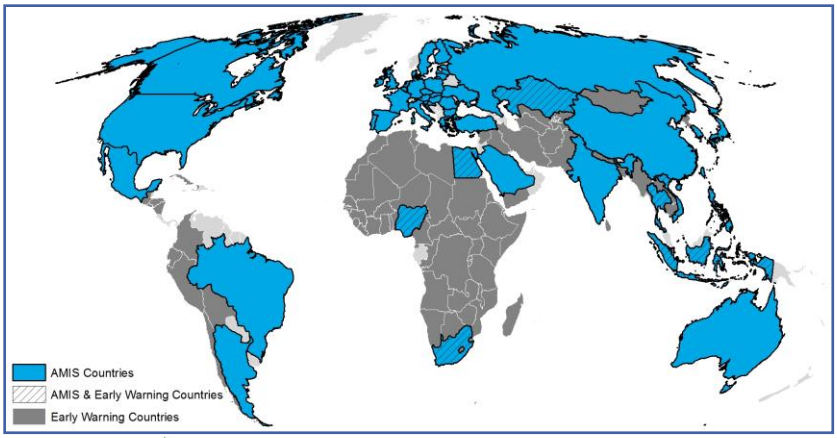
Crop Monitor for AMIS

Overview:

As of the end of October, conditions are generally favourable for all four crops. **Winter wheat** conditions in the southern hemisphere are generally favourable with the exception of Australia. Sowing of winter wheat in the northern hemisphere is ongoing under favourable conditions. **Maize** conditions in the northern hemisphere are exceptional in parts of the US, southern Europe, and Ukraine. While sowing in the southern hemisphere is beginning under favourable conditions. **Rice** in Asia is generally favourable with some mixed conditions in Indonesia, Thailand, and the Philippines. **Soybean** conditions are exceptional across most of the US and generally favourable throughout the rest of the northern hemisphere.



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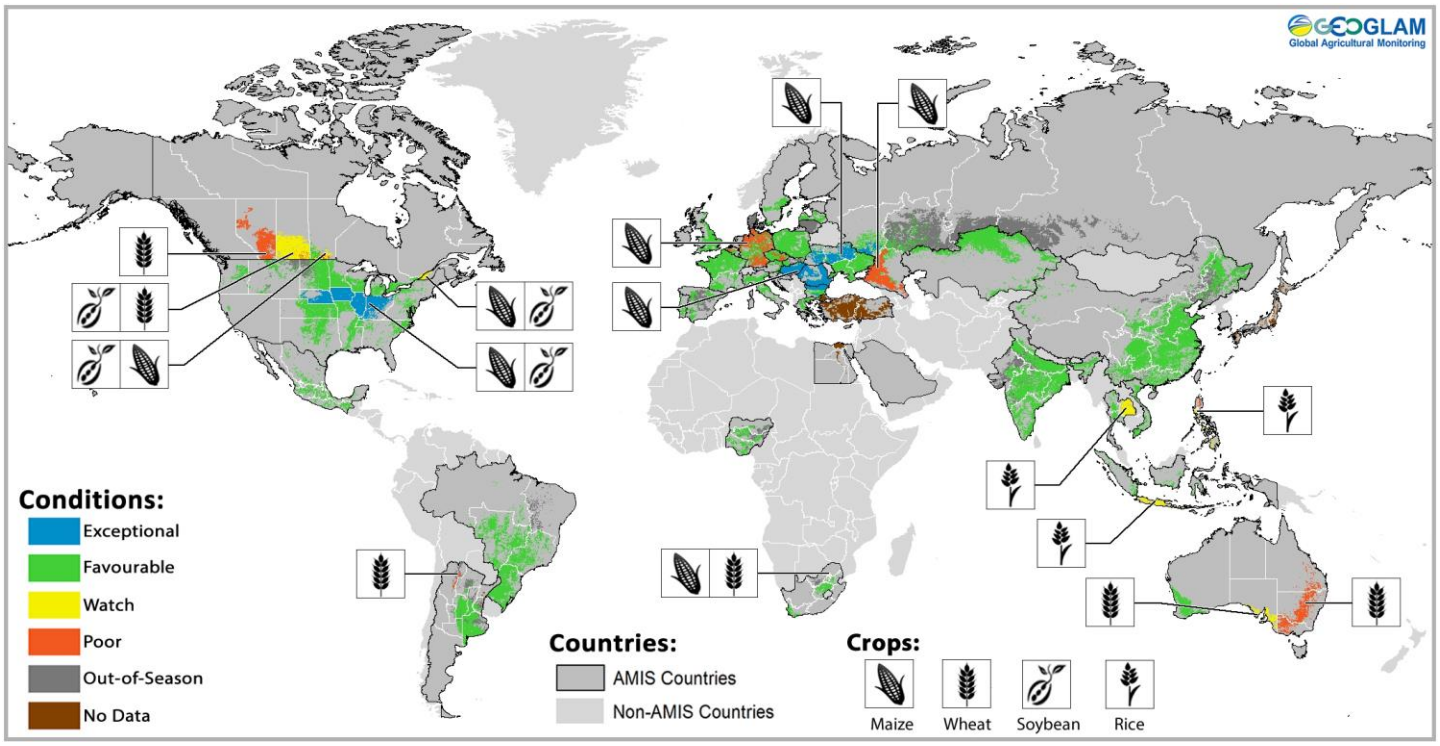
Conditions at a glance for AMIS countries (as of October 28th)



Crop condition map synthesizing information for all four AMIS crops as of October 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.***

Conditions at a glance

Wheat - In the northern hemisphere, sowing of winter wheat has begun under generally favourable conditions. In Canada, spring wheat harvest is being delayed by rain and snow. Sowing of winter wheat has begun under generally favourable conditions. In the southern hemisphere, winter wheat conditions are mixed with poor conditions in eastern Australia.

Maize - In the northern hemisphere, harvest is ongoing with a bumper crop expected in portions of the US, Europe, Ukraine, and the Russian Federation. However, dry conditions are negatively impacting expected yields in northern Europe and in southern Russian Federation. In the southern hemisphere, Brazil and Argentina are sowing the spring-planted crop under favourable conditions.

Rice - In East and South Asia, conditions are favourable as the main rice seasons draw to a close. In Southeast Asia, the harvest of wet-season rice is beginning in the northern countries, while sowing of wet-season- rice is starting in Indonesia.

Soybeans - In the northern hemisphere, US harvest is ongoing with expected record yields and production. Conditions are favourable across China, India, and Ukraine, while prospects are mixed for Canada. In the southern hemisphere, sowing is underway in Brazil.

El Niño and Indian Ocean Dipole Update

El Niño Southern Oscillation (ENSO) conditions are currently neutral. Signs of El Niño development have been observed in the Pacific Ocean, with forecasts currently indicating a 70-75 percent chance of a weak-to-moderate El Niño during the Northern Hemisphere 2018/19 winter. Associated with this El Niño event, between November and February, are increased chances of above normal rainfall in parts of Central Asia, East Africa, the southern US, Mexico, and southeastern South America. Drier than normal conditions are anticipated for the Indo-Pacific region, including parts of southeast Asia, Indonesia, and Australia, and for parts of Central America, the Caribbean and northern Brazil. For Southern Africa, models are not forecasting below normal rainfall, potentially due to the weak anticipated El Niño and/or other regional factors.

The Indian Ocean Dipole (IOD) has tended towards a positive state. This increases potential for heavy rainfall in East Africa and for warm, dry conditions in Australia. IOD is most likely to return to neutral during November and thus is not expected to enhance El Niño-related rainfall outcomes after that time.

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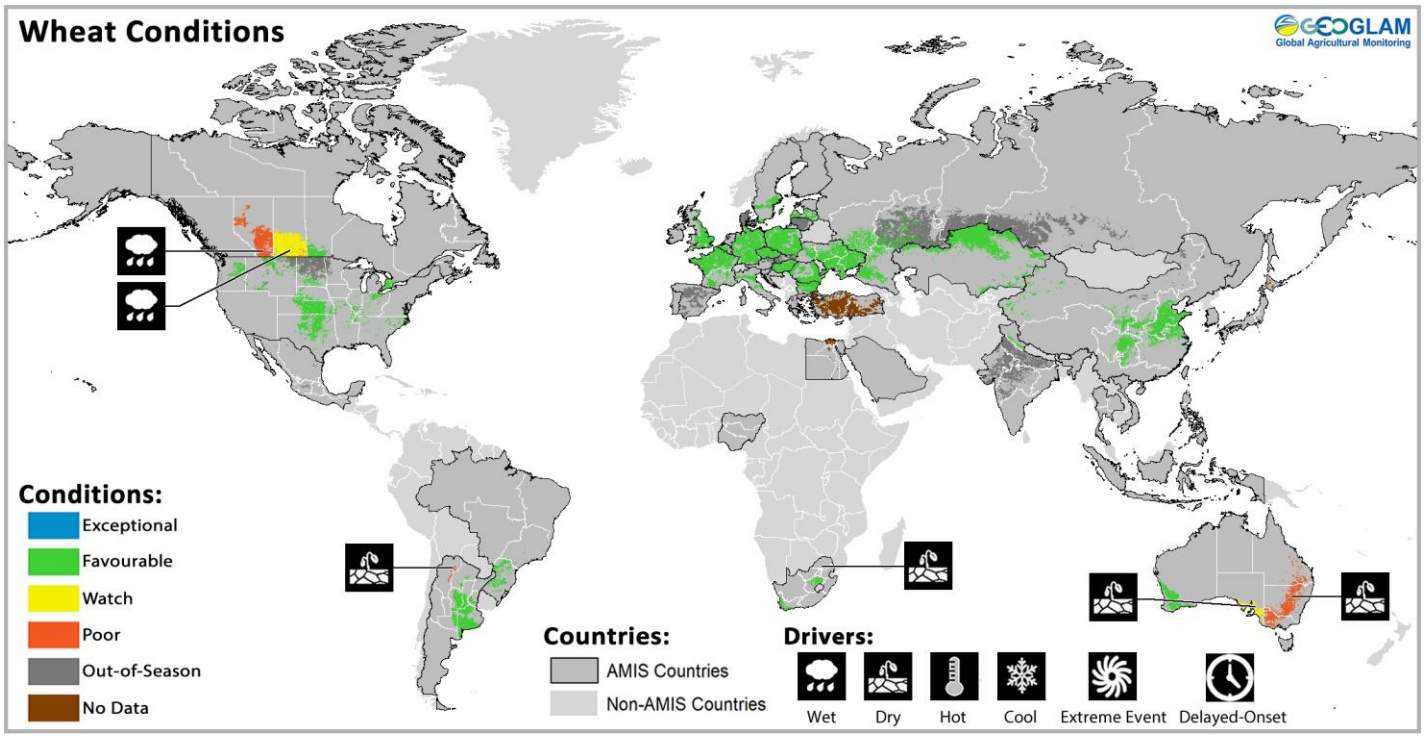
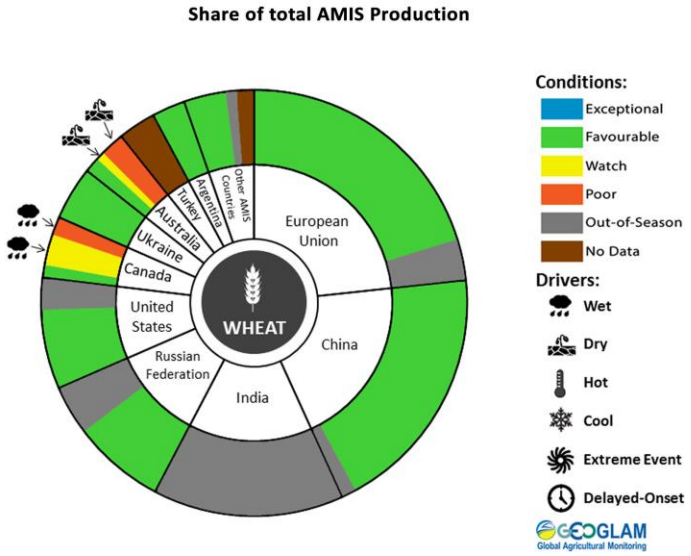
Wheat Conditions for AMIS Countries



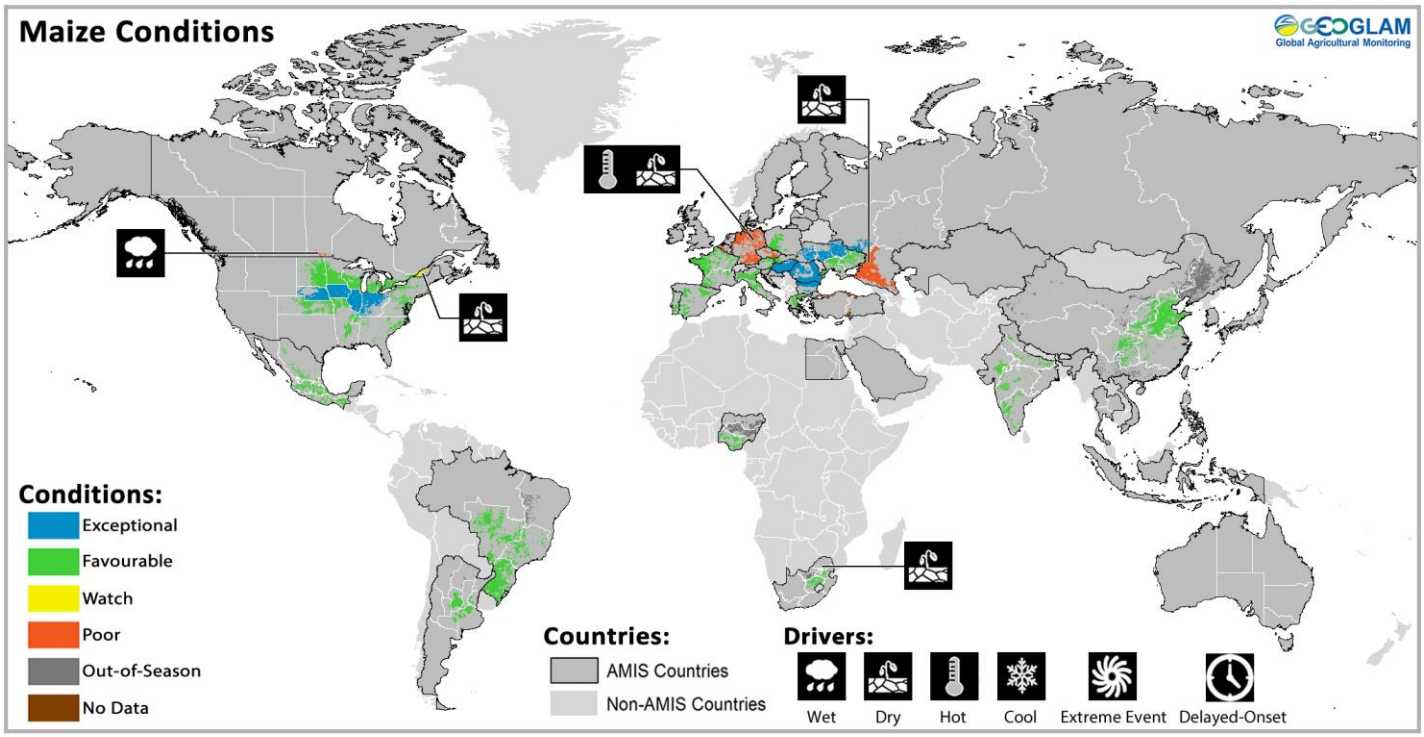
Wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in other than favourable conditions the climatic drivers responsible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

Wheat: In the **EU**, persistent dry conditions across portions of Europe are delaying winter wheat sowing. In **Ukraine**, winter wheat sowing is complete with generally favourable conditions. However, some areas in the southern and eastern regions that are experiencing soil moisture deficits at this early stage of the season. In the **Russian Federation**, winter wheat sowing is complete with crops emerging under favourable conditions. In **Kazakhstan**, spring wheat harvest is complete, with a slight increase in yields compared to last year. In **China**, sowing of winter wheat is ongoing under favourable conditions. In **India**, sowing of winter wheat is beginning in the northern states under favourable conditions. In the **US**, winter wheat sowing is beginning across the country under favourable conditions. In **Canada**, delays in harvesting spring wheat continue across the Prairies due to wet weather, impacting the conditions of the remaining crops. Yields vary across the Prairies depending on the amount of seasonal rainfall received, with overall yields estimated to drop compared to last year. In **Australia**, yields remain considerably variable across the country heading into harvest, with favourable conditions in Western Australia and parts of South Australia, while in the east, conditions are poor due to a lack of rainfall, most notably in Queensland and New South Wales. In **Argentina**, conditions are generally favourable as the harvest begins with some areas of concern in the northern regions.



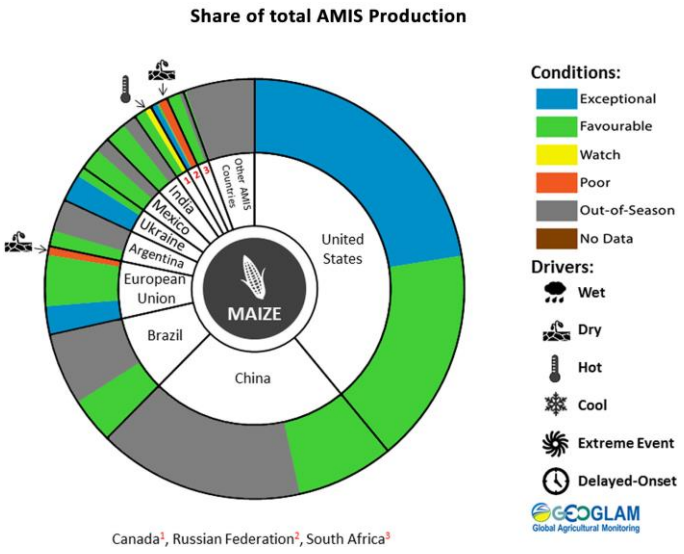
For detailed description of the pie chart please see box below.

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 October 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.

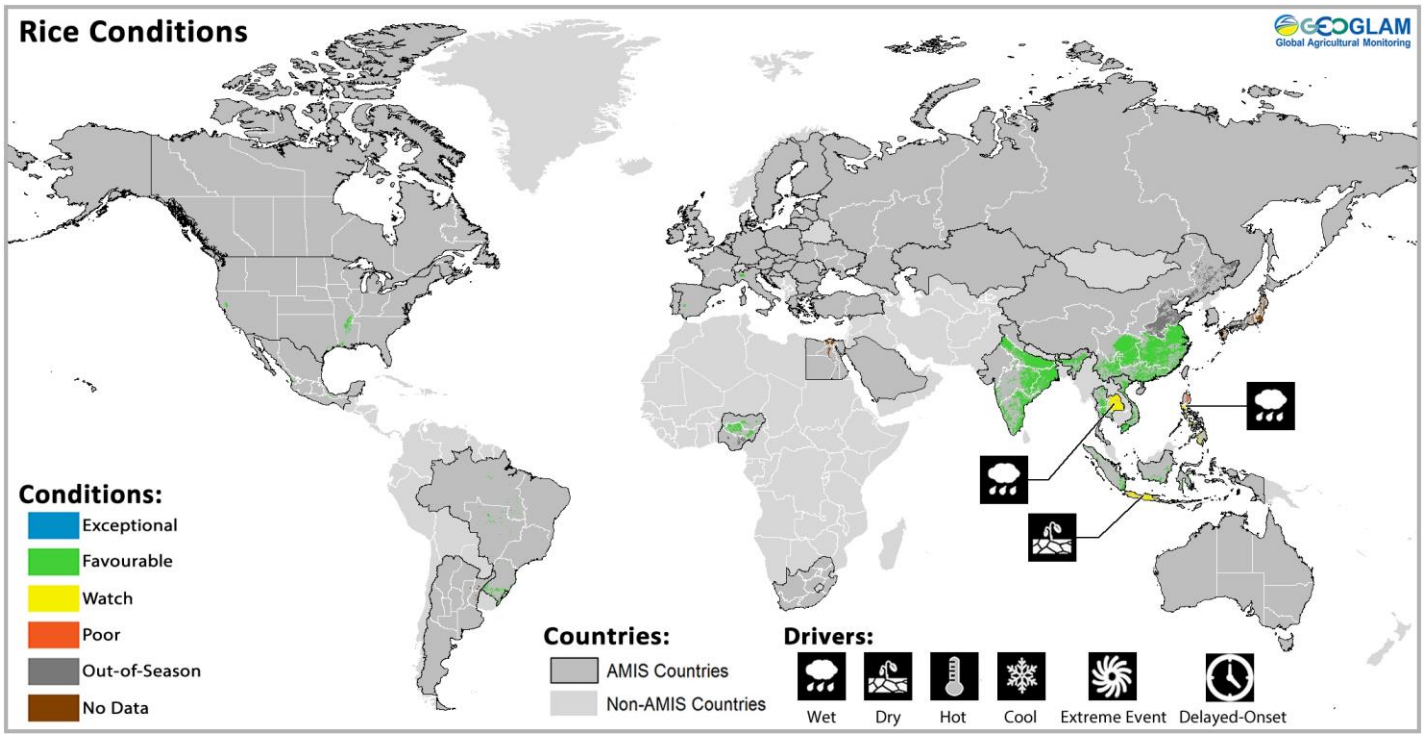
Maize: In the **US**, harvest is progressing with a bumper crop expected in many parts of the country. In **Canada**, conditions remain mixed with favourable conditions in the main producing province of Ontario and unfavourable conditions in Manitoba, and Quebec. In **Mexico**, conditions are favourable for the spring-summer crop. In the **EU**, the ongoing harvest is benefiting from warmer and drier-than-usual conditions. Overall EU yield expectations remain above the five-year average. In **Ukraine**, harvest is ongoing with record yields expected in the central and western regions. In the **Russian Federation**, conditions are mixed with record yields in the Central district and poor yields in the Southern district. In **China**, harvest is complete with another year of high production expected thanks to good yields. In **India**, harvest is wrapping up for Kharif maize under favourable conditions. An increase in production is estimated owing to a slight expansion of total sown area and good yields. In **Brazil**, sowing of the spring-planted crop is ongoing in the main producing regions under favourable conditions. In **Argentina**, sowing is continuing for the spring-planted crop under generally favourable conditions, albeit with some delays due areas of low soil moisture. In some areas of Córdoba, low soil moisture is delaying sowing. In **South Africa**, sowing is just beginning in eastern regions under generally favourable conditions.



Canada[1], Russian Federation[2], South Africa[3]

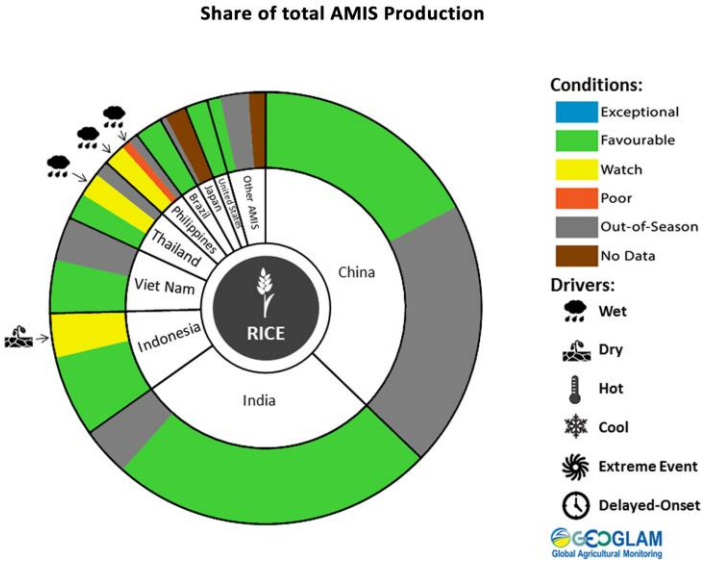
For detailed description of the pie chart please see box below.

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 October 28th. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed.

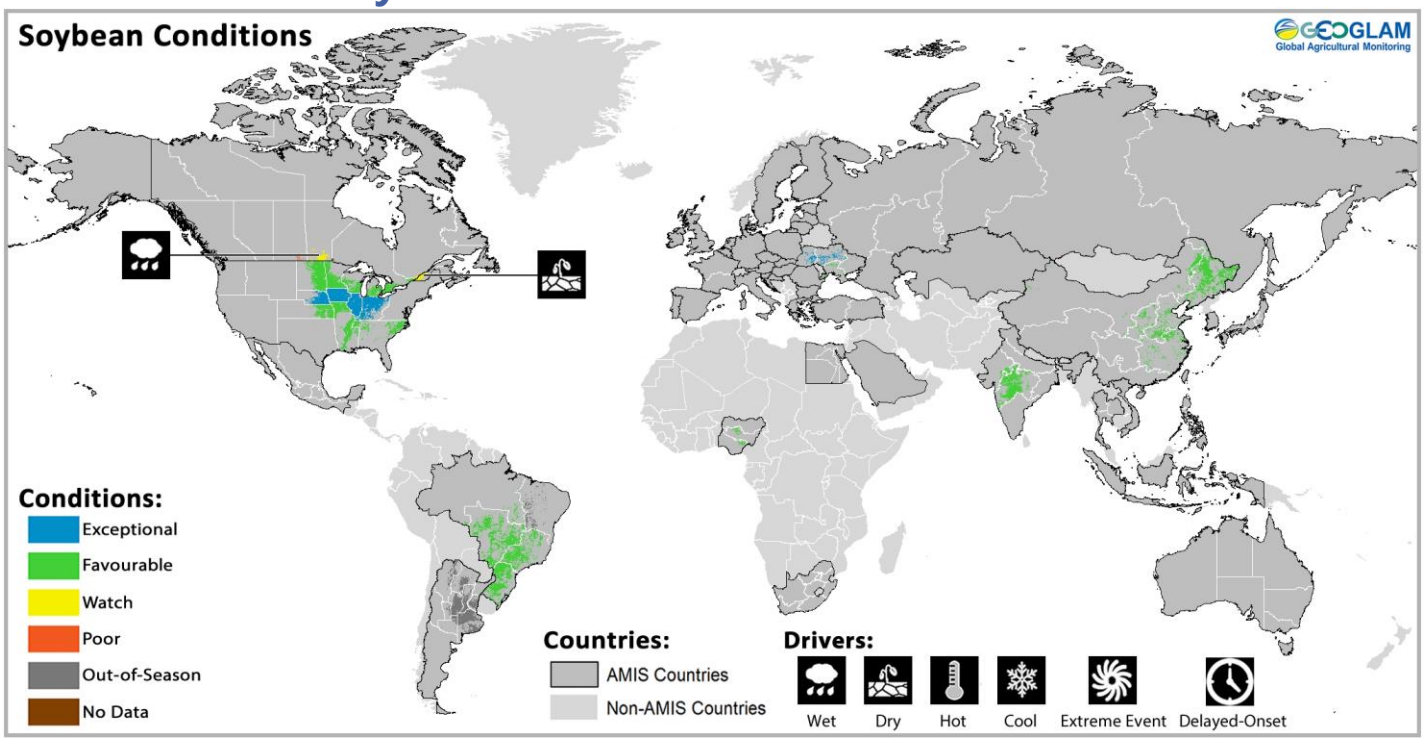
Rice: In **China**, harvest for single rice is ongoing under favourable conditions and late rice in the south is maturing under favourable conditions. In **India**, harvest of the Kharif rice is beginning in the northern states under favourable conditions, while in the southern and eastern regions the crop is entering the grain filling stage. An increase in overall production is estimated compared to last year due to good yields and despite a slightly lower total sown area this season. In **Indonesia**, harvest of dry-season rice continues with yields remaining above last year's. Sowing of wet-season rice has begun with areas of concern in Java and Lesser Sunda Islands due to low levels of rainfall. In **Viet Nam**, harvest of the summer-autumn rice (wet-season rice) has begun with yields reported slightly above last year's. Earlier in season flooding in the south noticeably reduced the total sown area. In **Thailand**, conditions of wet-season rice are generally favourable owing to good rainfall and enough sunlight. However, earlier flooding in the northeastern region remains a concern. In the **Philippines**, harvest of wet-season rice sown during April-June was interrupted due to the landfall of typhoon Mangkhut, which impacted crop conditions and resulted in crop losses especially in Northern Luzon. In **Brazil**, sowing begun under favourable conditions. In the **US**, harvest is wrapping up under favourable conditions.



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

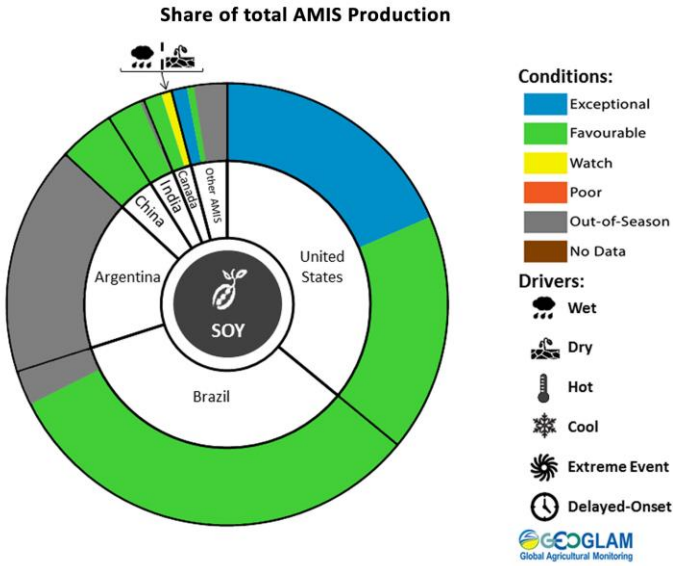
* Assessment based on information as of October 28th

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 October 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 the **US**, harvest is ongoing with expected record yields and production in many areas owing to exceptional growing conditions across most of the country. There are some relatively small areas of concern along the northern US border, given early snow, and in the Southeast, due to hurricane activity. In **Canada**, harvest is ongoing with favourable conditions in Ontario, while conditions are mixed in the Prairies due to above-average temperatures and poor soil moisture throughout the season and more recently due to damage caused by early snow and rain. In **China**, harvest is continuing under favourable conditions. In **India**, the crop is entering the maturity stage under favourable conditions. An increase in production is expected, despite a slight decline sown area. In **Ukraine**, harvest is almost complete with an increase in yield compared to last year. In **Brazil**, sowing is underway in the main producing regions under favourable conditions.



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

Information on crop conditions in non-AMIS countries can be found in the GEOGLAM Crop Monitor for Early Warning, published November 8th

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 October 28th

Appendix 1: Terminology & Definitions

Crop Conditions:

Exceptional: Conditions are much better than average* at 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.

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: Higher than average wetness.
Dry: Drier than average.
Hot: Hotter than average.
Cool: Cooler than average or risk of frost damage.
Extreme Events: This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)
Delayed-Onset: Late start of the season

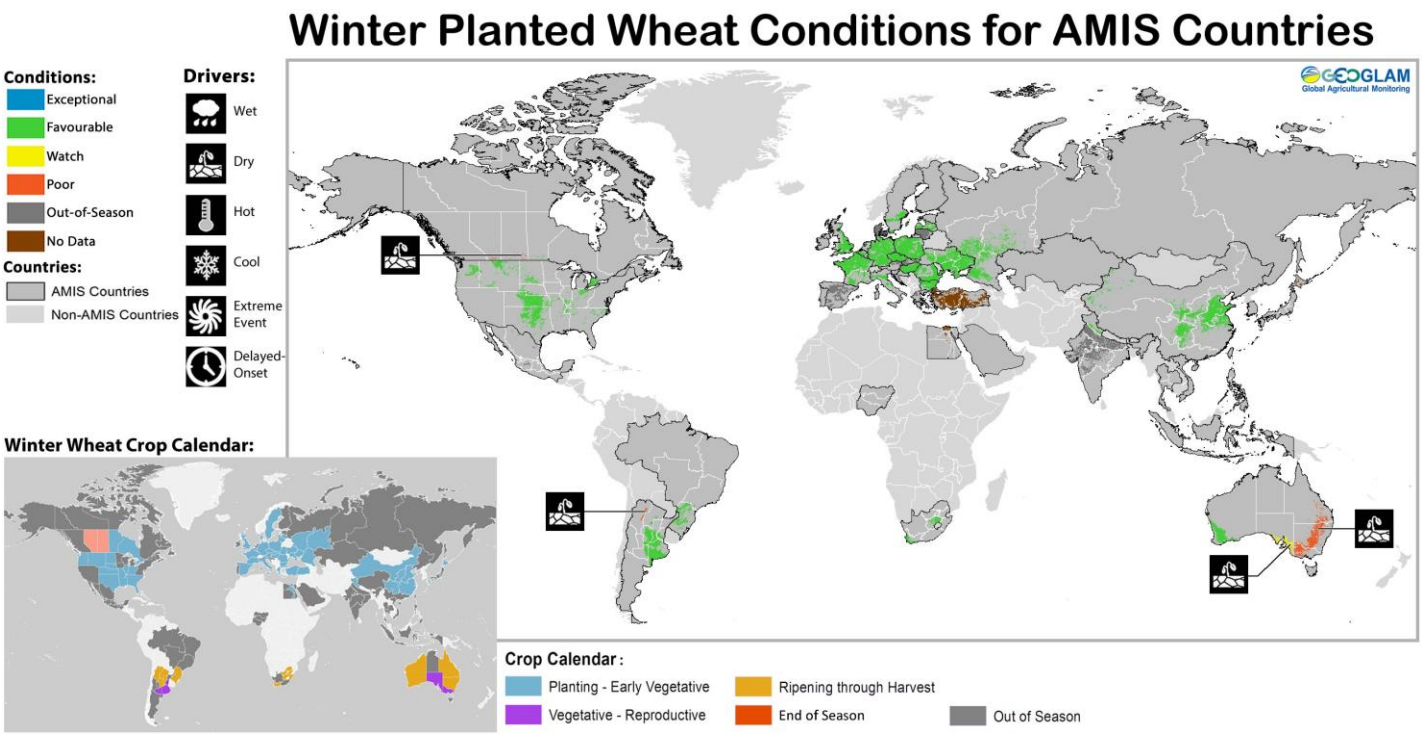
Crop Season Nomenclature:

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.

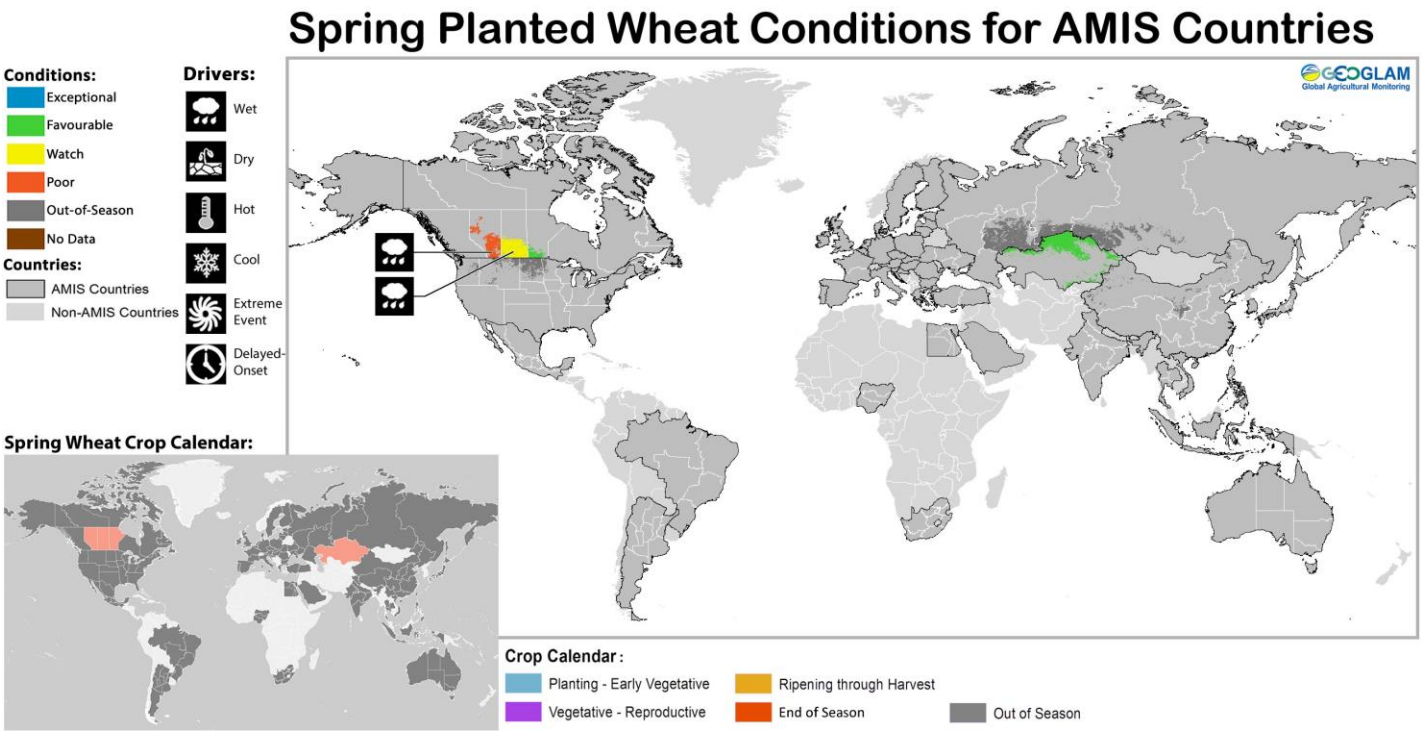
Crop Season Nomenclature				
Country	**Crop**	**Season 1 Name**	**Season 2 Name**	**Season 3 Name**
Argentina	Soybean	Spring-planted	Summer-planted	
Brazil	Maize	Summer-planted (larger producing season)	Spring-planted (smaller producing season)	
Canada	Wheat	Winter-planted	Spring-planted	
China	Maize	Spring-planted	Summer-planted	
China	Rice	Intermediate Crop	Early Crop	Late Crop
China	Wheat	Winter-planted	Spring-planted	
Egypt	Rice	Summer-planted	Nili season (Nile Flood)	
India	Maize	Kharif	Rabi	
India	Rice	Kharif	Rabi	
India	Soybean	Kharif	Rabi	
India	Wheat	Rabi	Kharif	
Indonesia	Rice	Main-season	Second-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	

* Assessment based on information as of October 28th

Appendix 2: Crop Season Specific Maps



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 October 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 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 October 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.

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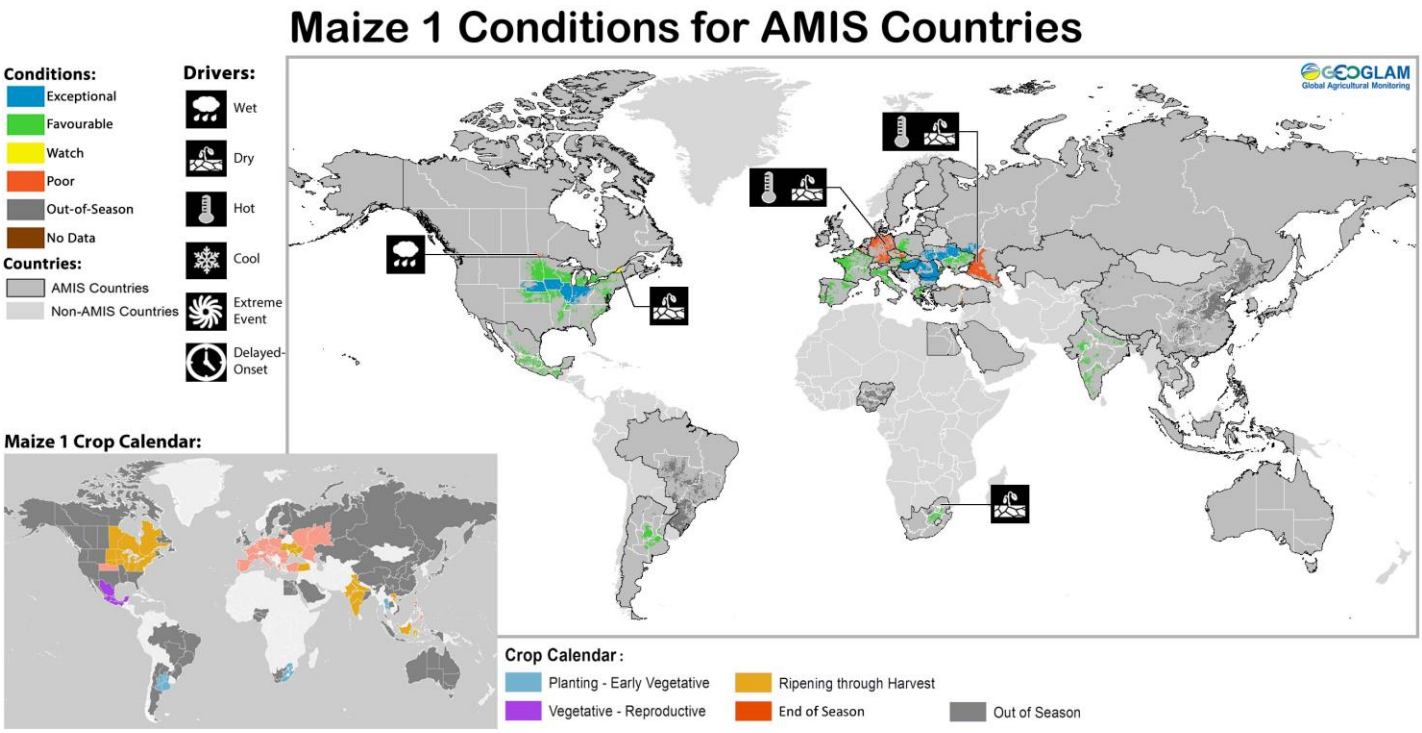
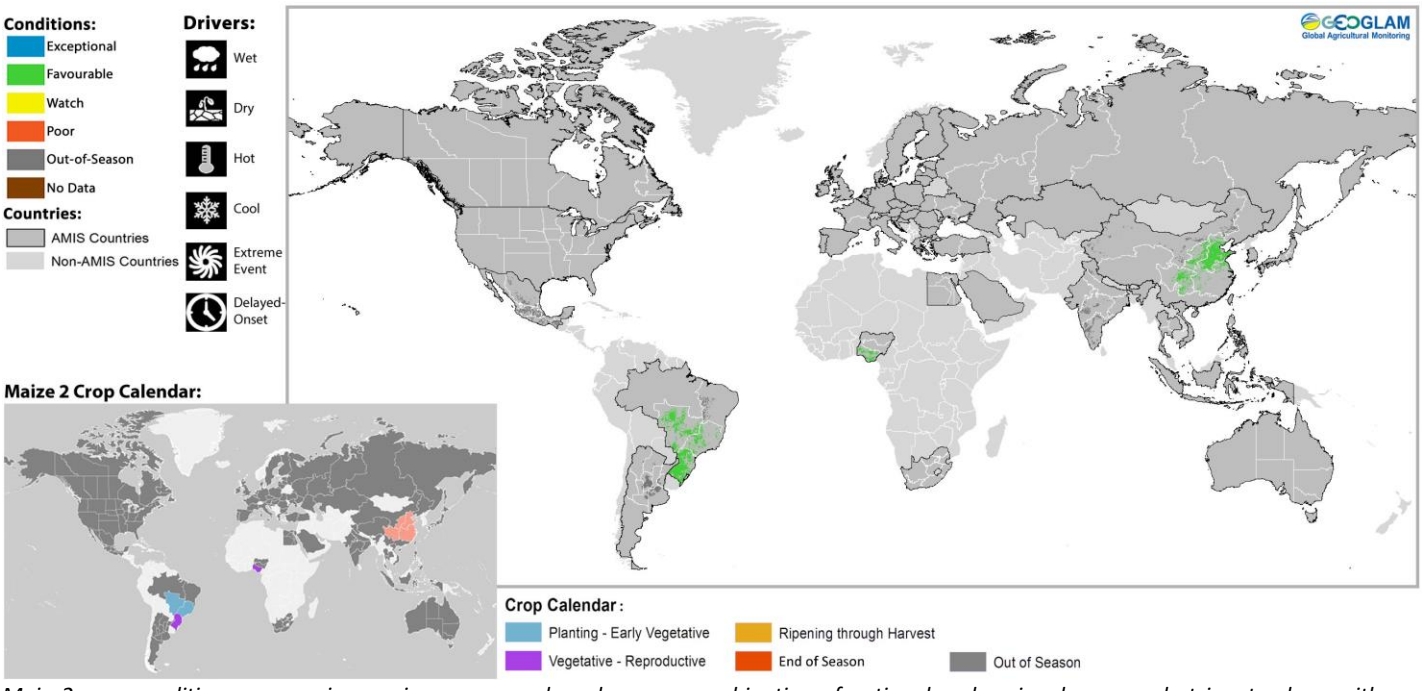


Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible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



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 October 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.

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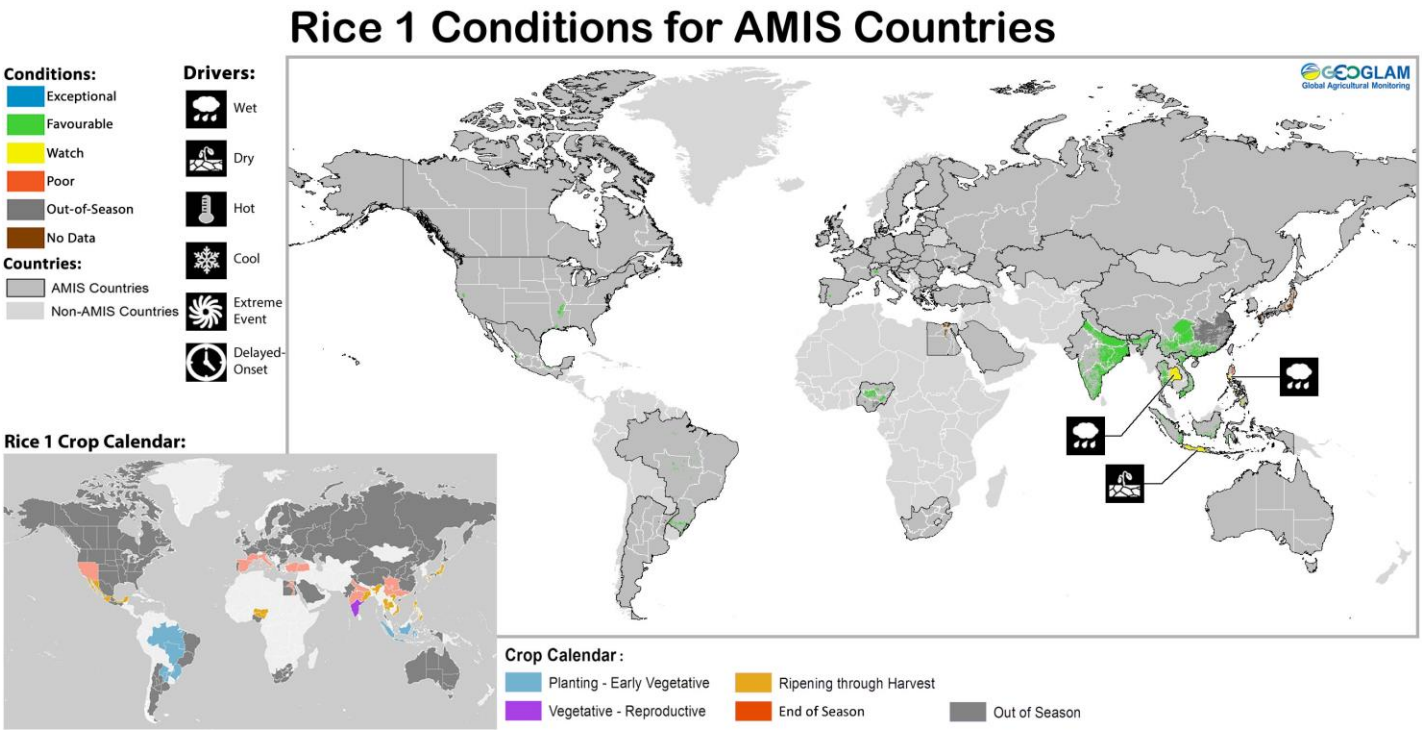
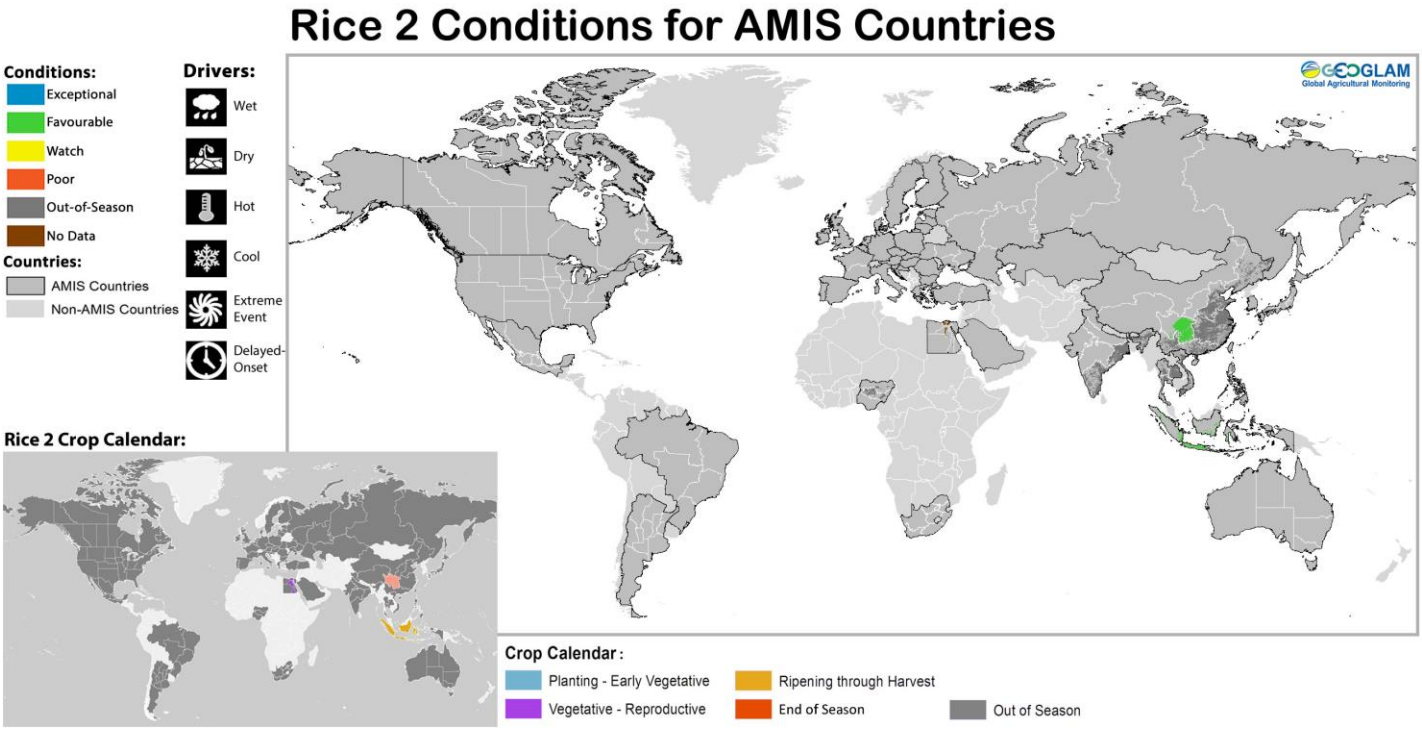


Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

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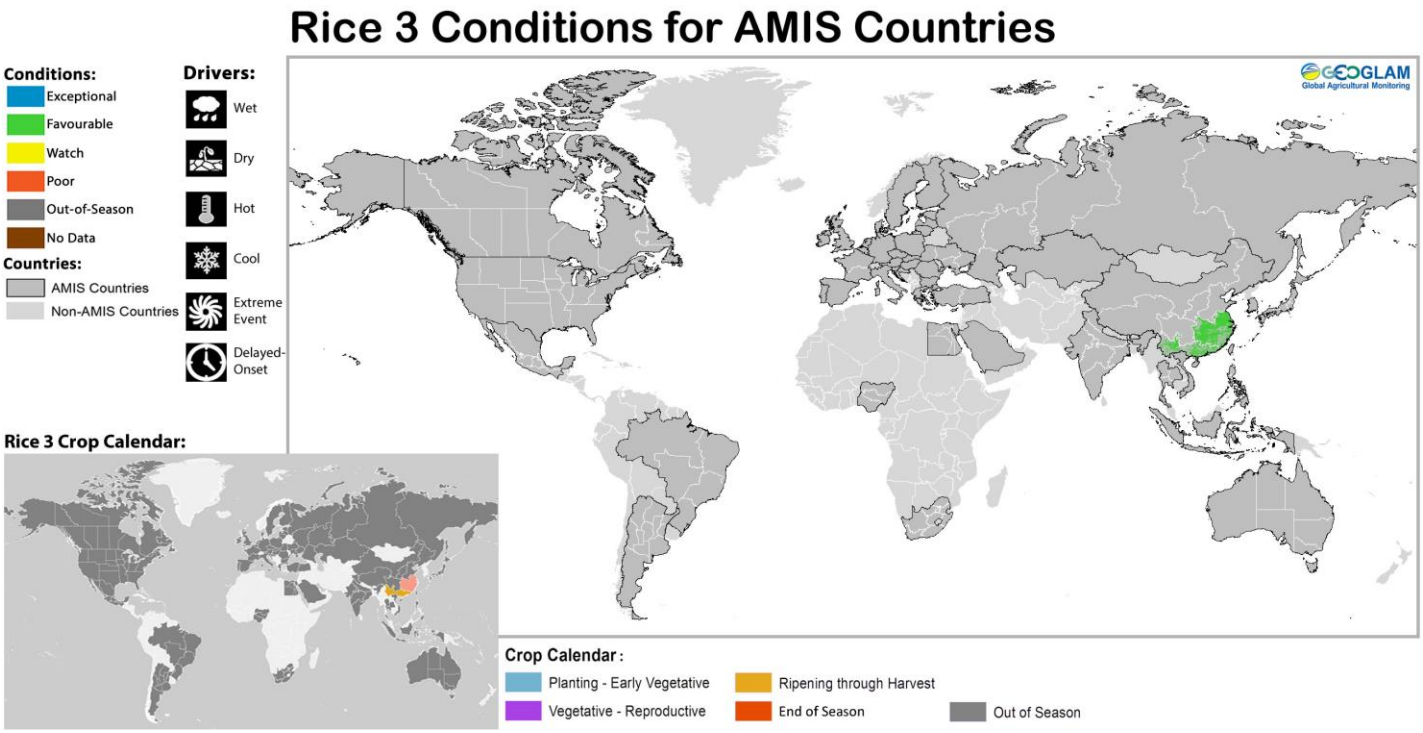
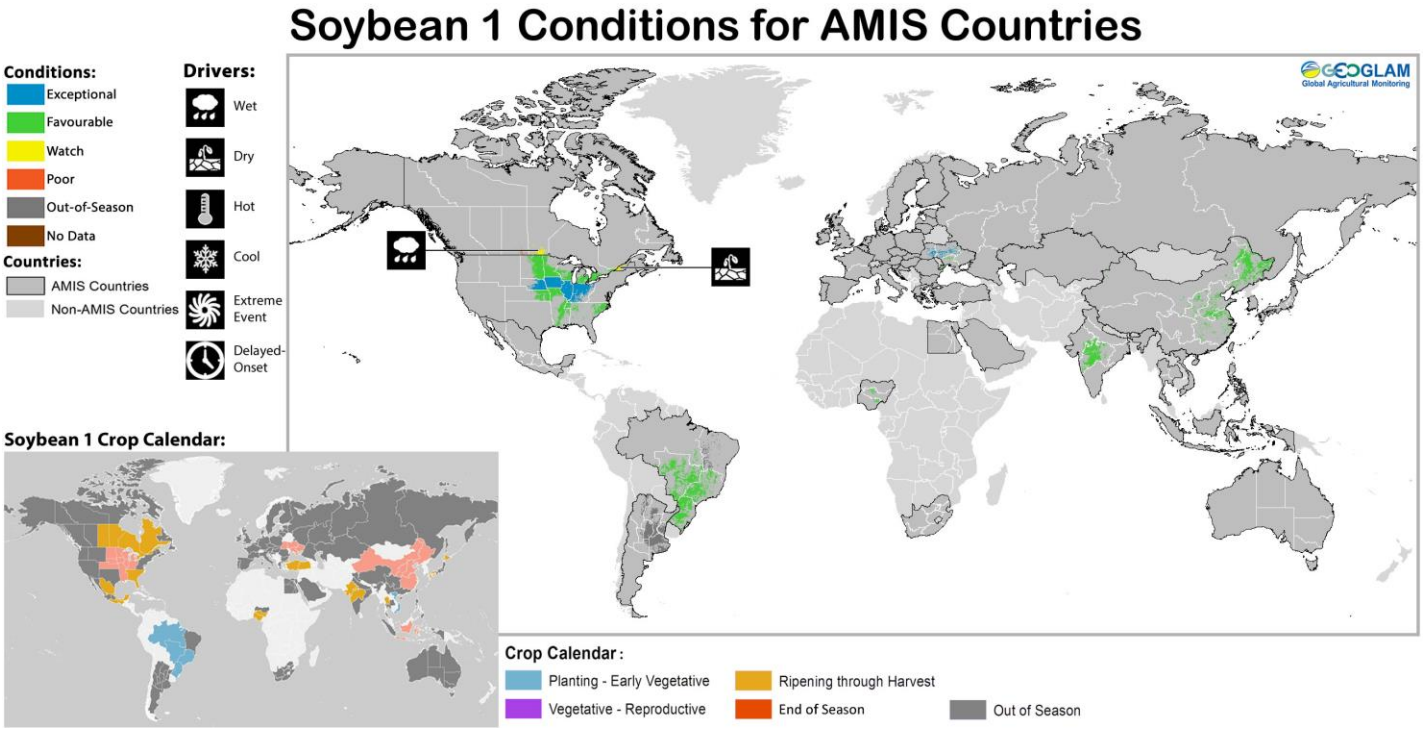


Rice 3 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

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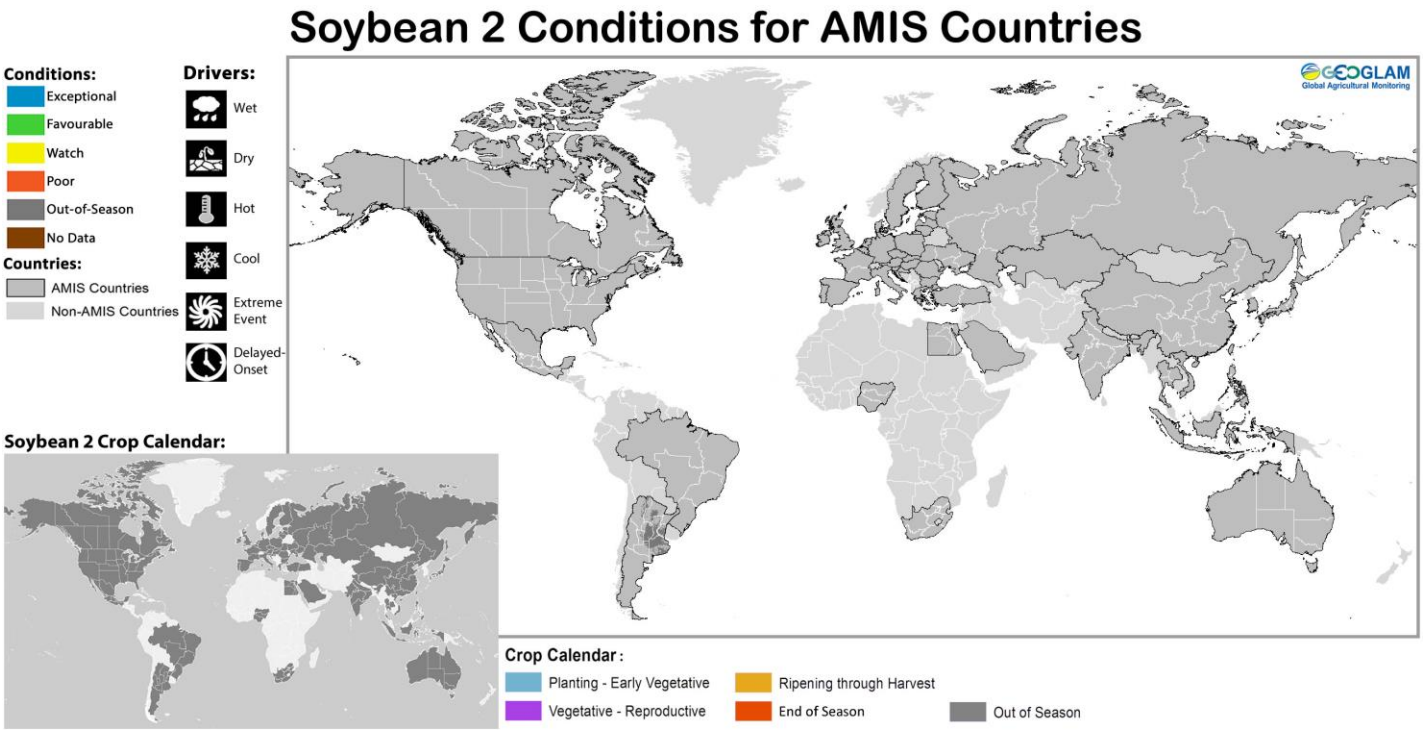

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Prepared by members of the GEOGLAM Community of Practice
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Climatic update by Climate Hazards Group of UC Santa Barbara

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

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Sources & Disclaimer

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