Summary of key issues

- During the week ending 5 April 2017 rainfall was recorded in south-eastern Queensland, north-eastern New South Wales, western Tasmania and across northern Australia.

- Ex-Tropical Cyclone Debbie brought torrential rainfall and significant flooding to eastern, central and south-eastern Queensland and north-eastern New South Wales. Numerous monthly and daily rainfall records were set in these areas.

- During the week ending 4 April 2017 maximum and minimum temperatures were close to average across most of Australia, with the exception of below average maximum and minimum temperatures in parts of South Australia, and above average maximum temperatures in parts of Western Australia.

- During March 2017 rainfall was extremely high in eastern New South Wales, Queensland and isolated areas of Western Australia and far south-eastern South Australia. Rainfall was extremely low for the remainder of South Australia, parts of western New South Wales, western Queensland, south-western Tasmania and southern parts of the Northern Territory.

- Relative upper layer soil moisture for March 2017 was generally well above average across much of eastern Australia and parts of south-western, central and northern Western Australia.

- The forecast for the next eight days indicates that rainfall totals in excess of 15 millimetres are expected across tropical northern Australia, parts of south-eastern Victoria, and western Tasmania. Little to no rainfall is forecast for much of the remainder of Australia.

- Water storage levels in the Murray–Darling Basin (MDB) increased during the week ending 6 April 2017 by 177 gigalitres (GL) to 15,523 GL and are at 69 per cent of total capacity.

- The US Department of Agriculture crop progress report estimates 51 per cent of the 2017–18 US winter wheat crop to be in good or excellent condition.

- Domestic and international canola prices fell as a result of developments in the international soybean market.
1. Climate

1.1. Rainfall this week

During the week ending 5 April 2017 rainfall was recorded in south-eastern Queensland, north-eastern New South Wales, western Tasmania and across northern Australia. The highest recorded weekly total was 759 millimetres at Springbrook Road near the Gold Coast in Queensland.

Most of the rainfall this week was associated with Ex-Tropical Cyclone Debbie, which brought torrential rainfall and significant flooding to eastern, central and south-eastern Queensland and north-eastern New South Wales. Numerous monthly and daily rainfall records were set in these areas. While the extent of damage to agriculture is still being assessed, the Bureau of Meteorology reports that the heavy rainfall during the past month has cleared nearly all areas of short-term rainfall deficiencies across southern Queensland and northern New South Wales.

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/

Rainfall for the week ending 5 April 2017
1.2. Temperature anomalies this week

During the week ending 4 April 2017 maximum temperatures were close to average across most of Australia. The main exceptions were in far western Western Australia where temperatures were between 2°C and 8°C above average, and South Australia and adjacent parts of Western Australia where temperatures were between 2°C and 6°C below average.

Minimum temperatures were close to average across most of Australia, with the exception of South Australia and parts of central New South Wales where temperatures were between 4°C and 6°C below average for this time of year.

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 their long-term averages. Temperature anomalies are calculated using high-resolution gridded datasets from 1911 onwards. For further information go to http://www.bom.gov.au/jsp/awap/temp/index.jsp.
1.3. Monthly rainfall

Rainfall for March 2017 was extremely high in eastern areas of New South Wales and Queensland. Rainfall was extremely high in central, south-western and northern parts of Western Australia and far south-eastern South Australia. Rainfall was extremely low to severely deficient in the remainder of South Australia and in isolated parts of western New South Wales, western Queensland, south-western Tasmania and southern parts of the Northern Territory.

In cropping regions, March rainfall was extremely high in parts of New South Wales and Queensland, well below average in South Australia, and average in Victoria and Western Australia.

Rainfall percentiles for March 2017

Source: Bureau of Meteorology

Note: Spatial rainfall percentile analyses are based on historical monthly rainfall data provided by the Bureau of Meteorology. These rainfall percentile maps show how rainfall recorded during that given time period compared with the rainfall recorded for that same period during the entire historical record (1900 to present). Rainfall percentiles are a way of providing an indication of the spread of data in a data set. To calculate percentiles, the entire rainfall record at a certain point is divided into one hundred equal parts. The 5th percentile for March 2017 means that only five per cent of all Marches in the historical record have recorded a rainfall total that is at or below the rainfall recorded during March 2017. Dark blue areas on the maps are those areas that were wetter than the same time of year during the entire historical record, and dark red areas are drier. For further information, go to http://www.bom.gov.au/jsp/awap/
1.4. Recent soil moisture percentiles

The maps below show the levels of modelled upper layer (0 to 10 centimetres) soil moisture and lower layer (10 centimetres to 1 metre) soil moisture during March 2017. These maps show how modelled soil conditions during March 2017 compare with March conditions modelled over the 106 year reference period (1911 to 2016). Dark blue areas on the maps are those areas that were much wetter than the same time of year during the reference period, and dark red areas were much drier than during the reference period. These data are from the Australian Water Resources Assessment Landscape model (AWRA-L version 5.0), which was developed through the Water Information Research and Development Alliance (WIRADA) initiative. WIRADA is a collaborative project between the BoM and the CSIRO.

The bulk of plant roots occur in the top 20 centimetres of the soil profile. Soil moisture in the upper layer of the soil profile (10 centimetres) is therefore the most appropriate indicator of the availability of water, particularly for germinating plants. The lower layer soil moisture is a larger, deeper store that is slower to respond to rainfall and tends to reflect accumulated rainfall events over longer time periods.

Relative upper layer soil moisture for March 2017 was well above average to extremely high across much of eastern Australia and parts of south-western, central and northern Western Australia. Through much of central Australia, South Australia and Tasmania the relative upper layer soil moisture was well below average to extremely low. The pattern of relative upper layer soil moisture reflects rainfall received during March 2017.

Modelled upper layer soil moisture for March 2017

Source: Bureau of Meteorology (Australian Water Resources Assessment Landscape model)
Relative lower layer soil moisture for March 2017 was well above average to extremely high across most of Western Australia, northern parts of Queensland and the Northern Territory, and isolated parts of South Australia and eastern New South Wales. Lower layer soil moisture for March 2017 was well below average to extremely low across parts of Queensland, scattered areas of western New South Wales and south-eastern Victoria. For the remainder of the country lower layer soil moisture was close to average.

*Modelled lower layer soil moisture for March 2017*

Source: Bureau of Meteorology (Australian Water Resources Assessment Landscape model)
1.5. **Rainfall forecast for the next 8 days**

The forecast for the next eight days indicates that rainfall totals in excess of 15 millimetres are mainly expected across tropical northern Australia, parts of south-eastern Victoria and western Tasmania. Little to no rainfall is forecast for much of the remainder of Australia (see map below).

This rainfall forecast is produced from computer models. As it contains no input from weather forecasters, it is important to check local forecasts and warnings issued by the Bureau of Meteorology.

**Total forecast rainfall (mm) for the period 6 to 13 April 2017**
2. Water

2.1. Water availability

Water storage levels in the Murray–Darling Basin (MDB) increased during the week ending 6 April 2017 by 177 gigalitres (GL) to 15,523 GL and are at 69 per cent of total capacity. This is 38 percentage points or 8,580 GL more than at the same time last year.

Information on irrigation water available in the Murray–Darling Basin from 1 January 2001 to 6 April 2017 is shown above. The top horizontal (short dash) line indicates the storage level during a similar time last year. The bottom horizontal (long dash) line indicates the amount of ‘dead’ or unusable storage.
2.2. Water storages

Changes in regional water storage for March 2017 and the previous 12 months are summarised in the table and graph below (current at 6 April 2017).

<table>
<thead>
<tr>
<th>Region</th>
<th>Total capacity (GL)</th>
<th>Current volume (GL)</th>
<th>Current volume (%)</th>
<th>Monthly change (GL)</th>
<th>Monthly change (%)</th>
<th>Annual change (GL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murray-Darling Basin (MDB)</td>
<td>22,559</td>
<td>15,523</td>
<td>69</td>
<td>-377</td>
<td>-2</td>
<td>8,580</td>
</tr>
<tr>
<td>Murray-Darling Basin Authority (MDBA)</td>
<td>9,352</td>
<td>5,809</td>
<td>59</td>
<td>-519</td>
<td>-6</td>
<td>3,366</td>
</tr>
<tr>
<td>Queensland MDB</td>
<td>186</td>
<td>177</td>
<td>95</td>
<td>99</td>
<td>53</td>
<td>63</td>
</tr>
<tr>
<td>Central Queensland</td>
<td>3,154</td>
<td>3,035</td>
<td>96</td>
<td>288</td>
<td>9</td>
<td>224</td>
</tr>
<tr>
<td>South-east Queensland</td>
<td>3,517</td>
<td>2,454</td>
<td>70</td>
<td>512</td>
<td>15</td>
<td>88</td>
</tr>
<tr>
<td>New South Wales MDB</td>
<td>13,884</td>
<td>4,962</td>
<td>36</td>
<td>-654</td>
<td>-5</td>
<td>1,443</td>
</tr>
<tr>
<td>Coastal New South Wales</td>
<td>1,074</td>
<td>955</td>
<td>89</td>
<td>20</td>
<td>2</td>
<td>28</td>
</tr>
<tr>
<td>Victoria MDB</td>
<td>8,488</td>
<td>6,176</td>
<td>73</td>
<td>-219</td>
<td>-3</td>
<td>2,865</td>
</tr>
</tbody>
</table>
3. Commodities

3.1. Market focus

US wheat crop

Concerns about dry conditions affecting the US winter wheat crop have largely dissipated with beneficial rainfall in late March. The US Department of Agriculture crop progress report estimated 51 per cent of the US winter wheat crop to be in good or excellent condition for the week ending 2 April 2017. While lower than the same time last year (59 per cent), this is above the five-year average. This is the first USDA crop progress report about the condition of the 2017–18 US winter wheat crop and will be updated weekly until harvest.

US winter wheat crop condition

![US winter wheat crop condition chart]

a As reported in the first USDA crop progress report of the year.
Source: US Department of Agriculture, National Agricultural Statistics Service.

Oilseeds

Domestic and international canola prices fell in the week ending 4 April as a result of developments in the international soybean market. According to the US Department of Agriculture prospective plantings report, US soybean plantings are expected to increase by 7 per cent in 2017–18, compared with 2016–17. The area planted to soybeans has expanded at the expense of wheat area. Record soybean exports from South America were also reported, with soybean exports in March the highest ever recorded. Early yield reports from the Argentine harvest are also above expectations.
<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><strong>Selected World Indicator Prices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australian Dollar - AUD/USD Exchange Rate</td>
<td>05-Apr</td>
<td>US$/A$</td>
<td>0.76</td>
<td>0.76</td>
<td>0% ●</td>
<td>0.76</td>
<td>0% ●</td>
</tr>
<tr>
<td>Wheat - US no. 2 hard red winter wheat, fob Gulf</td>
<td>04-Apr</td>
<td>US$/t</td>
<td>191</td>
<td>191</td>
<td>0% ●</td>
<td>204</td>
<td>-6% ↓</td>
</tr>
<tr>
<td>Coarse Grains - US no. 2 yellow corn, fob Hamburg</td>
<td>05-Apr</td>
<td>US$/t</td>
<td>157</td>
<td>156</td>
<td>&lt;1% ↑</td>
<td>158</td>
<td>&lt;1% ↓</td>
</tr>
<tr>
<td>Canola - Rapeseed, Europe, fob Hamburg</td>
<td>04-Apr</td>
<td>US$/t</td>
<td>430</td>
<td>440</td>
<td>-2% ↓</td>
<td>420</td>
<td>2% ↑</td>
</tr>
<tr>
<td>Cotton - Cotlook 'A' Index</td>
<td>05-Apr</td>
<td>USc/lb</td>
<td>86.3</td>
<td>86.9</td>
<td>&lt;1% ↓</td>
<td>66.7</td>
<td>29% ↑</td>
</tr>
<tr>
<td>Sugar - Intercontinental Exchange, nearby futures, no.11 contract</td>
<td>05-Apr</td>
<td>USc/lb</td>
<td>16.5</td>
<td>17.4</td>
<td>-5% ↓</td>
<td>14.9</td>
<td>11% ↑</td>
</tr>
<tr>
<td>Wool - Eastern Market Indicator</td>
<td>30-Mar</td>
<td>Ac/kg clean</td>
<td>1,502</td>
<td>1,546</td>
<td>-3% ↓</td>
<td>1,239</td>
<td>21% ↑</td>
</tr>
<tr>
<td>Wool - Western Market Indicator</td>
<td>31-Mar</td>
<td>Ac/kg clean</td>
<td>1,488</td>
<td>1,534</td>
<td>-3% ↓</td>
<td>1,309</td>
<td>14% ↑</td>
</tr>
<tr>
<td><strong>Selected domestic crop indicator prices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milling Wheat - ASW1, track quote, Port Adelaide, SA</td>
<td>05-Apr</td>
<td>A$/t</td>
<td>180</td>
<td>184</td>
<td>-2% ↓</td>
<td>241</td>
<td>-25% ↓</td>
</tr>
<tr>
<td>Feed Wheat - General purpose, Sydney, NSW</td>
<td>05-Apr</td>
<td>A$/t</td>
<td>206</td>
<td>211</td>
<td>-2% ↓</td>
<td>258</td>
<td>-20% ↓</td>
</tr>
<tr>
<td>Feed Barley - Sydney, NSW</td>
<td>05-Apr</td>
<td>A$/t</td>
<td>190</td>
<td>192</td>
<td>-1% ↓</td>
<td>227</td>
<td>-16% ↓</td>
</tr>
<tr>
<td>Canola - Portland, Vic.</td>
<td>03-Apr</td>
<td>A$/t</td>
<td>497</td>
<td>520</td>
<td>-4% ↓</td>
<td>518</td>
<td>-4% ↓</td>
</tr>
<tr>
<td>Grain Sorghum - Sydney, NSW</td>
<td>05-Apr</td>
<td>A$/t</td>
<td>244</td>
<td>247</td>
<td>-1% ↓</td>
<td>231</td>
<td>6% ↑</td>
</tr>
<tr>
<td><strong>Selected domestic livestock indicator prices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef - Eastern Young Cattle Indicator</td>
<td>31-Mar</td>
<td>Ac/kg cwt</td>
<td>641</td>
<td>619</td>
<td>4% ↑</td>
<td>585</td>
<td>10% ↑</td>
</tr>
<tr>
<td>Mutton - Mutton indicator (18-24 kg fat score 2-3), Vic</td>
<td>31-Mar</td>
<td>Ac/kg cwt</td>
<td>482</td>
<td>467</td>
<td>3% ↑</td>
<td>319</td>
<td>51% ↑</td>
</tr>
<tr>
<td>Lamb - Eastern States Trade Lamb Indicator</td>
<td>30-Mar</td>
<td>Ac/kg cwt</td>
<td>654</td>
<td>632</td>
<td>3% ↑</td>
<td>526</td>
<td>24% ↑</td>
</tr>
<tr>
<td>Pig - Eastern Seaboard (60.1-75 kg), average of buyers &amp; sellers</td>
<td>17-Mar</td>
<td>Ac/kg cwt</td>
<td>320</td>
<td>326</td>
<td>-2% ↓</td>
<td>389</td>
<td>-18% ↓</td>
</tr>
<tr>
<td>Goat - Eastern States (12.1-16 kg)</td>
<td>27-Mar</td>
<td>Ac/kg cwt</td>
<td>655</td>
<td>655</td>
<td>0% ●</td>
<td>525</td>
<td>25% ↑</td>
</tr>
<tr>
<td>Live cattle - Light steers ex Darwin to Indonesia</td>
<td>25-Mar</td>
<td>Ac/kg lwt</td>
<td>340</td>
<td>345</td>
<td>-1% ↓</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Live sheep - Live wether (Muchea WA saleyard) to Middle East</td>
<td>20-Mar</td>
<td>$/head</td>
<td>113</td>
<td>115</td>
<td>-2% ↓</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Indicator</td>
<td>Week ended</td>
<td>Unit</td>
<td>Latest price</td>
<td>Price week prior</td>
<td>Weekly change</td>
<td>Price 12 months prior</td>
<td>Year on year change</td>
</tr>
<tr>
<td>---------------------------</td>
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<td>---------------</td>
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<td>---------------------</td>
</tr>
<tr>
<td>Dairy - Whole milk powder</td>
<td>04-Apr</td>
<td>US$/t</td>
<td>2,924</td>
<td>2,855</td>
<td>2% ‹</td>
<td>2,013</td>
<td>45% †</td>
</tr>
<tr>
<td>Dairy - Skim milk powder</td>
<td>04-Apr</td>
<td>US$/t</td>
<td>1,913</td>
<td>1,948</td>
<td>-2% ↓</td>
<td>1,721</td>
<td>11% †</td>
</tr>
<tr>
<td>Dairy - Cheddar cheese</td>
<td>04-Apr</td>
<td>US$/t</td>
<td>3,288</td>
<td>3,406</td>
<td>-3% ↓</td>
<td>2,778</td>
<td>18% †</td>
</tr>
<tr>
<td>Dairy - Anhydrous milk fat</td>
<td>04-Apr</td>
<td>US$/t</td>
<td>5,936</td>
<td>5,799</td>
<td>2% ‧</td>
<td>3,203</td>
<td>85% †</td>
</tr>
</tbody>
</table>

Global Dairy Trade (GDT) weighted average prices

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

- **World wheat indicator price**
  US No. 2, hard red winter wheat, fob Gulf
  Week ended 4 April 2017

- **World coarse grains indicator price**
  US corn No. 2, fob Gulf
  Week ended 5 April 2017

- **World canola indicator price**
  Europe fob Hamburg
  Week ended 4 April 2017

- **World cotton indicator price**
  Cotlook ‘A’ index
  Week ended 5 April 2017
3.3. Global Dairy Trade (GDT) weighted average prices

- Whole milk powder price
  - 4 April 2017

- Skim milk powder price
  - 4 April 2017

- Cheddar cheese price
  - 4 April 2017

- Anhydrous milk fat price
  - 4 April 2017
3.4. Selected domestic crop indicator prices

- **Grain sorghum indicator price**
  - Sydney, NSW
  - Week ended 5 April 2017

- **Feed barley indicator price**
  - Sydney, NSW
  - Week ended 5 April 2017

- **Feed wheat indicator price**
  - General Purpose, Sydney, NSW
  - Week ended 5 April 2017

- **Milling wheat indicator price**
  - ASW1, track quote, Port Adelaide, SA
  - Week ended 5 April 2017
Canola indicator price
Portland, Victoria
Week ended 3 April 2017
3.5. Selected domestic livestock indicator prices

- **Eastern Young Cattle Indicator**
  - Week ended 31 March 2017

- **Eastern States Trade Lamb Indicator**
  - Week ended 30 March 2017

- **Mutton indicator price in Victoria**
  - (18–24 kg fat score 2–3)
  - Week ended 31 March 2017

- **Pig indicator price Eastern Seaboard**
  - (60.1–75 kg)
  - Week ended 17 March 2017
3.6. Movements in selected fruit and vegetable prices – week ended 1 April 2017
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
Canola
- Weekly Times: hardcopy
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