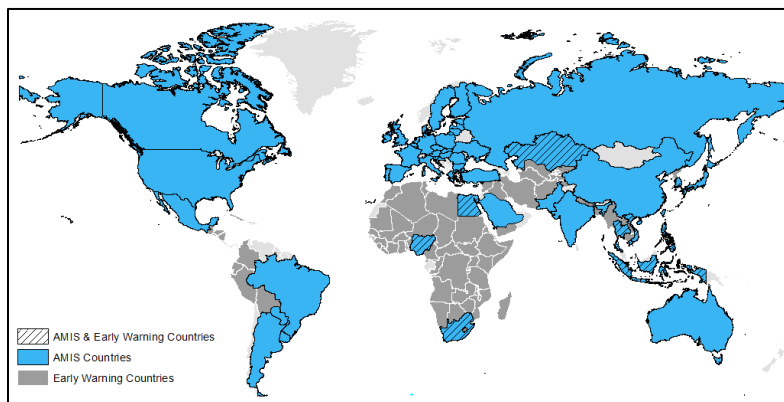


CROP MONITOR FOR AMIS

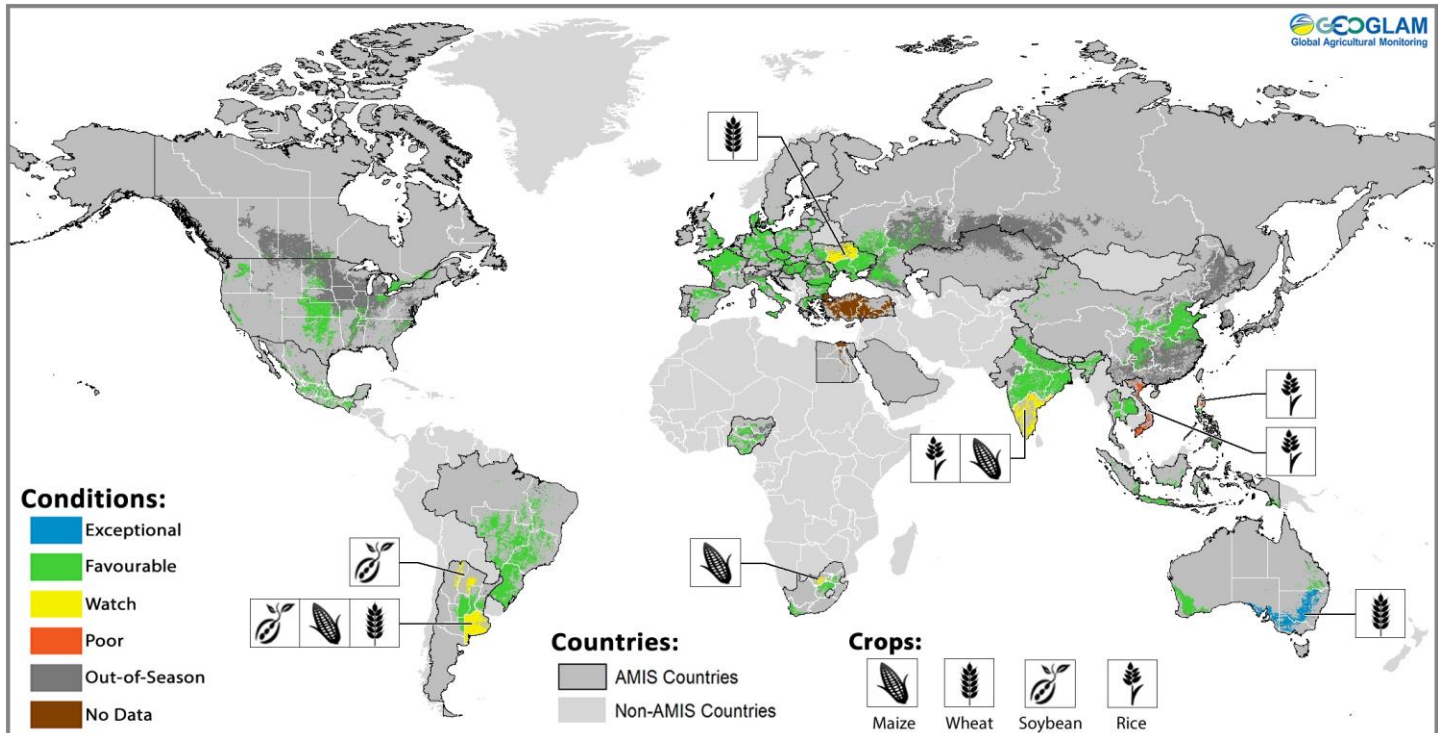
NO. 35

December 2016

The Group on Earth Observations' Global Agricultural Monitoring (GEOGLAM) initiative developed the Crop Monitor whose objective is to provide AMIS with an international and transparent multi-source, consensus assessment of crop growing conditions, status, and agro-climatic conditions, likely to impact global production. This activity covers the four primary crop types (wheat, maize, rice, and soy) within the main agricultural producing regions of the AMIS countries (G20+7). The Crop Monitor reports provide cartographic and textual summaries of crop conditions as of the 28th of each month, according to crop type. There is another Crop Monitoring initiative called the Early Warning Crop Monitor (geoglam-crop-monitor.org/), which has grown out of this initiative.



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



Crop condition map synthesizing information for all four AMIS crops as of November 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 planting is complete and is under generally favourable conditions at this early stage in the season as it enters dormancy in most countries. In the southern hemisphere, harvest has begun with conditions mostly favourable for South Africa and most of Argentina. Australia is experiencing exceptional conditions over large production areas, owing to earlier beneficial rainfall.

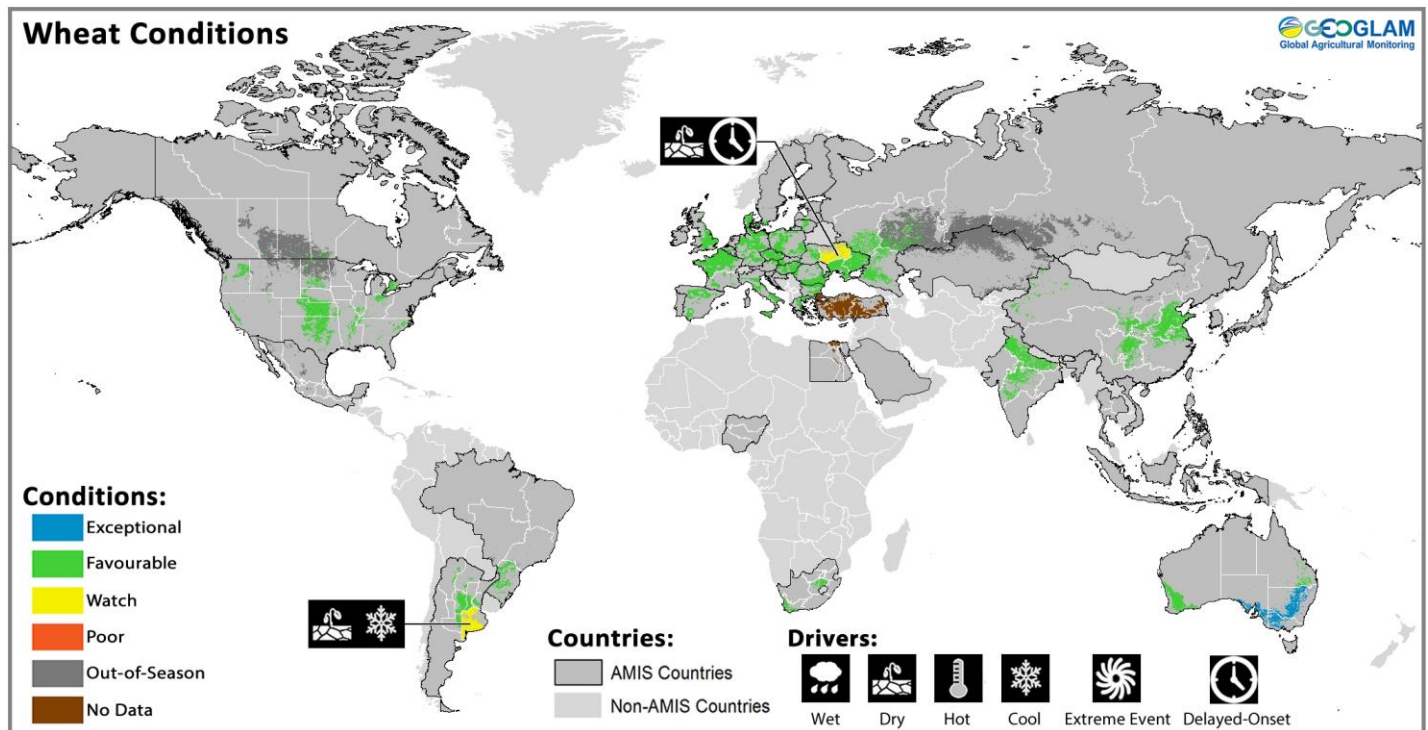
Maize - In the northern hemisphere, harvest is ongoing in India under generally favourable conditions, with the exception of the south, due to rainfall deficits. Conditions are favourable in Canada and Mexico. In the southern hemisphere, conditions for planting are generally favorable for Argentina, Brazil, and South Africa.

La Niña

La Niña conditions are established in the equatorial Pacific Ocean. They are anticipated to persist through January 2017, followed by transition to a neutral state. Consistent with this, broad areas of the Horn of Africa are experiencing a drier than normal October-December rainy season, with some areas characterized by drought with the worst vegetation conditions in fifteen years. Drier-than-normal conditions are expected in the next three months in southwest Asia, southeastern China, southeastern South America, and the southern United States. Above average rainfall is favored for southern Africa, Southeast Asia, Australia, and northern South America.

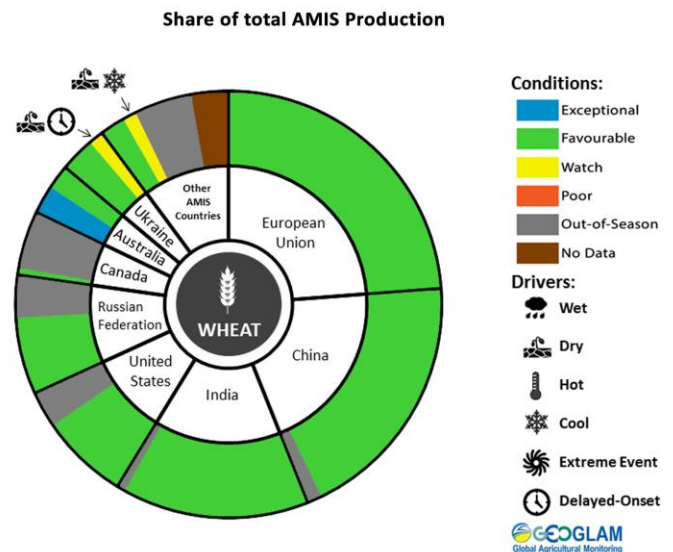
* Assessment based on information as of November 28th

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 November 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.

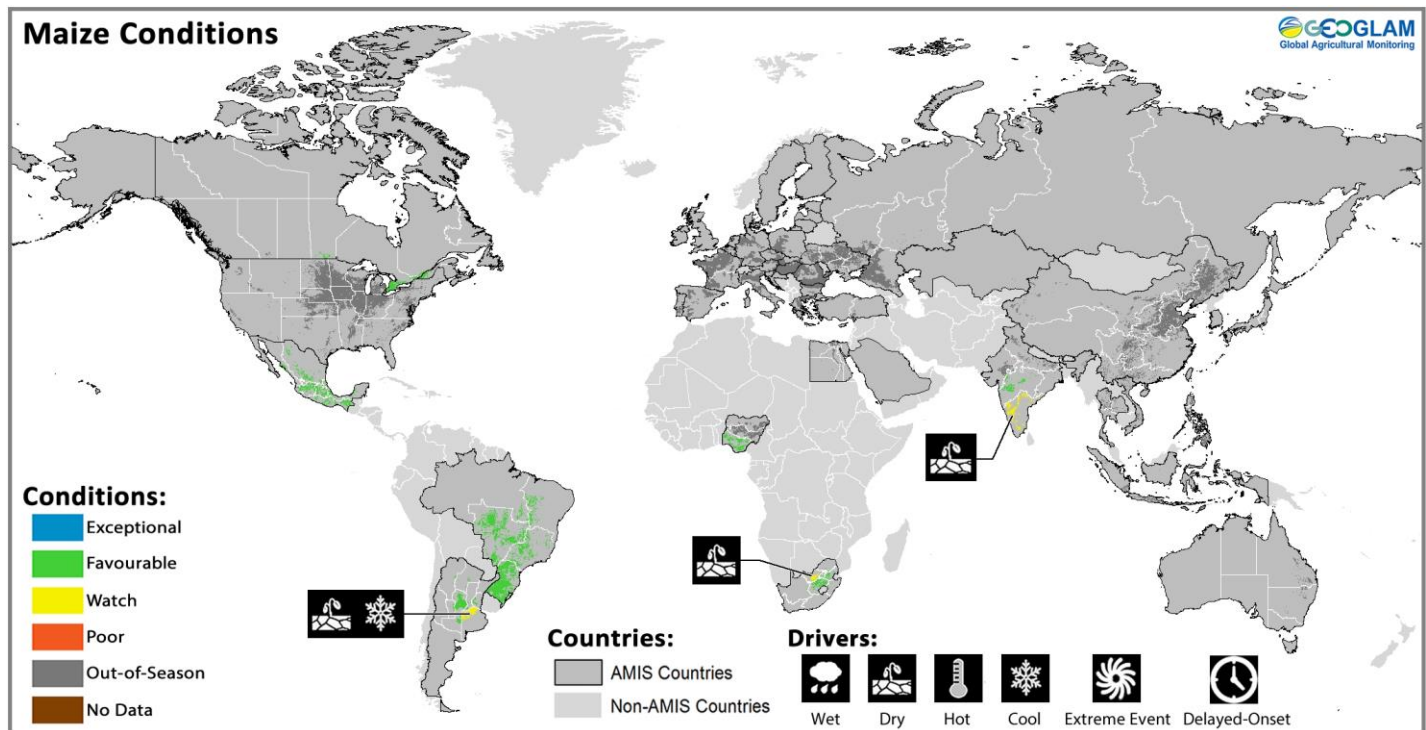
Wheat: In the **EU**, overall conditions are favourable for winter wheat despite some problematic weather conditions during sowing and emergence. In the **US**, conditions are favourable for winter wheat. In **Canada**, winter wheat is under favourable conditions with only minor delays in seeding due to wet conditions in Saskatchewan. In **China**, conditions have improved with recent good weather and beneficial snowfall for the dormancy period. In **India**, sowing is ongoing under generally favourable conditions. In the **Russian Federation**, winter wheat conditions are favourable as the crop enters dormancy. In **Ukraine**, winter wheat is under generally favourable conditions, and November rains provided good soil moisture reserves. However, there is concern over conditions in central Ukraine where seeds in a number of areas did not form shoots due to late planting and cold temperatures in October. In **Australia**, record yields are expected as conditions have improved markedly since September, with abundant soil moisture levels and mild temperatures boosting production prospects across the country. In **Argentina**, harvest is ongoing in the north of the country under favourable conditions. The main producing regions are under generally favourable conditions with good yields expected. However, a mix of dry soils, flooding, and frosts is causing some concern in parts of the Buenos Aires region.



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

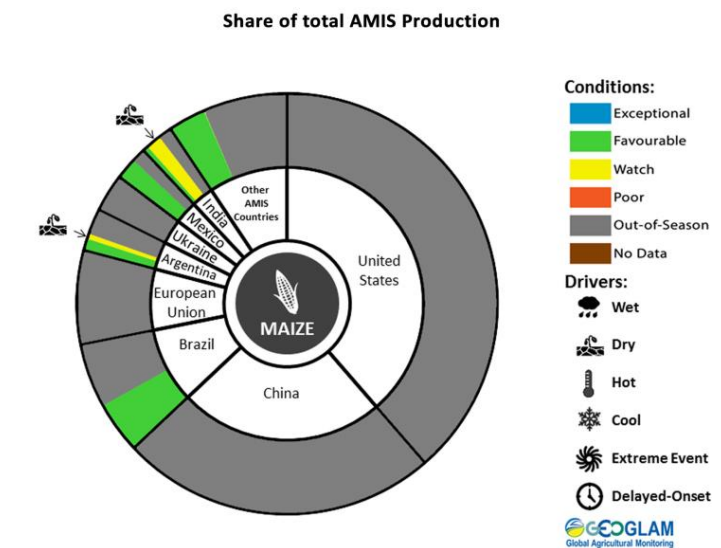
* Assessment based on information as of November 28th

Maize Conditions for AMIS Countries



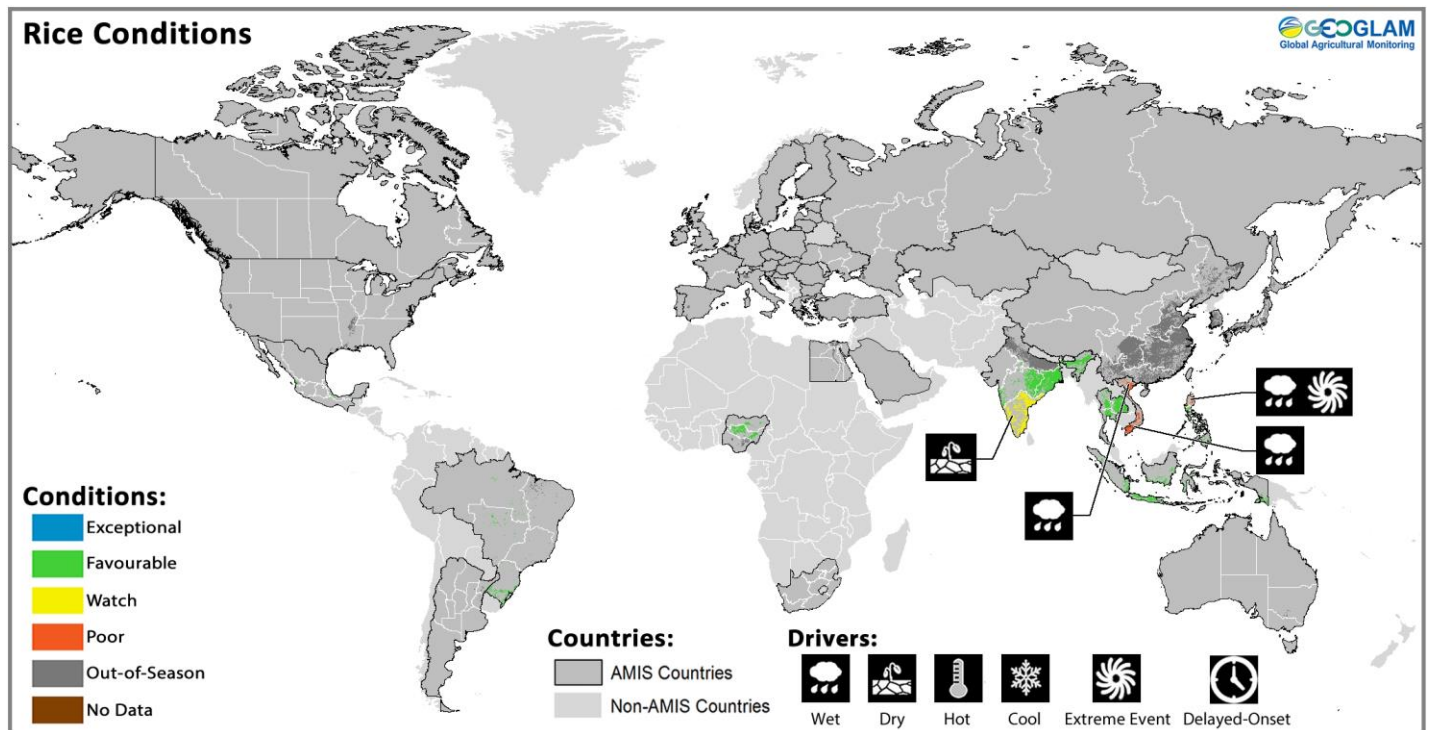
Maize crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in other than favourable conditions the climatic drivers responsible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

Maize: In **India**, harvest is ongoing under generally favourable conditions. However, in the south there some concerns due to rainfall deficits. In **Ukraine**, conditions are favourable, however the completion of harvest is delayed in some areas due to the rainy weather. In **Canada**, harvest delays continue due to wet conditions in the central prairies. In Ontario prospects improved owing to late rains, resulting in higher yields than previously expected. In **Mexico**, the spring-summer crop is under favourable conditions and a larger crop than last year is expected. In **Nigeria**, conditions are favourable for the second maize crop. In **Brazil**, conditions for planting and development of the spring crop are generally favourable. In **Argentina**, conditions are favourable with planting of early maize expanding into Buenos Aires and La Pampa regions owing to good soil moisture conditions, with the exception of some areas in the center and south. Late maize planting will begin soon. In **South Africa**, planting is progressing under favourable conditions owing to normal to above-normal spring rainfall.



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

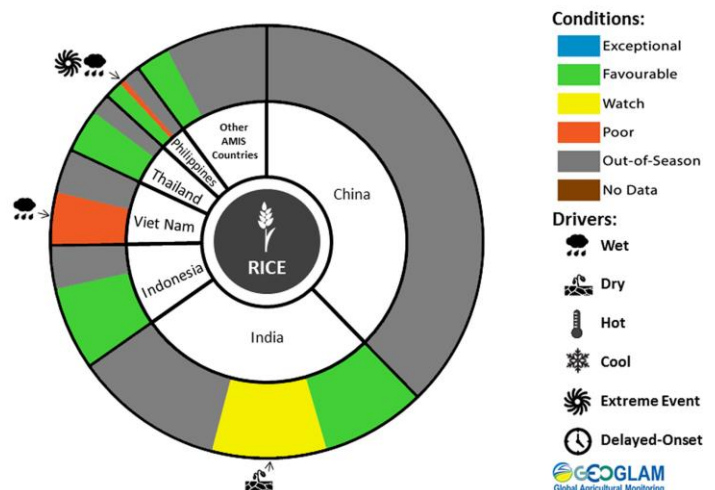
Rice Conditions for AMIS Countries



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

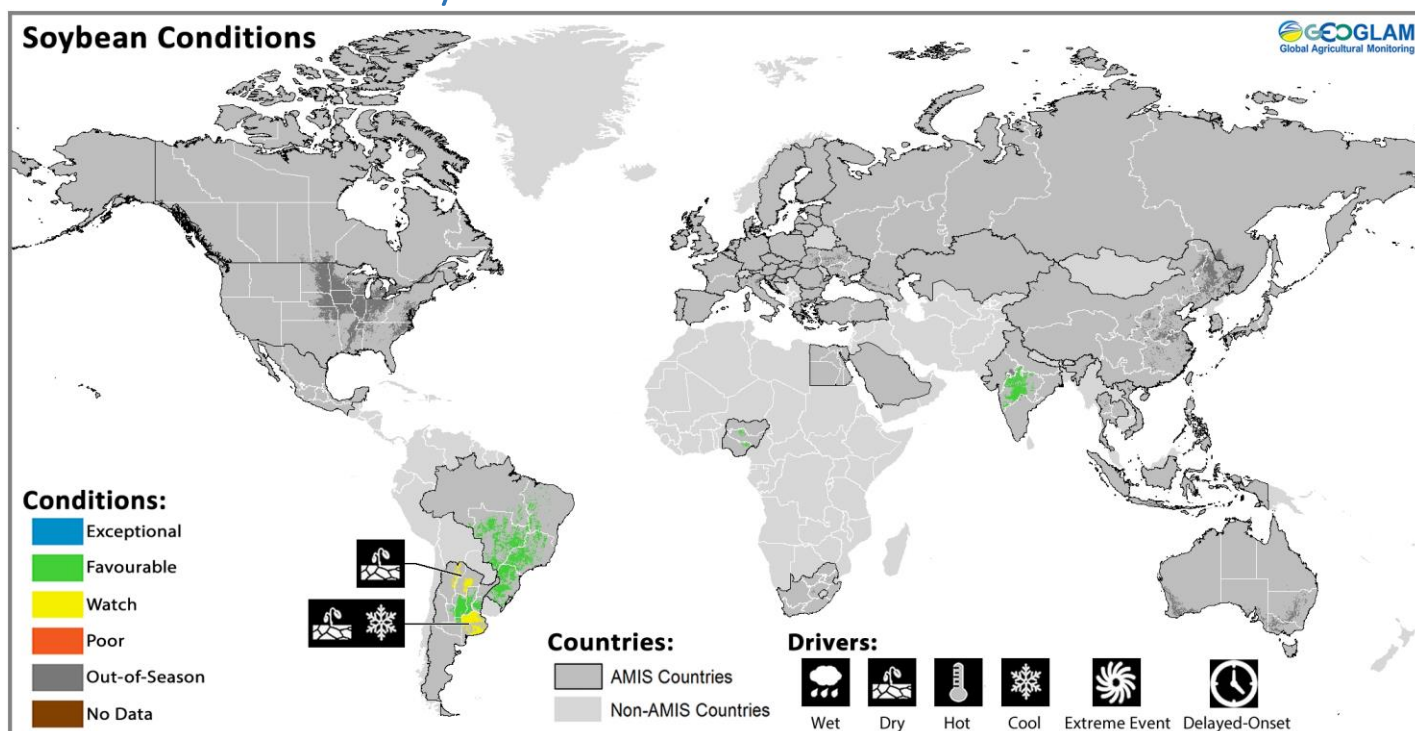
Rice: In **India**, Kharif crop harvest and land preparations for the Rabi crop are ongoing under generally favourable conditions, except in the south due to dry conditions caused by rainfall deficits over the last 2 months. In **Indonesia**, wet season planting is ongoing under favourable conditions owing to the early onset of the rainy season in September. There is an increase in planted area this season owing to the combination of favourable weather and government support. In **Viet Nam**, harvest of the autumn-winter crop in the north is ongoing and yields are expected to be below average (and similar to last year's drought affected crop) due to a mix of adverse weather conditions during the growing season. In the south, harvest of the summer-autumn crop is also ongoing, with below average yields expected. Land preparations are ongoing for dry season rice. In **Thailand**, the wet season crop is in the grain filling stage and growing conditions are favourable owing to good rainfall. Land preparations ongoing for the dry season crop. In the **Philippines**, wet season rice, planted in July-August, is in maturing to harvesting stages under generally favourable conditions. Crop damage and flooding from Typhoon Haima (Lawin) resulted in poor conditions in the north.

Share of total AMIS Production



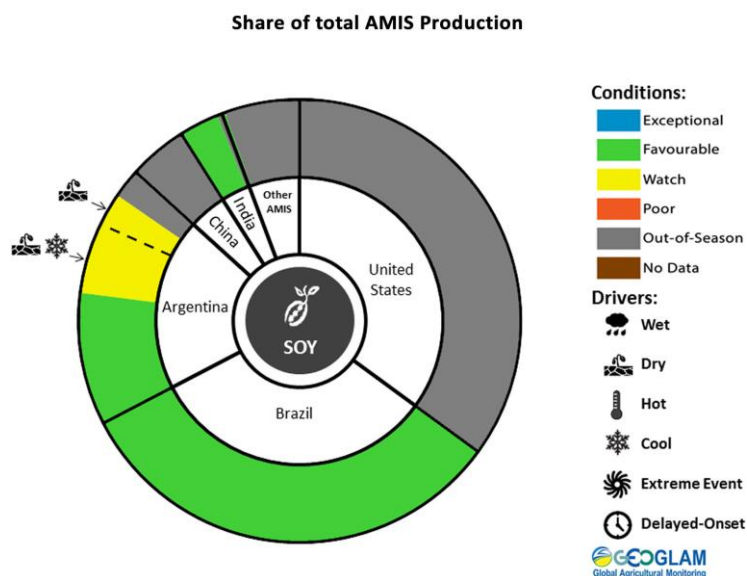
For detailed description of the pie chart please see box below.

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 November 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**, planting is complete in the main producing regions and is under favourable conditions. In **Argentina**, favourable weather conditions promoted planting in the center of the agricultural region. Dry weather in the previously flooded areas improved seeding conditions, however combined with low temperatures in the southern parts of Buenos Aires region, it caused some planting delays. In **India**, harvest is completing with favourable prospects owing to good monsoon rains this season.



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 Early Warning Crop Monitor](#), published December 8th 2016

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 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.

Conditions:

	Exceptional
	Favourable
	Watch
	Poor
	Out-of-Season
	No Data

*"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

	Wet
	Dry
	Hot
	Cool
	Extreme Event
	Delayed-Onset

Sources & Disclaimer

Sources and Disclaimers: The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners (in alphabetical order): Argentina (Buenos Aires Grains Exchange, 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), Russian Federation (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 multiagency report are consensual statements from the GEOGLAM experts, and do not necessarily reflect those of the individual agencies represented by these experts.

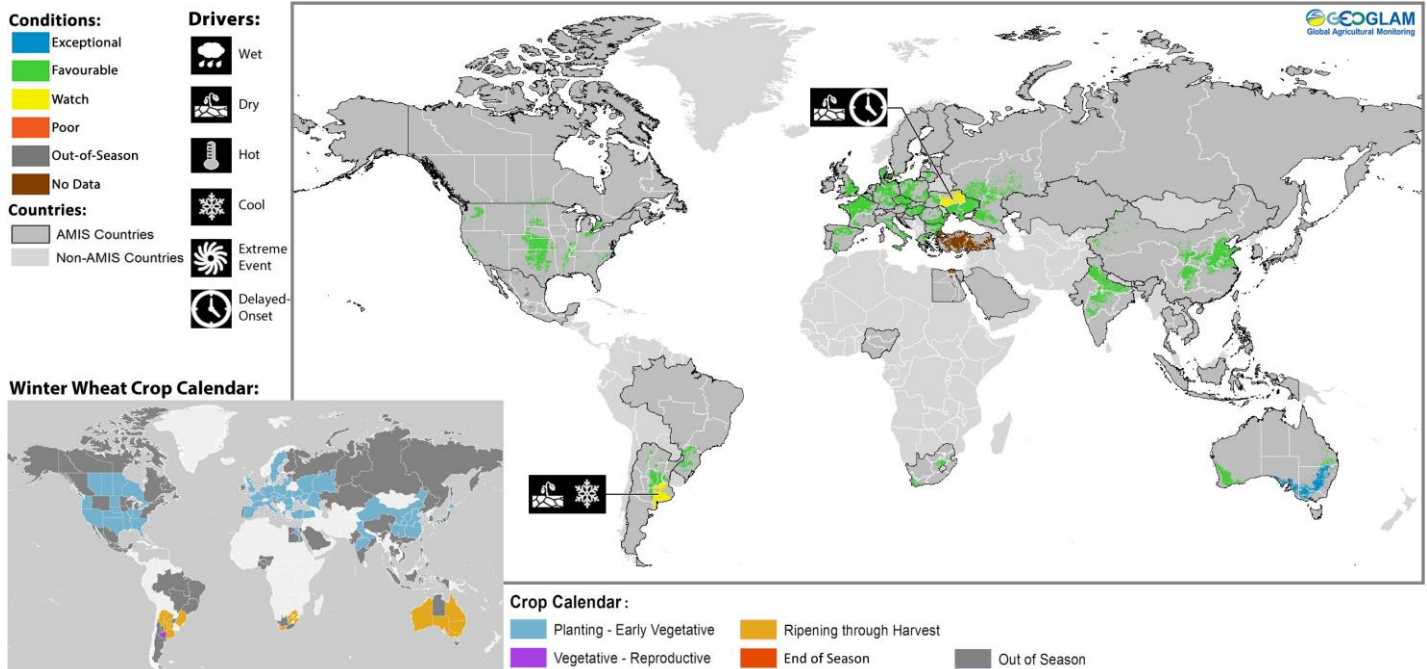
More detailed information on the GEOGLAM crop assessments is available at www.geoglam-crop-monitor.org

For information on country coverage and criteria:

<http://geoglam-crop-monitor.org/pages/about.php?target=approach>

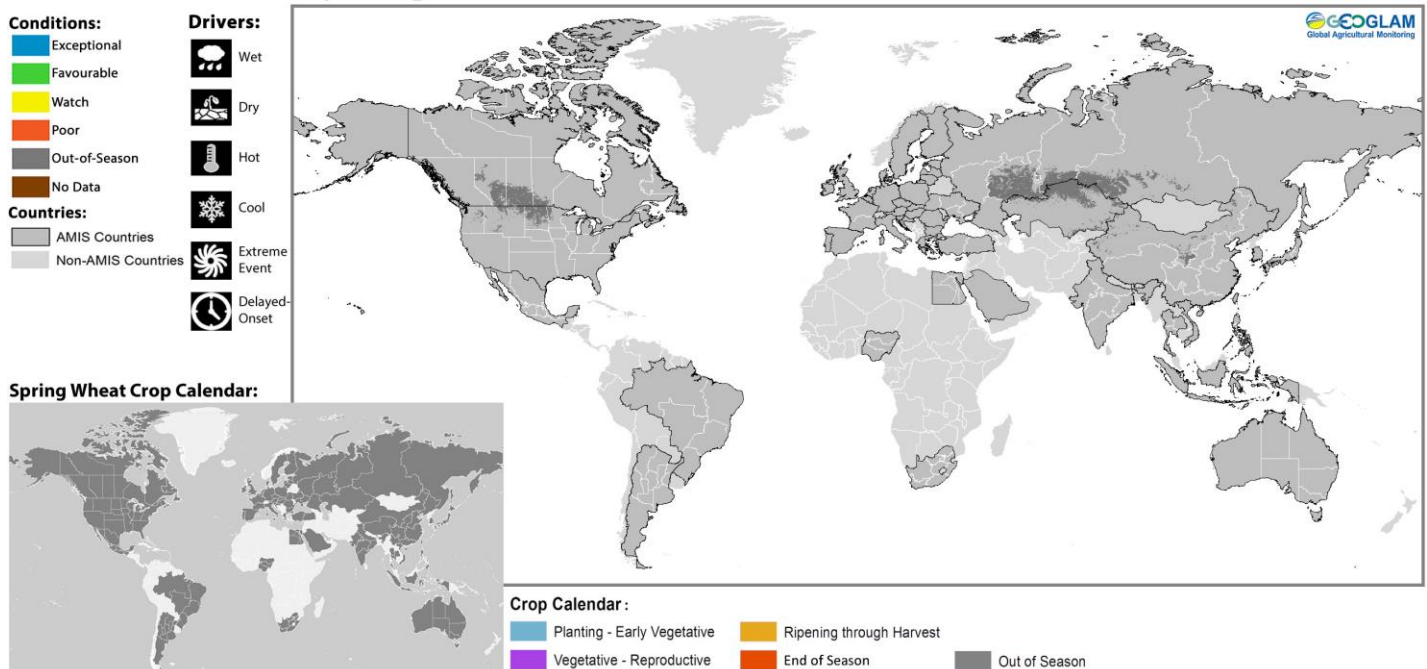
Appendix 2: Crop Season Specific Maps & Pie Charts

Winter Planted Wheat Conditions for AMIS Countries



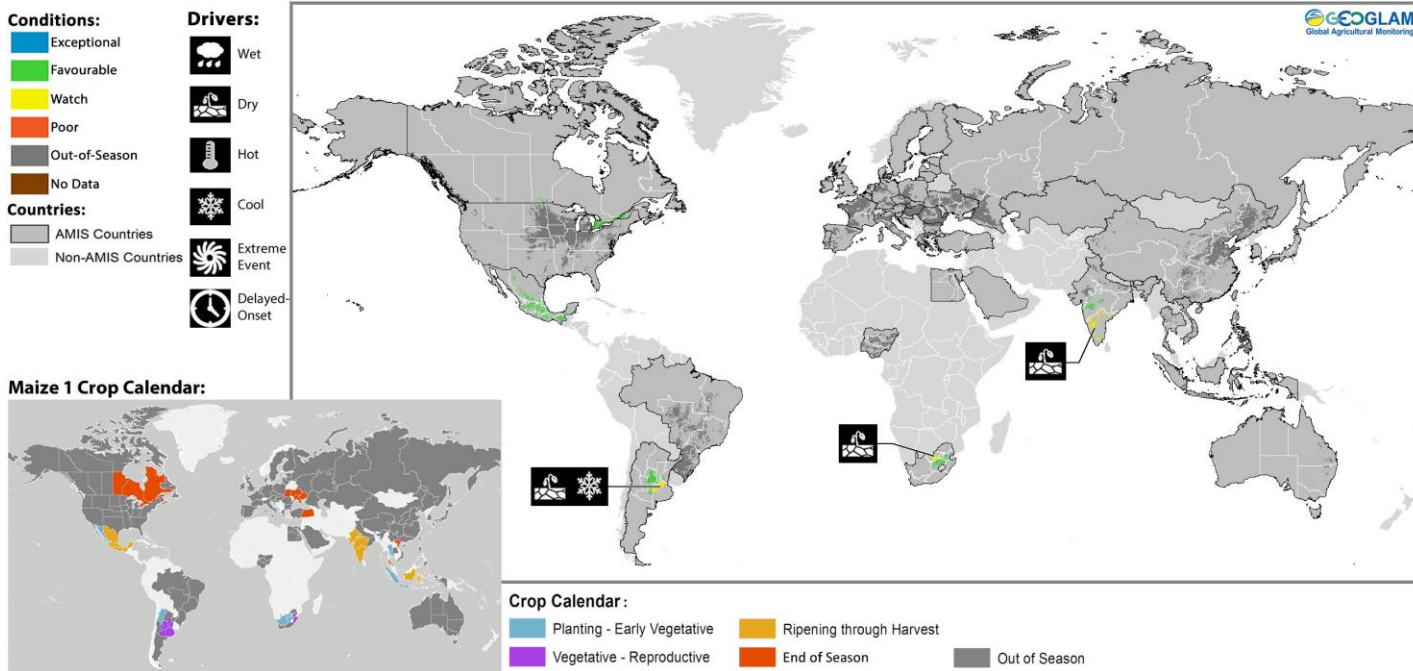
Winter wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Spring Planted Wheat Conditions for AMIS Countries



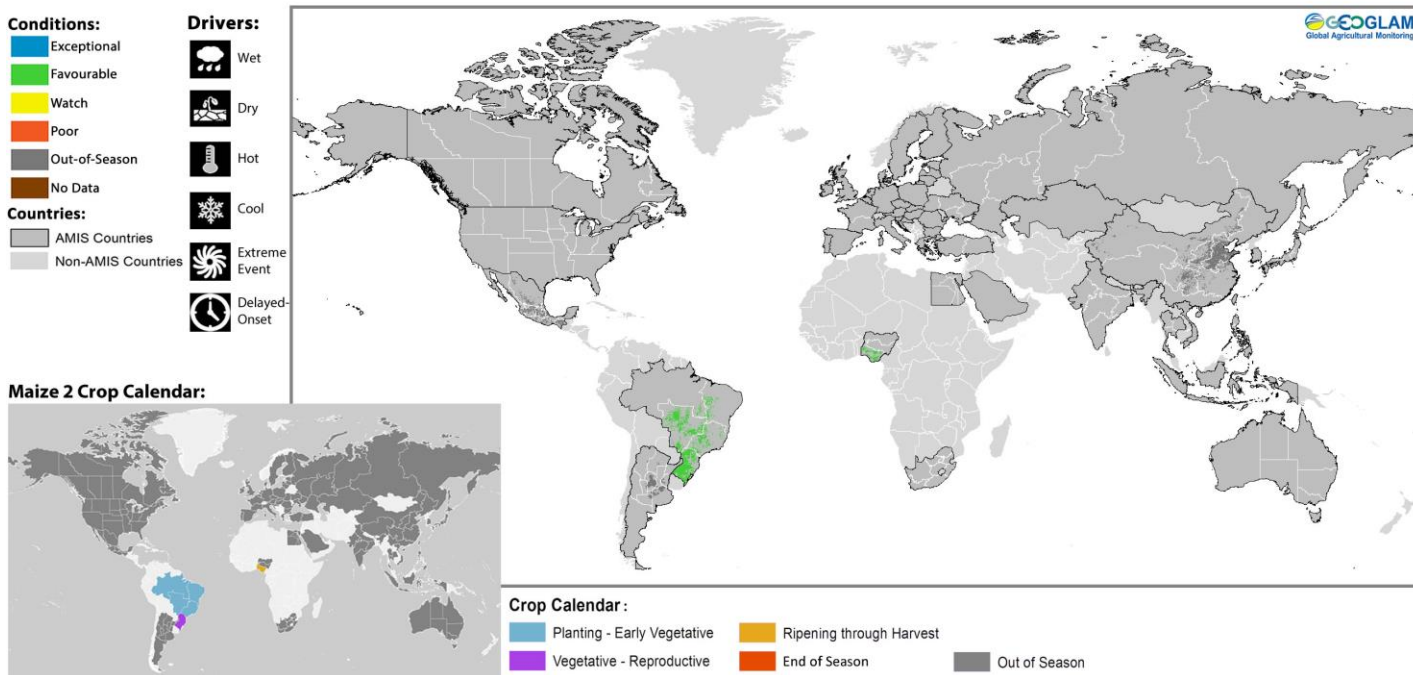
Spring wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Maize 1 Conditions for AMIS Countries



Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

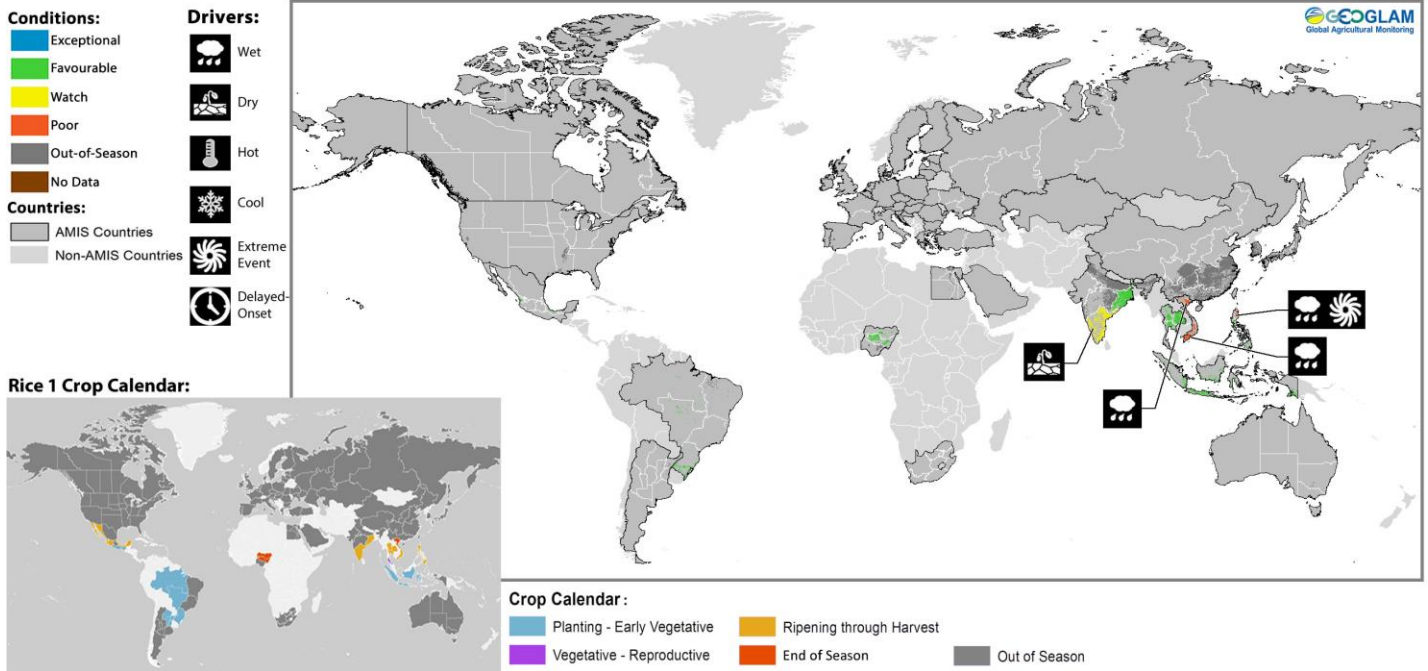
Maize 2 Conditions for AMIS Countries



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

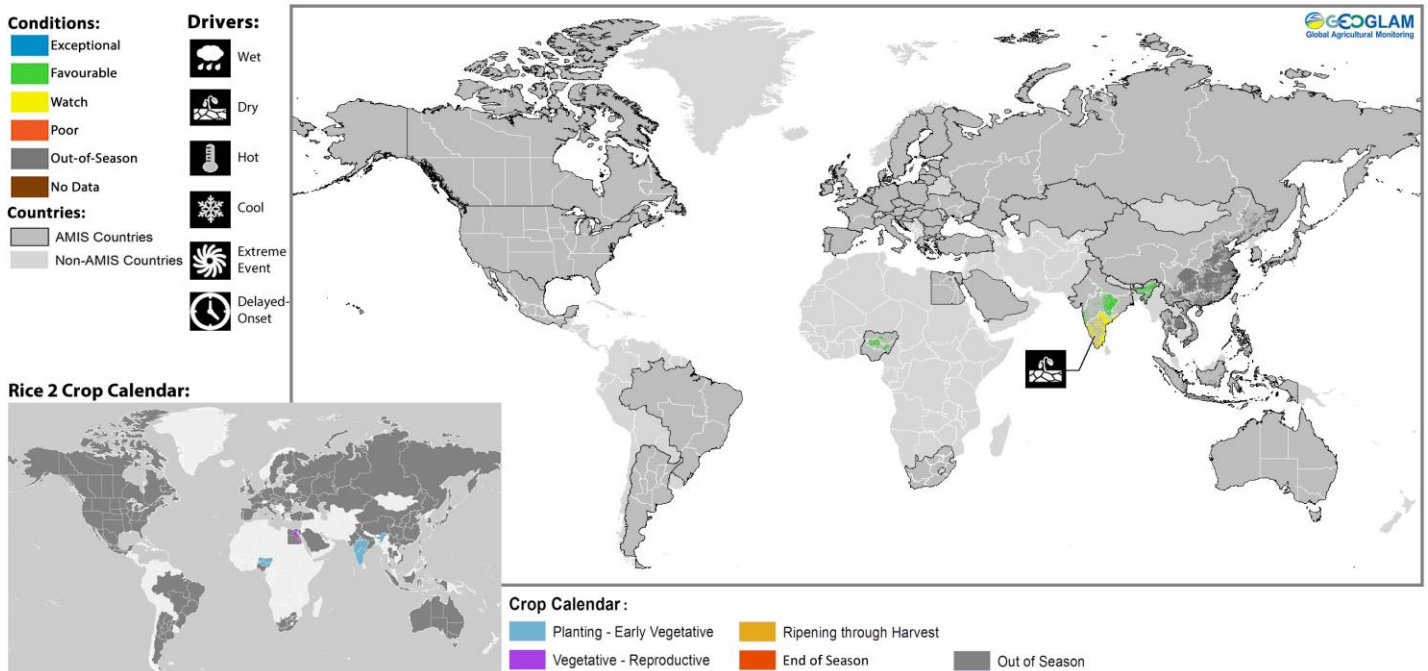
* Assessment based on information as of November 28th

Rice 1 Conditions for AMIS Countries



Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

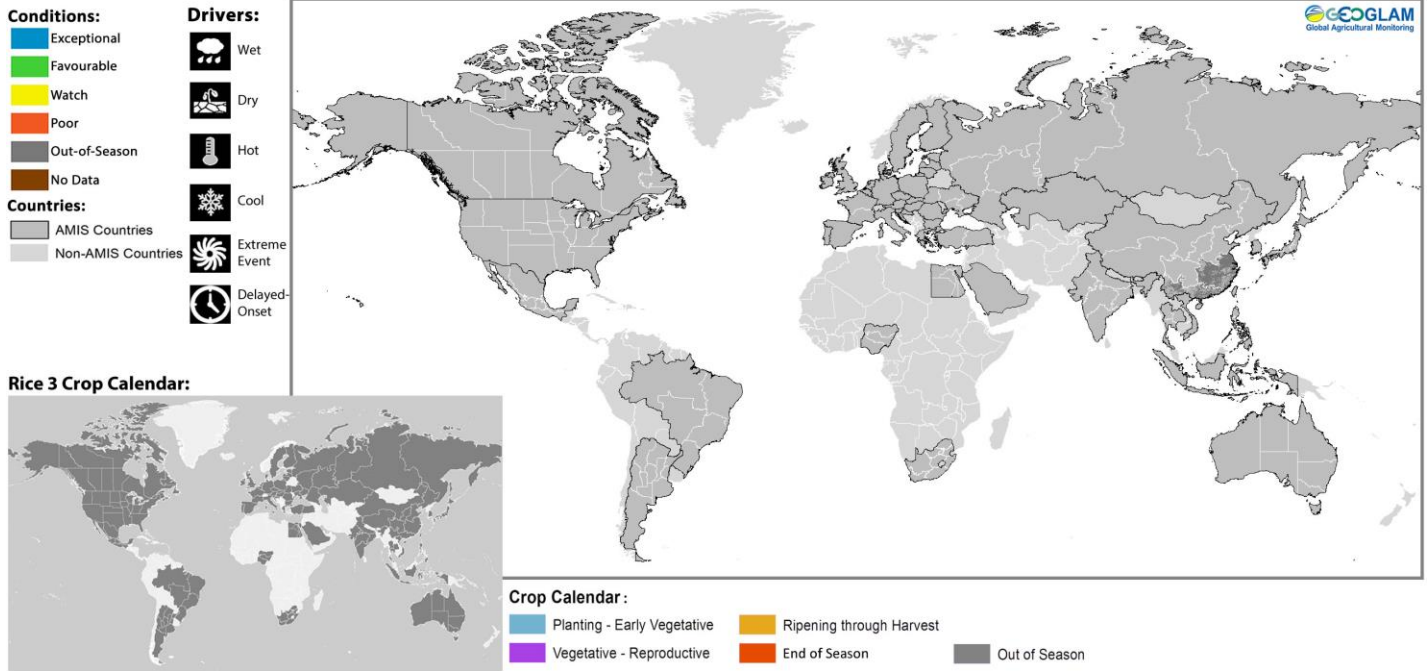
Rice 2 Conditions for AMIS Countries



Rice 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 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.

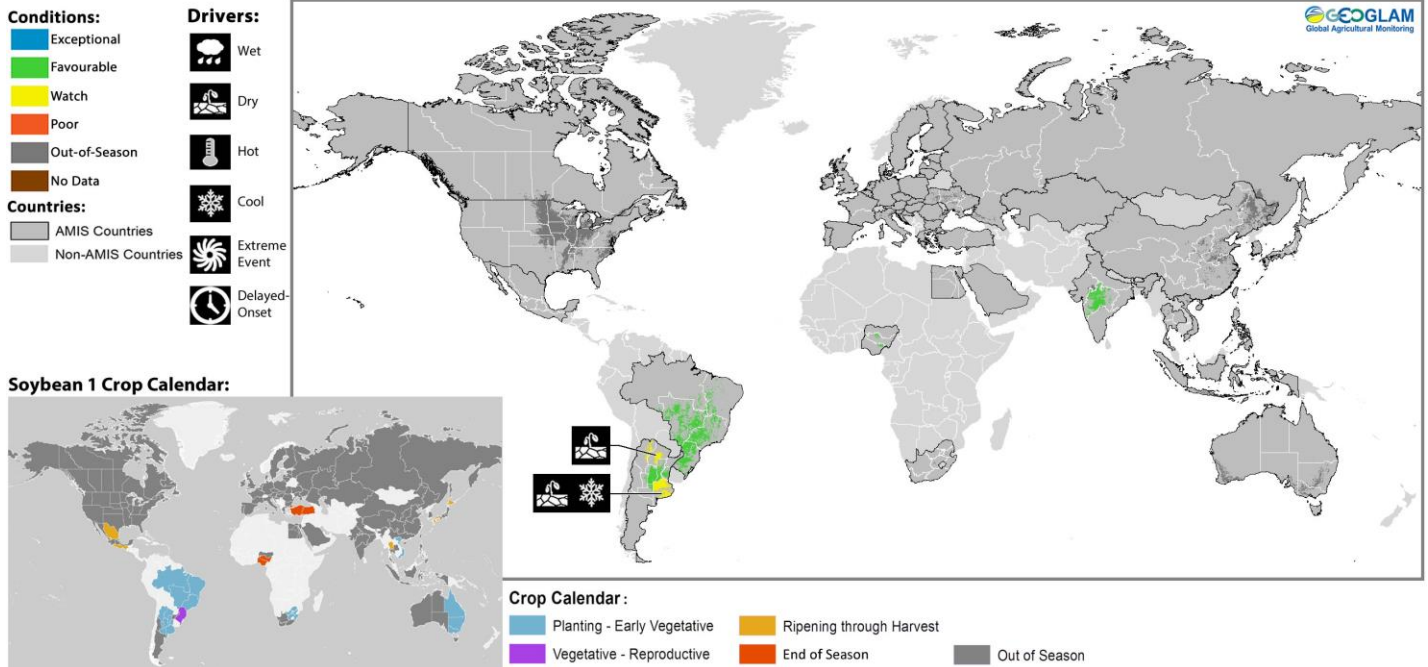
* Assessment based on information as of November 28th

Rice 3 Conditions for AMIS Countries



Rice 3 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

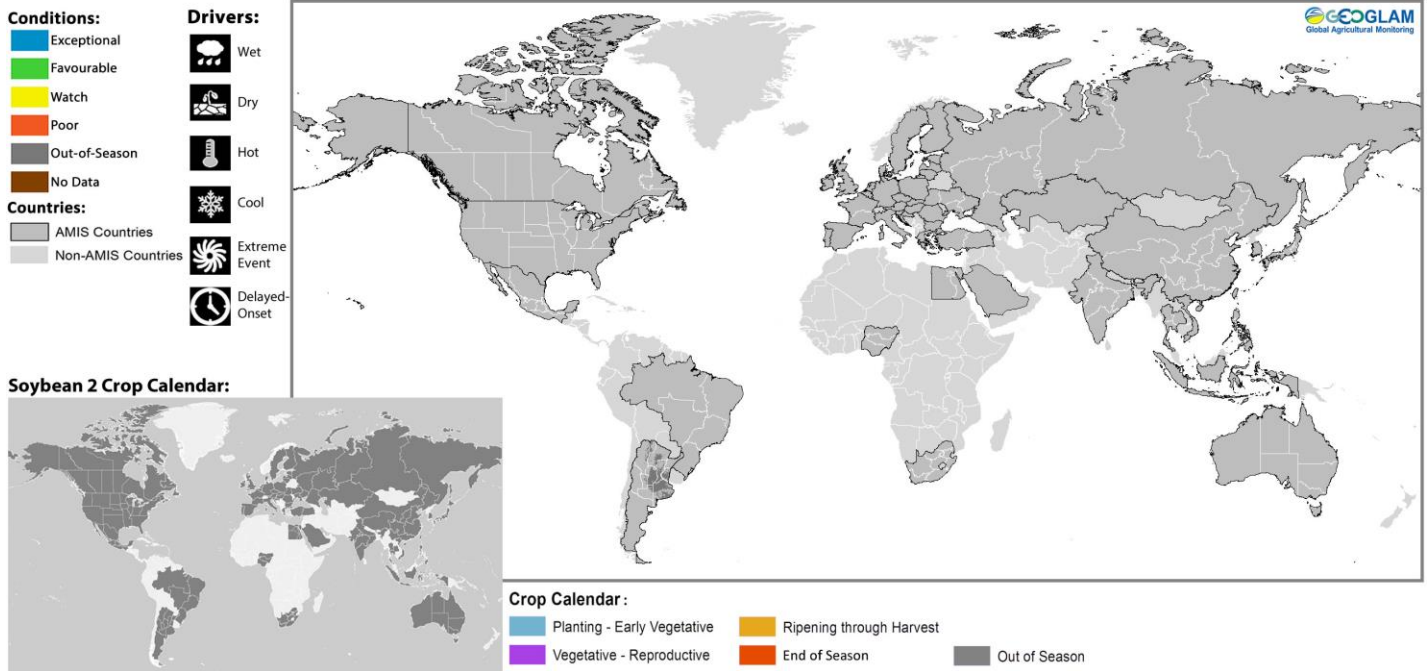
Soybean 1 Conditions for AMIS Countries



Soybean 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 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.

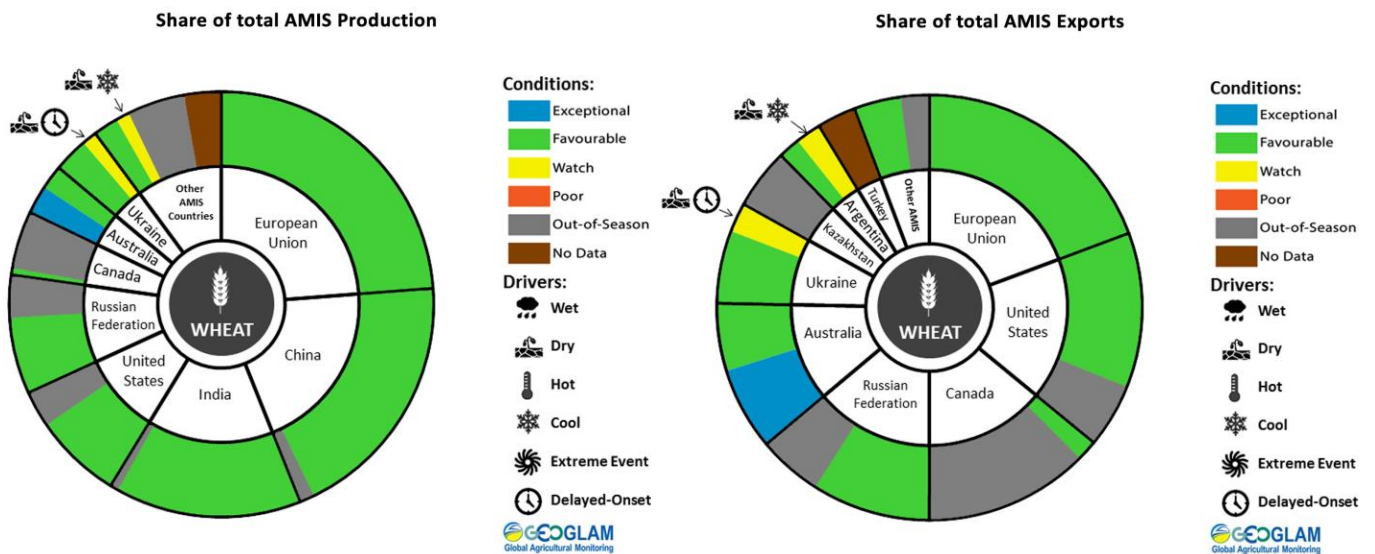
* Assessment based on information as of November 28th

Soybean 2 Conditions for AMIS Countries



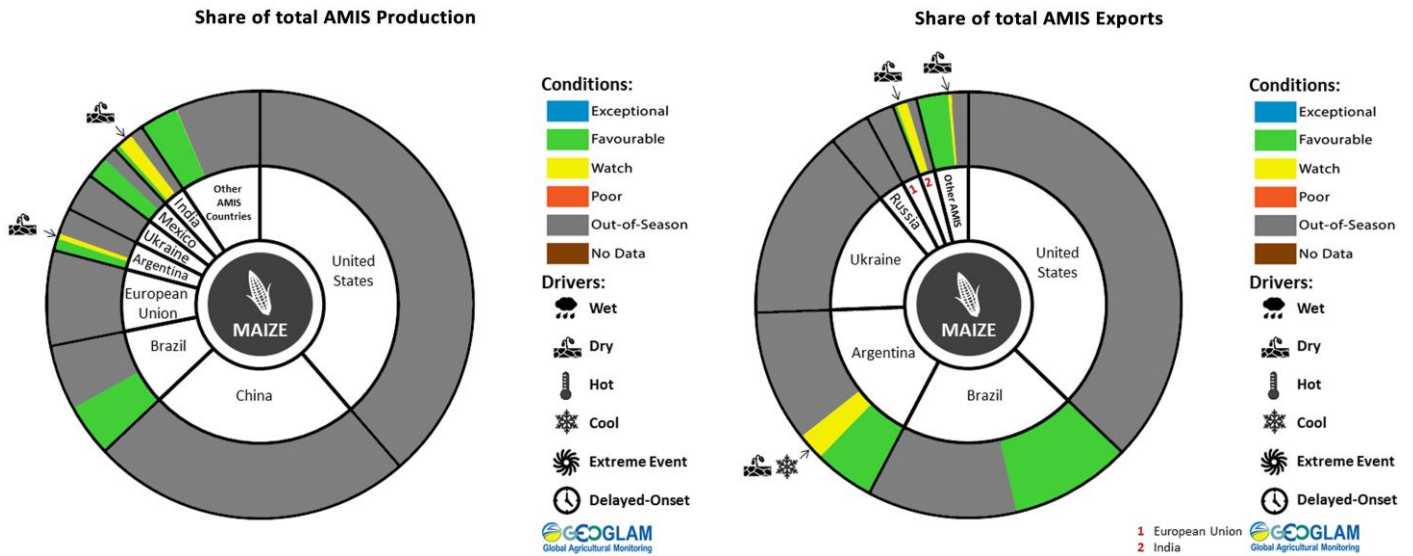
Soybean 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of November 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

Wheat AMIS Comparisons

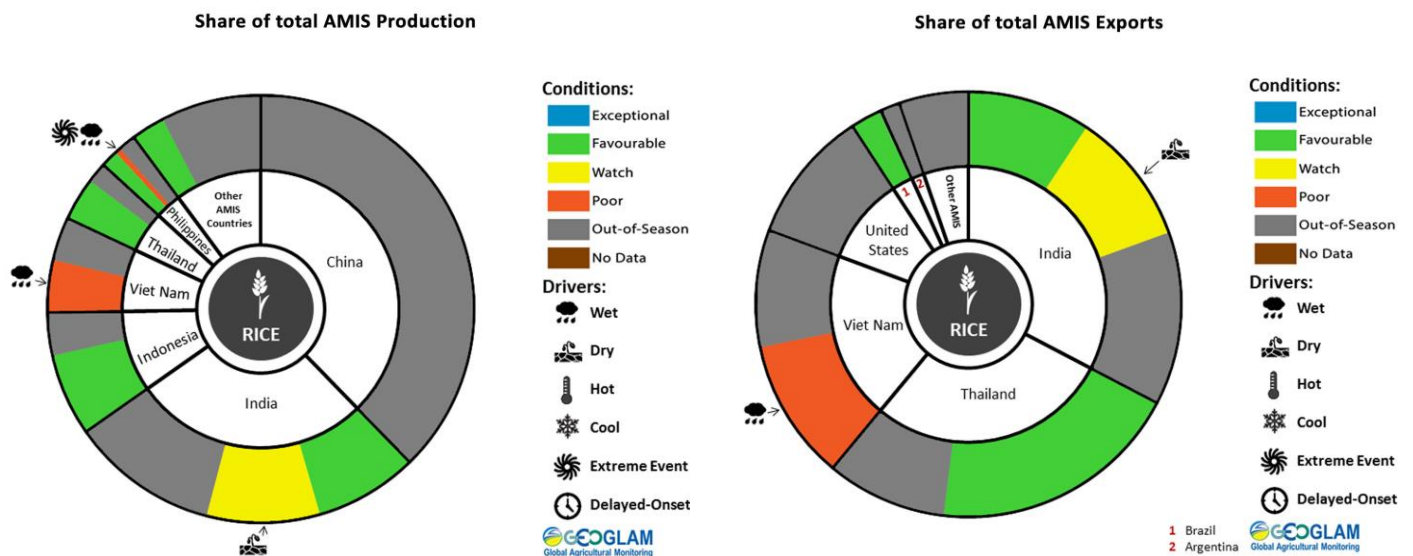


* Assessment based on information as of November 28th

Maize AMIS Comparisons



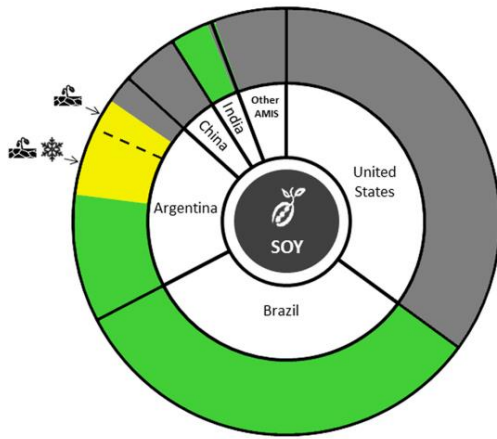
Rice AMIS Comparisons



* Assessment based on information as of November 28th

Soybean AMIS Comparisons

Share of total AMIS Production



Conditions:

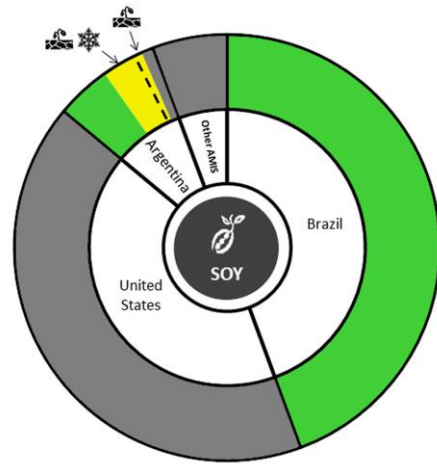
- Exceptional
- Favourable
- Watch
- Poor
- Out-of-Season
- No Data

Drivers:

- Wet
- Dry
- Hot
- Cool
- Extreme Event
- Delayed-Onset

GEGLAM
Global Agricultural Monitoring

Share of total AMIS Exports



Conditions:

- Exceptional
- Favourable
- Watch
- Poor
- Out-of-Season
- No Data

Drivers:

- Wet
- Dry
- Hot
- Cool
- Extreme Event
- Delayed-Onset

GEGLAM
Global Agricultural Monitoring

* Assessment based on information as of November 28th



Prepared by members of the GEOGLAM Community of Practice
Coordinated by the University of Maryland

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

Photo by: Inbal Becker-Reshef

www.geoglam-crop-monitor.org

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