GEOGLAM Crop Monitor

No. 27 – April 2016

Crop Monitor
a geoglam initiative

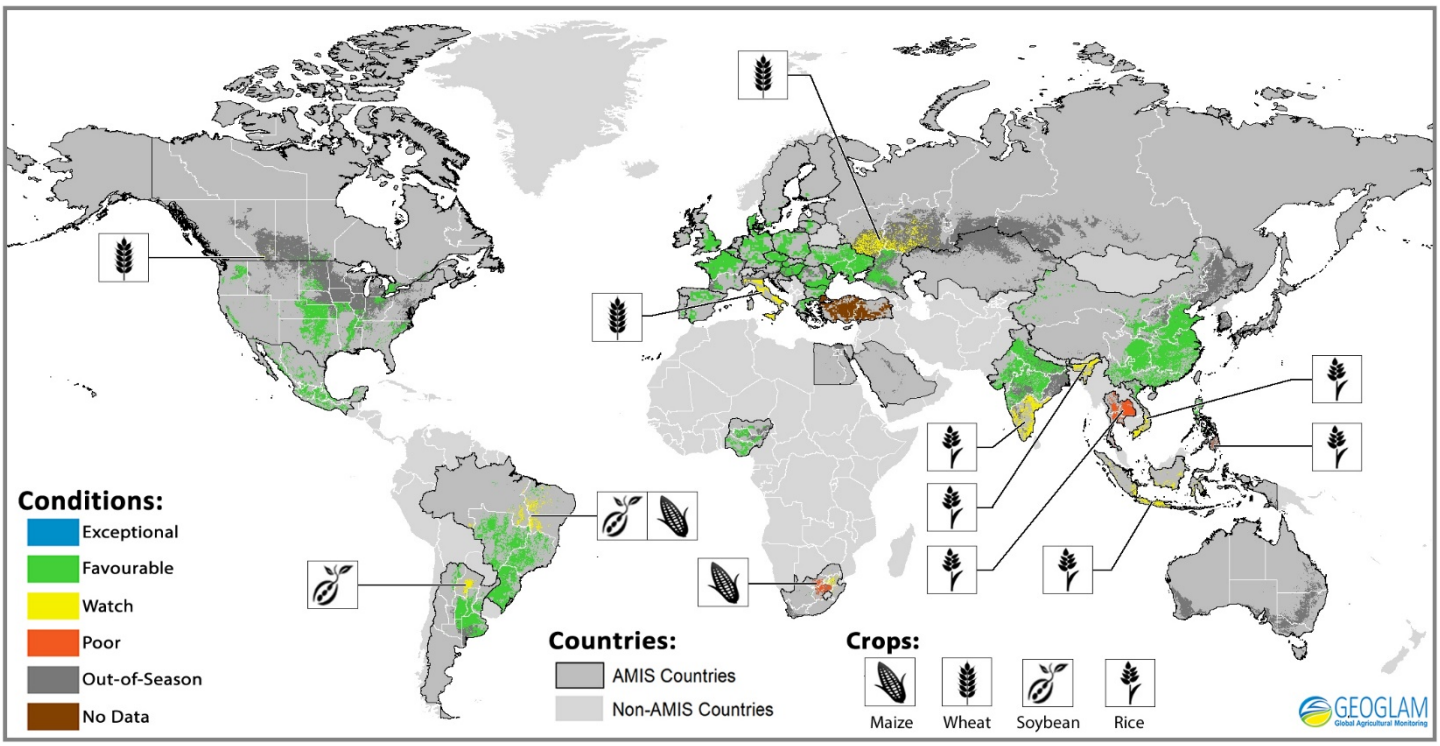
Prepared by members of the GEOGLAM Community of Practice
Coordinated by the University of Maryland

GEOGLAM Global Agricultural Monitoring

The Crop Monitor is a part of GEOGLAM, a GEO global initiative. http://www.geoglam-crop-monitor.org/

GEO GROUP ON EARTH OBSERVATIONS

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, conditions continue to be largely favourable for the winter wheat crop, which is resuming vegetative growth following winter dormancy. Conditions in Ukraine have improved since last month however some concern remains over the poor establishment in the fall. The southern hemisphere is currently out of season.

Maize - In the southern hemisphere, conditions continue to be relatively favourable, with the notable exception of South Africa, where they remain poor over the western production regions despite recent rains. The northern hemisphere is still largely out of season with the exception of India, Mexico and China where conditions are favourable.

Rice - El Niño continues to cause concern and impact conditions in Southeast Asia, especially in Thailand. Conditions in India deteriorated due to unfavourable moisture levels while in the other countries they remain generally favourable.

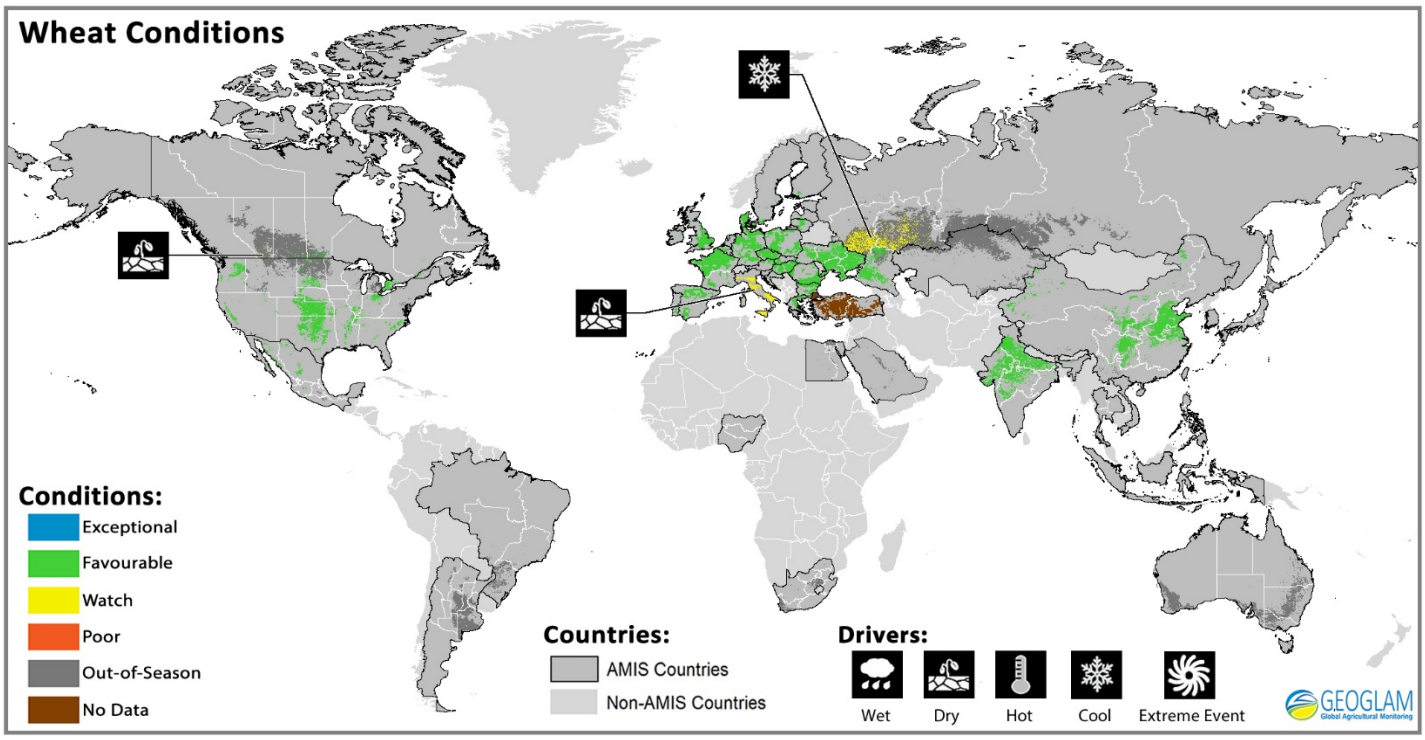
Soybeans - In the southern hemisphere, conditions remain generally favourable. However, in Brazil concern remains due to reduced rainfall in the northern and northeastern regions. The northern hemisphere is currently out of season.

El Niño declining

The ongoing El Niño continues to decline from its peak strength in late 2015, with neutral conditions expected by June. According to several UN agency estimates, it has already resulted in 60 million people affected by droughts, floods and extreme weather and its aftermath impact on food security is expected to continue well into 2017. Late arriving rains in Southern Africa this past month provided relief for pastures and water supplies, but are too late to mitigate widespread and severe drought impacts on crop production. Significant precipitation also arrived in March in Central Asia, likewise later than usual, in this case improving summer water supply prospects for important areas of irrigated agriculture in Afghanistan, Pakistan, and Tajikistan. Drought is expected to continue through June in Southeast Asia and across northern South America, including northeast Brazil, while in the same period southeast Brazil and Uruguay should see continuation of above average rainfall. No El Niño impacts are anticipated in the main summer growing season (June-July-August) of North America, Europe, Russia, China, and India. Thereafter, neutral conditions could persist through the last quarter of 2016, or there is a possibility of transition to La Niña. Odds of reverting to El Niño are low. A review of past El Niño events and model projections for October-December 2016 puts the probabilities at approximately 50 percent for La Niña, 40 percent for neutral, and 10 percent for El Niño.

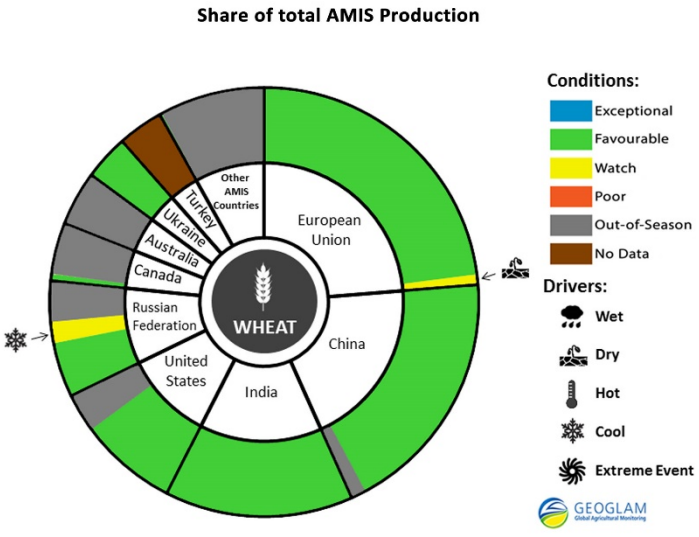
* Assessment based on information as of February28th

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**, the crop is generally in good condition and well developed due to the mild winter conditions and prospects are promising. Conditions have slightly deteriorated in Italy due to dry conditions. In the **US**, the crop has emerged from dormancy and is rapidly growing. Conditions are generally favourable throughout. In **China**, winter wheat is generally in the jointing stage. Overall, crop conditions are at the 5-year average level. Cooler weather caused below average conditions in southern Jiangsu and eastern and southern Henan. However, crop conditions were above average in eastern Sichuan, Chongqing and northern Guizhou due to favourable temperature and abundant rainfall.



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

In the **Russian Federation**, the crop is still mostly dormant, except in southern regions. Winterkill will be assessed later this month. In **Canada**, conditions for winter wheat are mixed in Western Canada, especially in central British Columbia, Alberta and the southern Prairies. The situation could improve drastically in April with normal precipitation patterns. There is also concern over winterkill in the western Prairies. In **India**, conditions are favourable and the crop is in ripening through harvest stages. In **Ukraine**, the crop continued to break winter dormancy and resume vegetative growth with almost no instances of winterkill. Conditions improved in many eastern and southern regions however, some concern remains over the poor establishment conditions in the fall.

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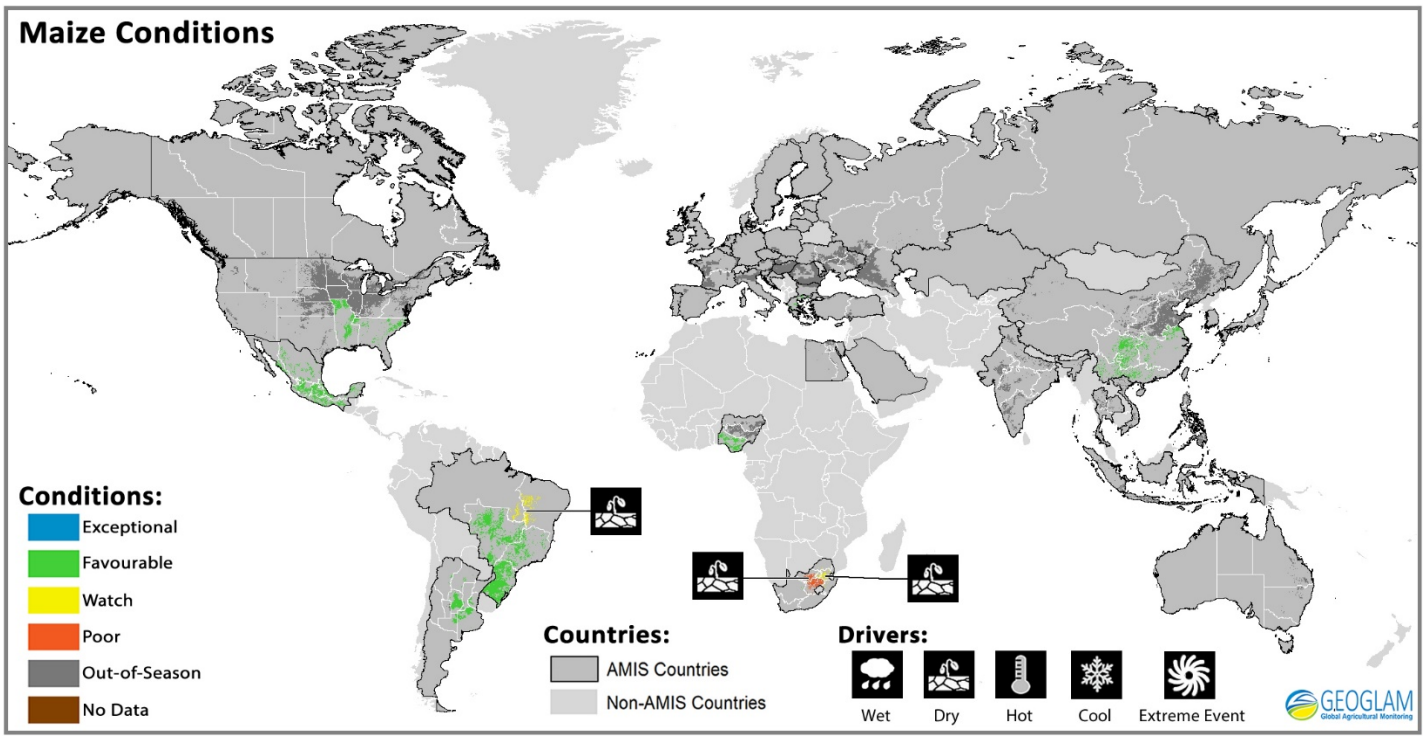
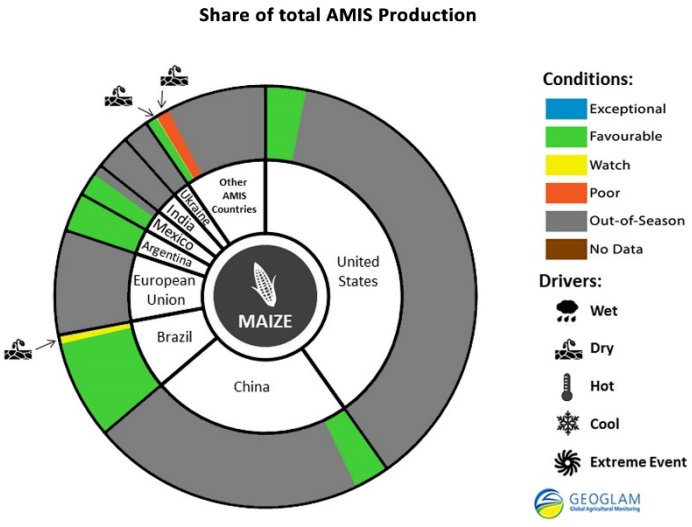
Maize Conditions for AMIS Countries



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**, conditions for the summer-planted crop (the larger producing season) continue to be favourable and the crop is generally in vegetative to reproductive stages. For the spring-planted crop, conditions are mostly favourable with the exception of the northeast and part of the north region where continued dry conditions reduced yields. This crop is mostly in the reproductive through harvesting stages. In **Argentina**, conditions remain generally favourable. The crop is grain filling to maturity stages and harvest has begun for the early-planted crop. In **South Africa**, late rains in March were generally too late to improve production prospects. Conditions improved over the eastern growing regions due to above-normal rainfall during March, but remain poor over the western production regions. Significant concerns remain over production, which is expected to be much below average. In **China**, spring maize is at seeding to three-leaf stage in Guangxi and the crop is in above average condition. In **India**, harvest continues and conditions are favourable. In **Mexico**, planting is almost complete for the autumn-planted crop and conditions are favourable. Planted area has increased relative to last year.



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

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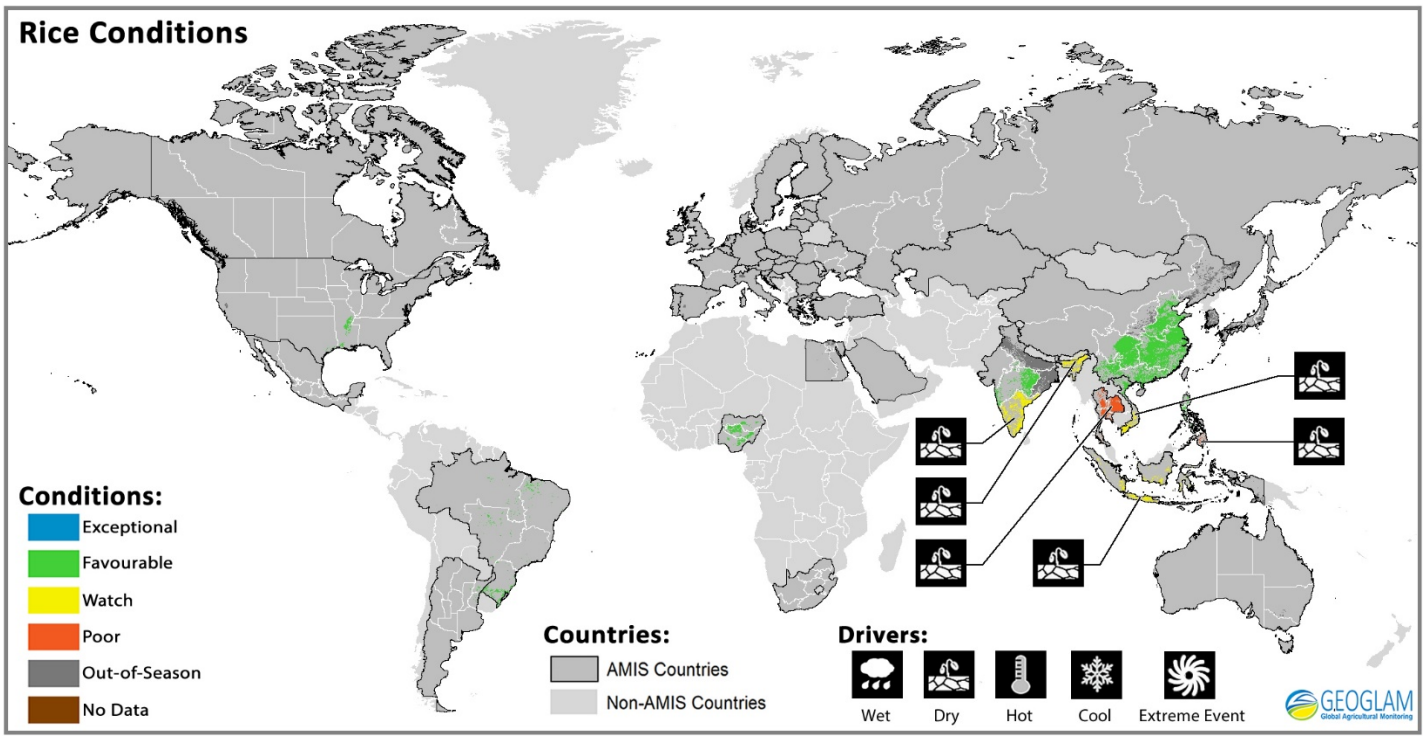
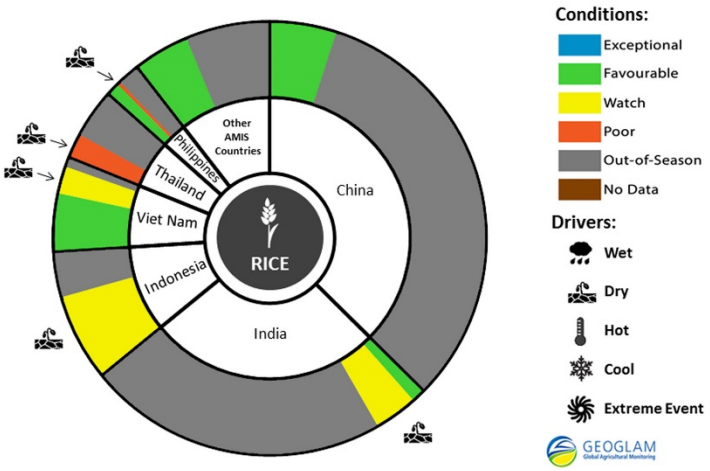
Rice Conditions for AMIS Countries



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

Rice: In **India**, conditions are mixed for the rabi crop due to unfavourable moisture conditions. In **China**, early rice is in the seeding stage in southern regions without major concerns at this early stage of the season. In **Thailand**, conditions for the dry season crop continue to be poor due to a water shortage attributed to El Niño and concern over pests and plant disease outbreaks in the northern and central regions. In **Viet Nam,** harvesting has begun for the winter-spring dry season crop and conditions are favourable in the northern region but mixed in the southern region due to salinization because of the low water levels of the Mekong River. In **Indonesia**, the wet season crop is in favourable condition, even though the monsoon rains were delayed, owing to a combination of sufficient irrigation and sunlight. Planted area is down due to the limited irrigation water. In the **Philippines**, the dry season crop conditions are favourable in the northern regions and mixed in the southern regions due to insufficient water and intense heat brought about by prolonged dry spells. In **Brazil**, excessive rainfall during parts of the growing season in the southern region, which is the main producing region, reduced yields. The crop is generally in the ripening through harvest stage. In **Argentina**, harvest has begun and conditions are favourable.

Share of total AMIS Production



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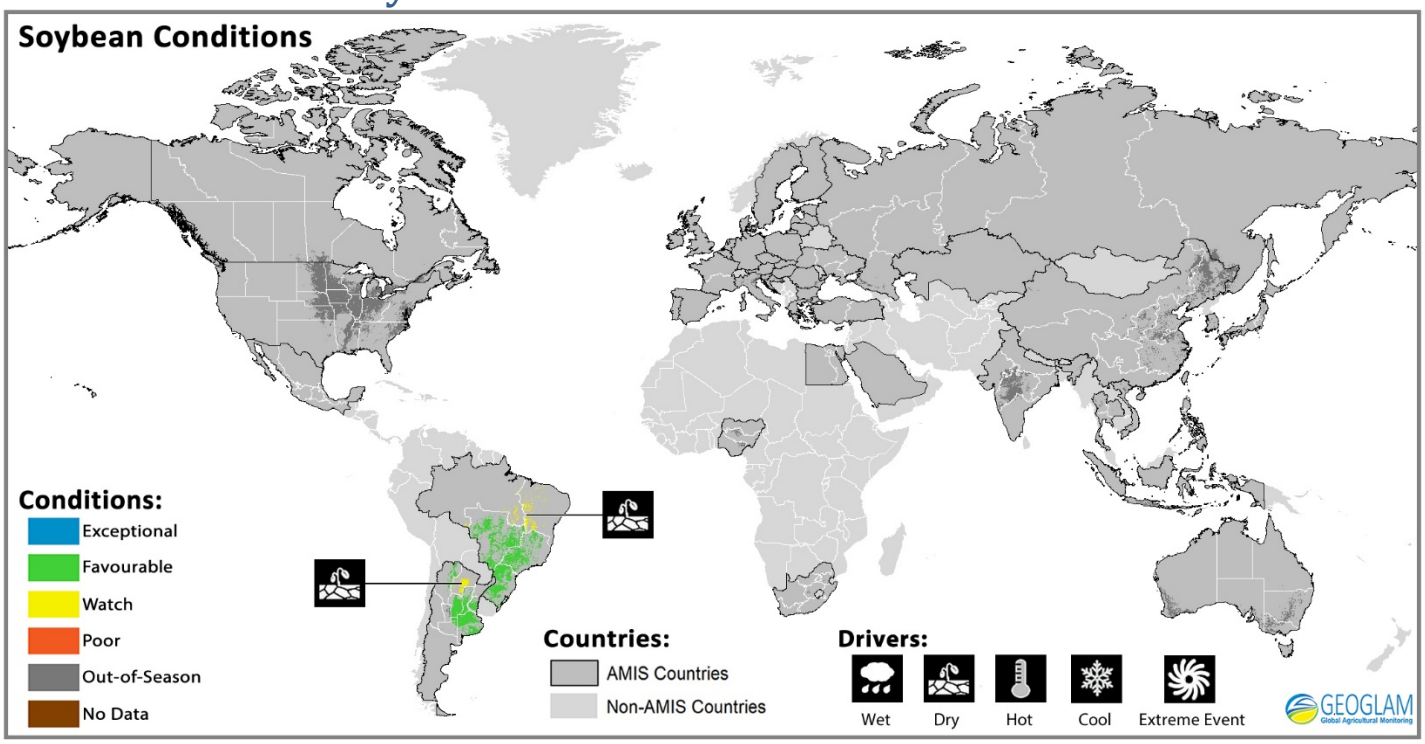
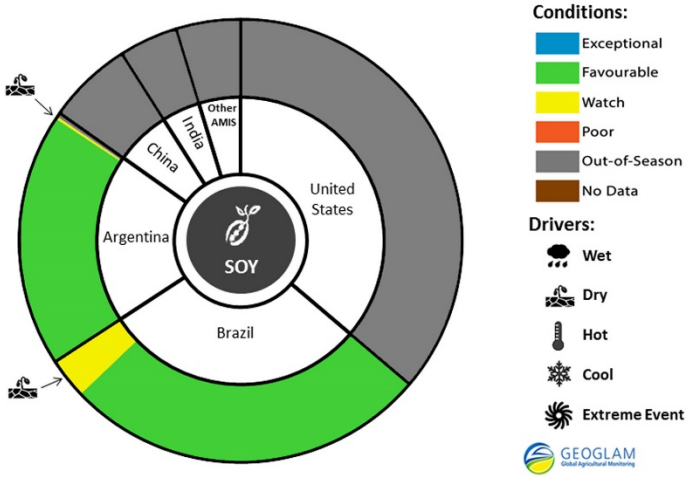
Soybean Conditions for AMIS Countries



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 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 generally favourable in the center-west, southeast and southern regions for the crop which is in the ripening through harvest stages. However, the reduced rainfall in the northeast and part of the north region reduced yields relative to last year. In **Argentina**, conditions remain good in most regions. There are some concerns over the central and northern regions and localized areas in southern Buenos Aires. The first crop is in grain-filling or maturity stages and the second crop has begun to fill grain. Harvest of the first soybean crop has begun in early-planted regions.

Share of total AMIS Production



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

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 February28th

Appendix 1: Definitions

Crop Conditions:

Exceptional: Conditions are much better than average* at time of reporting. This label is only used during the grain-filling through harvest stages.
Favourable: Conditions range from slightly lower to slightly better than average* at reporting time.
Watch: Conditions are not far from average* but there is a potential risk to production.
Poor: Crop conditions are well below average*. Crop yields are likely to be more than 5% below average. This is only used when conditions are not likely to be able to recover, and impact on production is likely.
Out Of Season: Crops are not currently planted or in development during this time.
No Data: No reliable source of data is available at this time.

*"Average" refers to the average conditions over the past 5 years.

Drivers:

These represent the key climatic drivers that are having an impact on crop condition status. They may result in production impacts and they can act as either positive or negative drivers of crop conditions.

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

Sources & Disclaimer

Sources and Disclaimers: The Crop Monitor assessment is conducted by GEOGLAM with inputs from the following partners (in alphabetical order): Argentina (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

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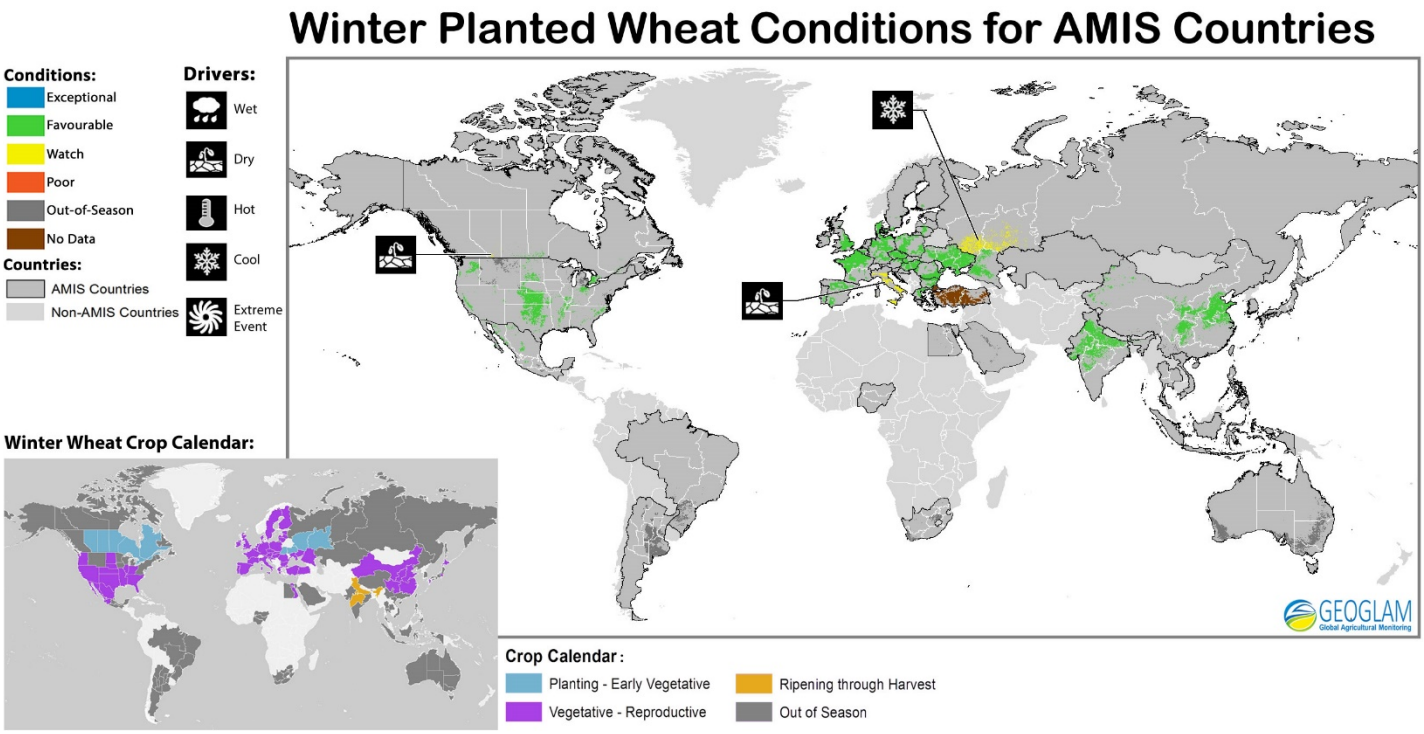
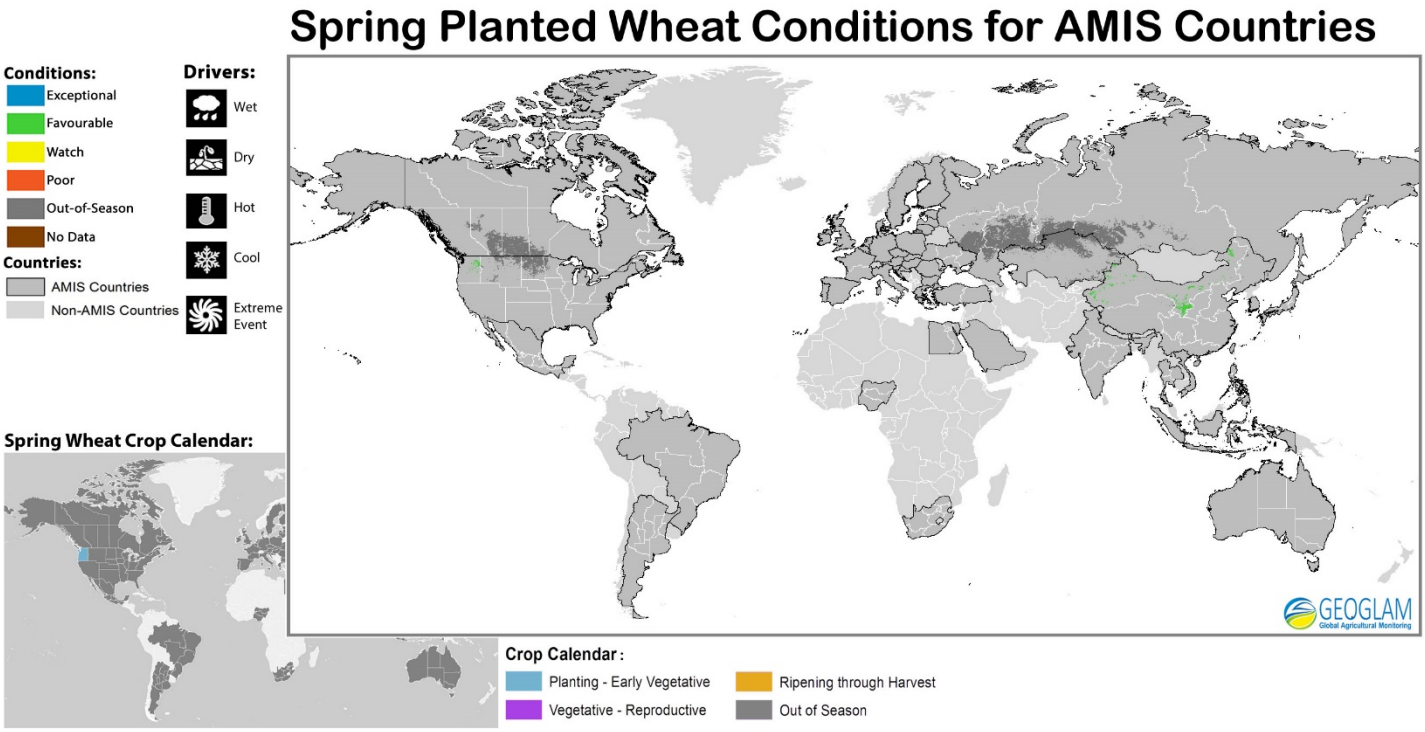
Appendix 2: Crop Season Specific Maps & Pie Charts



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.



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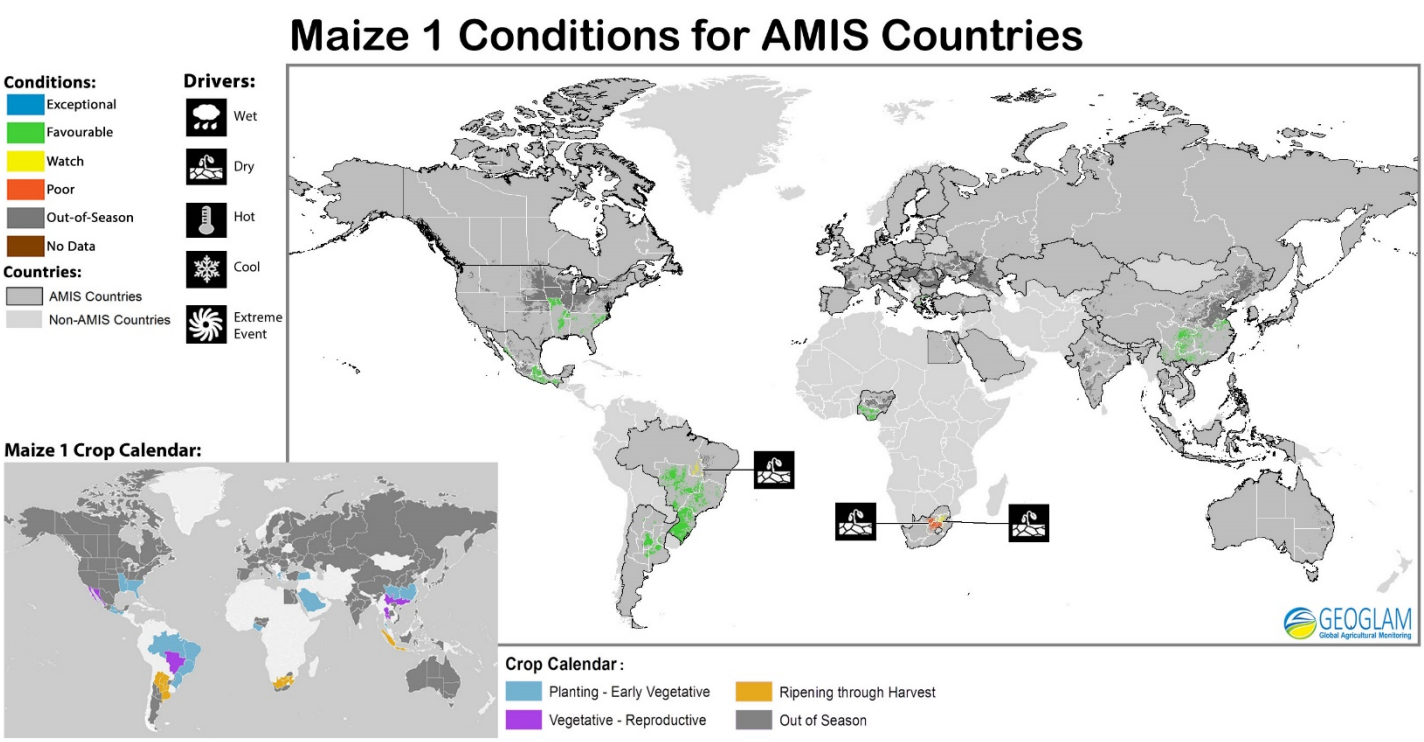
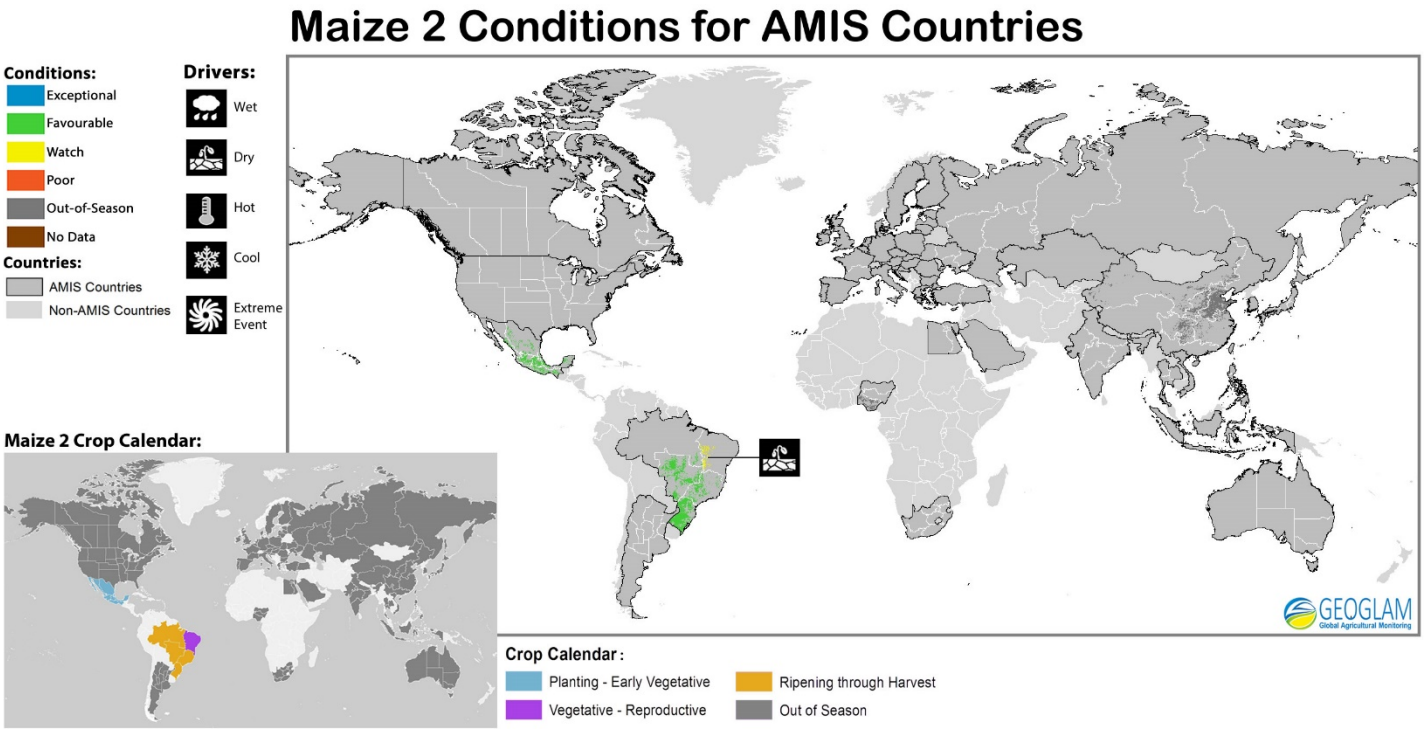


Maize 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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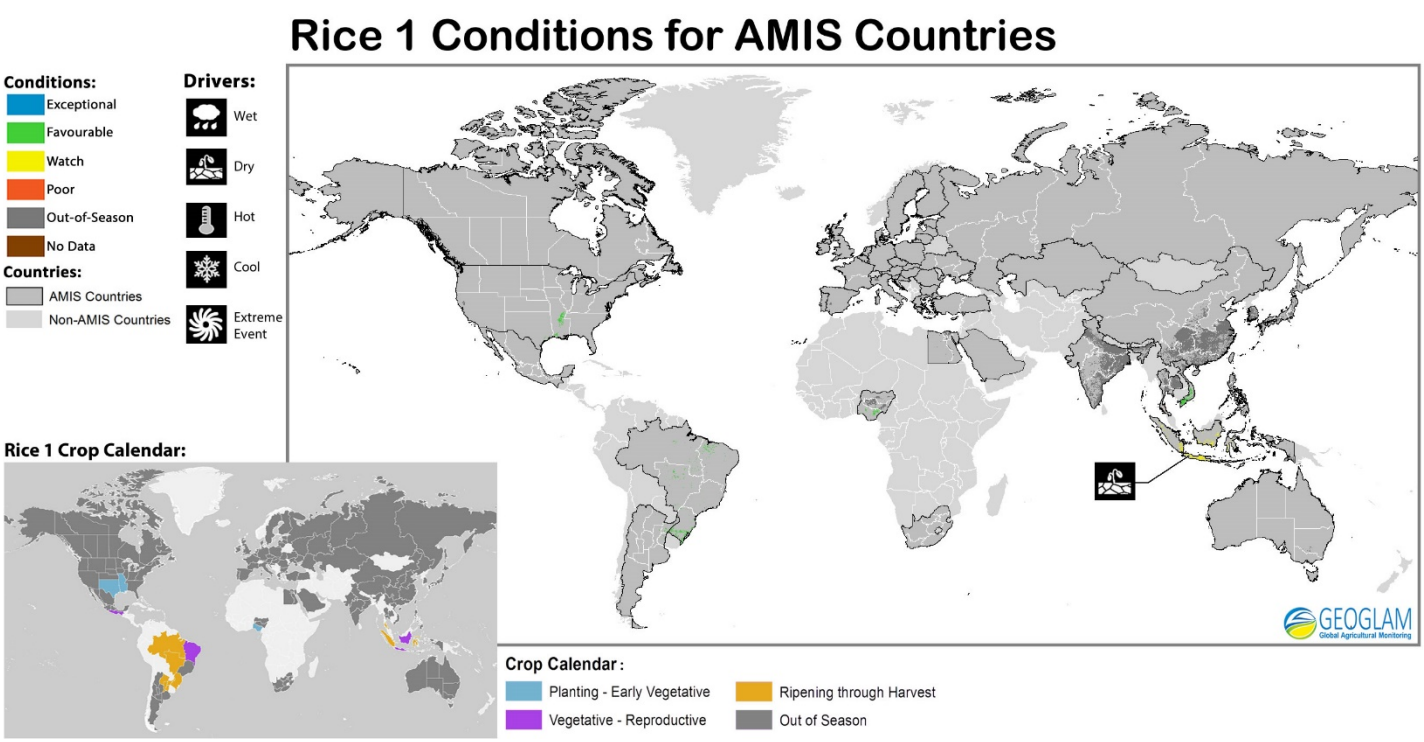
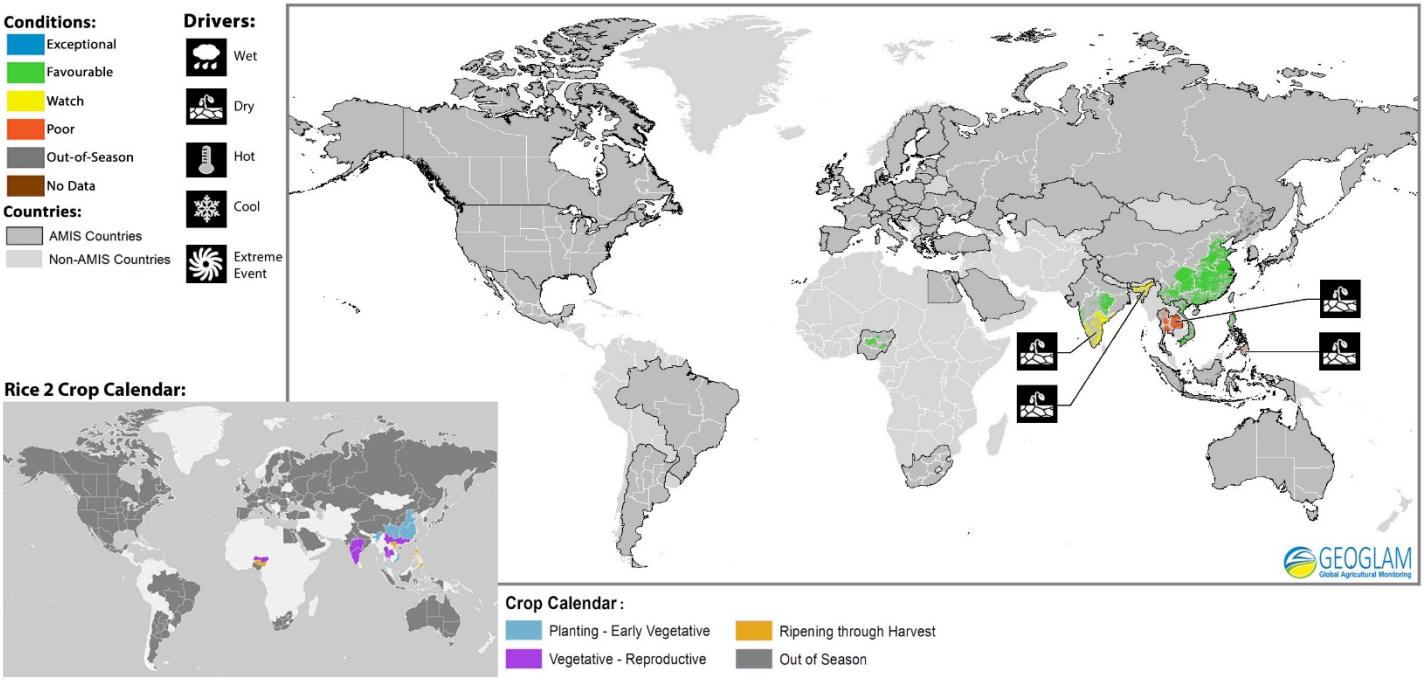


Rice 1 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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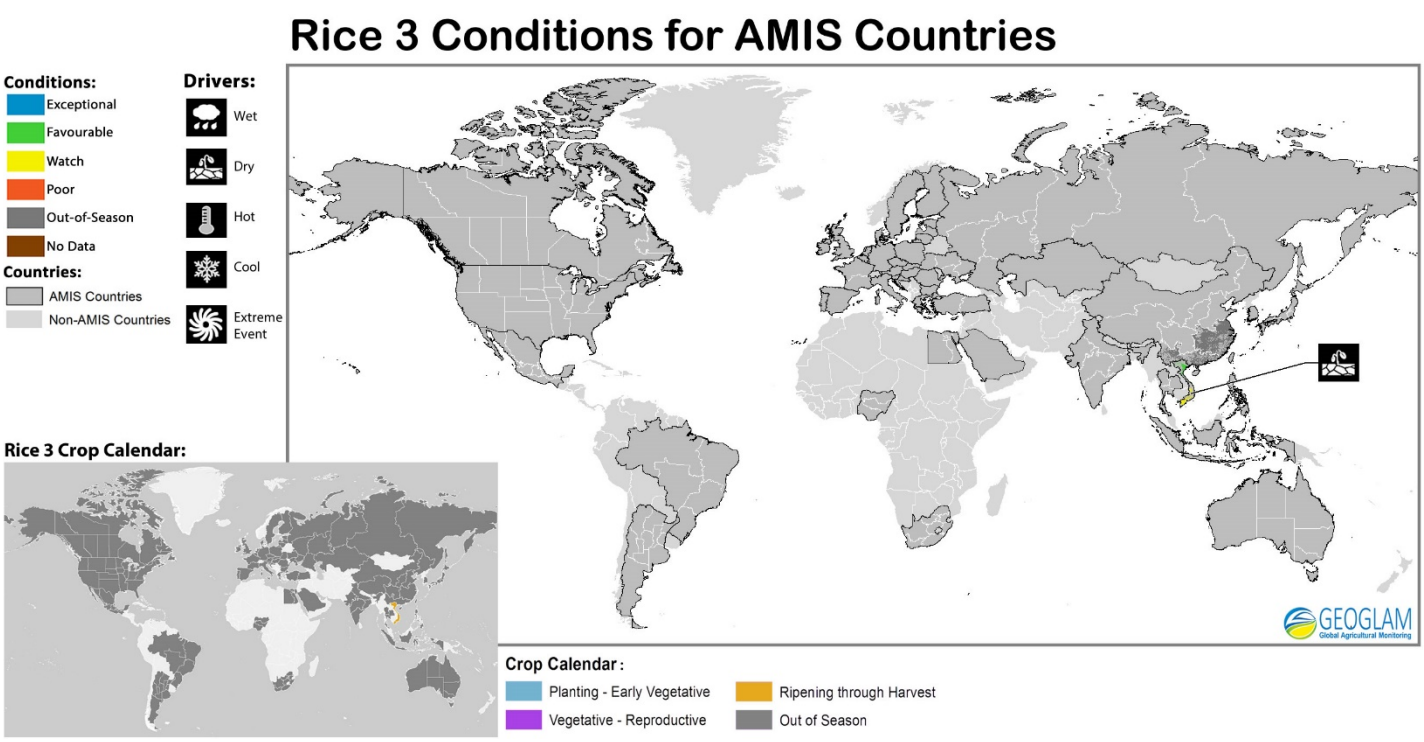
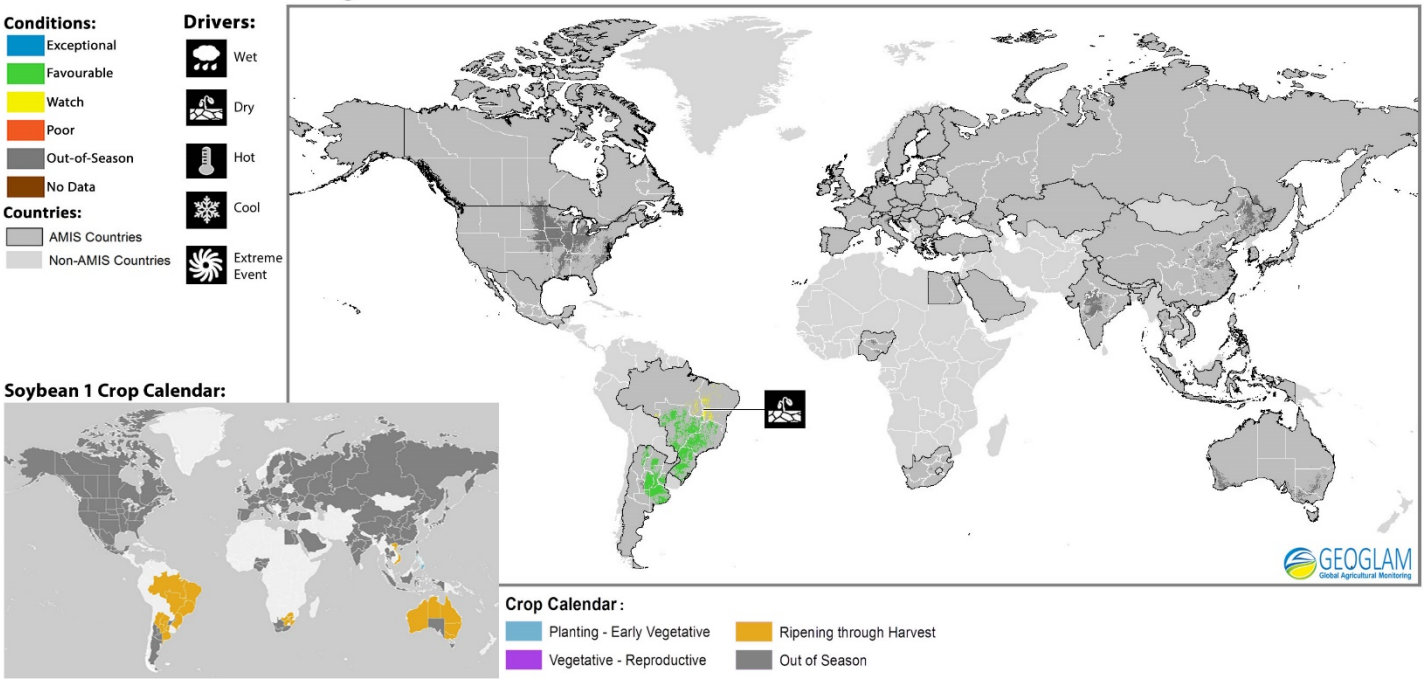


Rice 3 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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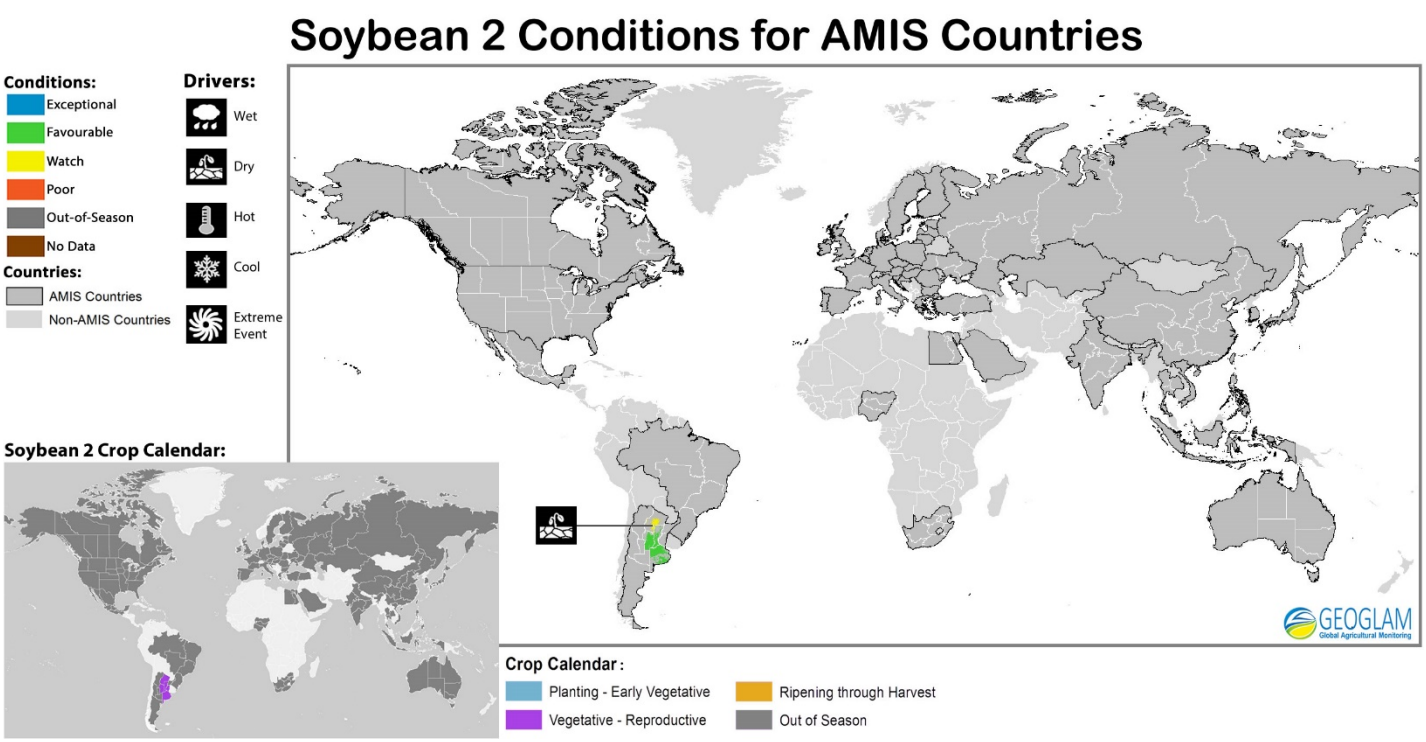
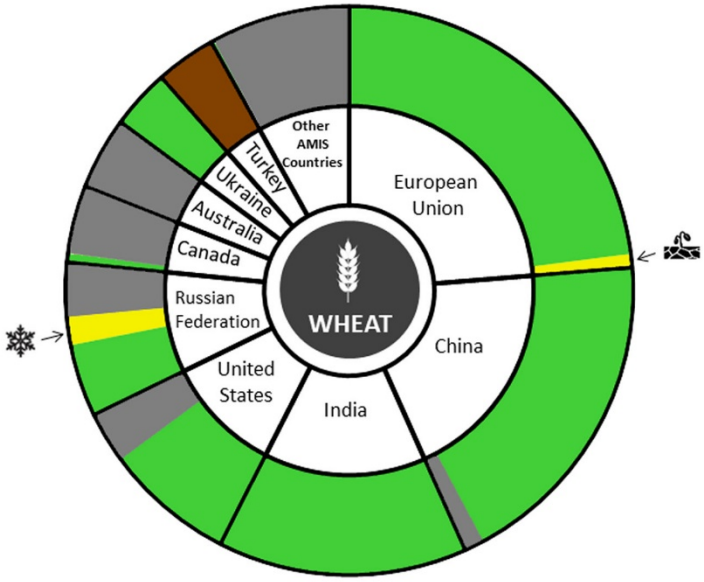


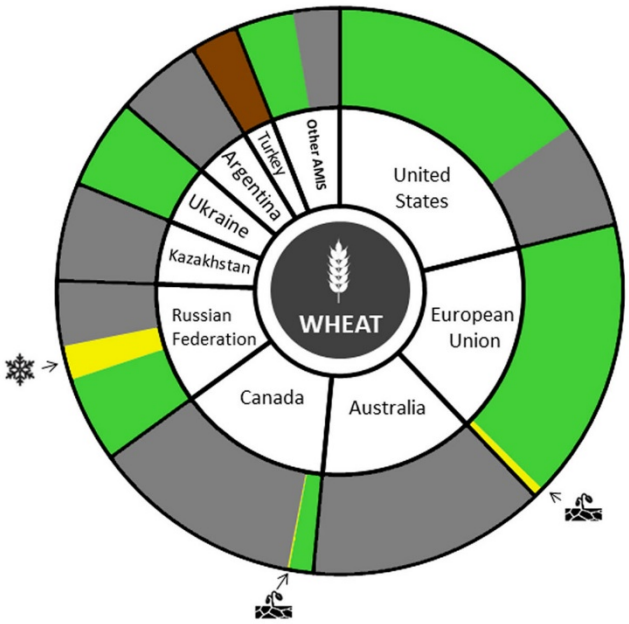
Soybean 2 crop conditions over main growing areas are based upon a combination of national and regional crop analyst inputs along with earth observation data. Condition information is based upon information as of March 28th. Where crops are in less than favourable conditions the climatic drivers responsible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

Wheat AMIS Comparisons

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



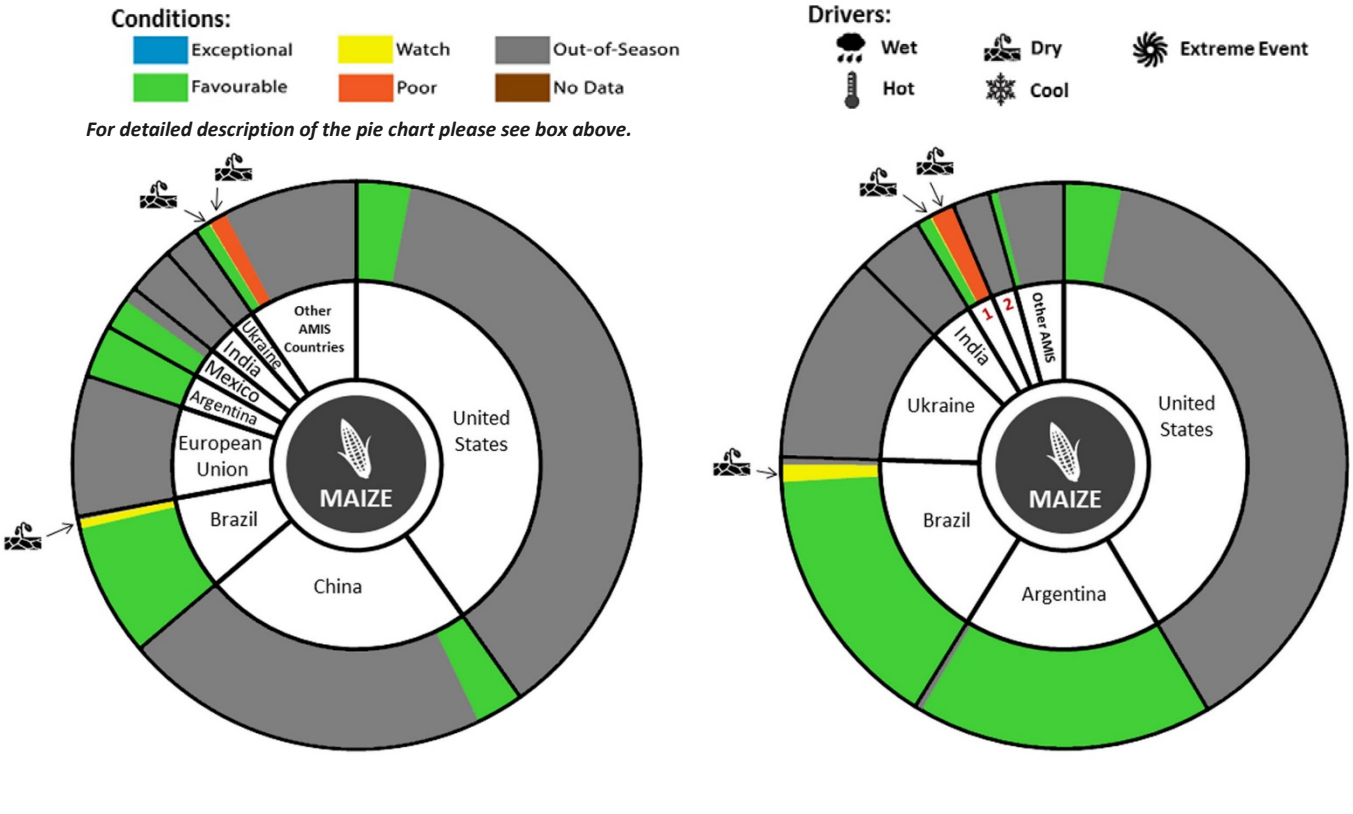
Share of total AMIS Production



Share of total AMIS Exports

* Assessment based on information as of February28th

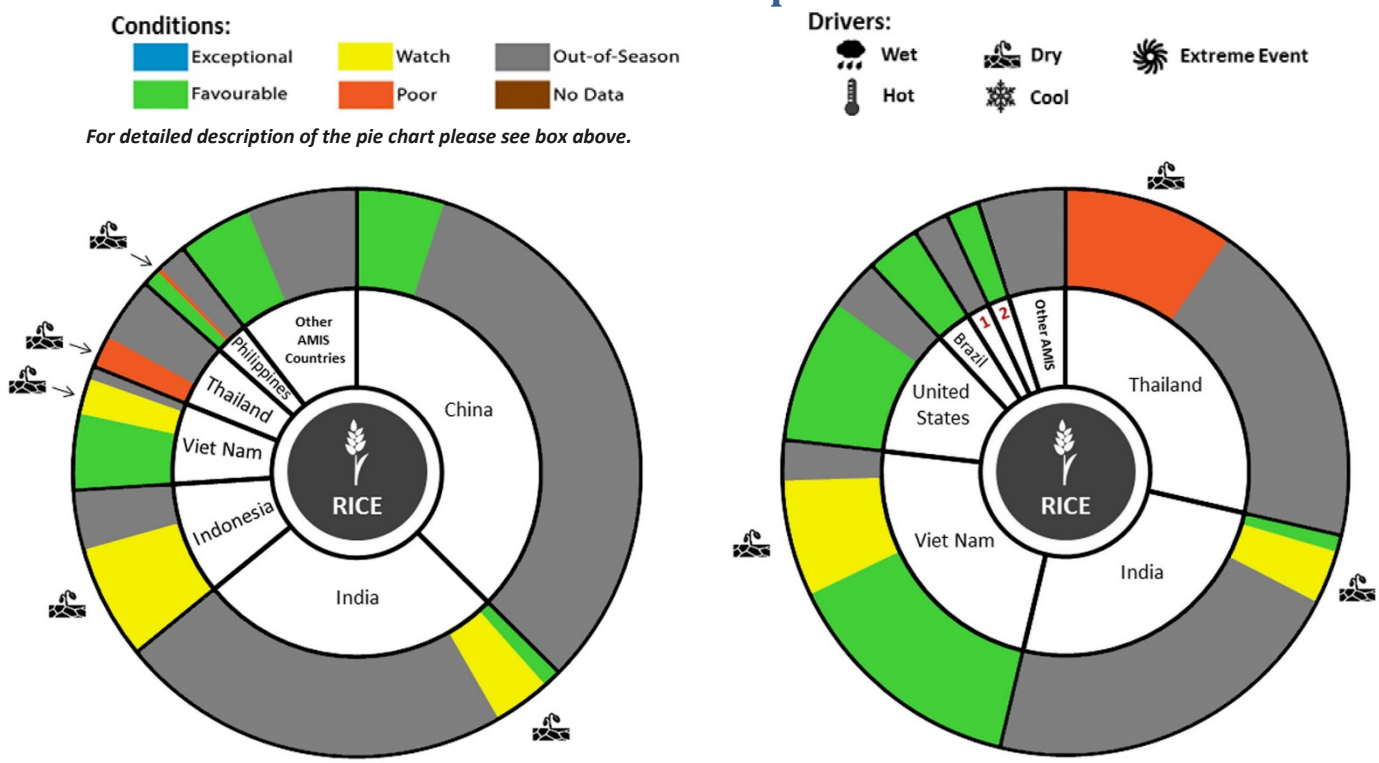
Maize AMIS Comparisons



Share of total AMIS Production

Share of total AMIS Exports

Rice AMIS Comparisons



Share of total AMIS Production

Share of total AMIS Exports

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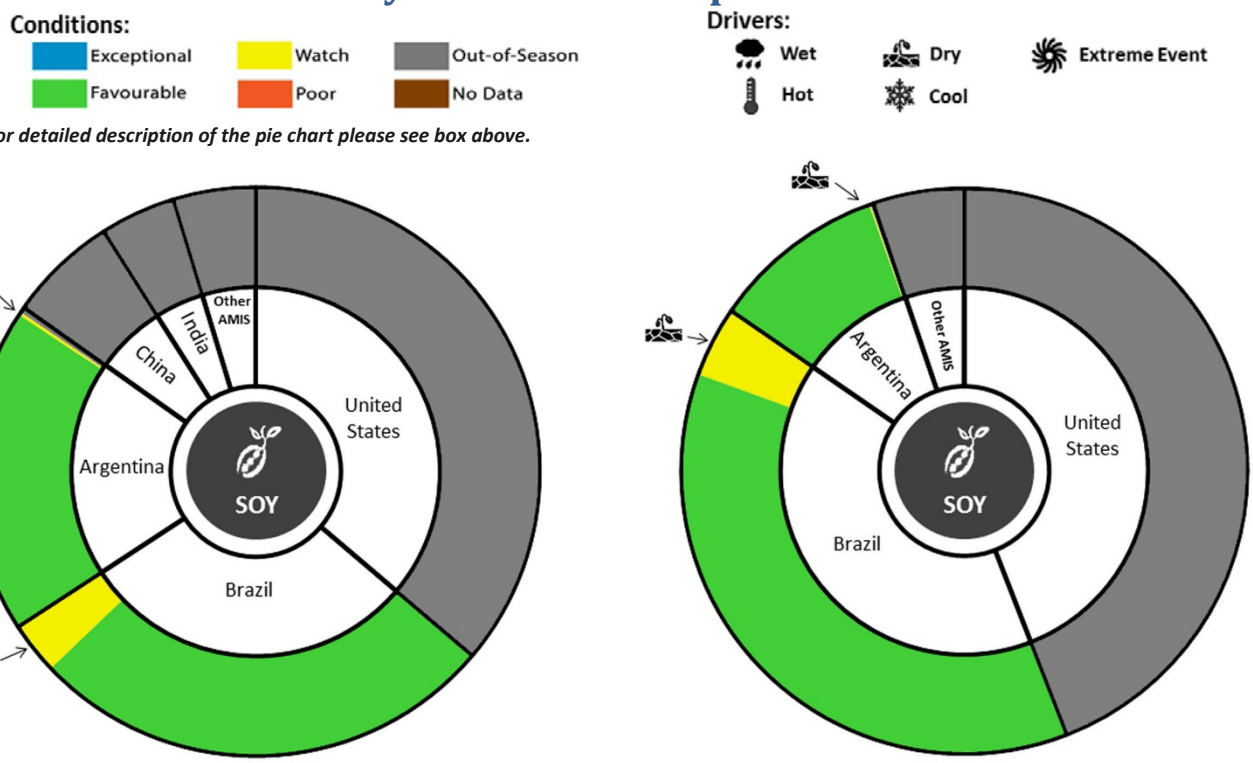
Soybean AMIS Comparisons



Share of total AMIS Production

Share of total AMIS Exports