Summary of key issues

- During the week ending 28 August 2019 little to no rainfall was recorded across most of Australia, with falls restricted to isolated areas of eastern and southern Australia.
- Across winter cropping regions rainfall totals of between 1 to 10 millimetres were recorded in parts of southern Queensland and much of Western Australia. Little to no rainfall was recorded across cropping regions in New South Wales, Victoria, South Australia and remaining cropping regions in Queensland.
- 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 during 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 most of the country.
- 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.
- The chance of an early northern rainfall onset for the 2019-20 season is low over large parts of tropical northern Australia. Most of northern Western Australia has a roughly equal chances of an early or late rainfall onset.
- Over the next eight days, a series of cold fronts are expected to move over southern Western Australia, resulting in timely rainfall for these cropping regions after a variable winter.
- Across Australia’s winter cropping regions, the 8-day rainfall forecast indicates that falls of between 5 and 50 millimetres is forecast for much of Western Australia. Rainfall of between 1 and 5 millimetres is forecast across eastern New South Wales, much of Victoria, central Queensland, and much of South Australia.
- Water storage levels in the Murray-Darling Basin (MDB) increased between 20 August and 28 August 2019 by 187 gigalitres (GL). Current volume of water held in storage is 10,263 GL which represents 41% of total capacity. This is 29% or 4,108 GL less than at the same time last year.
- Allocation prices in the southern Murray-Darling Basin decreased from $627 per ML on the 13 August 2019 to $623 per ML on 19 August 2019.
1. Climate

1.1. Rainfall this week

During the week ending 28 August 2019 little to no rainfall was recorded across most of Australia, with falls restricted to isolated areas of eastern and southern Australia.

Across winter cropping regions rainfall totals of between 1 to 10 millimetres were recorded in parts of southern Queensland and much of Western Australia. Little to no rainfall was recorded across winter cropping regions in New South Wales, Victoria and South Australia and remaining cropping regions in Queensland.

Rainfall for the week ending 28 August 2019

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Issued: 28/08/2019
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 27 August 2019, maximum temperatures were 2°C to 6°C above average across large parts of eastern and Western Australia. In contrast, minimum temperatures were -2°C to -6°C below average across scattered parts of northern and southern 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 27 August 2019

Minimum temperature anomalies for the week ending 27 August 2019

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.
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.

From today (29 August) the Bureau of Meteorology’s will be providing more outlooks, more often. This includes new forecasts for the weeks and fortnights ahead, and more frequent updates, with updated outlooks to be issued weekly.

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 during spring. A positive IOD typically brings below average spring rainfall and warmer days to southern and central Australia.

The latest rainfall outlook released by the Bureau of Meteorology suggests that a drier than average September is more likely for most of the country. In contrast, a wetter than average September is more likely for the south-west of Western Australia and much of western Tasmania (Bureau of Meteorology ‘National Climate Outlook’, 29 August 2019).

**Chance of exceeding the median rainfall September 2019**
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’, 29 August 2019).

Chance of exceeding the median rainfall September to November 2019
In many 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, 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 25 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: 29/08/2019
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 Tasmania. 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’, 29 August 2019).

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

![Map of Australia showing chance of exceeding median maximum temperature](image1)

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

![Map of Australia showing chance of exceeding median minimum temperature](image2)
1.4. **Northern Rainfall Onset Outlook**

The northern rainfall onset outlook provides an indication of whether the first significant rains after the dry season are likely to be earlier or later than normal. The onset occurs when the total rainfall after 1 September reaches 50 millimetres, this is considered approximately the amount of rainfall required to stimulate plant growth.

The chance of an early northern rainfall onset for the 2019-20 season is low over large parts of northern Australia. There is less than 30% chance of an early rainfall onset for much of the Top End and central parts of the Northern Territory, and the Cape York Peninsula and eastern Queensland. In other words, these areas have a greater than 70% chance of a late rainfall onset. Most of northern Western Australia has a roughly equal chances of an early or late rainfall onset.

**Median Northern Rainfall Onset in Neutral El Niño-Southern Oscillation (ENSO) Years**

![Map of Northern Rainfall Onset](image1)

**Chance of early Northern Rainfall Onset 2019-20 season**

![Map of Chance of early Northern Rainfall Onset](image2)
1.5. Rainfall forecast for the next eight days

Over the next eight days, a series of cold fronts are expected to move over southern Western Australia, resulting in timely rainfall for these cropping regions after a variable winter. High-pressure systems are expected to persist over south-eastern Australia for much of the next eight days, restricting the movement of rain-bearing systems and resulting in little to no rainfall forecast for this part of the country.

Rainfall of between 10 and 25 millimetres is forecast for parts of southern Victoria and south-eastern South Australia. Rainfall of between 25 and 100 millimetres is forecast for the south-west of Western Australia, an isolated area of eastern New South Wales and the west of Tasmania.

In cropping regions, rainfall of between 5 and 50 millimetres is expected across Western Australia. Lighter falls of between 1 and 5 millimetres are forecast across eastern New South Wales, much of Victoria, central Queensland, and much of South Australia. Little to no rainfall is expected across most cropping areas of New South Wales and Queensland.

Total forecast rainfall (mm) for the period 29 August to 5 September 2019
2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) increased by 187 gigalitres (GL) between 20 August and 28 August 2019. The current volume of water held in storage is 10,263 GL, which represents 41% of total capacity. This is 29% or 4,108 GL less than at the same time last year.


Allocation prices in the southern Murray-Darling Basin decreased from $627 per ML on the 13 August 2019 to $623 per ML on the 19 August 2019. Water volume traded remains low due to low seasonal demand.

Surface water trade activity, Southern Murray–Darling Basin

To access the full, interactive, weekly water dashboard, which contains the latest and historical water storage, water market and water allocation information, please visit http://www.agriculture.gov.au/abares/publications/weekly_update/weekly-update-290819
### 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>28-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>27-Aug</td>
<td>US$/t</td>
<td>202</td>
<td>201</td>
<td>&lt;1%</td>
<td>243</td>
<td>-17%</td>
</tr>
<tr>
<td>Coarse Grains – US no. 2 yellow corn, fob Gulf</td>
<td>28-Aug</td>
<td>US$/t</td>
<td>157</td>
<td>158</td>
<td>&lt;1%</td>
<td>158</td>
<td>-1%</td>
</tr>
<tr>
<td>Canola – Rapeseed, Europe, fob Hamburg</td>
<td>27-Aug</td>
<td>US$/t</td>
<td>427</td>
<td>426</td>
<td>&lt;1%</td>
<td>438</td>
<td>-3%</td>
</tr>
<tr>
<td>Cotton – Cotlook 'A' Index</td>
<td>28-Aug</td>
<td>USc/lb</td>
<td>70.1</td>
<td>70.8</td>
<td>&lt;1%</td>
<td>92.5</td>
<td>-24%</td>
</tr>
<tr>
<td>Wool – Eastern Market Indicator</td>
<td>22-Aug</td>
<td>Ac/kg clean</td>
<td>1,497</td>
<td>1,513</td>
<td>-1%</td>
<td>2,068</td>
<td>-28%</td>
</tr>
<tr>
<td>Sugar – Intercontinental Exchange, nearby futures, no.11 contract</td>
<td>28-Aug</td>
<td>USc/lb</td>
<td>11.5</td>
<td>11.5</td>
<td>0%</td>
<td>10.3</td>
<td>12%</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>27-Aug</td>
<td>A$/t</td>
<td>290</td>
<td>290</td>
<td>0%</td>
<td>330</td>
<td>-12%</td>
</tr>
<tr>
<td>Feed Wheat – General purpose, Sydney, NSW</td>
<td>28-Aug</td>
<td>A$/t</td>
<td>365</td>
<td>365</td>
<td>0%</td>
<td>430</td>
<td>-15%</td>
</tr>
<tr>
<td>Feed Barley – Sydney, NSW</td>
<td>28-Aug</td>
<td>A$/t</td>
<td>360</td>
<td>360</td>
<td>0%</td>
<td>410</td>
<td>-12%</td>
</tr>
<tr>
<td>Grain Sorghum – Sydney, NSW</td>
<td>28-Aug</td>
<td>A$/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>22-Aug</td>
<td>Ac/kg cwt</td>
<td>508</td>
<td>528</td>
<td>-4%</td>
<td>461</td>
<td>10%</td>
</tr>
<tr>
<td>Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic</td>
<td>23-Aug</td>
<td>Ac/kg cwt</td>
<td>597</td>
<td>596</td>
<td>&lt;1%</td>
<td>430</td>
<td>39%</td>
</tr>
<tr>
<td>Lamb – Eastern States Trade Lamb Indicator</td>
<td>22-Aug</td>
<td>Ac/kg cwt</td>
<td>806</td>
<td>834</td>
<td>-3%</td>
<td>843</td>
<td>-4%</td>
</tr>
<tr>
<td>Pig – Eastern Seaboard (60.1–75 kg), average of buyers &amp; sellers</td>
<td>16-Aug</td>
<td>Ac/kg cwt</td>
<td>380</td>
<td>379</td>
<td>&lt;1%</td>
<td>246</td>
<td>54%</td>
</tr>
<tr>
<td>Goat – Eastern States (12.1–16 kg)</td>
<td>19-Aug</td>
<td>Ac/kg cwt</td>
<td>902</td>
<td>902</td>
<td>0%</td>
<td>568</td>
<td>59%</td>
</tr>
<tr>
<td>Live cattle – Light steers ex Darwin to Indonesia</td>
<td>24-Aug</td>
<td>$/head</td>
<td>310</td>
<td>310</td>
<td>0%</td>
<td>300</td>
<td>3%</td>
</tr>
<tr>
<td>Live sheep – Live wether (Muche WA saleyard) to Middle East</td>
<td>13-May</td>
<td>$/head</td>
<td>135</td>
<td>110</td>
<td>23%</td>
<td>95</td>
<td>42%</td>
</tr>
<tr>
<td>Indicator</td>
<td>Week ended</td>
<td>Unit</td>
<td>Latest price</td>
<td>Price week prior</td>
<td>Weekly change</td>
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</tr>
<tr>
<td><strong>Global Dairy Trade (GDT) weighted average prices</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy – Whole milk powder</td>
<td>20-Aug</td>
<td>US$/t</td>
<td>3,100</td>
<td>3,039</td>
<td>2% ↑</td>
<td>2,883</td>
<td>8% ↑</td>
</tr>
<tr>
<td>Dairy – Skim milk powder</td>
<td>20-Aug</td>
<td>US$/t</td>
<td>2,478</td>
<td>2,482</td>
<td>&lt;1% ↓</td>
<td>1,951</td>
<td>27% ↑</td>
</tr>
<tr>
<td>Dairy – Cheddar cheese</td>
<td>20-Aug</td>
<td>US$/t</td>
<td>3,857</td>
<td>3,838</td>
<td>&lt;1% ↑</td>
<td>3,484</td>
<td>11% ↑</td>
</tr>
<tr>
<td>Dairy – Anhydrous milk fat</td>
<td>20-Aug</td>
<td>US$/t</td>
<td>5,061</td>
<td>5,246</td>
<td>-4% ↓</td>
<td>5,321</td>
<td>-5% ↓</td>
</tr>
</tbody>
</table>

<sup>a</sup> 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 27 August 2019

- World coarse grains indicator price
  US corn No. 2, fob Gulf
  Week ended 28 August 2019

- World canola indicator price
  Europe fob Hamburg
  Week ended 27 August 2019

- World cotton indicator price
  Cotlook ‘A’ index
  Week ended 28 August 2019
3.2. Global Dairy Trade (GDT) weighted average prices

- Whole milk powder price
- Skim milk powder price
- Cheddar cheese price
- Anhydrous milk fat price
3.3. Selected domestic crop indicator prices

Grain sorghum indicator price
Sydney, NSW
Week ended 28 August 2019

Feed barley indicator price
Sydney, NSW
Week ended 28 August 2019

Feed wheat indicator price
General Purpose, Sydney, NSW
Week ended 28 August 2019

Milling wheat indicator price
ASW1, track quote, Port Adelaide, SA
Week ended 27 August 2019
3.4. Selected domestic livestock indicator prices

Eastern Young Cattle Indicator
Week ended 22 August 2019

Mutton indicator price in Victoria
(18–24 kg fat score 2–3)
Week ended 23 August 2019

Eastern States Trade Lamb Indicator
Week ended 22 August 2019

Pig indicator price Eastern Seaboard
(60.1–75 kg)
Week ended 16 August 2019
3.5. Selected fruit and vegetable prices – week ended 29 August 2019
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
- Goulburn–Murray Water: www.g.mwater.com.au

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