Summary of key issues

- During the week ending 14 August 2019 rainfall was mainly restricted to the far south of Australia. Little to no rainfall was recorded across the rest of the continent.
- Rainfall of between 10 to 50 millimetres was recorded across winter cropping regions in the far south-east of New South Wales, much of Victoria, and parts of southern Western Australia and South Australia.
- Current and forecast Indian Ocean temperatures indicate that a positive Indian Ocean Dipole (IOD) is expected to be the dominant driver of climatic conditions in Australia for the remainder of winter and spring. A positive IOD at this time of year typically brings drier conditions to much of southern and central Australia.
- The rainfall outlook for September to November 2019 indicates that a drier than average three months is more likely across New South Wales, Victoria, Queensland, the Northern Territory, South Australia and large areas of Western Australia.
- In many areas where soil moisture is 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 the 2019 spring, despite chances of exceeding median rainfall being quite low.
- However, in areas with low stored soil moisture for this time of year, forecast 3-month rainfall totals are unlikely to be sufficient to sustain current levels of crop and pasture production, particularly as temperatures begin to increase in spring and evapotranspiration increases.
- Over the next eight days, a series of low-pressure systems and cold fronts are expected to produce rainfall, strong winds and possible thunderstorms over southern Australia.
- Across Australia’s winter cropping regions, the 8-day rainfall forecast indicates that falls of between 10 and 25 millimetres are expected across the far south-east of New South Wales, southern Victoria, southern Western Australia and parts of South Australia. Lighter falls of between 1 and 10 millimetres are forecast across the remainder of southern New South Wales, Victoria, South Australia and Western Australia.
- Water storage levels in the Murray-Darling Basin (MDB) increased between 6 August and 14 August 2019 by 209 gigalitres (GL). Current volume of water held in storage is 9,889 GL which represents 39% of total capacity. This is 31% or 4,370 GL less than at the same time last year.
- Allocation prices in the southern Murray-Darling Basin increased from $610 per ML in the week ending 29 July 2019 to $622 per ML in the week ending 5 August 2019.
1. Climate

1.1. Rainfall this week

During the week ending 14 August 2019 rainfall was mainly restricted to the far south of Australia. Little to no rainfall was recorded across the rest of the continent.

Rainfall of between 10 to 50 millimetres was recorded across winter cropping regions in the far south-east of New South Wales, much of Victoria, and parts of southern Western Australia and South Australia during the week ending 14 August 2019.

Lighter rainfall between 1 to 10 millimetres was recorded across most remaining winter cropping regions in southern and central New South Wales, central and southern Western Australia and South Australia during the week ending 14 August 2019. Cropping regions in northern New South Wales, northern Western Australia and Queensland recorded little to no rainfall.

Rainfall for the week ending 14 August 2019

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Note: The rainfall analyses and associated maps utilise data contained in the Bureau of Meteorology climate database, the Australian Data Archive for Meteorology (ADAM). The analyses are initially produced automatically from real-time data with limited quality control. They are intended to provide a general overview of rainfall across Australia as quickly as possible after the observations are received. For further information go to http://www.bom.gov.au/climate/rainfall/
1.2. Temperature anomalies this week

For the week ending 13 August 2019, maximum temperatures were -2°C to -4°C below average across parts of south-eastern and central Australia, and minimum temperatures were -2°C to -4°C below average across parts of central Australia. In contrast, minimum temperatures were 2°C to 4°C above average across isolated areas of northern Australia. Average (-2°C to 2°C) minimum and maximum temperatures were recorded across the remainder of the country.

**Maximum temperature anomalies for the week ending 13 August 2019**

![Maximum temperature anomalies map](image)

**Minimum temperature anomalies for the week ending 13 August 2019**

![Minimum temperature anomalies map](image)

Note: Spatial temperature analyses are based on historical weekly temperature data provided by the Bureau of Meteorology. These temperature anomaly maps show the departure of the maximum and minimum temperatures from the average over the 1961 to 1990 reference period. For further information go to: [http://www.bom.gov.au/jsp/awap/temp/index.jsp](http://www.bom.gov.au/jsp/awap/temp/index.jsp).
1.3. National Climate Outlook

The rainfall and temperature outlooks presented here show the likelihood, represented as a percentage, of experiencing wetter or drier (and warmer or cooler) than median climatic conditions for the given outlook periods. These climate outlooks are generated by ACCESS–S (Australian Community Climate Earth-System Simulator–Seasonal). ACCESS–S is the Bureau of Meteorology’s dynamical (physics-based) weather and climate model used for monthly, seasonal and longer-lead climate outlooks.

For further information, go to http://www.bom.gov.au/climate/ahead/about/

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

The Bureau of Meteorology’s climate model indicates that Tasman Sea pressure patterns are likely to favour a reduction in onshore flow for parts of the east coast of Australia, contributing to the warmer and drier conditions forecast across New South Wales and southern Queensland.

The latest rainfall outlook released by the Bureau of Meteorology suggests that a drier than average September is likely for parts of New South Wales, much of Queensland, scattered parts of Western Australia and the north of the Northern Territory. There is no strong shift towards a wetter or drier than average September for the remainder of the country (Bureau of Meteorology ‘National Climate Outlook’, 15 August 2019).

![Chance of exceeding the median rainfall September 2019](image)
The Bureau of Meteorology’s climate outlooks are given as a probability (or chance) of exceeding a specified rainfall or temperature threshold. In the case of the Bureau’s rainfall outlook, it is represented as the chance of rainfall being above median, expressed as a percentage. While this probabilistic forecast indicates that the chance of exceeding median rainfall is quite low across large parts of Australia, it does not mean that these areas will receive no rainfall during September to November 2019.

The rainfall outlook for September to November 2019 indicates that a drier than average three months is more 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 three months (Bureau of Meteorology ‘National Climate Outlook’, 15 August 2019).

**Chance of exceeding the median rainfall September to November 2019**
In many areas where soil moisture is 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, despite chances of exceeding median rainfall being quite low.

In cropping regions, for example, there is a 75% chance of receiving between 50 and 100 millimetres across eastern New South Wales, south-eastern and central Queensland, southern Victoria, central South Australia and southern Western Australia between September and November 2019.

There is a 75% chance of receiving between 10 and 50 millimetres across remaining cropping regions in western New South Wales, northern Victoria, northern and south-western Queensland, northern Western Australia and South Australia. In areas with low stored soil moisture for this time of year, this probable 3-month rainfall is unlikely to be sufficient to sustain current levels of crop and pasture production, particularly as temperatures begin to increase in spring and evapotranspiration increases.

Rainfall totals that have a 75% chance of occurring September to November 2019

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Issued: 15/08/2019
The temperature outlook for September to November 2019 indicates that daytime temperatures are more likely to be warmer than average for much of the country, with average maximum temperatures forecast for parts of south-eastern Australia. Night-time temperatures are also likely to be warmer than average for much of western and northern Australia, with average minimum temperatures forecast for parts of northern Queensland and much of southern Australia. The forecast drier than average conditions and dry soils could bring more cloud-free nights, increasing the risk of late-season frost in susceptible areas (Bureau of Meteorology 'National Climate Outlook', 15 August 2019).

**Chance of exceeding the median maximum temperature September to November 2019**

**Chance of exceeding the median minimum temperature September to November 2019**
1.4. Rainfall forecast for the next eight days

Over the next eight days, a series of low-pressure systems and cold fronts are expected to produce rainfall, strong winds and possible thunderstorms over southern Australia. However, heavy rainfall and snow is expected to be restricted to the far east and south of Australia, with little to no rainfall forecast for most of the country.

Rainfall of between 10 and 50 millimetres is forecast for parts of southern New South Wales, southern and eastern Victoria, the far south of Western Australia, southern South Australia and much of Tasmania. Rainfall of between 50 and 150 millimetres is forecast for alpine regions of New South Wales, parts of southern Victoria and the west of Tasmania.

In cropping regions, rainfall of between 10 and 25 millimetres is expected across the far south-east of New South Wales, southern Victoria, southern Western Australia and parts of South Australia. Lighter falls of between 1 and 10 millimetres are forecast across the remainder of southern New South Wales, Victoria, South Australia and Western Australia. Little to no rainfall is expected across Queensland and remaining areas of New South Wales.

Total forecast rainfall (mm) for the period 15 August to 22 August 2019
2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) increased by 209 gigalitres (GL) between 6 August and 14 August 2019. The current volume of water held in storage is 9,889 GL, which represents 39% of total capacity. This is 31% or 4,370 GL less than at the same time last year.

![Water storages in the Murray-Darling Basin, 2013–2019](chart1)

Allocation prices in the southern Murray-Darling Basin increased from $610 per ML in the week ending 29 July 2019 to $622 per ML in the week ending 5 August 2019. Water volume traded remains low due to low seasonal demand.

![Surface water trade activity, Southern Murray–Darling Basin](chart2)

The trades shown reflect estimated market activity and do not encompass all register trades. The price line reflects value weighted average prices for the entire southern Murray-Darling Basin up until 1 July 2019. The price line after 1 July 2019 reflects recorded transaction prices in the Victorian Murray (Below the Choke). Data shown is current at 14 August 2019, and encompasses water market activity until 5 August 2019. Data is sourced from the BOM water dashboard, or Ruralco Water for price data after 1 July 2019.

### 3. Commodities

#### Selected World Indicator Prices

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Week ended</th>
<th>Unit</th>
<th>Latest price</th>
<th>Price week prior</th>
<th>Weekly change</th>
<th>Price 12 months prior</th>
<th>Year on year change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Dollar – AUD/USD Exchange Rate</td>
<td>14-Aug</td>
<td>US$/A$</td>
<td>0.68</td>
<td>0.68</td>
<td>0% ●</td>
<td>0.73</td>
<td>-7% ▼</td>
</tr>
<tr>
<td>Wheat – US no. 2 hard red winter wheat, fob Gulf</td>
<td>13-Aug</td>
<td>US$/t</td>
<td>205</td>
<td>211</td>
<td>-3% ▼</td>
<td>258</td>
<td>-21% ▼</td>
</tr>
<tr>
<td>Coarse Grains – US no. 2 yellow corn, fob Gulf</td>
<td>14-Aug</td>
<td>US$/t</td>
<td>169</td>
<td>175</td>
<td>-3% ▼</td>
<td>164</td>
<td>3% ▲</td>
</tr>
<tr>
<td>Canola – Rapeseed, Europe, fob Hamburg</td>
<td>13-Aug</td>
<td>US$/t</td>
<td>423</td>
<td>420</td>
<td>&lt;1% ▲</td>
<td>436</td>
<td>-3% ▼</td>
</tr>
<tr>
<td>Cotton – Cotlook 'A' Index</td>
<td>14-Aug</td>
<td>USc/lb</td>
<td>70.4</td>
<td>71.9</td>
<td>-2% ▼</td>
<td>95.1</td>
<td>-26% ▼</td>
</tr>
<tr>
<td>Sugar – Intercontinental Exchange, nearby futures, no.11 contract</td>
<td>07-Aug</td>
<td>Ac/kg clean</td>
<td>1,676</td>
<td>na</td>
<td>na</td>
<td>1,990</td>
<td>-16% ▼</td>
</tr>
<tr>
<td>Wool – Eastern Market Indicator</td>
<td>08-Aug</td>
<td>Ac/kg clean</td>
<td>1,760</td>
<td>na</td>
<td>na</td>
<td>2,158</td>
<td>-18% ▼</td>
</tr>
<tr>
<td>Wool – Western Market Indicator</td>
<td>09-Aug</td>
<td>Ac/kg clean</td>
<td>1,676</td>
<td>na</td>
<td>na</td>
<td>1,990</td>
<td>-16% ▼</td>
</tr>
</tbody>
</table>

#### Selected domestic crop indicator prices

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Week ended</th>
<th>Unit</th>
<th>Latest price</th>
<th>Price week prior</th>
<th>Weekly change</th>
<th>Price 12 months prior</th>
<th>Year on year change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milling Wheat – ASW1, track quote, Port Adelaide, SA</td>
<td>13-Aug</td>
<td>A$/t</td>
<td>270</td>
<td>na</td>
<td>na</td>
<td>359</td>
<td>-25% ▼</td>
</tr>
<tr>
<td>Feed Wheat – General purpose, Sydney, NSW</td>
<td>07-Aug</td>
<td>A$/t</td>
<td>345</td>
<td>350</td>
<td>-1% ▼</td>
<td>380</td>
<td>-9% ▼</td>
</tr>
<tr>
<td>Feed Barley – Sydney, NSW</td>
<td>14-Aug</td>
<td>A$/t</td>
<td>360</td>
<td>360</td>
<td>0% ●</td>
<td>360</td>
<td>0% ●</td>
</tr>
<tr>
<td>Grain Sorghum – Sydney, NSW</td>
<td>14-Aug</td>
<td>A$/t</td>
<td>325</td>
<td>325</td>
<td>0% ●</td>
<td>410</td>
<td>-21% ▼</td>
</tr>
</tbody>
</table>

#### Selected domestic livestock indicator prices

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Week ended</th>
<th>Unit</th>
<th>Latest price</th>
<th>Price week prior</th>
<th>Weekly change</th>
<th>Price 12 months prior</th>
<th>Year on year change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef – Eastern Young Cattle Indicator</td>
<td>08-Aug</td>
<td>Ac/kg cwt</td>
<td>533</td>
<td>533</td>
<td>0% ●</td>
<td>463</td>
<td>15% ▲</td>
</tr>
<tr>
<td>Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic</td>
<td>09-Aug</td>
<td>Ac/kg cwt</td>
<td>565</td>
<td>593</td>
<td>-5% ▼</td>
<td>394</td>
<td>43% ▲</td>
</tr>
<tr>
<td>Lamb – Eastern States Trade Lamb Indicator</td>
<td>08-Aug</td>
<td>Ac/kg cwt</td>
<td>851</td>
<td>876</td>
<td>-3% ▼</td>
<td>761</td>
<td>12% ▲</td>
</tr>
<tr>
<td>Pig – Eastern Seaboard (60.1–75 kg), average of buyers &amp; sellers</td>
<td>26-Jul</td>
<td>Ac/kg cwt</td>
<td>375</td>
<td>364</td>
<td>3% ▲</td>
<td>247</td>
<td>52% ▲</td>
</tr>
<tr>
<td>Goat – Eastern States (12.1–16 kg)</td>
<td>12-Aug</td>
<td>Ac/kg cwt</td>
<td>902</td>
<td>902</td>
<td>0% ●</td>
<td>560</td>
<td>61% ▲</td>
</tr>
<tr>
<td>Live cattle – Light steers ex Darwin to Indonesia</td>
<td>10-Aug</td>
<td>Ac/kg lwt</td>
<td>310</td>
<td>310</td>
<td>0% ●</td>
<td>300</td>
<td>3% ▲</td>
</tr>
<tr>
<td>Live sheep – Live wether (Muchea WA saleyard) to Middle East</td>
<td>13-May</td>
<td>$/head</td>
<td>135</td>
<td>110</td>
<td>23% ▲</td>
<td>95</td>
<td>42% ▲</td>
</tr>
</tbody>
</table>
### Global Dairy Trade (GDT) weighted average prices *

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Week ended</th>
<th>Unit</th>
<th>Latest price</th>
<th>Price week prior</th>
<th>Weekly change</th>
<th>Price 12 months prior</th>
<th>Year on year change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy – Whole milk powder</td>
<td>06-Aug</td>
<td>US$/t</td>
<td>3,039</td>
<td>3,074</td>
<td>-1%</td>
<td>2,958</td>
<td>3% ↑</td>
</tr>
<tr>
<td>Dairy – Skim milk powder</td>
<td>06-Aug</td>
<td>US$/t</td>
<td>2,482</td>
<td>2,505</td>
<td>&lt;1%</td>
<td>1,972</td>
<td>26% ↑</td>
</tr>
<tr>
<td>Dairy – Cheddar cheese</td>
<td>06-Aug</td>
<td>US$/t</td>
<td>3,838</td>
<td>3,869</td>
<td>&lt;1%</td>
<td>3,663</td>
<td>5% ↑</td>
</tr>
<tr>
<td>Dairy – Anhydrous milk fat</td>
<td>06-Aug</td>
<td>US$/t</td>
<td>5,246</td>
<td>5,523</td>
<td>-5%</td>
<td>5,709</td>
<td>-8% ↓</td>
</tr>
</tbody>
</table>

* Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.
3.1. Selected world indicator prices

- **World wheat indicator price**
  - US No. 2, hard red winter wheat, fob Gulf
  - Week ended 13 August 2019

- **World coarse grains indicator price**
  - US corn No. 2, fob Gulf
  - Week ended 14 August 2019

- **World canola indicator price**
  - Europe fob Hamburg
  - Week ended 13 August 2019

- **World cotton indicator price**
  - Cotlook 'A' index
  - Week ended 14 August 2019
3.2. Global Dairy Trade (GDT) weighted average prices

Whole milk powder price
6 August 2019

Skim milk powder price
6 August 2019

Cheddar cheese price
6 August 2019

Anhydrous milk fat price
6 August 2019
3.3. Selected domestic crop indicator prices

Grain sorghum indicator price
Sydney, NSW
Week ended 14 August 2019

Feed barley indicator price
Sydney, NSW
Week ended 14 August 2019

Feed wheat indicator price
General Purpose, Sydney, NSW
Week ended 7 August 2019

Milling wheat indicator price
ASW1, track quote, Port Adelaide, SA
Week ended 13 August 2019
3.4. Selected domestic livestock indicator prices

Eastern Young Cattle Indicator
Week ended 8 August 2019

Eastern States Trade Lamb Indicator
Week ended 8 August 2019

Mutton indicator price in Victoria
(18–24 kg fat score 2–3)
Week ended 9 August 2019

Pig indicator price Eastern Seaboard
(60.1–75 kg)
Week ended 26 July 2019
Goat indicator price Eastern States
(12.1–16 kg)
Week ended 12 August 2019

Live cattle indicator price
light steers ex Darwin
Week ended 10 August 2019

Live sheep indicator price
wether ex Western Australia
Week ended 13 May 2019
3.5. Selected fruit and vegetable prices – week ended 15 August 2019

Weekly wholesale prices for blueberry, pineapple (smoothleaf), watermelon (seedless) & banana (cavendish)

Weekly wholesale prices for kiwifruit (hayward), strawberry, apple (royal gala) & avocado (hass)

Weekly wholesale prices for onion (brown), cauliflower, potato (white, brushed) & tomato (field gourmet)

Weekly wholesale prices for broccoli, lettuce (iceberg), pumpkin (grey bulk) & bean (round stringless)
4. Data attribution

Climate
Bureau of Meteorology

Water
New South Wales
Queensland
- Sunwater: www.sunwater.com.au
- Seqwater: http://seqwater.com.au
South Australia
- South Australian Department of Environment, Water and Natural Resources: www.environment.sa.gov.au
Victoria

Commodities
Fruit and vegetables
- Datafresh: www.freshstate.com.au
Pigs
- Australian Pork Limited: www.australianpork.com.au
Dairy
World wheat, canola
- International Grains Council
World coarse grains
- United States Department of Agriculture
World cotton
- Cotlook: www.cotlook.com/
World sugar
- New York Stock Exchange - Intercontinental Exchange
Wool
Milling wheat
- ProFarmer
Domestic wheat, barley, sorghum
- The Land: hardcopy or online at www.theland.farmonline.com.au/markets
Domestic canola
- The Weekly Times: hardcopy
Cattle, beef, mutton, lamb, goat and live export