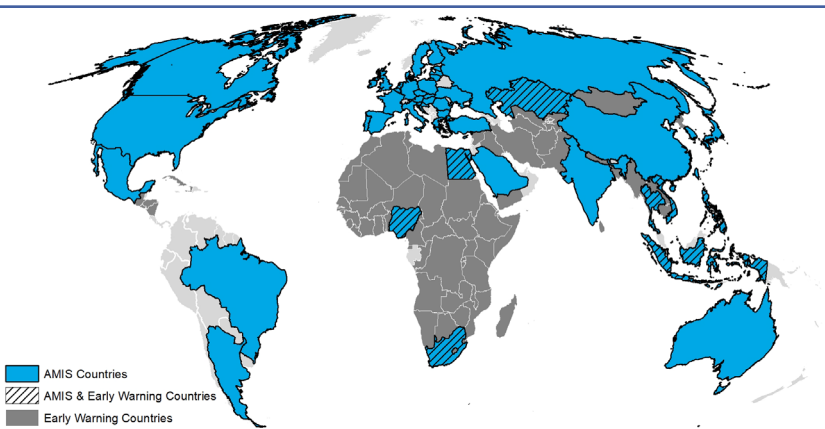


Crop Monitor for AMIS

Overview:

As of the end of April, conditions are generally favourable for wheat, maize, rice, and soybeans with only some areas of concern. For wheat in the northern hemisphere, winter wheat is entering the critical reproductive stage while spring wheat sowing is beginning. For maize, harvesting is continuing in the southern hemisphere while sowing is proceeding in the northern hemisphere. Rice conditions are generally favourable in southeast Asia while harvesting is wrapping up in India and sowing begins in China. Soybean harvesting is ongoing in the southern hemisphere while sowing begins in the northern hemisphere.

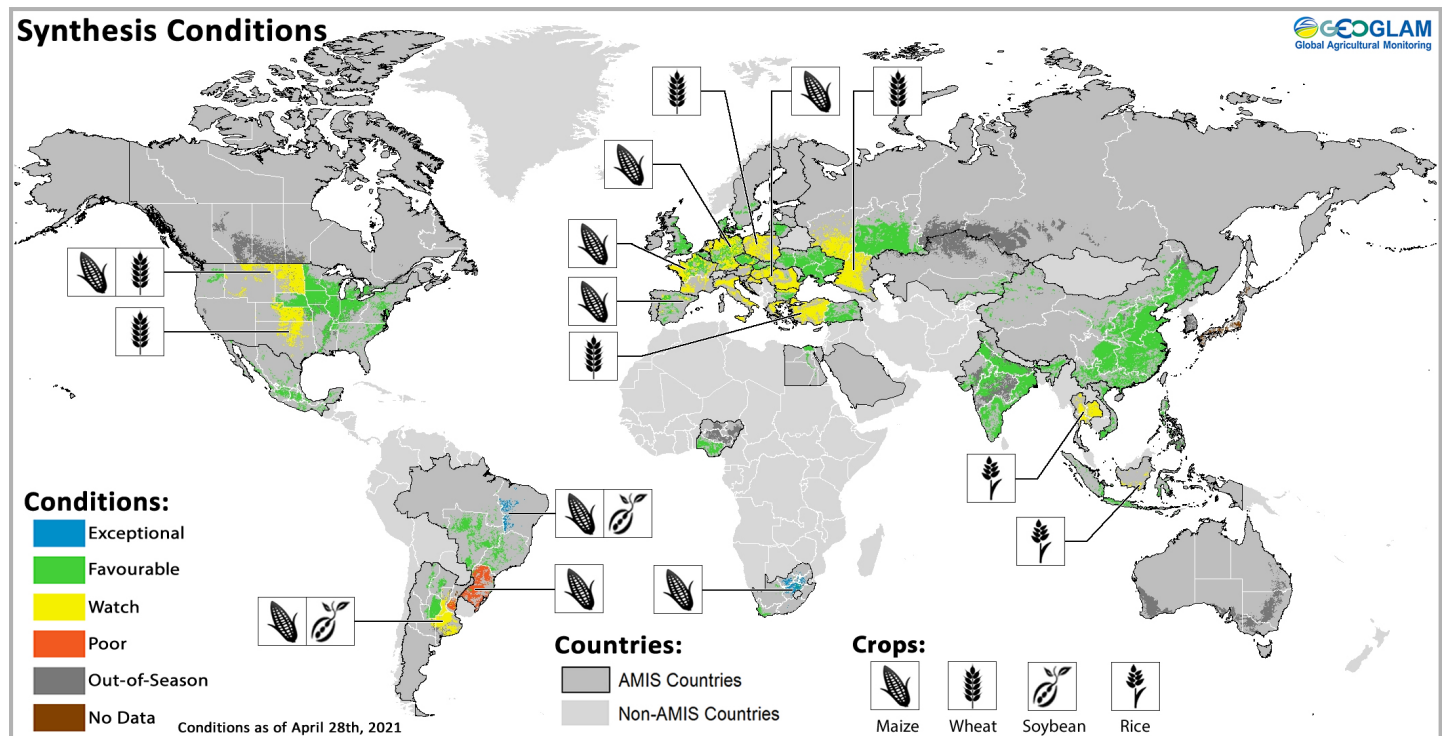


Contents:

Conditions and Forecasts at a Glance.....	2
Wheat Conditions.....	3
Maize Conditions.....	4
Rice Conditions.....	5
Soybeans Conditions.....	6
Climate Forecasts.....	7
Appendix I –Terminology & Definitions.....	12
Appendix II – Crop Season Specific Maps.....	13

Assessment based on information as of April 28th

At a glance for AMIS countries (as of April 28th)



Crop condition map synthesizing information for all four AMIS crops as of April 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. **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, spring wheat sowing is just beginning while areas of concern for winter wheat remain for the Russian Federation, western Turkey, the US, and Canada.

Maize - In the southern hemisphere, harvesting of spring-planted and some summer-planted crops is progressing. In the northern hemisphere, sowing is beginning with delays in Europe due to recent cold weather.

Forecasts at a Glance

Climate Influences - The current La Niña is weakening. A transition to neutral El Niño-Southern Oscillation (ENSO) is expected in the next month (81% chance for May to July).

Argentina – There are currently no water deficit areas across the main agricultural regions. The beginning of wheat sowing in mid-May is forecast to start with good soil moisture conditions.

Australia – The two-week forecast shows the majority of wheat sowing areas will receive some rainfall, with the

Rice - Sowing is continuing in China while the harvesting of Rabi rice is beginning in India. In Southeast Asia, harvesting is ongoing for wet-season rice in Indonesia and dry-season rice in the northern countries. Harvesting is wrapping up in Brazil.

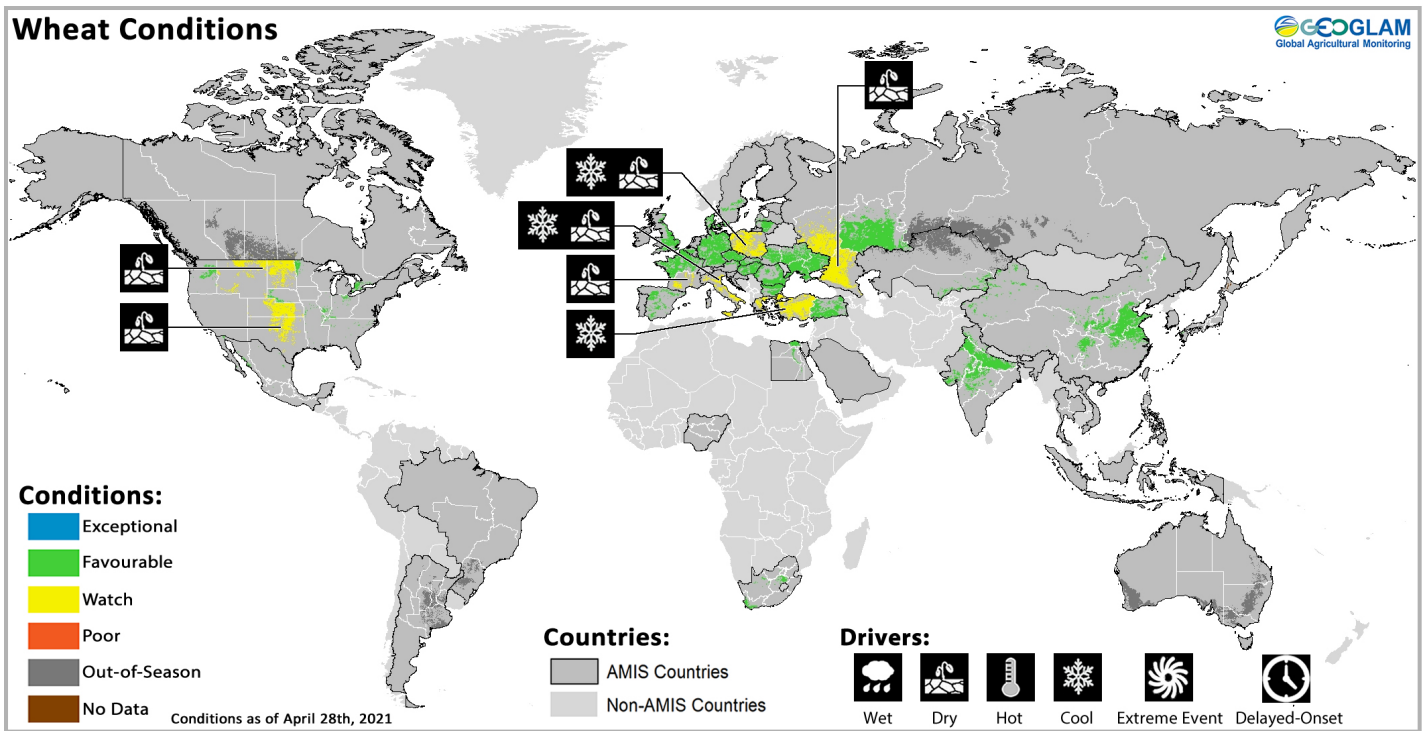
Soybeans - In the southern hemisphere, harvesting is coming to an end in Brazil and ongoing in Argentina. In the northern hemisphere, sowing is just beginning in the US and Ukraine.

most received in Western Australia southern Queensland, northern New South Wales, and parts of western Victoria.

India - The 2021 southwest monsoon (June to September) is forecast to have average rainfall on the whole across the country.

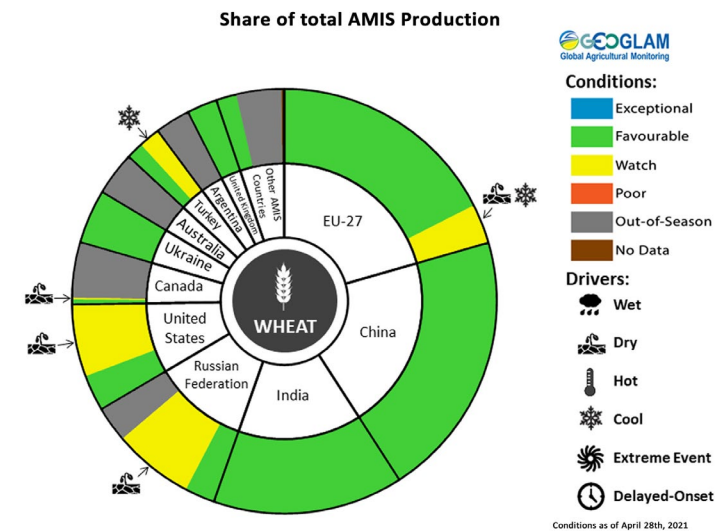
United States – The short-term outlook over the next week and a half has probabilities of above-average rainfall from the Great Plains to the East Coast, while below-average rainfall in the Pacific Northwest and the Southwest.

Wheat Conditions for AMIS Countries



Wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 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.

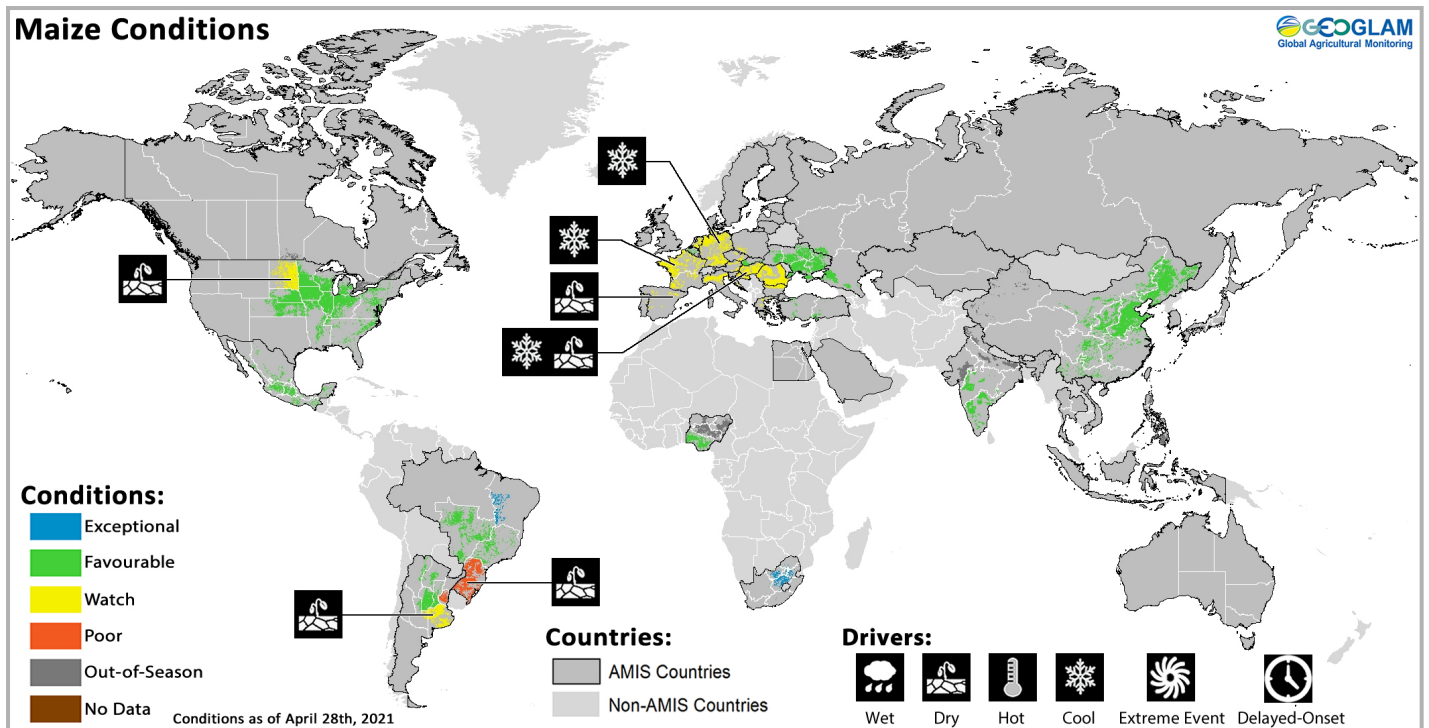
Wheat: In the **EU**, conditions are generally favourable for winter wheat with some spot areas affected by dry and cold conditions. In the **UK**, conditions are favourable despite a slowing of crop development due to recent cold weather. In **Ukraine**, conditions are favourable with some improvement in the south owing to good rainfall over the past few months. In the **Russian Federation**, winter wheat conditions have improved thanks to recent rainfall. However, some of the crop, particularly in the central district, will need to be resown. Spring wheat sowing is just beginning under favourable conditions. In **Turkey**, rainfall has mitigated earlier dry conditions, however, recent cold weather has impacted the western part of the country. In **China**, conditions are favourable for winter wheat in the flowing to ripening stages and as the sowing of spring wheat begins. In **India**, harvesting is wrapping up under favourable conditions. There is an increase in total sown area compared to last year. In the **US**, winter wheat remains under watch conditions in the northern and southern Great Plains due to dryness. Spring wheat sowing is about halfway complete and also under watch conditions due to dryness. In **Canada**, winter wheat conditions are favourable in the main producing province of Ontario, while dryness persists in the Prairie provinces.



For detailed description of the pie chart please see box on page 6.

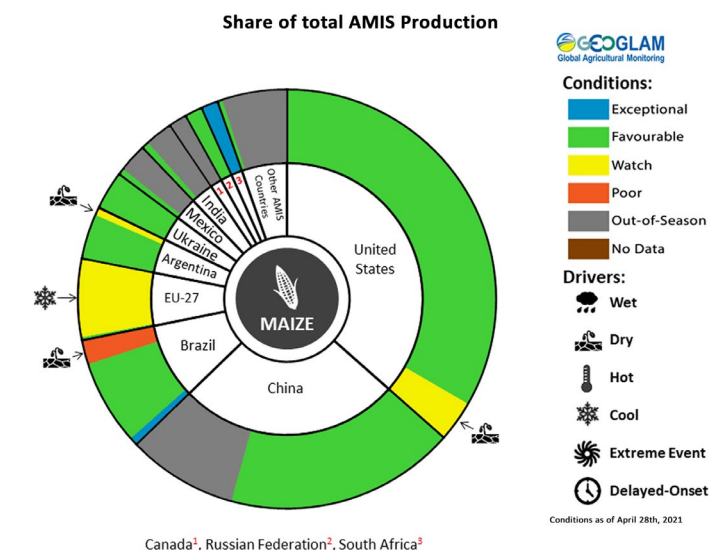
* Assessment based on information as of April 28th

Maize Conditions for AMIS Countries



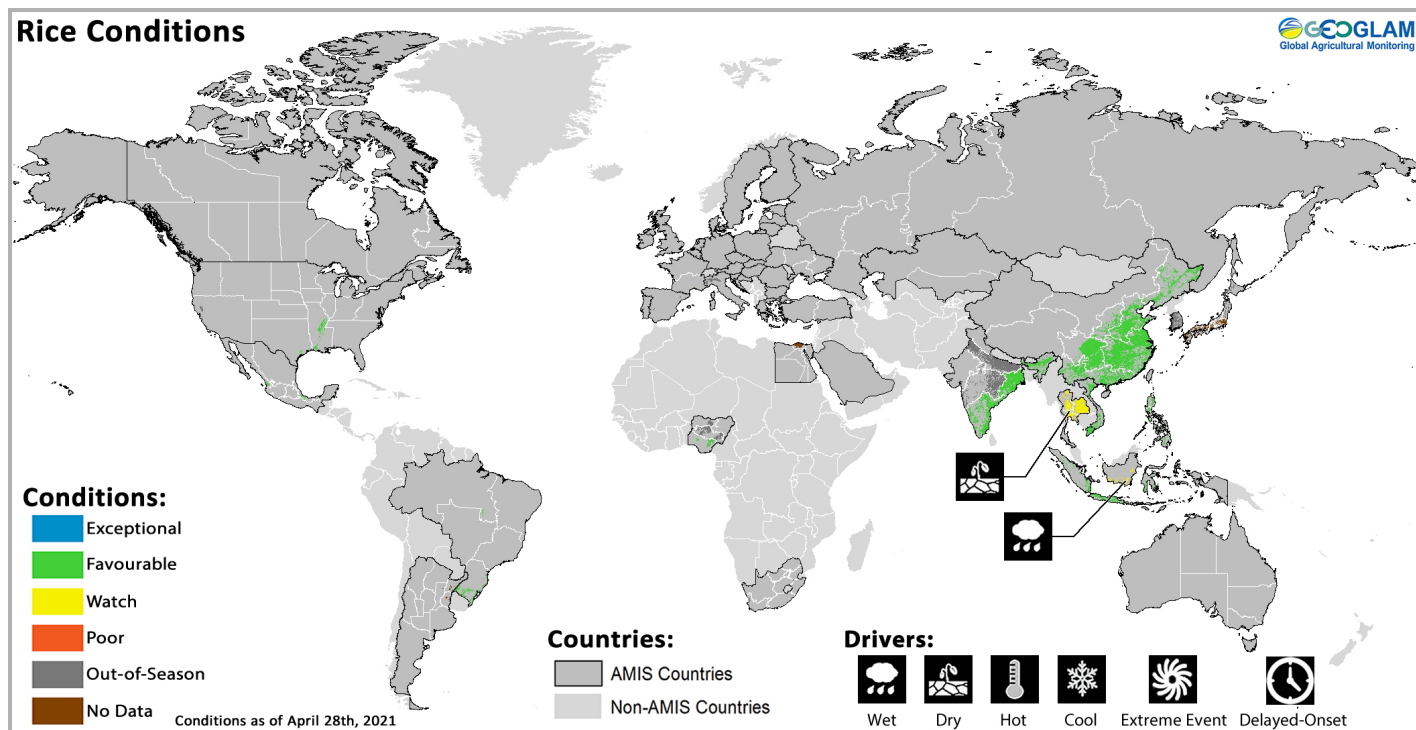
Maize crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 28th. Where crops are in other than favourable conditions the climatic drivers responsible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

Maize: In **Brazil**, harvest is continuing for the spring-planted (smaller season) crop with poor conditions in the main producing South region due to earlier dryness. Conversely, conditions are favourable in the Central-West and the Southeast regions, while exceptional in the Northeast region. The summer-planted (larger season) crop is under favourable conditions with most of the crop entering the critical vegetative to reproductive stage. There is an estimated increase in total sown area compared to last year. In **Argentina**, harvesting of the early-planted crop (usually larger season) and the late-planted crop (usually smaller season) is ongoing after some delays due to rainfall and the prioritization of soybean harvesting. Conditions are generally favourable, however, yields are very heterogeneous as a result of uneven rainfall during the season. In **India**, harvesting is wrapping up for the Rabi crop under favourable conditions. In **South Africa**, harvesting is progressing well under exceptional conditions. In **Mexico**, the autumn-winter crop (smaller season) is under favourable conditions. In the **US**, conditions are generally favourable as sowing is well underway, particularly in the southern parts of the corn belt. In **China**, sowing of the spring-planted crop is beginning under favourable conditions. In the **EU**, conditions are mixed as cold and dry weather in the northern and eastern parts of Europe is delaying sowing and crop development. In **Ukraine**, sowing is beginning under favourable conditions. In the **Russian Federation**, sowing is just beginning under favourable conditions.



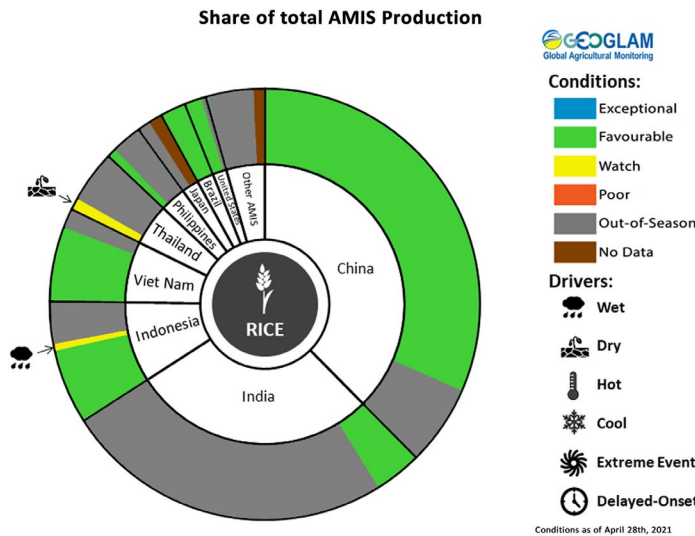
For detailed description of the pie chart please see box on page 6.

Rice Conditions for AMIS Countries



Rice crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 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.

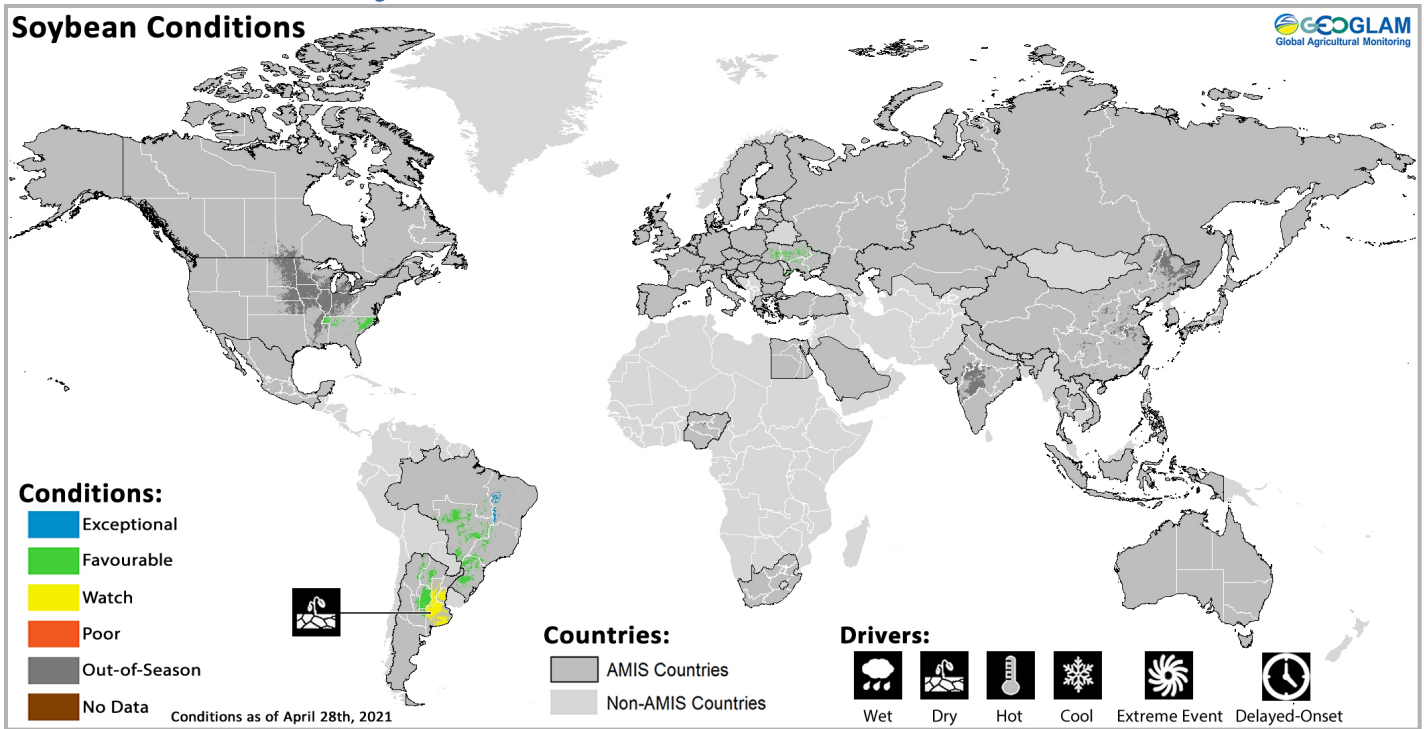
Rice: In **China**, sowing of single-season and early-season rice is ongoing under favourable conditions. In **India**, Rabi rice is under favourable conditions as harvesting begins. In **Indonesia**, harvesting of wet-season rice is entering the fourth month under generally favourable conditions owing to good rainfall and sunlight during the critical flowering stage. In **Viet Nam**, conditions are favourable across the country for the winter-spring (dry-season) crop as harvesting continues in the Mekong River Delta. Sowing of the summer-autumn (wet-season) crop in the Mekong River Delta is progressing at a good pace under favourable conditions. In **Thailand**, harvesting is ongoing for dry-season rice under mixed conditions across the country due to a lack of irrigation water during most of the season followed by recent moisture damage from a storm in the north to central regions. In the **Philippines**, harvesting of dry-season rice is ongoing under favourable conditions. Crops in some provinces of Visayas and Mindanao have recovered from earlier storm damage. In **Brazil**, harvest is wrapping up under favourable conditions. In the **US**, sowing is progressing under favourable conditions.



For detailed description of the pie chart please see box on page 6.

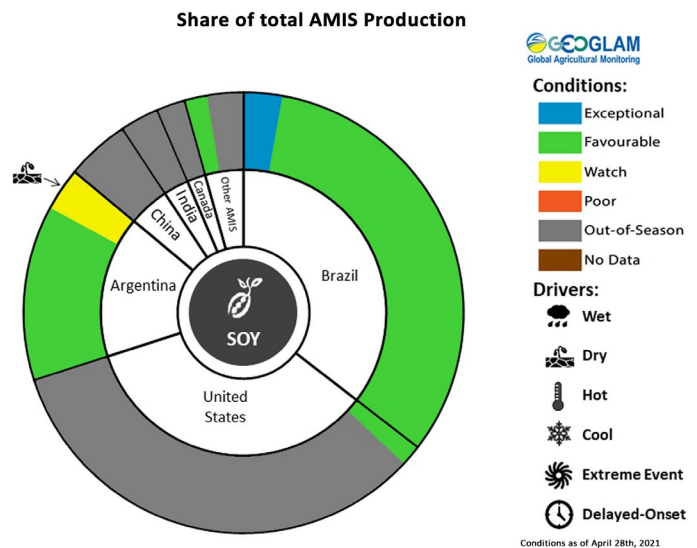
* Assessment based on information as of April 28th

Soybean Conditions for AMIS Countries



Soybean crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 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.

Soybeans: In **Brazil**, harvesting is wrapping up under favourable conditions across most of the country and with exceptional conditions in the Northeast region. Despite the delayed sowing due to the lack of rains, there is an increase in the total sown area compared to last year. Yields across the country are in line with the five-year average, with above-average yields in the Northeast region. In **Argentina**, both the early-planted crop (larger season) and the late-planted crop (smaller season) are now harvesting after suffering some delays due to earlier adverse weather. Conditions remain quite mixed due to the uneven amount and timing of rains throughout the season across the country. In the **US**, sowing is just beginning in the southern states under favourable conditions. In **Ukraine**, sowing is beginning under favourable conditions with ample soil moisture.



For detailed description of the pie chart please see box below.

Information on crop conditions in non-AMIS countries can be found in the [GEGLAM Crop Monitor for Early Warning](#), published May 6th

Pie chart description: Each slice represents a country's share of total AMIS production (5-year average). Main producing countries (representing 95 percent of production) are shown individually, with the remaining 5 percent grouped into the "Other AMIS Countries" category. The proportion within each national slice is coloured according to the crop conditions within a specific growing area; grey indicates that the respective area is out of season. Sections within each slide are weighted by the sub-national production statistics (5-year average) of the respective country. The section within each national slice also accounts for multiple cropping seasons (i.e. spring and winter wheat). When conditions are other than 'favourable', icons are added that provide information on the key climatic drivers affecting conditions.

* Assessment based on information as of April 28th

Climate Forecasts for AMIS Countries

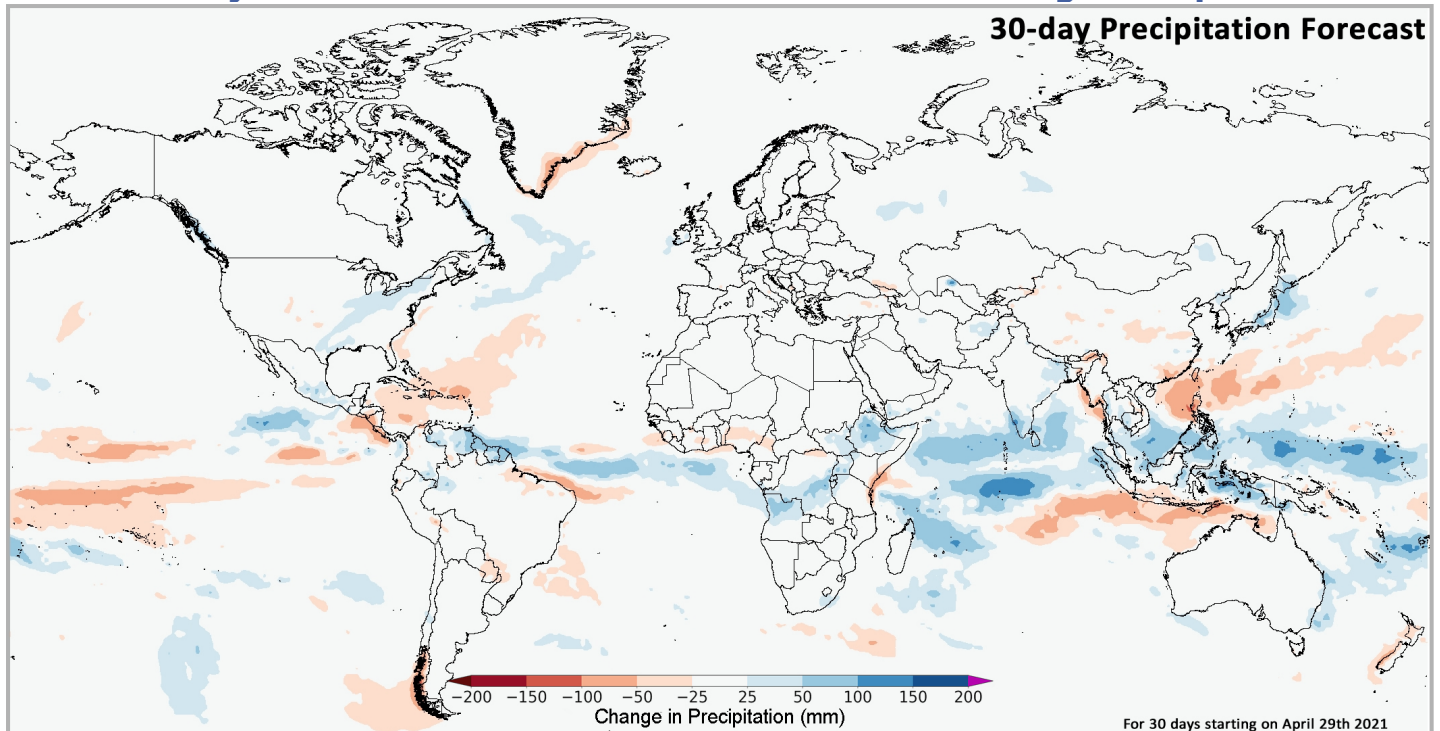
Climate Influences: Weakening La Niña

The current La Niña is weakening. A transition to neutral El Niño-Southern Oscillation (ENSO) is expected in the next month (81% chance for May to July).

Long-range forecasts made at this time of year have a high level of uncertainty. However, IRI/CPC forecasts in April indicated about equal chances that another La Niña event might develop (46% chance), or neutral ENSO conditions will occur (41% chance) during October to December 2021.

Source: UCSB Climate Hazards Center

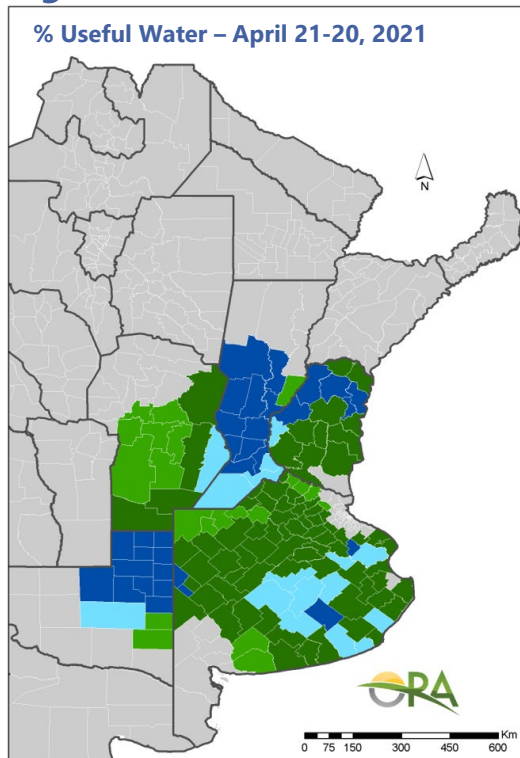
Global 30-day Forecast of Areas with Above or Below-Average Precipitation



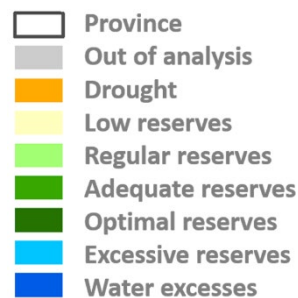
Forecast of areas with above or below-average precipitation over the next 30-days starting on April 29th, 2021. The image is the multimodel mean of precipitations anomaly from the Subseasonal Experiment ([SubX](#)) model forecasts for that day. The anomaly is based on the 1999 to 2016 model average. Skill assessments of SubX can be accessed [here](#). Source: UCSB Climate Hazards Center

The 30-day precipitation forecast indicates a likelihood of above-average rainfall over the Great Lakes and Northeast regions of the US, southern Mexico, Venezuela, Guyana, Suriname, French Guiana, northern and central Angola, southern and central DRC, Rwanda, southern Uganda, South Sudan, Ethiopia, northwest Somalia, southern and eastern India, western Indonesia, western Cambodia, southern Philippines, and Japan. There is also a likelihood of below-average rainfall in Cuba, Haiti, The Dominican Republic, El Salvador, southern Honduras, western Nicaragua, Costa Rica, eastern Paraguay, southern Chile, central Nigeria, the northern coast of Tanzania, coastal Kenya, southern Somalia, southeast China, northern Philippines, and Java Indonesia.

Argentina: Current Water Reserves and Wheat Sowing Probability

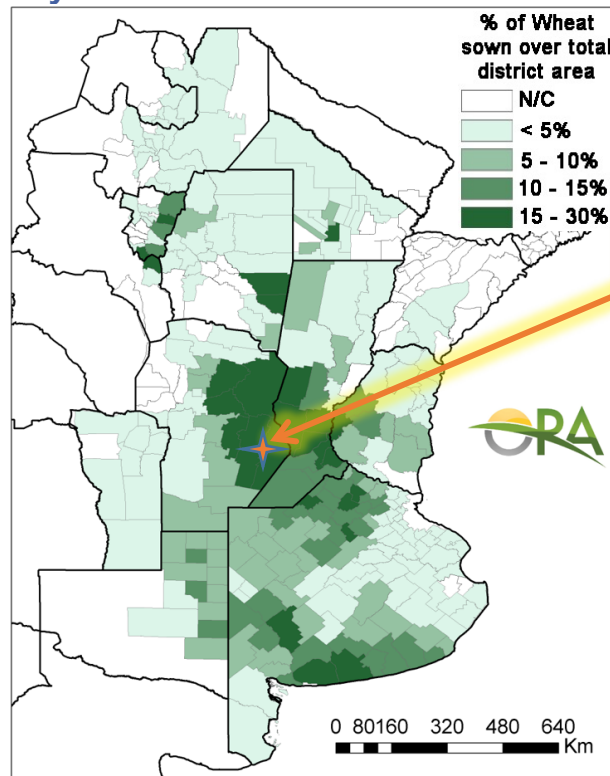


- Significant rains during April have delayed soybean harvest activities in important productive areas. However, this has resulted in no areas with water deficits, so it is expected that the sowing of wheat will not be delayed due to lack of soil moisture.



Source: Office of Agricultural Risk. <http://www.ora.gob.ar/descargas.php>

30-day Wheat Water Stress or Excess Scenarios



Marcos Juárez – Wheat
Early sowing: Mid-May

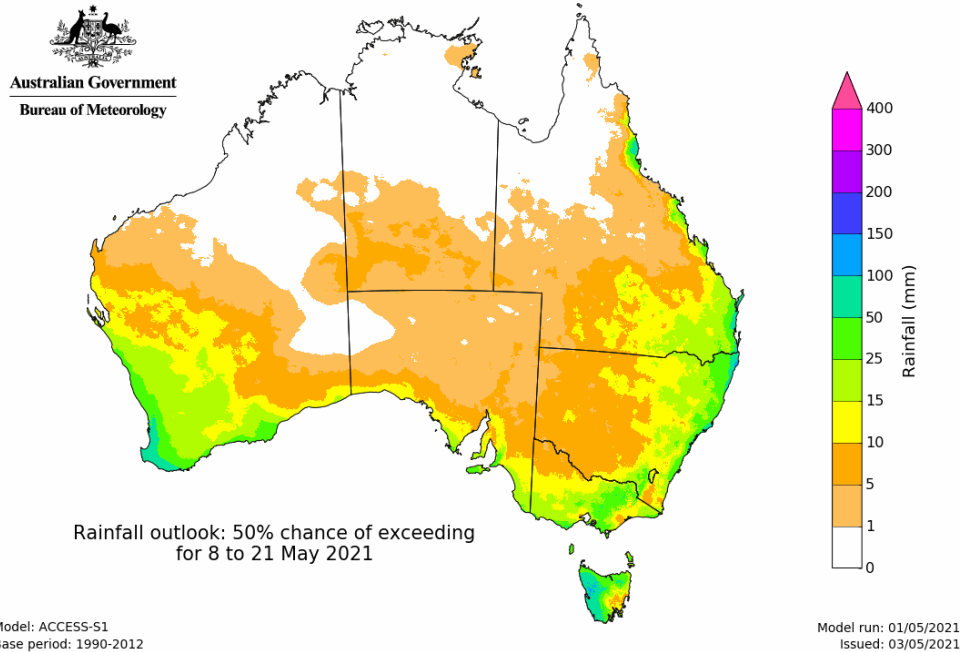
The scenarios were developed by ORA-MAGyP based on the weather forecast of the SMN
<https://www.smn.gob.ar/pronostico-trimestral>

Marcos Juárez is a representative town in the main producing wheat region, with sowing starting in mid-May. The current forecast indicates a greater than 60% probability of adequate groundwater storage at the beginning of sowing. If rains are above average from now until the start of sowing, which is foreseen, there is an estimated 40% probability of excess water.

* Assessment based on information as of April 28th

Australia Climate Outlook

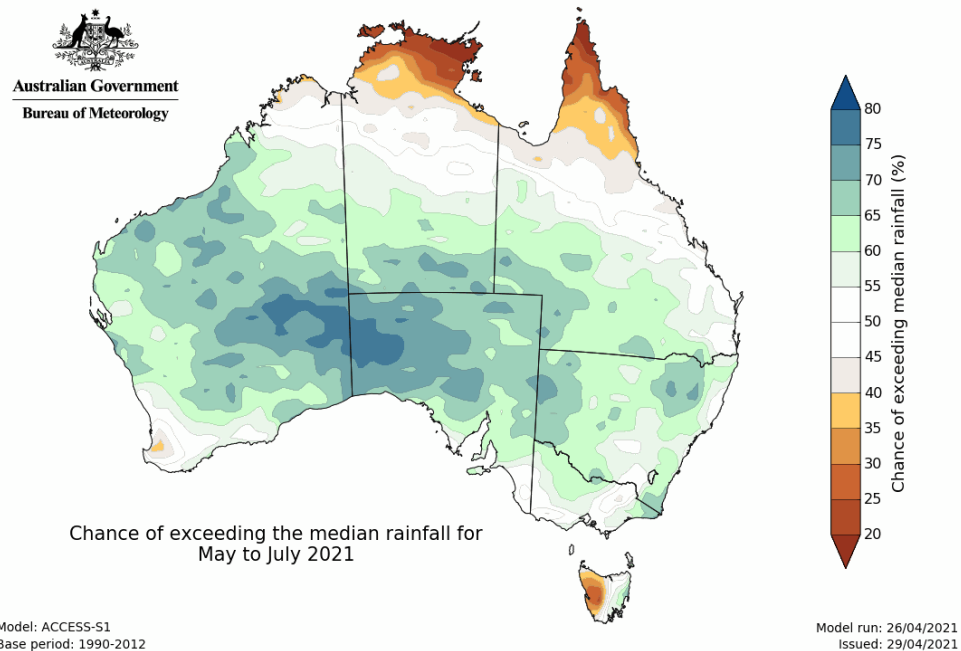
Wheat sowing beginning in May for Australia. The current (May 3rd) weekly rainfall forecast for the next two weeks (May 8th-21st) shows that the majority of wheat-growing areas are likely to receive some rainfall. Wheat-growing areas that will receive the most rainfall during that time are Western Australia, southern Queensland, northern New South Wales, and parts of western Victoria. Additionally, during the next two weeks, daytime maximum temperatures are likely to be close to average while nighttime minimum temperatures are likely to be slightly above-average.



Australia rainfall outlook covering May 8-21st 2021. Data from The Australian Bureau of Meteorology.

Image from: <http://www.bom.gov.au/climate/ahead/outlooks/>

The longer-term May to July outlook issued on April 29th indicates above-average rainfall for the northern wheat-growing areas of Western Australia, South Australia, and northern New South Wales. The remaining wheat-growing areas are likely to receive average rainfall. During May to July, both daytime maximum temperatures and nighttime minimum temperatures are likely to be above-average.



Chance of exceeding median rainfall for May to July 2021. Data from The Australian Bureau of Meteorology.

Image from: <http://www.bom.gov.au/climate/ahead/outlooks/>

Source: Australia Bureau of Meteorology

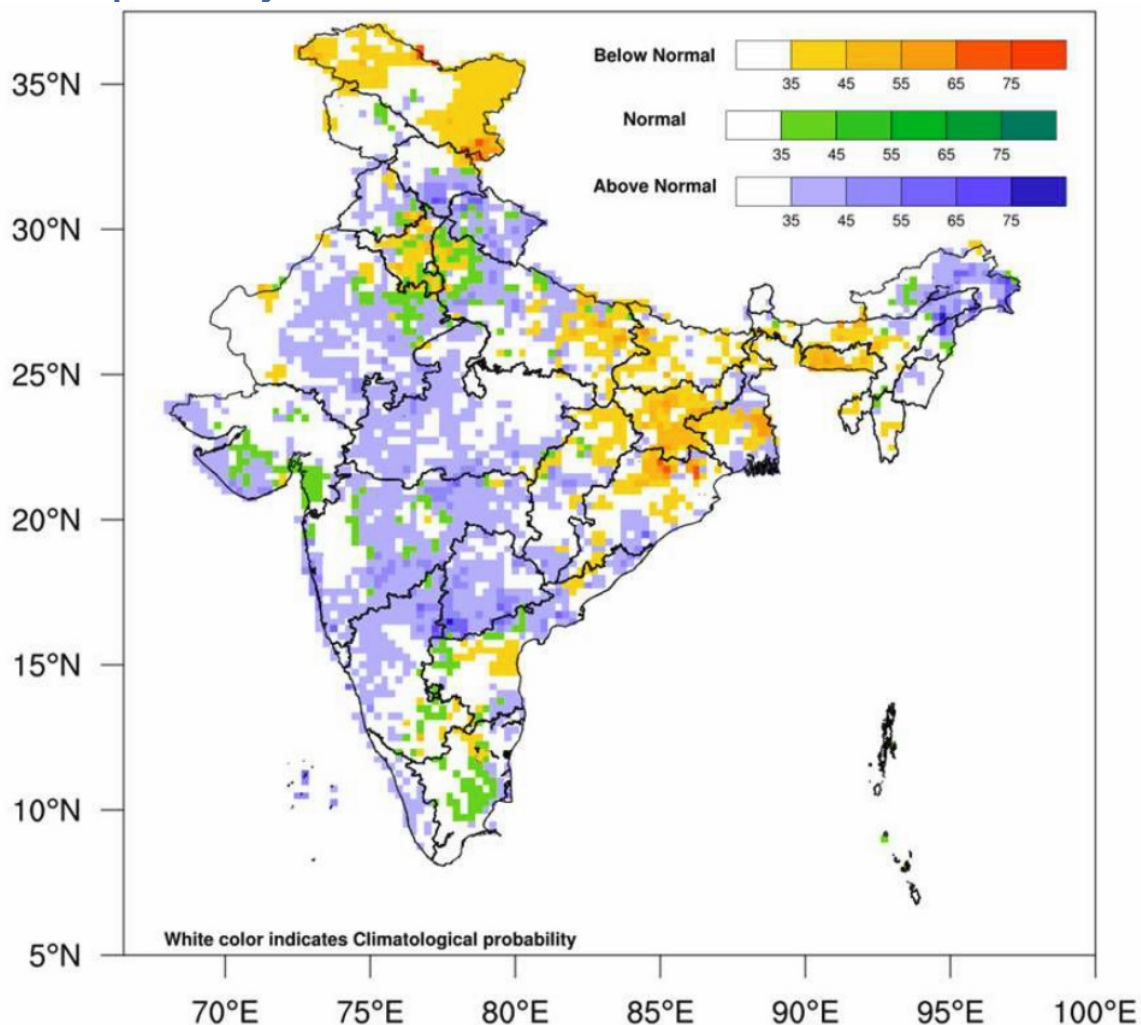
India: Southwest Monsoon Rainfall Forecast

The 2021 southwest monsoon (June to September) is forecast by the India Meteorological Department (April) to have average rainfall on the whole across the country. The monsoon seasonal rainfall across the country is expected to be 98% of the long period average (1961-2010) with an error of +/- 5%. The long period average rainfall for the country as a whole is 88 cm.

Both the El Niño-Southern Oscillation (ENSO) and the India Ocean Dipole (IOD) have strong influences on the southwest monsoon. Currently, ENSO is expected to reach neutral conditions this month (May) and is expected to remain neutral throughout the monsoon season. IOD conditions are currently neutral and are expected to remain neutral or to develop negative IOD conditions, depending on the model used.

The current forecast shows the probability of either average or slightly above-average rainfall across most of the country. There is also a slight probability of below-average rainfall across the north-western and central-east regions of the country. The next forecast from the India Meteorological Department will be during the last week of May 2021.

Tercile probability rainfall forecast for the 2021 southwest monsoon season



Probability forecast of tercile categories (below normal, normal, and above normal) for the rainfall over India during the 2021 southwest monsoon season (June-September). Images from https://mausam.imd.gov.in/imd_latest/contents/press_release.php.

Source: India Meteorological Department

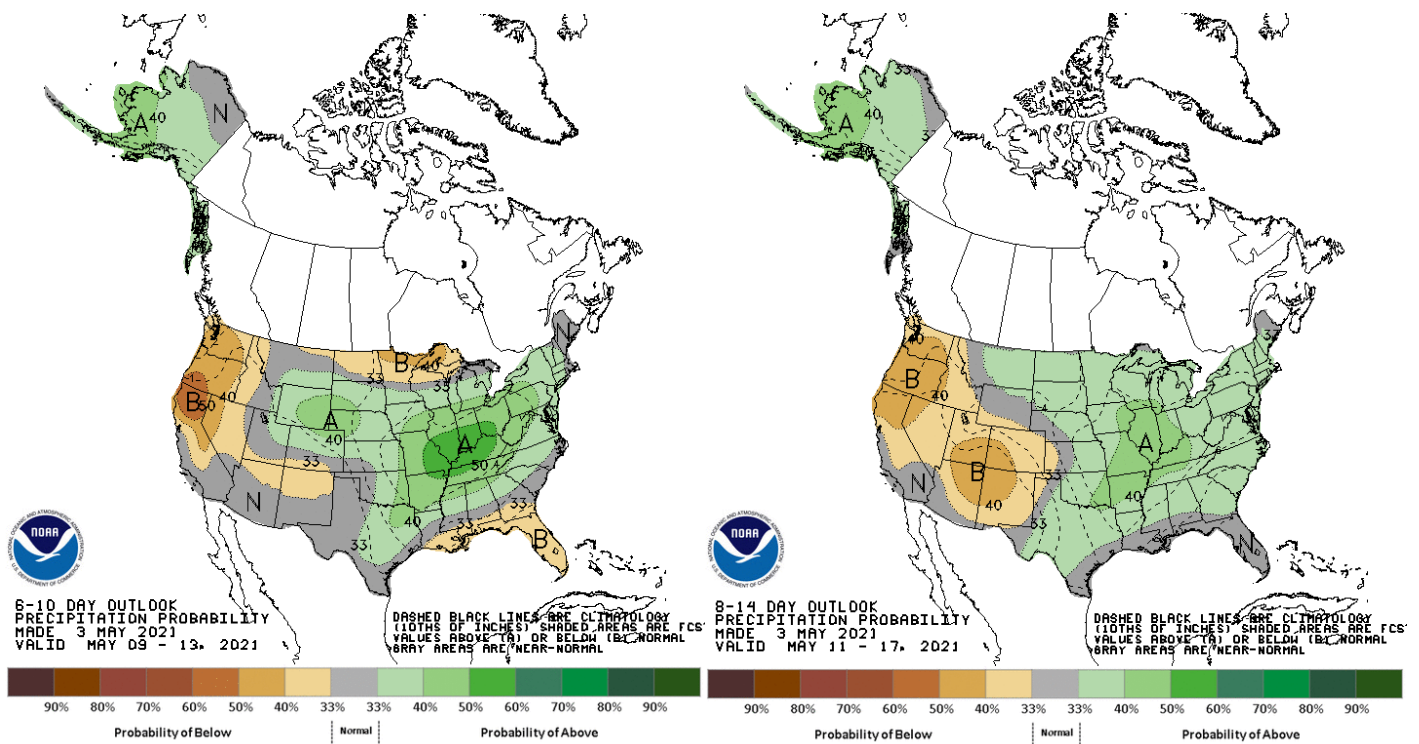
United States Climate Outlook

For the May 9-13 short-term outlook, there is the possibility of below-average rainfall from the central West Coast (50%) into the Pacific Northwest (33-50%) and extending into the southwest (33%). Additional areas of probable below-average precipitation are in Florida (33%) and from northern Michigan to western North Dakota (33-40%). Areas of possible above-average precipitation are in the central Great Plains (33-40%) and from the eastern Great Plains across to the East Coast (33-50%), with the highest probabilities centered in the Ohio River Valley.

During the May 11-17th short-term outlook, the possibility of below-average precipitation remains across the central West Coast and the Pacific Northwest (33-40%). The southwest has an increased probability for below-average rainfall (33-40%). The eastern half of the US retains the probabilities of above-average rainfall (33-40%) with areas expanding to include the southern Great Plains and the northern Great Plains. The highest probabilities are centered around the western Ohio River Valley, Lower Mississippi Valley, and the Tennessee Valley.

For the longer-term May-June-July (MJJ) 2021 outlook, above-average temperatures are likely over most of the contiguous US with the highest likelihood (over 70%) centered over the Four Corners region in the Southwest and centered on coastal New England (60%). For precipitation, below-average precipitation is likely from the Pacific Northwest across the Rockies, central Great Plains, and down across Texas. Above-average precipitation is likely along the East Coast and into the Ohio River Valley.

6-10 Day and 8-14 Day Precipitation Outlooks



The official 6-10 and 8-14 day outlooks issued May 3rd 2021 from NOAA/National Weather Service, National Centers for Environmental Predictions, Climate Prediction Center. Images from <https://www.cpc.ncep.noaa.gov/products/forecasts/>.

Source: NOAA Climate Prediction Center

* Assessment based on information as of April 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 not far from 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 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.

Conditions:

	Exceptional
	Favourable
	Watch
	Poor
	Out-of-Season
	No Data

Drivers:

These represent the key climatic drivers that are having an impact on crop condition status. They result in production impacts and can act 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

	Wet
	Dry
	Hot
	Cool
	Extreme Event
	Delayed-Onset

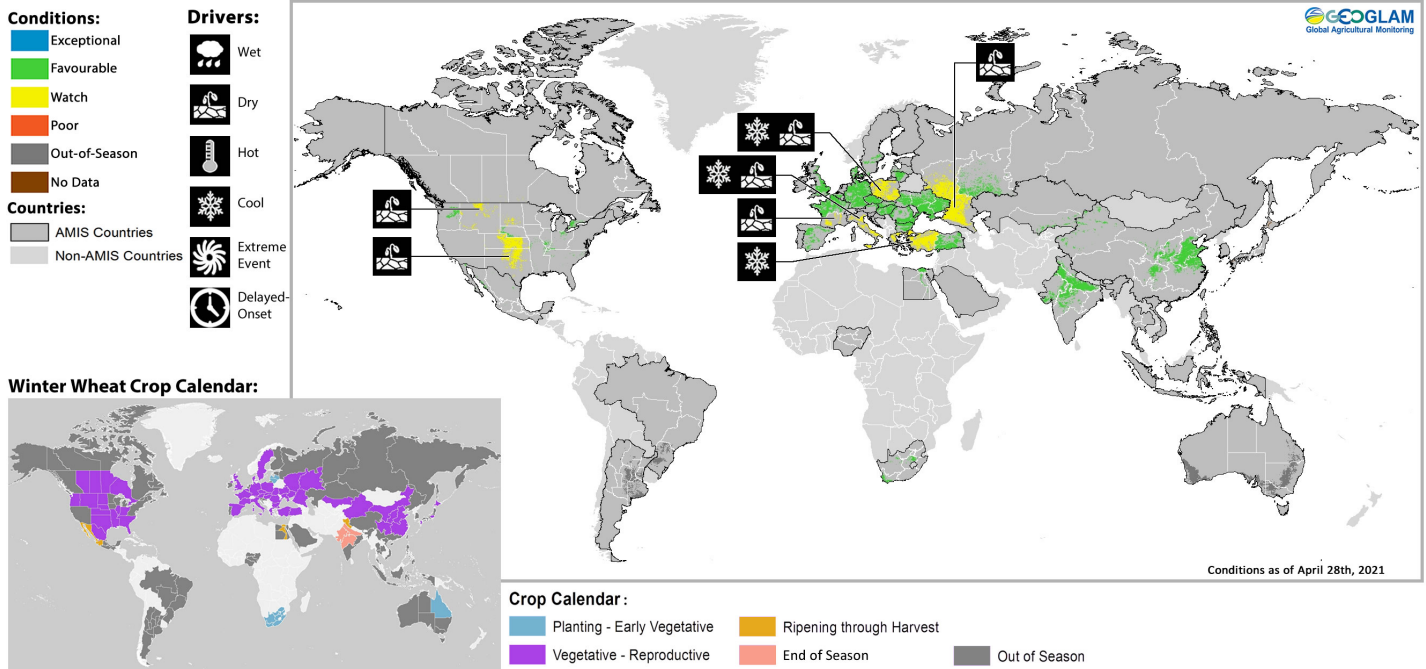
Crop Season Nomenclature:

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.

Crop Season Nomenclature				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Argentina	Soybean	Spring-planted	Summer-planted	
Brazil	Maize	Summer-planted (larger producing season)	Spring-planted (smaller producing season)	
Canada	Wheat	Winter-planted	Spring-planted	
China	Maize	Spring-planted	Summer-planted	
China	Rice	Single-season	Late-season	Early-season
China	Wheat	Winter-planted	Spring-planted	
Egypt	Rice	Summer-planted	Nili season (Nile Flood)	
India	Maize	Kharif	Rabi	
India	Rice	Kharif	Rabi	
Indonesia	Rice	Wet-season	Dry-season	
Mexico	Maize	Spring-planted	Autumn-planted	
Nigeria	Maize	Main-season	Short-season	
Nigeria	Rice	Main-season	Off-season	
Philippines	Rice	Wet-season	Dry-season	
Russian Federation	Wheat	Winter-planted	Spring-planted	
Thailand	Rice	Wet-season	Dry-season	
United States	Wheat	Winter-planted	Spring-planted	
Viet Nam	Rice	Wet-season	Dry-season	

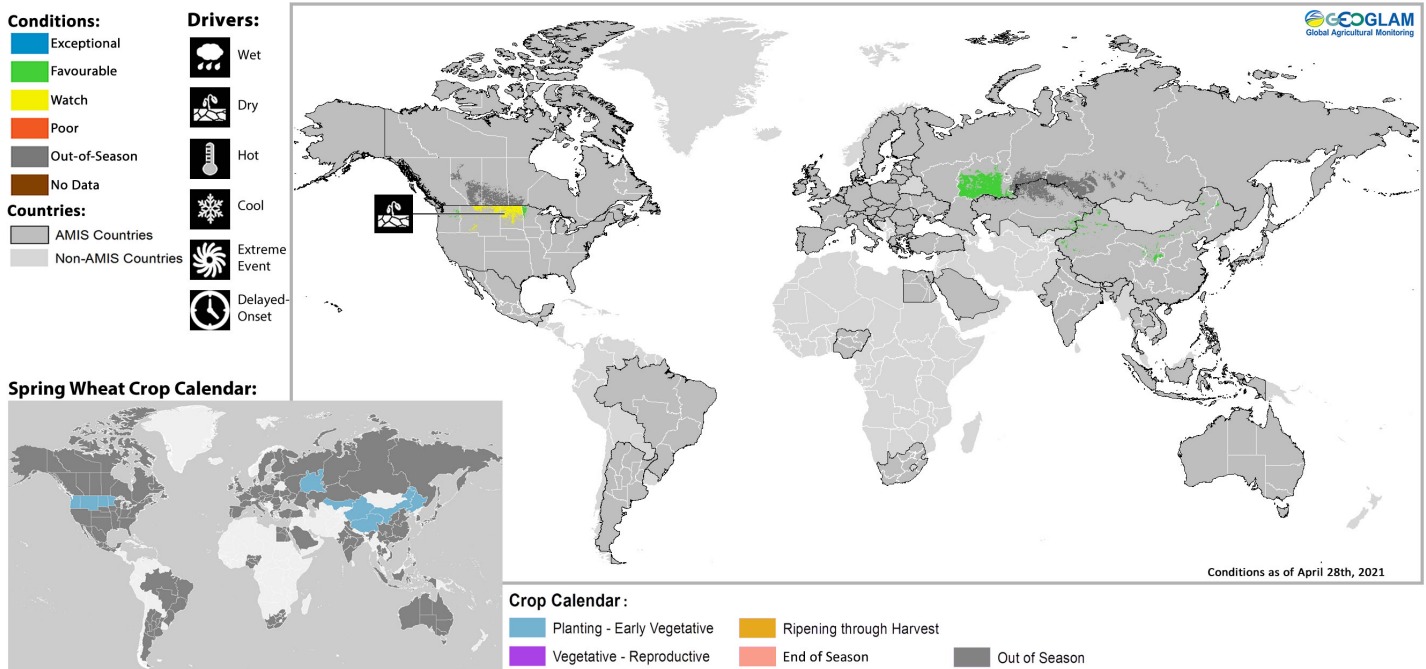
Appendix 2: Crop Season Specific Maps

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. Condition information is based upon information as of April 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.

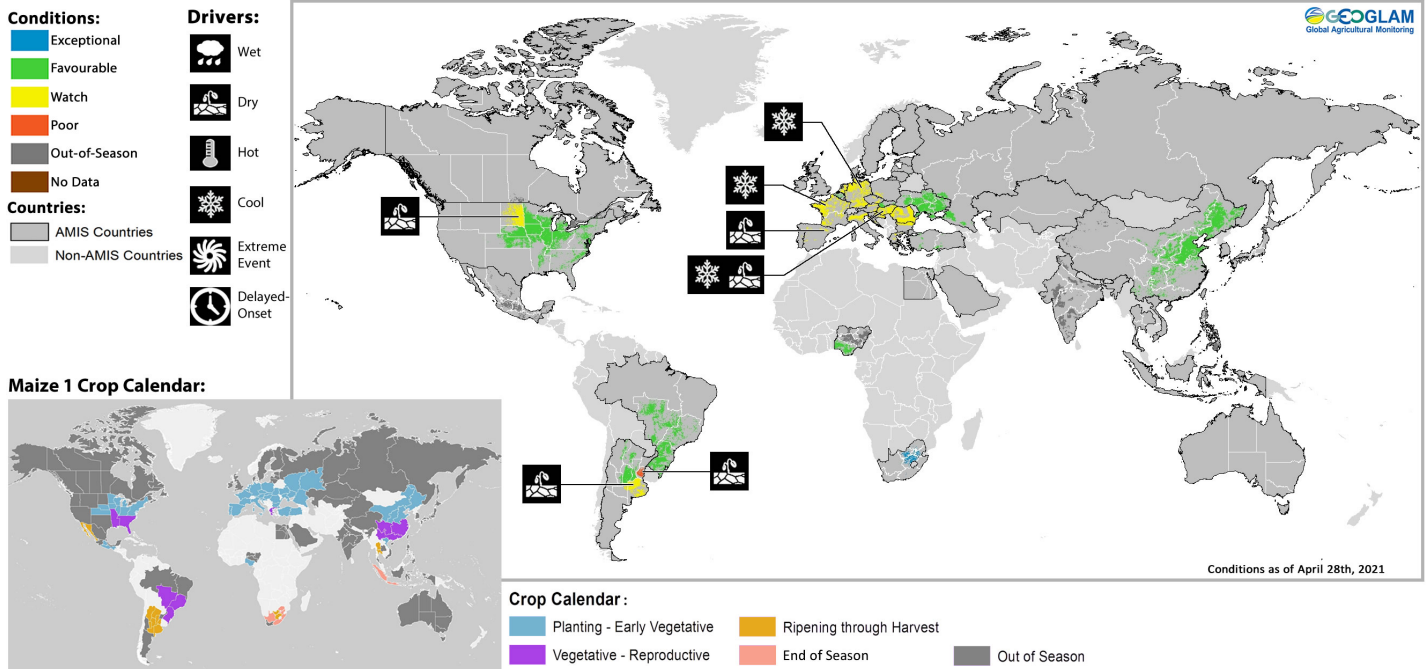
Spring Planted Wheat Conditions for AMIS Countries



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. Condition information is based upon information as of April 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.

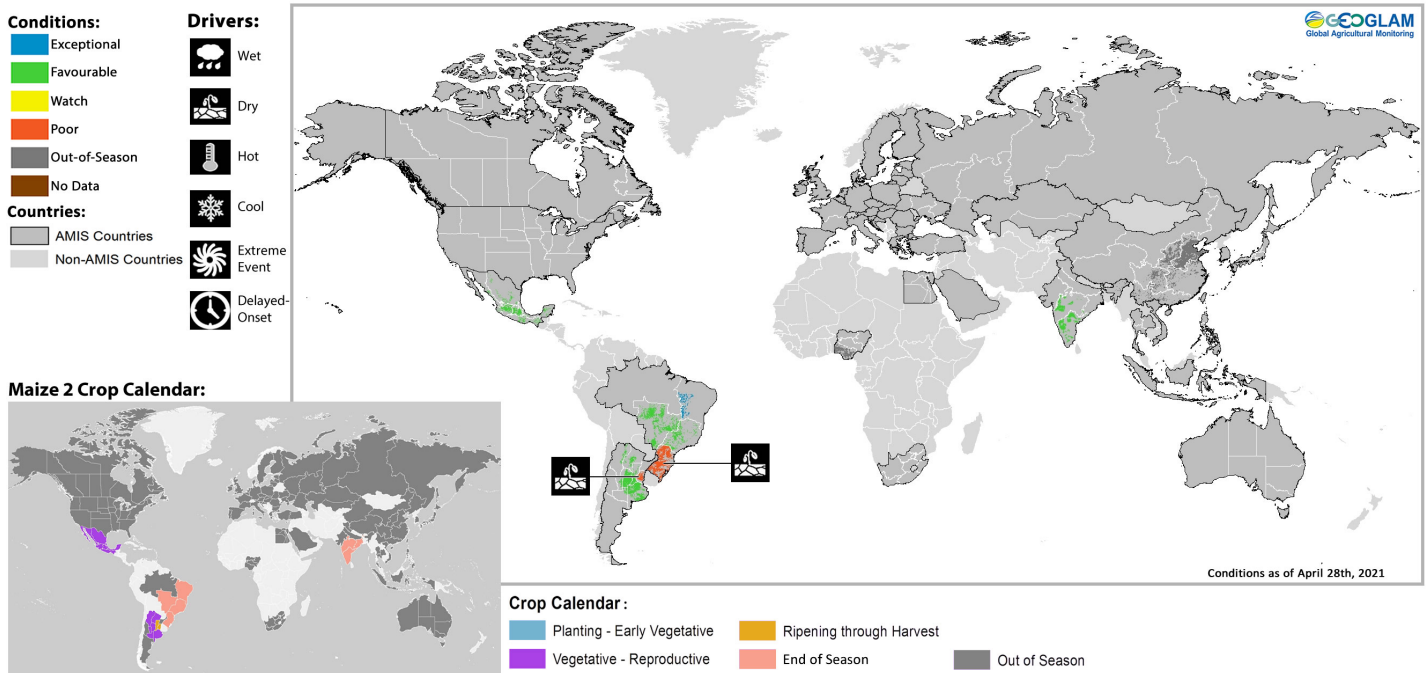
* Assessment based on information as of April 28th

Maize 1 Conditions for AMIS Countries



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. Condition information is based upon information as of April 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.

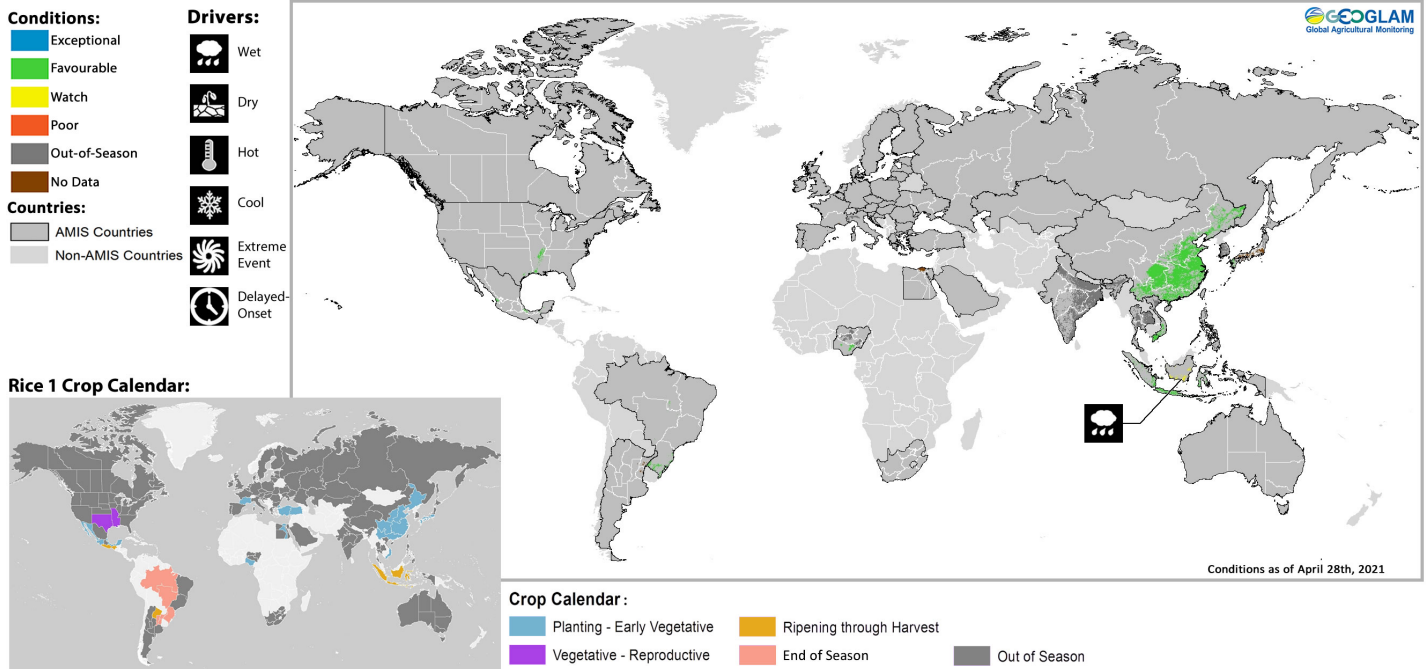
Maize 2 Conditions for AMIS Countries



Maize2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 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.

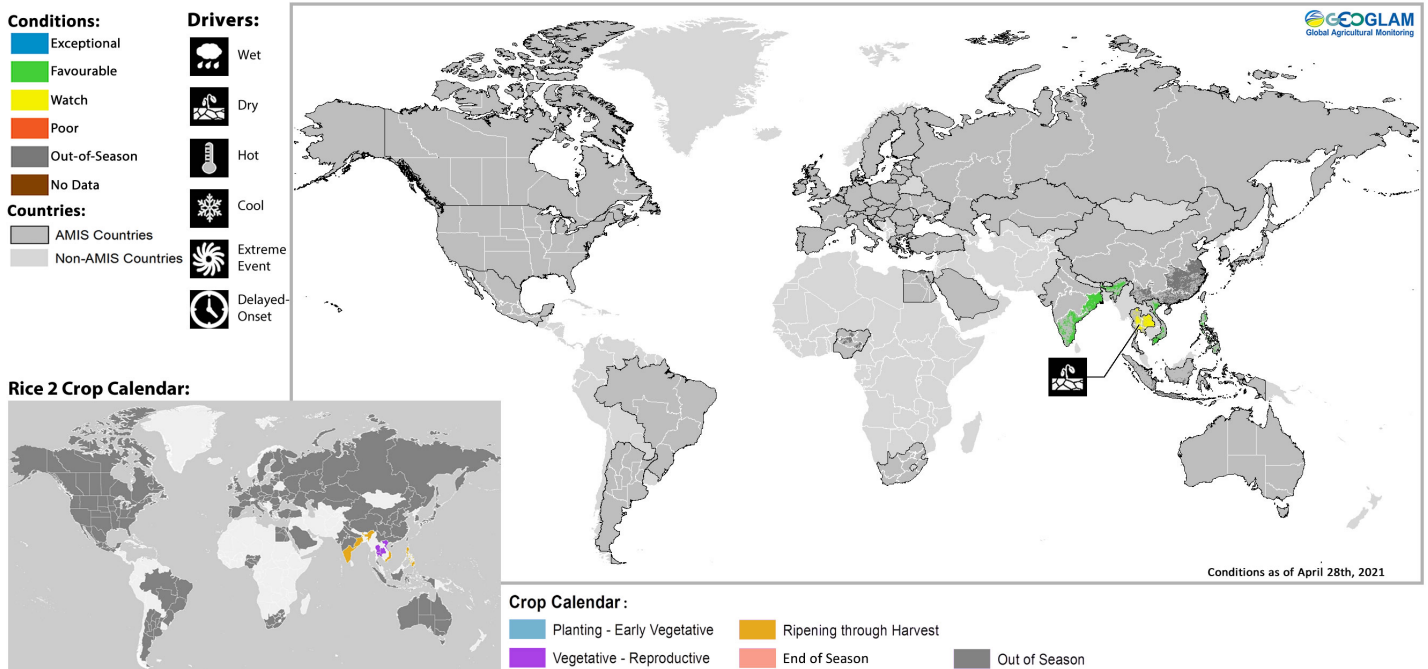
* Assessment based on information as of April 28th

Rice 1 Conditions for AMIS Countries



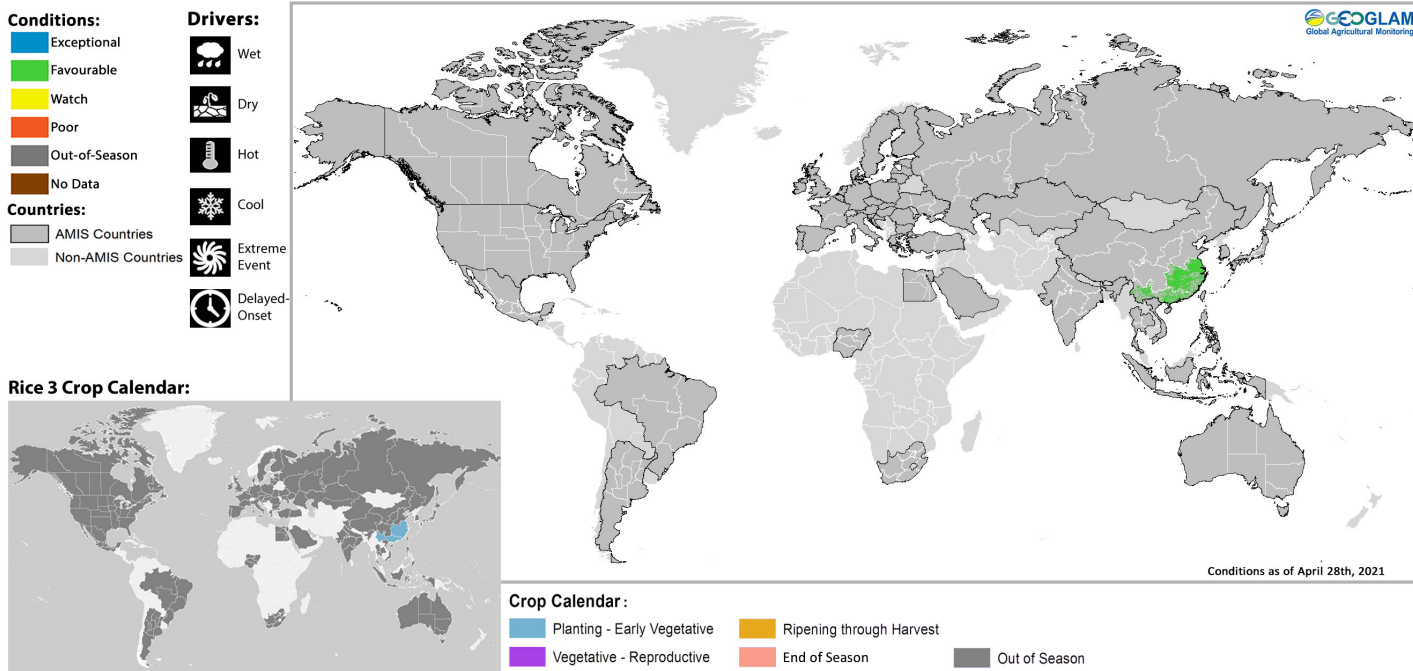
Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible 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 Conditions for AMIS Countries



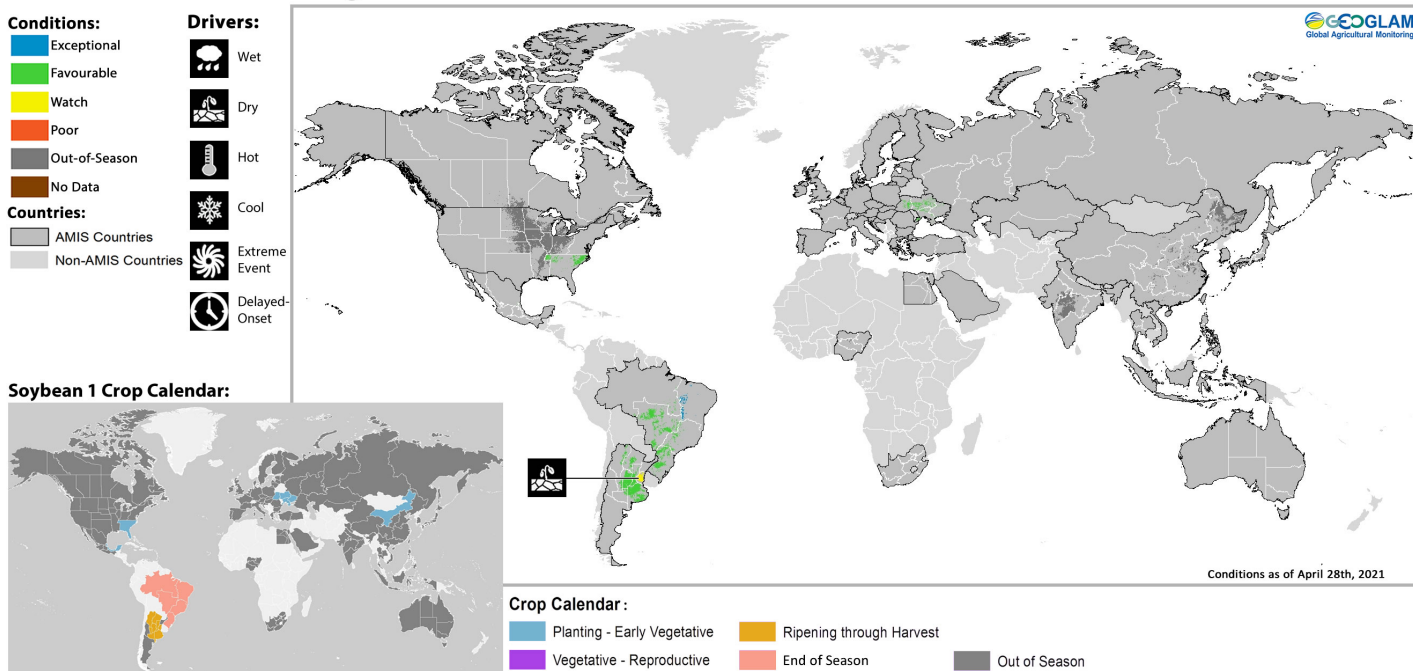
Rice 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of April 28th. Where crops are in less than favourable conditions the climatic drivers responsible 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 3 Conditions for AMIS Countries



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. Condition information is based upon information as of April 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.

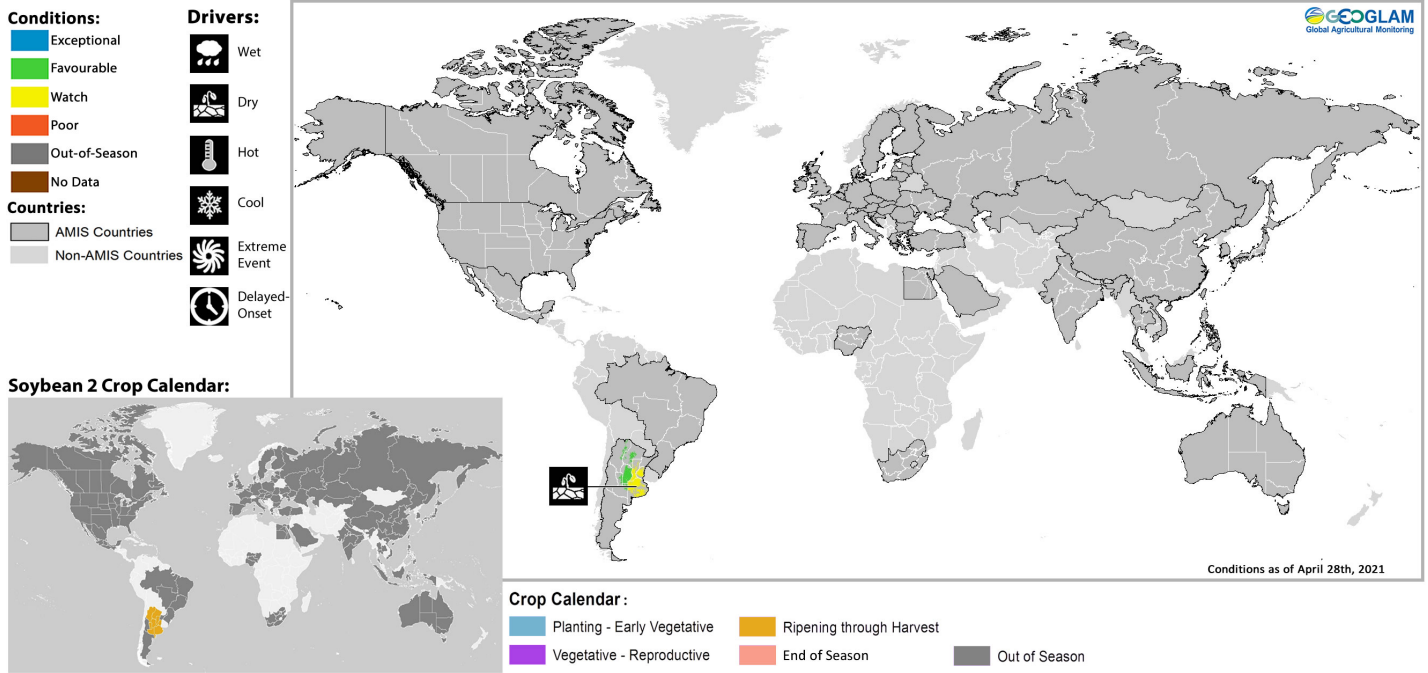
Soybean 1 Conditions for AMIS Countries



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. Condition information is based upon information as of April 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 April 28th

Soybean 2 Conditions for AMIS Countries



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. Condition information is based upon information as of April 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 April 28th



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The Crop Monitor is a part of GEOGLAM, a GEO global initiative.

Photo courtesy of Brian Barker

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