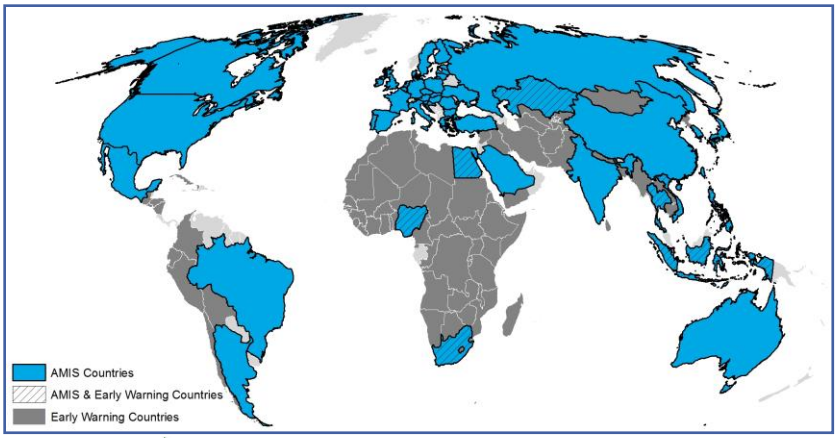
Crop Monitor for AMIS

Overview:

As of the end of September, soybean and rice conditions are generally favourable while wheat and maize conditions are mixed. **Spring wheat** harvest is ongoing under generally favourable conditions with the exception of Canada. **Winter wheat** conditions in the southern hemisphere are mixed, particularly in Australia. For **maize** in the northern hemisphere, conditions are exceptional in the US and southern Europe, while mixed in northern Europe. **Rice** in China and India are favourable while in conditions in Southeast Asia are mixed. **Soybean** conditions are exceptional in most of the US and generally favourable throughout the rest of the northern hemisphere.



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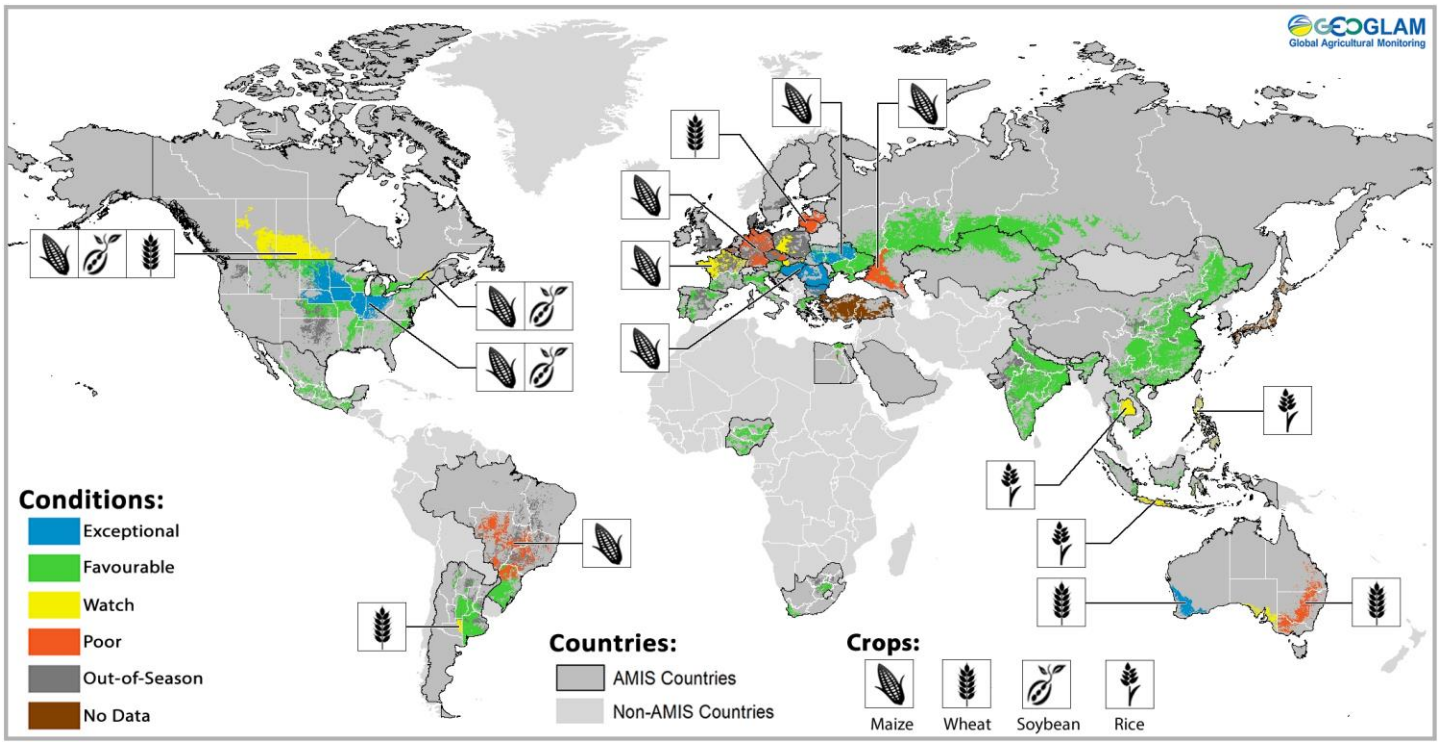
Conditions at a glance for AMIS countries (as of September 28th)



Crop condition map synthesizing information for all four AMIS crops as of September 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, spring wheat harvest is ongoing under generally favourable conditions. Yields are around average albeit below last year's numbers. Sowing of winter wheat has begun in northern regions. In the southern hemisphere, winter wheat conditions are mixed with considerable yield variability in Australia.

Maize - In the northern hemisphere, the US and southern Europe are experiencing exceptional conditions with bumper crops expected. However, dry conditions are impacting yield prospects in northern Europe and the Russian Federation. In the southern hemisphere, harvest of Brazil's summer-planted crop (larger) has completed under poor conditions and sowing of the spring-planted crop has begun in both Brazil and Argentina.

Rice - In China, conditions are favourable for all three rice seasons. In India, Kharif rice conditions are favourable. In Southeast Asia, the wet-season is ongoing with mixed conditions in the Philippines due to adverse weather, and in parts of northeast Thailand, due to floods. In Indonesia, dry-season rice harvest is ongoing with favourable yields.

Soybeans - In the northern hemisphere, US harvest has begun under exceptional conditions, with record yields forecast. Conditions are favourable across China, India, and Ukraine, while prospects have improved for Canada. In the southern hemisphere, sowing has begun in Brazil.

El Niño and IOD Update

ENSO conditions are currently neutral. Since August, models have reduced the amount of warming forecast during 2018. The latest outlook is for a 50-55% chance of El Niño development for October to November and a 65-70% chance for development during December to February. The most likely scenario is a weak El Niño during late northern hemisphere fall and winter. Should El Niño materialize, normal to above-normal rains could occur in Central Asia, southern North America, southeastern South America, and eastern East Africa. Normal to drier than normal conditions could occur in Central America, the Caribbean, northern South America, Southern Africa, the Maritime Continent, and Australia.

Forecasts indicate a weak to moderate strength positive Indian Ocean Dipole (IOD) between October and December, and September observations trended in this direction. A positive IOD could reinforce El Niño conditions, increasing the chances of heavy rain in the eastern Horn of Africa and reduced rainfall in parts of Australia.

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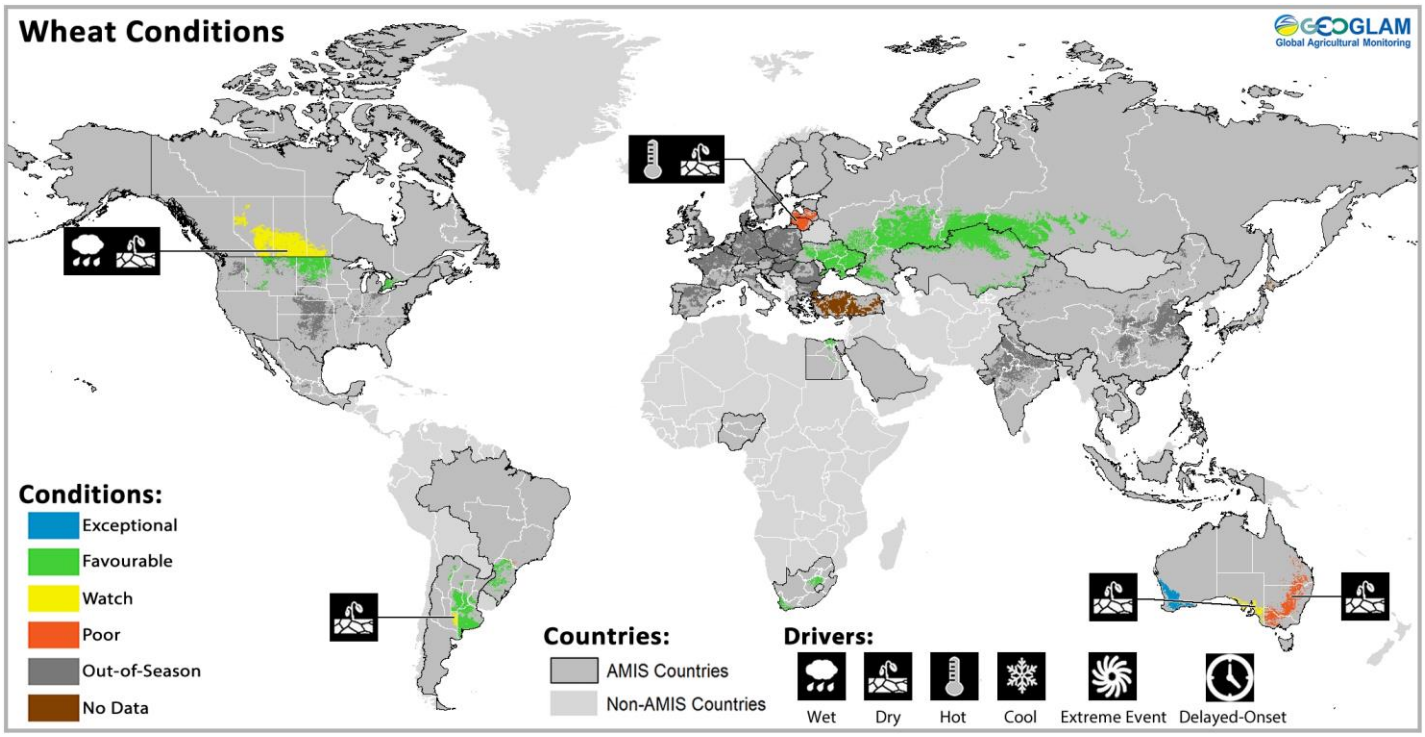
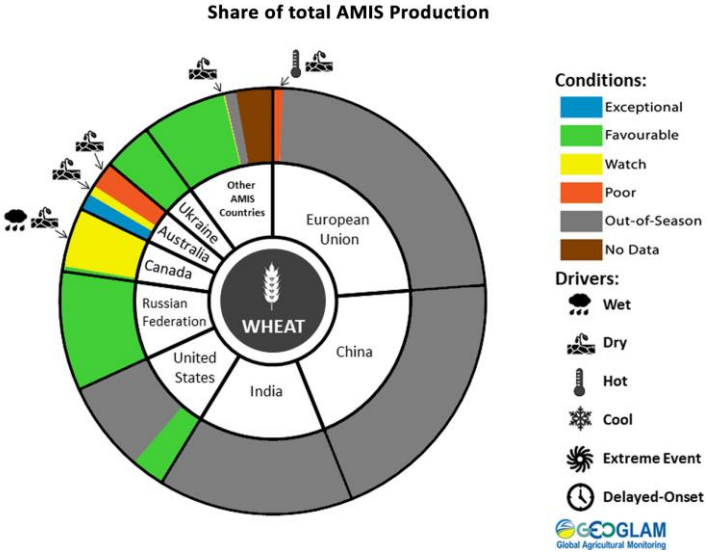
Wheat Conditions for AMIS Countries



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 September 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.

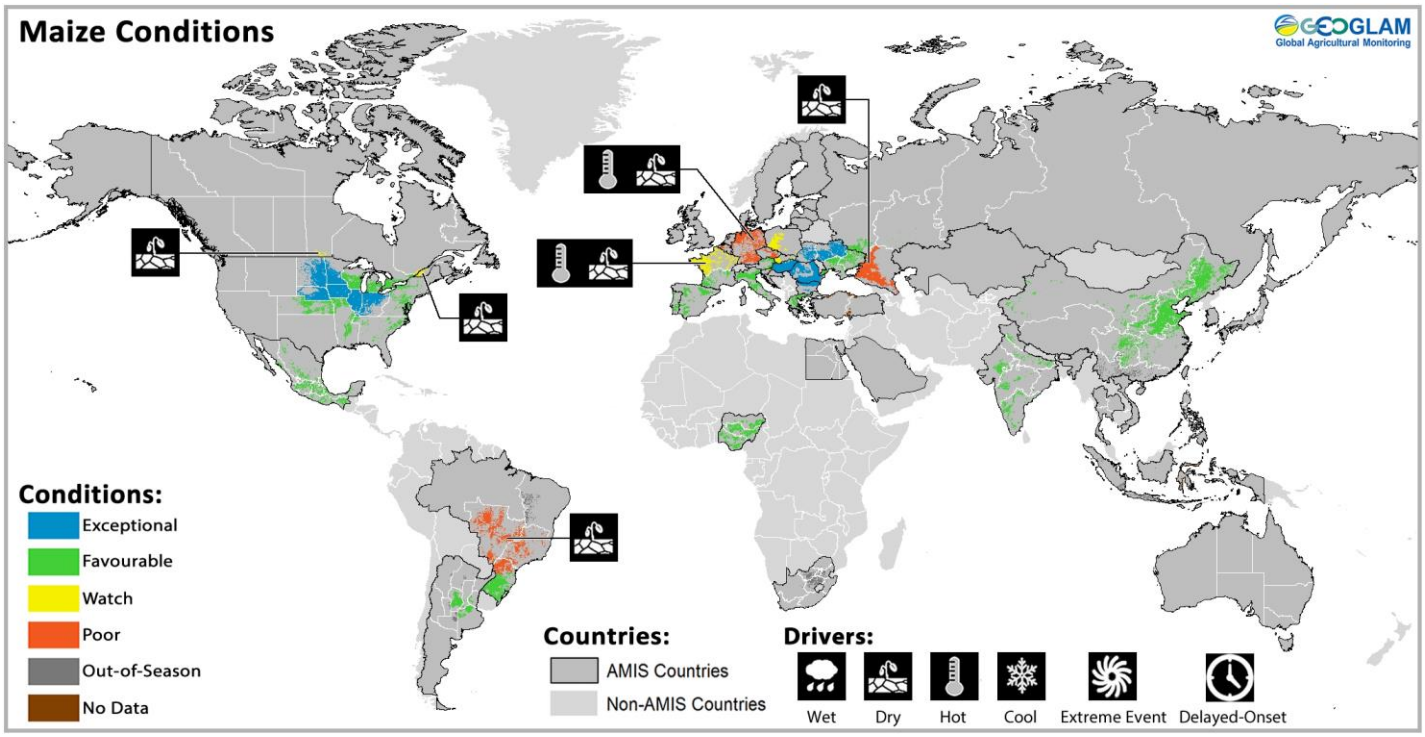
Wheat: In **Ukraine**, winter wheat sowing has begun under favourable conditions owing to recent improvements in soil moisture. In the **Russian Federation**, spring wheat harvest continues with yields expected to be near average. Winter wheat sowing is complete in northern regions and is underway in the southern regions under favourable conditions. In **Kazakhstan**, spring wheat harvest is proceeding under favourable conditions with average yields expected. In the **US**, spring wheat harvest is complete with favourable production prospects. In **Canada**, winter wheat harvest is complete with slightly lower yields relative to last year. Spring wheat harvest continues with variable yields and some concern across the Prairies due to dry conditions during the growing season and early snow cover in some regions. Harvest continues with variable yields for spring wheat due to soil moisture deficits in some regions over the past several months. In **Australia**, yields vary considerably across the country with exceptional 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 with some concern in areas of low soil moisture.



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

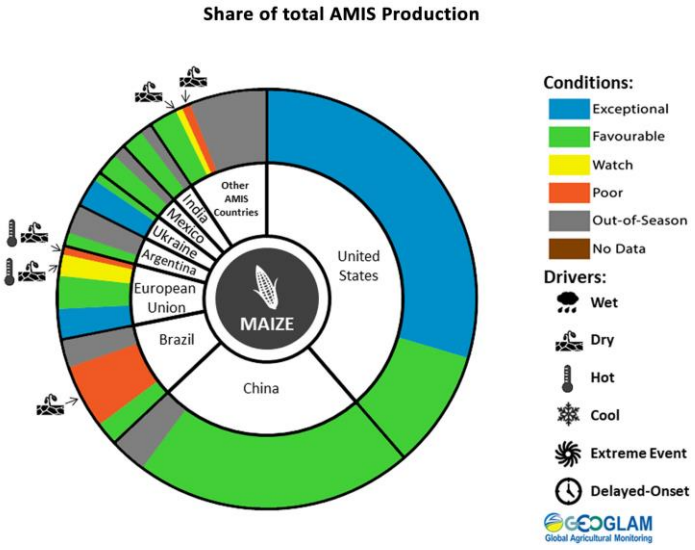
* Assessment based on information as of September 28th

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 September 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**, a bumper crop is expected as harvest progresses. In **Canada**, conditions remain mixed heading into harvest. There is some concern due to the dry weather experienced in Manitoba, and Quebec, while the crop in the main producing province Ontario is under favourable conditions. In **Mexico**, conditions are favourable for the spring-summer crop with an increase in total sown area compared to last year. In **China**, conditions are favourable with harvest beginning early in some regions of central and northeast China. In **India**, conditions are favourable with the crop in the grain filling stage and there is an increase in sown are compared to last year. In the **EU**, harvest is ongoing with overall EU yields expected to remain above the five-year average. The persistent drought in northern and central Europe significantly reduced yield prospects in those regions, however exceptional prospects in southern Europe are expected to help compensate. In **Ukraine**, harvest begun with record yields expected in the central and western regions. In **Brazil**, harvest of the summer-planted crop (larger) is complete with reduced yields and area due to lack of rainfall over the course of the season. Sowing of the spring-planted crop has begun in the south under favourable conditions. In **Argentina**, sowing is commencing under favourable conditions for the spring-planted crop.



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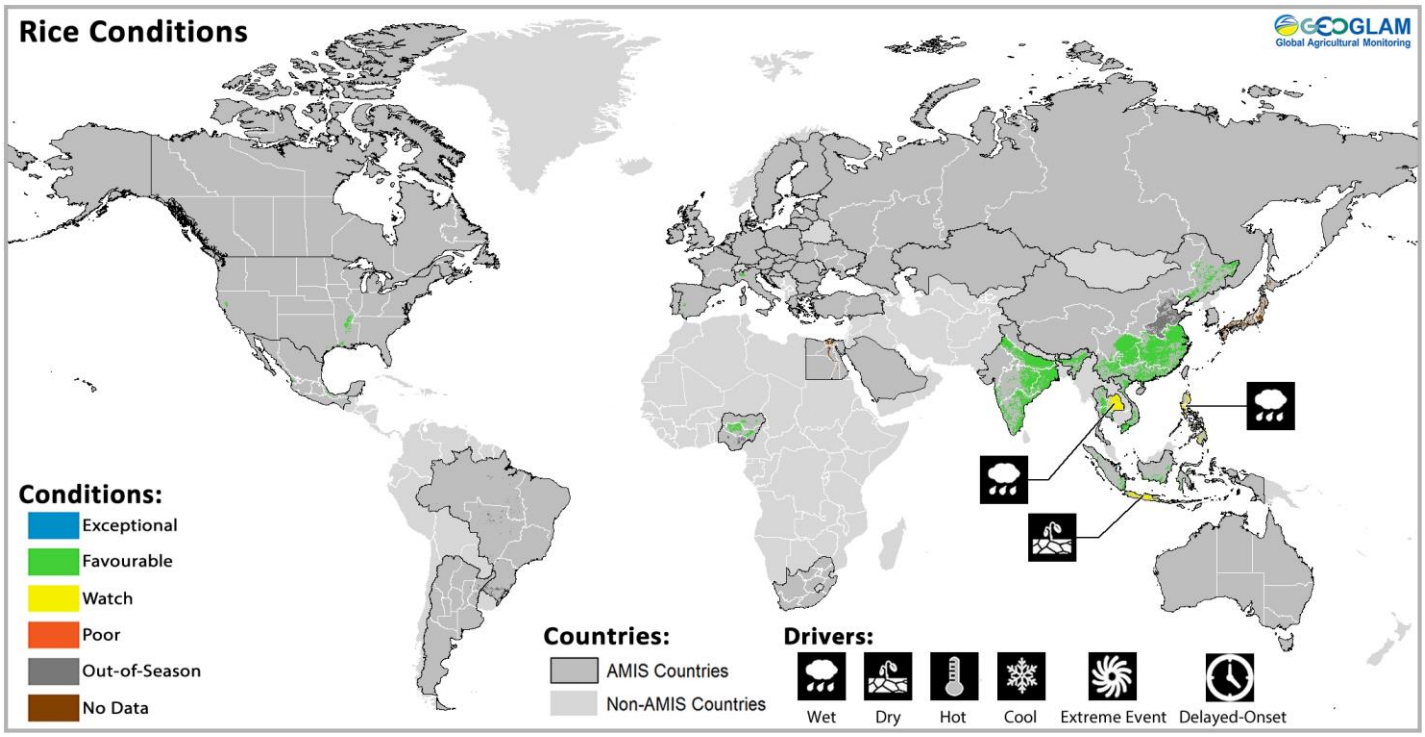
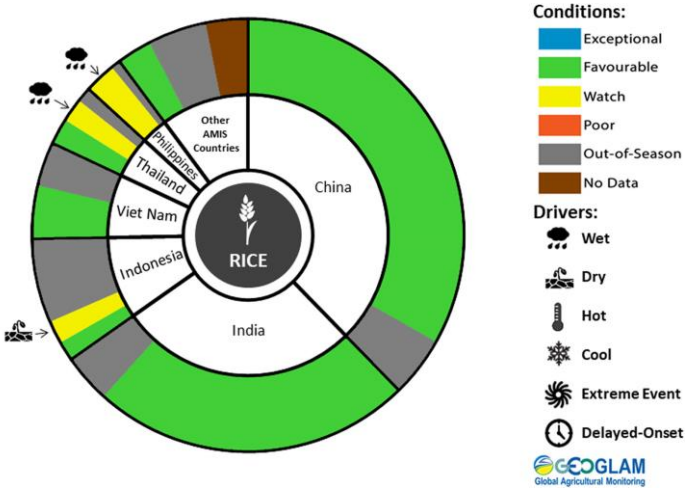
Rice Conditions for AMIS Countries



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

Rice: In **China**, conditions are favourable for single rice and semi-late rice in the maturation stage. Late rice in the south is under favourable conditions in the heading stage. In **India**, Kharif rice is under favourable conditions while in the maturity stage in the north and tillering stage in the south. An increase in total sown area is reported. In **Indonesia**, sowing of dry-season rice is complete with total sown area down due to dry conditions earlier this season. Harvest of the earlier sown rice continues with yields remaining above last year's yields. In **Viet Nam**, conditions are favourable for the summer-autumn rice (wet-season rice) with a slight reduction in national total sown area. Harvest has begun in the south with some delays due to a late start of the season. In **Thailand**, conditions of wet-season rice are generally favourable owing to continuous rain and good weather. However, flooding due to heavy rains in the northeastern region is expected to reduce yields. In the **Philippines**, wet-season rice conditions are mixed due to adverse weather conditions over the course of the season. Harvest of the April-May sown crop is ongoing and a reduction in final yields compared to last year is expected. A typhoon in mid-September affected heavily the northern region, but details are currently under investigation. In the **US**, conditions are favourable.

Share of total AMIS Production



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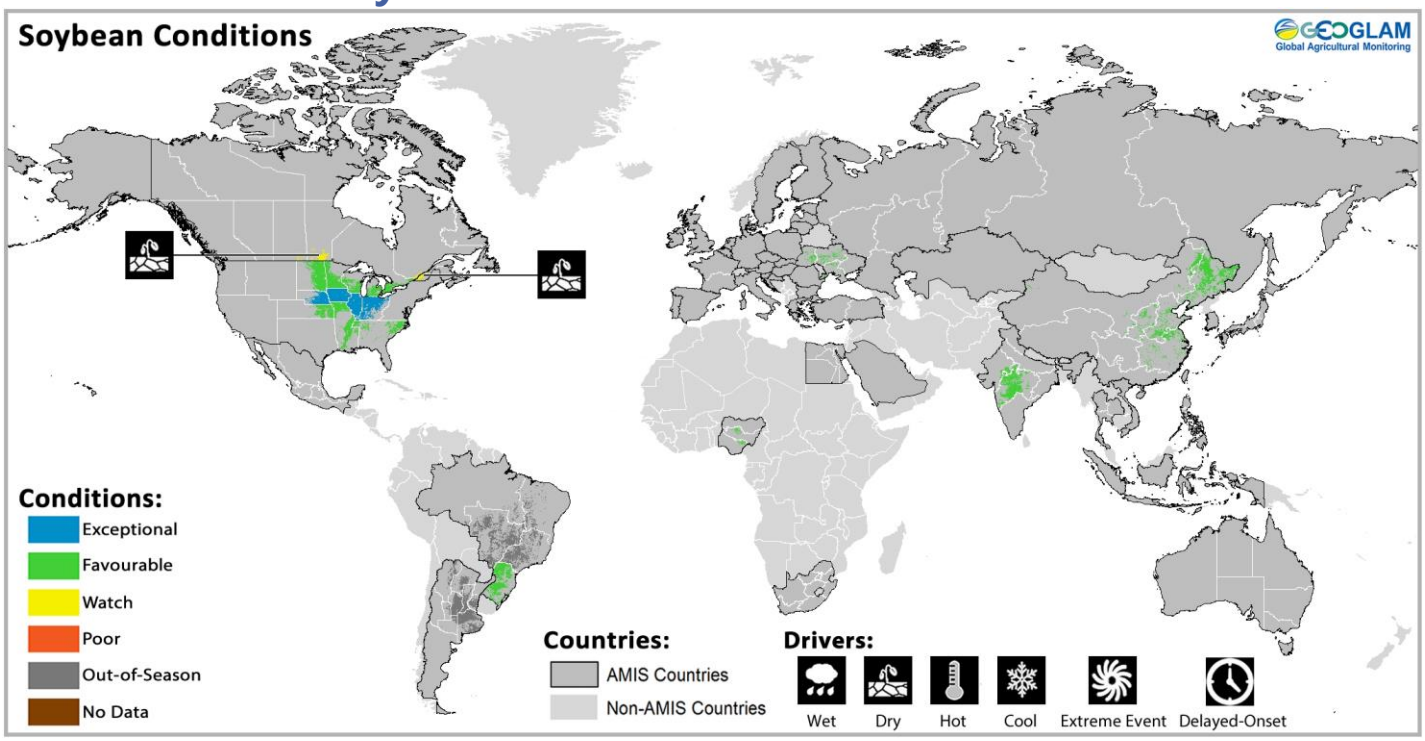
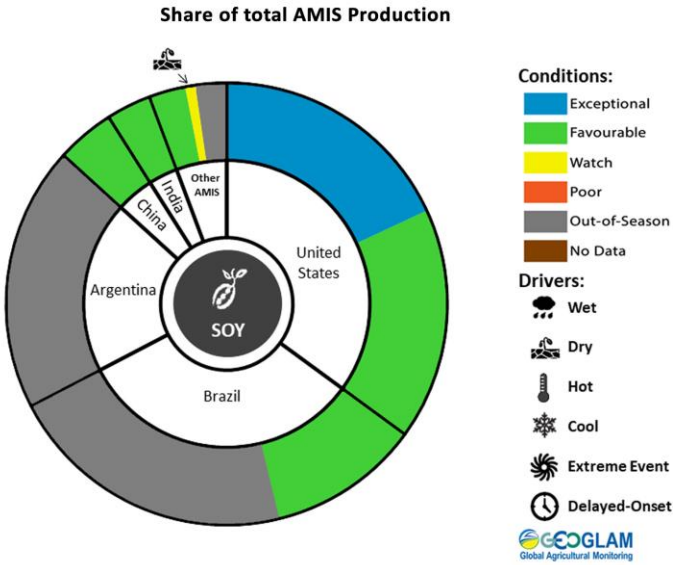
Soybean Conditions for AMIS Countries



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 September 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 has begun and record yields are expected in many areas owing to exceptional growing conditions across most of the country. In **Canada**, harvest is ongoing in the prairies with yields varying according to rainfall received over the past few months. An increase in yield is expected at the national level compared to last year, however overall production will be down due to a reduction in harvested area this year. In **China**, conditions are favourable with the crop in the maturing and harvesting stages. Early harvesting has begun in some regions of central and northeast China compared to last year. In **India**, the crop is in the pod filling stage under favourable conditions. In **Ukraine**, harvest has begun under favourable conditions. In **Brazil**, sowing is just beginning 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 October 4th

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.

* Assessment based on information as of September 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	

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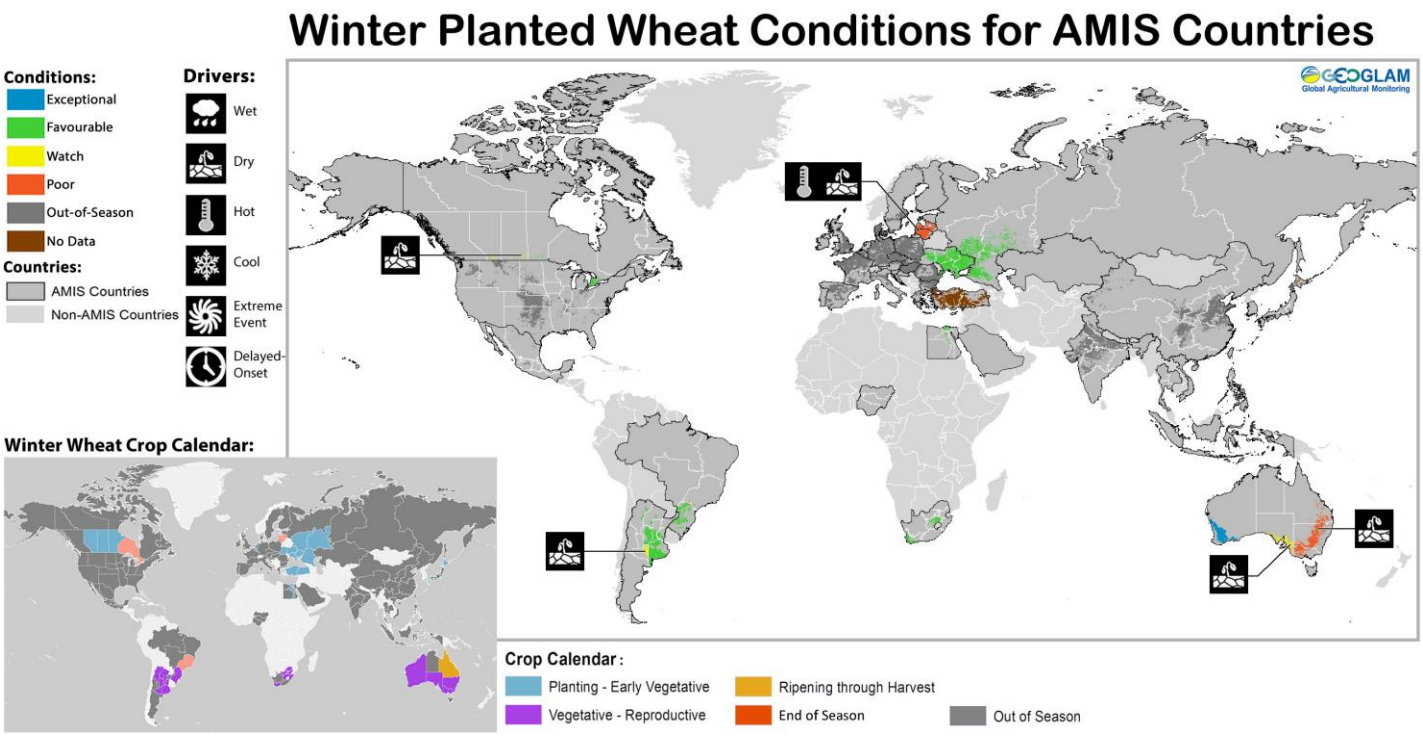
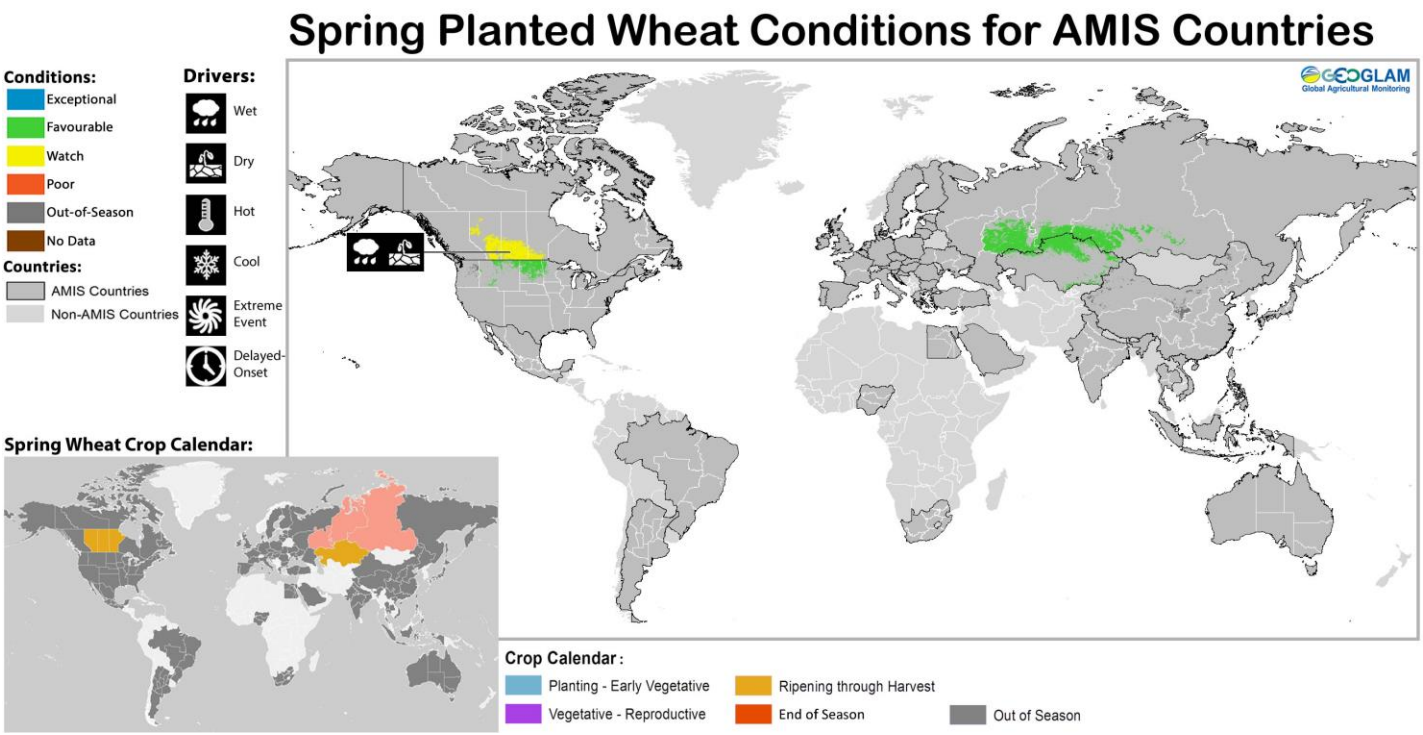
Appendix 2: Crop Season Specific Maps



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 September 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 September 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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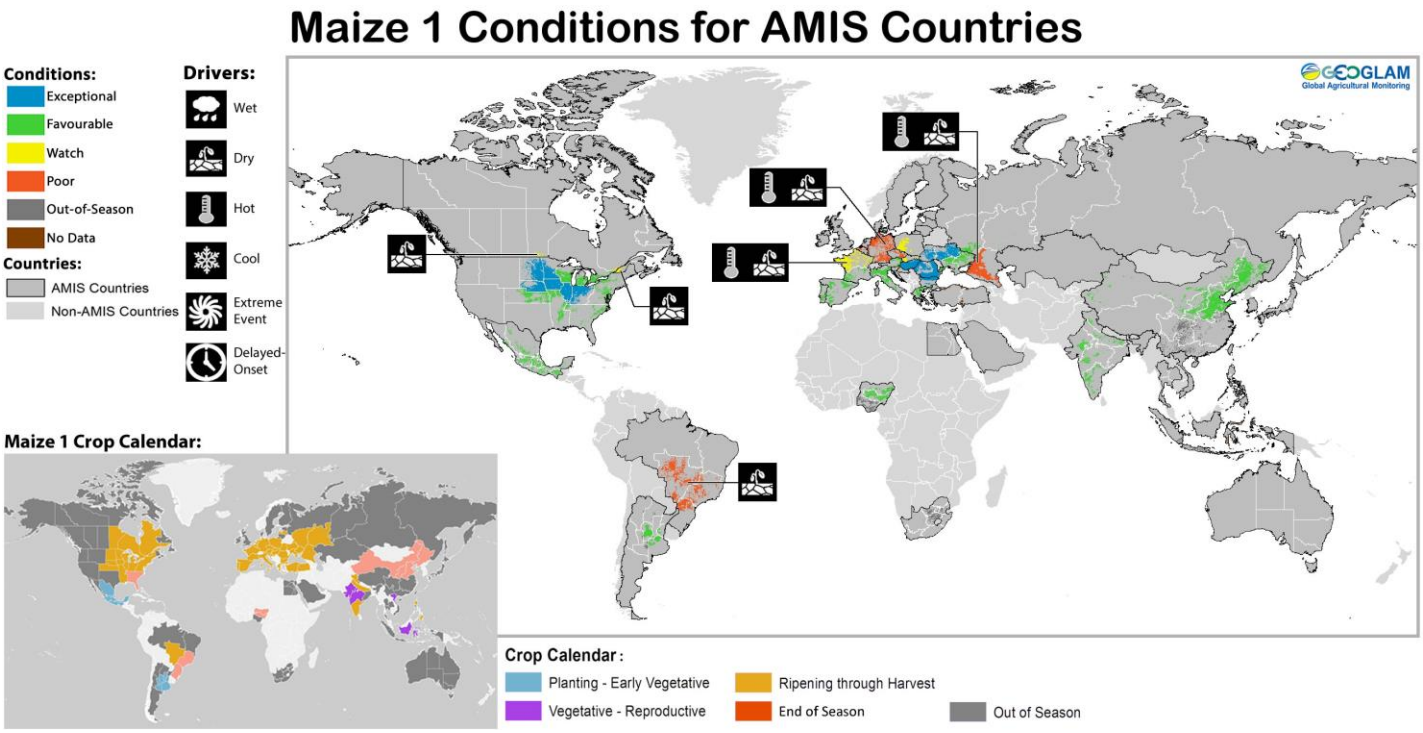
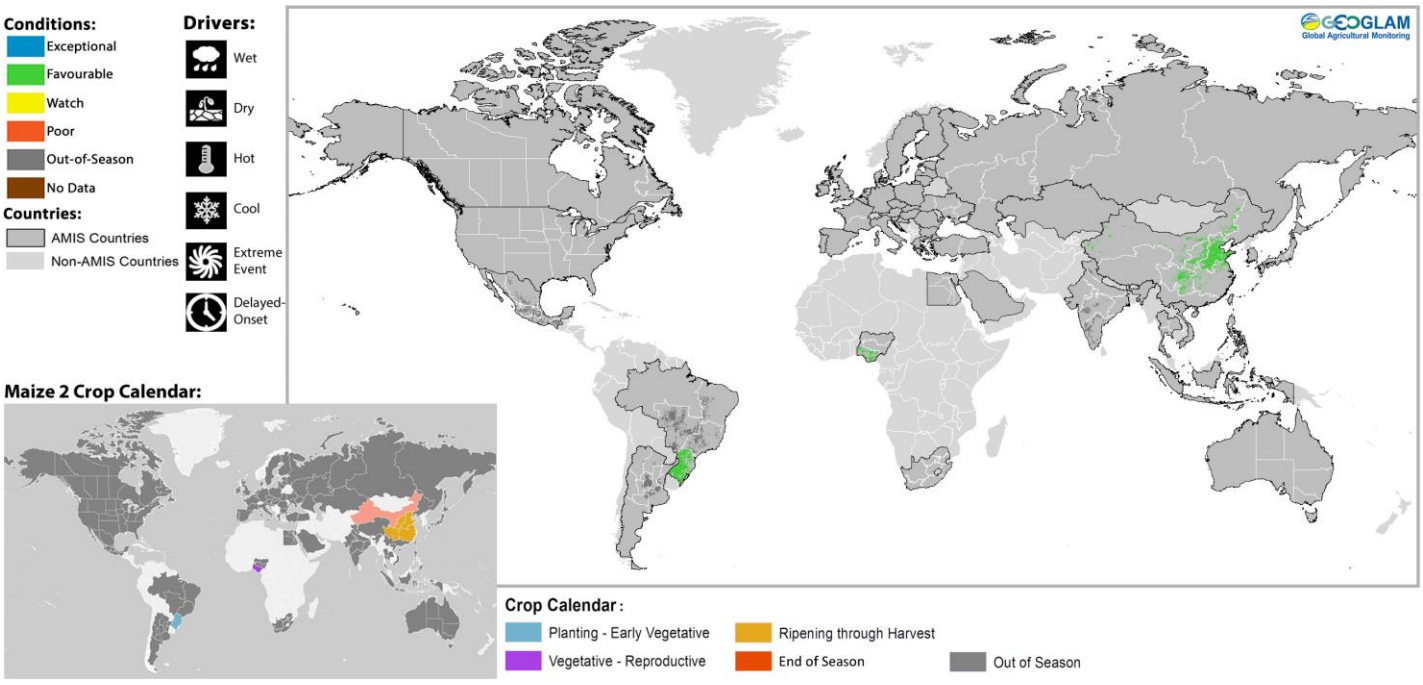


Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of September 28th. Where crops are in less than favourable conditions the climatic drivers responsible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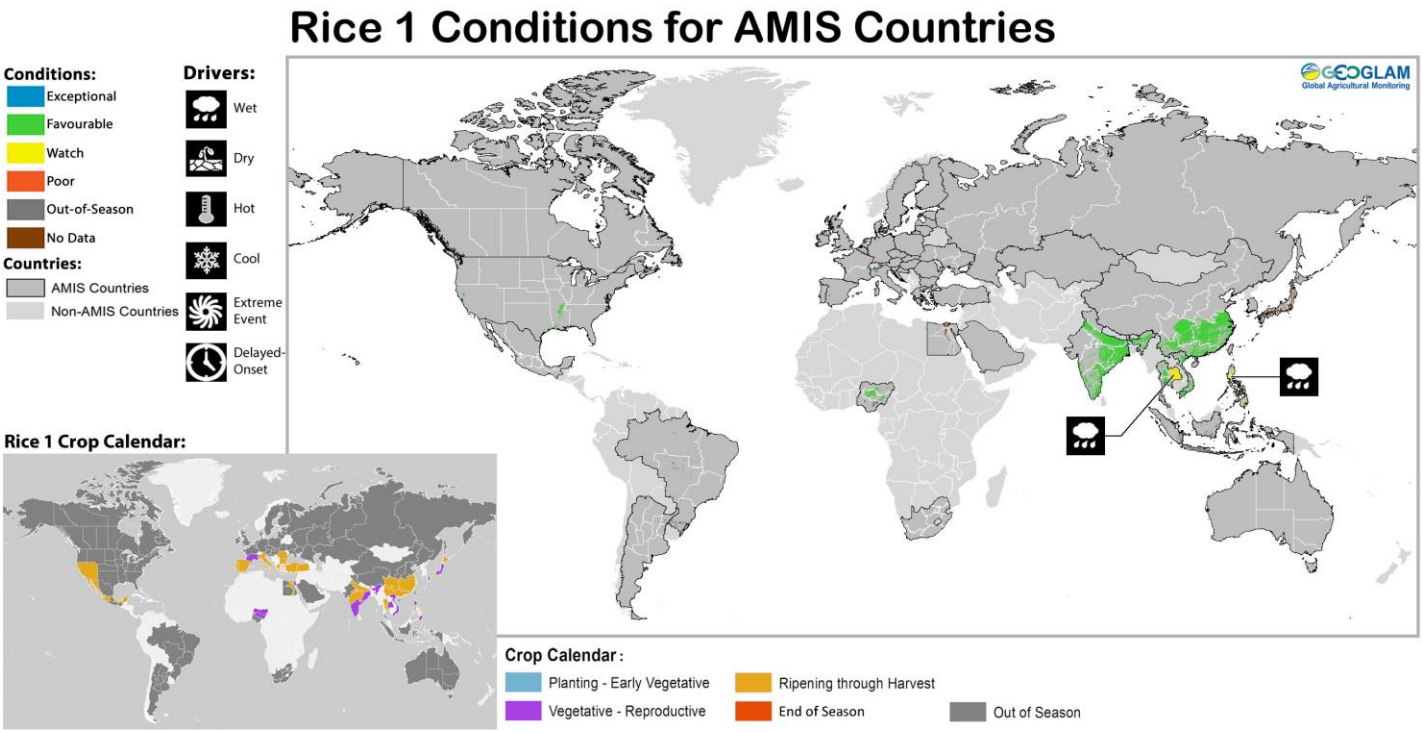

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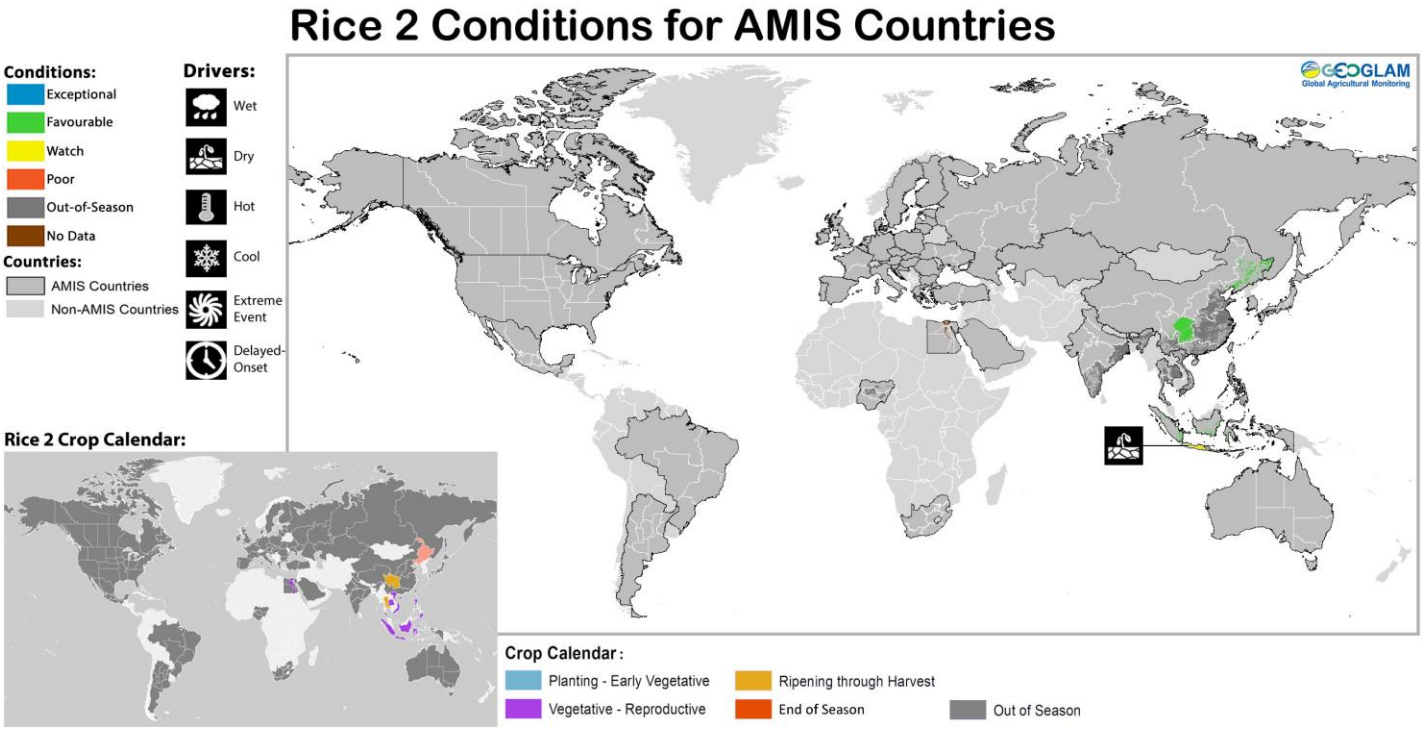

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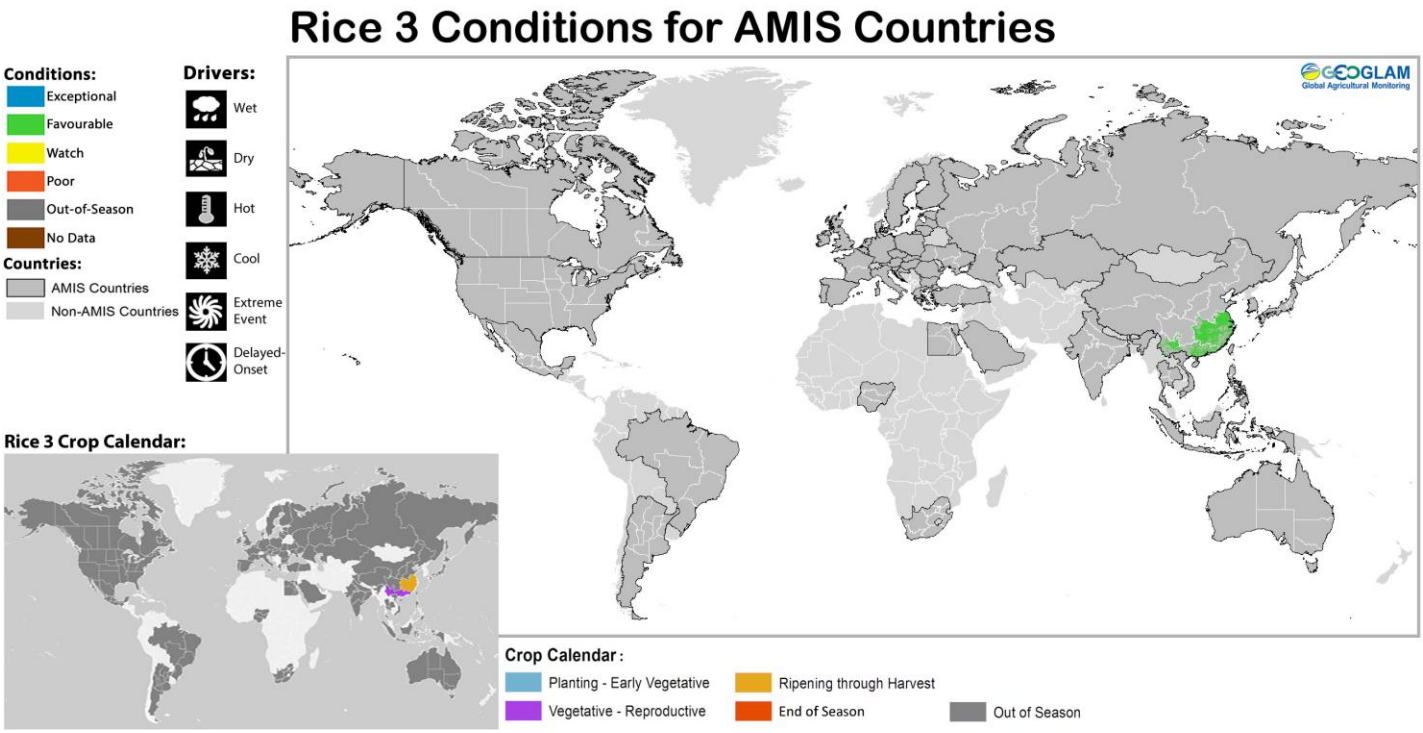

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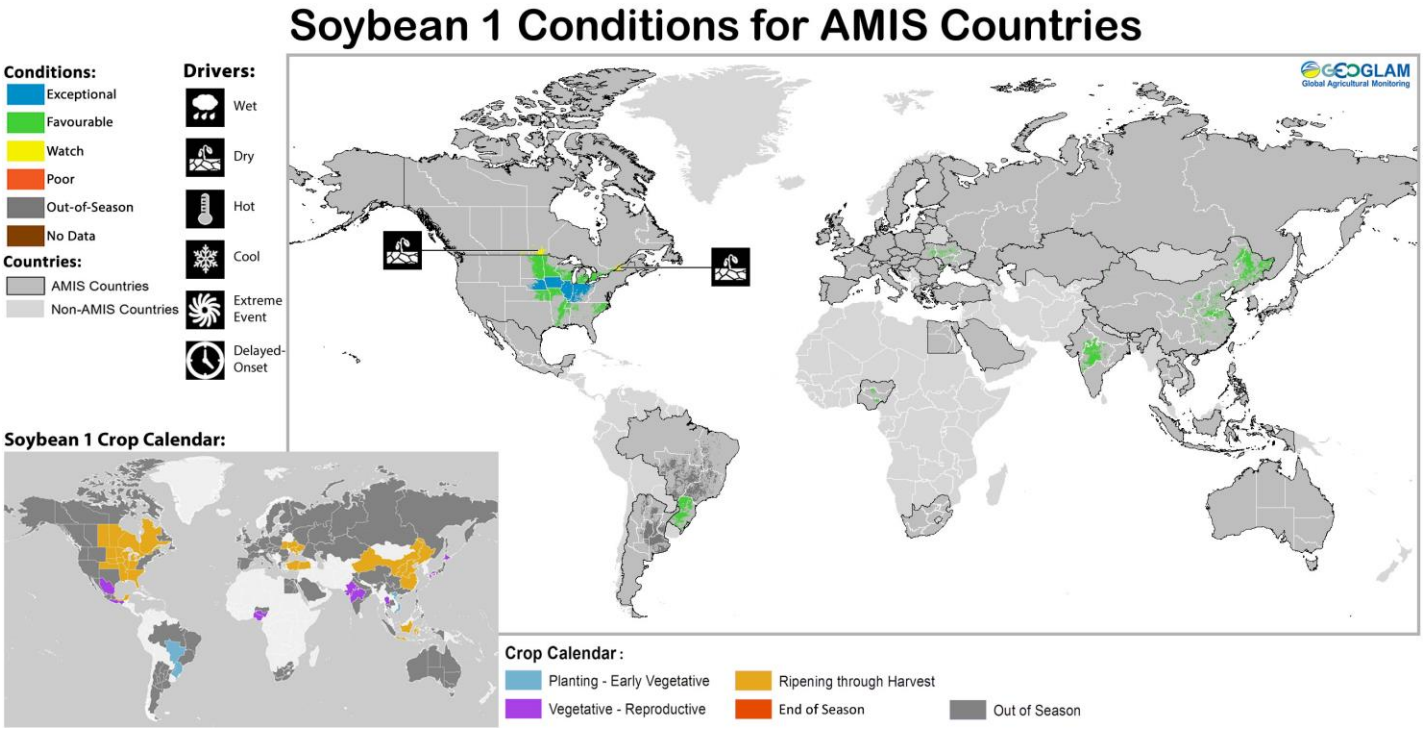

Soybean 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of September 28th. Where crops are in less than favourable conditions the climatic drivers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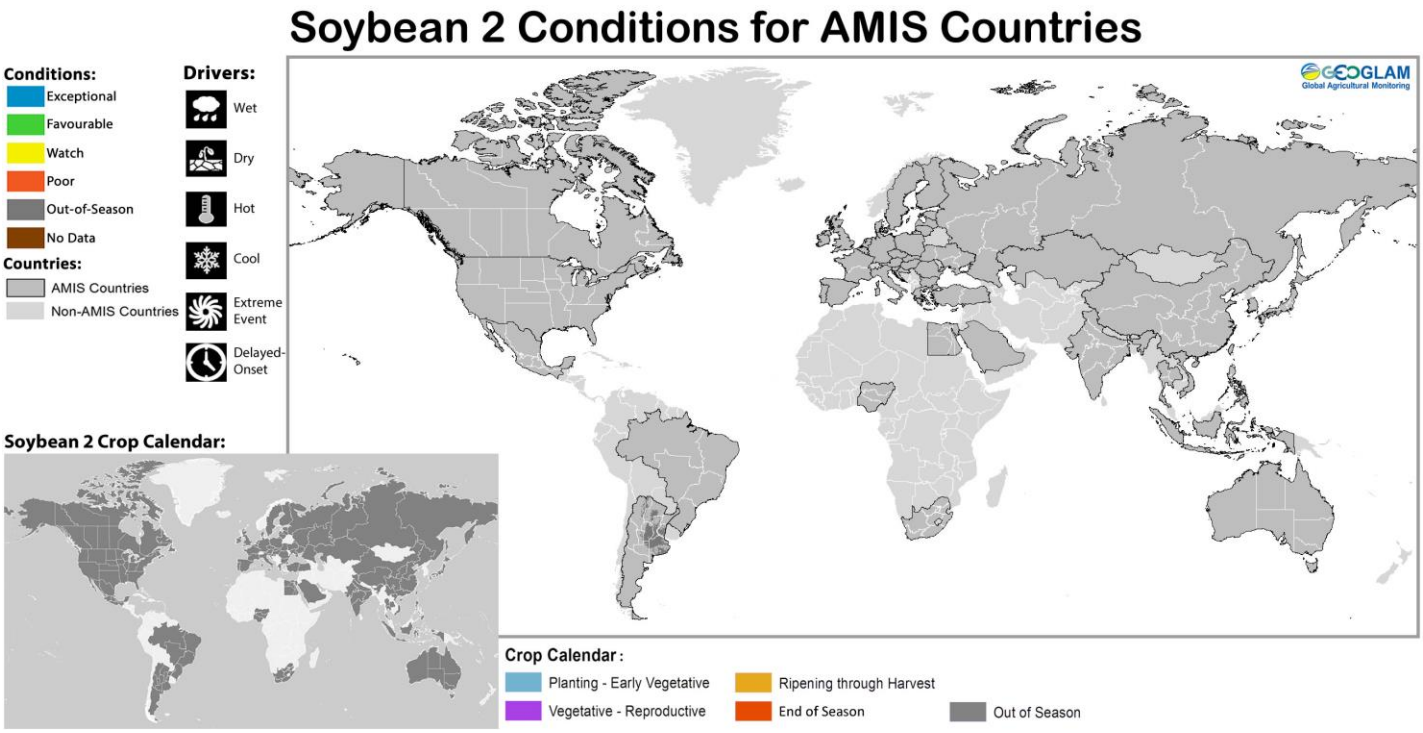

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Prepared by members of the GEOGLAM Community of Practice
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Climatic update by Climate Hazards Group of UC Santa Barbara

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

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Sources & Disclaimer

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