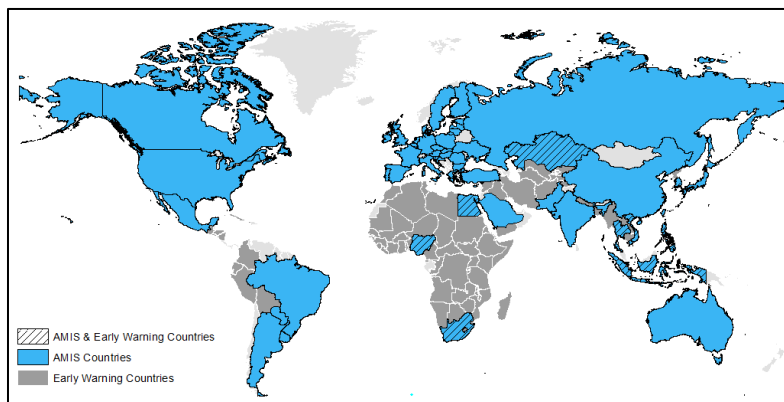


CROP MONITOR FOR AMIS

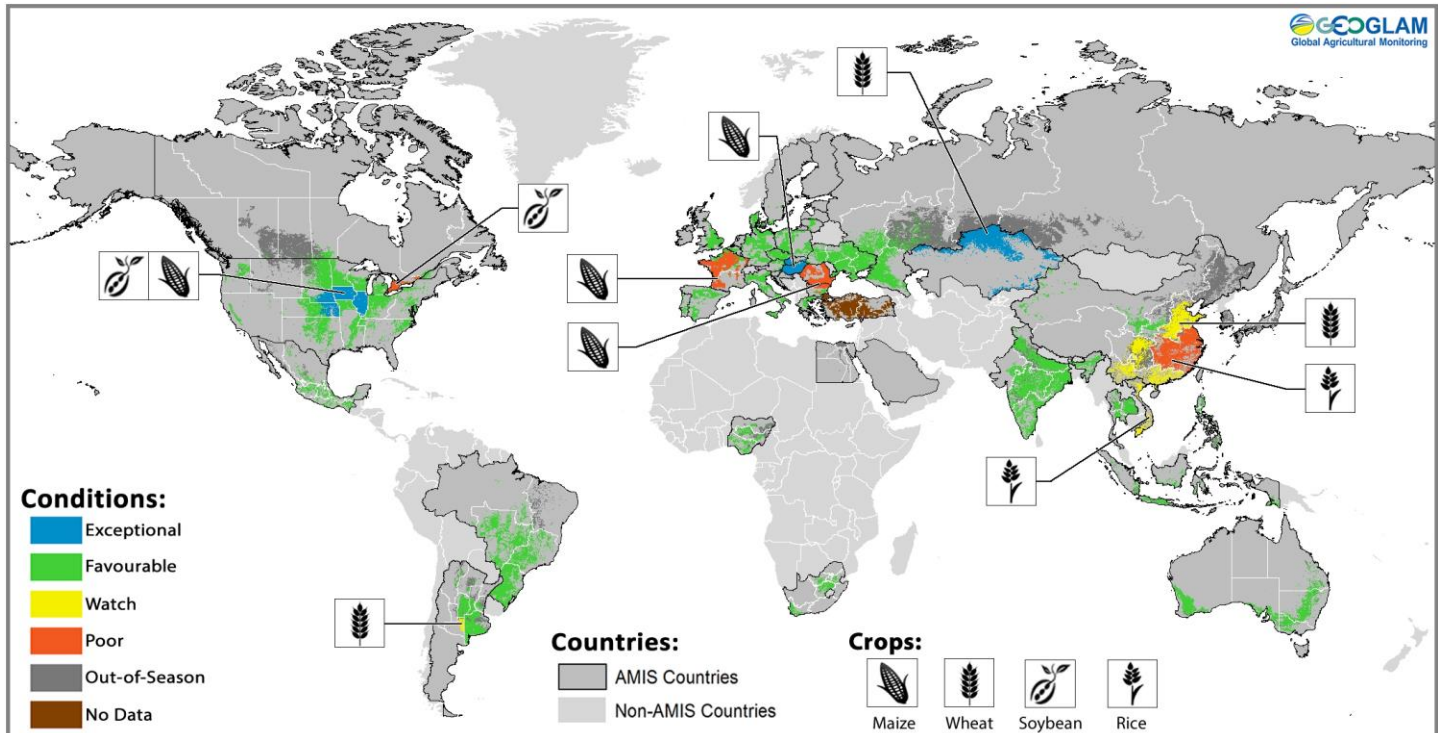
NO. 34

November 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 October 28th)



Crop condition map synthesizing information for all four AMIS crops as of October 28th. Crop conditions over the main growing areas for wheat, maize, rice, and soybean are based on a combination of national and regional crop analyst inputs along with earth observation data. **Crops that are in other than favourable conditions are displayed on the map with their crop symbol.**

Conditions at a glance

Wheat - In the northern hemisphere, winter wheat planting is almost complete under generally favourable conditions at this early stage of the season. Record yields are reported in Kazakhstan for spring wheat. In the southern hemisphere, conditions are generally favourable for Argentina, Australia, Brazil, and South Africa.

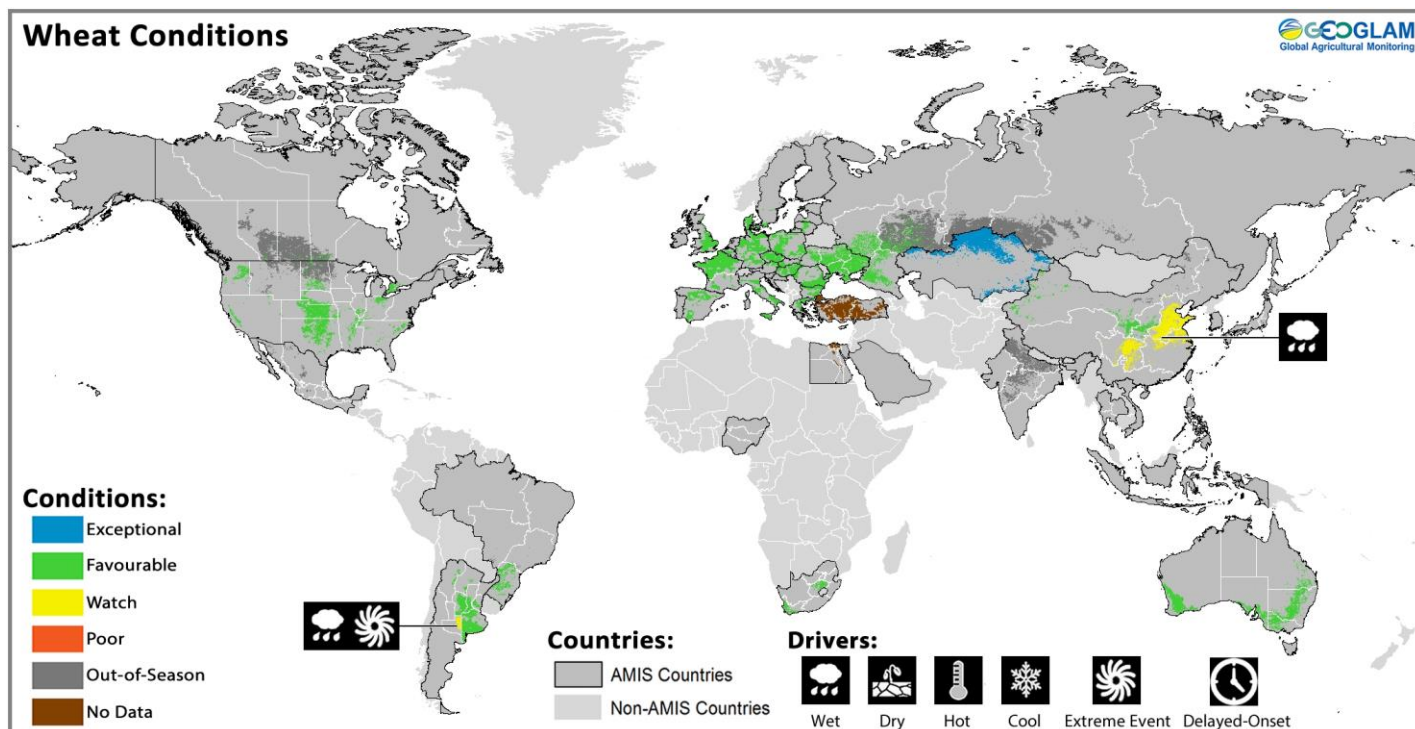
Maize - In the northern hemisphere, conditions are mostly favourable as the season draws to a close. In the US, record production is expected. However, persistent dry conditions in France marked the end of a difficult season with well below average production. In the southern hemisphere, planting is underway under generally favourable conditions in Argentina, Brazil, and South Africa.

Borderline neutral-La Nina

Borderline neutral-La Nina conditions in the equatorial Pacific Ocean are expected to persist through the end of 2016 and into early 2017, thereafter transitioning to a fully neutral state. Expected global precipitation impacts in this period are those characteristic of La Nina events. They include drier than normal conditions in southeastern South America, the southern United States, southwest Asia, southeastern China, and East Africa, while above average rainfall is favored for, southeast Asia, Australia, northern South America and southern Africa. Consistent with this outlook, heavy rainfall already fell throughout southeast Asia and failed October rains have already been experienced over much of East Africa.

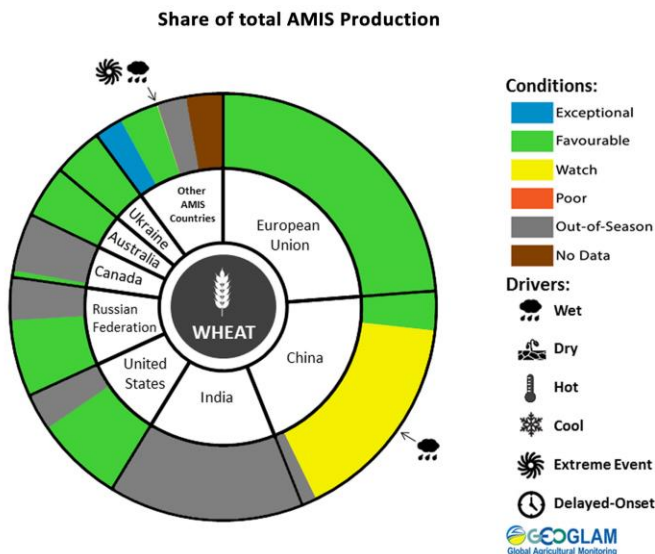
* Assessment based on information as of October 28th

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 October 28th. Where crops are in other than favourable conditions the climatic drivers responsible for those conditions are displayed. Crop Season Specific Maps can be found in Appendix 2.

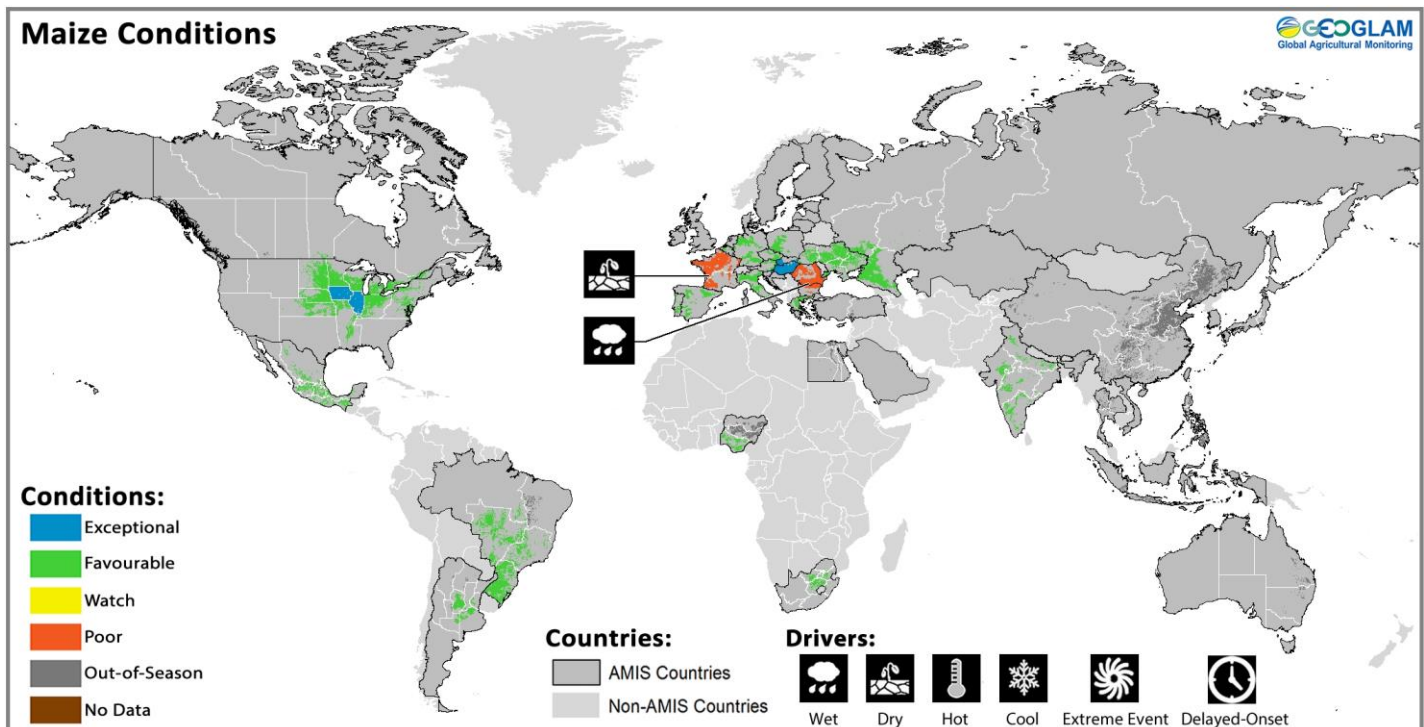
Wheat: In the **EU**, overall conditions are favourable at this early stage of the winter wheat season, however dry conditions in the west and abundant rains in Romania have delayed sowing. In the **US**, winter wheat sowing is nearing completion and conditions are favourable. In **China**, continuously wet weather adversely affected winter wheat in the central and southern regions, though it is still very early in the season. In **Canada**, winter wheat is under generally favourable conditions with only minor concern over reduced area due to wet fields during sowing in the Prairie Provinces. In **Ukraine**, winter wheat sowing was completed under generally favourable conditions. In **Kazakhstan**, spring wheat harvest is complete with record production reported. In **Australia**, conditions are generally favourable with average to above average winter rainfall across the east. However, frosts during September and dryness in October are likely to limit yield potential in Western Australia, while localized flooding and waterlogging have resulted in some lost yield potential in southeast Australia. In **Argentina**, harvest has just begun in the north of the country with yields close to average, despite the dry conditions earlier in the season. The main producing regions are under generally favourable conditions with spot areas of flooding in La Pampa and some minor frost in Buenos Aires.



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

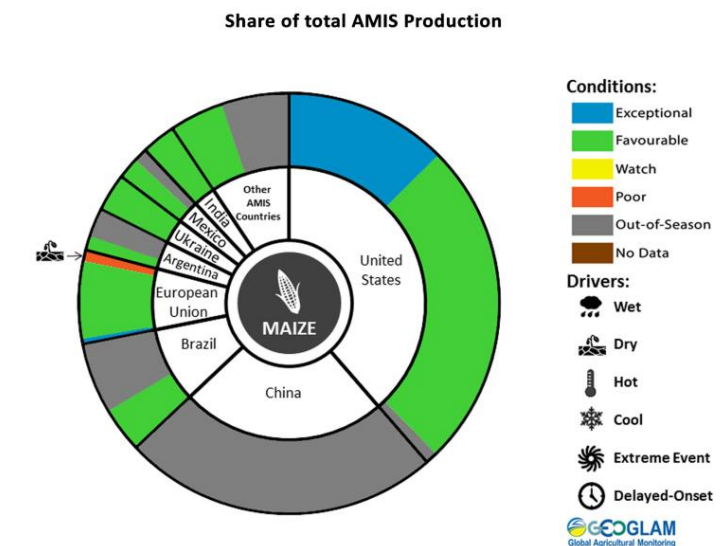
* Assessment based on information as of October 28th

Maize Conditions for AMIS Countries



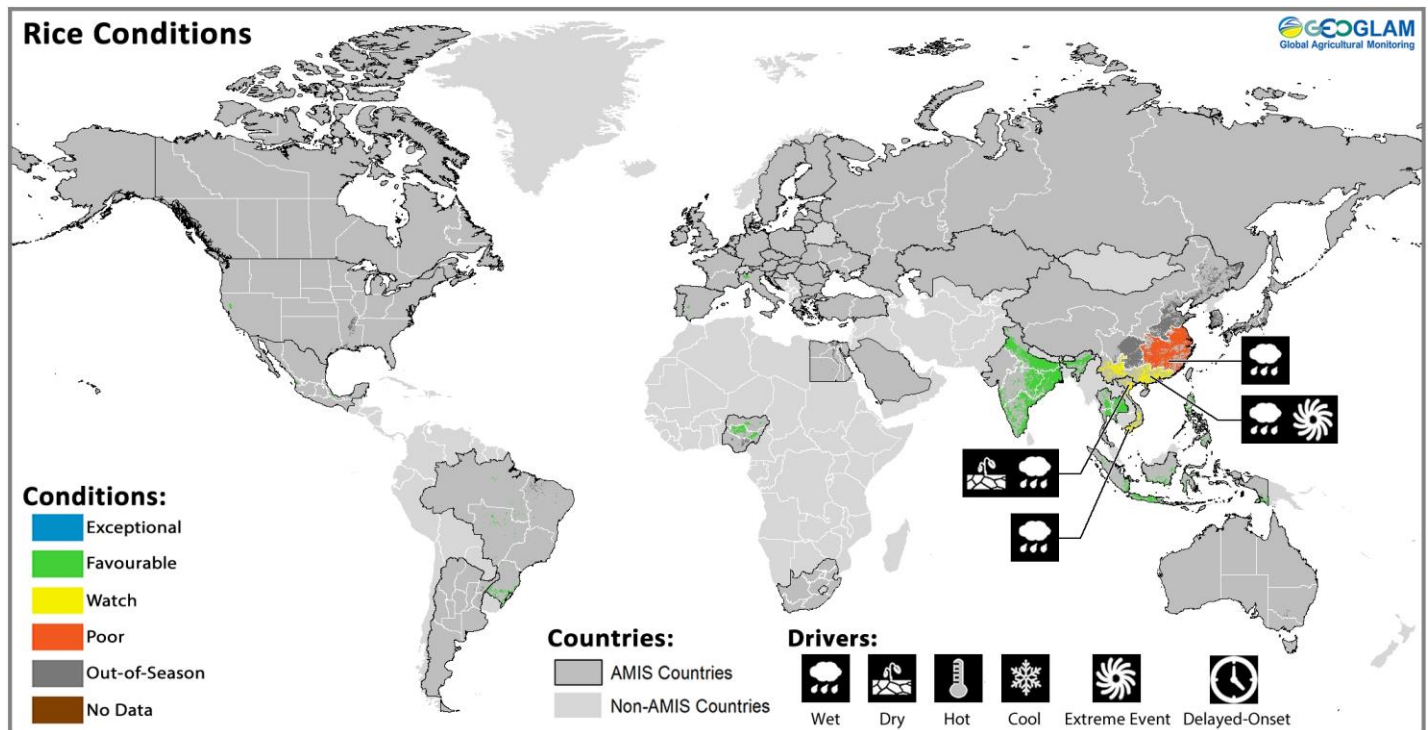
Maize crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in other than favourable conditions the climatic drivers responsible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

Maize: In the **US**, harvest is well under way, and the Corn Belt is expecting particularly favourable to exceptional yields which is helping push total production to a record level. In the **EU**, heavy rains in the first half of October delayed part of the harvest in south-east Europe, while overall conditions are mixed due to persistent dry conditions in France. In **Ukraine**, harvest is over halfway complete with favourable yields reported. In **India**, conditions are favourable owing to ample rains, and only minor pockets of dryness are reported. In **Mexico**, planting of the spring-summer crop ended last month and growing conditions remain favourable. In **Canada**, dry conditions in the largest producing province of Ontario resulted in just below average yields. In the **Russian Federation**, harvest is over half way complete under favourable conditions with yields about the same or above last year's. In **Nigeria**, conditions are favourable owing to average to above average rainfall during the season. In **Brazil**, planting of the spring crop is advancing in the main producing regions under favourable conditions. In **Argentina**, planting of early maize is ongoing under favourable conditions due to good soil moisture but some delays in planting have occurred.



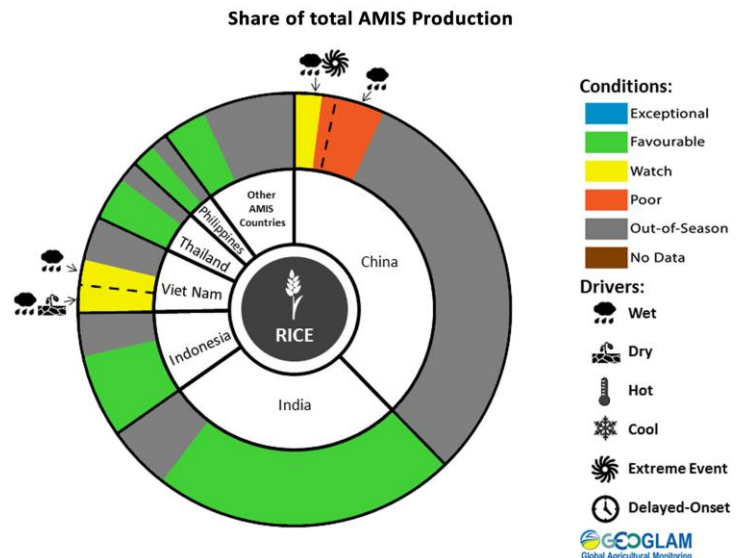
For detailed description of the pie chart please see box below.

Rice Conditions for AMIS Countries



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

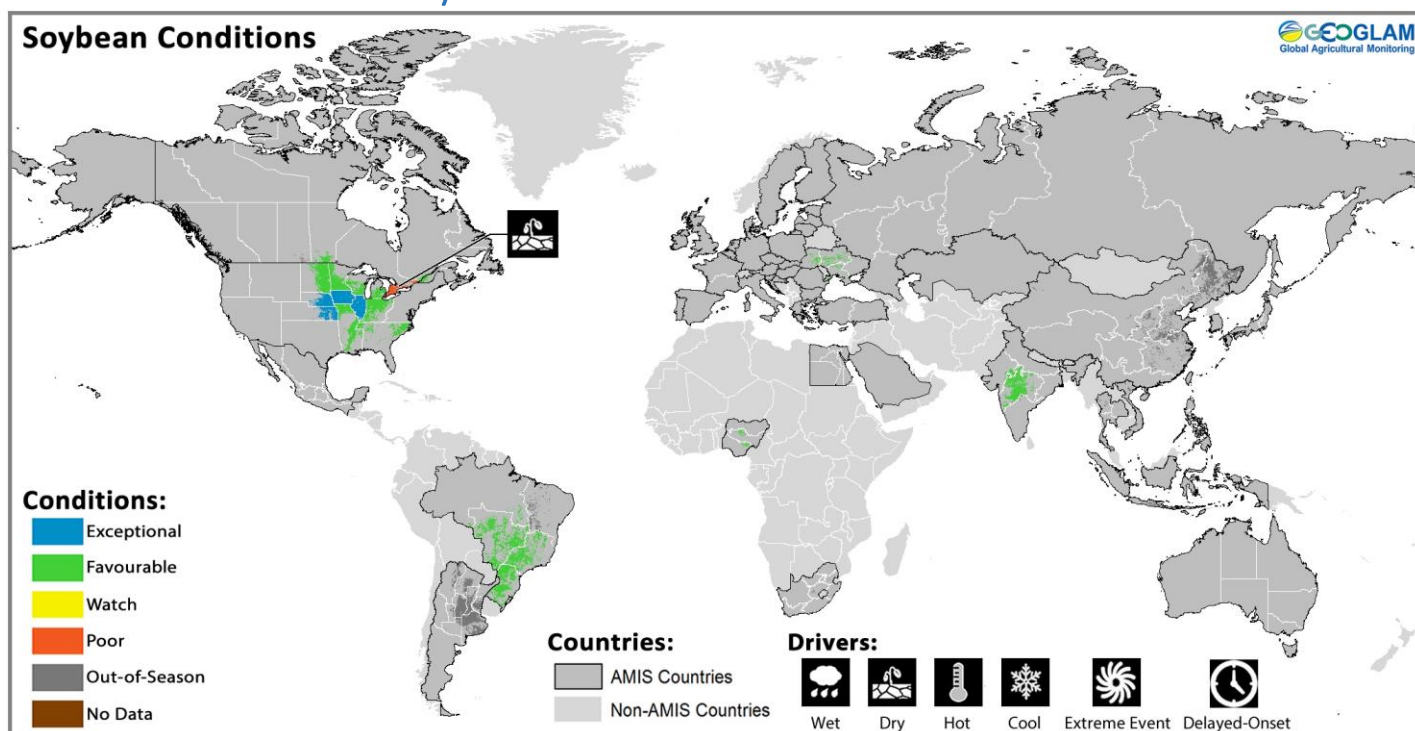
Rice: In **China**, late rice is experiencing below average conditions due to continuously rainy weather and the impact of recent typhoons in the south. In **India**, conditions for the kharif crop are generally favourable owing to the good monsoon rains. In **Indonesia**, planting of the wet season rice started earlier than normal owing to favourable conditions created by the early onset of the rainy season in September. In **Viet Nam**, the seeding of the autumn-winter crop in the north is complete, but has been adversely affected by heavy rainfall. In the south, summer-autumn crop harvesting has begun with mixed conditions due to floods and low solar radiation. In **Thailand**, conditions improved significantly, as the wet season crop received sufficient rainfall and conditions are now favourable with only minor damage due to flooding in the north and northeast regions. In the **Philippines**, wet season rice planted in July-August is under favourable conditions owing to average to above average rainfall. In the **US**, harvest is complete under favourable conditions.



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

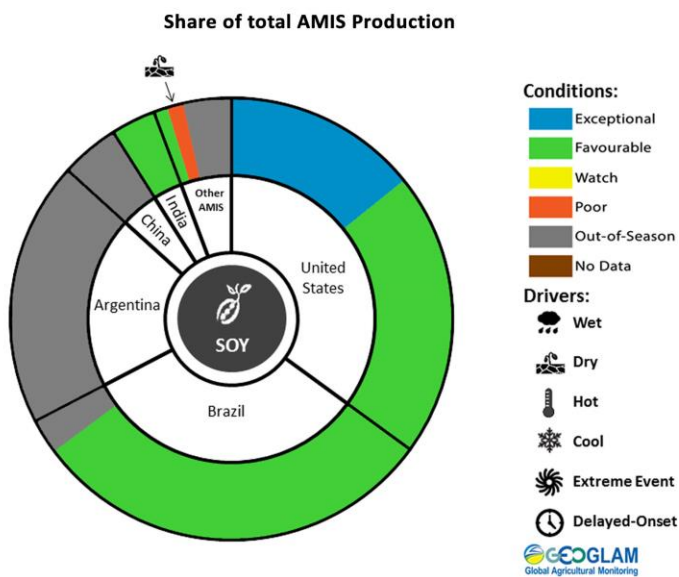
* Assessment based on information as of October 28th

Soybean Conditions for AMIS Countries



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

Soybeans: In the **US**, harvest is drawing to a close, with exceptional yields and production levels that will surpass previous records, notably in Illinois, Indiana, Iowa, and Nebraska. In **Brazil**, planting is ongoing in the main production regions under mainly favourable conditions. In **Argentina**, the start of planting is delayed due to heavy rainfall in October that inundated fields and the roads needed for mobilizing the planting machines. In **India**, harvest began under generally favourable conditions owing to good monsoon rains. In **Canada**, harvest is wrapping up and production is expected to be near average as a result of increased harvested area and favorable production in Manitoba. Dry conditions during the growing season in the largest producing province of Ontario resulted in below to well below-average yields in that province. In **Ukraine**, harvest is nearing completion under favourable conditions, and a good crop is expected.



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 November 6th 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.

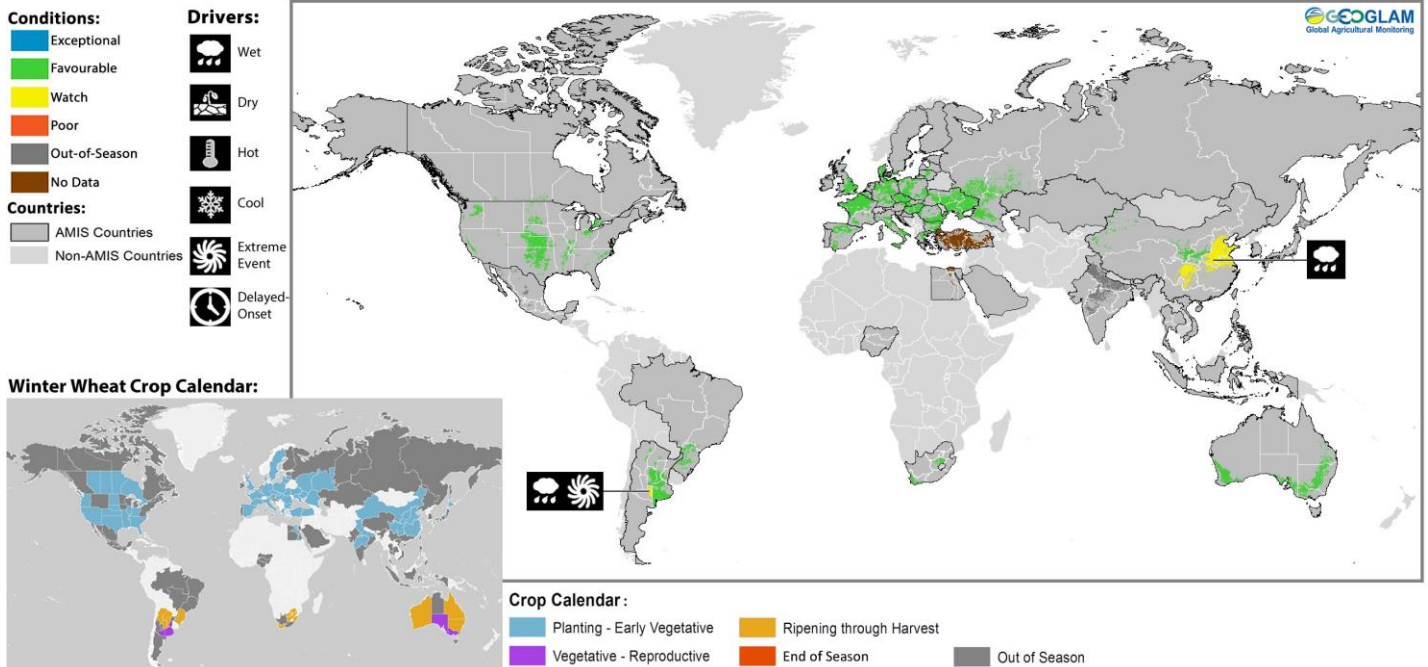
More detailed information on the GEOGLAM crop assessments is available at www.geoglam-crop-monitor.org

For information on country coverage and criteria:

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

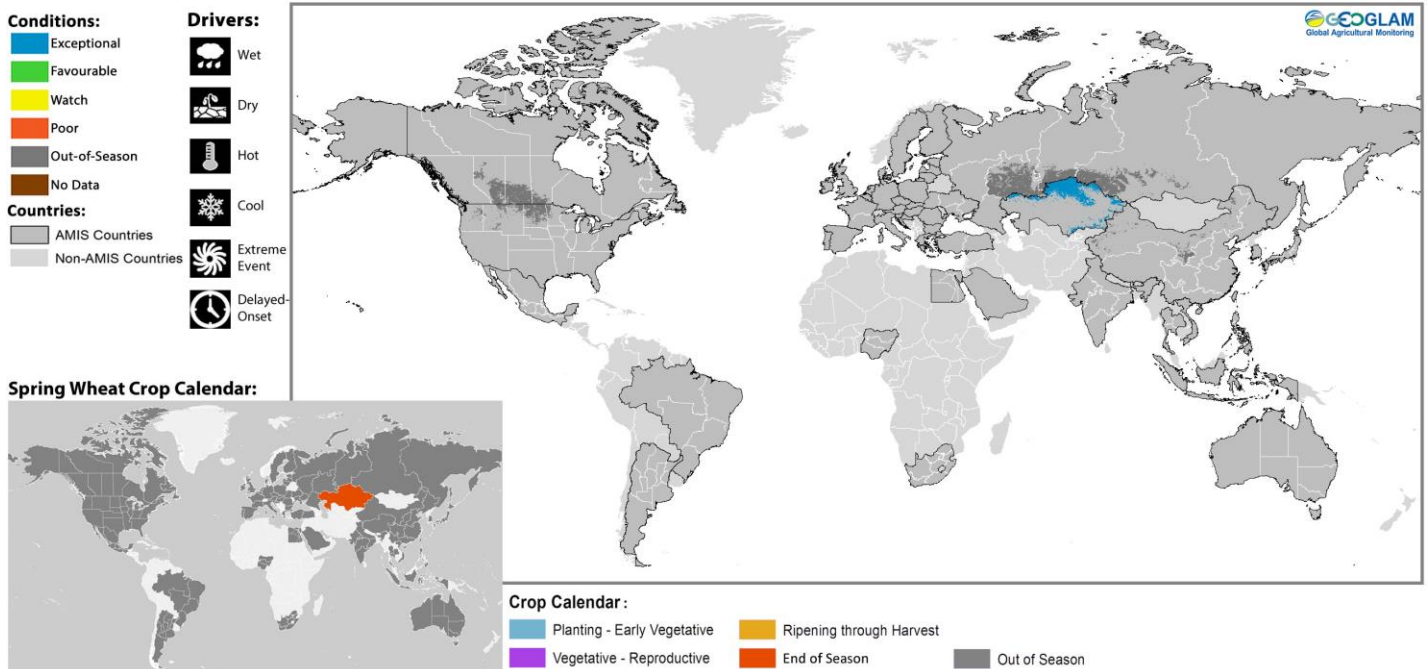
Appendix 2: Crop Season Specific Maps & Pie Charts

Winter Planted Wheat Conditions for AMIS Countries



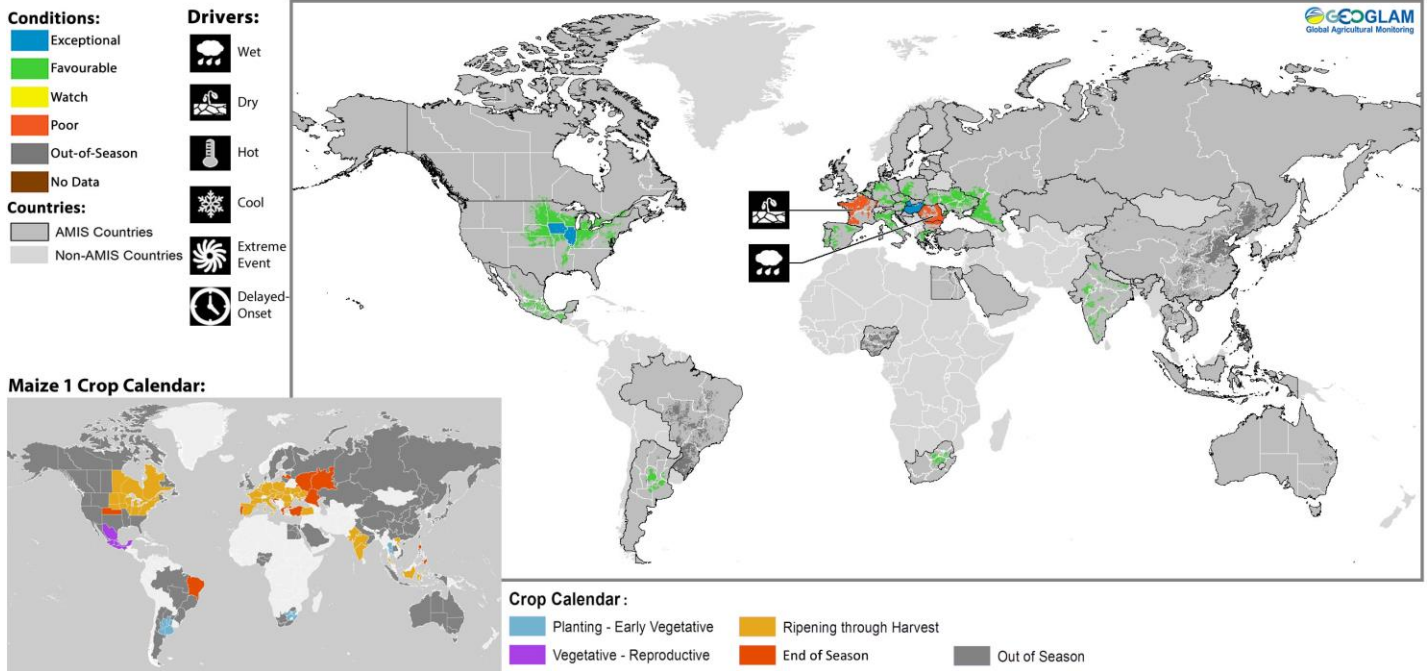
Winter wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers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

Spring Planted Wheat Conditions for AMIS Countries



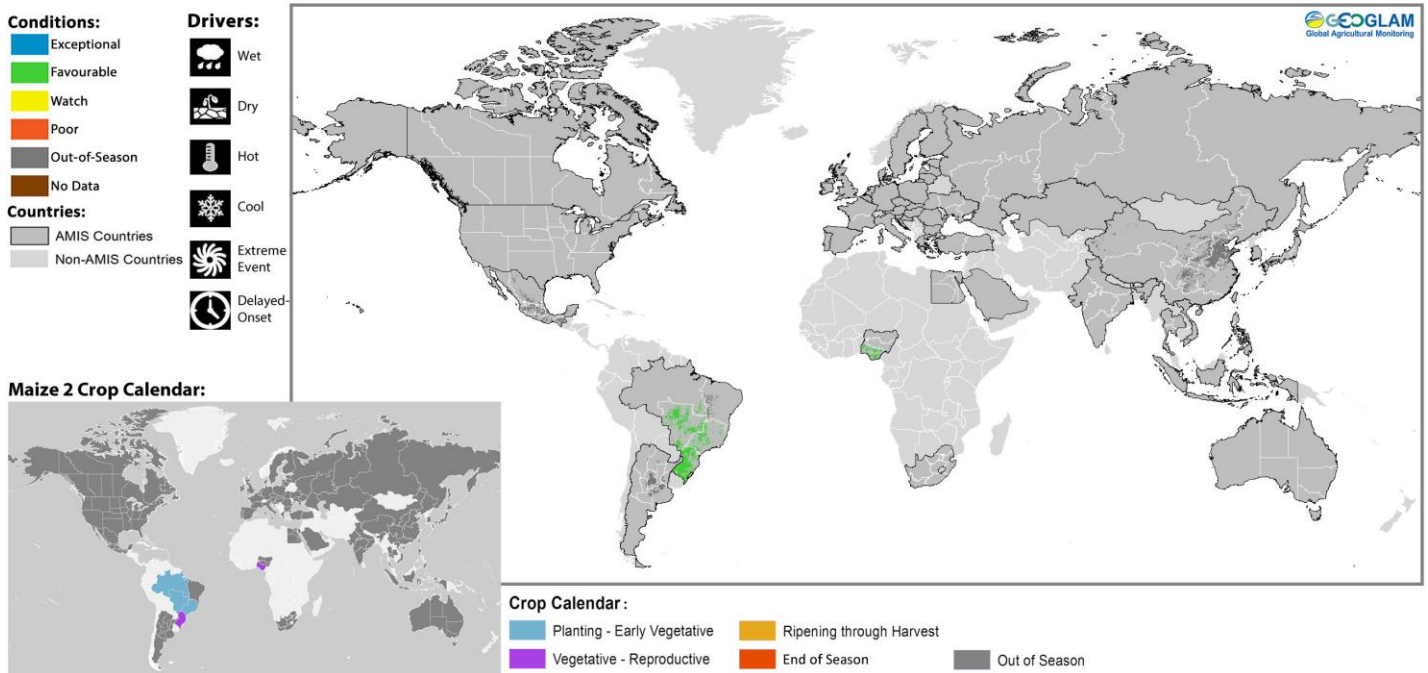
Spring wheat crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers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

Maize 1 Conditions for AMIS Countries



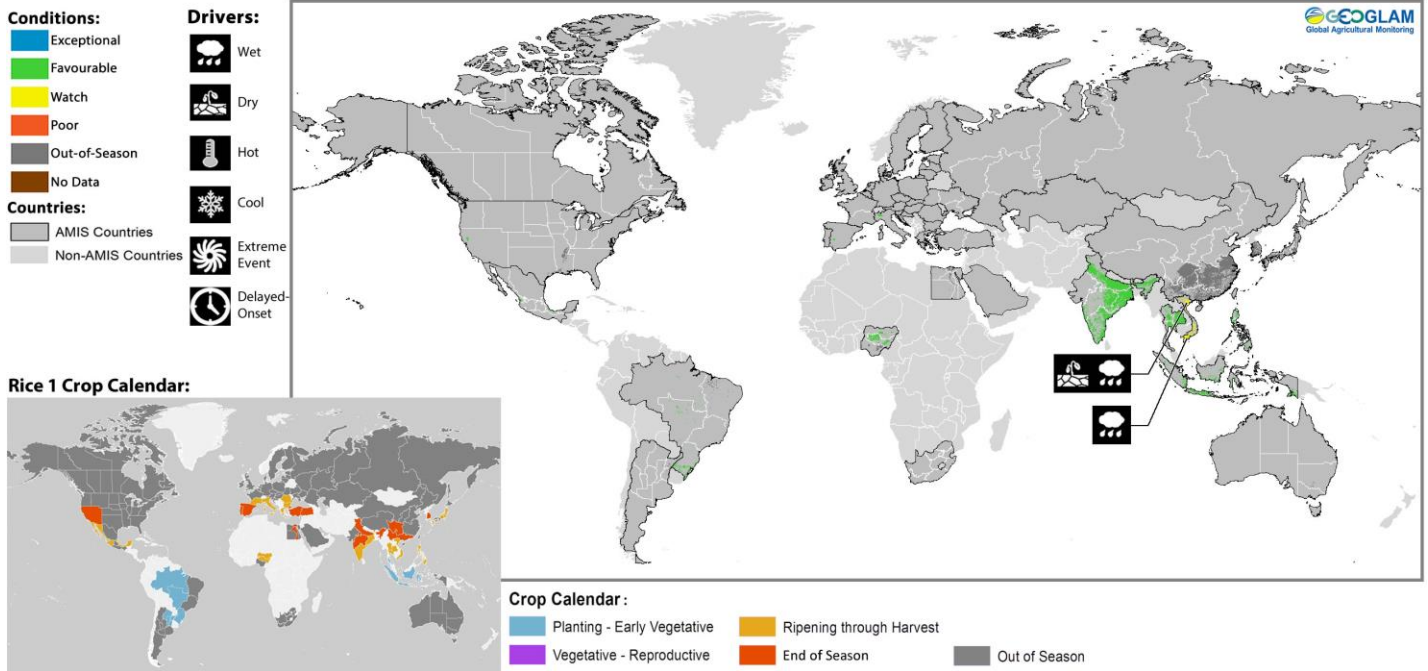
Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

Maize 2 Conditions for AMIS Countries



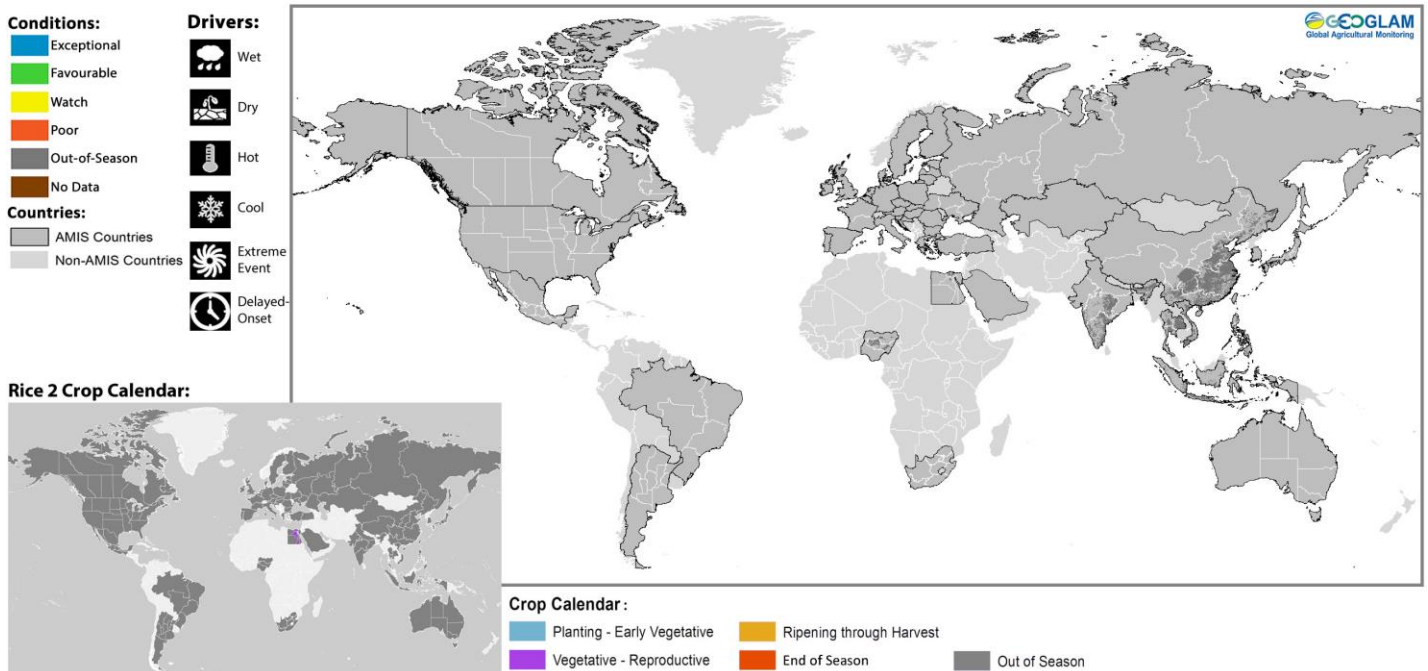
Maize2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Rice 1 Conditions for AMIS Countries



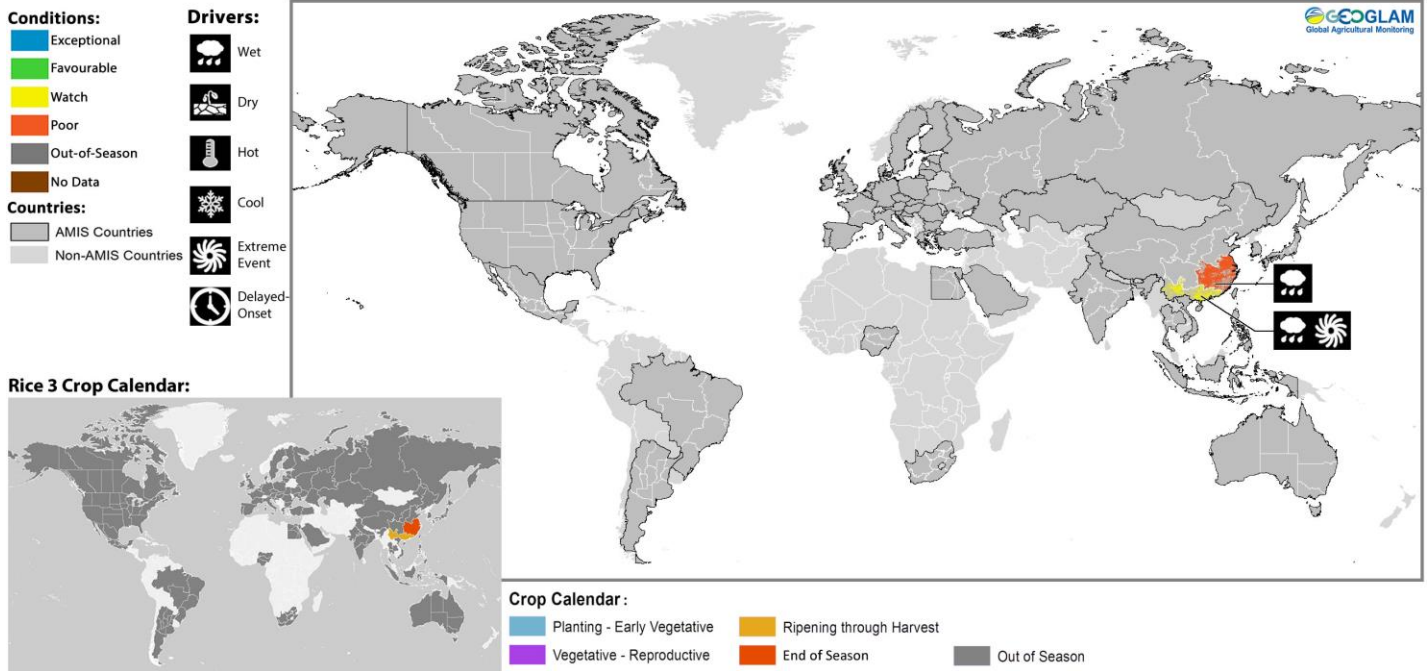
Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

Rice 2 Conditions for AMIS Countries



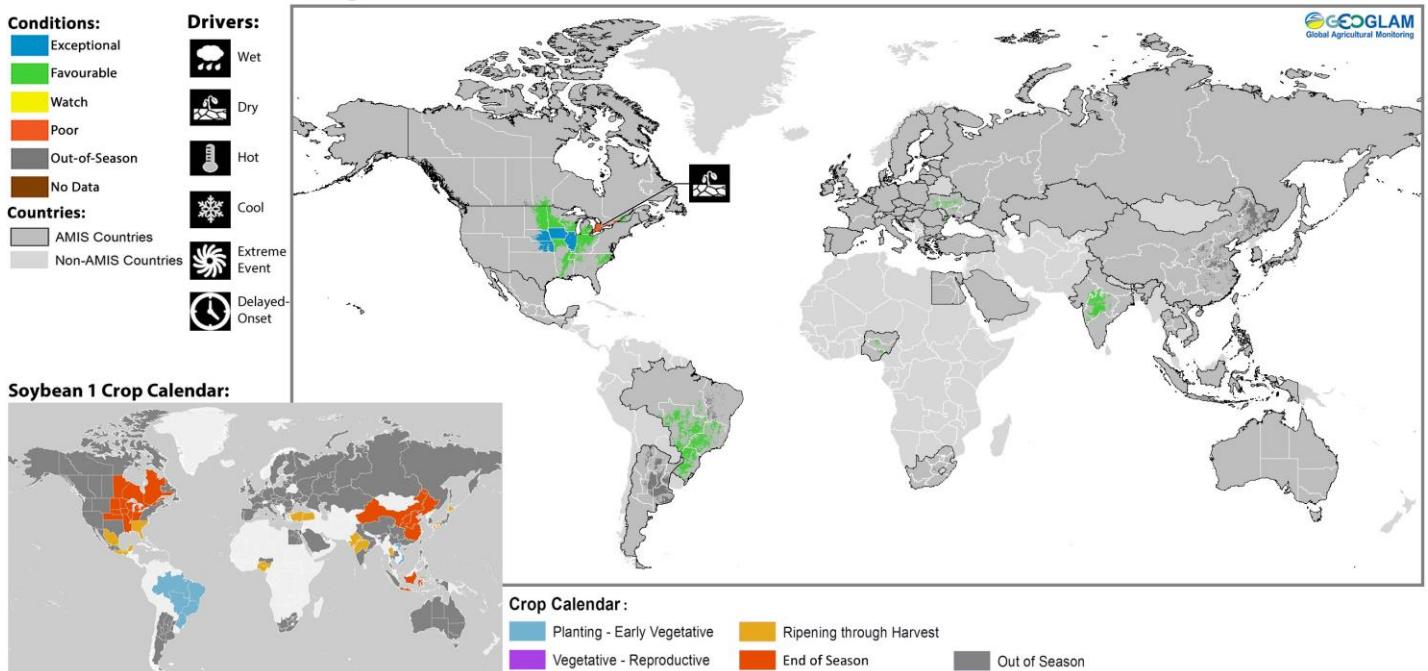
Rice 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of October 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

Rice 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 October 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

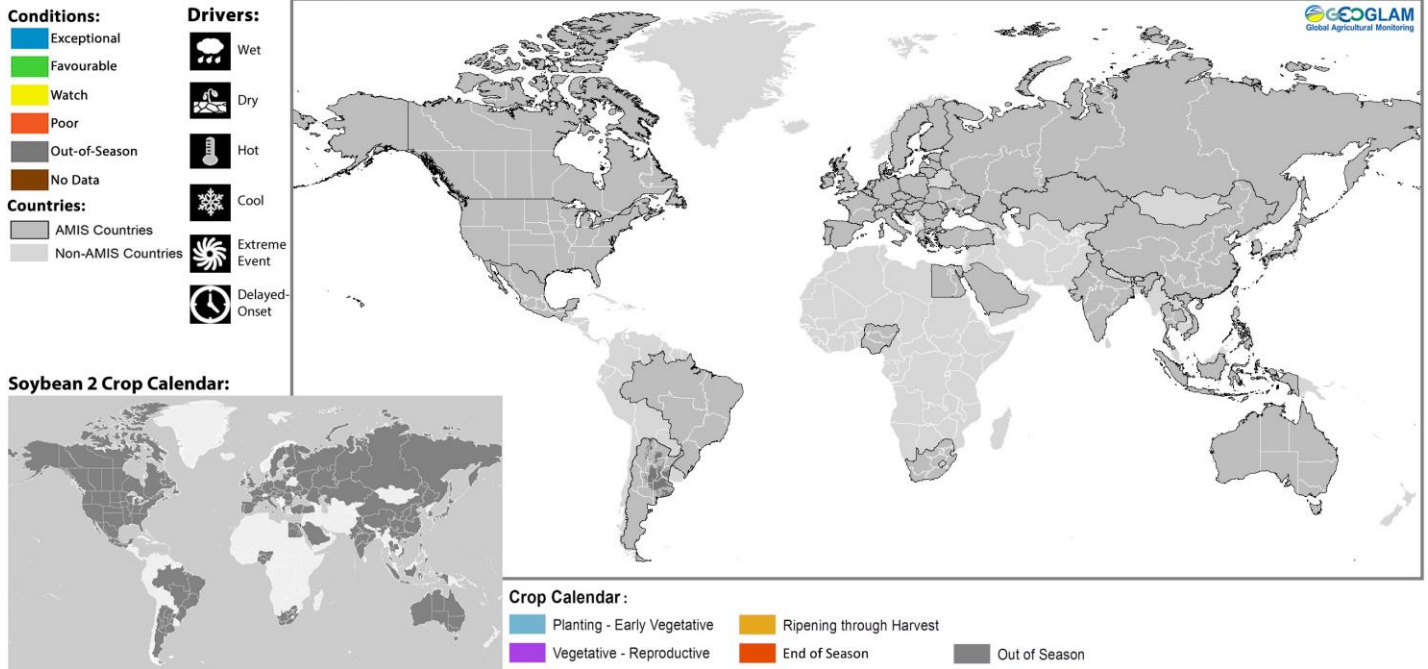
Soybean 1 Conditions for AMIS Countries



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 October 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

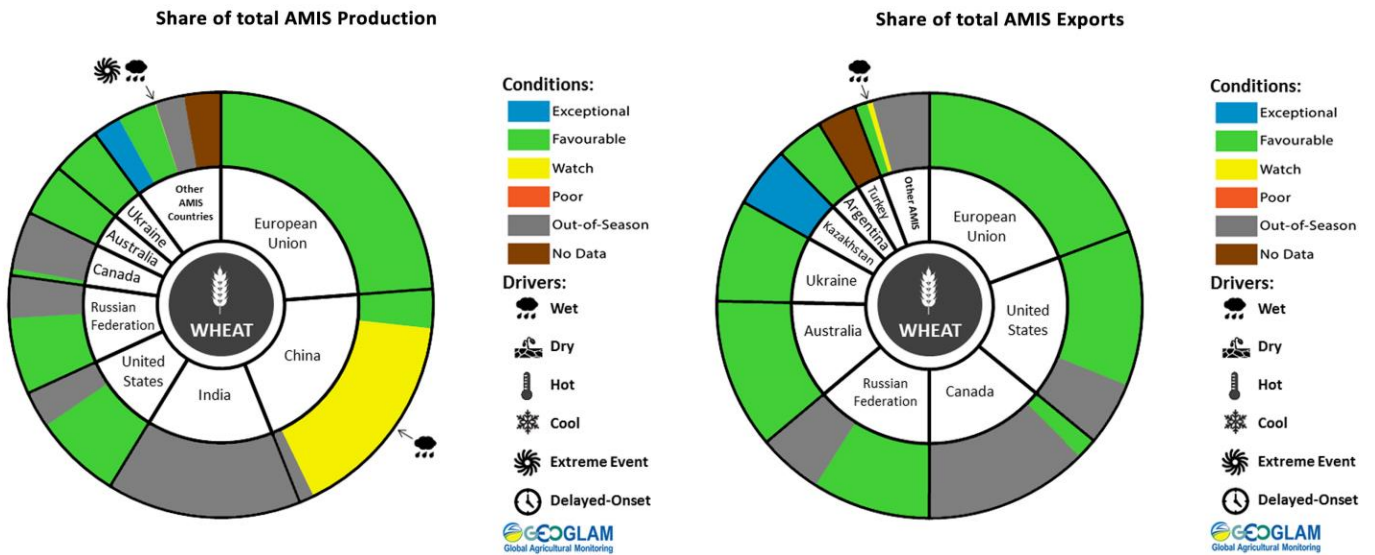
* Assessment based on information as of October 28th

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 October 28th. Where crops are in less than favourable conditions the climatic drivers responsible for those conditions are displayed. The crop calendar is provided as a point of reference to provide information on what part of the life cycle the crops are currently in for each area.

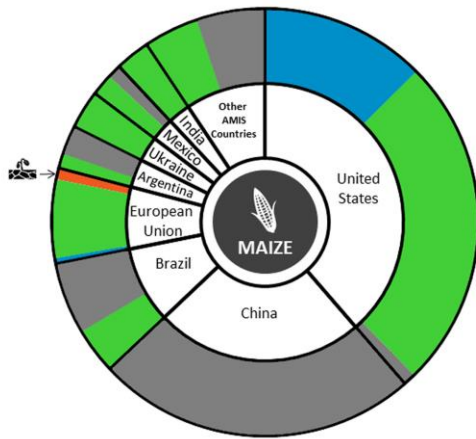
Wheat AMIS Comparisons



* Assessment based on information as of October 28th

Maize AMIS Comparisons

Share of total AMIS Production

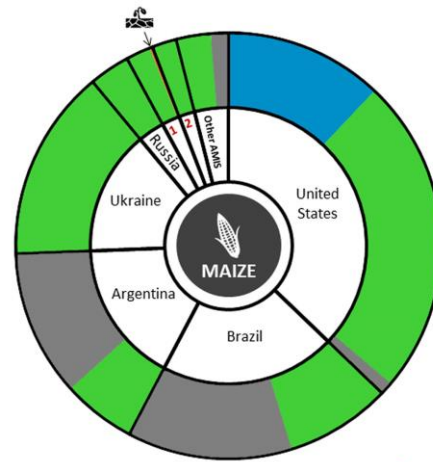


- Conditions:**
- Exceptional
 - Favourable
 - Watch
 - Poor
 - Out-of-Season
 - No Data

- Drivers:**
- Wet
 - Dry
 - Hot
 - Cool
 - Extreme Event
 - Delayed-Onset



Share of total AMIS Exports



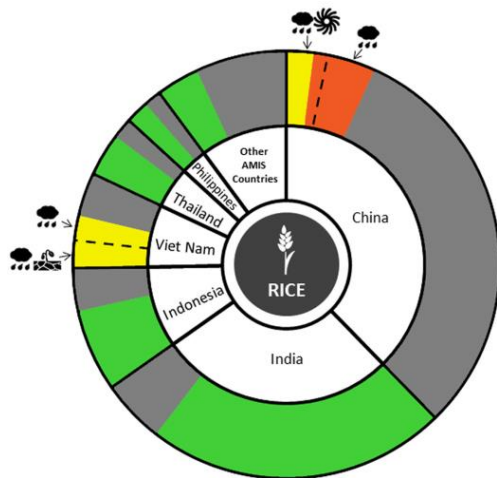
- Conditions:**
- Exceptional
 - Favourable
 - Watch
 - Poor
 - Out-of-Season
 - No Data

- Drivers:**
- Wet
 - Dry
 - Hot
 - Cool
 - Extreme Event
 - Delayed-Onset



Rice AMIS Comparisons

Share of total AMIS Production

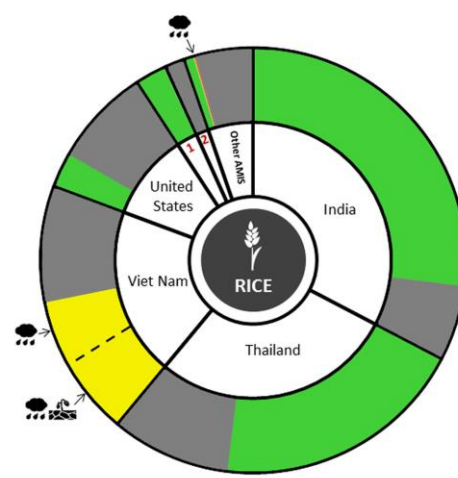


- Conditions:**
- Exceptional
 - Favourable
 - Watch
 - Poor
 - Out-of-Season
 - No Data

- Drivers:**
- Wet
 - Dry
 - Hot
 - Cool
 - Extreme Event
 - Delayed-Onset



Share of total AMIS Exports



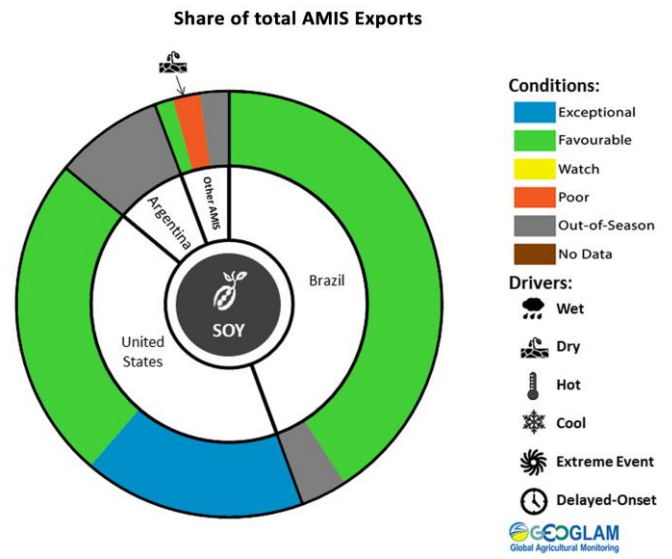
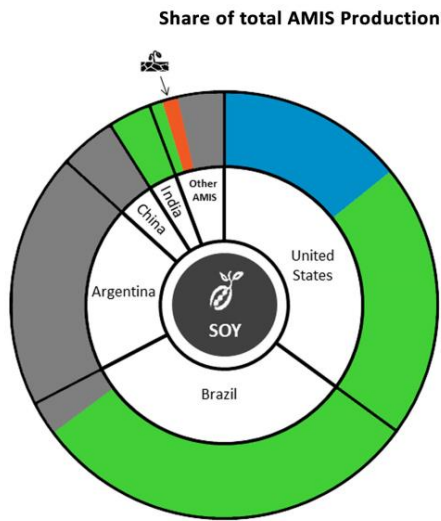
- Conditions:**
- Exceptional
 - Favourable
 - Watch
 - Poor
 - Out-of-Season
 - No Data

- Drivers:**
- Wet
 - Dry
 - Hot
 - Cool
 - Extreme Event
 - Delayed-Onset



* Assessment based on information as of October 28th

Soybean AMIS Comparisons



* Assessment based on information as of October 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: Dave Johnson

www.geoglam-crop-monitor.org

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