Seasonal conditions

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Global production conditions generally favourable. Promising start to the winter growing season across south-eastern Australia.

Production conditions favourable in major crop-producing countries

Global crop production conditions are generally favourable, despite dryness across parts of the European Union, Brazil, Argentina, Ukraine and some equatorial regions.

Grains

In the southern hemisphere, conditions for wheat sowing are generally favourable for Australia and mixed for Argentina. In the northern hemisphere, conditions are mixed for wheat crop development in the European Union and Ukraine, and generally favourable for crop development and sowing in the United States, Canada and China. Conditions are favourable in the Russian Federation with the exception of southern regions, where winter wheat yields have been affected by drought conditions.

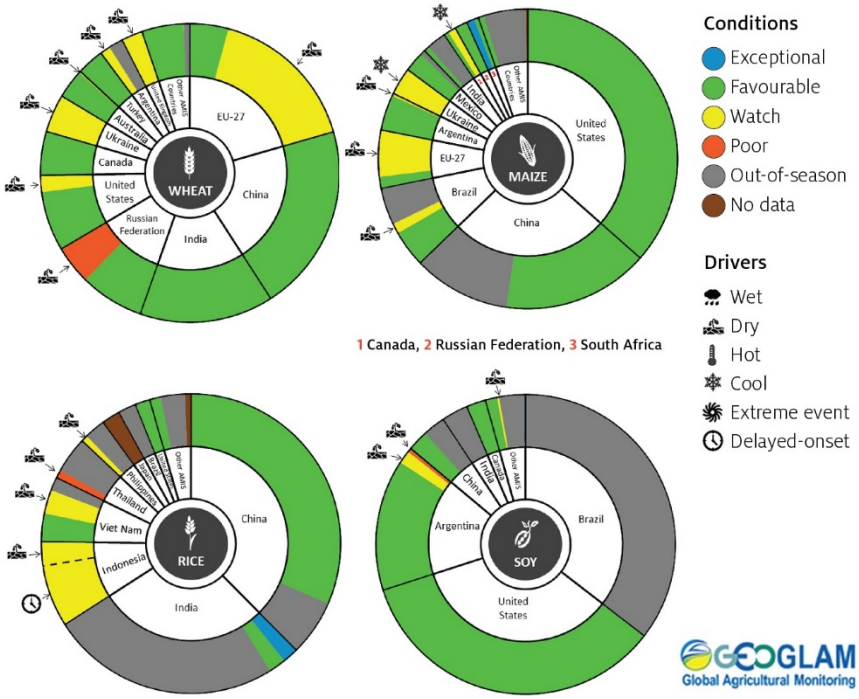
Growing conditions for maize are generally favourable for ongoing harvest in India and Mexico. Sowing conditions have been favourable for the United States, mixed for Canada and the European Union and unfavourable in Ukraine. Conditions for crop development in Brazil are mixed. Conditions are generally favourable in South Africa and exceptional in Argentina as the season ends. In Australia, total summer crop production in 2019–20 is estimated to have fallen to its lowest level in more than 30 years, driven by significant falls in grain sorghum and cotton production.

Conditions are favourable for rice development in China and for the end of harvest in India. Harvest is ongoing under mixed conditions for rice in the northern countries of South-East Asia and for wet-season rice in Indonesia. In Australia, rice production is estimated to be around 57,000 tonnes, the lowest since 2007–08, because of low water allocations and high water prices.

Oilseeds

Growing conditions for soybeans are favourable for ongoing harvest in Argentina. Conditions are generally favourable for sowing in the United States, Canada and China. Conditions are mixed in Ukraine due to low soil moisture in the south and low air temperatures elsewhere. In Australia, planting conditions have been favourable for canola (rapeseed), with production expected to return to close to the 10-year average to 2019–20.

Crop conditions, AMIS countries, 28 May 2020



Source: AMIS Agricultural Market Information System

Rainfall has been variable, but expected to be at least average between June and August 2020

Crop production is highly sensitive to climate. It is affected by long-term trends in average rainfall and temperature, inter-annual climate variability, shocks during specific phenological stages, and extreme weather events (IPCC 2012). Some crops are more tolerant than others to certain types of stresses. At each phenological stage, different types of stresses affect each crop species in different ways.

The rainfall anomalies and outlooks presented here give an indication of the current and future state of production conditions for major grain- and oilseed-producing countries. These countries are responsible for over 80% of global production. This data can be used to assess the global grain supply outlook.

Rainfall anomalies

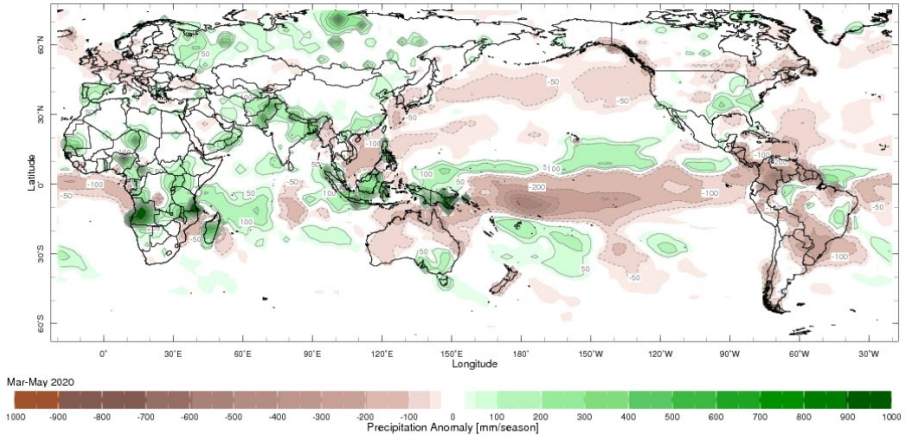
Rainfall during March to May tends to affect development and yield prospects of summer crops and starting soil moisture conditions for winter crops across the southern hemisphere. In the northern hemisphere, March to May rainfall affects the development and yield prospects of winter crops, especially wheat. It also influences farmers' planting intentions and opportunities with regard to spring wheat and rapeseed crops, as well as summer crops such as corn, cotton, rice, sunflowers and grain sorghum.

Rainfall over the 3 months to 31 May 2020 was variable for the world's major grain- and oilseed-producing regions. In the northern hemisphere, March to May 2020 rainfall totals were generally below the 1979 to 2000 average across parts of the European Union and Ukraine, and in parts of the western plains of the United States. In contrast, rainfall totals were above average across the south-west of the United States, parts of western Russia, India and west Asia. Dryness during May reduced soil moisture for winter grains and oilseeds across many key growing areas surrounding the Black Sea, and across the European Union and the United Kingdom.

In the southern hemisphere, March to May 2020 rainfall totals were generally below the 1979 to 2000 average in southern Brazil and Central America. In contrast, rainfall totals were above average across parts of south-eastern Australia. Persistent dryness has limited the

yield potential of second-crop corn in southern Brazil, but conditions were favourable in key production areas farther north. In Argentina, a dry May has adversely affected winter grain establishment in most major production areas and the reproductive development of soybeans. For Australia, this has resulted in a rapid increase in soil moisture levels allowing for timely planting of wheat, barley and canola (rapeseed). Rain arrived too late to benefit grain sorghum.

World precipitation anomalies, March to May 2020



Note: World 3-month seasonal precipitation anomalies are in units of mm/season, based on precipitation estimates from the NOAA Climate Prediction Center's Climate Anomaly Monitoring System Outgoing Precipitation Index dataset. Precipitation estimates for March to May 2020 are compared with rainfall recorded for that period during the 1979 to 2000 base period.
Source: International Research Institute for Climate and Society

Global climate outlook

The global climate outlook indicates that average to above average rainfall is more likely between June and August 2020 for most of the world's major grain- and oilseed-producing regions. If realised, this is likely to benefit spring wheat and canola (rapeseed), cotton, rice, corn, grain sorghum, soybean, sunflower and millet production in the northern hemisphere, and winter wheat and canola (rapeseed) production in most southern hemisphere growing regions.

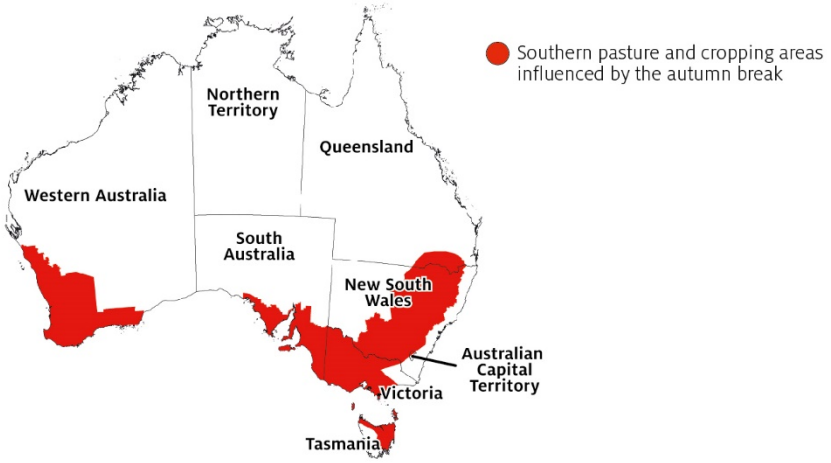
For country-by-country assessments of the climate outlook and potential impact on production conditions, see ABARES Weekly Australian climate, water and agricultural update–21 May 2020.

Climate outlook for Australia

Early autumn break delivers timely rainfall across south-eastern Australia

In southern Australia, the timing of the autumn break is an important ingredient for a successful pasture and crop production season. The autumn break is the first significant rainfall of the winter growing season and provides enough moisture to initiate crop and pasture germination and support early plant growth. The break generally applies to southern pasture and cropping areas mainly in New South Wales, Victoria, South Australia, Western Australia and Tasmania—and occasionally parts of southern Queensland.

Areas likely to be influenced by the autumn break rainfall, Australia



An early autumn break can increase the length of the growing season, potentially improving production and yield. However, there is a greater risk of a dry periods and low soil moisture following an early or 'false' break. This can cause plants to die after germination, reducing the remaining seed bank for the winter growing season and lowering potential production.

Autumn 2020 started with average to above average rainfall across Australia's cropping regions. The autumn break occurred in March for most eastern winter cropping regions. Generally, this occurs when at least 25 millimetres of rainfall is recorded within any 3-day period from 1 March.

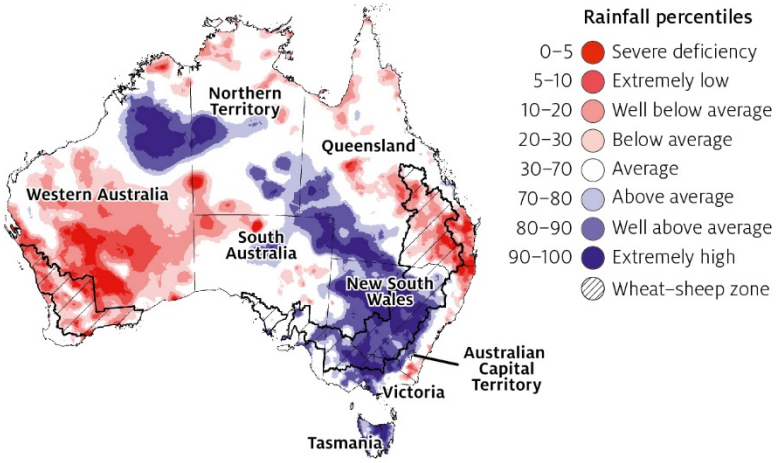
Typically, the autumn break is driven by westerly fronts moving across southern Australia and cut-off low pressure systems. This year an uncharacteristic early autumn break in south-eastern Australia was driven by incursions of moist tropical air from northern Australia, resulting in substantial rainfall. The early autumn break across cropping regions in much of New South Wales and Victoria was consolidated by falls in early April, supporting the early plant growth that had been initiated. Cropping regions in South Australia also received rainfall in early April that was followed by significant falls at the end of the month. This increased producer confidence for widespread winter crop planting.

In contrast, average rainfall was recorded across cropping regions in Western Australia and Queensland in March, followed by below average rainfall in April and patchy rainfall in May. Parts of the southern cropping region of Western Australia received sufficient rains to start the season, but most of these areas will rely on winter rainfall to initiate germination and support crop growth.

Rainfall in May 2020 was above average across much of northern Australia and below average across much of southern Australia. Above average to well above average rainfall was recorded across much of northern Queensland, northern Western Australia and the inner north of the northern Territory. In contrast, well below average to below average rainfall was recorded across parts of western New South Wales, southern Queensland, northern Victoria, eastern Tasmania, the south of the Northern Territory and much of South Australia and southern Western Australia.

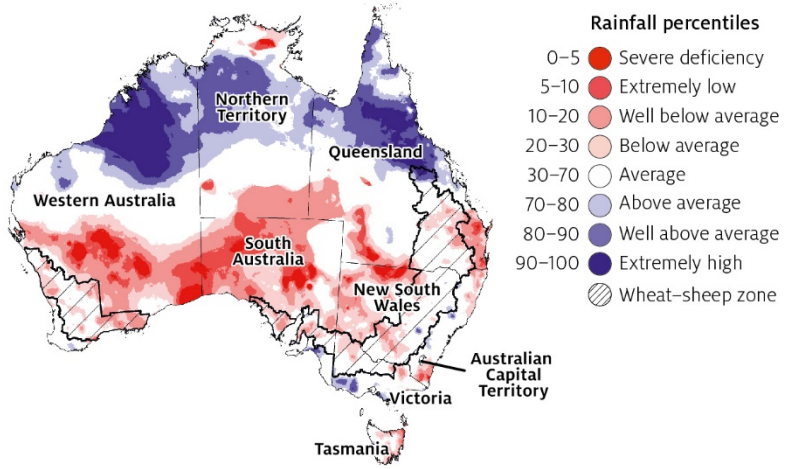
Rainfall for May 2020 in winter cropping regions was below average to average across most cropping regions.

Rainfall percentiles, Australia, 1 March to 31 May 2020



Note: Rainfall for March to May 2020 relative to the long-term record and ranked in percentiles. This analysis ranks rainfall for the selected period compared with the historical average (1900 to present) recorded for that period.
Source: Bureau of Meteorology

Rainfall percentiles, Australia, May 2020



Note: Rainfall for May 2020 relative to the long-term record and ranked in percentiles. This analysis ranks rainfall for the selected period compared with the historical average (1900 to present) recorded for that period.
Source: Bureau of Meteorology

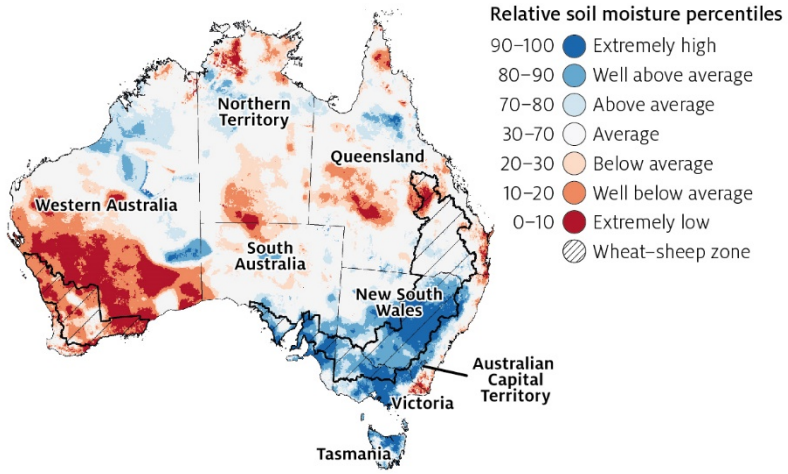
Autumn rainfall leads to above average soil moisture in south-eastern Australia

Autumn rainfall improved soil moisture across south-eastern Australia. This follows a summer of mixed rainfall and well above average temperatures. Root zone soil moisture was above average across much of Australia during March and variable in April and May.

In May 2020 soil moisture in cropping regions was below average across Western Australia and northern Queensland, and average across the remainder of Queensland. In contrast, soil moisture was above average to well above average across New South Wales, Victoria and South Australia. Lower layer soil moisture in Queensland has been average to above average, but autumn rainfall totals have been low.

Significant rainfall is needed to replenish the profile to initiate germination and encourage further planting.

Modelled root zone soil moisture, Australia, May 2020



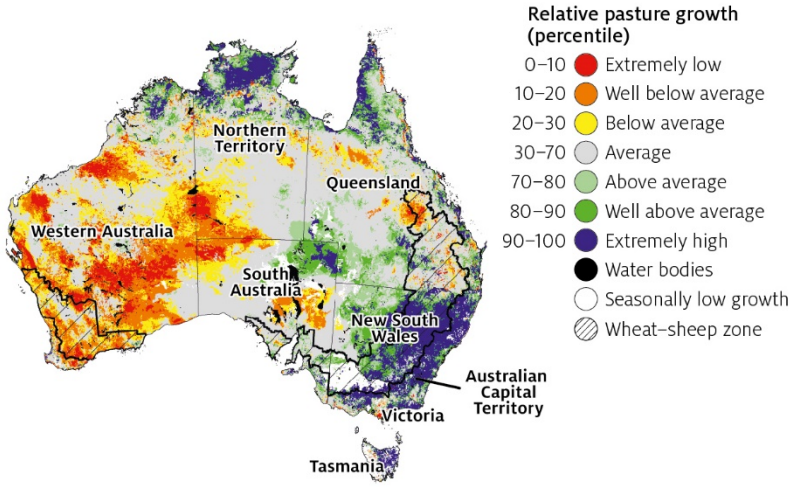
Note: Soil moisture estimates are relative to the long-term record and ranked in percentiles. Estimates are used to compare root zone soil moisture during May 2020 and ranked by percentiles for each May in the 1911 to 2016 historical reference period. Root zone soil moisture is defined as the soil surface to 1 metre in depth.
Source: Bureau of Meteorology

Pasture growth above average for some key livestock production regions

Pasture growth during the first 3 months of the northern wet season was limited due to drier and warmer than average conditions. However, increased rainfall and continued warm temperatures have benefited pasture growth during the second half of the northern wet season (February to April 2020). For the 3 months to April 2020, modelled pasture growth was well above average to extremely high across parts of the north of the Northern Territory, northern Western Australia and northern Queensland.

Above average autumn rainfall in parts of south-eastern Australia has contributed to above average pasture growth. Modelled pasture growth for the 3 months to May 2020 was well above average to extremely high across eastern Tasmania and much of New South Wales and southern Victoria.

Relative pasture growth, Australia, 1 March to 31 May 2020



Note: AussieGRASS pasture growth estimates are relative to the long-term record and shown in percentiles. Percentiles rank data on a scale of zero to 100. This analysis ranks pasture growth for the selected period against average pasture growth for the long-term record (1957 to 2016). Pasture growth is modelled at 5km2 grid cells.
Source: Queensland Department of Science, Information Technology and Innovation

Sufficient rainfall likely for most winter cropping regions

Both the El Niño–Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD) are currently neutral. However, all models surveyed by the

Bureau of Meteorology suggest the possibility of a negative IOD developing in the Indian Ocean from mid-winter. A negative IOD typically brings above average winter to spring rainfall to southern Australia. All models show that a negative IOD is more likely than not, but individual models show a broad spread of likely scenarios covering both the neutral IOD and negative IOD range.

Some model outlooks also suggest a La Niña-like state in the tropical Pacific Ocean is possible later in the southern hemisphere spring. La Niña is normally associated with higher than average rainfall during winter, spring and early summer over much of Australia. Typically, La Niña events tend to begin in autumn, mature during winter, spring and early summer, and then begin to decay in late summer. Given that the greatest impact normally occurs during the winter, spring and early summer periods, a late forming La Niña is likely to have little influence on climatic conditions during the current winter growing season in southern Australia.

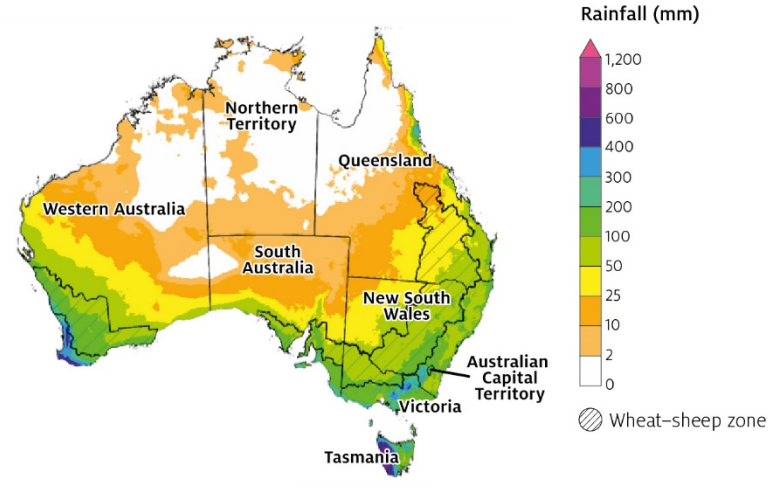
With the major climate drivers—ENSO and IOD—currently neutral, secondary drivers such as high pressure systems and a positive Southern Annular Mode (SAM) are expected to be the main climate influences during early winter. In winter, a positive SAM typically means less rainfall for south-west Western Australia, southern Victoria and Tasmania.

The Bureau of Meteorology's climate outlook for June to August 2020 (released on 4 June 2020) suggests roughly equal chances of wetter or drier than average winter rainfall for much of Australia. It is likely rainfall will not be evenly distributed over winter. Lower than average rainfall is more likely during June in most cropping regions, with more favourable conditions expected for the remainder of winter.

The bureau's forecast indicates a 75% chance of receiving between 50 and 100 millimetres of rainfall in most Australian cropping regions between June and August 2020. The forecast indicates a 75% chance of between 100 and 200 millimetres in most cropping regions in Western Australia and southern cropping regions in New South Wales, Victoria and South Australia. These rainfall totals are likely to be enough to sustain crops through to spring in regions where crops were in a good position at the start of winter.

The forecast indicates that northern and western cropping regions in Queensland have a 75% chance of receiving rainfall of between 10 and 50 millimetres. In areas with low soil moisture at the start of winter, these expected low 3-month rainfall totals are unlikely to be sufficient to sustain crop production.

Rainfall totals with a 75% chance of occurring, Australia, June to August 2020



Source: Bureau of Meteorology

References

IPCC 2019, Managing the risks of extreme events and disasters to advance climate change adaptation, Intergovernmental Panel on Climate Change, Cambridge University Press, United Kingdom.