Overview:
At the end of August, conditions are mixed for wheat, maize, rice, and soybeans. Wheat harvests in the northern hemisphere are facing mixed conditions due to drought in several areas, while the southern hemisphere is experiencing expanding dry conditions in Argentina and Australia. Exceptional maize yields are expected in Brazil, but Argentina is facing poor outputs due to persistent drought. Rice crops in China are affected by dry and hot conditions, crops in eastern India have recovered from rain delays, and conditions are mostly favorable in Southeast Asia. Soybean crops in the northern hemisphere are developing under mixed conditions, with some improvement in the west due to enhanced rains.
At a glance for AMIS countries (as of August 28th)

Global crop condition map synthesizing information for all four AMIS crops as of August 28th. 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 along with earth observation data from all Crop Monitors. Crops that are in other than favourable conditions are displayed on the map with their crop symbol.

Crop Conditions at a Glance

Wheat – In the northern hemisphere, winter and spring wheat harvesting is wrapping up under mixed conditions with drought in several areas. In the southern hemisphere, there are expanding dry conditions in Argentina and Australia.

Maize – In the southern hemisphere, exceptional yields are expected in Brazil while poor outputs are expected in Argentina due to persistent drought. In the northern hemisphere, conditions remain mixed.

Rice – In China, dry and hot conditions expanded in the south and southwest. In India, Kharif crops have recovered from delayed rains in the east. In Southeast Asia, conditions are mostly favourable except in Thailand.

Soybeans – In the northern hemisphere, crops are developing under mixed conditions with some improvement in the west due to enhanced rains.

Forecasts at a Glance

Climate Influences – El Niño is currently present, and models predict a strong intensity during October to January. Positive Indian Ocean Dipole (IOD) conditions may also develop during September to January.

El Niño Yield Impacts - El Niño events are estimated to affect crop yields on at least 25 percent of global croplands. The current El Niño event is expected to have significant impacts on regional precipitation and agricultural yield outcomes.

Argentina – Below-average rainfall is expected in the main producing Pampas region through mid-September, and warmer temperatures are forecast for the northern half of the country through November.

Australia – Wheat growing areas are expected to receive rainfall in the coming weeks while dry conditions and high temperatures are likely in many areas through November.

The United States – Likely below-average precipitation through early September in the Pacific Northwest and northern Midwest is expected to continue through November, and above-average temperatures are expected across much of the west and south.

* Assessment based on information as of August 28th
Wheat Conditions for AMIS Countries

Wheat: In the EU, harvest finalized under mixed conditions as persistent dryness impacted Lithuania and Latvia, and recent exceptionally wet conditions caused yield drops in Denmark and Sweden. In the UK, end of season conditions are favourable despite recent below-average temperatures and excessive rains. In Türkiye, harvesting finalized under exceptional conditions due to conducive spring weather. In Ukraine, end of season conditions are favourable for unoccupied territories. In the Russian Federation, winter harvesting is favourable. Persistent drought remains a concern for spring crops despite improved August rainfall. In China, spring crop harvesting is nearing completion with ongoing concern over the northwest and north-centre due to dry and hot weather. In the US, below-average winter yields are expected in the Dakotas, Nebraska, and the Pacific Northwest. Spring wheat conditions have been downgraded due to possible yield declines. In Canada, conditions remain mixed for winter and spring crops with ongoing summer drought concerns in the western Prairies expected to significantly hamper durum wheat production. In Australia, dry conditions are expanding into New South Wales while the south and southeast remain favourable. In Argentina, conditions are mixed with dryness in the centre and north.

* Assessment based on information as of August 28th
Maize Conditions for AMIS Countries

Maize: In Brazil, above-average summer-planted (larger season) crop yields are expected in the major producing central-west. In Argentina, drought and extreme heat significantly impacted the late-planted (usually smaller season) crop. In the US, conditions improved in parts of the Corn Belt with above-average yields possible in some eastern states while severe drought continues to impact parts of the interior. In Mexico, conditions have improved for the Spring-Summer (larger season) crop as Hurricane Hilary and tropical showers provided much-needed moisture relief. In Canada, conditions have been consistently advantageous in the main producing east. In China, harvesting of the spring-planted crop is nearing completion with concern in the northwest and southwest due to persistent dry and hot weather. Conditions are favourable for the summer-planted crop except in the southwest. In India, Kharif crops are developing with expanding dry conditions in all areas except in the north. In the EU, heatwaves and dry conditions impacted Romania and the Czech Republic, and water use restrictions may impact yields in Spain. In Ukraine, conditions in unoccupied regions are favourable despite a prolonged period of hot and dry weather that accelerated ripening. In the Russian Federation, conditions remain favourable.

* Assessment based on information as of August 28th
Rice Conditions for AMIS Countries

Rice Conditions

Rice crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

Rice: In China, harvesting of the single-season crop commenced while the late-season continues to develop with expanding dry and hot concerns in the south and southwest. In India, Kharif season crops recovered from delayed rainfall onset in the east while deficient rainfall is now impacting the centre. In Indonesia, planting of dry-season rice continues while harvesting of earlier planted crops is underway, and yields are near-normal despite less precipitation received during the growing season. In northern Vietnam, planting and development of wet-season rice (both seasonal and summer-autumn) continues with adequate irrigation preparation. In the south, conditions are favourable for the wet-season crop (both summer-autumn and autumn-winter). In Thailand, wet-season yields are expected to decrease compared to last year due to ongoing drought and a high risk of damage from pests and disease. In the Philippines, conditions are favourable for the wet-season. In Japan, paddy development is supported by conducive hot and sunny weather, but some southern areas were impacted by seasonal rain and typhoon activity. In the US, conditions remain favourable.

* Assessment based on information as of August 28th
**Soybean Conditions for AMIS Countries**

**Soybeans:** In the US, persistent drought continues to impact parts of the Lake States, Central Plains, and Delta region while conditions improved elsewhere. In China, crops continue to develop under favourable conditions. In India, conditions have been downgraded to watch due to limited precipitation received in August. In Canada, conditions are favourable as recent precipitation in parts of the Prairie region improved pod fill. In Ukraine, generally conducive weather has mostly benefitted crop development in areas that were able to plant.

*Assessment based on information as of August 28th*
Climate Influences: El Niño Advisory and Positive IOD Watch

The El Niño-Southern Oscillation (ENSO) is currently in the El Niño phase and forecast to reach a strong level of intensity during October to January (66% chance) and remain active until March to May (82% chance), according to the IRI/CPC forecast.

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.

Positive Indian Ocean Dipole (IOD) conditions are forecast for September to January, according to the Australian Bureau of Meteorology. Sea surface temperatures began showing signs of positive IOD development in August. 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 events.

Source: UCSB Climate Hazards Center

* Assessment based on information as of August 28th
El Niño 2023/2024 anticipated regional and global climate and agricultural yield impacts

- The ongoing El Niño will likely be a strong event that will reach peak strength from October to January.

- **Wheat**: Historically, the impact of El Niño events on wheat yields has been modest at the country scale. Average yield declines relative to expected yields are around 5% or less in India, China, Australia, southeastern South America, and parts of Europe and North Africa, although Morocco tends to experience yield deficits of up to 15%.

- **Maize**: Past El Niño events have led to deficit maize production in India, China, southeastern Africa, and parts of Central America and northern South America. The effects tend to be strongest in southeastern Africa where average deficits are around 10 to 15% relative to expected yields in Zimbabwe and South Africa, with some events resulting in deficits of over 50%.

- **Rice**: Past El Niño events have reduced rice yields in major production regions of South and Southeast Asia. The strongest impacts of El Niño events have been in India and Thailand, which were the world’s two leading rice exporters in 2022/2023. Average yield declines in India and Thailand during El Niño events have been 2 to 4% with declines of 5 to 10% possible.

- **Soybeans**: El Niño events tend to improve soybean yields in both the United States and Argentina, while reducing yields in India. Yields tend to be around 3% and 8% above expected levels in the United States and Argentina, respectively, while they are around 9% below expected levels in India on average.

Following three consecutive years of La Niña, the El Niño-Southern Oscillation (ENSO) is currently in the El Niño phase. The ongoing El Niño is forecast to be a strong event, reaching its maximum intensity in late 2023 and persisting through early 2024. El Niño events are estimated to affect crop yields on at least 25 percent of global croplands. Characteristics of an El Niño, like its intensity, are related to the severity of the global climate impacts. The current forecast for a strong El Niño is expected to have significant impacts on regional precipitation patterns and agricultural yield outcomes at the regional and possibly global level.

While crop yield impacts vary from one El Niño event to another, average global-mean soybean yields generally improve during an El Niño event while global mean rice yields, and to a lesser extent wheat yields, slightly decrease. The ongoing El Niño has already affected seasonal precipitation in different parts of the globe, impacting ongoing cropping seasons notably in Central America, East Africa, India, and Southeast Asia. This El Niño also raises concerns for upcoming cropping seasons in some areas, including parts of Southern Africa, Southeast Asia, Central America, northern South America, Australia, and elsewhere.

For more information on El Niño impacts to ongoing and upcoming cropping seasons see the [Crop Monitor August Special Alert](#).

**Historical crop yield conditions during El Niño events for wheat, maize, rice, soybeans, and sorghum using FAO country level yield data and ERSSTv5 from 1961-2020. In countries with more than one crop affected, the color reflects the strongest effect. Source: Crop Monitor Special Report, August 2023**

* Assessment based on information as of August 28th
Global Two-week Forecast of Areas with Above or Below-Average Precipitation

The two-week forecast indicates a likelihood of above-average rainfall over central-eastern Mexico, southern Colombia, northwestern Brazil, southern Peru, southern Chile, southwestern Uruguay, northern Morocco, Algeria, Tunisia, parts of the Sahel region in West Africa, Spain, southwestern France, eastern Ukraine, northeastern Kazakhstan, northern Mongolia, China, southern Pakistan, central India, Myanmar, Thailand, Laos, northeastern Cambodia, Viet Nam, the Philippines, and northeastern Australia.

There is also a likelihood of below-average rainfall over much of Canada, the United States, Mexico, Central America and the Caribbean, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname, French Guiana, Brazil, central Chile, Argentina, the Gulf of Guinea in West Africa, northwestern and southeastern portions of Southern Africa, Madagascar, much of East Africa, Yemen, northern Europe, Turkey, Azerbaijan, northern Iran, Russia, Kazakhstan, Uzbekistan, southwestern Mongolia, southern Japan, eastern Afghanistan, northern Pakistan, south and northern India, Sri Lanka, Bangladesh, Malaysia, Indonesia, Papua New Guinea, and much of Australia.

* Assessment based on information as of August 28th
**Argentina Outlook**

The 6 – 12 September precipitation forecast anomaly (left) indicates a likelihood of below-average rainfall over the main producing Pampas region in the east, particularly in Entre Rios, while above-average rainfall is expected in the northeast and central-west. During the same period, temperatures are likely to be above-normal along the northern coast and in Chubut and slightly below-normal in and around southern Santa Fe. The 13 – 19 September precipitation forecast anomaly (centre) shows a switch to below-average rainfall for the northeast, extending down into Cordoba, while above-average rainfall is expected to continue in the centre-west. During the same period, above-normal temperatures are expected in the northeast, and below-average temperatures are expected in the centre and south.

The long-term August-September-November 2023 forecast (right) indicates below-average precipitation over the northwest from northern San Juan to Jujuy and down into Cordoba, while above-average precipitation is expected in the northeast from Entre Rios to Misiones and in the central-west. During the same period, above-normal temperatures are expected in the northern half of the country, particularly in the northwest, and below-average temperatures are expected in the southern half.

**Precipitation Anomaly Forecasts**

* Assessment based on information as of August 28th
Australia Outlook

The short-term 11 – 24 September rainfall forecast indicates that wheat-growing areas in Western Australia, South Australia, Victoria, New South Wales, and Queensland are likely to receive rainfall. Daytime maximum and nighttime minimum temperatures are expected to be mostly above-average, particularly in Western Australia.

The long-term September-October-November outlook indicates a likelihood of below-average rainfall for most areas, particularly in the southwest, southeast, and northeast, with the exception of the northwest where precipitation is expected to be near to slightly above-average. During the same period, there are high chances of above-average temperatures throughout the country.

* Assessment based on information as of August 28th
United States Outlook

The 11 – 15 September outlook indicates a likelihood of below-average precipitation in the Pacific Northwest, in northern parts of the Midwest, and in the southern half of Florida. Above-average precipitation is expected across much of the east and interior, particularly in and around northern Texas and western Oklahoma. During the same time, temperatures are likely to be above-average across western areas, particularly in the Pacific Northwest, and along the south, particularly in New Mexico and Texas. Conversely, below-normal temperatures are expected for much of the interior and extending into the northeast, particularly in the Corn Belt region.

For the long-term seasonal September-October-November outlook, below-average rainfall is forecast to continue in the Pacific Northwest and parts of the Lake States and will also impact eastern Arizona and western New Mexico. Above-average precipitation is expected in the Southeast. During the same period, above-normal temperatures are expected across much of the country, particularly in the Southwest and Northeast, and with the exception of parts of the interior and north where there are equal chances of above and below-average temperatures.

Short-term and Seasonal Outlooks

Source: NOAA Climate Prediction Center

* Assessment based on information as of August 28th
Appendix 1: Terminology & Definitions

Crop Conditions:

Exceptional: Conditions are much better than average* at the time of reporting. This label is only used during the grain-filling through harvest stages.

Favourable: Conditions range from slightly lower to slightly better than average* at reporting time.

Watch: Conditions are close to average* but there is a potential risk to final production. The crop can still recover to average or near average conditions if the ground situation improves. This label is only used during the planting-early vegetative and the vegetative-reproductive stages.

Poor: Crop conditions are well below average*. Crop yields are likely to be more than 5% below average. This is only used when conditions are not likely to be able to recover, and an impact on production is likely.

Out of Season: Crops are not currently planted or in development during this time.

No Data: No reliable source of data is available at this time.

*“Average” refers to the average conditions over the past 5 years.

Drivers:

These represent the key climatic drivers that are having an impact on crop condition status. They result in production impacts and can function as either positive or negative drivers of crop conditions.

Wet: Wetter than average (includes water logging and floods).

Dry: Drier than average.

Hot: Hotter than average.

Cool: Cooler than average or risk of frost damage.

Extreme Events: Catch-all for all other climate risks (i.e., hurricane, typhoon, frost, hail, winter kill, wind damage, etc.). When this category is used, the analyst will also specify the type of extreme event in the text.

Delayed-Onset: Late start of the season.

Crop Season Nomenclature:

In countries that contain multiple cropping seasons for the same crop, the following chart identifies the national season name associated with each crop season within the Crop Monitor. Within the Crop Monitor for AMIS countries, the larger producing season (most recent 5 years) has been assigned to the first season.
Appendix 2: Crop Season-Specific Maps

Winter Planted Wheat Conditions for AMIS Countries

Winter wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Spring Planted Wheat Conditions for AMIS Countries

Spring wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

* Assessment based on information as of August 28th
Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Maize 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.
Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Rice 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

* Assessment based on information as of August 28th
Rice 3 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Soybean 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.
Soybean 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Crop condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

* Assessment based on information as of August 28th
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Photo courtesy of Kara Mobley

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Sources & Disclaimer

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