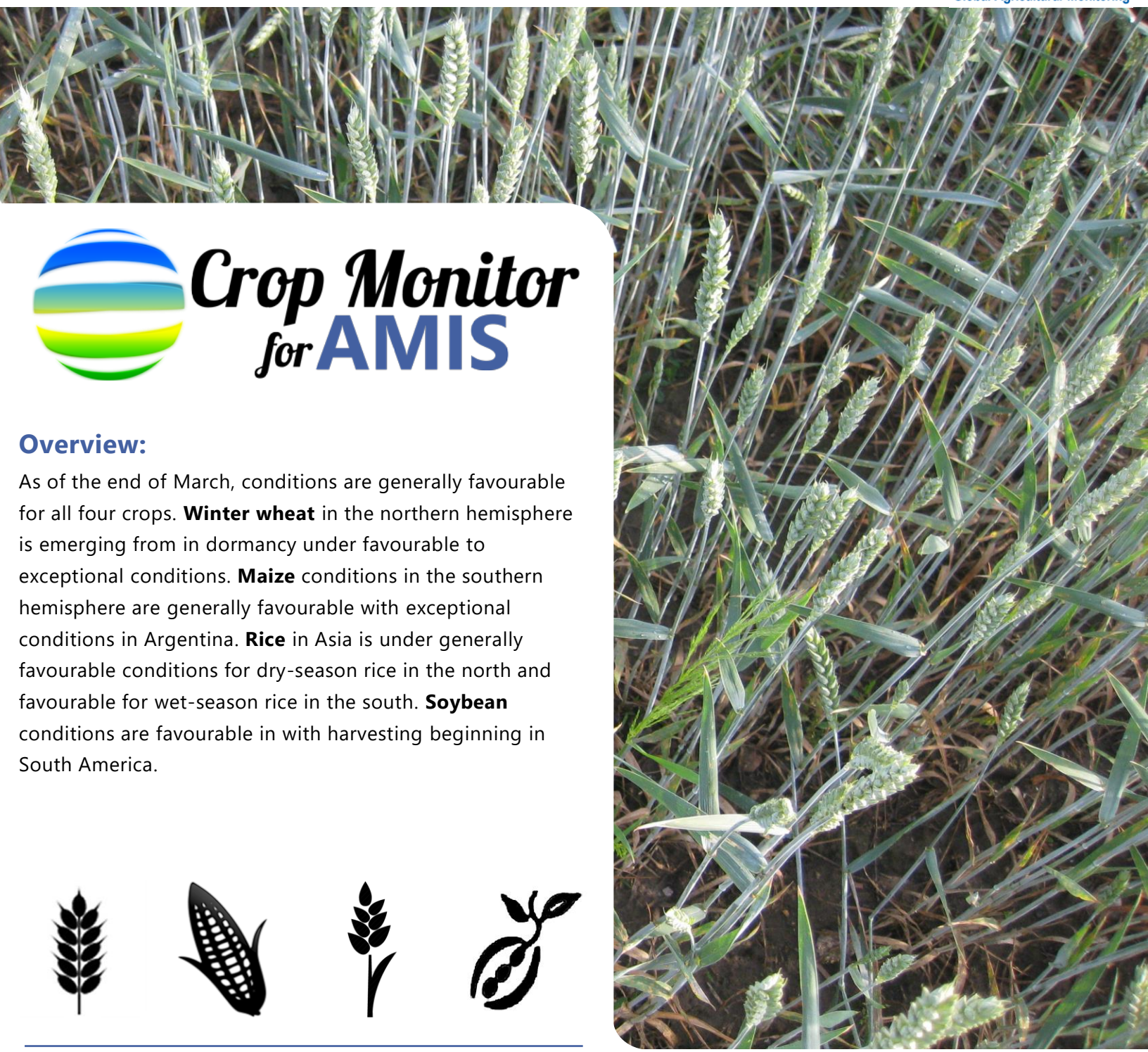
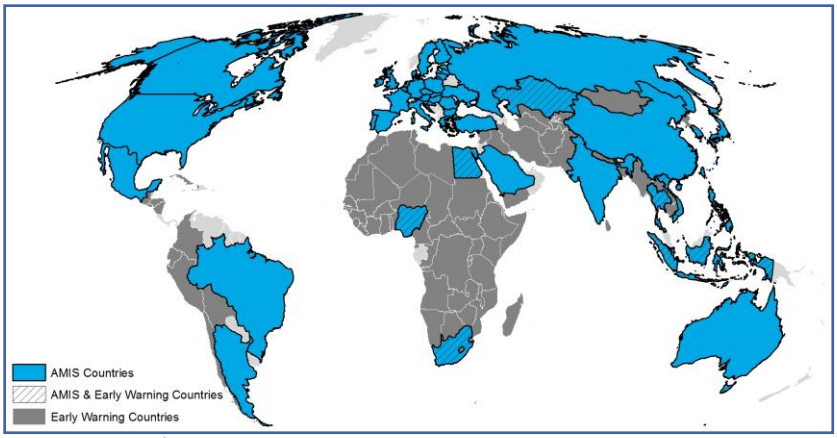


Crop Monitor for AMIS

Overview:

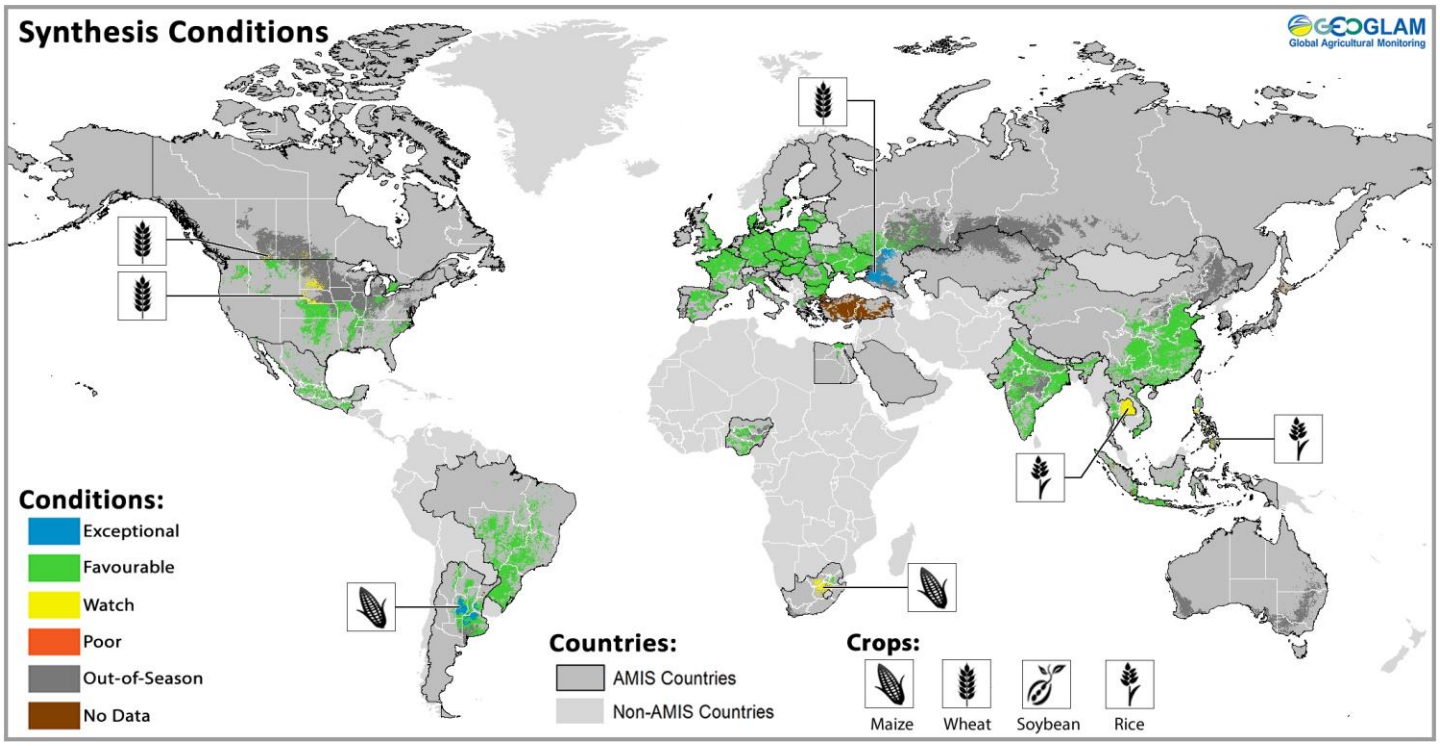
As of the end of March, conditions are generally favourable for all four crops. **Winter wheat** in the northern hemisphere is emerging from in dormancy under favourable to exceptional conditions. **Maize** conditions in the southern hemisphere are generally favourable with exceptional conditions in Argentina. **Rice** in Asia is under generally favourable conditions for dry-season rice in the north and favourable for wet-season rice in the south. **Soybean** conditions are favourable in with harvesting beginning in South America.



Contents:

Assessment based on information as of March 28th

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



Crop condition map synthesizing information for all four AMIS crops as of March 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, winter wheat is under favourable conditions with southern areas emerging from dormancy early in many places with above normal growth.

Maize - In the southern hemisphere, conditions are favourable across most countries. Exceptional conditions are present at the start of harvest for early-planted maize in Argentina, while conditions remain mixed in South Africa at a crucial stage for final yield development.

Rice - In China and India, conditions are favourable. In Southeast Asia, conditions are mixed in the northern countries for dry-season rice, with dry conditions in the Philippines and Thailand. Wet-season rice is advancing favourably in Indonesia.

Soybeans - In the southern hemisphere, harvesting is ongoing in Brazil and Argentina under favourable conditions with average to potentially above-average yields expected respectively.

El Niño Advisory

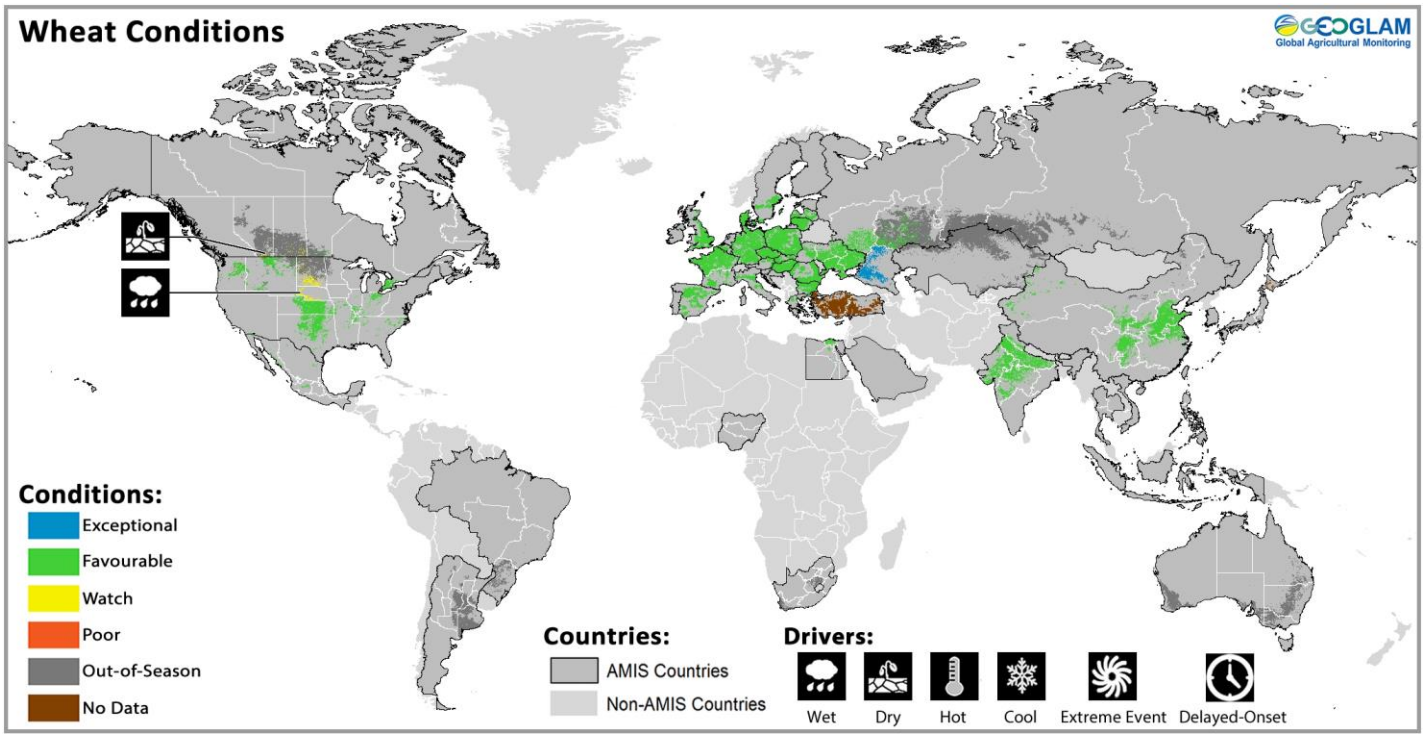
Weak-to-moderate El Niño-Southern Oscillation (ENSO) conditions are present and are forecast to continue during the Northern Hemisphere spring (80% chance for April to June) and summer (60% chance for June to August).

Associated with this event are increased chances of above normal April to June rainfall in parts of the southeastern United States, Central Asia, and southeastern South America, and increased chances of below normal rainfall in Southeast Asia, particularly for the maritime region, and in parts of eastern Southern Africa and northern South America.

El Niño conditions during June to August would typically increase chances of below normal rainfall in Indonesia, the Philippines, northern and eastern Australia, India, Central America and parts of the Caribbean, northern South America, and northern Ethiopia. Forecasts are also tending towards a positive Indian Ocean Dipole mode during June to August. Such conditions tend to suppress rainfall in parts of Australia.

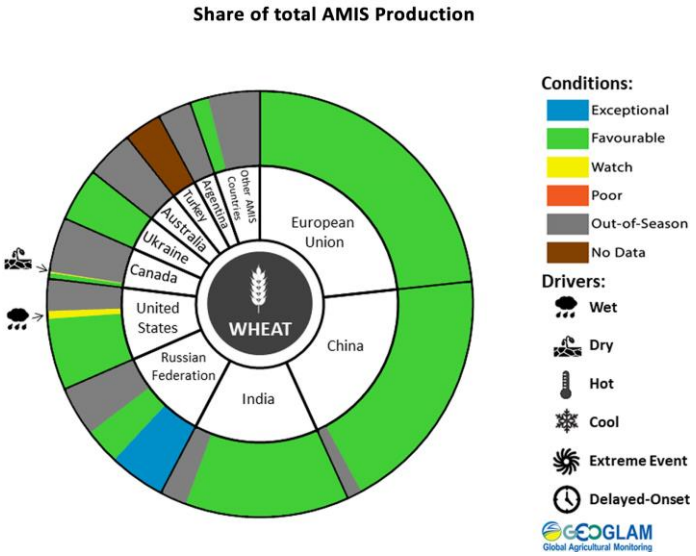
* Assessment based on information as of March 28th

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 March 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.

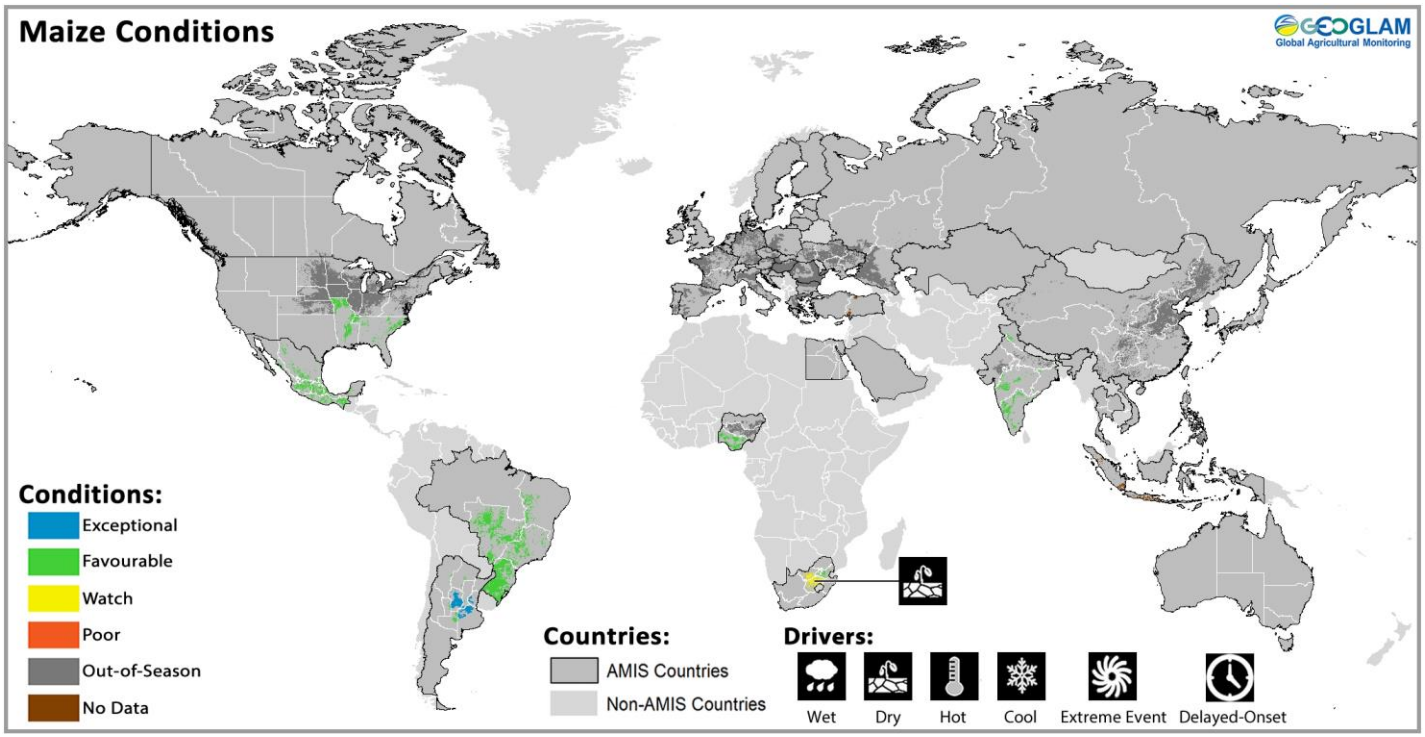
Wheat: In the **EU**, winter wheat conditions are generally favourable, but additional rainfall is needed in southern Europe in the coming month. In **Ukraine**, a very warm start to March has led to winter wheat growth being two to three weeks ahead of normal, which tends to be a positive factor for final yields. In the **Russian Federation**, winter wheat conditions are off to an exceptional start in the Southern region, while areas further north remain in dormancy under favourable conditions. In **China**, conditions for winter wheat are generally favourable as warmer than average weather is bringing the crop out of dormancy earlier than normal. In **India**, winter wheat is progressing towards maturity stage under favourable conditions. Total sown area is in line with the previous year. In the **US**, winter wheat conditions are favourable in the main producing area of the southern Great Plains. Further north in Nebraska and the Dakotas very wet and snowy conditions are raising concerns. In **Canada**, winter wheat conditions are favourable for the dormant crop in the main producing provinces. However, delays in sowing in the fall, along with an increased risk of winterkill, may reduce production in the southern Prairies.



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

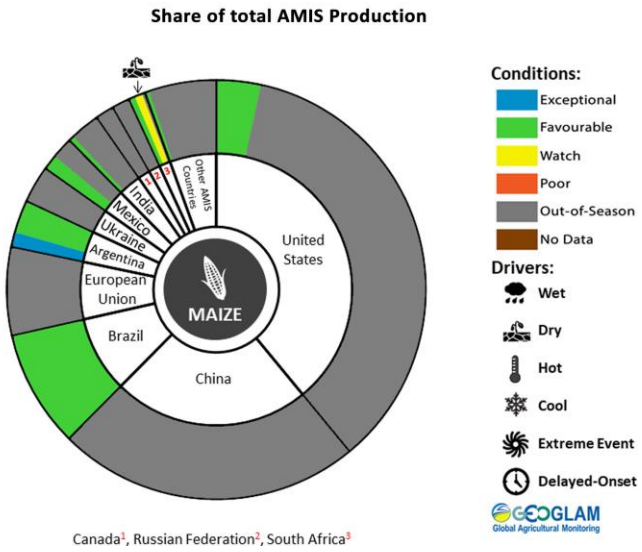
* Assessment based on information as of March 28th

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 March 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.

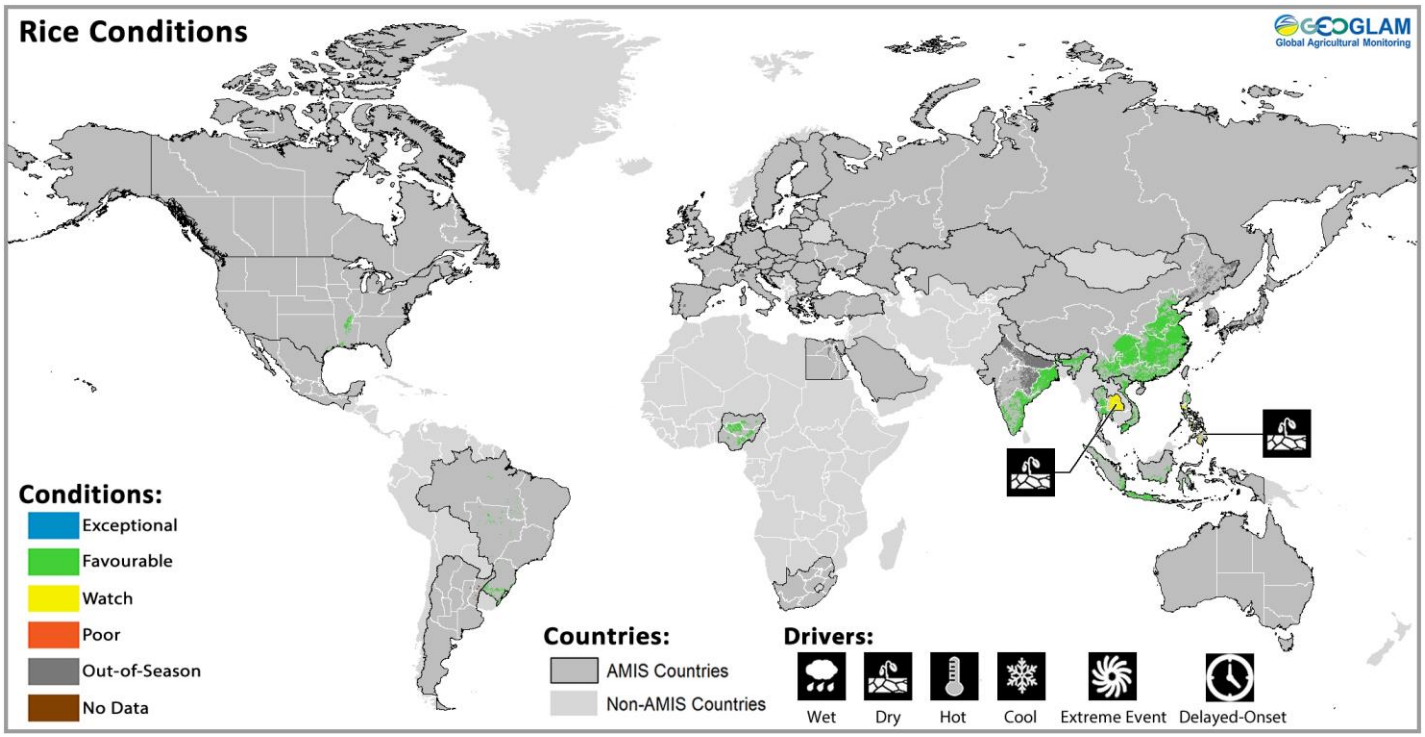
Maize: In **Brazil**, harvesting is advancing for the spring-planted crop and average yields are expected. Sowing of the summer-planted crop (higher producing season) is progressing under favourable conditions. A slight increase in total sown area is expected. In **Argentina**, harvest of the spring-planted crop has begun under exceptional conditions in the main producing areas. Conditions are favourable for the summer-planted crops. In **Mexico**, conditions are favourable for both the spring-summer cycle and autumn-winter crops. In **South Africa**, conditions are mixed as dry conditions in the western production area early in the season reduced sown area, and current warm and dry conditions continue to put pressure on yields. Rainfall over the short term will be crucial to determining final yields. **India**, conditions are favourable for the Rabi crop as sowing is complete and total sown area is close to average. In the **US**, sowing of maize has begun in the southern states under favourable conditions.



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

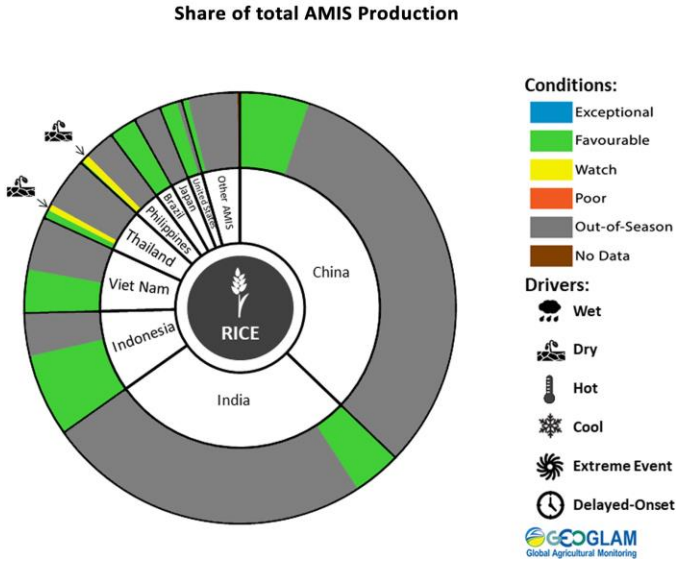
* Assessment based on information as of March 28th

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

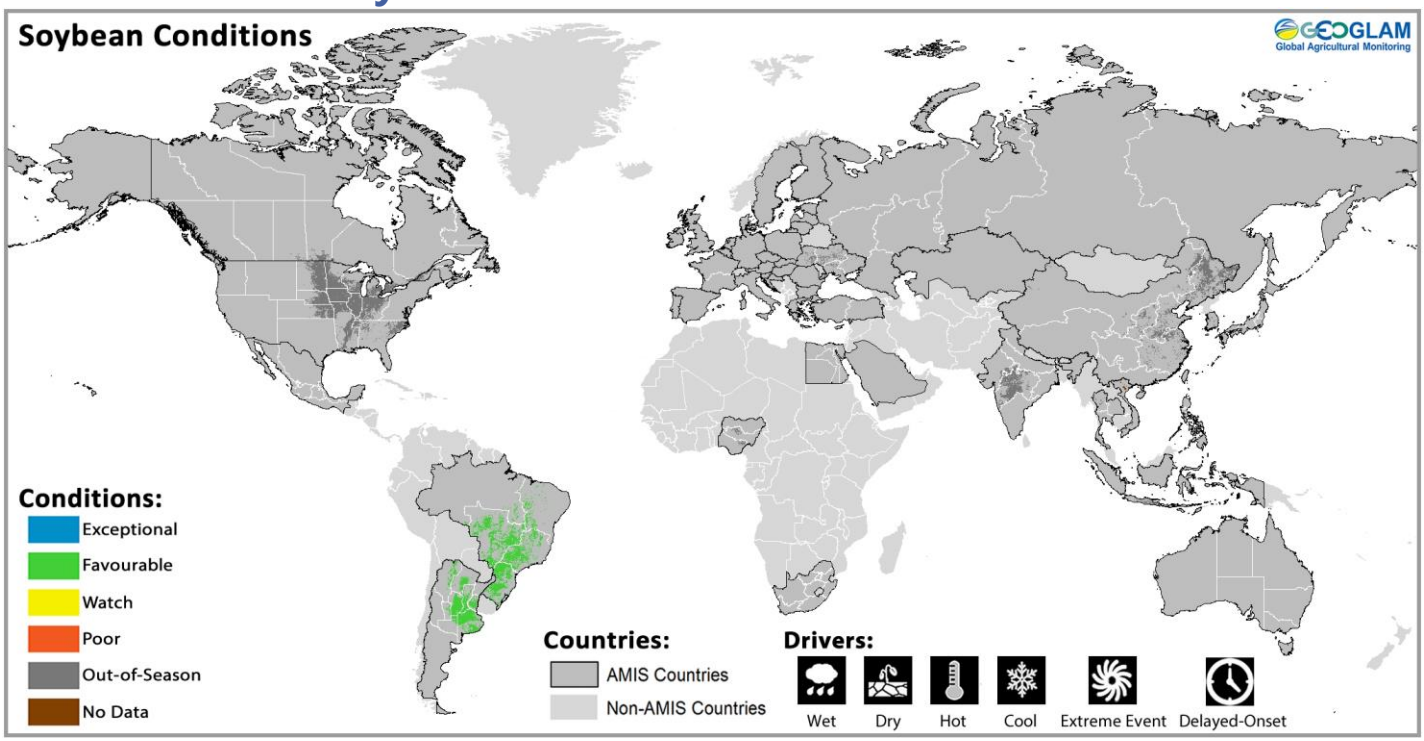
Rice: In **China**, early-crop rice conditions are favourable with plentiful rainfall for irrigation. In **India**, transplanting of the Rabi rice is complete and under favourable conditions. In **Indonesia**, conditions are favourable as sowing of wet-season rice enters into the final month. Harvest of the earlier sown fields continues with yields expected to be close to average owing to sufficient sunlight during the growing season. In **Viet Nam**, conditions are favourable for winter-spring rice (dry-season rice) with sowing complete in the south and continuing in the north. Total sown area is noticeably higher in the north compared to last year due to warm weather. In **Thailand**, dry-season rice is harvesting under general favourable conditions with the exception of dry conditions in the northeastern region, which will potentially reduce final yields. In the **Philippines**, dry-season rice is in the maturing to harvesting stages under mixed conditions. Dry conditions in the southern areas during the critical growth stage may affect final yields. In **Brazil**, harvesting is ongoing with a noticeable decrease expected in production compared to last year due to a reduction in sown area. In the **US**, sowing is beginning in the south under favourable conditions.



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

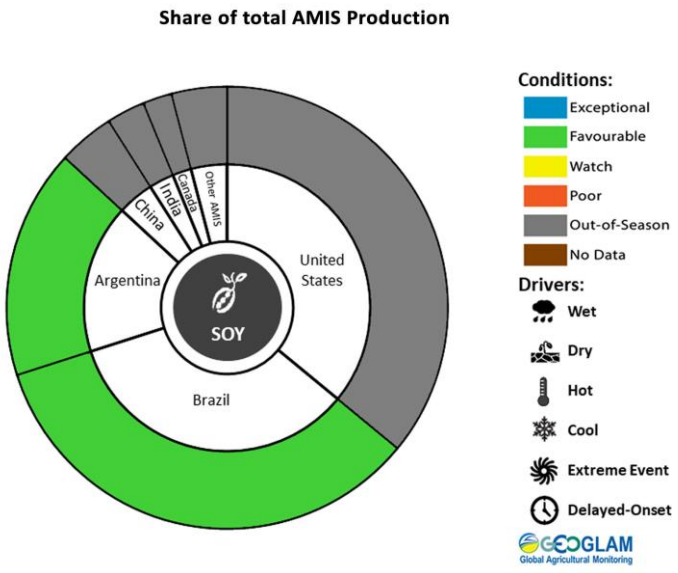
* Assessment based on information as of March 28th

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 March 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**, conditions are favourable as the harvest progresses. A slight reduction in final production is expected compared to the previous year due to dry conditions in the South and Central-West regions during December and January. Overall yields are estimated to be near average. In **Argentina**, harvest has begun for spring-planted crops under favourable conditions. Summer-planted crops are under favourable conditions, with earlier sown crops showing better performance than later sown crops. A frost in the last week of February in southern Buenos Aires and La Pampa resulted in only minor losses.



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 April 4th

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 March 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

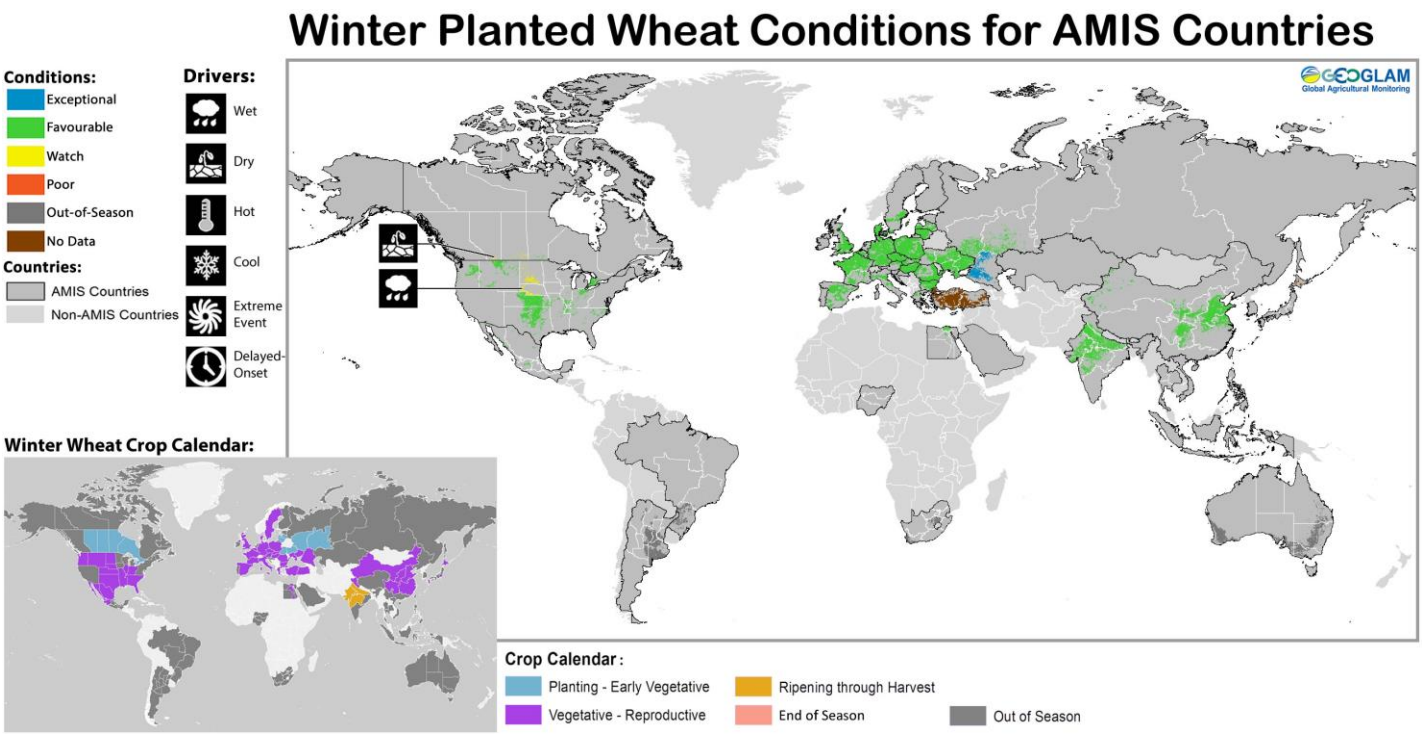
Crop Season Nomenclature:

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.

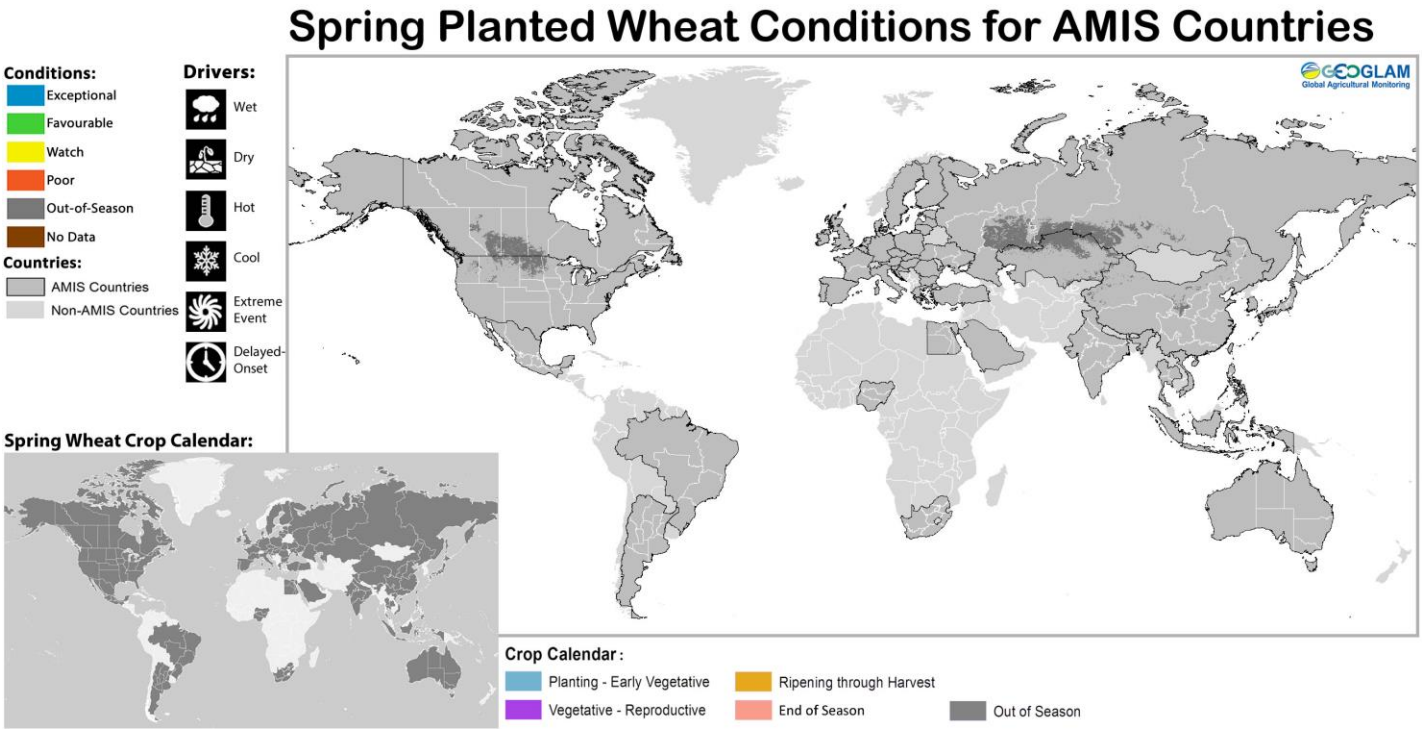
Crop Season Nomenclature				
Country	Crop	Season 1 Name	Season 2 Name	Season 3 Name
Argentina	Soybean	Spring-planted	Summer-planted	
Brazil	Maize	Summer-planted (larger producing season)	Spring-planted (smaller producing season)	
Canada	Wheat	Winter-planted	Spring-planted	
China	Maize	Spring-planted	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 March 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 March 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 March 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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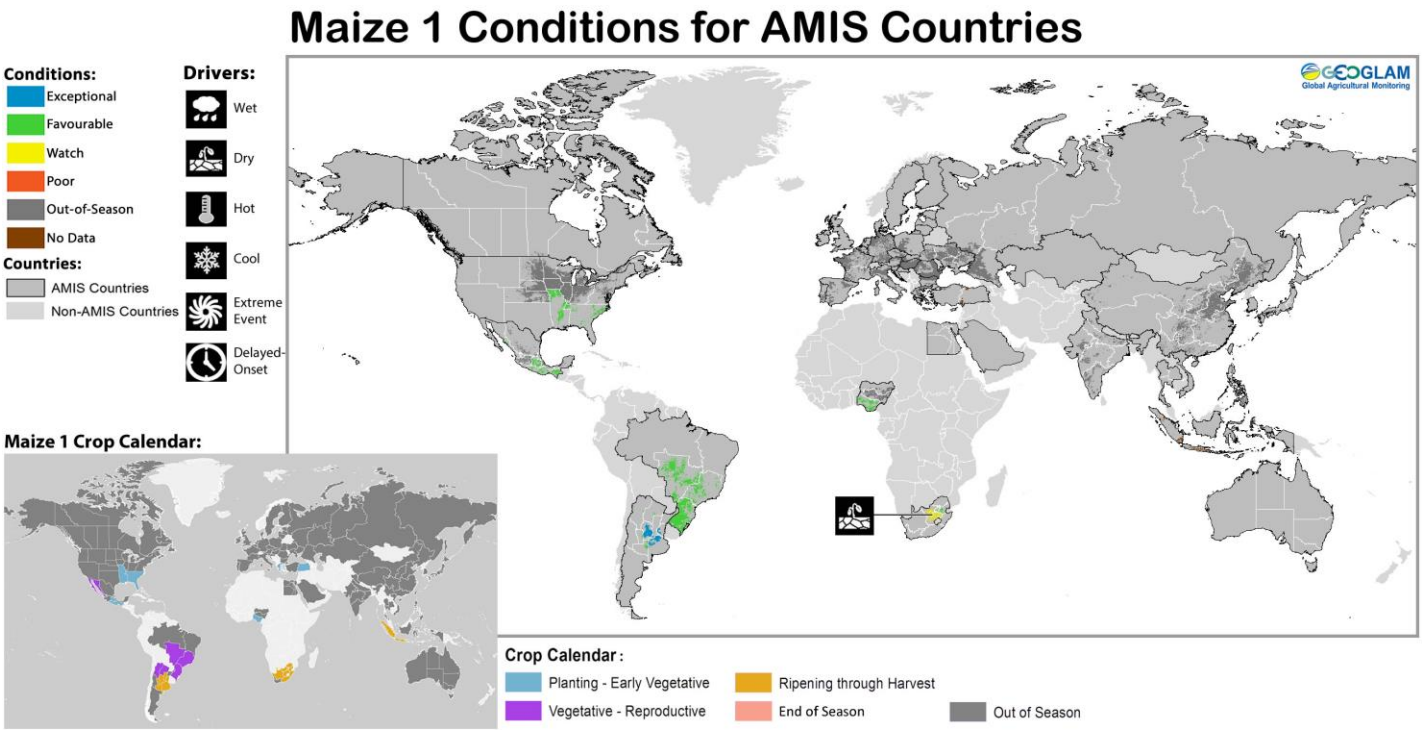
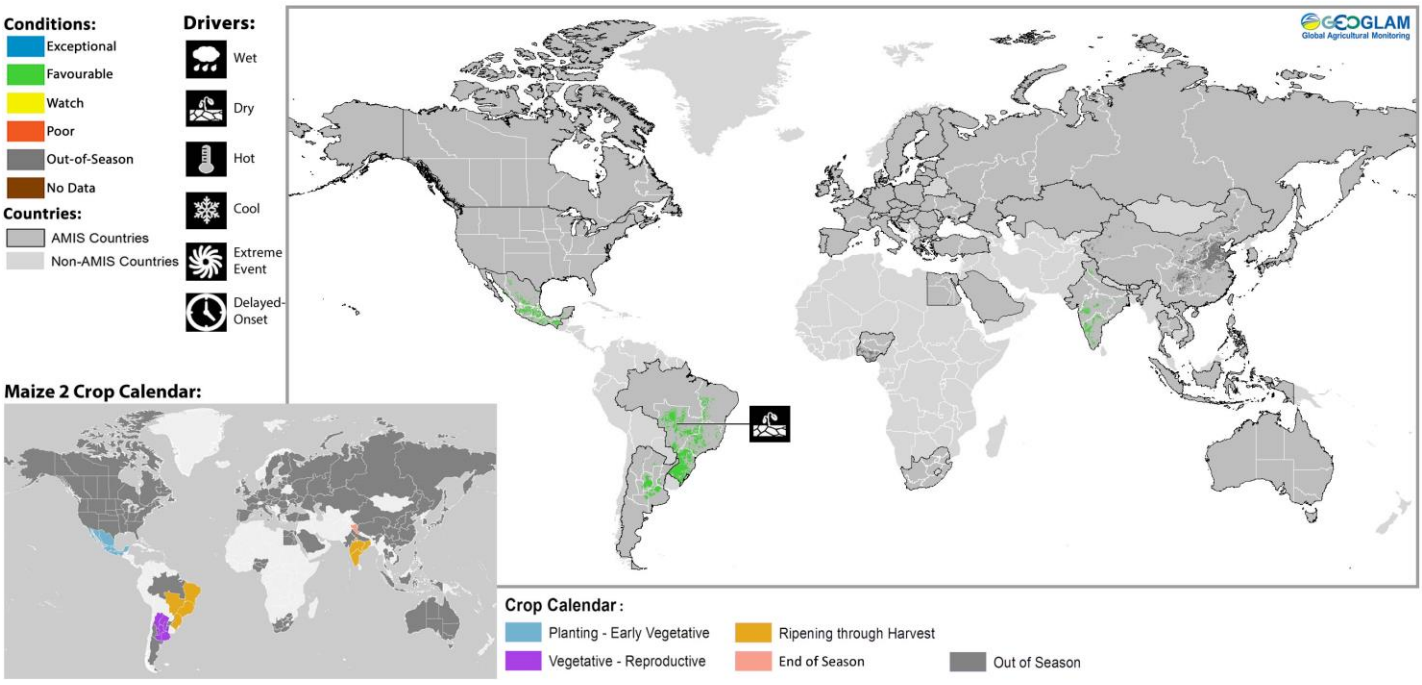


Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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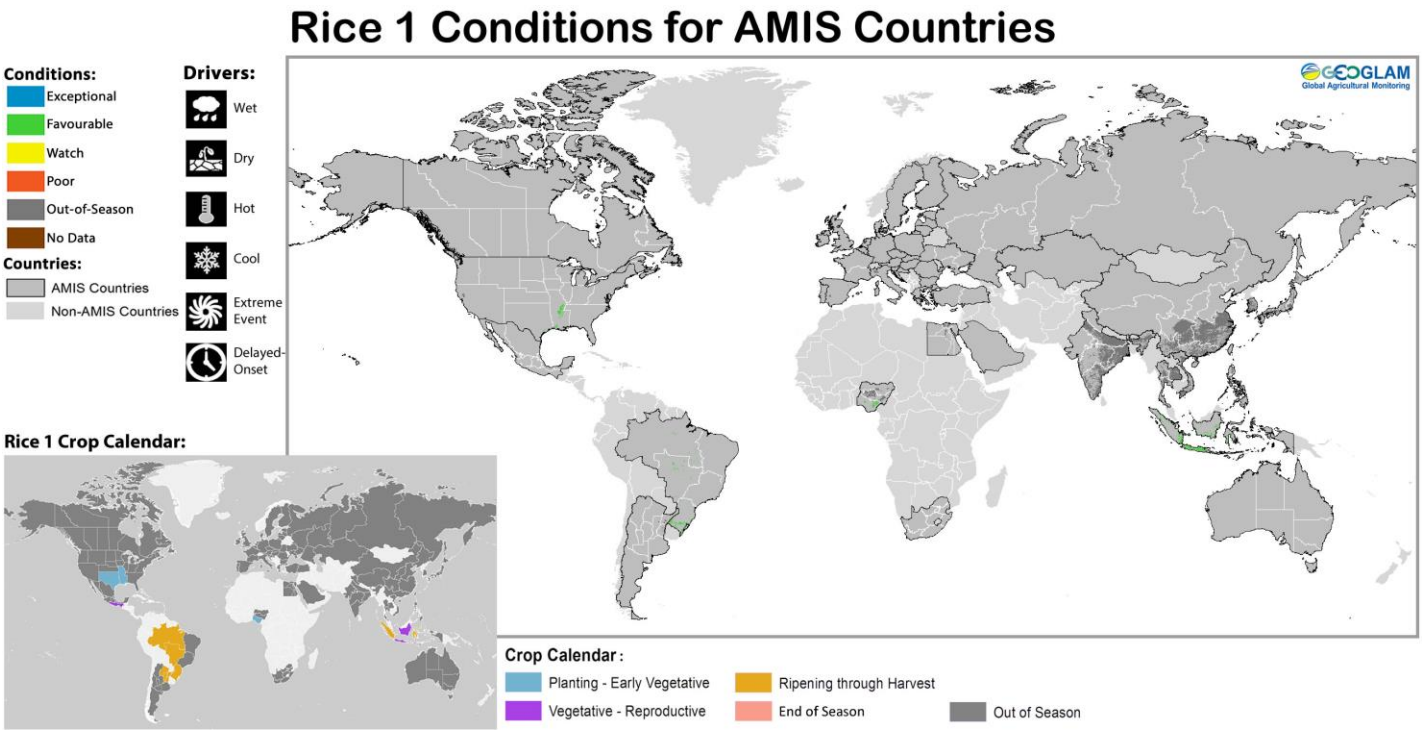
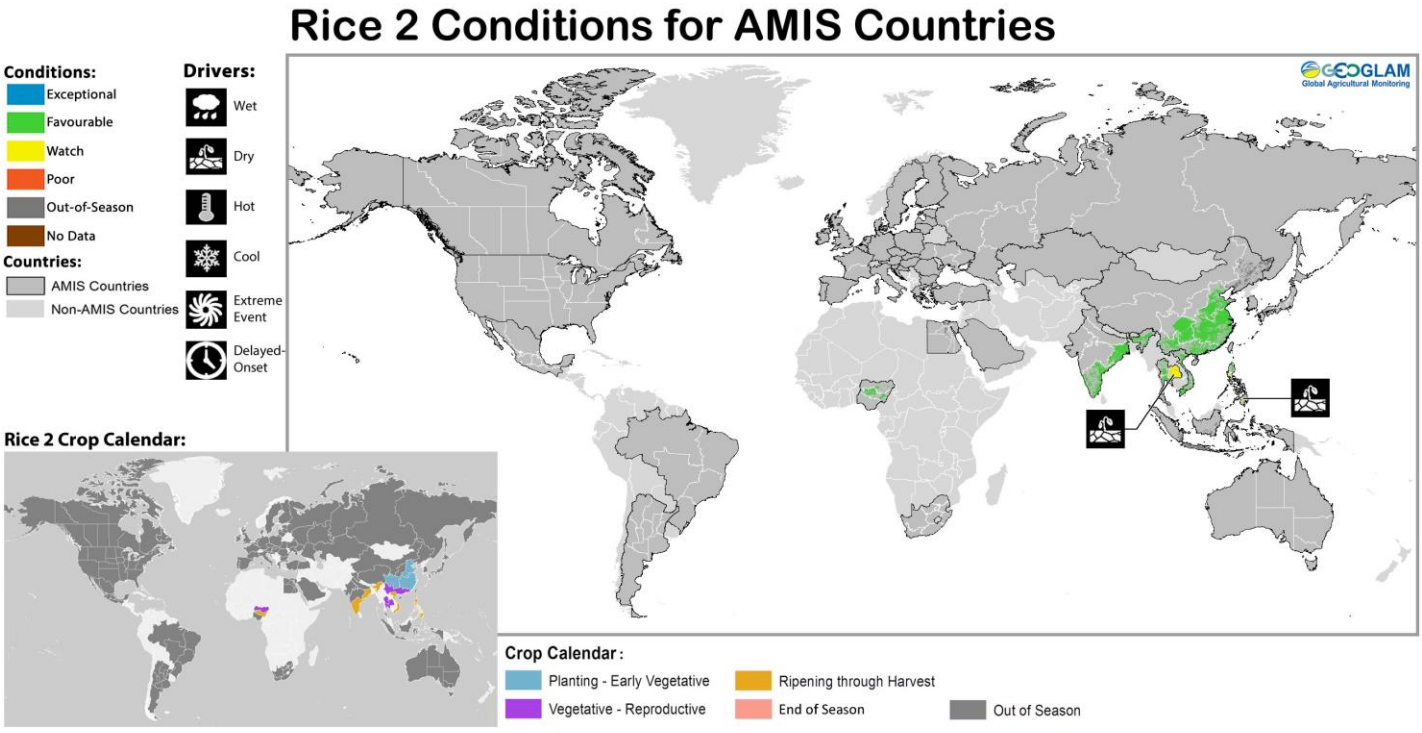


Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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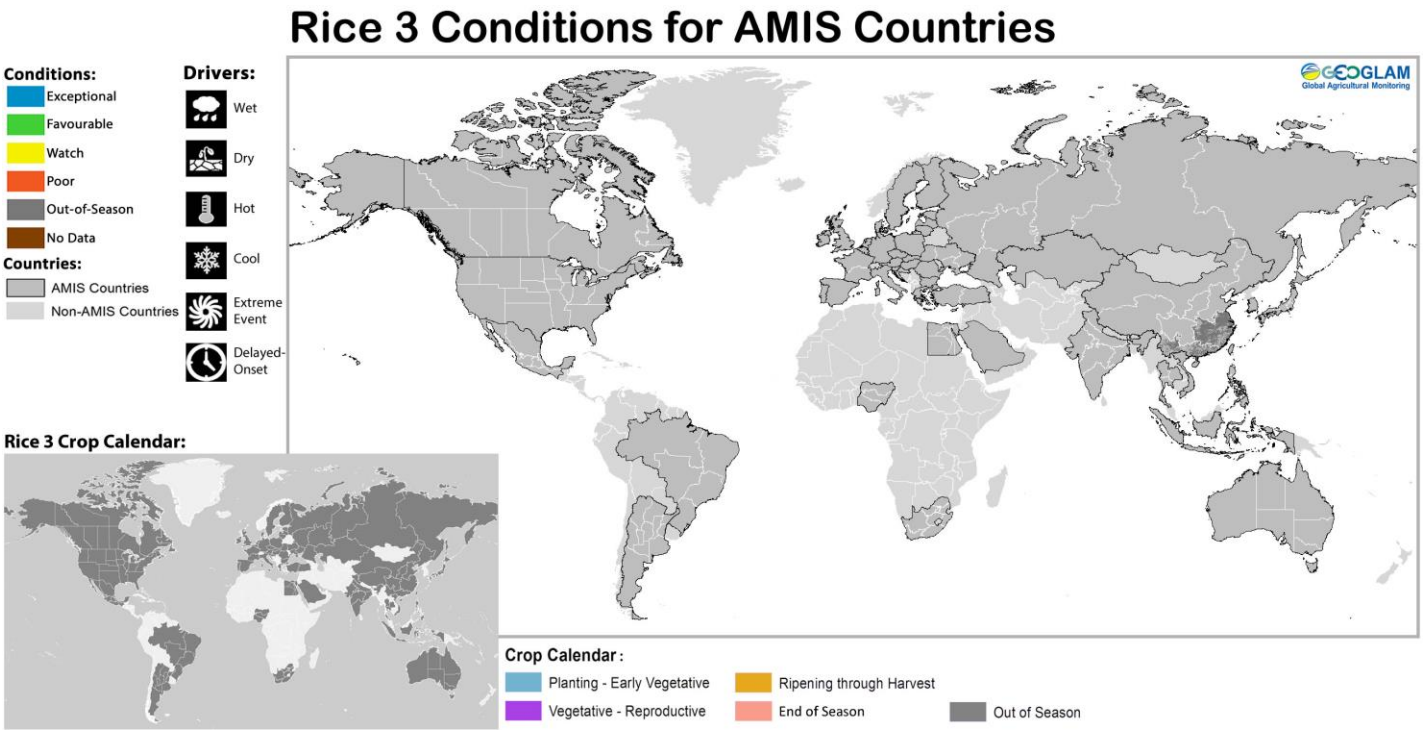
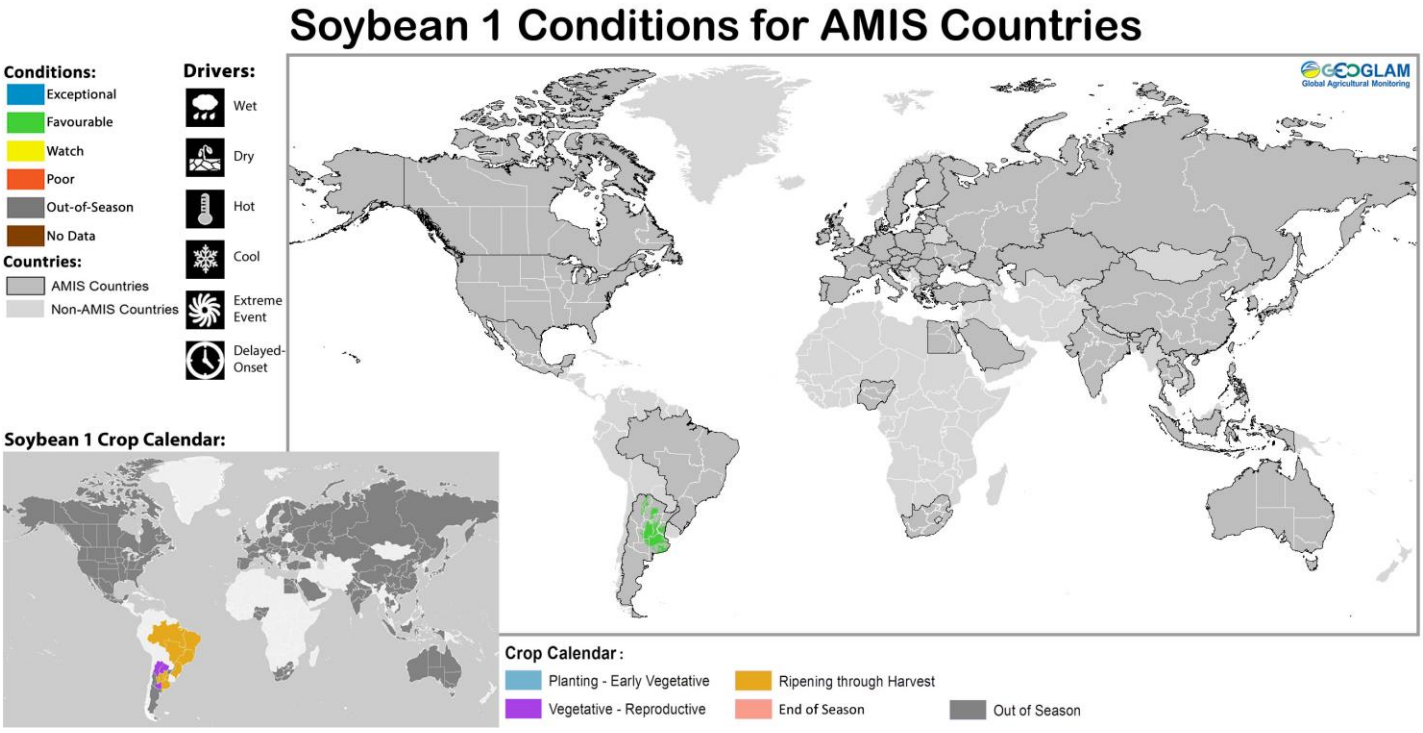


Rice 3 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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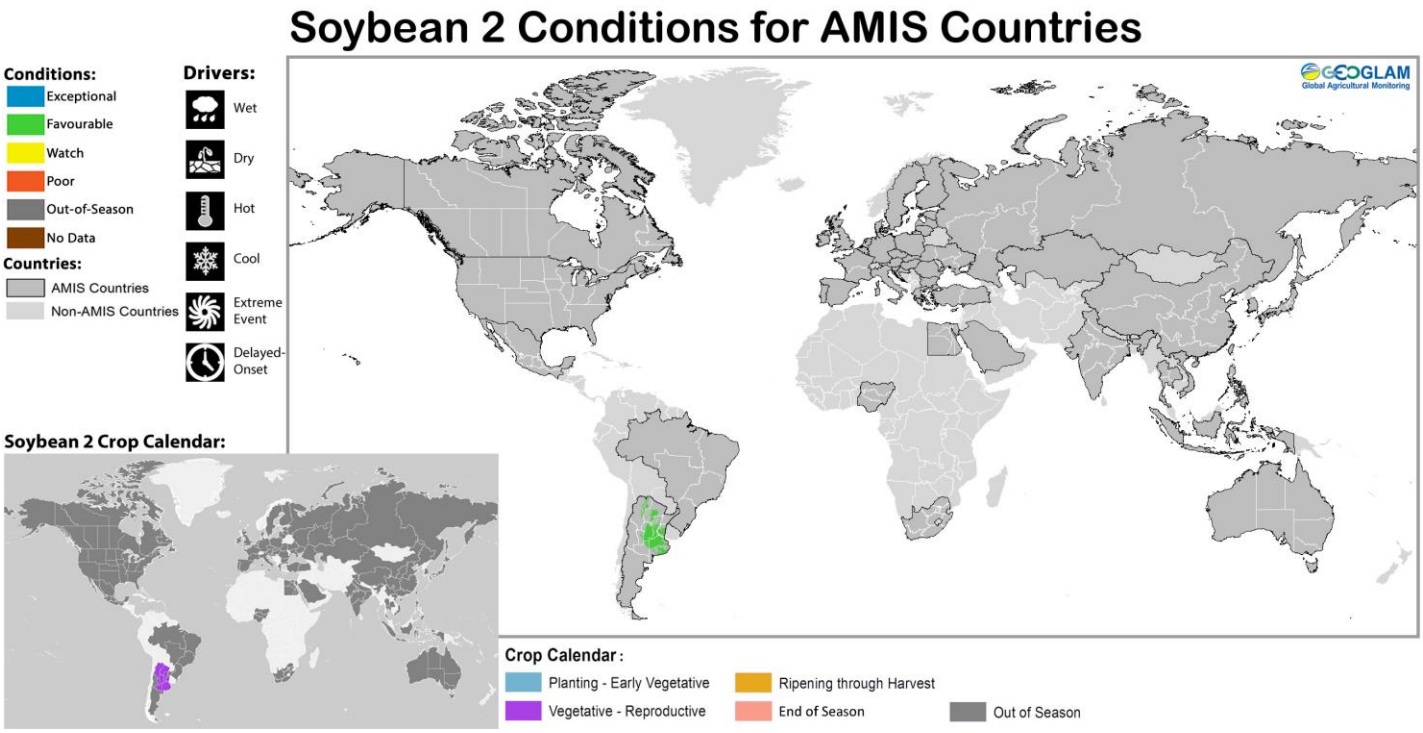

Soybean 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

Prepared by members of the GEOGLAM Community of Practice
Coordinated by the University of Maryland with funding from NASA Harvest
Climatic update by Climate Hazards Group of UC Santa Barbara

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

Photo curtesy of: Inbal Becker-Reshef

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