



Weekly Australian Climate, Water and Agricultural Update



No. 4/2021

4 February 2021

Summary of key issues

- During the 7 days to 3 February 2021, troughs, low-pressure systems and weak cold fronts generated showers and thunderstorm activity across parts of northern, western and south-eastern Australia. In those summer cropping regions that recorded rainfall this week, these falls are likely to benefit the production prospects and yield potential of dryland crops (see Section 1.1).
- In summer cropping regions, January rainfall was average across New South Wales and Queensland. Rainfall was above average to extremely high across isolated parts of northern and western New South Wales and central and southern Queensland, and below average across isolated parts of northern and eastern Queensland. Despite below average January rainfall across parts of northern Australia, rainfall totals and stored soil moisture were sufficient to maintain average to above average pasture production and support livestock restocking confidence (see Section 1.3).
- Over the next 8 days, troughs, low-pressure systems, onshore flow and a strong cold front are expected to generate showers and storms over parts of northern, western and eastern Australia.
- In Australia's summer cropping regions, over the next 8 days rainfall totals of between 10 and 50 millimetres are expected across western and central New South Wales, and western and northern Queensland. Rainfall of between 5 and 10 millimetres is expected across most summer cropping regions in north-eastern New South Wales and south-eastern Queensland. Little to no rainfall is expected across the remaining parts of south-eastern Queensland summer cropping regions (see Section 1.5).
- Water storage levels in the Murray-Darling Basin (MDB) decreased by 33 gigalitres (GL) between 27 January 2021 and 3 February 2021. The current volume of water held in storage is 13,525 GL, which represents 53% of total capacity.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$124 per ML to \$105 per ML between 28 January 2021 and 4 February 2021. Prices are lower in the Goulburn-Broken, Murrumbidgee and regions above the Barmah Choke, due to binding of the Goulburn intervalley trade and Murrumbidgee export limits, and the Barmah Choke trade constraint.

1. Climate

1.1. Rainfall this week

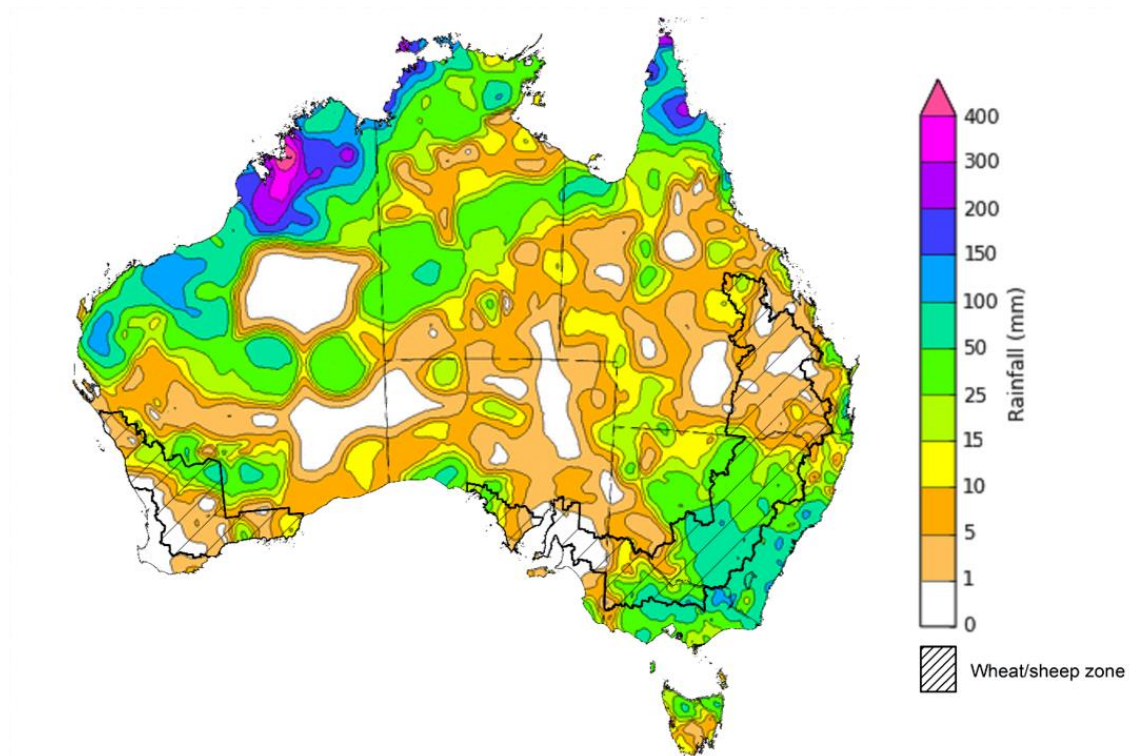
During the 7 days to 3 February 2021, troughs, low-pressure systems and weak cold fronts generated showers and thunderstorm activity across parts of northern, western and south-eastern Australia.

Rainfall totals of between 15 and 100 millimetres were recorded across much of New South Wales, Victoria and the northern half of Western Australia, and parts of northern Queensland, southern Western Australia and the centre and north of the Northern Territory. Similar rainfall totals were recorded across scattered parts of the remainder of Queensland and South Australia. Rainfall totals in excess of 100 millimetres were recorded across parts of northern Western Australia and isolated parts of the northern Queensland and the north of the Northern Territory.

In Australia's summer cropping regions, rainfall totals of between 10 and 50 millimetres were generally restricted to northern New South Wales and isolated parts of northern Queensland during the 7 days to 3 February 2021.

In those summer cropping regions that recorded rainfall during the 7 days to 3 February 2021, these falls are likely to benefit the production prospects and yield potential of dryland crops.

Rainfall for the week ending 3 February 2021



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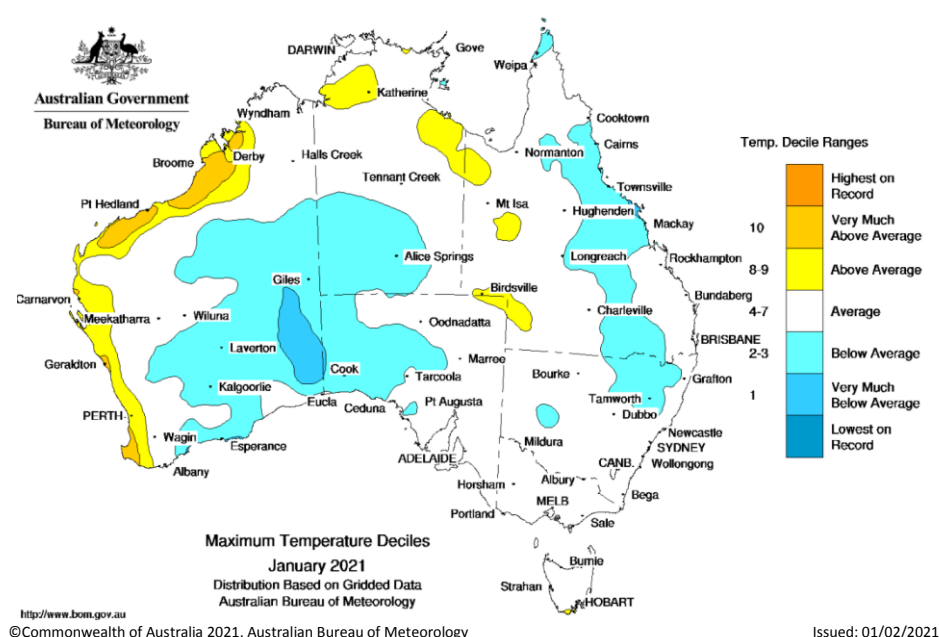
Note: The rainfall analyses and associated maps utilise data contained in the Bureau of Meteorology climate database, the Australian Data Archive for Meteorology (ADAM). The analyses are initially produced automatically from real-time data with limited quality control. They are intended to provide a 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. Monthly temperatures

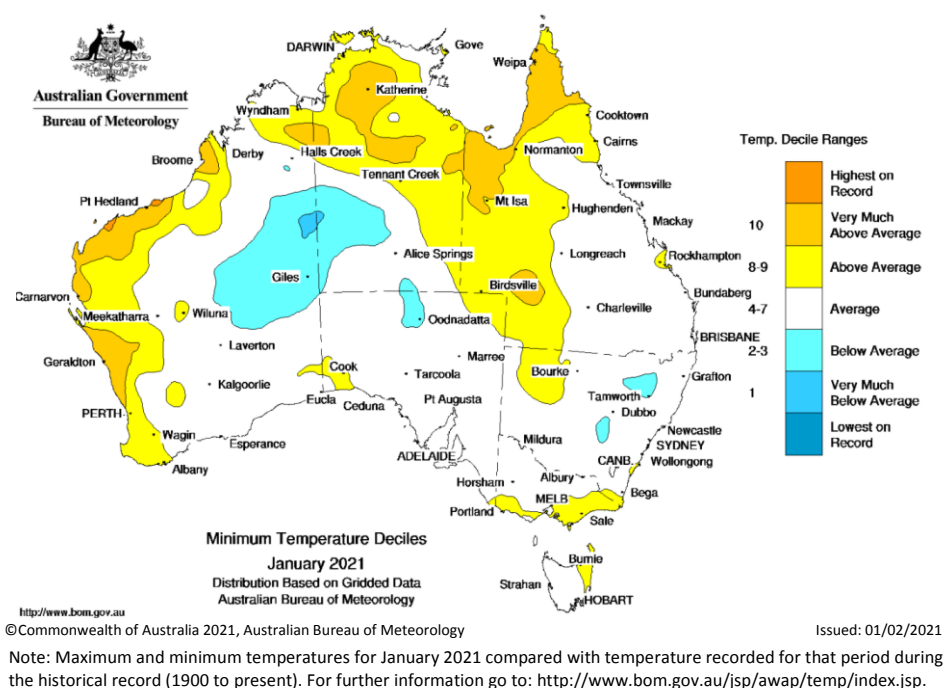
January 2021 was warmer than average nationally with a national mean temperature of 0.26°C above average and a mean minimum temperature of 0.46°C above average.

Maximum temperatures for January were very much below average to below average across large parts of central-western and eastern Australia. Similarly, minimum temperatures were below average across parts of central-western Australia. Minimum temperatures were very much above average to above average across large parts of the western coastline, northern Australia and western Queensland. Maximum temperatures were very much above average to above average across the western coastline. Across eastern Australia, average minimum temperatures coupled with substantial rainfall are likely to have benefitted production prospects of dryland summer crops.

Maximum temperature deciles for January 2021



Minimum temperature deciles for January 2021



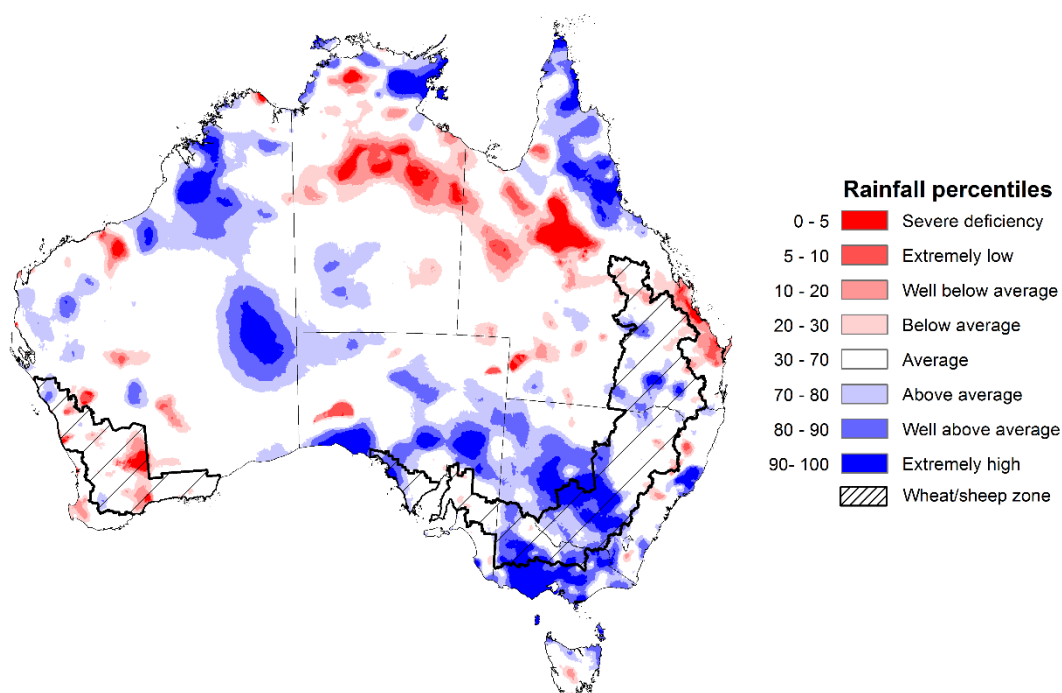
1.3. Monthly rainfall

Rainfall during January 2021 was below average nationally. Rainfall was severely deficient to below average across parts of eastern and north-western Queensland, Western Australia and the centre of the Northern Territory. Rainfall was above average to extremely high across much of Victoria and parts of western New South Wales, northern Queensland, southern South Australia, northern and eastern Western Australia and the far north of the Northern Territory.

La Niña remained at moderate levels in January. The Southern Annular Mode (SAM) was positive at the start of the month and generally neutral for the remainder of January. During summer, La Niña and a positive SAM typically increase the chance of rainfall in northern and eastern Australia. When SAM is neutral it has low influence on rainfall. Active monsoon conditions and an active Madden–Julian Oscillation (MJO) during January were influencing the development of tropical lows, cyclones and above average rainfall across parts of northern Australia.

In summer cropping regions, January rainfall was generally average across New South Wales and Queensland. Rainfall was above average to extremely high across isolated parts of northern and western New South Wales, and central and southern Queensland. It was below average across isolated parts of northern and eastern Queensland. The substantial rainfall likely benefitted the production prospects and yield potential of dryland crops in eastern Australia. Despite below average January rainfall across parts of northern Australia, rainfall totals and stored soil moisture have been sufficient to maintain average to above average pasture production and support livestock restocking confidence.

Rainfall percentiles for January 2021



Source: Bureau of Meteorology

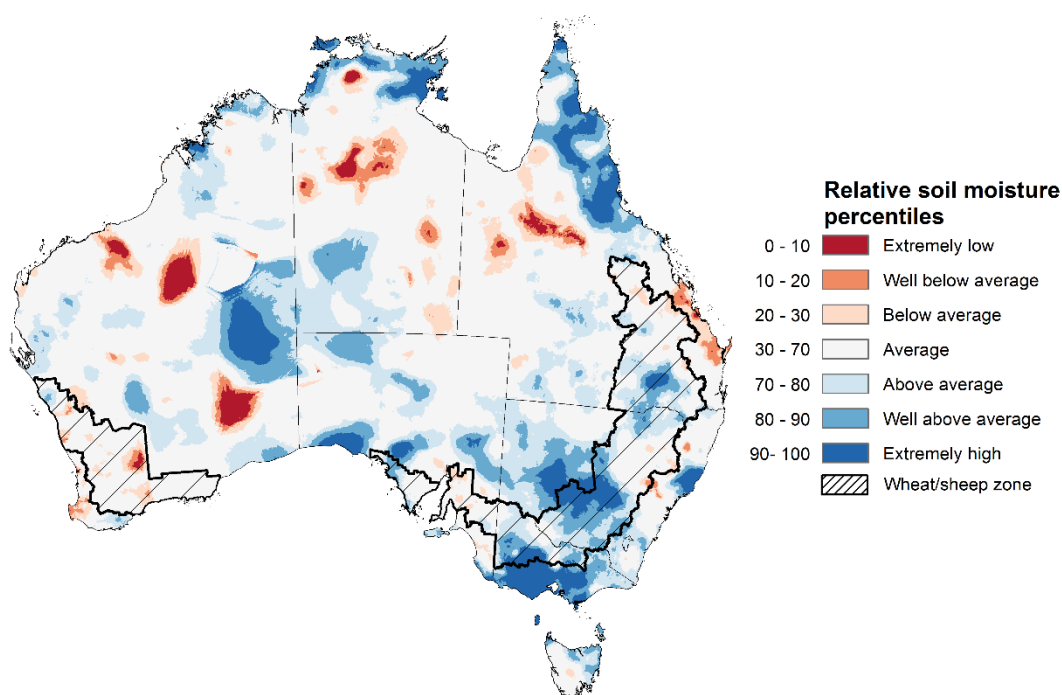
Note: Rainfall for January 2021 is compared with rainfall recorded for that period during the historical record (1900 to present). For further information, go to <http://www.bom.gov.au/jsp/awap/>

1.4. Monthly soil moisture

Upper layer soil moisture in January 2021 was above average to extremely high for this time of year across much of south-eastern Australia and parts of central and northern Australia, largely reflecting rainfall patterns during the month. Modelled soil moisture was extremely low to below average across isolated parts of northern and western Australia. Upper layer soil moisture is less important after plant germination and establishment has occurred because plants can access lower soil moisture.

Relative upper layer soil moisture was above average to extremely high for this time of year across cropping regions in northern and western New South Wales and southern Queensland. Soil moisture was generally average across remaining cropping regions in Queensland and New South Wales.

Modelled upper layer soil moisture for January 2021



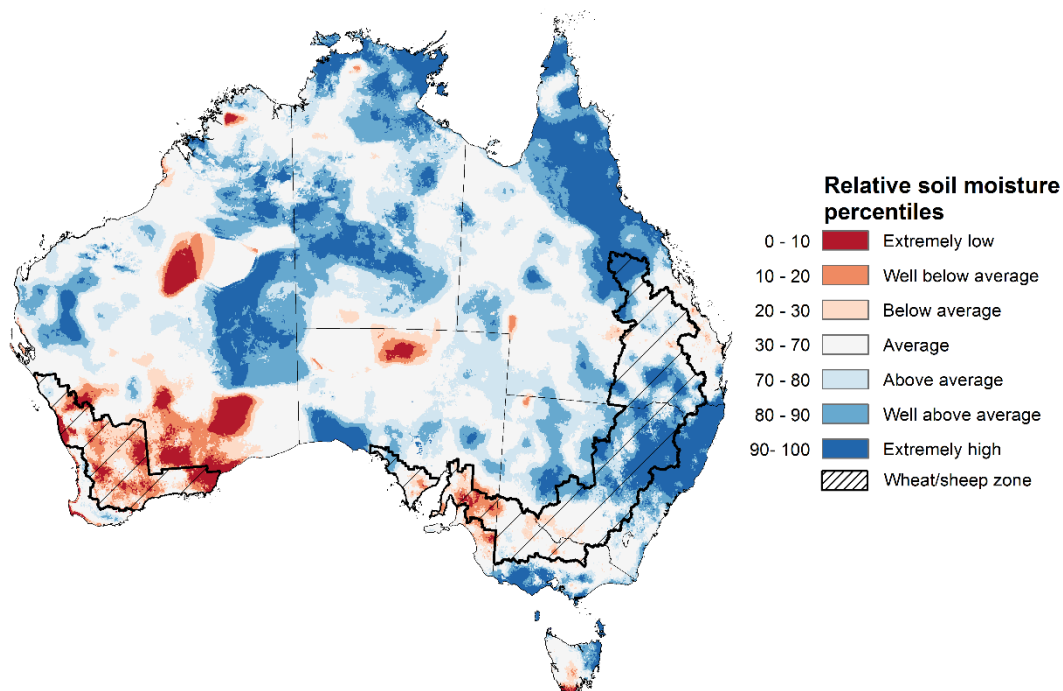
Source: Bureau of Meteorology ([Australian Water Resources Assessment Landscape model](#))

Note: This map shows the levels of modelled upper layer soil moisture (0 to 10 centimetres) during January 2021. This map shows how modelled soil conditions during January 2021 compare with January conditions modelled over the reference period (1911 to 2016). Dark blue areas on the maps were much wetter in January 2021 than during the reference period. The dark red areas were much drier than during the reference period. 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 is therefore useful indicator of the availability of water, particularly for germinating seed.

Lower layer soil moisture for January 2021 was above average to extremely high for this time of year across large parts of northern, central and eastern Australia. Lower layer soil moisture was extremely low to below average across parts of Western Australia and South Australia.

In summer cropping regions, lower layer soil moisture was average to extremely high for much of northern New South Wales and parts of southern and northern Queensland. Soil moisture is average across remaining summer cropping regions.

Modelled lower layer soil moisture for January 2021



Source: Bureau of Meteorology ([Australian Water Resources Assessment Landscape model](#))

Note: This map shows the levels of modelled lower layer soil moisture (10 to 100 centimetres) during January 2021. This map shows how modelled soil conditions during January 2021 compare with January conditions modelled over the reference period (1911 to 2016). Dark blue areas on the maps were much wetter in January 2021 than during the reference period. The dark red areas were much drier than during the reference period. The bulk of plant roots occur in the top 20 centimetres of the soil profile. 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.

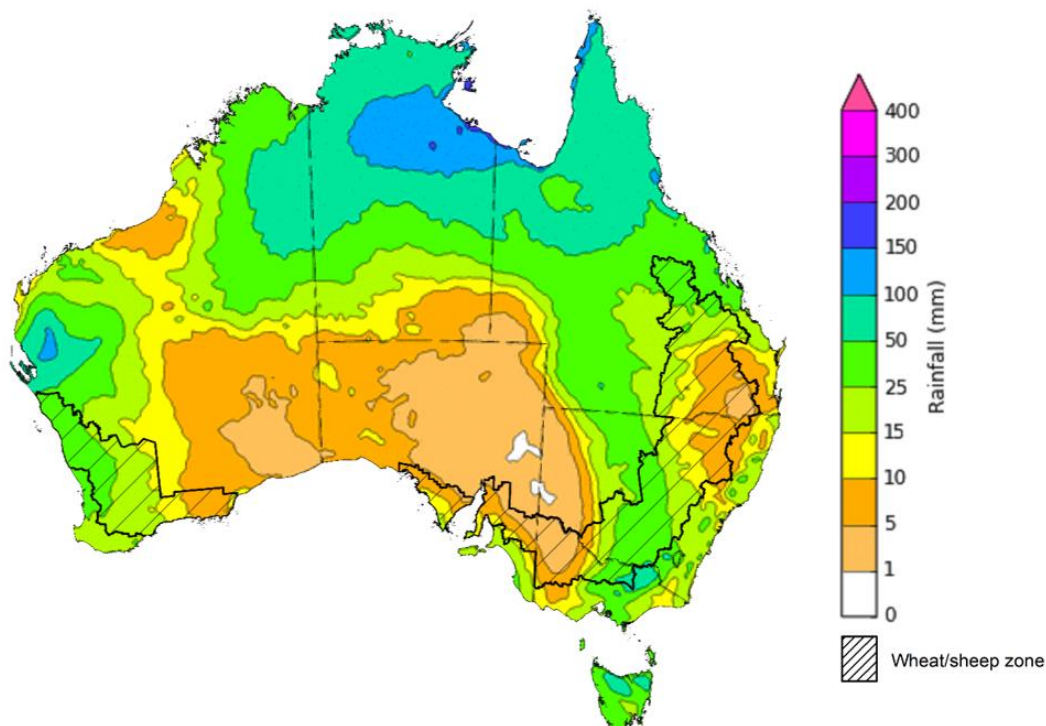
1.5. Rainfall forecast for the next eight days

Troughs, low-pressure systems, onshore flow and a strong cold front are expected to generate showers and storms over parts of northern, western and eastern Australia during the next 8 days.

Rainfall totals of between 10 and 50 millimetres are forecast for much of New South Wales, central and eastern Victoria, central and south-western Queensland, western and northern Western Australia, the south of the Northern Territory and Tasmania. Rainfall totals in excess of 50 millimetres are expected across parts of northern Queensland, western and northern Western Australia and the northern half of the Northern Territory, as well as isolated parts of eastern Victoria and northern Tasmania.

In Australia's summer cropping regions, rainfall of between 10 and 50 millimetres is expected across western and central New South Wales and western and northern Queensland. Rainfall of between 5 and 10 millimetres is expected across most summer cropping regions in north-eastern New South Wales and south-eastern Queensland. Little to no rainfall is expected across the remaining parts of south-eastern Queensland summer cropping regions.

Total forecast rainfall (mm) for the period 4 February to 11 February 2021



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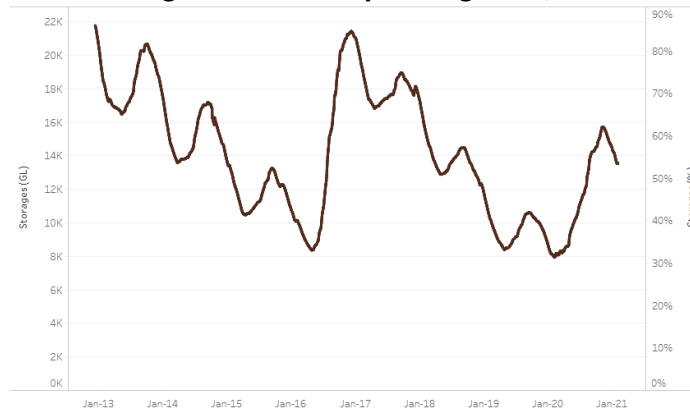
Note: This rainfall forecast is produced from computer models. As the model outputs are not altered by weather forecasters, it is important to check local forecasts and warnings issued by the Bureau of Meteorology.

2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) decreased by 33 gigalitres (GL) between 27 January 2021 and 3 February 2021. The current volume of water held in storage is 13,525 GL, which represents 53% of total capacity. This is 69% or 5,534 GL more than at the same time last year.

Water storages in the Murray-Darling Basin, 2013–2021

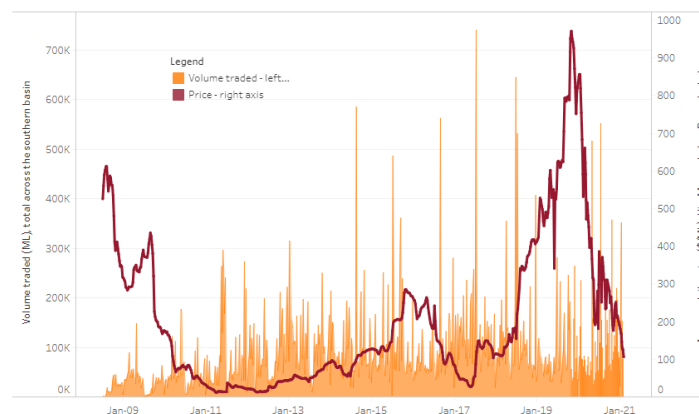


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$124 per ML to \$105 per ML between 28 January 2021 and 4 February 2021. Prices are lower in the Goulburn-Broken, Murrumbidgee and regions above the Barmah Choke, due to binding of the Goulburn intervalley trade and Murrumbidgee export limits, and the Barmah Choke trade constraint.

Region	\$/ML
NSW Murray Above	92
NSW Murrumbidgee	42
VIC Goulburn-Broken	90
VIC Murray Below	105

Surface water trade activity, Southern Murray–Darling Basin



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 4 February 2021.

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/products/weekly_update/weekly-update-040221

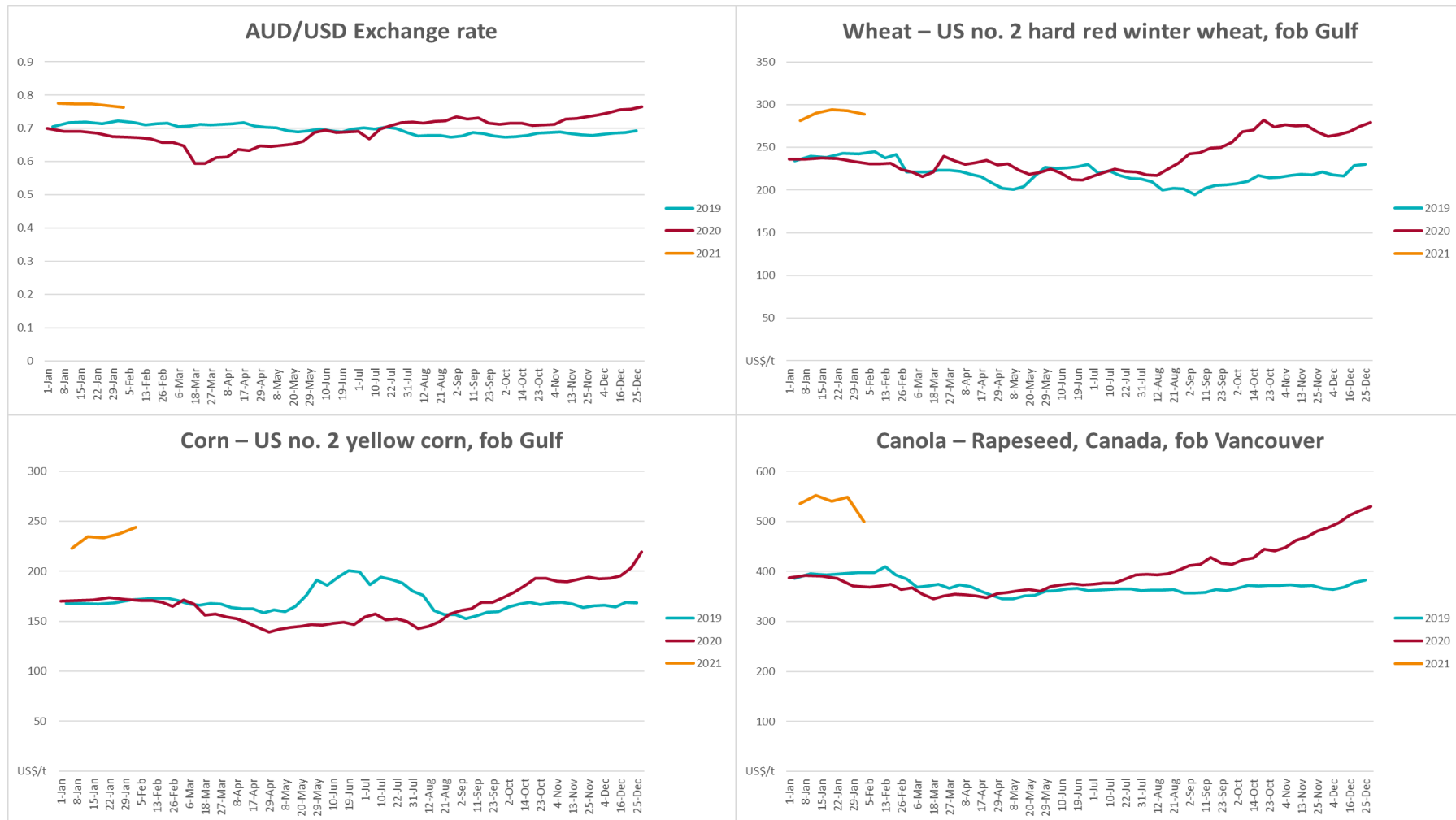
3. Commodities

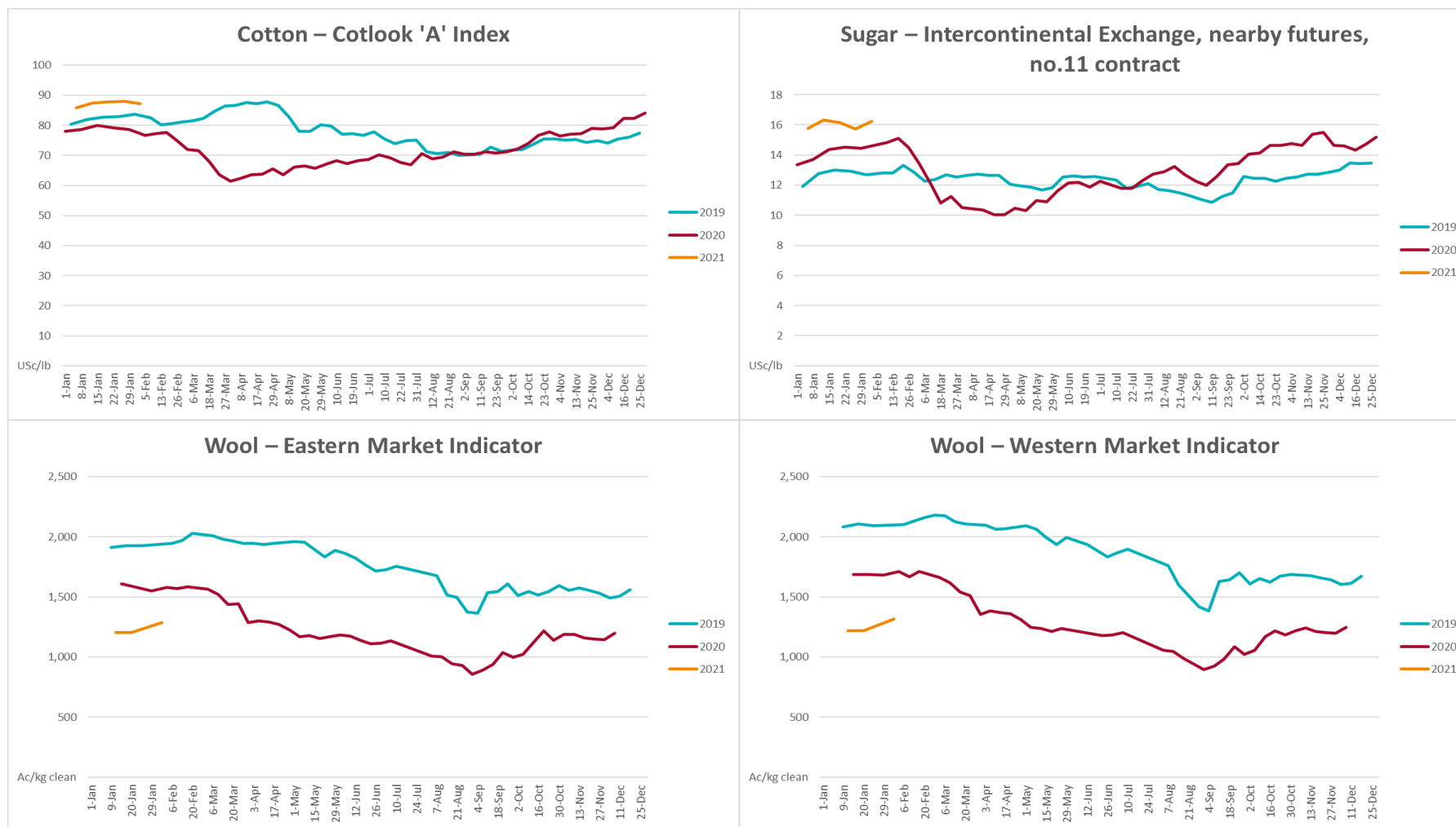
Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	03-Feb	A\$/US\$	0.76	0.77	-1%	0.67	14%
Wheat – US no. 2 hard red winter wheat, fob Gulf	03-Feb	US\$/t	289	293	-1%	230	25%
Corn – US no. 2 yellow corn, fob Gulf	03-Feb	US\$/t	244	237	3%	170	43%
Canola – Rapeseed, Canada, fob Vancouver	03-Feb	US\$/t	499	548	-9%	371	35%
Cotton – Cotlook 'A' Index	03-Feb	USc/lb	87	88	-1%	77	13%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	03-Feb	USc/lb	16	16	3%	15	11%
Wool – Eastern Market Indicator	03-Feb	Ac/kg clean	1,285	1,202	7%	1,555	-17%
Wool – Western Market Indicator	03-Feb	Ac/kg clean	1,313	1,219	8%	1,621	-19%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	03-Feb	A\$/t	357	358	0%	373	-4%
Feed Wheat – ASW, Port Adelaide, SA	03-Feb	A\$/t	354	354	0%	369	-4%
Feed Barley – Port Adelaide, SA	03-Feb	A\$/t	305	308	-1%	329	-7%
Canola – Kwinana, WA	03-Feb	A\$/t	686	676	1%	658	4%
Grain Sorghum – Brisbane, QLD	03-Feb	A\$/t	385	379	2%	477	-19%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	03-Feb	Ac/kg cwt	885	882	0%	505	75%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	27-Jan	Ac/kg cwt	594	574	3%	553	7%
Lamb – Eastern States Trade Lamb Indicator	27-Jan	Ac/kg cwt	850	825	3%	815	4%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	13-Jan	Ac/kg cwt	367	367	0%	405	-9%
Goats – Eastern States (12.1–16 kg)	27-Jan	Ac/kg cwt	818	818	0%	816	0%
Live cattle – Light steers ex Darwin to Indonesia	27-Jan	Ac/kg lwt	355	355	0%	315	13%
Live sheep – Live wethers (Mucnea WA saleyard) to Middle East	18-Nov	\$/head	118	108	9%	N/A	N/A

Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Global Dairy Trade (GDT) weighted average prices ^a							
Dairy – Whole milk powder	03-Feb	US\$/t	3,458	3,380	2%	2,674	29%
Dairy – Skim milk powder	03-Feb	US\$/t	3,198	3,243	-1%	2,042	57%
Dairy – Cheddar cheese	03-Feb	US\$/t	4,178	4,082	2%	3,263	28%
Dairy – Anhydrous milk fat	03-Feb	US\$/t	5,463	5,398	1%	4,936	11%

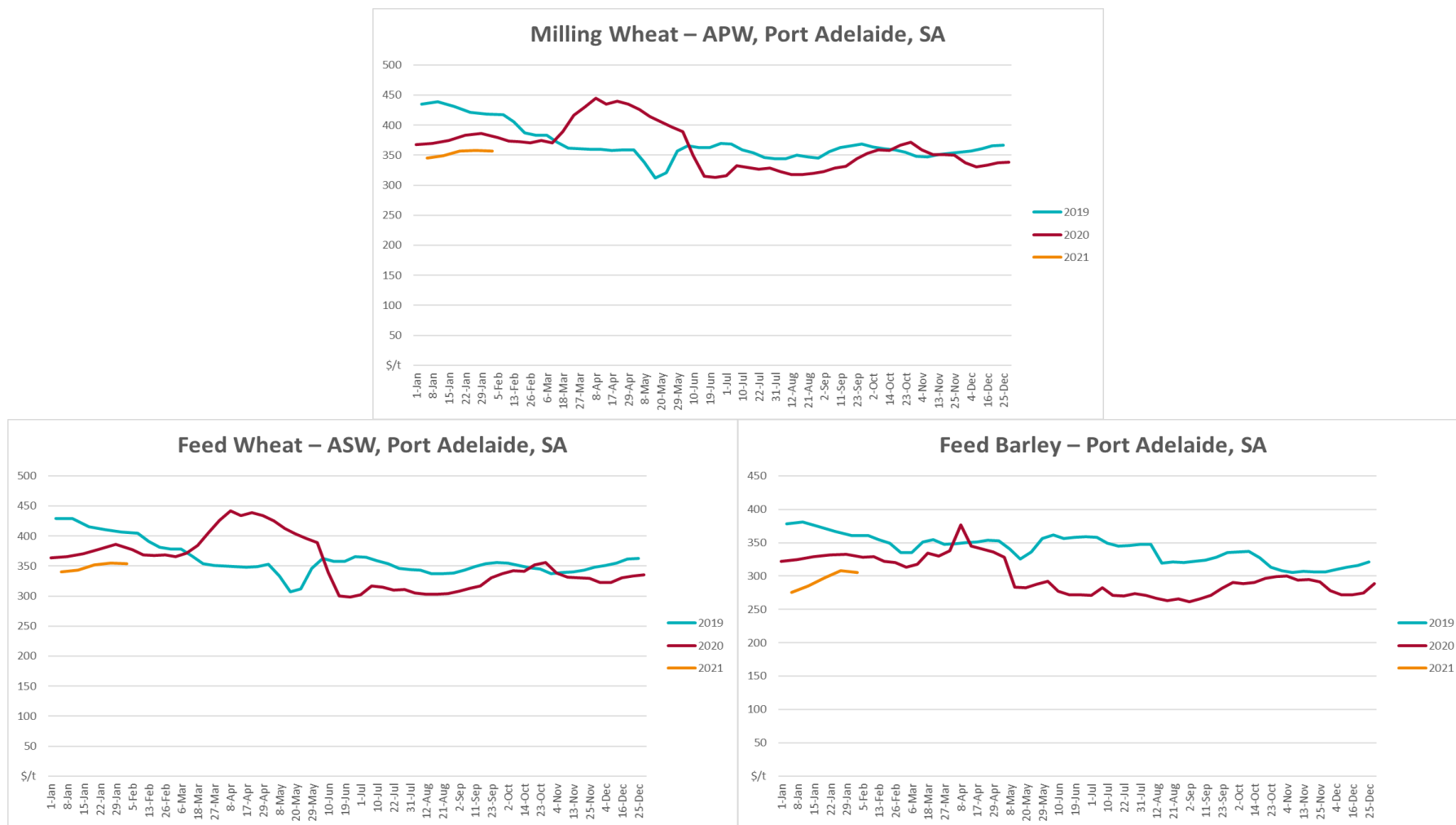
a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

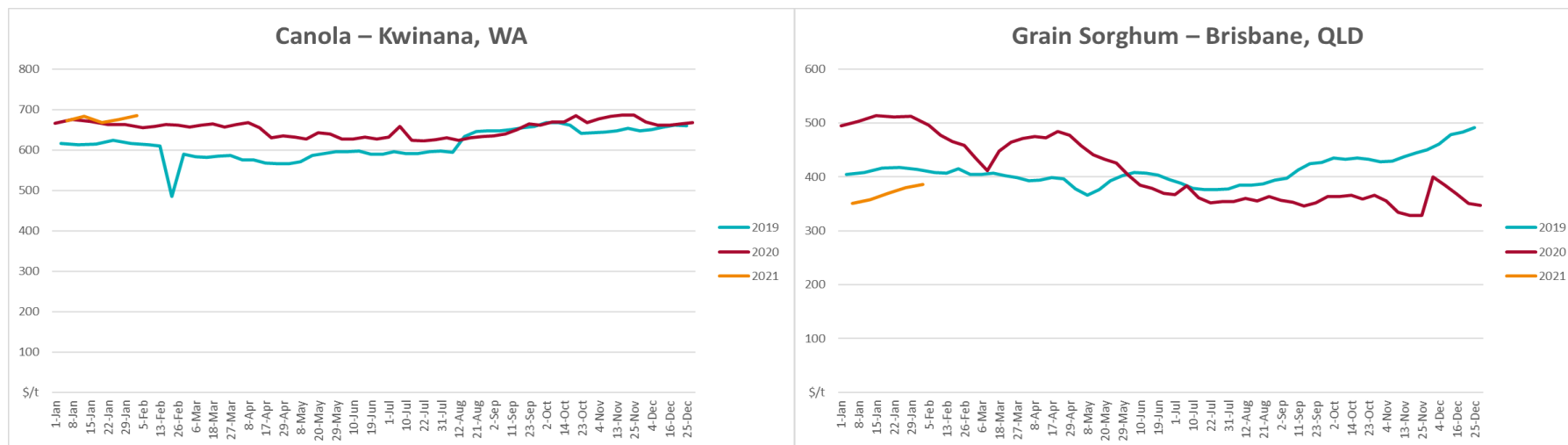
3.1. Selected world indicator prices



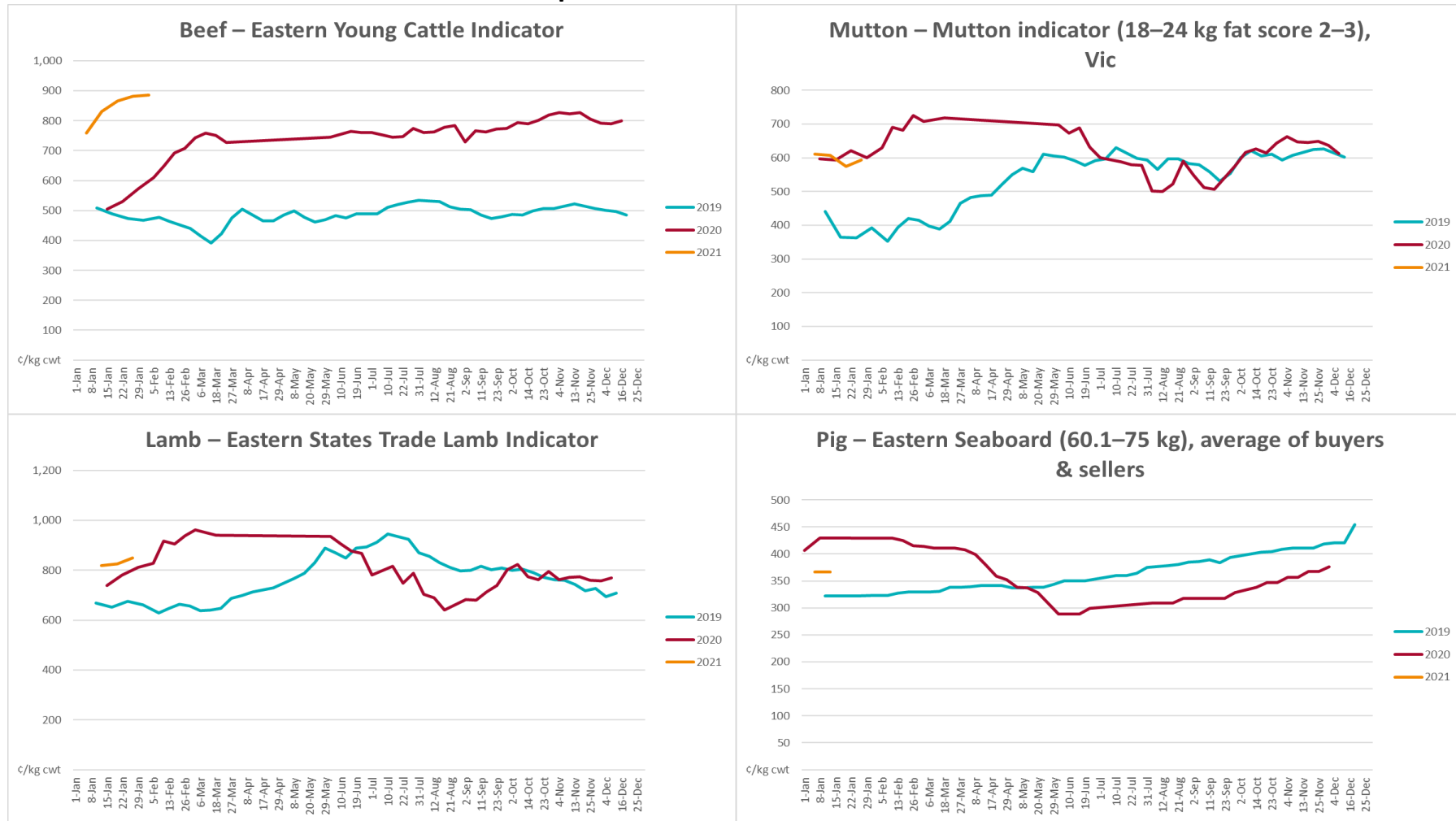


3.2. Selected domestic crop indicator prices

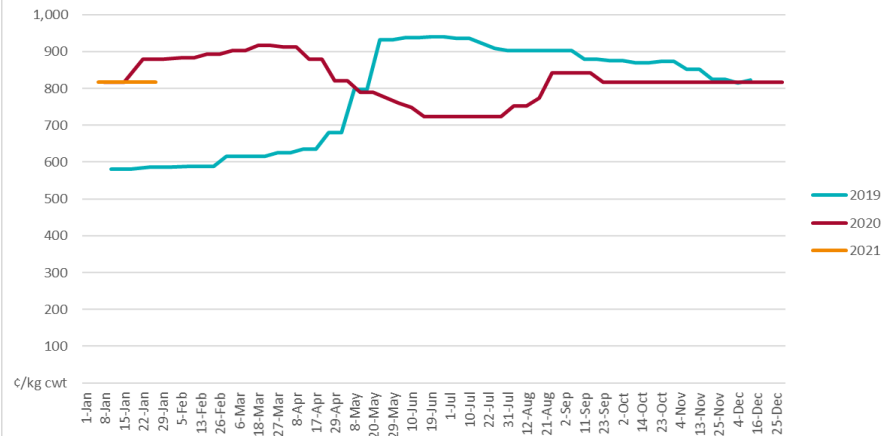




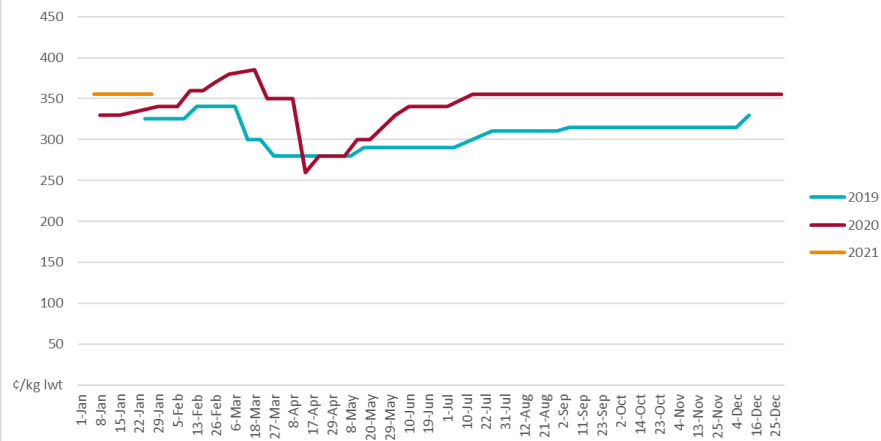
3.3. Selected domestic livestock indicator prices



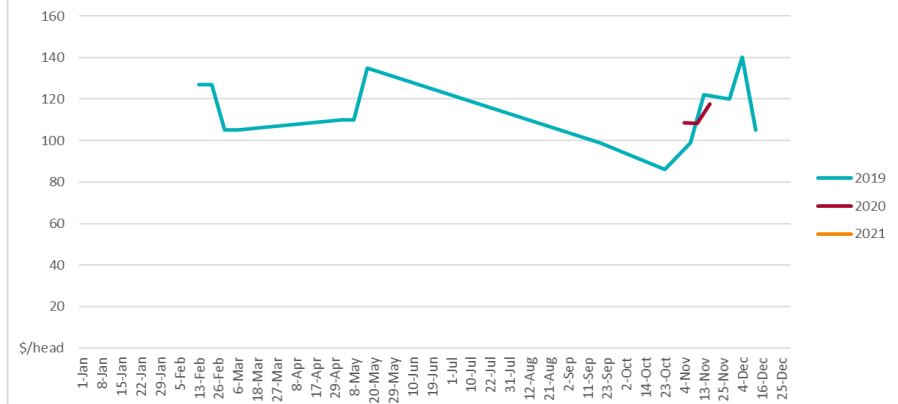
Goats – Eastern States (12.1–16 kg)



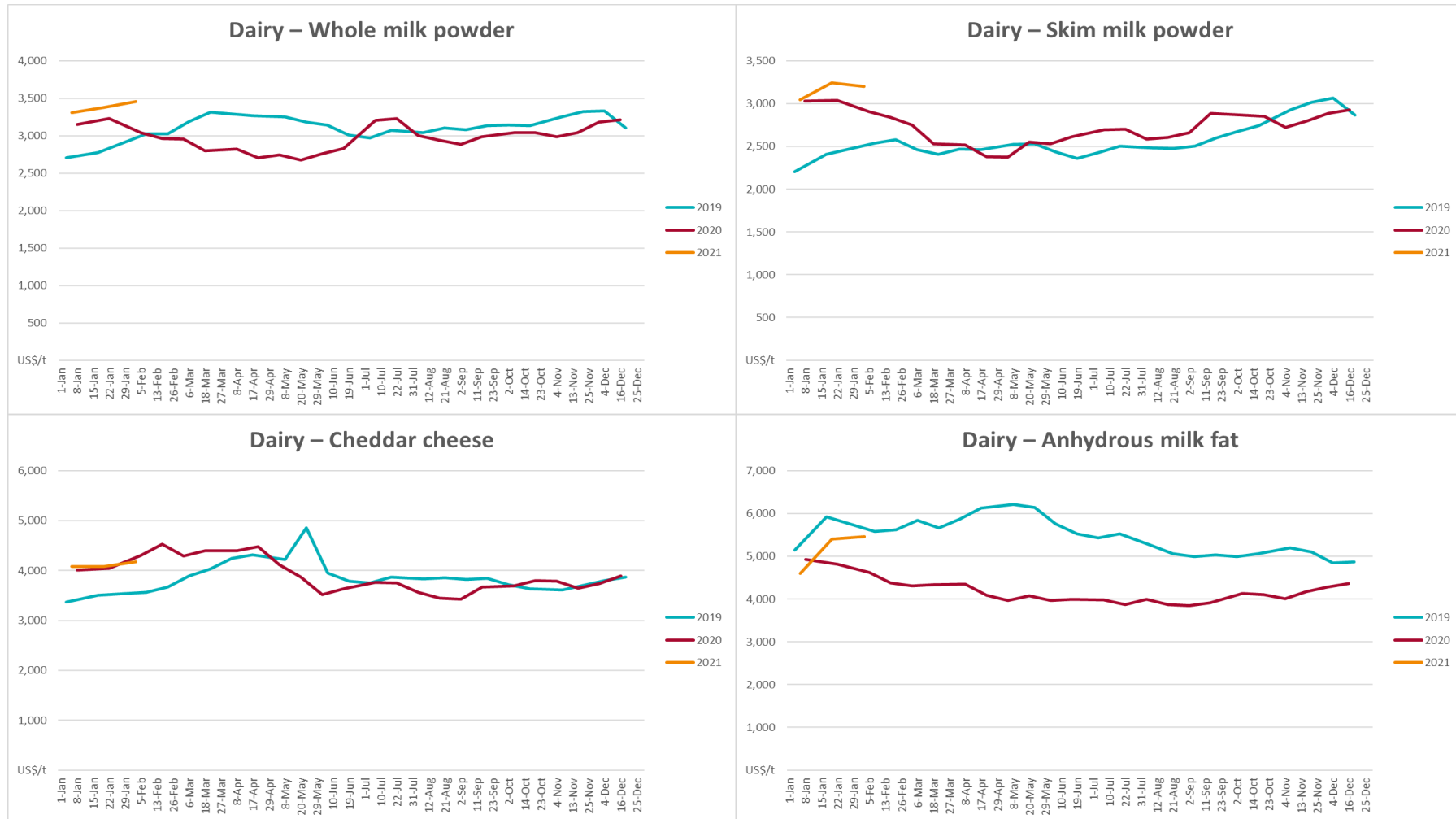
Live cattle – Light steers ex Darwin to Indonesia



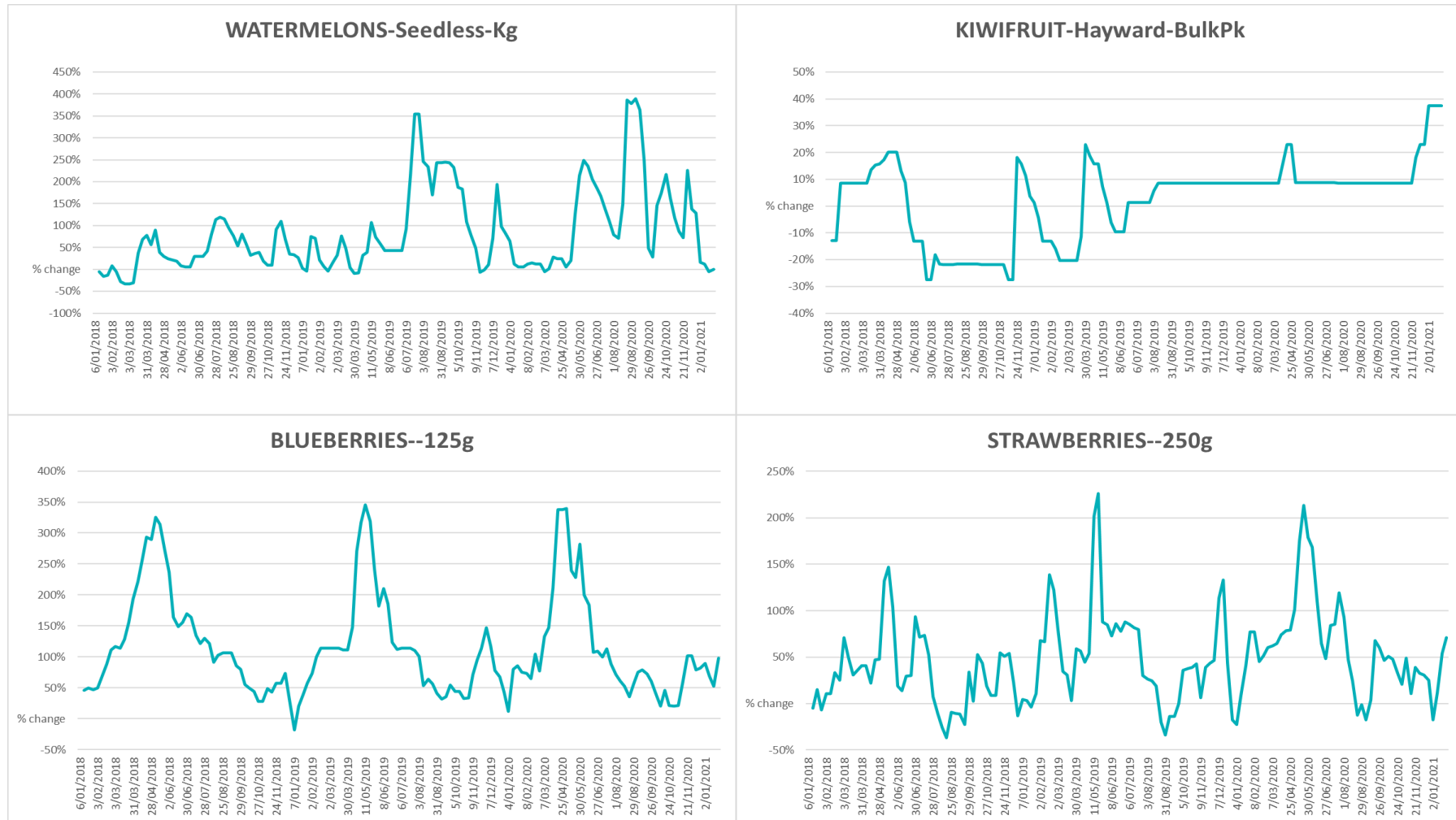
Live sheep – Live wethers (Muchea WA saleyard) to Middle East

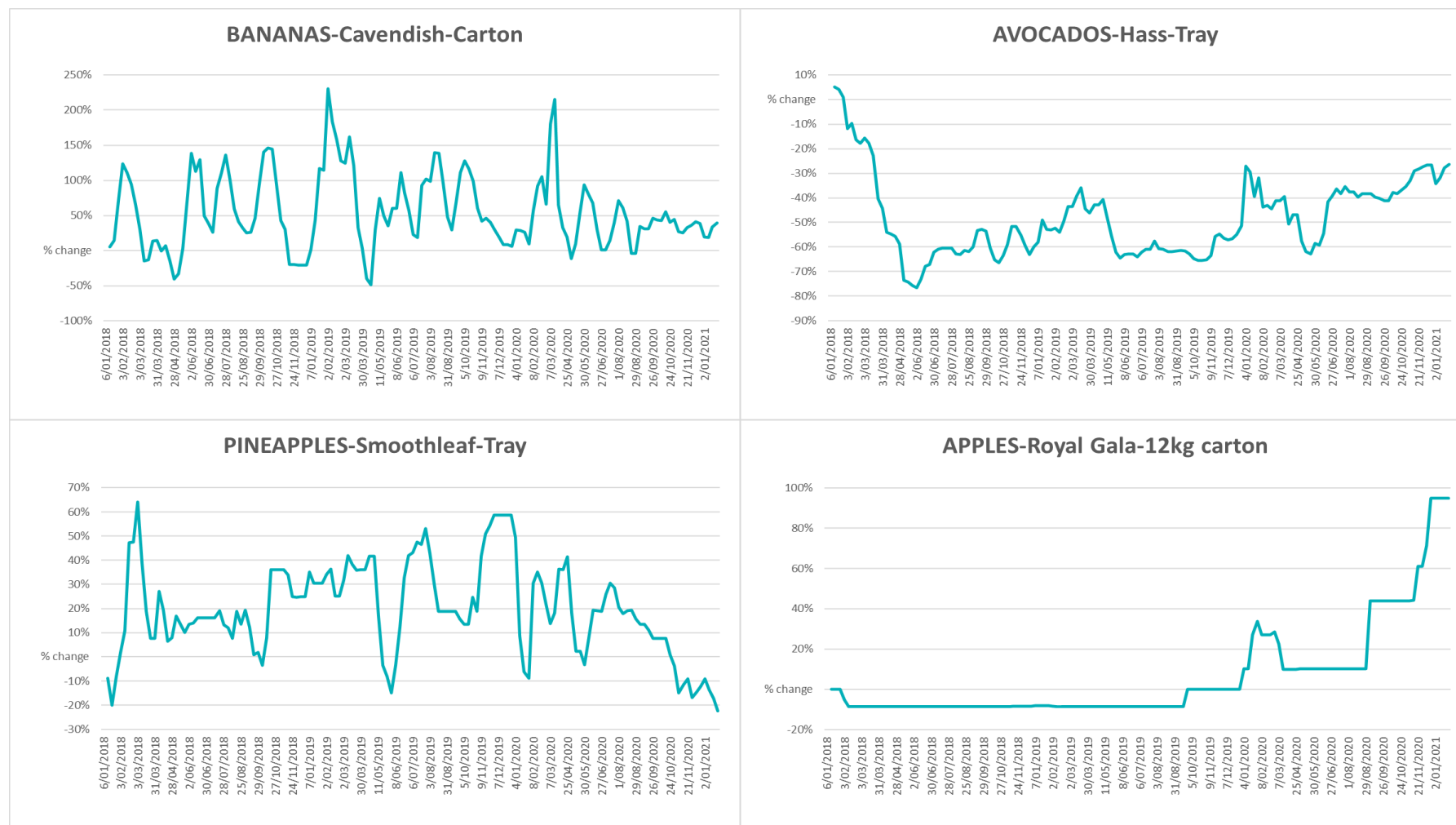


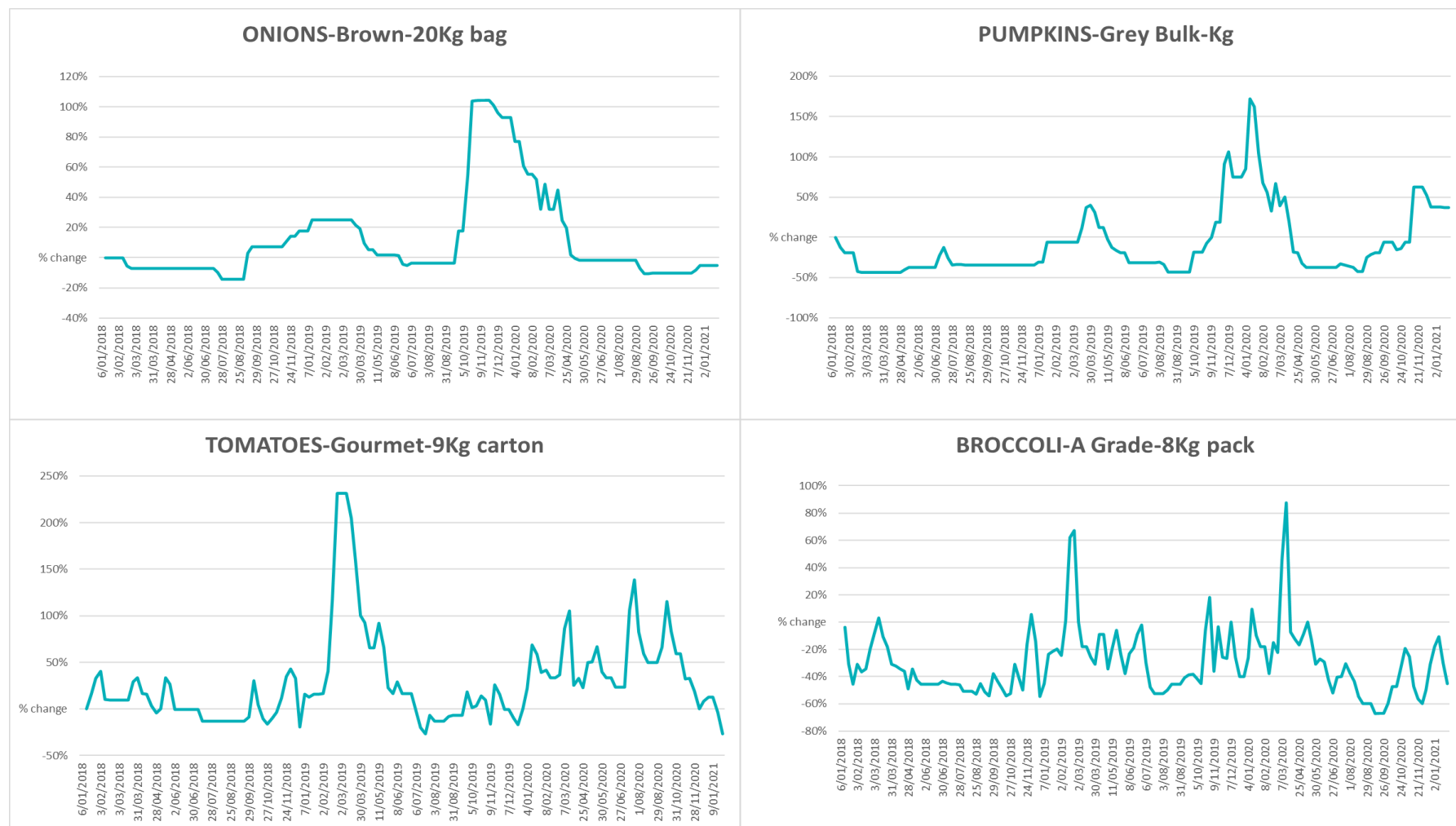
3.4. Global Dairy Trade (GDT) weighted average prices

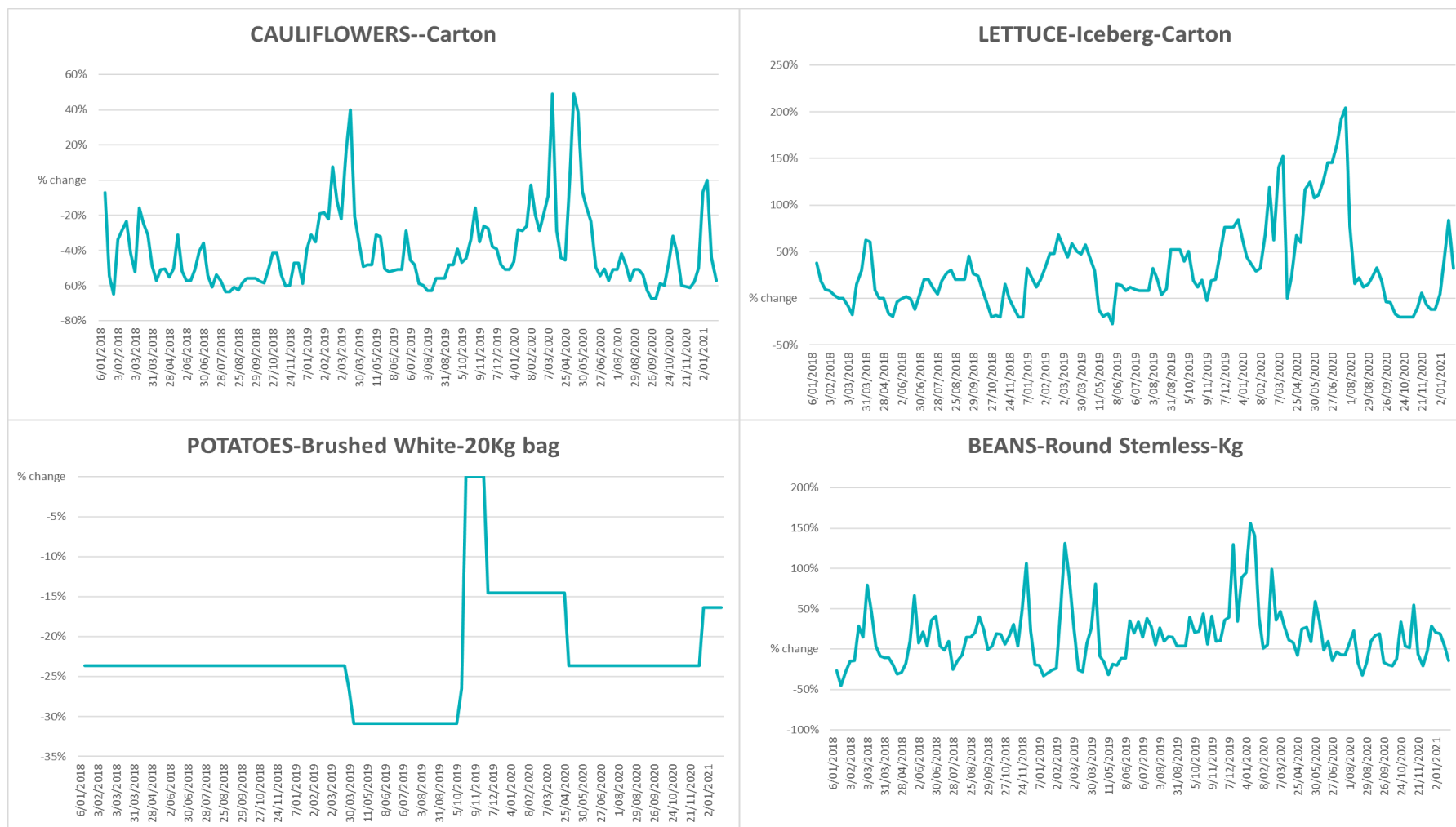


3.5. Selected fruit and vegetable prices









4. Data attribution

Climate

Bureau of Meteorology

- Weekly rainfall totals: www.bom.gov.au/jsp/awap/rain/index.jsp
- Monthly and last 3-month rainfall percentiles: www.bom.gov.au/jsp/awap/rain/index.jsp
- Temperature anomalies: www.bom.gov.au/jsp/awap/temp/index.jsp
- Rainfall forecast: www.bom.gov.au/jsp/watl/rainfall/pme.jsp
- Seasonal outlook: www.bom.gov.au/climate/outlooks/#/overview/summary/
- Drought statement: www.bom.gov.au/climate/drought/drought.shtml
- Soil moisture: www.bom.gov.au/water/landscape/

Other

- Pasture growth: <https://www.longpaddock.qld.gov.au/aussiegrass/>
- 3-month global outlooks: [Environment and Climate Change Canada](#), [NOAA Climate Prediction Center](#), [EUROBRISA CPTEC/INPE](#), [European Centre for Medium-Range Weather Forecasts](#), [Hydrometcenter of Russia](#), [National Climate Center Climate System Diagnosis and Prediction Room \(NCC\)](#), [International Research Institute for Climate and Society](#)
- Global production: <https://ipad.fas.usda.gov/ogamaps/cropmapsandcalendars.aspx>

Water

New South Wales

- New South Wales Water Information: <http://waterinfo.nsw.gov.au/>
- New South Wales Office of Water, Department of Primary Industries: www.water.nsw.gov.au/Home/default.aspx
- Available water determinations register: www.water.nsw.gov.au/water-licensing/registers

Queensland

- Sunwater: www.sunwater.com.au
- Seqwater: <http://seqwater.com.au>

South Australia

- SA Water: www.sawater.com.au/community-and-environment/the-river-murray/river-reports/daily-flow-report
- 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

- Global Dairy Trade: www.globaldairytrade.info/en/product-results/

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

- Australian Wool Exchange: www.awex.com.au/

Domestic wheat, barley, sorghum and canola

- Jumbuk Consulting Pty Ltd: <http://www.jumbukag.com.au/>

Cattle, beef, mutton, lamb, goat and live export

- Meat and Livestock Australia: www.mla.com.au/Prices-and-market

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