Summary of key issues

- Despite low rainfall totals during the week ending 8 July 2020, most cropping regions have average to above average levels of root-zone soil moisture, with the exception of Western Australia, and parts of South Australia, Queensland and northern Victoria. Production outcomes in regions across southern Australia with low root-zone soil moisture will be heavily reliant on rainfall during the remainder of winter and early spring to support pasture growth and crop development (see Section 1.1).

- It is expected that further cooling in the central and eastern tropical Pacific Ocean will occur and a La Niña-like pattern could emerge, potentially contributing to the above average late winter and spring rainfall outlook for parts of Australia (see Section 1.2).

- There is a high chance that rainfall between July and September will be sufficient to sustain crop and pasture development across much of southern Australia. Across most of New South Wales, Victoria, South Australia and Western Australia, for example, there is a 75% chance of receiving between 50 and 100 millimetres between July and September 2020 (see Section 1.3).

- Over the next eight days, a low-pressure system is expected to bring rainfall, thunderstorms and snow to south-eastern Australia (see Section 1.4). Across cropping regions, rainfall of between 10 and 50 millimetres is expected across much of New South Wales, central and southern Queensland, and parts of eastern Victoria and the west of Western Australia.

- Water storage levels in the Murray-Darling Basin (MDB) increased between 1 July 2020 and 8 July 2020 by 137 gigalitres (GL). The current volume of water held in storage is 11,020 GL which represents 44 per cent of total capacity.

- Allocation prices in the Victorian Murray below the Barmah choke decreased from $385 per ML on 2 July 2020 to $345 per ML on 9 July 2020. Prices are lower in the Goulburn-Broken, Murrumbidgee, and regions above the Barmah Choke, due to binding Goulburn intervalley trade and Murrumbidgee export limits, and the Barmah Choke trade constraint.
1. Climate

1.1. Rainfall this week

During the week ending 8 July 2020, a high-pressure system restricted the development of rain bearing systems over southern Australia. Rainfall totals of between 10 and 50 millimetres were recorded across parts of far south-eastern Australia, much of Tasmania and isolated parts of south-western Western Australia and eastern Queensland. Rainfall in excess of 50 millimetres was recorded across parts of western Tasmania.

In Australia’s cropping regions, rainfall totals of between 5 and 15 millimetres were recorded across parts of southern New South Wales, southern Victoria, southern South Australia and the southern regions of Western Australia. Across remaining cropping regions little to no rainfall was recorded during the week ending 8 July 2020.

Despite the low rainfall totals this week, most cropping regions have average to above average levels of root-zone soil moisture, with the exception of Western Australia, and parts of South Australia, Queensland and northern Victoria. Production outcomes in regions across southern Australia with low root-zone soil moisture will be heavily reliant on rainfall during the remainder of winter and early spring to support pasture growth and crop development.

Rainfall for the week ending 8 July 2020
1.2. Climate Drivers

Following a generally favourable start to the winter cropping season in Australia, there is interest in how the remainder of winter and early spring may pan out. To gain some insight it is important to look at the major climate drivers—the Indian Ocean Dipole (IOD) and the El Niño Southern Oscillation (ENSO)—that influence winter and spring rainfall across southern Australia. If negative IOD or La Niña conditions were to eventuate as forecast by a range of international climate models, these key climate drivers would become the major influencing factor for late winter and spring rainfall across southern Australia.

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

The El Niño–Southern Oscillation (ENSO) is currently neutral and likely to remain neutral through winter. It is expected that further cooling in the central and eastern tropical Pacific Ocean will occur and a La Niña-like pattern could emerge, potentially contributing to the above average late winter and spring rainfall outlook for parts of Australia.

**Monthly sea surface temperature anomalies for NINO3.4 region**

The Indian Ocean Dipole (IOD) is currently neutral and while the Bureau’s model suggests it is likely to remain neutral, half of the international models surveyed suggest a negative IOD could develop in late winter or spring. A negative IOD typically brings above average rainfall to southern Australia during winter and spring.

**Monthly sea surface temperature anomalies for IOD region**
The Southern Annular Mode (SAM) is currently neutral and expected to remain neutral for the next fortnight, having little influence on Australia’s climate. The SAM refers to the north-south shift of the band of rain-bearing westerly winds and weather systems in the Southern Ocean compared to the usual position. When SAM is neutral during winter, the top of this band of westerly winds is over southern Australia and the sub-tropical ridge, a belt of high-pressure systems, is over northern Australia. This allows for cold fronts and troughs to move over southern Australia, bringing normal winter rainfall.

The Bureau of Meteorology’s ENSO Outlook remains at La Niña WATCH. This means that while the El Niño-Southern Oscillation is currently neutral, the chance of a La Niña forming during the southern hemisphere spring has increased to around 50% - twice the normal likelihood.

The cooling trend in the tropical Pacific Ocean has eased during the past fortnight, however more than half the international climate models suggest the cooling will approach or exceed La Niña thresholds in spring.

A La Niña WATCH is not a guarantee that a La Niña will occur; it is an indication that some of the typical precursors of an event are in place. The potential impact of a La Niña event on agricultural production across southern Australia decreases if the event forms during spring or summer, as it has a shorter time to strengthen and will persist for a shorter time before it decays in late summer.
1.3. National Climate Outlook

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.


The latest rainfall outlook released by the Bureau of Meteorology suggests above average rainfall is likely for isolated parts of north-western Australia during July 2020, with below average rainfall likely across parts of south-eastern Australia and Western Australia. The rainfall outlook for July to September 2020 suggests that wetter than average conditions are likely for parts of eastern Australia and drier than average conditions are likely for parts of northern Western Australia. There are roughly equal chances of a wetter or drier than average three months across the remainder of Australia (Bureau of Meteorology ‘National Climate Outlook’, 2 July 2019).

**Chance of exceeding the median rainfall July to September 2020**

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Issued: 18/07/2020
The outlook for July 2020 suggests that there is a 75% chance of rainfall totals between 10 and 50 millimetres across south-eastern, south-western and far southern Australia. Rainfall totals in excess of 50 millimetres are likely across isolated parts of south-eastern Australia, far south-western Australia and much of Tasmania.

In cropping regions there is a 75% chance of rainfall totals between 10 and 25 millimetres across much of New South Wales, Victoria, South Australia and Western Australia. In Queensland there is a 75% chance of rainfall totals between 1 and 10 millimetres across southern growing regions for July 2020.

Rainfall totals that have a 75% chance of occurring July 2020
The outlook for July to September 2020 suggests that there is a 75% chance of rainfall totals between 50 and 200 millimetres across south-eastern, south-western, and far southern Australia. Rainfall totals in excess of 200 millimetres are likely across isolated parts of south-eastern and south-western Australia and northern and western Tasmania.

In many areas where soil moisture is close to average to above average for this time of year, there is a good chance of recording July to September rainfall totals sufficient to sustain crop and pasture production. In cropping regions, there is a 75% chance of receiving between 50 and 100 millimetres across most of New South Wales, Victoria, South Australia and Western Australia. Across cropping regions in Queensland there is a 75% chance of rainfall totals between 10 millimetres in the north and up to 50 millimetres for most remaining areas between July and September 2020.

Rainfall totals that have a 75% chance of occurring July to September 2020
The temperature outlook for July to September 2020 indicates that daytime and night-time temperatures are likely to be between 1°C to 2°C above the 1990-2012 average across parts of the northern half of Australia. Average (-1°C to 1°C) daytime and night-time temperatures are likely for the remainder of the country (Bureau of Meteorology ‘National Climate Outlook’, 2 July 2020).

**Predicted maximum temperature anomaly for July to September 2020**

**Predicted minimum temperature anomaly for July to September 2020**
1.4. Rainfall forecast for the next eight days

A low-pressure system over south-eastern Australia is expected to bring rainfall, thunderstorms and snow during the next eight days. Rainfall totals of between 10 and 50 millimetres are forecast for much of central and eastern New South Wales, south-eastern Queensland, eastern Victoria and south-western Western Australia. Falls in excess of 50 millimetres are forecast across parts of the New South Wales coastline.

In cropping regions, rainfall of between 10 and 50 millimetres is expected across much of New South Wales, central and southern Queensland, and parts of eastern Victoria and the west of Western Australia. Little to no rainfall is expected across remaining cropping regions during the next eight days.

Total forecast rainfall (mm) for the period 9 July 2020 to 16 July 2020
2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) increased by 137 gigalitres (GL) between 1 July 2020 and 8 July 2020. The current volume of water held in storage is 11,020 GL, which represents 44% of total capacity. This is 20% or 1,873 GL more than at the same time last year.

Water storages in the Murray-Darling Basin, 2013–2020

![Water storage data is sourced from the Bureau of Meteorology.](image)

Allocation prices in the Victorian Murray below the Barmah Choke decreased from $385 per ML on 2 July 2020 to $345 per ML on 9 July 2020. Prices are lower in the Goulburn-Broken, Murrumbidgee, and regions above the Barmah Choke, due to binding of the Goulburn inter-valley trade and Murrumbidgee export limits, and the Barmah Choke trade constraint.

<table>
<thead>
<tr>
<th>Region</th>
<th>$/ML</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSW Murray Above</td>
<td>330</td>
</tr>
<tr>
<td>NSW Murrumbidgee</td>
<td>300</td>
</tr>
<tr>
<td>VIC Goulburn-Broken</td>
<td>295</td>
</tr>
<tr>
<td>VIC Murray Below</td>
<td>345</td>
</tr>
</tbody>
</table>

Surface water trade activity, Southern Murray–Darling Basin

![Surface water trade activity](image)

The trades shown reflect estimated market activity and do not encompass all register trades. The price is shown for the VIC Murray below the Barmah choke. Historical prices (before 1 July 2019) are ABARES estimates after removing outliers from BOM water register data. Prices after 1 July 2019 and prior to the 30 October 2019 reflect recorded transaction prices as sourced from Ruralco. Prices after the 30 October 2019 are sourced from Waterflow. Data for volume traded is sourced from the BOM water register. Data shown is current at 9 July 2020.

## 3. Commodities

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Week ended</th>
<th>Unit</th>
<th>Latest price</th>
<th>Previous week</th>
<th>Weekly change</th>
<th>Price 12 months ago</th>
<th>Annual 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>AUD/USD Exchange rate</td>
<td>08-Jul</td>
<td>A$/US$</td>
<td>0.67</td>
<td>0.69</td>
<td>-3%</td>
<td>0.70</td>
<td>-5%</td>
</tr>
<tr>
<td>Wheat – US no. 2 hard red winter wheat, fob Gulf</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>211</td>
<td>216</td>
<td>2%</td>
<td>217</td>
<td>2%</td>
</tr>
<tr>
<td>Corn – US no. 2 yellow corn, fob Gulf</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>157</td>
<td>154</td>
<td>2%</td>
<td>192</td>
<td>-18%</td>
</tr>
<tr>
<td>Canola – Rapeseed, Canada, fob Vancouver</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>366</td>
<td>374</td>
<td>-2%</td>
<td>365</td>
<td>0%</td>
</tr>
<tr>
<td>Cotton – Cotlook 'A' Index</td>
<td>08-Jul</td>
<td>USc/lb</td>
<td>70</td>
<td>69</td>
<td>2%</td>
<td>74</td>
<td>-5%</td>
</tr>
<tr>
<td>Sugar – Intercontinental Exchange, nearby futures, no.11 contract</td>
<td>01-Jul</td>
<td>USc/lb</td>
<td>12</td>
<td>12</td>
<td>3%</td>
<td>12</td>
<td>-1%</td>
</tr>
<tr>
<td>Wool – Eastern Market Indicator</td>
<td>08-Jul</td>
<td>Ac/kg clean</td>
<td>1,134</td>
<td>1,116</td>
<td>2%</td>
<td>1,887</td>
<td>-40%</td>
</tr>
<tr>
<td>Wool – Western Market Indicator</td>
<td>08-Jul</td>
<td>Ac/kg clean</td>
<td>1,202</td>
<td>1,185</td>
<td>1%</td>
<td>2,095</td>
<td>-43%</td>
</tr>
<tr>
<td><strong>Selected Australian grain export prices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milling Wheat – APW, Port Adelaide, SA</td>
<td>08-Jul</td>
<td>A$/t</td>
<td>332</td>
<td>316</td>
<td>5%</td>
<td>354</td>
<td>-6%</td>
</tr>
<tr>
<td>Feed Wheat – ASW, Port Adelaide, SA</td>
<td>08-Jul</td>
<td>A$/t</td>
<td>316</td>
<td>302</td>
<td>5%</td>
<td>354</td>
<td>-11%</td>
</tr>
<tr>
<td>Feed Barley – Port Adelaide, SA</td>
<td>08-Jul</td>
<td>A$/t</td>
<td>283</td>
<td>271</td>
<td>4%</td>
<td>345</td>
<td>-18%</td>
</tr>
<tr>
<td>Canola – Kwinana, WA</td>
<td>08-Jul</td>
<td>A$/t</td>
<td>659</td>
<td>631</td>
<td>4%</td>
<td>592</td>
<td>11%</td>
</tr>
<tr>
<td>Grain Sorghum – Brisbane, QLD</td>
<td>08-Jul</td>
<td>A$/t</td>
<td>384</td>
<td>366</td>
<td>5%</td>
<td>377</td>
<td>2%</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>01-Jul</td>
<td>Ac/kg cwt</td>
<td>759</td>
<td>760</td>
<td>0%</td>
<td>504</td>
<td>51%</td>
</tr>
<tr>
<td>Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic</td>
<td>01-Jul</td>
<td>Ac/kg cwt</td>
<td>600</td>
<td>631</td>
<td>-5%</td>
<td>464</td>
<td>29%</td>
</tr>
<tr>
<td>Lamb – Eastern States Trade Lamb Indicator</td>
<td>01-Jul</td>
<td>Ac/kg cwt</td>
<td>782</td>
<td>867</td>
<td>-10%</td>
<td>641</td>
<td>22%</td>
</tr>
<tr>
<td>Pig – Eastern Seaboard (60.1–75 kg), average of buyers &amp; sellers</td>
<td>24-Jun</td>
<td>Ac/kg cwt</td>
<td>299</td>
<td>289</td>
<td>3%</td>
<td>344</td>
<td>-13%</td>
</tr>
<tr>
<td>Goat – Eastern States (12.1–16 kg)</td>
<td>01-Jul</td>
<td>Ac/kg cwt</td>
<td>723</td>
<td>723</td>
<td>0%</td>
<td>938</td>
<td>-23%</td>
</tr>
<tr>
<td>Live cattle – Light steers ex Darwin to Indonesia</td>
<td>01-Jul</td>
<td>Ac/kg lwt</td>
<td>340</td>
<td>340</td>
<td>0%</td>
<td>290</td>
<td>17%</td>
</tr>
<tr>
<td>Live sheep – Live wether (Muchea WA saleyard) to Middle East</td>
<td>11-Dec</td>
<td>$/head</td>
<td>105</td>
<td>140</td>
<td>-25%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Indicator</td>
<td>Week ended</td>
<td>Unit</td>
<td>Latest price</td>
<td>Previous week</td>
<td>Weekly change</td>
<td>Price 12 months ago</td>
<td>Annual change</td>
</tr>
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<td>---------------------------------------</td>
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</tr>
<tr>
<td>Global Dairy Trade (GDT) weighted average prices *</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dairy – Whole milk powder</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>3,208</td>
<td>2,829</td>
<td>13%</td>
<td>3,226</td>
<td>-1%</td>
</tr>
<tr>
<td>Dairy – Skim milk powder</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>2,694</td>
<td>2,609</td>
<td>3%</td>
<td>2,047</td>
<td>32%</td>
</tr>
<tr>
<td>Dairy – Cheddar cheese</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>3,762</td>
<td>3,631</td>
<td>4%</td>
<td>4,205</td>
<td>-11%</td>
</tr>
<tr>
<td>Dairy – Anhydrous milk fat</td>
<td>08-Jul</td>
<td>US$/t</td>
<td>3,981</td>
<td>3,993</td>
<td>0%</td>
<td>6,354</td>
<td>-37%</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

- **AUD/USD Exchange rate**
- **Wheat – US no. 2 hard red winter wheat, fob Gulf**
- **Corn – US no. 2 yellow corn, fob Gulf**
- **Canola – Rapeseed, Canada, fob Vancouver**
3.2. Selected domestic crop indicator prices

- Milling Wheat – APW, Port Adelaide, SA

- Feed Wheat – ASW, Port Adelaide, SA

- Feed Barley – Port Adelaide, SA
3.3. Selected domestic livestock indicator prices

- **Beef – Eastern Young Cattle Indicator**

- **Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic**

- **Lamb – Eastern States Trade Lamb Indicator**

- **Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers**
3.4. Global Dairy Trade (GDT) weighted average prices

Dairy – Whole milk powder

Dairy – Skim milk powder

Dairy – Cheddar cheese

Dairy – Anhydrous milk fat
3.5. Selected fruit and vegetable prices

![Graphs showing percentage change in selected fruit and vegetable prices from 6/01/2018 to 7/03/2020 for WATERMELONS-Seedless-Kg, KIWIFUIT-Hayward-BulkPk, BLUEBERRIES--125g, and STRAWBERRIES--250g.](image_url)
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
- 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