rapeseed along with a variety of vegetables and fruits including major production of melons according to the Ministry of Agrarian Policy and Food of Ukraine.

In addition to the impacts on vital cropland the dam’s collapse also threatens water supply for human consumption, leaving the habitability of affected settlements and the future restoration of farms in question.

Immediate Impacts of the Dam's Destruction

After the dam’s collapse, settlements and cropland downstream experienced significant flooding across more than 40,000 hectares of land (mostly wetlands), according to satellite data analysis, with over 46 towns and villages affected, including Kherson City. Despite initial fears, the agricultural area flooded was minimal with approximately 1,000 hectares of croplands flooded. However, upstream of the dam, all four major irrigation canal inlets were disconnected from the dam within a few days after its collapse as the reservoir’s water levels dropped rapidly. While the canals still retained water at the end of June 2023, they will likely dry out as the summer season progresses.

The irrigation canals primarily serve summer crops such as maize, soybeans, and sunflowers as well as fruits and vegetables, but they also provide water to winter crops like wheat. As this is a semi-arid area, precipitation cannot always meet crop requirements and the canals played a critical role in ensuring water supplies for irrigation. Immediate attention will have to be paid to the growing conditions of summer crops currently in the ground. However, as planting of next year’s winter wheat approaches in late summer/early fall, decisions will also have to be made by individual farmers as to the feasibility of a successful harvest given limited water supply compared to previous years.

Long Term Outlook

With Ukraine being a major grain and oilseed exporter, variations in the country’s production can have big impacts not only on its own population but also on global supplies and associated prices, particularly for countries that heavily depend on imports from Ukraine. Prior to the war, Kherson oblast alone produced approximately 6 percent of Ukraine’s wheat, 8 percent of its soybean and rapeseed, 13 percent of its vegetables, and one-third of its melons.

2022 already saw significant concern over the availability of Ukrainian agricultural exports after the outbreak of war in the country. The destruction of the Kakhovka dam and the drying up of the irrigation canals will no doubt cast additional concern over agricultural production and export shortages.

Issues from the destruction of the Kakhovka dam will continue well beyond the 2023 planting and harvest seasons. It will take time for the dam to be rebuilt, the reservoir to refill, and the canals to flow again. AMIS will continue monitoring croplands in Ukraine in cooperation with partners like GEOGLAM that uses global satellite systems and on the ground observations to analyze crop health throughout the growing season and provide monthly transparent updates through the Crop Monitor for AMIS reports.
Feature article

Flooded croplands and non croplands - 7 June 2023

Total Flooded Area as of June 7th:
Total Area: 410 Km² - 420 Km²
Flooded Cropland:
3.5 Km² - 5 Km²

Flooded settlements - 7 June
World supply-demand outlook

**WHEAT** production forecast for 2023 raised on improved prospects in several countries, including Canada, Kazakhstan and Türkiye.

Utilization in 2023/24 scaled up slightly m/m on higher feed use, now rising marginally above 2022/23 solely on growth in food consumption while feed and other use are set to contract.

Trade in 2023/24 (July/June) raised this month, on larger expected sales from Canada and stronger demand from China, but still forecast to fall from the 2022/23 record level.

Stocks (ending in 2024) now forecast to rise slightly above opening levels following an upwards revision this month mostly concerning stocks in China, the EU, and Kazakhstan.

Stocks (2023/24 carry-outs) raised slightly, largely reflecting less imports by Indonesia, alongside more modest import increases in the US and some African countries, outweighing a downward revision for the US, while global closing stocks still seen remaining close to the 2022/23 level.

Trade in 2023/24 (Oct/Sep) virtually stable m/m, confirming expectations of a steady growth of global soybean transactions from the previous season.

Stocks (2023/24 carry-outs) lowered moderately, chiefly reflecting a downward revision for the US, while global closing stocks still seen recovering by 17 percent from the opening levels.

**MAIZE** production forecast for 2023 nearly unchanged and still pointing to a rebound, surpassing the 2022 level by 4.2 percent.

Utilization in 2023/24 still forecast to increase by 1.9 percent, largely on growth in feed use, especially in Brazil, the US and the EU, along with higher food consumption and industrial use.

Trade in 2023/24 (July/June) forecast to fall, reflecting weaker import demand from the EU and a decline in exports from Ukraine as well as from Paraguay.

Stocks (ending in 2024) revised down slightly m/m, mostly in Brazil, China and some African countries, outweighing lower crush in the US, while global closing stocks still forecast to rise by 4.3 percent above opening levels, underpinned by a sharp recovery of US inventories.

**RICE** production forecast for 2023 raised fractionally m/m, reflecting a few small upward adjustments to output figures for producers along south of the equator and for Bangladesh.

Utilization in 2023/24 essentially unchanged m/m and still expected to remain close to the 2022/23 level.

Trade in 2023 (January-December) downscaled somewhat and now seen contracting by 5.1 percent y/y; as an anticipated rebound in imports from Pakistan, alongside more modest import increases elsewhere, are outweighed by import cuts particularly by Bangladesh, China, Senegal, Sri Lanka and Viet Nam.

Stocks (2023/24 carry-outs) raised slightly, largely reflecting less upbeat carryover expectations for Myanmar.

**SOYBEAN** 2023/24 production trimmed from the previous month, with a lower forecast for the US more than offsetting upward revisions for Brazil, India and Zambia.

Utilization in 2023/24 raised slightly, mainly driven by higher crush forecasts for Brazil, India, and some African countries, outweighing smaller consumption prospects elsewhere.

Trade in 2023/24 (Oct/Sept) virtually stable m/m, confirming expectations of a steady growth of global soybean transactions from the previous season.

Stocks (2023/24 carry-outs) lowered moderately, chiefly reflecting a downward revision for the US, while global closing stocks still seen recovering by 17 percent from the opening levels.

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**Notes:**

- *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](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](https://app.amis-outlook.org/#/market-database/compare-sources) on the last page of this report.
Revisions (FAO-AMIS) to 2023/24 forecasts since the previous report

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

Crop conditions around the world

Crop condition map synthesizing information for all four AMIS crops as of . 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, winter wheat harvesting is ongoing and spring wheat sowing is wrapping up under mixed conditions. In the southern hemisphere, sowing is ongoing in Argentina under mixed conditions.

Maize
In the southern hemisphere, harvest is continuing in Argentina under poor conditions. In the northern hemisphere, drought is developing in the US, Mexico, northern China, and central Ukraine.

Rice
In China, harvesting of early-season rice is beginning. In India, the Kharif season begins with a delayed start. In Southeast Asia, sowing of wet-season rice progresses in the northern countries while in Indonesia sowing of dry-season rice continues.

Soybeans
In the southern hemisphere, harvest is wrapping up in Argentina with poor yields. In the northern hemisphere, drought is affecting crops in the US, while India begins the season with a delayed start.

El Niño Advisory and Positive IOD Watch:

The El Niño-Southern Oscillation (ENSO) is currently in the El Niño phase. Models predict that this will likely be a moderate or strong El Niño event that is expected to last through early 2024. El Niño events tend to enhance rainfall in Central Asia, southern North America, southern South America, southern Europe, eastern and southern East Africa, and southern and eastern China. Drier-than-average conditions tend to occur in Central America, the Caribbean, northern South America, parts of western and northern East Africa, Southern Africa, India, Northern China, the Maritime Continent, and Australia.

Positive Indian Ocean Dipole (IOD) conditions may also develop during July to November, according to the Australian Bureau of Meteorology forecast. Positive IOD conditions can enhance El Niño-related drying influences in Australia and the Maritime Continent, and wetting influences during the East Africa short rains.

Source: UCSB Climate Hazards Center
Crop monitor

Summaries by crop

Wheat
In the EU, conditions are favourable, except for the Iberian Peninsula due to a catastrophic drought. In the UK, a wet spring has supported conditions through a dry May and June. In Türkiye, conditions are favourable thanks to ample spring rainfall. In Ukraine, harvesting is beginning in the south under favourable conditions away from the war zones. In the Russian Federation, harvesting of winter wheat is beginning under favourable conditions. Spring wheat sowing is wrapping up under dry conditions. In China, harvesting of winter wheat wraps up after record rainfall during the harvest that has likely degraded grain quality and localized yields. Spring wheat is under developing dryness in the north. In the US, harvesting of winter wheat is underway with poor conditions in the central and southern Great Plains due to prolonged drought. Spring wheat is under mixed conditions in parts of the Dakotas due to recent hot and dry weather. In Canada, conditions are mixed for both winter and spring wheat due to expanding drought across the western Prairies. In Australia, average to above-average June rainfall has benefited crop establishment and growth across most of the country; however, dry conditions persist across the east. In Argentina, sowing is beginning under mixed conditions as soil moisture levels begin to recover.

Maize
In Brazil, the summer-planted crop (larger season) is primarily in the ripening to harvesting stages under favourable conditions. There is an increase in total sown area compared to last year. In Argentina, conditions are poor as the harvest is wrapping up for the early-planted crop (typically larger season) and as harvesting of the late-planted crop (typically smaller season) proceeds slowly. In the US, drought conditions are developing across much of the Corn Belt following an extremely dry spring. Good rains over the next month will be important for maintaining yields. In Mexico, harvesting of the Autumn-Winter crop (smaller season) wraps up as the Spring-Summer crop (larger season) suffers under drought conditions. In Canada, sowing is wrapping up under favourable conditions. In China, conditions are mixed as dryness develops in parts of the northeast and extreme heat is experienced in parts of the North China Plain. In India, sowing is off to a delayed start due to the late onset of the monsoon. In the EU, conditions are generally favourable as rain returns to the southern regions. In Ukraine, conditions are mixed due to recent hot and dry weather in the central regions and the implications of the ongoing war. In the Russian Federation, conditions are favourable.
Rice

In **China**, harvesting of early-season rice is beginning under generally favourable conditions as the sowing of late-season rice begins. Above-average rainfall in the south is supporting favourable conditions for single-season rice. In **India**, sowing of the Kharif crop is beginning after a slightly delayed start due to the late onset of the monsoon. In **Indonesia**, harvesting of wet-season rice is wrapping up under favourable conditions, albeit with a slight reduction in the harvested area compared to last year. Conditions are favourable as the sowing of dry-season rice enters the third month. In **Viet Nam**, harvesting of dry-season rice (Winter-Spring) is ongoing in the north under favourable conditions while the sowing of wet-season rice (Summer-Autumn) begins. In the south, wet-season rice (Summer-Autumn) is under favourable conditions. In **Thailand**, harvesting of dry-season rice has begun under mixed conditions due to a later-than-normal start of the rainy season and the high cost of agricultural inputs. The total sown area is expected to be reduced compared to last year. In the **Philippines**, wet-season rice is in the tillering to young panicle-forming stage under favourable conditions. In the **US**, conditions are favourable with an increase in sown area compared to last year.

Soybeans

In **Argentina**, harvesting is wrapping up for both the early-planted crop (larger season) and the late-planted crop (smaller season) with poor yields and lower quality due to drought and extreme heat throughout the season. In the **US**, an extremely dry spring has reduced crop conditions across much of the main growing areas. Good rainfall during July and August will be important to preserve yields. In **Canada**, sowing is completed, and conditions are favourable. In **China**, conditions are mixed in the main producing areas due to extremely high temperatures in the North China Plain along with developing dry conditions in the northeast. In **India**, a slower-than-normal start to the monsoon has delayed the start of sowing this season. In **Ukraine**, sowing is wrapping up under generally favourable conditions away from the frontlines of the war.

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

Wheat

- On 5 June, the Ministry of Finance in China allocated CNY 200 million (USD 27.8 million) in disaster relief funds to facilitate mechanical harvesting and drying of wheat. This follows prolonged rain in Henan province, a major wheat producing region.

Maize

- On 31 May, the Ministry of Economy in Argentina updated its phytosanitary measures to satisfy the requirements of China for the safe export of maize (resolution No. 699/2023).
- On 24 June, Mexico imposed a 50 percent tariff on white maize imports. This measure will remain effective until the end of the year. This decision comes amidst a trade dispute between Mexico and Canada and the US, concerning the issue of genetically modified maize (See AMIS Market Monitor May 2023).

Rice

- On 29 May, the Directorate General of Foreign Trade in India amended the export policy for both basmati and non-basmati rice (Notification No. 09/2023). Under the amended policy, the export of rice to Iceland, Liechtenstein, Norway, Switzerland, and the UK will only be permitted if accompanied by a certificate of inspection issued by the Export Inspection Council or Export Inspection Agency. For EU member states, a certificate of inspection will not be required for rice exports for a period of six months, starting from the amendment date.
- On 16 June, Indonesia signed an agreement with India that allows for the import of up to 1 million tonnes of rice from India. The purpose of this agreement is to ensure an adequate supply of rice in the event of disruptions resulting from the El Niño weather pattern. This agreement adds to the 2 million tonne rice import quota already allocated to the Indonesian state food procurement agency, Bulog, for the current year.

Biofuels

- On 30 June, Argentina announced an increase in the price of bioethanol made from either sugar or maize for mandatory blending on the domestic market. The new price is set at ARS 165.43 (USD 0.66) (Resolution 554/2023)
- On 21 June, the US Environmental Protection Agency (EPA) issued new regulations requiring oil refiners to increase the incorporation of biofuels in fuel blends during the next three years. The EPA set the finalized biofuel blending volumes at 79.26 billion liters for 2023, 79.49 billion liters for 2024, and 83.28 billion liters for 2025. These figures represent a slight increase compared to the initially proposed volumes of 75.71 billion liters in 2023, 79.49 billion liters in 2024, and 83.28 billion liters in 2025, which were announced in December 2022.
- On 27 June, the US Department of Agriculture announced investment of up to USD 500 million to support projects aimed at enhancing biofuel infrastructure. The funding for these projects will be provided through the Inflation Reduction Act of 2022. An initial round of funding will provide USD 25 million to finance 59 infrastructure projects through the Higher Blends Infrastructure Incentive Program, a scheme that seeks to promote the availability of higher blend ethanol by offering cost-sharing for the construction and retrofitting of biofuel infrastructure.

Fertilizers

- On 28 June, the Cabinet Committee on Economic Affairs in India approved a total allocation of INR 3.7 trillion (USD 45 billion) to support various fertilizer schemes, including a urea scheme and an organic manure scheme.
- On 17 June, the EU reinstated import duties of 6.5 percent on urea and of 5.5 percent on ammonia. The import duties had been previously suspended for six months. Several countries, including Egypt, Algeria, and Trinidad and Tobago, remain exempt from the tariffs.

Across the board

- On 27 June, the Ministry of Agriculture and Livestock in Brazil introduced a financing plan to provide BRL 364.22 billion (USD 75.9 billion) in support for medium and large rural producers until June 2024. Producers participating in the National Support Program for the Medium Rural Producer will be able to obtain credit under the scheme, which seeks to bolster national agricultural production.
- On 9 June, Canada announced it would extend for one year the Ukraine Goods Remission Order, thereby ensuring that Ukrainian agricultural products and other goods can continue to be imported tariff-free, on a temporary and exceptional basis.
- On 13 June, Egypt allocated EGP 127.7 billion (USD 4.1 billion) for its food subsidy programme for the financial year starting 1 July.
- On 5 June, the European Commission extended until 15 September 2023 arrangements allowing five of Ukraine’s
neighbours (Bulgaria, Hungary, Poland, Romania and Slovakia) to impose exceptional and temporary restrictions on imports of wheat, maize, rapeseed, and sunflower seed from Ukraine, following the adoption of an exceptional safeguard under the Autonomous Trade Measures Regulation on 2 May 2023 (See AMIS Market Monitor May 2023).

- On 18 June in the EU, the Ministry of Agriculture in Poland announced that about 60 percent of surplus grain had been purchased by the government to aid farmers affected by a large influx of Ukrainian crops to Poland. Furthermore, an amount of PLN 3,000 (USD 737) per hectare has been granted to incentivize farmers to sell their grain.

- On 15 May, India revised its import tariffs on certain oilseeds, through Notification No. 34/2023, and reduced tariffs on some types of vegetable oil. The import tariff on crude palm oil has been decreased from USD 1,001 to USD 988 per tonne, while the tariff for Refined, Bleached & Deodorized (RBD) palm oil has been revised from USD 1,022 to USD 1,020 per tonne. Import tariffs on other vegetable oils have also been lowered, with crude palmolein tariffs now set at USD 1,033 per tonne; those on RBD palmolein now set at USD 1,030 per tonne; and those on crude soya bean oil lowered to USD 983 per tonne. Additionally on 14 June, import duties on refined soybean oil and refined sunflower oil were reduced from 17.5 to 12.5 percent until 31 March 2024, with immediate effect.

- On 31 May, South Korea allowed duty free imports of some agricultural products including palm oil, crude alcohol made from fermented grain, and dried distillers grains with solubles. Duty free palm oil imports are expected to reduce the cost of producing mixed feed for animals. Tariff rate quotas on some higher priced agricultural products have also been introduced from June onwards.

- On 3 June, Türkiye raised the import duties on sunflower seeds and sunflower oil to 27 percent and 36 percent respectively, starting 1 June. This increase comes into effect after the expiration of the existing zero import duty rate on 31 May.

- On 20 June, India approved wheat and broken rice exports to Indonesia, Senegal, and Gambia in 2023/24 financial year, in response to requests from their governments (Notification 08/2023). Indian exporters who had previously been involved in exporting grains to these countries will now be required to bid for the allocated quota of wheat and broken rice (See AMIS Market Monitor, June 2023).

- On 30 May, India increased the minimum support price for all kharif crops (June-December) for marketing year 2023 (Oct 2023-Sep 2024) including: paddy rice from INR 20.40 (USD 0.25) per kilogram to INR 21.83 (USD 0.27) per kilogram; grade ‘A’ paddy from INR 20.60 per kilogram (USD 0.25) to INR 22.00 (USD 0.27) per kilogram; maize from INR 19.62 (USD 0.24) per kilogram to INR 20.90 (USD 0.25) per kilogram; yellow soybean from INR 43.00 (USD 0.52) per kilogram to INR 46.00 (USD 0.56) per kilogram.

- On 7 June 2023, India increased the minimum support price for all kharif crops (June-December) for marketing year 2023 (Oct 2023-Sep 2024) including: paddy rice from INR 20.40 (USD 0.25) per kilogram to INR 21.83 (USD 0.27) per kilogram; grade ‘A’ paddy from INR 20.60 per kilogram (USD 0.25) to INR 22.00 (USD 0.27) per kilogram; maize from INR 19.62 (USD 0.24) per kilogram to INR 20.90 (USD 0.25) per kilogram; yellow soybean from INR 43.00 (USD 0.52) per kilogram to INR 46.00 (USD 0.56) per kilogram.

- On 31 May, South Korea approved a new grain storage programme worth around INR 1 trillion (USD 12 billion), in efforts to boost warehouse capacity. The program aims to increase the storage capacity by 70 million tonnes, bringing the total to 215 million tonnes within the next five years.
Wheat

Wheat markets remained volatile during June. After touching a near two year-low in late May amid ideas of ample global availabilities and sustained competition from the Russian Federation, the GOI wheat sub-Index rebounded in early June, as mounting weather worries in some key producers, including Argentina, Canada, the EU and the US, prompted talk of tightening global supply prospects, with overspill from rallying soybean and maize prices adding to upside. However, the downtrend renewed later in the month, as neighbouring markets subsided, while values also succumbed to seasonal harvest pressure in the northern hemisphere. Average sub-Index values edged lower month-on-month and registered an eighth successive monthly decline.

Maize

The IGC GOI maize sub-Index averaged 3 percent lower in June, marking a fifth consecutive monthly decline, with downside tied to seasonal weakness in South American markets. With the local harvest passing the halfway point, Argentine quotations eased on increased spot availabilities and as traders sought to maintain competitiveness against other origins. Despite some fieldwork delays, prices in Brazil were also softer as beneficial rains cemented expectations for a record second (safrinha) crop and a larger surplus. Average US quotes were firmer over the month, underscored by concerns about expanding Midwest drought conditions ahead of the pollination period.

Rice

Amid mixed movements across key Asian exporters, the GOI rice sub-Index was broadly unchanged month-on-month. Nominal quotations in Pakistan were markedly lower as weak offshore demand for whole grain rice weighed on sentiment. In contrast, offers advanced in India on tighter exportable availabilities, and as worries over a delayed start to the southwest monsoon raised concerns about kharif crop prospects. Quotes in Thailand were also firmer amid an uptick in demand from key Asian buyers, while low availabilities ahead of the summer-autumn crop harvest underpinned in Vietnam. Elsewhere, US Gulf quotes were mildly stronger amid tight supplies ahead of 2023/24 harvesting.

Soybeans

Average international soyabean values moved higher during June, the IGC GOI sub-Index rising by 2 percent month-on-month. In the US, despite recent pressure from favourable rains, gains were largely linked to worries about the impact of hot, dry Midwest weather on yield potential. Tightening US old crop availabilities provided underlying support, but this was countered by seasonally slow international demand amid heavy and competitively priced Brazilian supplies. A surge in soya oil values likely added to the positive tone. While Brazilian export quotations (Paranagua) also advanced, also underpinned by solid overseas interest and currency movements, price offers were still quoted at sizeable discounts to alternative origins.
International prices

Selected export prices, currencies and indices

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

WHEAT
(US No. 2 H.R.W.)

MAIZE
(US No. 2 Yellow)

RICE
(Thai 100% B)

SOYBEANS
(US No. 2 Yellow)

Daily quotations of selected export prices

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AMIS countries’ currencies against US Dollar

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<td>Argentina</td>
<td>ARS</td>
<td>248.8</td>
<td>-7.1%</td>
<td>-50.7%</td>
</tr>
<tr>
<td>Australia</td>
<td>AUD</td>
<td>1.5</td>
<td>1.1%</td>
<td>-4.3%</td>
</tr>
<tr>
<td>Brazil</td>
<td>BRL</td>
<td>4.8</td>
<td>-2.4%</td>
<td>-6.5%</td>
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<tr>
<td>Canada</td>
<td>CAD</td>
<td>1.3</td>
<td>2.7%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>China</td>
<td>CNY</td>
<td>7.2</td>
<td>-6.5%</td>
<td>-3.5%</td>
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<td>Egypt</td>
<td>EGP</td>
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<td>-3.5%</td>
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<tr>
<td>EU</td>
<td>EUR</td>
<td>0.9</td>
<td>2.7%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>India</td>
<td>INR</td>
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<td>Indonesia</td>
<td>IDR</td>
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<td>-1.6%</td>
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<td>Japan</td>
<td>JPY</td>
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<td>-5.2%</td>
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<tr>
<td>Kazakhstan</td>
<td>KZT</td>
<td>448.3</td>
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<td>-0.5%</td>
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<tr>
<td>Rep. of Korea</td>
<td>KRW</td>
<td>1295.4</td>
<td>2.5%</td>
<td>-1.3%</td>
</tr>
<tr>
<td>Mexico</td>
<td>MXN</td>
<td>17.2</td>
<td>-16.0%</td>
<td>-15.5%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>NGN</td>
<td>610.2</td>
<td>-24.6%</td>
<td>-32.0%</td>
</tr>
<tr>
<td>Philippines</td>
<td>PHP</td>
<td>55.8</td>
<td>-3.7%</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Russian Fed.</td>
<td>RUB</td>
<td>83.2</td>
<td>-5.1%</td>
<td>-3.3%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>SAR</td>
<td>3.8</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>South Africa</td>
<td>ZAR</td>
<td>18.7</td>
<td>1.9%</td>
<td>-15.5%</td>
</tr>
<tr>
<td>Thailand</td>
<td>THB</td>
<td>34.9</td>
<td>-2.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Türkiye</td>
<td>TRY</td>
<td>23.8</td>
<td>-17.0%</td>
<td>-28.7%</td>
</tr>
<tr>
<td>UK</td>
<td>GBP</td>
<td>0.8</td>
<td>1.3%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Ukraine</td>
<td>UAH</td>
<td>36.9</td>
<td>-20.2%</td>
<td>-1.3%</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>VND</td>
<td>23510.4</td>
<td>-0.2%</td>
<td>-3.7%</td>
</tr>
</tbody>
</table>

FAO Food Price Index  Jun 2022 - Jun 2023

Nominal Broad Dollar Index  Jun 2022 - Jun 2023
Futures markets

Overall market sentiment

- Considering the dry conditions and damaged crops in the US and China, along with geopolitical uncertainty in the Black Sea region, grain and oilseed futures markets are likely to maintain a risk premium, keeping prices above the five-year average level.
- However, the overall gloomy outlook for the world economy and sufficient supply in the cash market are expected to prevent new price highs, provided that the US maize receives sufficient rains before pollinating.
- Implied volatility in maize showed a sharp decrease in late June, suggesting that the weather rally might be over and that market participants appear less concerned about price fluctuations in the coming weeks.

MONTHLY PRICE TREND

Futures prices

Weather patterns and geopolitical factors continue to be main drivers shaping the dynamics in grain and oilseed markets. The CME maize and soybean futures prices initially surged on continued dry conditions in the US Midwest, reaching multi-month highs by mid-June. However, improved rain prospects later in the month boosted production expectations and triggered a sell-off in maize and soybean. The nearest delivery of maize experienced a 16 percent drop over the last six sessions, marking the steepest decline for that period in at least three decades.

In the wheat market, prices shifted to an upward trend due to adverse climate developments negatively affecting quality in China and yield potential in Europe. Additionally, the temporary advance of the Wagner mercenary group toward Moscow increased the perceived risk of geopolitical instability, which some believe might lower the likelihood of the Russian Federation renewing the Black Sea Grain Initiative. Even if extended, the initiative faces limitations due to continuing inspection delays, impacting its effectiveness in offloading the 2023 harvest. In this context, Ukraine is preparing to export its 2023 harvest primarily through Danube ports. Black Sea cash markets nevertheless remained subdued, keeping wheat futures prices in check as grain merchants factor in low export flow risk and adequate supply from the Russian Federation.

Volumes & volatility

With the sharp weather swings in the US Midwest, historical volatility in maize and soybean futures has returned to high levels. Maize historical volatility in June exceeded 40 percent, significantly higher than the 10-year average and even surpassing last year’s already elevated level. Historical volatility in soybean also increased in June above the 10-year average, albeit less markedly. There was a notable (though short-lived) spike in implied volatility for soybean oil futures following the announcement of the US Environmental Protection Agency of the highest-ever biofuel blending targets that nevertheless felt short of industry expectations.

Implied volatility in maize decreased significantly in the last two weeks of June, suggesting that the weather rally was likely over and that market participants seem less concerned about price fluctuations in the coming weeks.

Forward curves

In the wheat market, forward curves for Euronext and CME wheat in June still show a contango configuration, indicating successive price increases to account for higher storage costs driven by expectations of higher inventory levels.

By contrast, Chicago maize and soybean futures remained in backwardation, albeit steeper than in the previous month. For soybean, this seems to be due to heightened fears of logistical bottlenecks in Brazil while for maize linked to the overall poor start to the production season.

Investment flows

Trading volumes increased in June as financial operators seized opportunities opened by the volatile market environment and commercials tried to hedge against climate risks. In this context, the agricultural options complex experienced a record high average daily trading volume on 16 June.

On the CME, financial investors bought back their short positions in wheat, while on Euronext, their market share in wheat futures reached its highest level since the beginning of the year, accounting for 47 percent of the market. This indicates a more bullish sentiment from these investors on wheat. Although financial investors scrambled to rebuild net long positions in maize and soybean amid surging markets in mid-June, their positions remained well below the recent peak in February, indicating some doubts about the bullish potential in maize and soybean.

Euronext futures volumes and price evolution

<table>
<thead>
<tr>
<th></th>
<th>Average daily volume (1000 tonnes)</th>
<th>M/M</th>
<th>Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>3 193.4</td>
<td>+20.8%</td>
<td>+14.7%</td>
</tr>
<tr>
<td>Maize</td>
<td>108.0</td>
<td>-10.8%</td>
<td>+16.1%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Prices (USD/t)</th>
<th>M/M</th>
<th>Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>256.1</td>
<td>+2.6%</td>
<td>-35.9%</td>
</tr>
<tr>
<td>Maize</td>
<td>251.6</td>
<td>+4.6%</td>
<td>-26.8%</td>
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</table>

CME futures volumes and price evolution

<table>
<thead>
<tr>
<th></th>
<th>Average daily volume (1000 tonnes)</th>
<th>M/M</th>
<th>Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>24 272.7</td>
<td>+58.1%</td>
<td>+46.2%</td>
</tr>
<tr>
<td>Maize</td>
<td>64 880.2</td>
<td>+48.3%</td>
<td>+30.7%</td>
</tr>
<tr>
<td>Soybean</td>
<td>43 814.5</td>
<td>+47.2%</td>
<td>+38.7%</td>
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<table>
<thead>
<tr>
<th></th>
<th>Prices (USD/t)</th>
<th>M/M</th>
<th>Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>245.4</td>
<td>+6.8%</td>
<td>-34.4%</td>
</tr>
<tr>
<td>Maize</td>
<td>228.4</td>
<td>-0.6%</td>
<td>-17.4%</td>
</tr>
<tr>
<td>Soybean</td>
<td>483.3</td>
<td>-4.0%</td>
<td>-14.2%</td>
</tr>
</tbody>
</table>
Market indicators

Daily quotations from leading exchanges - nearby futures

**Wheat**

USD per tonne

**Maize**

USD per tonne

**Rice**

USD per tonne

**Soybean**

USD per tonne

CFTC commitments of traders

Major categories net length as percentage of open interest*

**Wheat**

**Maize**

**Rice**

**Soybean**

*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)
- EUR per tonne
- Graphs from May 23 to Jun 25 with data points for each month.

### Euronext maize (EMA)
- EUR per tonne
- Graphs from May 23 to Jun 25 with data points for each month.

### CBOT wheat
- USD cent per bushel
- Graphs from May 23 to Jun 25 with data points for each month.

### CBOT maize
- USD cent per bushel
- Graphs from May 23 to Jun 25 with data points for each month.

### CBOT rice
- USD per hundredweight
- Graphs from May 23 to Jun 25 with data points for each month.

### CBOT soybean
- USD cent per bushel
- Graphs from May 23 to Jun 25 with data points for each month.

### Historical and implied volatilities

#### Historical Volatility (30 days)
- Graphs from Jun 22 to Jun 23.
- Indicators: Wheat, Maize, Rough rice, Soybeans.

#### Implied Volatility (Daily)
- Graphs from Jun 22 to Jun 23.
- Indicators: Wheat, Maize, Rough rice, Soybeans.

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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 No. 75 February AMIS Market Monitor 2020.
**Fertilizer outlook**

Prices for most fertilizer products continued their downward trend in June, pointing to well-supplied global markets. The sustained decrease in natural gas prices has particularly supported production of nitrogen-based fertilizers. Seasonal low demand in the Northern Hemisphere for several fertilizers also contributed to lower prices.

- **Natural gas** prices decreased slightly in June with sufficient supplies and gas storage at high levels. However, the market experienced relatively high price volatility due in part to production outages in Norway and uncertainty in the Russian Federation following the staged uprising of the Wagner mercenary group.

- **Ammonia** prices were down as supply remained plentiful and natural gas prices continued their decline, encouraging production particularly in Europe where high costs had curbed output for months. Meanwhile, demand has fallen with a slow market in the U.S. until applications will restart in autumn. The EU reinstated a tariff on imported ammonia, which is unlikely to influence world markets.

- **Urea** prices decreased substantially in June. The anticipated Indian tender fell short of expected levels, leaving more supply on world markets than anticipated, despite a reduction in exports from Indonesia and ongoing export control mechanisms in place in major exporter China. Demand in the Northern Hemisphere is seasonally low. Price declines may be slowing down as urea prices near the cost of production.

- **DAP** prices decreased in June, particularly in the US Gulf, due to the lower demand as the application period ended in the Northern Hemisphere. DAP prices in India, the world’s major importer, have consistently dropped this year with the country’s stock levels climbing.

- **Potash** prices were marginally down in the US Gulf due to lower demand. Prices in Brazil also continued their decent as inventories remained high. A low Chinese contract price contributed a softer tone to the market.

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### Ammonia and urea (spot prices)

![Ammonia and urea (spot prices) chart]

### Ammonia average, urea average and natural gas (spot prices)

![Ammonia average, urea average and natural gas (spot prices) chart]

### Potash and phosphate (spot prices)

![Potash and phosphate (spot prices) chart]

---

**Ammonia and urea:** Overview of nitrogen-based fertilizer weekly prices (averaged by month) in the US Gulf, Western Europe and Black Sea. **Potash & phosphate:** Overview of phosphate and potassium-based fertilizer weekly prices (averaged by month) in the US Gulf, Baltic and Vancouver. **Ammonia & urea averages:** Monthly average prices from ammonia’s US Gulf NOLA, Middle East, Black Sea and Western Europe were averaged to obtain ammonia average prices; monthly average prices from urea’s US Gulf NOLA, US Gulf Prill, Middle East Prill, Black Sea Prill and Mediterranean were averaged to obtain Urea Average prices. **Natural gas:** Henry Hub Natural Gas Spot Price from ICE up to December 2017 and from Bloomberg (BGAP) from January 2018 onwards. Prices are intraday prices averaged by month. Natural gas is used as major input to produce nitrogen-based fertilizers. **DAP:** Diammonium Phosphat

---

<table>
<thead>
<tr>
<th>Ammonia &amp; urea average</th>
<th>Jan-23</th>
<th>Jan-22 std. dev.</th>
<th>% change last month</th>
<th>% change last year</th>
<th>12-month high</th>
<th>12-month low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia-US Gulf NOLA</td>
<td>297.5</td>
<td>-</td>
<td>-7.0</td>
<td>-67.2</td>
<td>1060.3</td>
<td>297.5</td>
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<tr>
<td>Ammonia-Western Europe</td>
<td>366.2</td>
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<td>-4.2</td>
<td>-70.3</td>
<td>1294.0</td>
<td>366.2</td>
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<td>Ammonia avg. across regions</td>
<td>290.0</td>
<td>1.4</td>
<td>-7.8</td>
<td>-71.8</td>
<td>1139.3</td>
<td>290.0</td>
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<td>Urea-US Gulf</td>
<td>305.6</td>
<td>23.0</td>
<td>-20.5</td>
<td>-37.2</td>
<td>655.4</td>
<td>305.6</td>
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<td>Urea-Black Sea</td>
<td>256.0</td>
<td>10.0</td>
<td>-13.4</td>
<td>-50.3</td>
<td>576.6</td>
<td>256.0</td>
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<tr>
<td>Urea avg. across regions</td>
<td>300.5</td>
<td>17.4</td>
<td>-14.0</td>
<td>-48.8</td>
<td>687.5</td>
<td>300.5</td>
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<td>DAP-US Gulf</td>
<td>455.4</td>
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<td>DAP-Baltic</td>
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<td>+0.0</td>
<td>-41.2</td>
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<tr>
<td>Potash-Baltic</td>
<td>372.5</td>
<td>-</td>
<td>+0.0</td>
<td>-13.4</td>
<td>372.5</td>
<td>372.5</td>
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<tr>
<td>Potash-US Gulf NOLA</td>
<td>390.0</td>
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<td>-1.3</td>
<td>-48.5</td>
<td>732.0</td>
<td>365.5</td>
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<tr>
<td>Natural gas</td>
<td>2.1</td>
<td>0.2</td>
<td>-3.8</td>
<td>-73.3</td>
<td>8.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

*Estimated using available weekly data to date. *Source: Own elaboration based on Bloomberg

---

All prices shown are in US dollars.

---

**Chart and tables description**

**Ammonia and urea:** Overview of nitrogen-based fertilizer weekly prices (averaged by month) in the US Gulf, Western Europe and Black Sea. **Potash & phosphate:** Overview of phosphate and potassium-based fertilizer weekly prices (averaged by month) in the US Gulf, Baltic and Vancouver. **Ammonia & urea averages:** Monthly average prices from ammonia’s US Gulf NOLA, Middle East, Black Sea and Western Europe were averaged to obtain ammonia average prices; monthly average prices from urea’s US Gulf NOLA, US Gulf Prill, Middle East Prill, Black Sea Prill and Mediterranean were averaged to obtain Urea Average prices. **Natural gas:** Henry Hub Natural Gas Spot Price from ICE up to December 2017 and from Bloomberg (BGAP) from January 2018 onwards. Prices are intraday prices averaged by month. Natural gas is used as major input to produce nitrogen-based fertilizers. **DAP:** Diammonium Phosphat
Ocean freight markets

Dry bulk freight market developments

<table>
<thead>
<tr>
<th>Baltic Dry Index (BDI)</th>
<th>Change M/M</th>
<th>Change Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-23 average</td>
<td>-23.8%</td>
<td>-55.2%</td>
</tr>
</tbody>
</table>

**sub-indices:**
- **Capesize:** 1592.1 -25.6% -37.7%
- **Panamax:** 1122.2 -15.5% -58.9%
- **Supramax:** 758.0 -28.5% -69.8%

<table>
<thead>
<tr>
<th>Baltic Handysize Index (BHSI)</th>
<th>Change M/M</th>
<th>Change Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jun-23 average</td>
<td>-22.2%</td>
<td>-65.7%</td>
</tr>
</tbody>
</table>

**IGC Grains and Oilseeds Freight Index (GOFI):**

<table>
<thead>
<tr>
<th>Change M/M</th>
<th>Change Y/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>-10.2%</td>
<td>-43.2%</td>
</tr>
</tbody>
</table>

**sub-indices:**
- **Argentina:** 156.5 -11.5% -43.5%
- **Australia:** 81.7 -4.4% -53.4%
- **Brazil:** 162.9 -9.1% -44.0%
- **Black Sea:** 125.1 -12.5% -41.1%
- **Canada:** 90.5 -13.5% -42.7%
- **Europe:** 101.4 -13.6% -42.3%
- **US:** 99.9 -8.7% -42.4%

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

**IGC GOFI**

- BDI and IGC GOFI

- Selected IGC GOFI sub-indices

- 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 bulk, 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.

- Sentiment in the dry bulk freight complex remained largely bearish in June, with the Baltic Dry Index (BDI) averaging nearly one-quarter lower compared to the previous month.

- After plunging in late May amid renewed economic worries, particularly linked to China, Capesize vessel earnings subsequently moved higher, as better-than-expected May trade statistics from that country buoyed market sentiment. Aside from a moderate year-on-year rise in monthly iron ore arrivals, data featured a near-50-percent jump in coal imports compared to May 2022. Increasing journey times for bauxite shipments - as activity shifted from Indonesia to Guinea - provided additional price support. Despite some recovery during the month, sector rates were 26 percent lower than in May.

- The Panamax sub-Index declined by 16 percent on average. The market continued to witness mixed sentiment in the Atlantic, where slow European demand for coal deliveries reportedly prompted some exporters to re-direct their shipments to Asia, thereby leading to increased competition for business in the Pacific. In contrast, brisk grains and oilseeds-related activity out of South America continued to prop up freight rates.

- Average Supramax values fell the most during the period (29 percent), largely tied to sluggish demand in the Atlantic. Despite recent reported improvements on routes out of the eastern coast of South America, average Handysize earnings were also markedly lower month-on-month, as slow demand in Europe and the Mediterranean, including for grains deliveries, boosted regional tonnage availability.

- The IGC Grains and Oilseeds Freight Index (GOFI) averaged 10 percent lower month-on-month, led by declines in Canada and Europe, but with downside in voyage freight rates limited by an uptick in fuel prices.
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 unordered 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.