Seasonal conditions

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Australian conditions mixed with drought in the east and good rainfall in the south and west. Global conditions generally favourable.

Climatic conditions in major crop-producing countries

At 28 August 2019 global production conditions were generally favourable.

Grains

Conditions for wheat development are generally favourable in Argentina. Conditions in Australia are mixed due to severe rainfall deficiencies across New South Wales and Queensland. In the northern hemisphere, winter and spring wheat harvesting is continuing under generally favourable conditions.

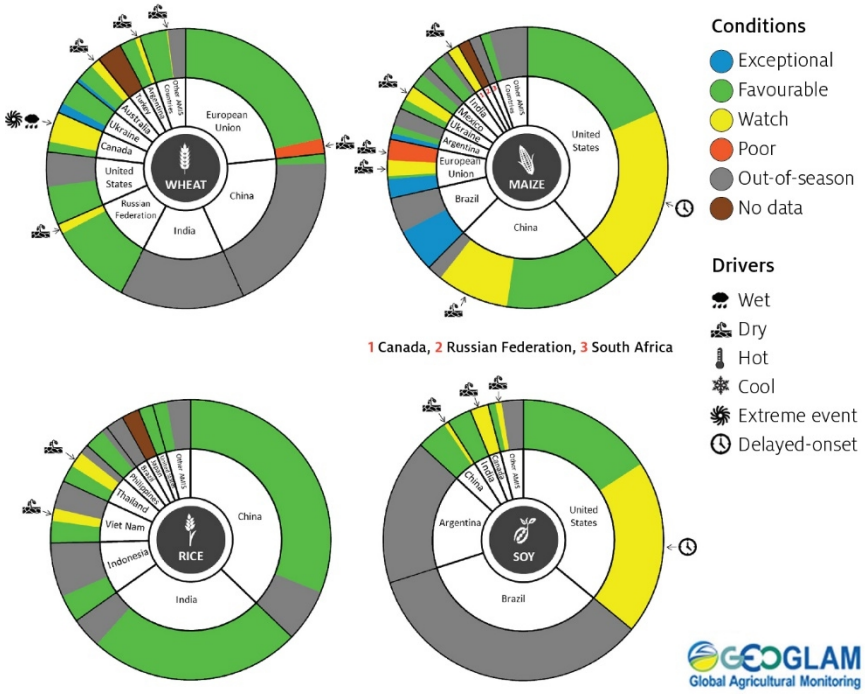
Growing conditions for maize are generally favourable in Brazil, Argentina, Mexico, China and India. Conditions are mixed in the United States, Canada, the European Union and Ukraine.

Growing conditions for rice are favourable in China, India, Indonesia, the Philippines, Japan and the United States. Wet-season rice conditions in Vietnam and Thailand are mixed due to below average rainfall.

Oilseeds

Growing conditions for soybeans are generally favourable in China, India and Ukraine. Conditions in the United States and Canada are under watch due to delayed sowing. Final yields will depend on conditions during the remainder of the growing season.

Crop conditions, AMIS countries, 28 August 2019



AMIS Agricultural Market Information System.
Source: AMIS

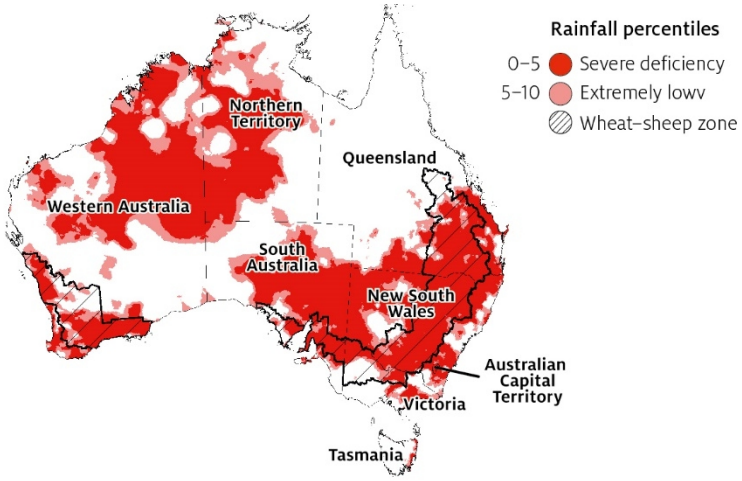
Climate outlook for Australia

Dryness persists across much of Australia

From March 2018 to August 2019, much of south-eastern, and large areas of western and northern Australia recorded rainfall totals in the lowest 5 to 10 per cent of the historical record (severe deficient to extremely low rainfall). Much of northern inland New South Wales has been particularly dry with large areas having record low rainfall.

While large areas of south-western Western Australia recorded aggregate 18-month rainfall totals in the lowest 10 per cent of the historical record, timely rainfall during the peak growing season (April to October) has been sufficient to support average to above average crop production during 2018-19 and 2019-20.

Rainfall deficiencies, Australia, 1 March 2018 to 31 August 2019



Note: Rainfall for March 2018 to August 2019 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

Below average rainfall reduces crop prospects

The NSW wheat–sheep zone is on track to record decile 1 growing season (April to October) rainfall for 2 consecutive years for the first time since 1940 and 1941, and for only the second time in the last 118 years.

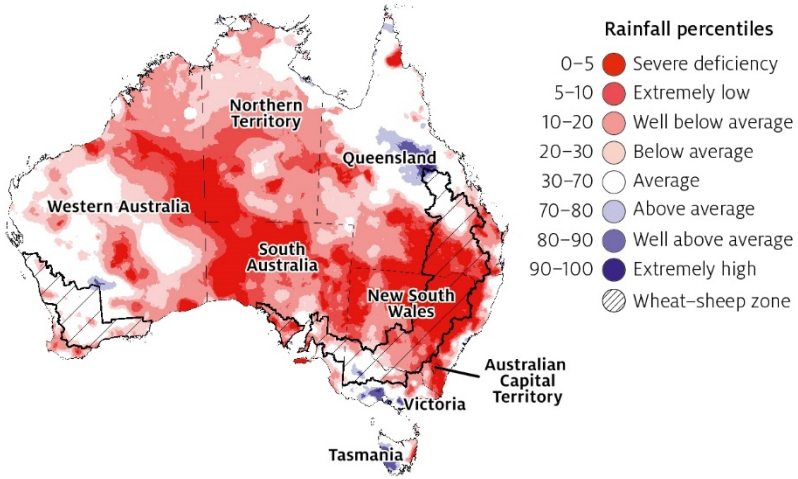
Winter rainfall was below average across large areas of Australia. Rainfall in June 2019 was variable across the country. Rainfall was particularly low across parts of south-eastern and central Australia. Cropping regions in Western Australia, South Australia and northern Queensland had an improved start to winter compared with 2018. Rainfall in these regions was average to well above average in June 2019. These falls enabled farmers to complete planting programs, supported crop and pasture growth and improved soil moisture levels.

In contrast, July 2019 was dry across much of Australia. Below average rainfall was recorded across cropping regions in New South Wales, southern Queensland, Western Australia and South Australia. Average July 2019 rainfall was recorded across cropping regions in southern New South Wales, Victoria and northern Queensland. This average rainfall and above average temperatures benefited crop and pasture growth in these regions. Elsewhere, stored soil moisture from June rainfall was sufficient to support continued crop development across much of Western Australia and South Australia.

Conditions in August 2019 were dry across much of south-eastern and central Australia. Severely deficient to well below average rainfall was recorded across New South Wales, southern Queensland, parts of the west of Western Australia, much of South Australia, northern Tasmania and the south of the Northern Territory.

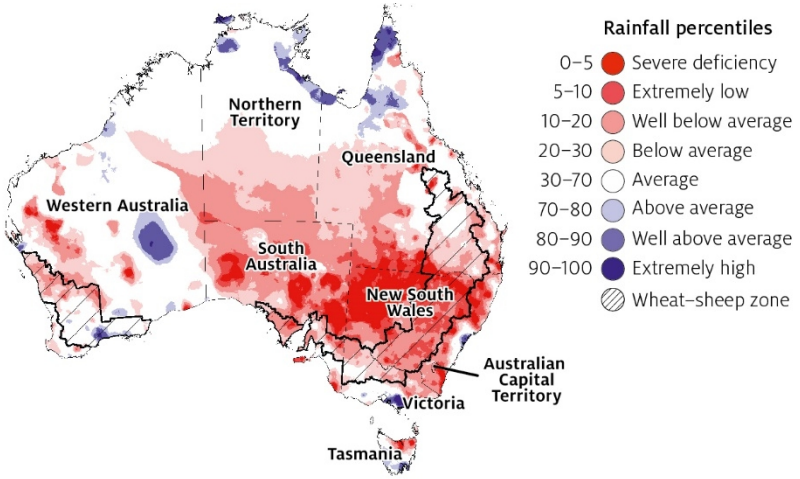
Rainfall for August 2019 in winter cropping regions was average in parts of Victoria, northern Queensland and southern Western Australia. Rainfall was below average or lower across cropping regions in New South Wales, northern and eastern Victoria, southern Queensland, much of South Australia and northern Western Australia.

Rainfall percentiles, Australia, 1 June 2019 to 31 August 2019



Note: Rainfall for June to August 2019 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, August 2019



Note: Rainfall for August 2019 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

Soil moisture declined significantly through winter

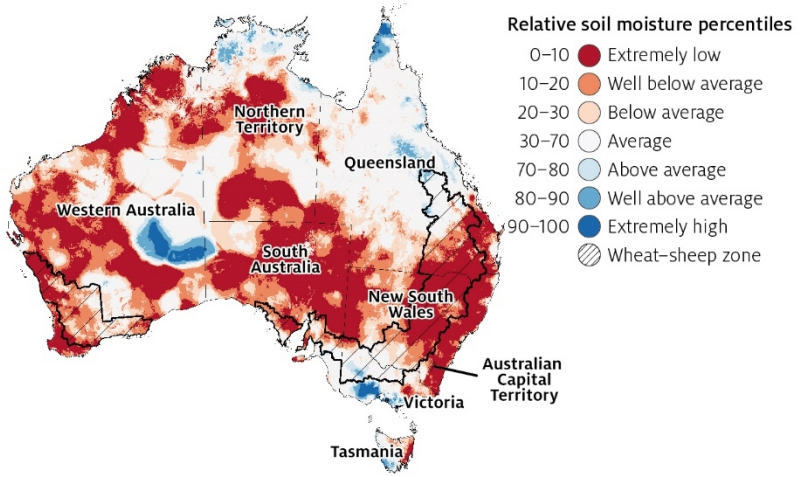
Variable rainfall and above average temperatures during winter resulted in decreased soil moisture levels across Australia. Root zone soil moisture was below average to average across Australia during June, followed by well below average soil moisture in July and August.

In August 2019 soil moisture in cropping regions was extremely low to well below average in much of New South Wales, southern Queensland, western South Australia and northern Western Australia. For cropping regions in Victoria, northern Queensland and parts of eastern South Australia soil moisture was average to above average.

The low levels of soil moisture mean early spring rainfall will be critical for grain development in regions that had viable crops at the

start of spring. Similarly, the planting of summer crops in these regions will require spring rainfall for crop germination and establishment.

Modelled root zone soil moisture, Australia, August 2019



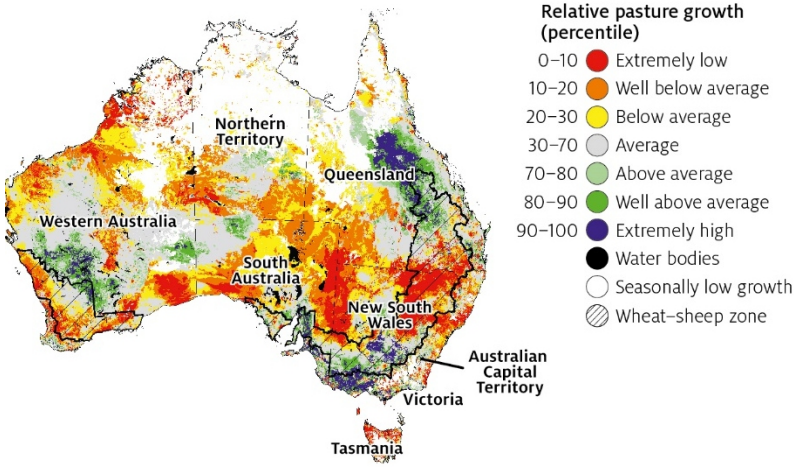
Note: Soil moisture estimates are relative to the long-term record and ranked in percentiles. Estimates are used to compare root zone soil moisture during August 2019 and ranked by percentiles for each August in the 1911–2015 historical reference period. Root zone soil moisture is defined as, 0 to 1 metre in depth.
Source: Bureau of Meteorology

Pasture growth below average for some livestock production regions

Below average winter rainfall and low soil moisture limited pasture production across large areas of southern, western and central Australia. For the 3 months to August 2019, modelled pasture growth was extremely low to well below average across large areas of New South Wales and South Australia, parts of southern Queensland, the south of the Northern Territory and parts of Western Australia. In contrast, modelled pasture growth was well above average to extremely high across parts of south-western Victoria, southern New South Wales, north-eastern Queensland, inland southern Western Australia and south-eastern South Australia.

Modelled pasture growth and soil moisture levels were extremely low over winter across much of New South Wales, southern Queensland and South Australia. As a result, livestock producers in these regions will be heavily reliant on spring rainfall and supplementary feed to maintain current stock numbers. In contrast, above average pasture production across much of Victoria, southern South Australia and north-eastern Queensland is likely to enable farmers to rebuild stock numbers and provide opportunities to replenish fodder supplies.

Relative pasture growth, Australia, 1 June 2019 to 31 August 2019



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 5km^2 grid cells.
Source: Queensland Department of Science, Information Technology and Innovation

Sufficient rainfall likely for some winter cropping regions

The El Niño-Southern Oscillation is expected to remain neutral for the remainder of 2019. A positive Indian Ocean Dipole (IOD) is underway. Most climate models suggest it will remain the dominant driver of climatic conditions in Australia during spring. A positive IOD typically brings below average spring rainfall to southern and central Australia, and warmer days for southern Australia.

A prolonged negative Southern Annular Mode (SAM) event is also forecast to develop in spring due to a predicted sudden stratospheric warming event. This negative SAM is likely to intensify dry and warm conditions across eastern Australia during spring.

The Bureau of Meteorology's climate outlook for October to December 2019 (released 5 September 2019) indicates that a drier than average spring is likely across most of the country. Across parts of the north and west of Western Australia and Tasmania, there is no strong shift towards a wetter or drier than average 3 months.

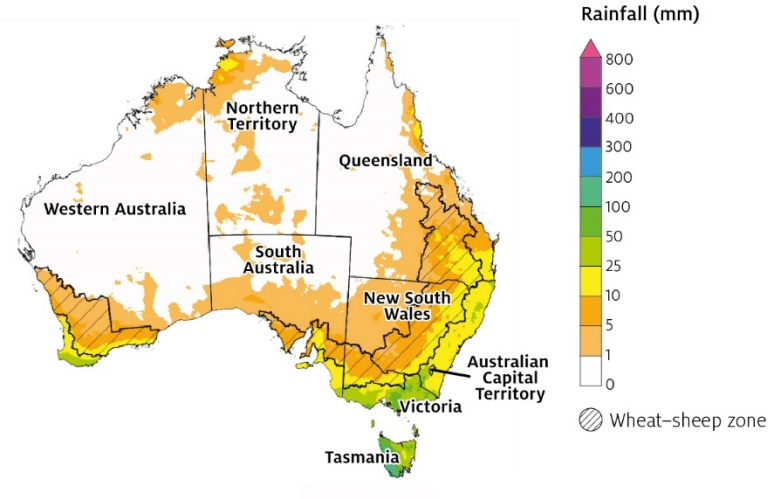
The Bureau of Meteorology's climate outlook suggests drier than average rainfall across large areas of Australia. In areas where soil moisture is close to average to above average for this time of year, there is still a significant chance of recording rainfall totals sufficient to sustain crop and pasture production through spring.

In October 2019 cropping regions in eastern New South Wales, southern Victoria, south-eastern Queensland, far southern Western Australia and central South Australia have a 75% chance of receiving rainfall of between 10 and 25mm.

Between October and December 2019 cropping regions in eastern New South Wales and much of Queensland have a 75% chance of receiving rainfall of between 50 and 100mm. Smaller areas may receive up to 200mm. Cropping regions in western New South Wales, much of Victoria, far northern and south-western Queensland, southern Western Australia and eastern South Australia are also likely to receive rainfall of between 25 and 50mm. Cropping regions in northern Western Australia and western South Australia also have a 75% chance of receiving between 10 and 25mm.

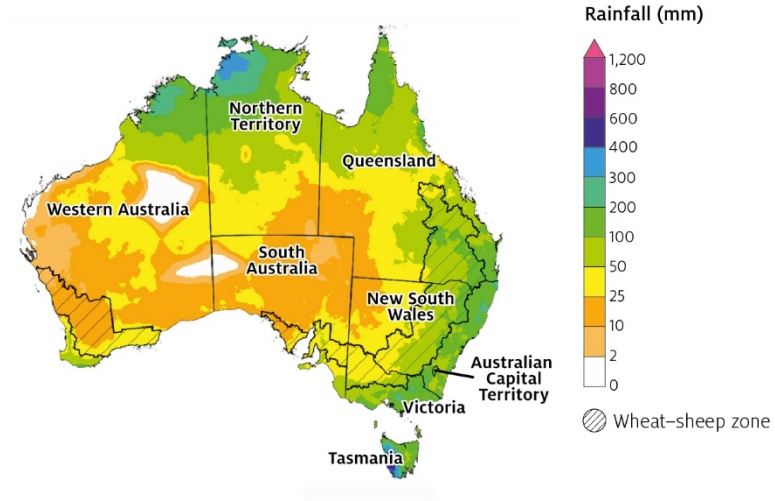
Prospects are poor for areas with low soil moisture for this time of year. For these regions, the forecast low 3-month rainfall totals are unlikely to be sufficient to sustain current levels of crop and pasture production, particularly as temperatures and evapotranspiration begin to increase in spring.

Rainfall totals with a 75% chance of occurring, Australia, October 2019



Source: Bureau of Meteorology

Rainfall totals with a 75% chance of occurring, Australia, October to December 2019



Source: Bureau of Meteorology