GEOGLAM Crop Monitor

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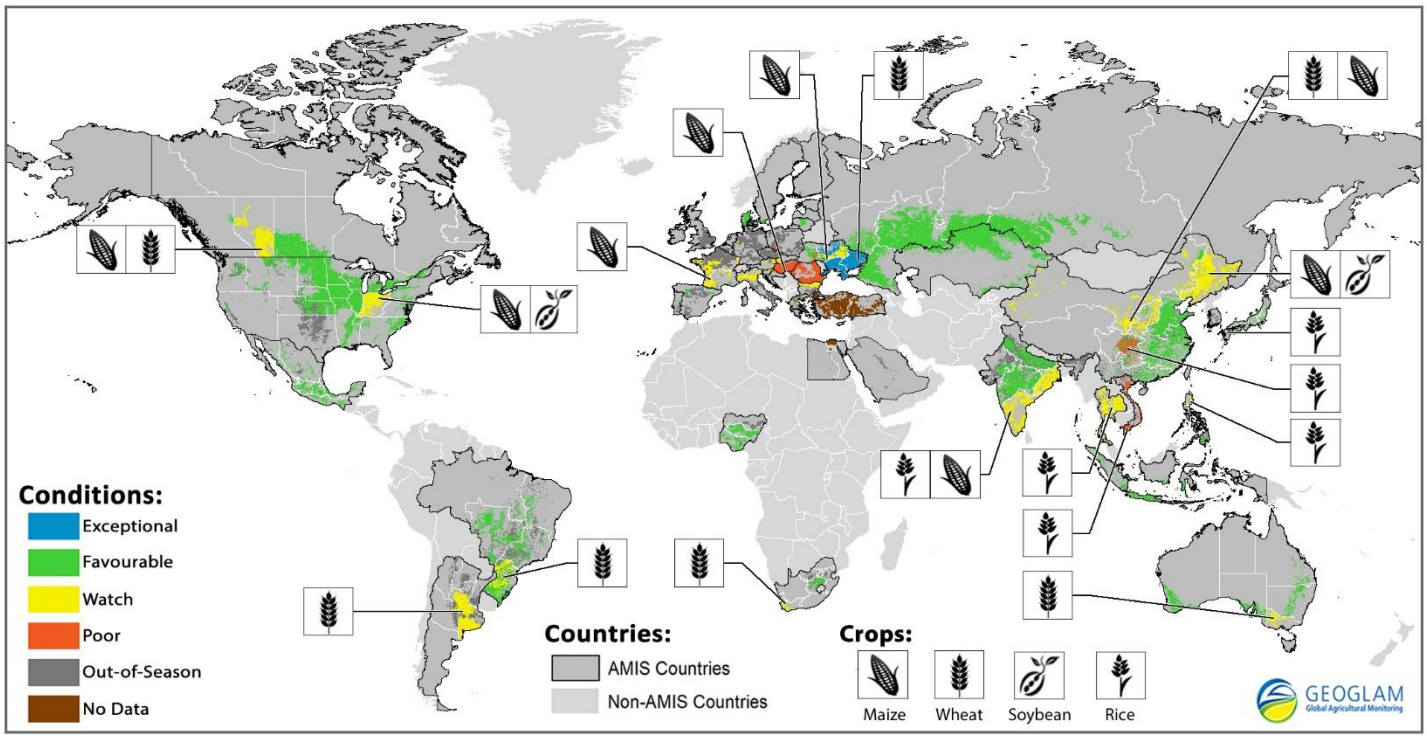
Global Agricultural Monitoring

Prepared by members of the GEOGLAM Community of Practice

Crop Conditions for AMIS Countries (As of August 28th)*



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. ***Crops that are in less than favourable conditions are displayed on the map with their crop symbol.***

Highlights

Wheat - In the northern hemisphere, conditions remain favourable as the season draws to a close, with the exception of China, and Canada where spring wheat conditions are somewhat below average due to lack of rain. In the southern hemisphere, conditions are favourable with the following exceptions. In Argentina there is some concern over excess rain in central regions. In Brazil, there is some concern in parts of the south due to lack of rain, and in South Africa, conditions are mixed due to slightly below average rainfall.

Maize - In the northern hemisphere, conditions are mixed. In Ukraine, conditions are mixed due to persistent dryness and high temperatures in western and northern regions. In the EU, conditions are mixed in large part due to a heat wave at the beginning of August. In India, there are some areas of moisture stress in the south. In Canada, yields are expected to be somewhat below normal or close to average. In the southern hemisphere, conditions continue to be generally favourable.

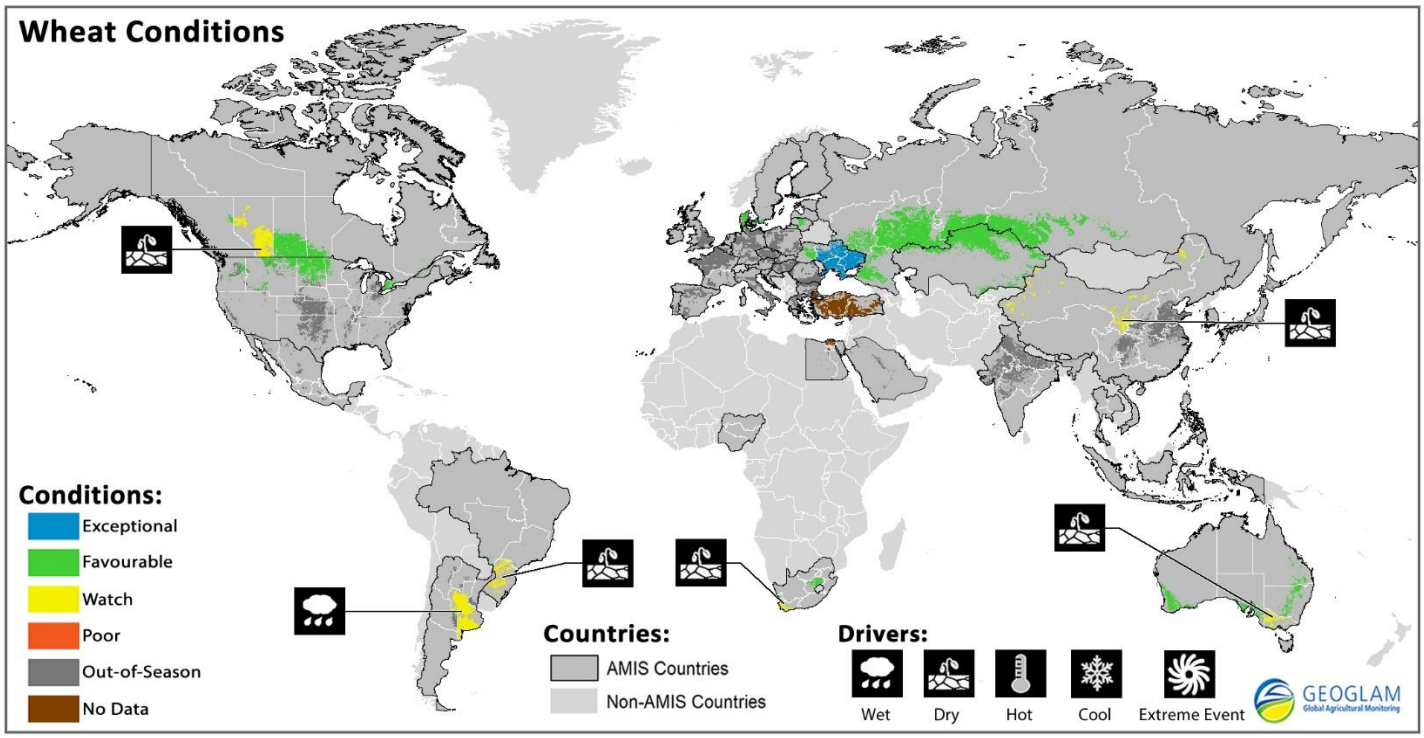
Rice - Conditions remain mixed in part due to El Niño conditions affecting large parts of Asia. In China, conditions are mixed with some poor conditions in the southwest due to excess rainfall and lack of sunshine. In Thailand, there is concern due to lack of rain and irrigation water. In Viet Nam, the wet season crop planted in summer is in poor conditions due to a drought that is considered to be the worst in the last 40-years and in the Philippines, below average rainfall in the northern region is affecting crop conditions.

Soybeans - Conditions are generally favourable in the northern hemisphere with only a few problematic areas. In the US, there is a minor concern in the eastern Corn Belt region. In China, conditions are mostly favourable except in the northeast region. In Canada, yields are below normal but are offset by increased planted area. In India, conditions are generally favourable.

Within the top 4 Strongest El Niño since 1950

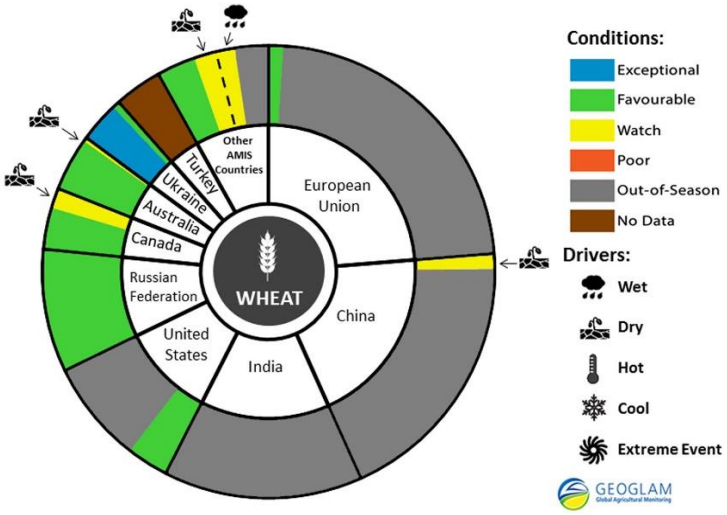
Models indicate that the current El Niño event is likely to be in the top 4 strongest events since 1950. El Niño can have both positive and negative impacts on growing conditions, depending on the region, season, timing and strength. El Niño has already affected growing conditions, particularly in Asia, with drier than average conditions in parts of India, Thailand, Viet Nam and the Philippines, and these conditions are forecast to continue and spread to Indonesia. North-central China has experienced below average rainfall, impacting spring and summer crops, whereas parts of southern China have experienced much wetter than average conditions. Similarly, in Central America, a dry corridor across Panamá, Colombia and Venezuela has already severely affected the first crop season of 2015. In Australia, El Niño is generally associated with reduced precipitation in the east and warmer temperatures in the south. However, increased sea surface temperatures across the Indian Ocean are likely moderating these conditions and therefore, to date conditions have been largely favourable for winter crops, though continued rain in coming weeks will be critical. In southern Africa, El Niño traditionally results in below average rainfall during the main growing season (maize), and in South America, it generally results in wetter than normal conditions during summer months (soy and maize season) in southern Brazil and Argentina, and drier than normal conditions in northern Brazil. In North America most effects are expected during the upcoming winter season, with warmer than average temperatures expected across Canada and the northern US, and wetter than average conditions across the southern half of the US. Over Central Asia El Niño generally increases chances of above average rainfall and snowfall-providing abundant water for growing crops, but also increasing the probability of spring flooding.

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 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.

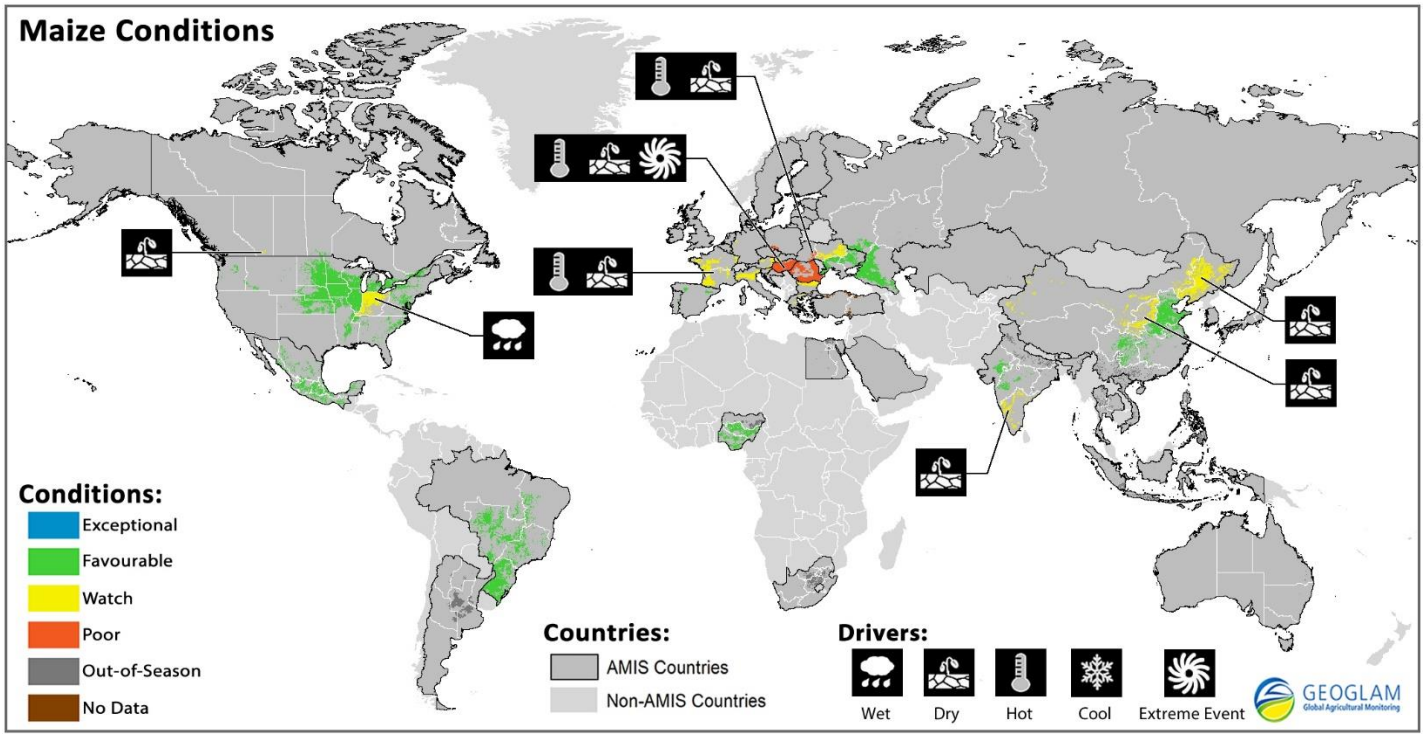
Wheat: In the *northern hemisphere*, overall conditions remain favourable as the season draws to a close. In the *EU*, winter wheat prospects have improved owing to favourable weather in the northern regions. In the remaining regions the season has ended. In the **US**, harvest is nearly complete and prospects are quite good throughout, particularly in North and South Dakota. In **China**, conditions are generally below average for spring wheat, which is in maturity to harvest stages, due primarily to significantly below average rainfall in the northern region. In the **Russian Federation**, harvest is ongoing for spring wheat and prospects are good despite some dry weather in August in parts of the country. Winter wheat planting has started, with some complications due to rain and dry top soil. In **Ukraine**, harvest is complete for winter wheat with much above average yields and winter wheat planting has started. In **Canada**, spring wheat yields are below average nationally, with some recovery from drought conditions in western Canada in August due to large precipitation events in the Prairie region that helped reduce the extent and severity of the summer drought. Harvests are ahead of normal in many areas. In **Kazakhstan** conditions are good owing to favourable weather throughout the growing season. Harvest will begin in September. In the *southern hemisphere*, overall conditions are mostly favourable. In **Australia**, conditions remain generally favourable, and the crop is in vegetative to reproductive stages. Above average rains stabilized yield prospects in Western Australia and South Australia where crops had been stressed from an unusually dry June and early July. In contrast, conditions deteriorated across some southern growing regions during August, due to rainfall deficits particularly in Victoria. Timely rainfall over the next two months will be critical for sustaining crops through to harvest in a number of regions. In



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

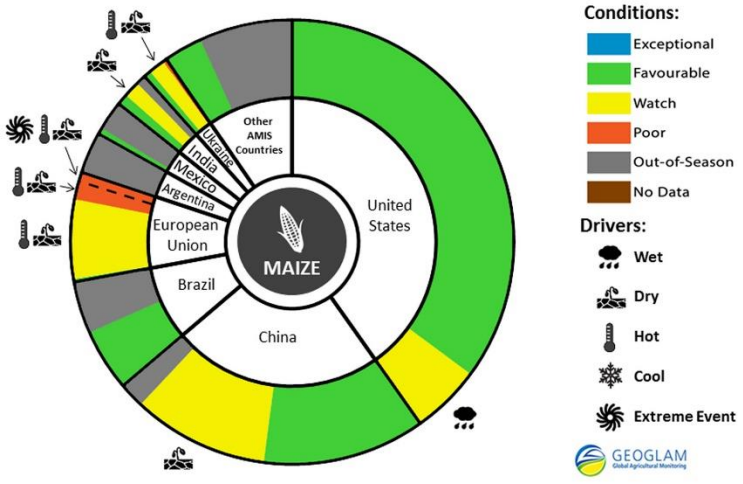
Argentina, conditions are favourable though there is some concern due to excess rainfall in central regions. Winter wheat planting is complete and crop is in vegetative stages. In **Brazil**, conditions are mostly favourable and planted area is down relative to last season. There is some concern in parts of the southern growing region due to recent lack of rain. In **South Africa**, conditions are mixed due to slightly below normal rainfall in the main production region and overall yields are expected to be below average.

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 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.

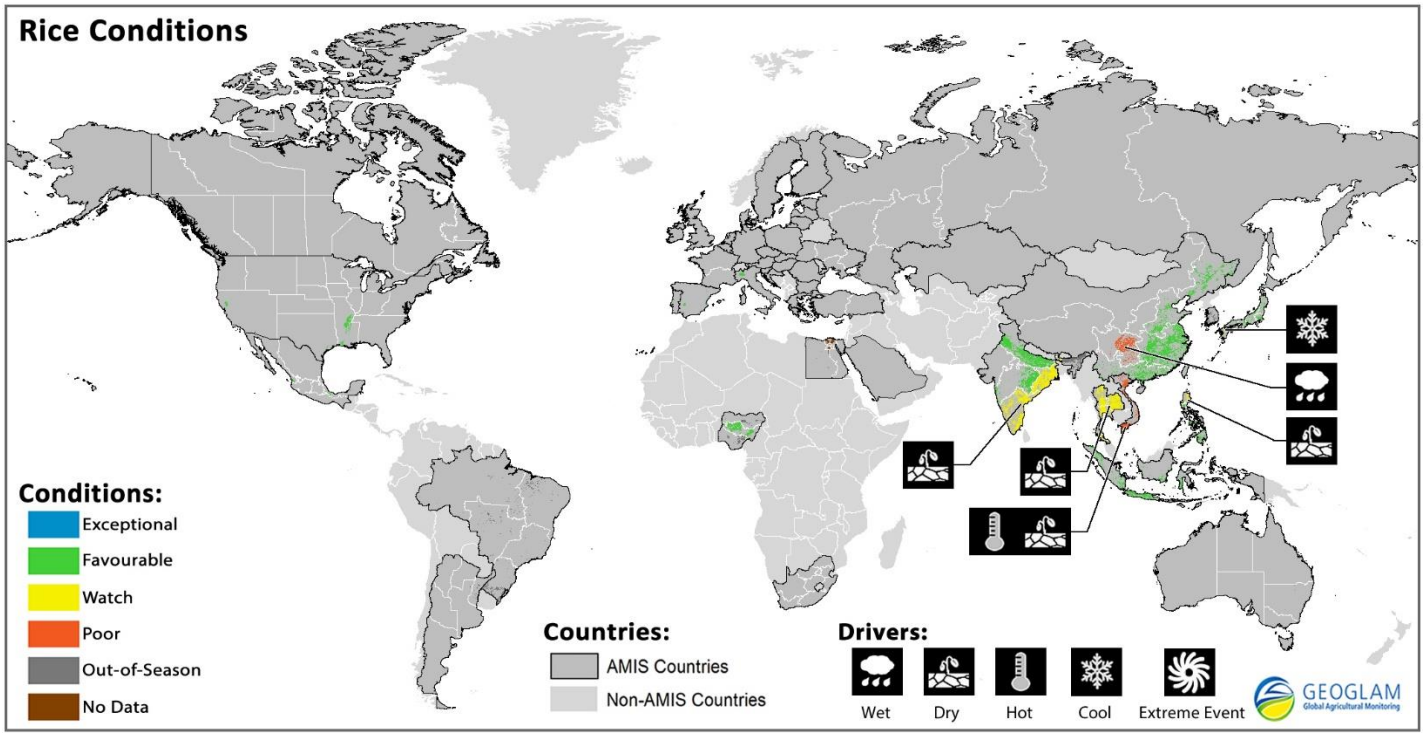
Maize: In the *northern hemisphere*, conditions are mixed. In the **US**, the crop is progressing quite favourably with little concern other than in localized areas within the eastern Corn Belt due to excess moisture. In **China** conditions are overall favourable with the exception of parts of the northern growing regions, which experienced below average rainfall since June. The spring-planted crop is in the grain-filling to milking stages and the summer-planted crop is in the flowering stage. In **Ukraine**, conditions are mixed due to persistent dryness and high temperatures in western and northern regions primarily impacting the late-planted crop. Conditions are favourable in the rest of the country and harvest is ongoing. In the **EU**, conditions are mixed due to a heat wave at the beginning of August. In eastern European countries, recent rain led to a partial recovery of crop conditions. In **India**, conditions are generally favourable with the exception of some areas in the south, which are experiencing significant moisture stress. In **Mexico**, conditions are generally favourable for the spring-summer planted crop with some areas of delayed planting due to limited soil moisture. In **Canada**, yields are expected to be somewhat



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

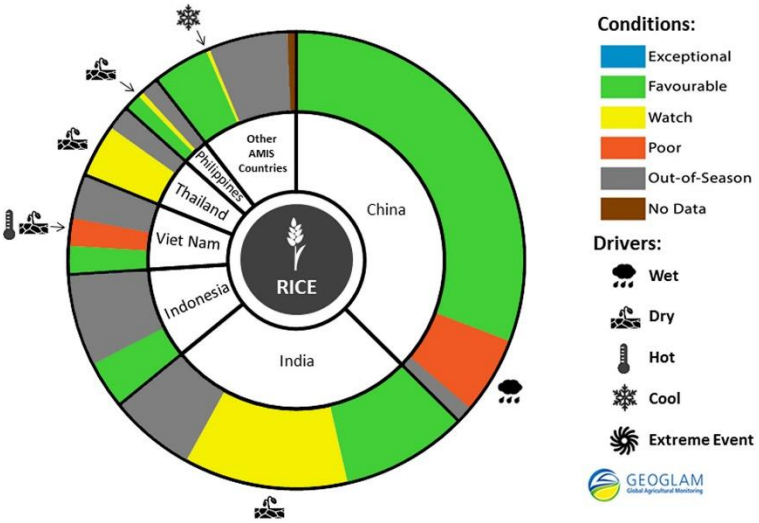
below or close to average, due to a decrease in seeded area and unfavourable growing conditions in some regions. In **Nigeria**, conditions are favourable owing to good rainfall conditions. In the southern hemisphere, conditions continue to be generally favourable. In **Brazil**, conditions are good for the summer-planted crop, which is in ripening through harvest stages. Increased planted area and good yield will result in increased production this season.

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

Rice: Conditions remain mixed in part due to the current El Niño affecting large parts of Asia. In **India**, conditions are generally favourable except for some areas in southern and eastern regions experiencing significant moisture stress. In **China**, conditions are mixed. In the northeast, conditions are average and in the southwest, conditions are poor due to excess rainfall and lack of sunshine. In the southeast, despite heavy rain, conditions are average. In **Thailand**, there is concern over the wet season rice due to a shortage of rainfall and irrigation water, resulting in delayed development and reduced yield potential. This concern is most pronounced in the Northeast and Central regions. There is also a significant reduction in planting of the dry season rice due to the dry conditions, which are attributed to the ongoing El Niño. In **Viet Nam**, poor conditions for the summer-autumn wet season rice, are attributed to El Niño. High temperatures and dry conditions caused planting delays, and yield potential is expected to be reduced. The drought is considered to be the worst in the last 40 years. In contrast, the autumn-winter planted wet season crop is in generally favourable condition. In the **US**, conditions are favourable and harvest is in progress. In **Indonesia**, conditions for the dry season rice are favourable and the crop is in vegetative to maturity stages.

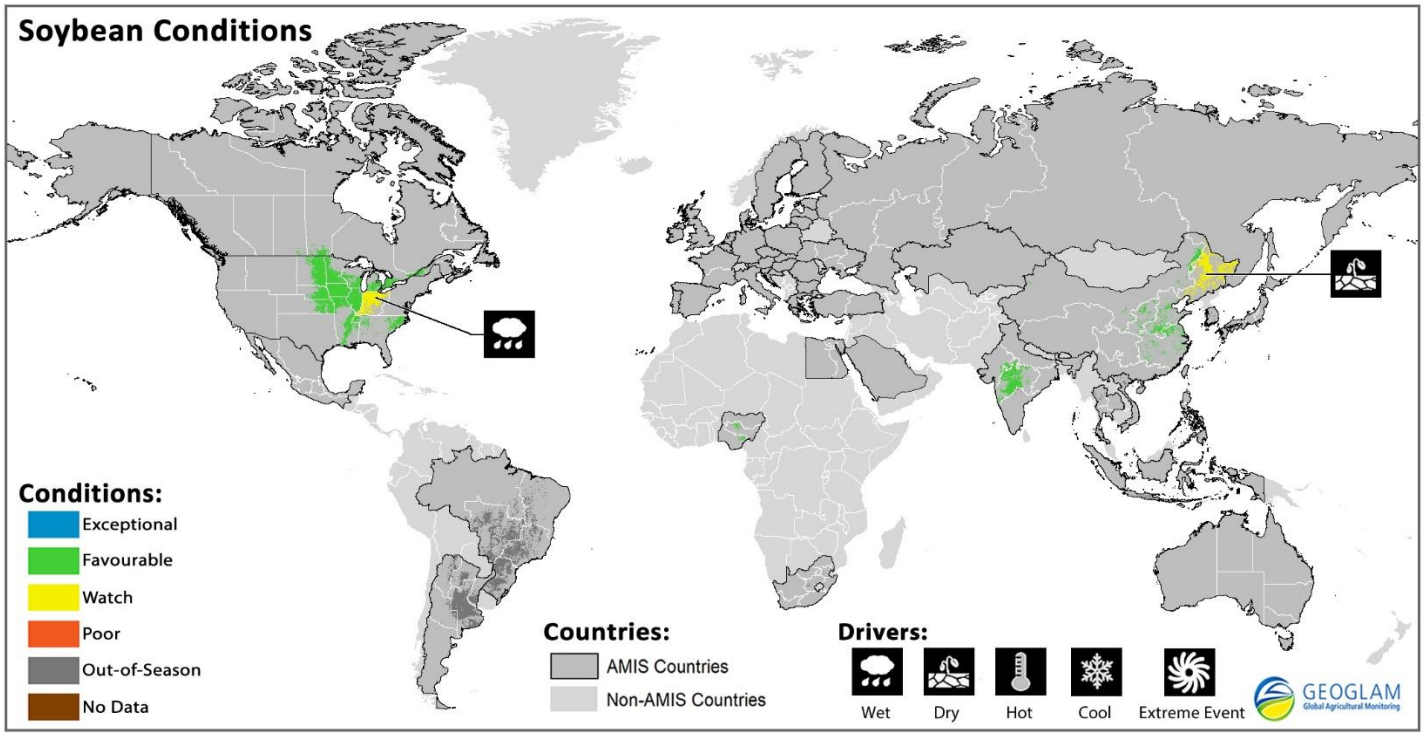


For detailed description of the pie chart please see box below.

* Assessment based on information as of August 28th

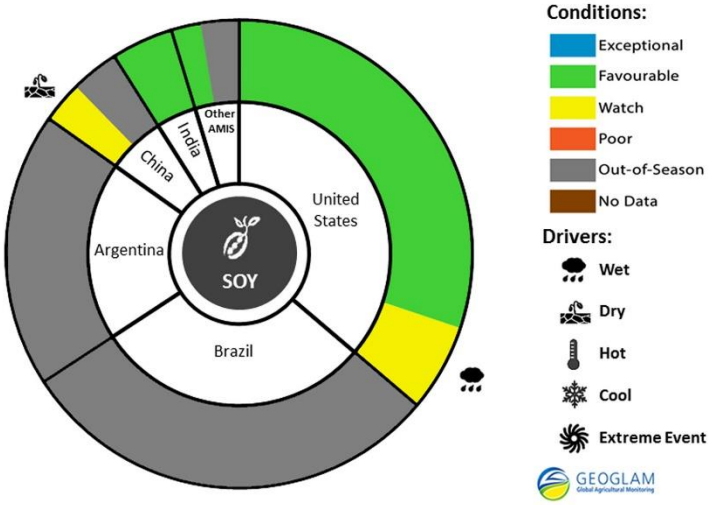
In the **Philippines**, the wet season crop is in mostly favourable condition even though there has been below average rainfall in the northern regions. There are concerns over continued dryness due to El Niño. In **Japan**, conditions are mostly favourable except for some areas in the south due to low temperatures and lack of sunshine.

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 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.

Soybeans: In the *northern hemisphere*, where harvesting is about to start, conditions remain mostly favourable. In the **US**, the crop is in good condition throughout the country with some minor wet conditions in parts of the eastern Corn Belt region. In **China**, conditions are mostly favourable except in the northeast region due to a shortage of rainfall. In **Canada**, yields are expected to be below normal, due to delayed seeding in many areas due to cold wet weather conditions. Due to an increase in the seeded acreage, final production numbers may yet be close to average. In **India**, conditions are generally favourable except for a few areas experiencing significant moisture stress.



Pie chart description: Each slice represents a country's share of total AMIS production (5-year average). Main producing countries (representing 90 percent of production) are shown individually, with the remaining 10 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.

Appendix 1: 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 production.
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 August or August not result in production impacts and they can act as either positive or negative drivers of crop conditions.

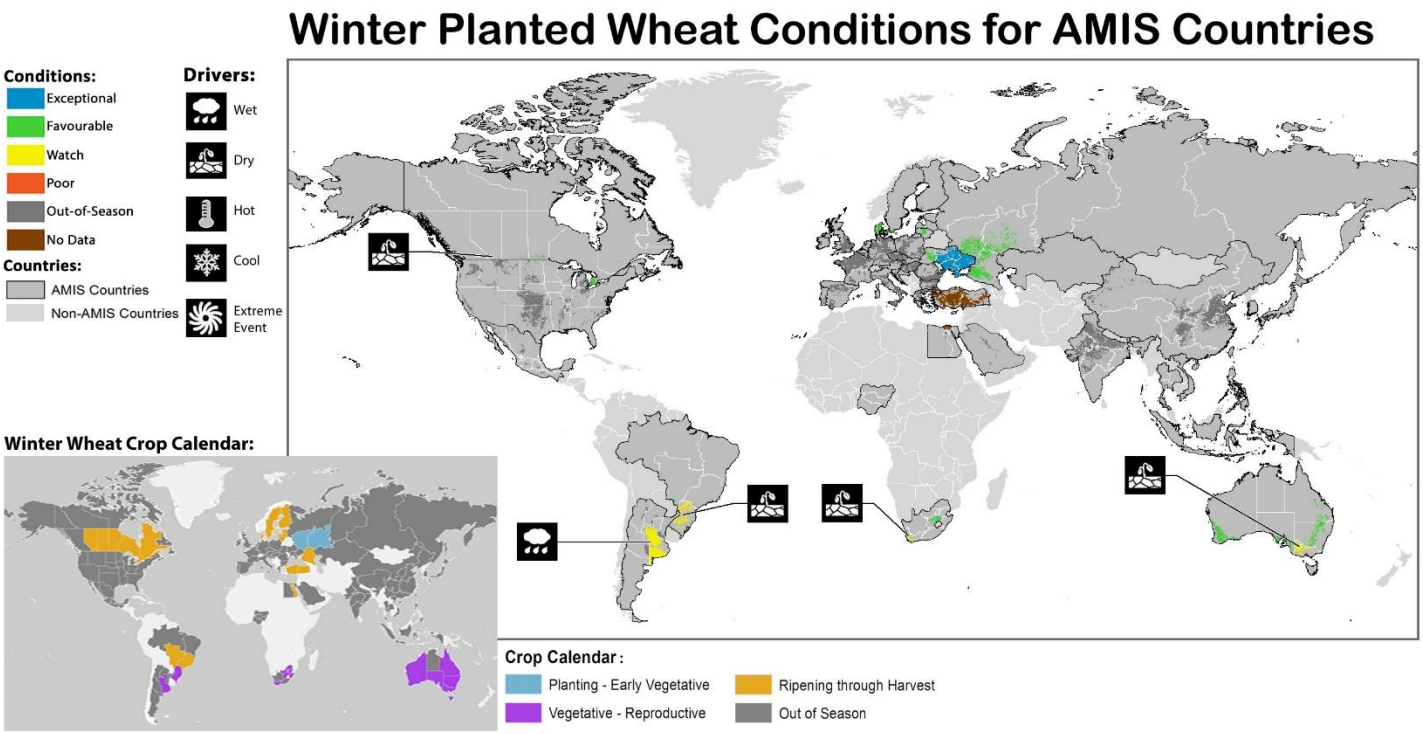
Wet: Higher than average wetness.
Dry: Drier than average.
Hot: Hotter than average.
Cool: Cooler than average or risk of frost damage.
Extreme Events: This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)

Sources & Disclaimer

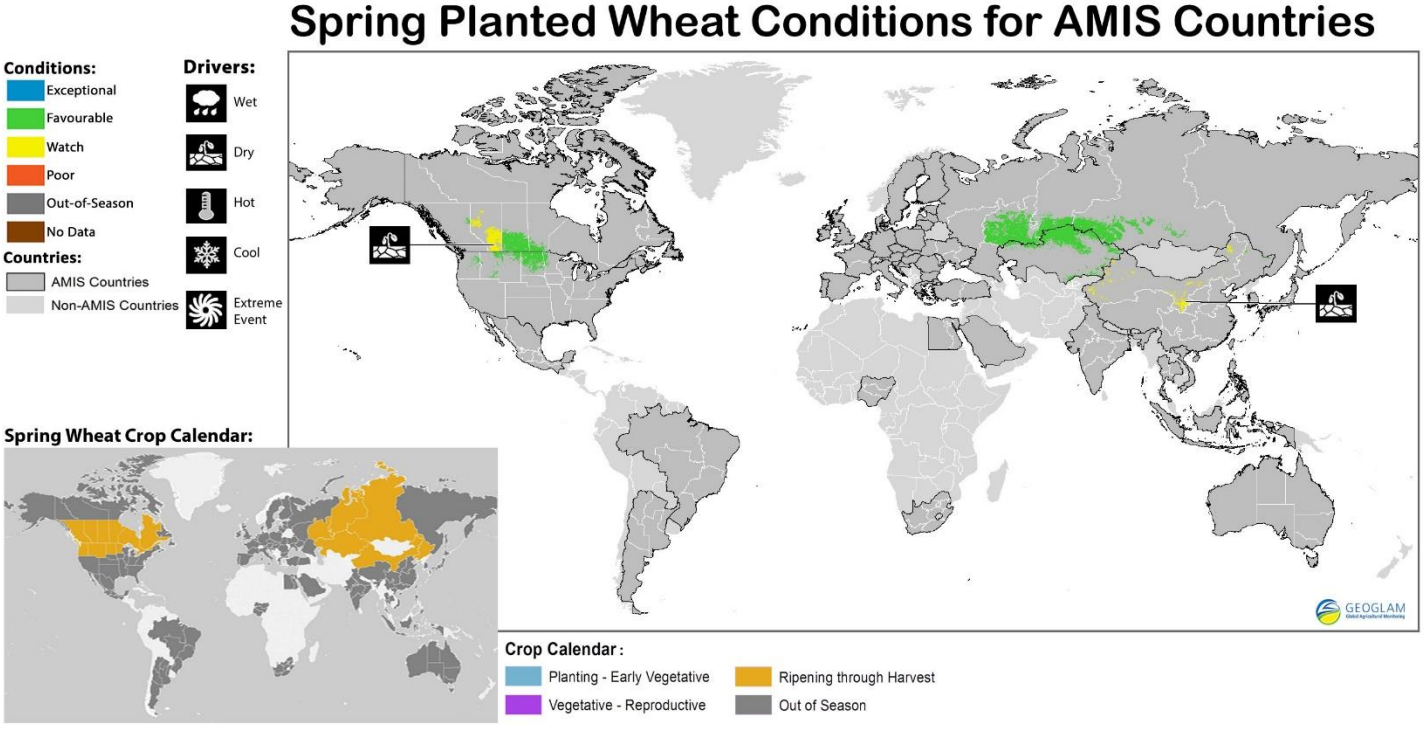
Sources and Disclaimers: The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners (in alphabetical order): Argentina (INTA), Asia Rice Countries (AFSIS, ASEAN+3 & Asia RiCE), Australia (ABARES & CSIRO), Brazil (CONAB & INPE), Canada (AAFC), China (CAS), EU (EC JRC MARS), Indonesia (LAPAN & MOA), International (CIMMYT, FAO, IFPRI & IRRI), Japan (JAXA), Mexico (SIAP), Russia (IKI), South Africa (ARC & GeoTerraImage & SANSA), Thailand (GISTDA & OAE), Ukraine (NASU-NSAU & UHMC), USA (NASA, UMD, USGS – FEWS NET, USDA (FAS, NASS)), Viet Nam (VAST & VIMHE-MARD). The findings and conclusions in this joint multi-agency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts. Map data sources: Major crop type areas based on the IFPRI/IIASA SPAM 2005 beta release (2013), USDA/NASS 2013 CDL, 2013 AAFC Annual Crop Inventory Map, GLAM/UMD, GLAD/UMD, Australian Land Use and Management Classification (Version 7), SIAP, ARC, and JRC. Crop calendars based on GEOGLAM partner crop calendars and USDA crop calendars.

More detailed information on the GEOGLAM crop assessments is available www.geoglam-crop-monitor.org.
For more information regarding on the new crop monitor and pie charts:
http://www.geoglam-crop-monitor.org/pages/about.php?target=maps-charts.

Appendix 2: Crop Season Specific Maps



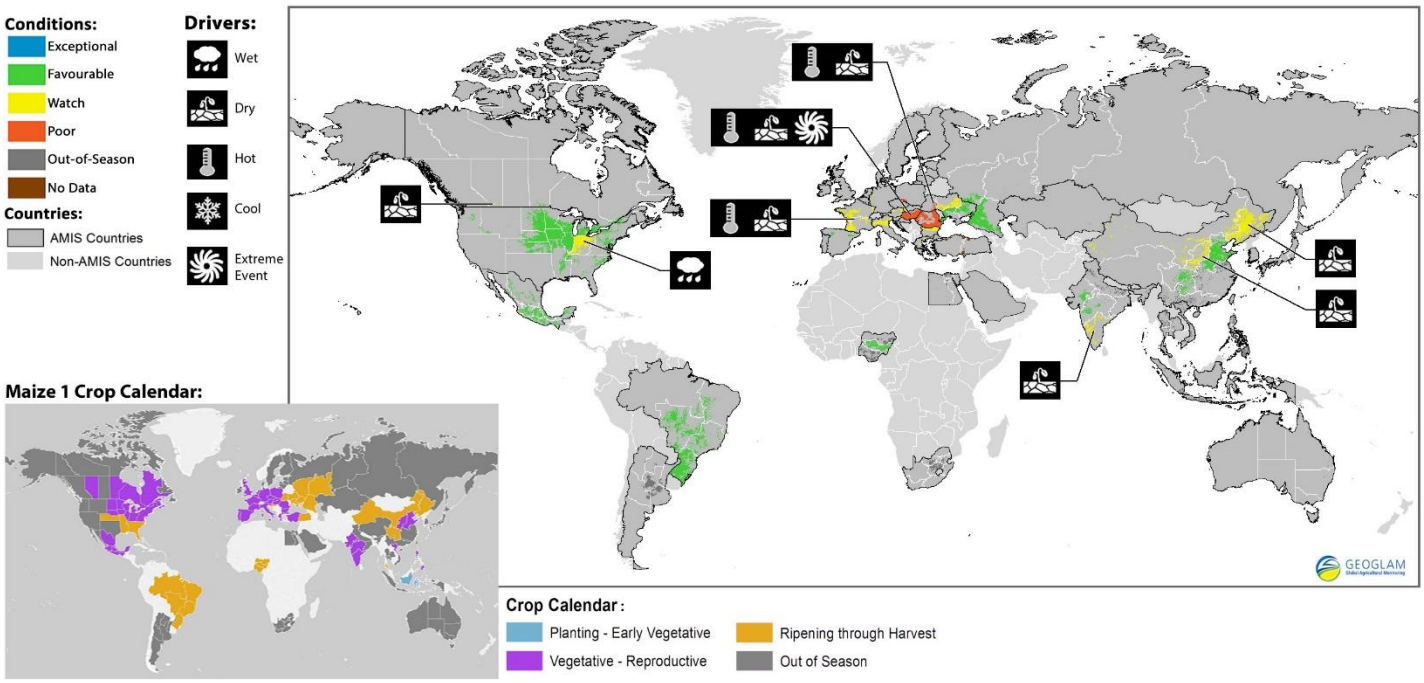
Winter wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of August 28th. Where crops are in less than favourable conditions the climatic drivers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



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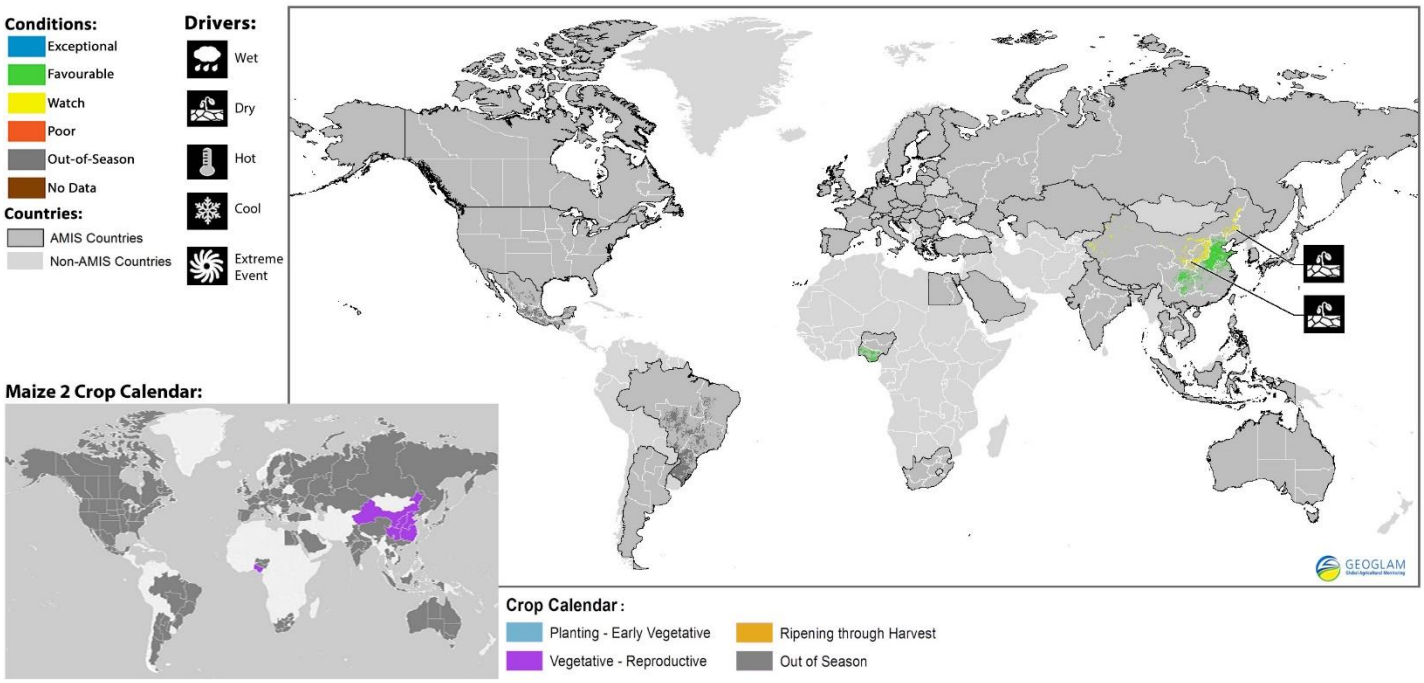
Maize 2 Conditions for AMIS Countries



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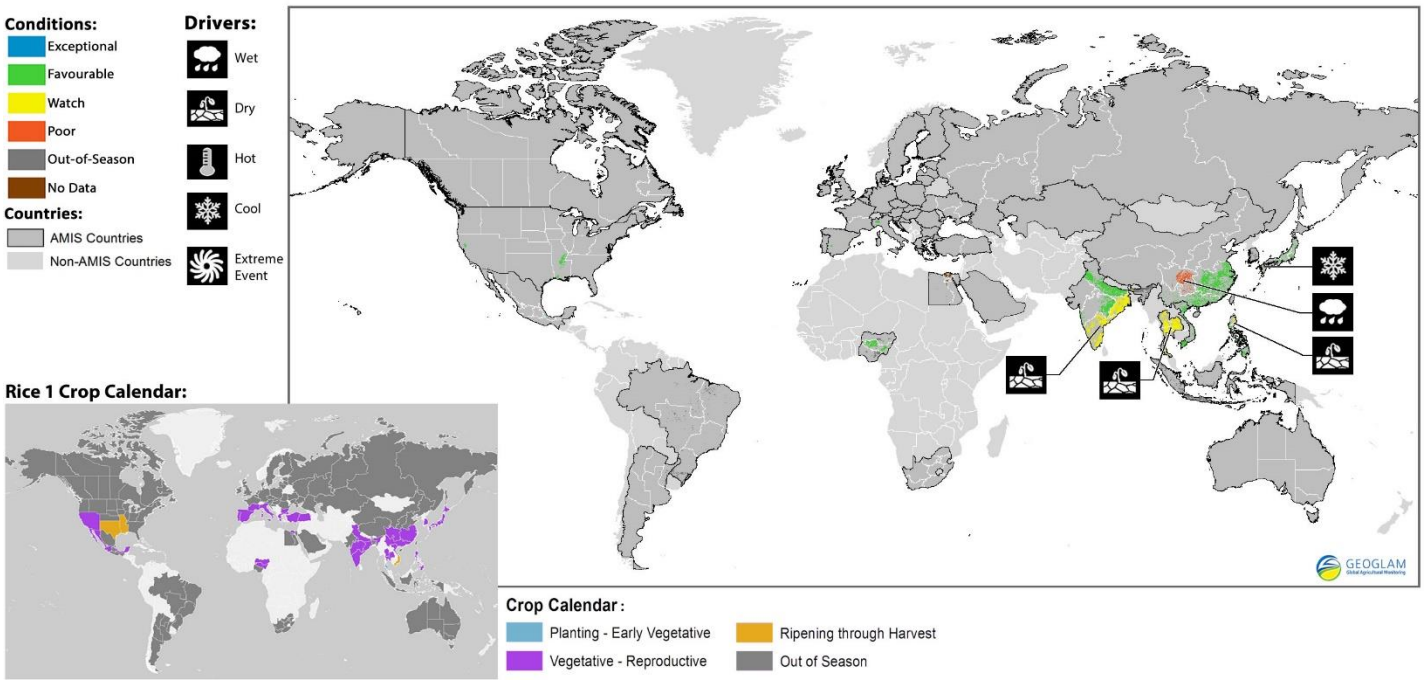
Rice 1 Conditions for AMIS Countries



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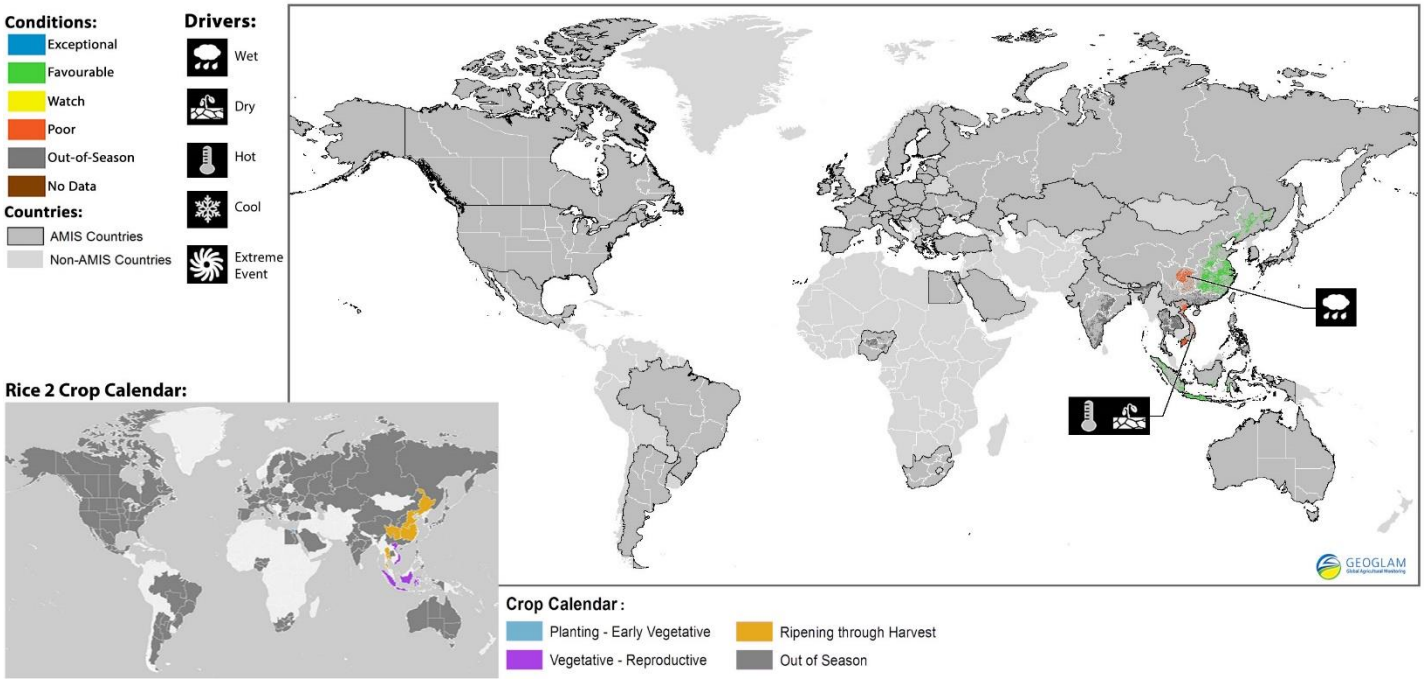

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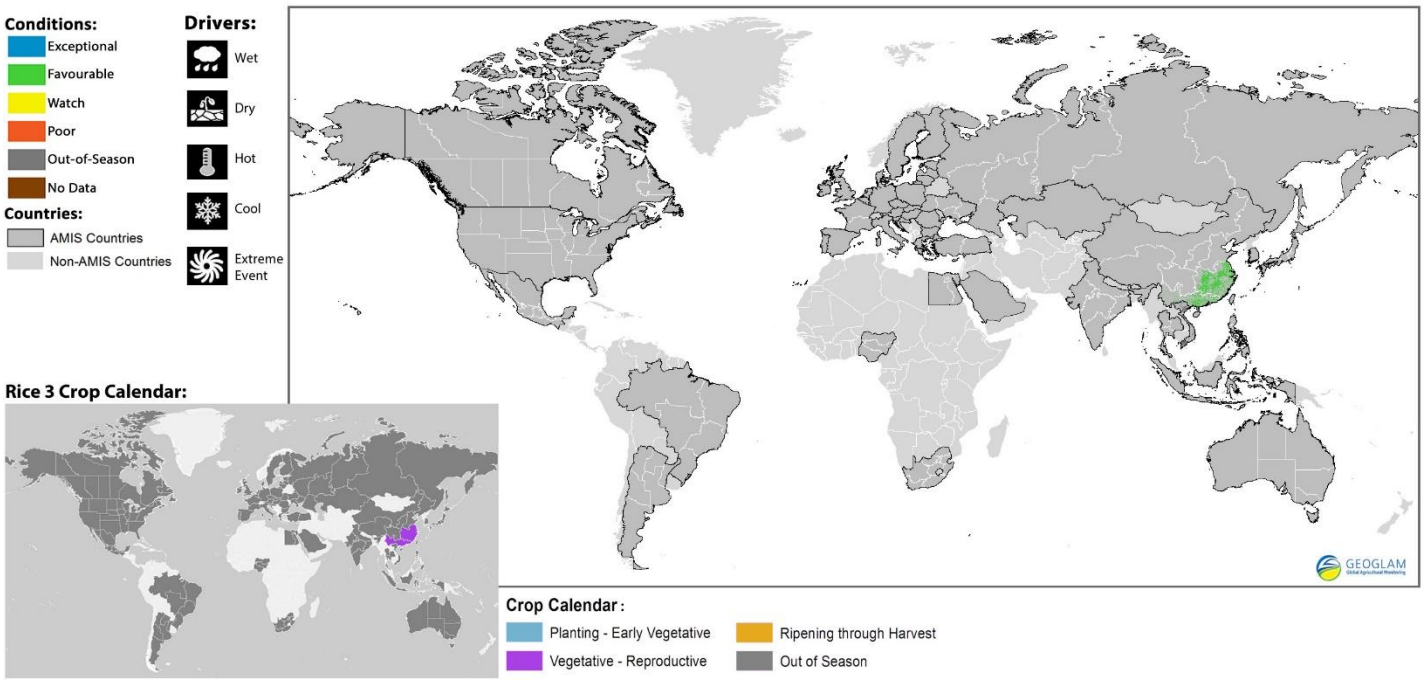

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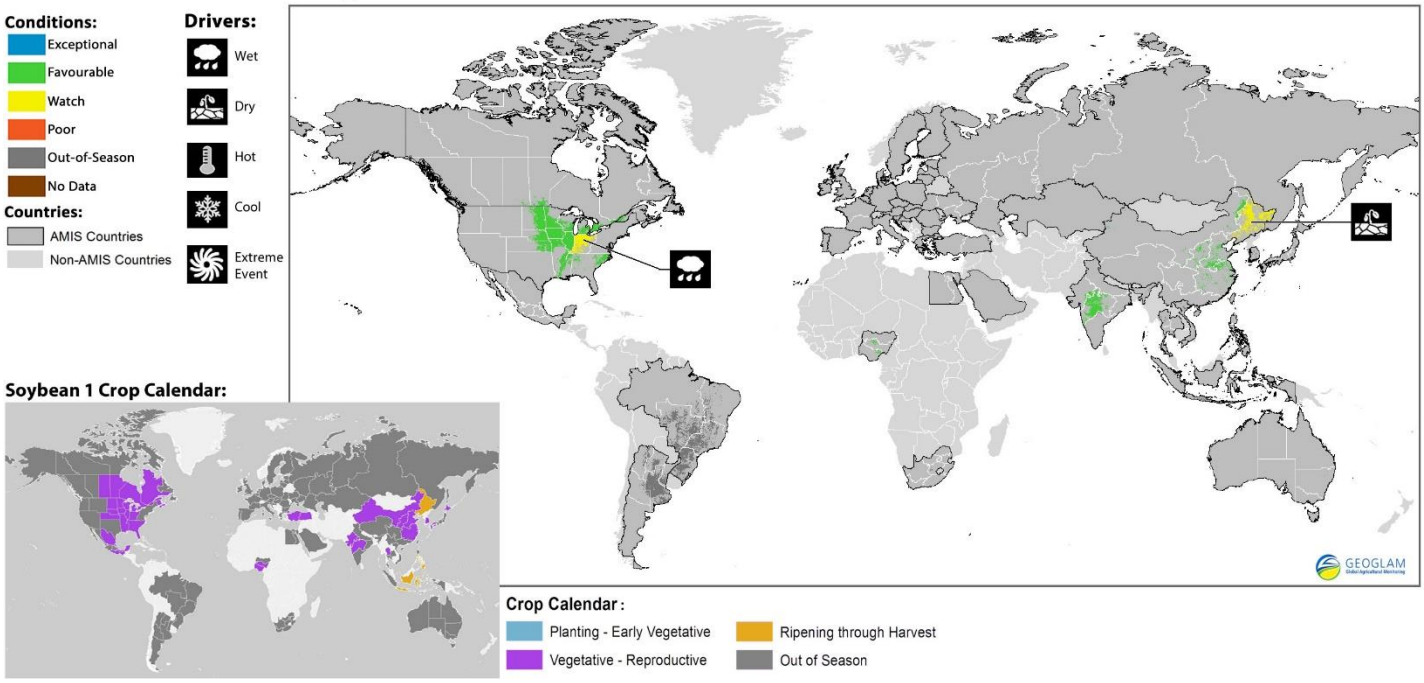
Soybean 1 Conditions for AMIS Countries



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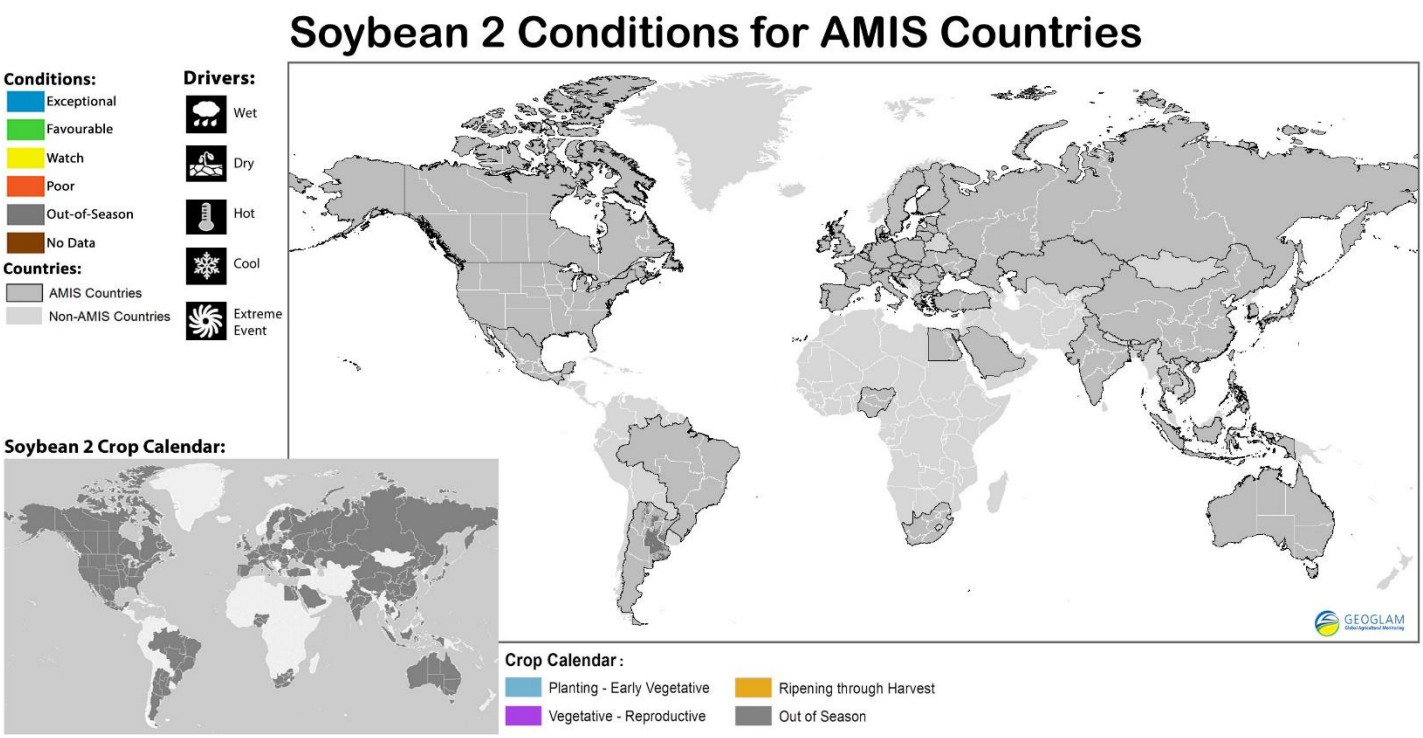

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