Summary of key issues

- During the week ending 25 September 2019 little to no rainfall was recorded across much of Australia, with falls restricted to parts of southern and central Australia.

- Across cropping regions, rainfall totals of between 10 to 50 millimetres were recorded in part of the far south of Western Australia and much of South Australia. Lighter falls of between 1 and 10 millimetres were recorded across cropping regions in central and eastern New South Wales, Victoria and remaining cropping regions in Western Australia and South Australia.

- Most climate models indicate that a positive Indian Ocean Dipole (IOD) is expected to remain 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.

- A prolonged negative Southern Annular Mode (SAM) event is also forecast to develop in spring. This negative SAM is likely to intensify dry and warm conditions across eastern Australia and bring wetter than average conditions to western Tasmania during spring.

- The rainfall outlook for October to December 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. However, chances of exceeding median rainfall are low.

- 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 and evapotranspiration increase through spring.

- Over the next eight days, frontal and trough activity is expected to result in limited rainfall over parts of eastern and southern Australia.

- Across Australia’s winter cropping regions, the 8-day rainfall forecast indicates that falls of between 5 and 10 millimetres are expected across parts of southern Queensland. Little to no rainfall is expected across cropping regions in New South Wales, Victoria, Western Australia, South Australia and remaining cropping regions in Queensland.

- Water storage levels in the Murray-Darling Basin (MDB) increased between 18 September and 25 September 2019 by 5 gigalitres (GL). Current volume of water held in storage is 10,430 GL which represents 41 per cent of total capacity. This is 26 percentage points or 3,750 GL less than at the same time last year.

- Allocation prices in the Victorian Murray Below the Barmah Choke decreased from $792 per ML on 9 September 2019 to $783 per ML on 16 September 2019. Trade restrictions are currently binding in several catchments, leading to differences in water prices across the Murray Darling Basin.
1. Climate

1.1. Rainfall this week

During the week ending 25 September 2019 rainfall was restricted to parts of southern and central Australia.

Across cropping regions, rainfall totals of between 10 to 50 millimetres were recorded in part of the far south of Western Australia and much of South Australia. Lighter falls of between 1 and 10 millimetres were recorded across cropping regions in central and eastern New South Wales, Victoria and remaining cropping regions in Western Australia and South Australia. Little to no rainfall was recorded across cropping regions in Queensland and remaining cropping regions in New South Wales.
1.2. Temperature anomalies this week

For the week ending 24 September 2019, maximum and minimum temperatures were 2°C to 4°C above average across a large area of eastern Australia and isolated areas of northern Australia. In contrast, maximum temperatures were 2°C to 4°C below average across parts of central and western 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 24 September 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.

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 until the end of spring. A positive IOD typically brings below average spring rainfall and warmer days to southern and central 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 and bring wetter than average conditions to western Tasmania during spring.

The latest rainfall outlook released by the Bureau of Meteorology suggests that a drier than average October is more likely for most of the country. Across parts of northern Western Australia and much of Tasmania, there is no strong shift towards a wetter or drier than average October (Bureau of Meteorology 'National Climate Outlook', 19 September 2019).

Chance of exceeding the median rainfall October 2019

![Chance of exceeding the median rainfall October 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 October to December 2019.

The rainfall outlook for October to December 2019 indicates that a drier than average three months is more likely across most of the country. In contrast, a wetter than average October to December is more likely for the north-west of Western Australia (Bureau of Meteorology ‘National Climate Outlook’, 19 September 2019).

**Chance of exceeding the median rainfall October to December 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 southern Victoria, for example, there is a 75% chance of receiving between 50 and 200 millimetres.

Between October and December 2019, eastern New South Wales, much south-eastern and northern Queensland, and the north of Western Australia and the Northern Territory have a 75% chance of receiving rainfall of between 50 and 200mm. Smaller areas may receive rainfall totals in excess of 200mm.

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 continue to increase as we head into the summer months.

Rainfall totals that have a 75% chance of occurring October to December 2019

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Issued: 19/09/2019
The temperature outlook for October to December 2019 indicates that daytime temperatures are more likely to be warmer than average for much of the country. Night-time temperatures are also likely to be warmer than average for much of western and a large area of eastern Australia, with cooler than average minimum temperatures forecast for parts of the tropical north and south-eastern Australia. The forecast drier than average conditions and dry soils could bring more cloud-free nights, along with cooler than average night-time temperatures in southern Australia, increases the risk of late-season frost in susceptible areas (Bureau of Meteorology ‘National Climate Outlook’, 19 September 2019).

**Chance of exceeding the median maximum temperature October to December 2019**

![Map showing the chance of exceeding the median maximum temperature for October to December 2019.]

**Chance of exceeding the median minimum temperature October to December 2019**

![Map showing the chance of exceeding the median minimum temperature for October to December 2019.]

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1.4. Rainfall forecast for the next eight days

Over the next eight days, frontal and trough activity is expected to result in limited rainfall over parts of eastern and southern Australia. High-pressure systems are forecast to persist over southern Australia during the next eight days, and are likely to restrict the movement of rain-bearing systems and result in low rainfall forecast for much of mainland Australia.

Rainfall totals of between 1 and 10 millimetres is forecast for parts of eastern New South Wales, southern Victoria, south-eastern Queensland, southern Western Australia, the far south-east and south-west of South Australia and eastern Tasmania. Higher rainfall totals up to 50 millimetres are forecast for western Tasmania.

In cropping regions, rainfall of between 5 and 10 millimetres is expected across parts of southern Queensland. Little to no rainfall is expected across cropping regions in New South Wales, Victoria, Western Australia, South Australia and remaining cropping regions in Queensland.

Total forecast rainfall (mm) for the period 26 September to 3 October 2019

©Commonwealth of Australia 2019, Australian Bureau of Meteorology

Issued: 26/09/2019

Note: This rainfall forecast is produced from computer models. As the model outputs are not altered by weather forecasters, it is important to check local forecasts and warnings issued by the Bureau of Meteorology.
2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) increased by 5 gigalitres (GL) between 18 September and 25 September 2019. The current volume of water held in storage is 10,430 GL, which represents 41% of total capacity. This is 26% or 3,750 GL less than at the same time last year.


Allocation prices in the Victorian Murray below the Barmah Choke decreased from $792 per ML on 9 September 2019 to $783 per ML on 16 September 2019. Trade restrictions are currently binding in several catchments, leading to differences in water prices across the Murray Darling Basin.

Surface water trade activity, Southern Murray–Darling Basin

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 26 September 2019, and encompasses water market activity until 16 September 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>25-Sep</td>
<td>US$/A$</td>
<td>0.68</td>
<td>0.69</td>
<td>-1%</td>
<td>0.73</td>
<td>-7%</td>
</tr>
<tr>
<td>Wheat – US no. 2 hard red winter wheat, fob Gulf</td>
<td>17-Sep</td>
<td>US$/t</td>
<td>203</td>
<td>199</td>
<td>2%</td>
<td>238</td>
<td>-15%</td>
</tr>
<tr>
<td>Coarse Grains – US no. 2 yellow corn, fob Gulf</td>
<td>25-Sep</td>
<td>US$/t</td>
<td>160</td>
<td>159</td>
<td>&lt;1%</td>
<td>154</td>
<td>4%</td>
</tr>
<tr>
<td>Canola – Rapeseed, Europe, fob Hamburg</td>
<td>24-Sep</td>
<td>US$/t</td>
<td>426</td>
<td>429</td>
<td>&lt;1%</td>
<td>434</td>
<td>-2%</td>
</tr>
<tr>
<td>Cotton – Cotlook 'A' Index</td>
<td>25-Sep</td>
<td>USc/lb</td>
<td>71.5</td>
<td>72.8</td>
<td>-2%</td>
<td>88.5</td>
<td>-19%</td>
</tr>
<tr>
<td>Wool – Eastern Market Indicator, nearby futures, no.11 contract</td>
<td>19-Sep</td>
<td>Ac/kg clean</td>
<td>1,542</td>
<td>1,535</td>
<td>&lt;1%</td>
<td>2,067</td>
<td>-25%</td>
</tr>
<tr>
<td>Wool – Western Market Indicator</td>
<td>20-Sep</td>
<td>Ac/kg clean</td>
<td>1,643</td>
<td>1,625</td>
<td>1%</td>
<td>2,222</td>
<td>-26%</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>24-Sep</td>
<td>AS/t</td>
<td>315</td>
<td>300</td>
<td>5%</td>
<td>365</td>
<td>-14%</td>
</tr>
<tr>
<td>Feed Wheat – General purpose, Sydney, NSW</td>
<td>25-Sep</td>
<td>AS/t</td>
<td>375</td>
<td>375</td>
<td>0%</td>
<td>430</td>
<td>-13%</td>
</tr>
<tr>
<td>Feed Barley – Sydney, NSW</td>
<td>02-Oct</td>
<td>AS/t</td>
<td>380</td>
<td>360</td>
<td>6%</td>
<td>410</td>
<td>-7%</td>
</tr>
<tr>
<td>Grain Sorghum – Sydney, NSW</td>
<td>25-Sep</td>
<td>AS/t</td>
<td>345</td>
<td>345</td>
<td>0%</td>
<td>410</td>
<td>-16%</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>19-Sep</td>
<td>Ac/kg cwt</td>
<td>469</td>
<td>477</td>
<td>-2%</td>
<td>501</td>
<td>-6%</td>
</tr>
<tr>
<td>Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic</td>
<td>20-Sep</td>
<td>Ac/kg cwt</td>
<td>531</td>
<td>558</td>
<td>-5%</td>
<td>484</td>
<td>10%</td>
</tr>
<tr>
<td>Lamb – Eastern States Trade Lamb Indicator</td>
<td>19-Sep</td>
<td>Ac/kg cwt</td>
<td>804</td>
<td>811</td>
<td>&lt;1%</td>
<td>773</td>
<td>4%</td>
</tr>
<tr>
<td>Pig – Eastern Seaboard (60.1–75 kg), average of buyers &amp; sellers</td>
<td>13-Sep</td>
<td>Ac/kg cwt</td>
<td>384</td>
<td>389</td>
<td>-1%</td>
<td>250</td>
<td>54%</td>
</tr>
<tr>
<td>Goat – Eastern States (12.1–16 kg)</td>
<td>23-Sep</td>
<td>Ac/kg cwt</td>
<td>880</td>
<td>880</td>
<td>0%</td>
<td>540</td>
<td>63%</td>
</tr>
<tr>
<td>Live cattle – Light steers ex Darwin to Indonesia</td>
<td>14-Sep</td>
<td>Ac/kg lwt</td>
<td>315</td>
<td>315</td>
<td>0%</td>
<td>300</td>
<td>5%</td>
</tr>
<tr>
<td>Live sheep – Live wether (Muchea WA saleyard) to Middle East</td>
<td>16-Sep</td>
<td>$/head</td>
<td>99</td>
<td>99</td>
<td>0%</td>
<td>na</td>
<td>0%</td>
</tr>
<tr>
<td>Indicator</td>
<td>Week ended</td>
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<td>Latest price</td>
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<td>-----------------------------------</td>
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<td>---------------------</td>
</tr>
<tr>
<td>Dairy – Whole milk powder</td>
<td>17-Sep</td>
<td>US$/t</td>
<td>3,133</td>
<td>3,076</td>
<td>2%</td>
<td>2,768</td>
<td>13%</td>
</tr>
<tr>
<td>Dairy – Skim milk powder</td>
<td>17-Sep</td>
<td>US$/t</td>
<td>2,599</td>
<td>2,500</td>
<td>4%</td>
<td>1,980</td>
<td>31%</td>
</tr>
<tr>
<td>Dairy – Cheddar cheese</td>
<td>17-Sep</td>
<td>US$/t</td>
<td>3,846</td>
<td>3,827</td>
<td>&lt;1%</td>
<td>3,503</td>
<td>10%</td>
</tr>
<tr>
<td>Dairy – Anhydrous milk fat</td>
<td>17-Sep</td>
<td>US$/t</td>
<td>5,030</td>
<td>4,988</td>
<td>&lt;1%</td>
<td>5,294</td>
<td>-5%</td>
</tr>
</tbody>
</table>

*a 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 17 September 2019

- **World coarse grains indicator price**
  - US corn No. 2, fob Gulf
  - Week ended 25 September 2019

- **World canola indicator price**
  - Europe fob Hamburg
  - Week ended 24 September 2019

- **World cotton indicator price**
  - Cotlook 'A' index
  - Week ended 25 September 2019
3.2. Global Dairy Trade (GDT) weighted average prices

- **Whole milk powder price**
  - 17 September 2019

- **Skim milk powder price**
  - 17 September 2019

- **Cheddar cheese price**
  - 17 September 2019

- **Anhydrous milk fat price**
  - 17 September 2019
3.3. Selected domestic crop indicator prices

- Grain sorghum indicator price
  Sydney, NSW
  Week ended 25 September 2019

- Feed barley indicator price
  Sydney, NSW
  Week ended 2 October 2019

- Feed wheat indicator price
  General Purpose, Sydney, NSW
  Week ended 25 September 2019

- Milling wheat indicator price
  ASW1, track quote, Port Adelaide, SA
  Week ended 24 September 2019
3.4. Selected domestic livestock indicator prices

- **Eastern Young Cattle Indicator**
  - Week ended 19 September 2019

- **Mutton indicator price in Victoria**
  - (18–24 kg fat score 2–3)
  - Week ended 20 September 2019

- **Eastern States Trade Lamb Indicator**
  - Week ended 19 September 2019

- **Pig indicator price Eastern Seaboard**
  - (60.1–75 kg)
  - Week ended 13 September 2019
3.5. Selected fruit and vegetable prices – week ended 26 September 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