



Weekly Australian Climate, Water and Agricultural Update

No. 16/2022

28 April 2022

Summary of key issues

- For the week ending 27 April 2022, low-pressure troughs across eastern and south-central Australia resulted in moderate to heavy rainfall. A cold front brought isolated rainfall to parts of south-western Australia, while high-pressure systems provided clear, dry conditions for remaining parts of the country (see Section 1.1).
- Planting of winter crops is well underway in most cropping regions across the country. Canola and long-season legumes have been the priority to-date, with planting of winter cereals to increase over the coming weeks. Moderate rainfall in Central Queensland over the past week has likely delayed the harvesting of cotton and planting of winter crops. Meanwhile, the dry conditions across southern Queensland and much of New South Wales would have allowed harvesting of summer crops and planting of winter crops to continue.
- The 2021–22 La Niña event continues to weaken, with oceanic indicators mostly at neutral levels. However, atmospheric indicators remain above La Niña thresholds, meaning La Niña's influence continues. Even as the event weakens, it is expected to continue influencing climate patterns in Australia over the coming months (see Section 1.2).
- The outlook for May 2022 indicates that there is a 75% chance of rainfall totals between 10 and 50 millimetres across eastern New South Wales, parts of eastern Queensland, Victoria, southern South Australia, the far-southwest of Western Australia and Tasmania. Rainfall totals in excess of 100 millimetres are expected in parts of northern Queensland and western Tasmania (see Section 1.3).
- There is a high—75%—chance that forecast rainfall totals for May to July 2022 in northern cropping regions will be sufficient to support the germination and establishment of winter crops. In remaining cropping regions, the expectation of close to average rainfall over the next three months is likely to provide an ideal start to the winter cropping season, particularly in areas with average or better soil moisture levels for this time of year.
- Over the 8-days to 5 May 2022, low-pressure troughs are expected to bring rainfall to south-eastern Australia, with a cold front bringing further rainfall to the far south-east (see Section 1.4).
- The dry conditions expected across Queensland cropping regions will allow the harvesting of cotton and sorghum to continue, as well as the planting of winter crops. However, for New South Wales and Victoria, this rainfall is likely to restrict field access, delaying harvesting and planting activity.
- Water storage in the Murray–Darling Basin (MDB) decreased by 134 gigalitres (GL) between 20 April 2022 and 27 April 2022. The current volume of water held in storage is 21,341GL, which represents 85 per cent of total capacity. This is 50% or 7,139 GL more than at the same time last year.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$72 per ML on 14 April 2022 to \$65 per ML on 21 April 2022. Prices are lower in the Goulburn–Broken, Murrumbidgee and regions above the Barmah choke due to the binding of the Goulburn intervalley trade limit, Murrumbidgee export limit and Barmah choke trade constraint.

1. Climate

1.1. Rainfall this week

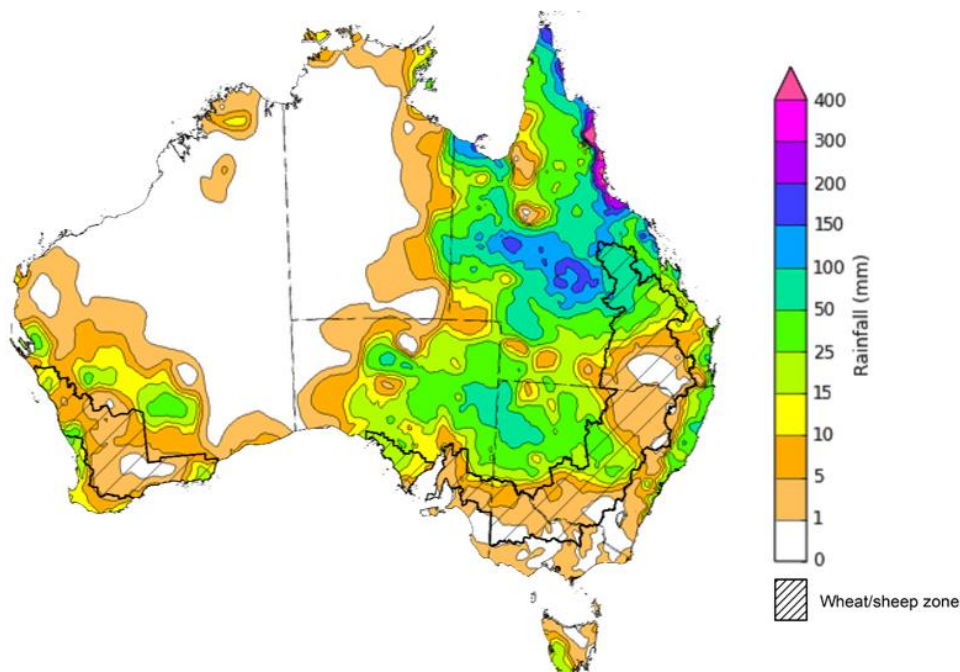
For the week ending 27 April 2022, low-pressure troughs across eastern and south-central Australia resulted in moderate to heavy rainfall. A cold front brought isolated rainfall to parts of south-western Australia, while high-pressure systems provided clear, dry conditions for remaining parts of the country.

Rainfall totals of between 10 and 100 millimetres were recorded across central, western and north-eastern parts of New South Wales, much of Queensland, central and eastern South Australia, scattered areas of south-western Western Australia, the east of the Northern Territory and south-western Tasmania. Rainfall totals in excess of 100 millimetres were recorded across parts of central and northern Queensland. Remaining parts of Australia received little to no rainfall.

In cropping regions, rainfall totals of between 10 and 50 millimetres were recorded across central New South Wales, northern Queensland, the west of South Australia and isolated parts of Western Australia. Rainfall in excess of 50 millimetres was recorded in cropping regions in northern Queensland. Little to no rainfall was recorded across cropping regions in remaining parts of New South Wales, Queensland, Victoria, South Australia and Western Australia.

Planting of winter crops is well underway in most cropping regions across the country. Canola and long-season legumes have been the priority to-date, with planting of winter cereals to increase over the coming weeks. Moderate rainfall in Central Queensland over the past week has likely delayed the harvesting of cotton and planting of winter crops. Meanwhile, the dry conditions across southern Queensland and much of New South Wales would have allowed harvesting of summer crops and planting of winter crops to continue. In much of Victoria, South Australia and Western Australia, soil moisture conditions are favouring a good start to the season. However, the east of South Australia is yet to receive significant rainfall to start the winter cropping season.

Rainfall for the week ending 27 April 2022



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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/>

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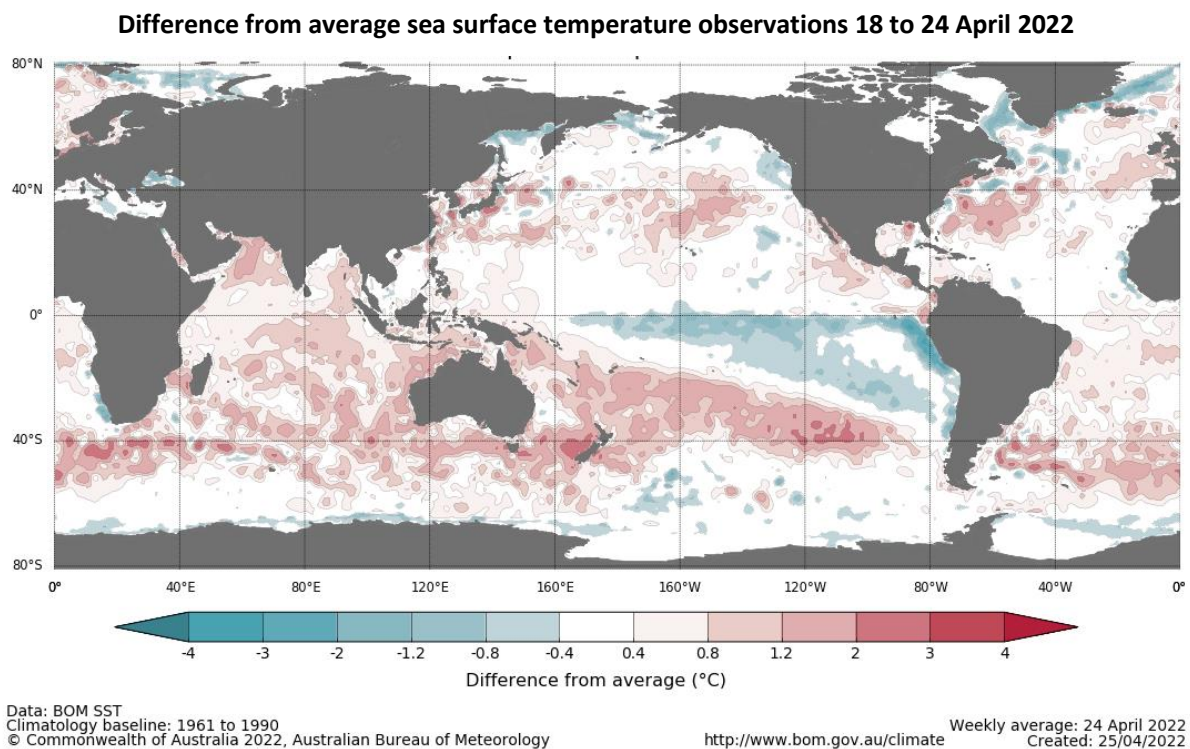
1.2. Climate Drivers

Throughout late autumn and early winter, the climate drivers with the largest potential impact on Australia's climate patterns are the El Niño–Southern Oscillation (ENSO) and the Southern Annular Mode (SAM). These climate drivers are likely to influence pasture growth across southern Australia and planting opportunities for winter crops.

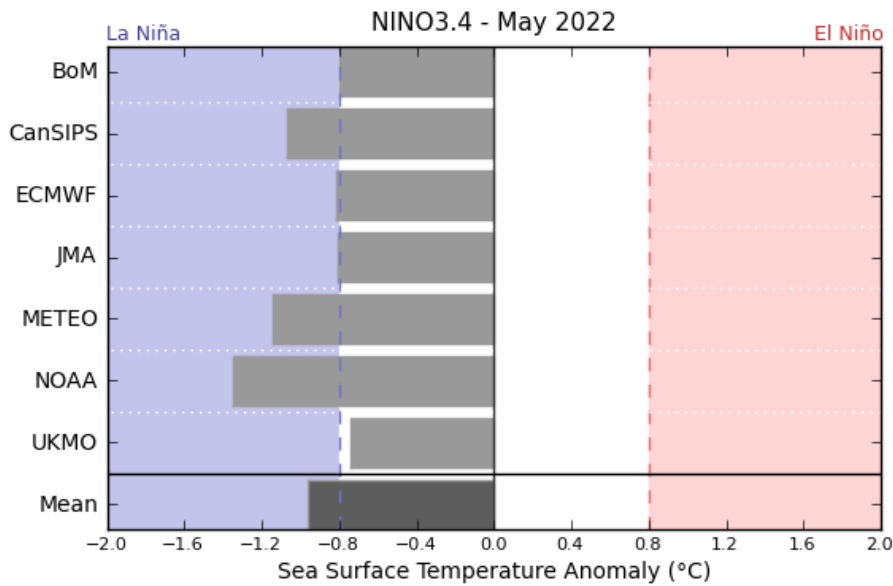
The 2021–22 La Niña event continues to weaken, with oceanic indicators mostly at neutral levels. However, atmospheric indicators remain above La Niña thresholds, meaning La Niña's influence continues. La Niña events are typically associated with above average rainfall across large parts of eastern Australia during autumn, as well as the increased likelihood of tropical cyclones within the Australian region. Even as the event weakens, it is expected to continue influencing climate patterns in Australia over the coming months.

The SAM index is currently neutral but is expected to briefly dip to negative levels with neutral to positive levels thereafter for the coming two to three weeks. During autumn SAM typically has a weaker influence on Australian rainfall.

Below average sea surface temperature (SST) anomalies have persisted and weakened slightly along the equator in the central and eastern Pacific Ocean. Meanwhile, warm SST anomalies throughout the Maritime Continent have weakened slightly. Warm sub-surface water temperature anomalies have strengthened slightly in the eastern Pacific Ocean, foreshadowing the breakdown of the current La Niña event.



International climate model outlooks for the NINO 3.4 region in May 2022

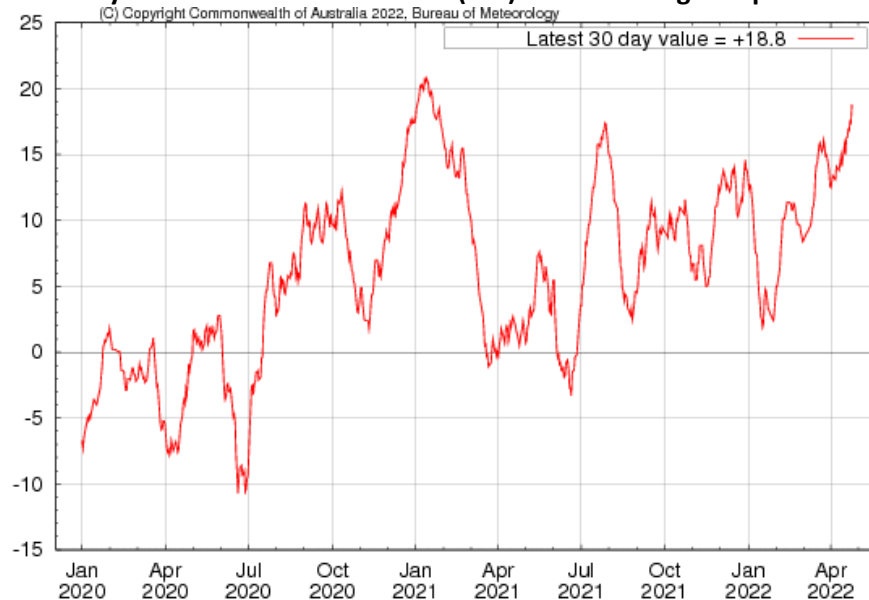


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Most climate models surveyed by the Bureau of Meteorology expect the La Niña event to continue into May, with three of the seven models expecting it to remain active in June 2022. ENSO events are most active throughout spring and summer, then decay and return to neutral conditions in autumn. For the period ending 27 April 2022, the 30-day SOI was +18.8 and the 90-day SOI was +14.3, both well above the La Niña threshold of +7. Trade winds were stronger than average in the western Pacific but have returned to average strength in the eastern Pacific, and cloudiness near the Date Line remains below average. These indications are consistent with the ongoing La Niña event.

30-day Southern Oscillation Index (SOI) values ending 27 April 2022



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.

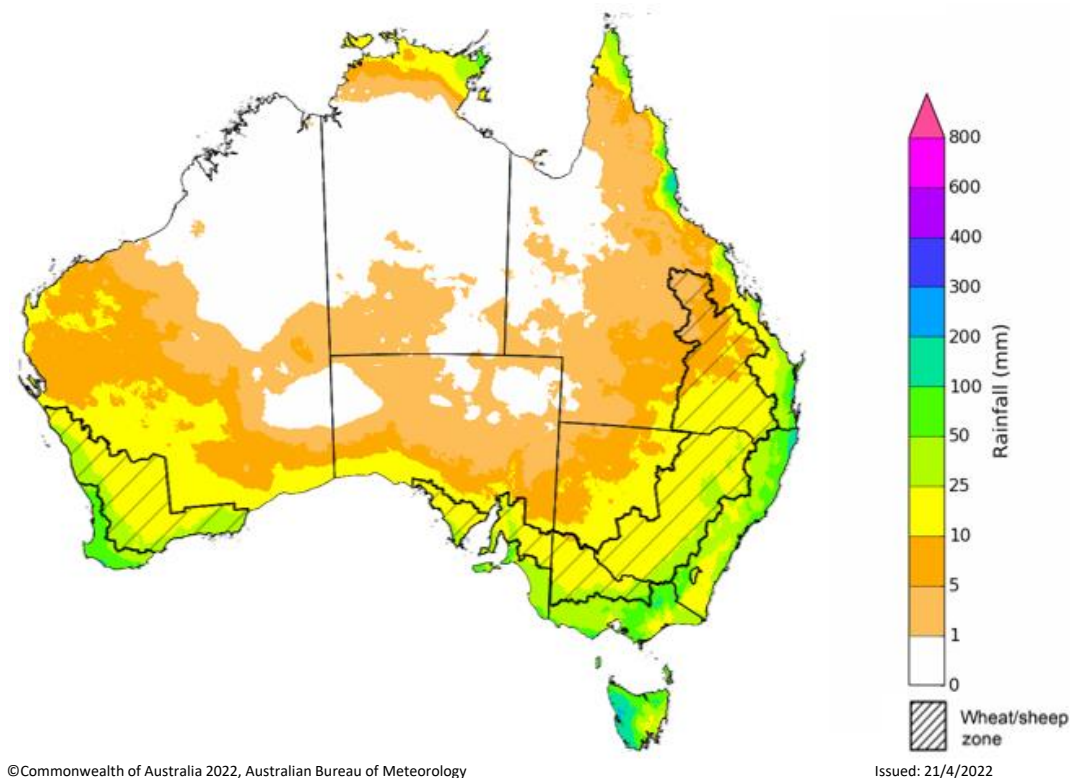
For further information, go to <http://www.bom.gov.au/climate/ahead/about/>

The Bureau of Meteorology's latest rainfall outlook indicated wetter than average conditions are expected across the majority of Australia during May. The ACCESS-S climate model suggests there is close to a 60% chance of exceeding median for most of Australia, while the south-west and far south-east of Australia have roughly equal chances of being above or below median.

The outlook for May 2022 indicates that there is a 75% chance of rainfall totals between 10 and 50 millimetres across eastern New South Wales, scattered areas of Queensland, Victoria, southern South Australia, the far-southwest of Western Australia and Tasmania. Rainfall totals in excess of 100 millimetres are expected in parts of northern Queensland and western Tasmania.

Across cropping regions there is a 75% chance of rainfall totals of between 10 and 25 millimetres across most of New South Wales, southern Queensland, Victoria, South Australia and Western Australia. There is a 75% chance of rainfall less than 10 millimetres for most northern Queensland cropping regions. Given that many winter cropping regions have received sufficient rainfall to classify a consolidated autumn break, these forecast rainfall totals are expected to deliver sufficient additional soil moisture to provide a favourable start to the winter season. Meanwhile, lower rainfall totals during May, compared to March and April, across Queensland and northern New South Wales will allow timely field access for the planting of winter crops and harvesting activity for summer planted crops.

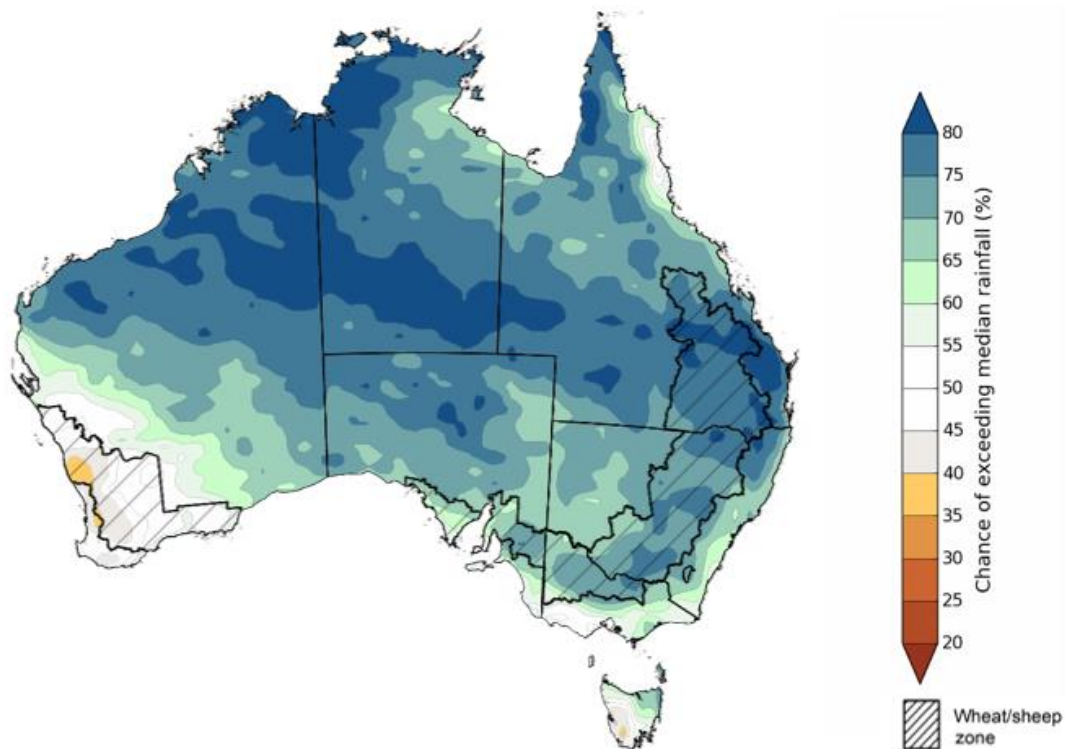
Rainfall totals that have a 75% chance of occurring May 2022



The rainfall outlook for May to July 2022 suggests there is a greater than 65% chance of exceeding median rainfall across most of New South Wales, Queensland, South Australia, northern Victoria and Western Australia and the Northern Territory. Between May to July 2022, below average rainfall is expected for parts of south-west Western Australia and isolated parts of western Tasmania. For remaining regions of Australia, there is roughly an equal chance of above and below median rainfall (Bureau of Meteorology 'National Climate Outlook', 21 April 2022).

Bureau of Meteorology rainfall outlooks for May to July have greater than 55% past accuracy across most of Australia. Outlook accuracy is greater than 65% across large areas of western and eastern Australia.

Chance of exceeding the median rainfall May to July 2022

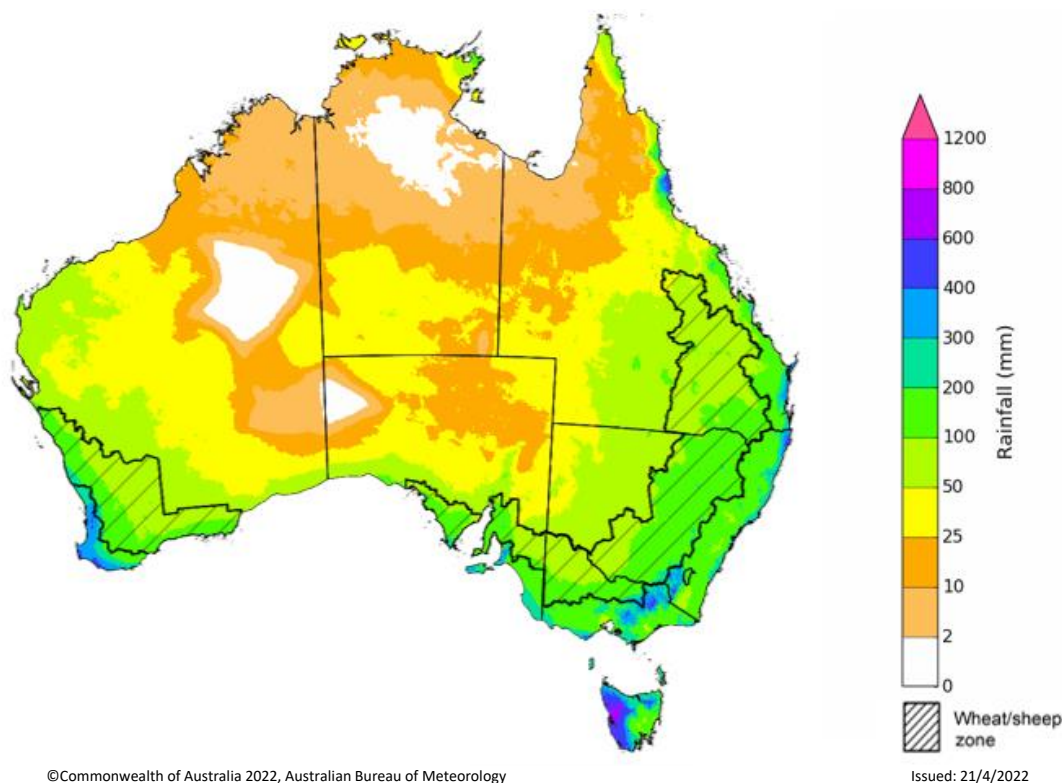


The outlook for May to July 2022 suggests there is a 75% chance of rainfall totals between 50 and 200 millimetres across much of New South Wales, south-eastern Queensland, Victoria, southern parts of South Australia, the south-west of Western Australia and Tasmania. Rainfall totals in excess of 200 millimetres are forecast for alpine regions of New South Wales and Victoria, the far south-west of Western Australia and western Tasmania.

Across cropping regions, there is a 75% chance of receiving between 50 and 100 millimetres across south-western New South Wales, much of Queensland, northern Victoria, eastern South Australia and eastern Western Australia. Totals of between 100 and 200 millimetres are expected across much of New South Wales, parts of southern Queensland, southern Victoria, central and western South Australia and western and southern Western Australia.

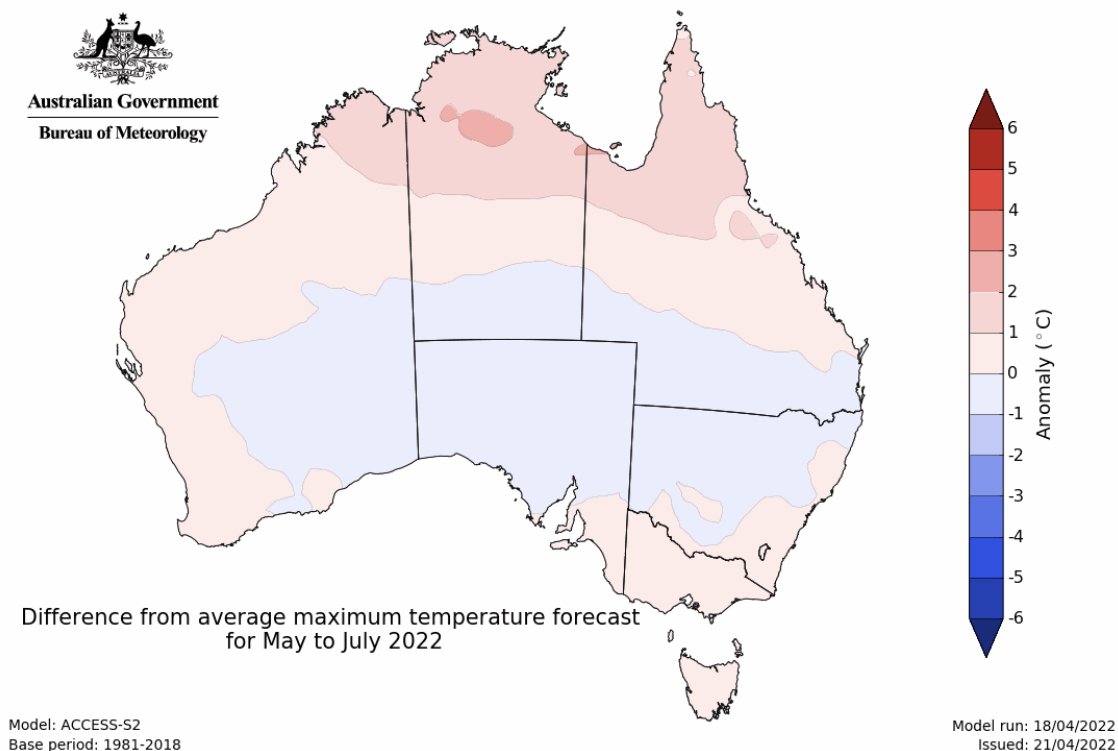
Root zone soil moisture levels are average to above average across much of the Wheat/sheep zone but below average to average across parts of South Australia and Victoria. There is a high—75%—chance that forecast rainfall totals in northern cropping regions will be sufficient to support the germination and establishment of winter crops. In remaining cropping regions, the expectation of close to average rainfall over the next three months is likely to provide an ideal start to the winter cropping season, particularly in areas with average or better soil moisture levels for this time of year.

Rainfall totals that have a 75% chance of occurring May to July 2022

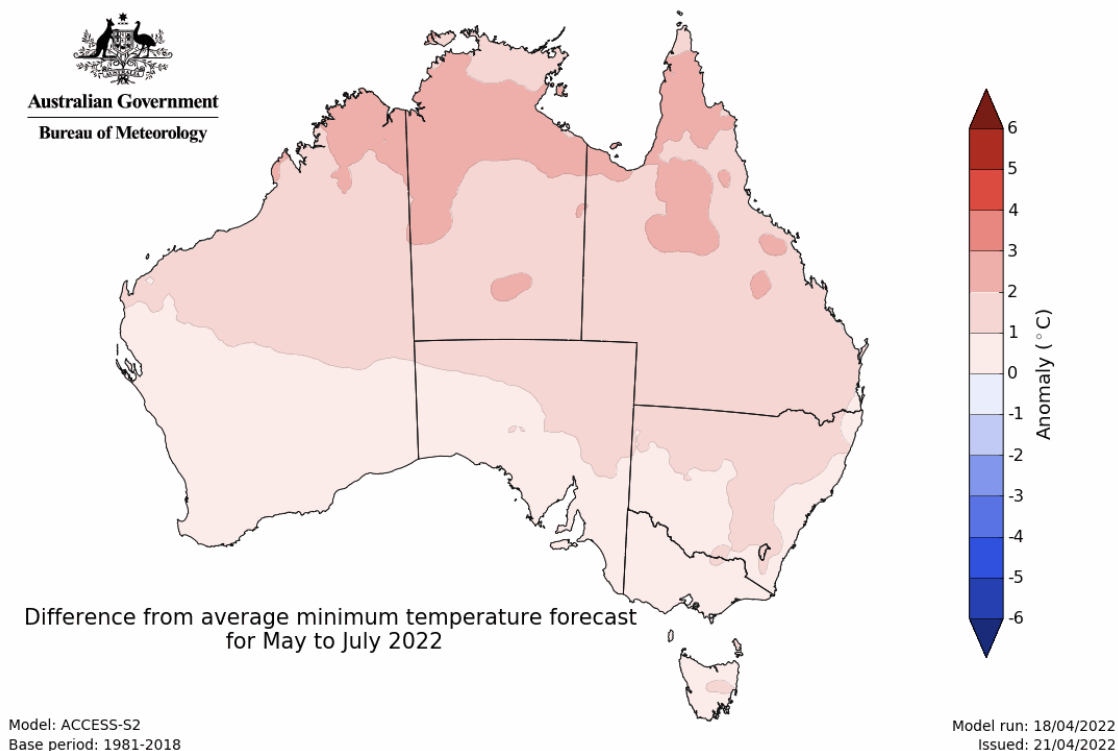


The temperature outlook for May to July 2022 indicates that maximum temperatures across most of Australia are likely to be close to the 1990-2012 average (-1°C to 1°C), with slightly higher than average temperatures across the tropical north. Minimum temperatures are expected to be slightly above average for much of the northern two thirds of Australia, and close to average for the rest of Australia (Bureau of Meteorology 'National Climate Outlook', 21 April 2022).

Predicted maximum temperature anomaly for May to July 2022



Predicted minimum temperature anomaly for May to July 2022



1.4. Rainfall forecast for the next eight days

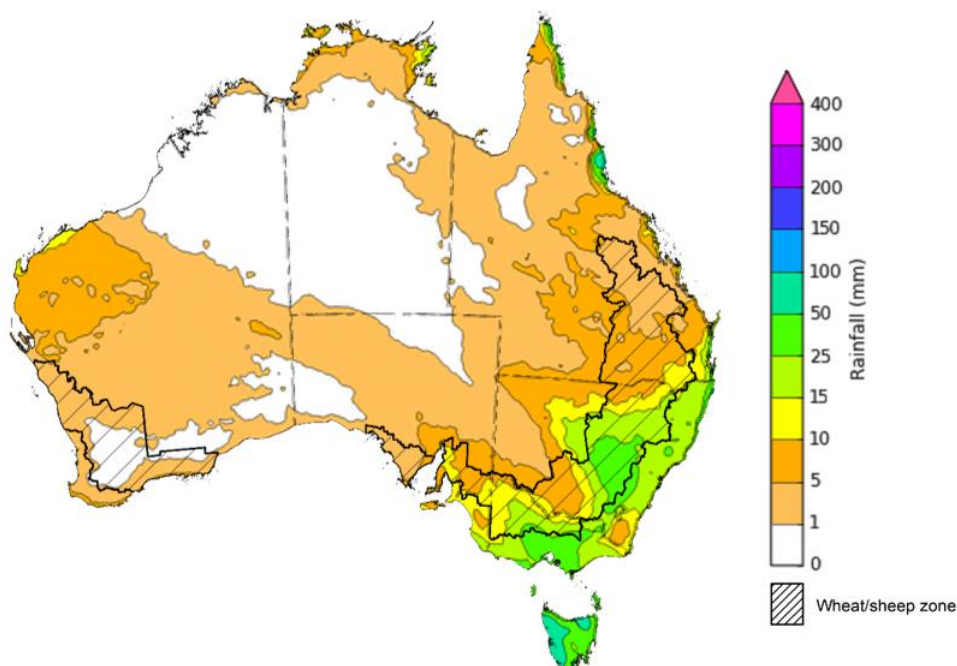
Over the 8-days to 5 May 2022, low-pressure troughs are expected to bring rainfall to south-eastern Australia, with a cold front bringing further rainfall to the far south-east. In remaining parts of the country, high-pressure systems will bring mostly dry conditions.

Rainfall totals of between 10 and 50 millimetres are forecast for much of eastern New South Wales, parts of southern Queensland and the south-east of South Australia, as well as Victoria and Tasmania. Rainfall in excess of 50 millimetres is expected for central New South Wales, as well as western and northern parts of Tasmania.

In Australian cropping regions, rainfall totals of between 10 and 50 millimetres are expected across New South Wales and Victoria, and isolated areas of southern Queensland and the east of South Australia. Rainfall in excess of 50 millimetres is expected in cropping regions of central New South Wales. Little to no rainfall is forecast for all remaining cropping regions during the next 8-days.

The dry conditions expected across Queensland cropping regions will allow the harvesting of cotton and sorghum to continue, as well as the planting of winter crops. However, for most of New South Wales and Victoria, moderate rainfall is likely to restrict field access, delaying harvesting and planting activity. In South Australia and Western Australia, planting activity is expected to increase over the coming week, with relatively dry conditions. Many growers will be eager to complete planting programs as soon as possible given the expectation for a wetter than average winter. The east of South Australia is still yet to receive an autumn break, but growers are likely to dry-sow winter crops given the favourable 3-month rainfall outlook.

Total forecast rainfall (mm) for the period 28 April to 5 May 2022



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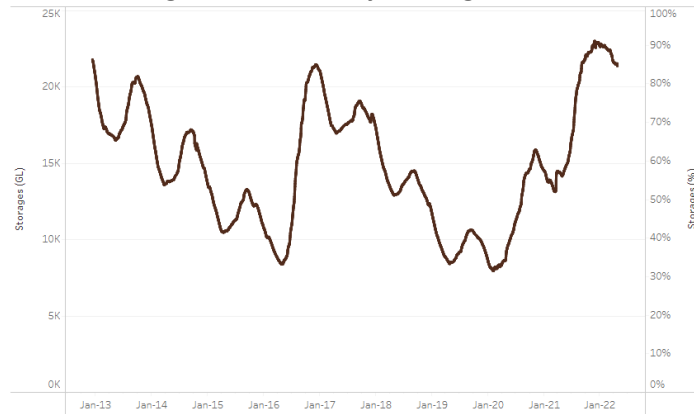
Note: This rainfall forecast is produced from computer models. As the model outputs are not altered by weather forecasters, it is important to check local forecasts and warnings issued by the Bureau of Meteorology.

2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) decreased by 134 gigalitres (GL) between 20 April 2022 and 27 April 2022. The current volume of water held in storage is 21,341GL, which represents 85 per cent of total capacity. This is 50% or 7,139 GL more than at the same time last year.

Water storages in the Murray-Darling Basin, 2013–2022

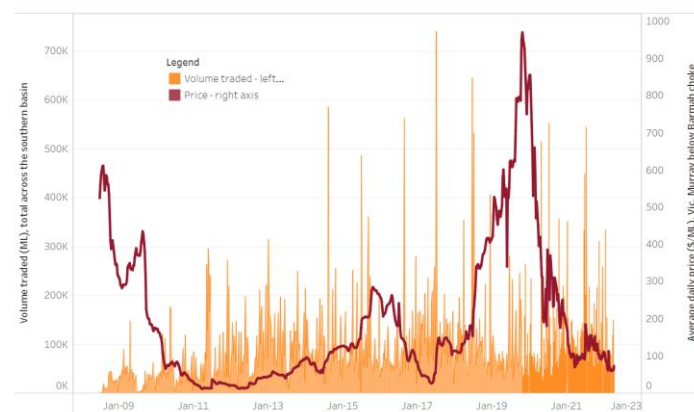


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$72 per ML on 14 April 2022 to \$65 per ML on 21 April 2022. Prices are lower in the Goulburn-Broken, Murrumbidgee and regions above the Barmah choke due to the binding of the Goulburn intervalley trade limit, Murrumbidgee export limit and Barmah choke trade constraint.

Region	\$/ML
NSW Murray Above	7
NSW Murrumbidgee	7
VIC Goulburn-Broken	34
VIC Murray Below	65

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 28 April 2022.

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-280422

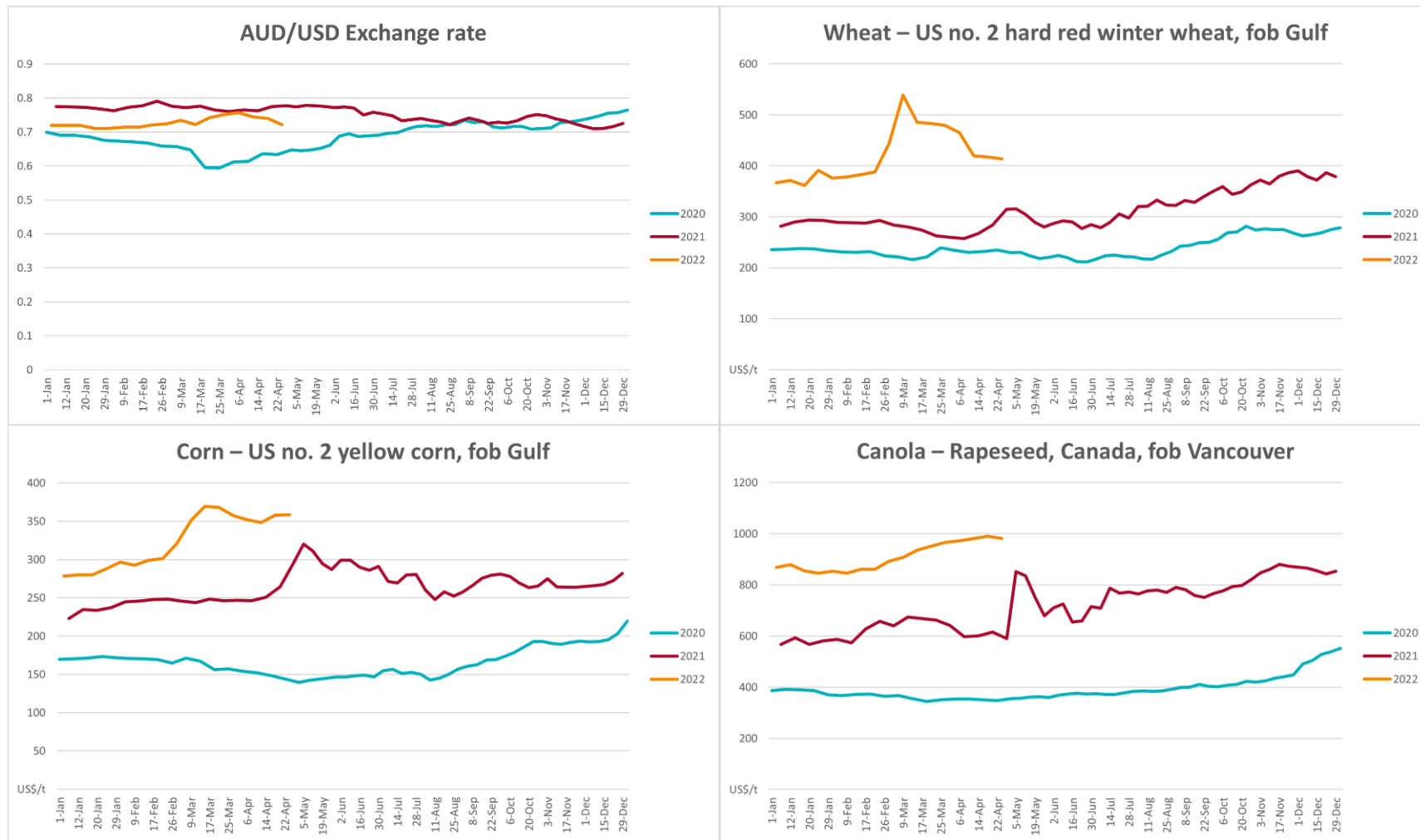
3. Commodities

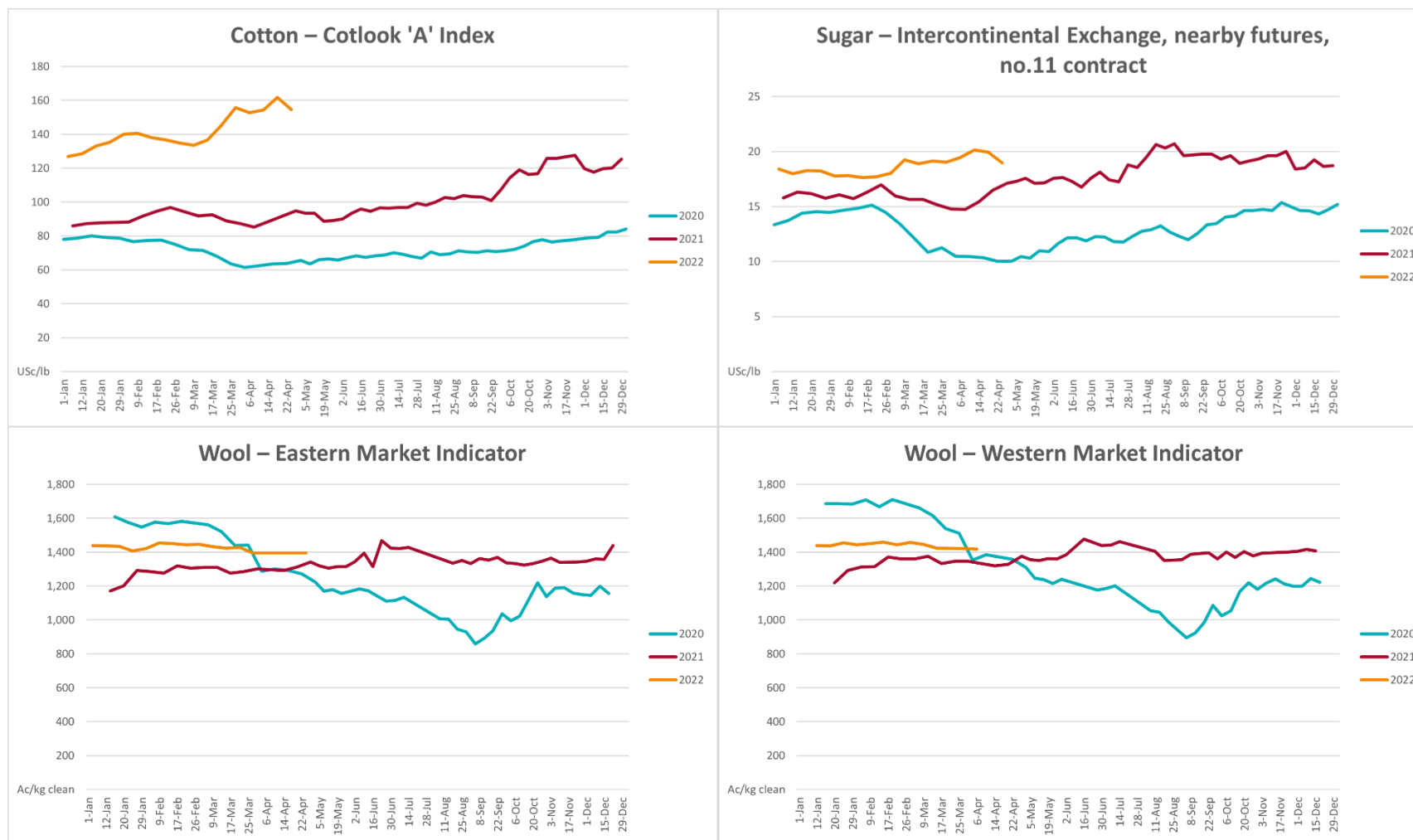
Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	27-Apr	A\$/US\$	0.72	0.74	-2%	0.77	-7%
Wheat – US no. 2 hard red winter wheat, fob Gulf	27-Apr	US\$/t	413	417	-1%	315	31%
Corn – US no. 2 yellow corn, fob Gulf	27-Apr	US\$/t	358	358	0%	320	12%
Canola – Rapeseed, Canada, fob Vancouver	27-Apr	US\$/t	982	990	-1%	852	15%
Cotton – Cotlook 'A' Index	27-Apr	USc/lb	155	162	-4%	93	66%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	27-Apr	USc/lb	18.9	19.9	-5%	17	10%
Wool – Eastern Market Indicator	27-Apr	Ac/kg clean	1,395	1,395	0%	1,309	7%
Wool – Western Market Indicator	06-Apr	Ac/kg clean	1,417	1,421	0%	1,222	16%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	27-Apr	A\$/t	540	528	2%	379	42%
Feed Wheat – ASW, Port Adelaide, SA	27-Apr	A\$/t	692	697	-1%	378	83%
Feed Barley – Port Adelaide, SA	27-Apr	A\$/t	481	463	4%	313	54%
Canola – Kwinana, WA	27-Apr	A\$/t	1,268	1,238	2%	727	74%
Grain Sorghum – Brisbane, QLD	27-Apr	A\$/t	434	426	2%	366	19%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	20-Apr	Ac/kg cwt	1,072	1,088	-1%	880	22%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	27-Apr	Ac/kg cwt	597	555	8%	710	-16%
Lamb – Eastern States Trade Lamb Indicator	27-Apr	Ac/kg cwt	802	779	3%	818	-2%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	30-Mar	Ac/kg cwt	368	357	3%	347	6%
Goats – Eastern States (12.1–16 kg)	05-Jan	Ac/kg cwt	879	879	0%	818	8%
Live cattle – Light steers ex Darwin to Indonesia	23-Mar	Ac/kg lwt	550	550	0%	260	112%
Live sheep – Live wethers (Mucnea WA saleyard) to Middle East	22-Sep-21	\$/head	147	171	-14%	126	17%

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	20-Apr	US\$/t	4,207	4,532	-7%	2,952	43%
Dairy – Skim milk powder	20-Apr	US\$/t	4,408	4,599	-4%	2,747	60%
Dairy – Cheddar cheese	20-Apr	US\$/t	6,185	6,472	-4%	4,398	41%
Dairy – Anhydrous milk fat	20-Apr	US\$/t	6,802	6,908	-2%	4,331	57%

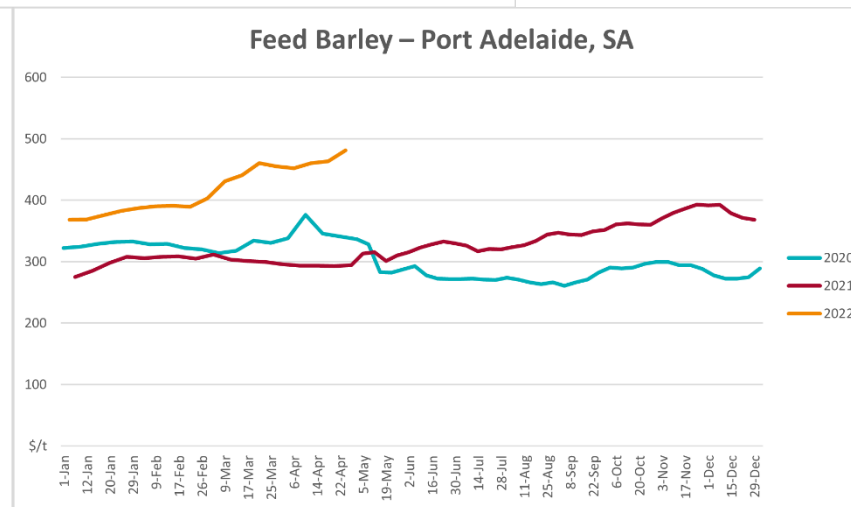
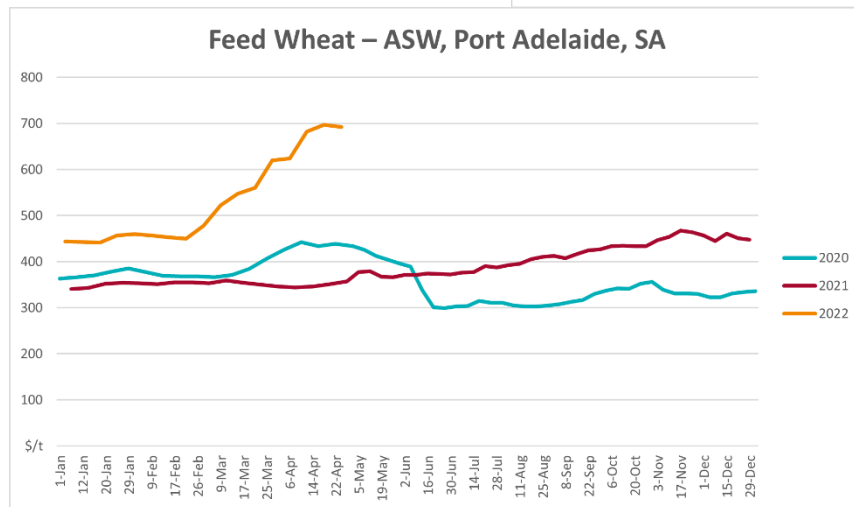
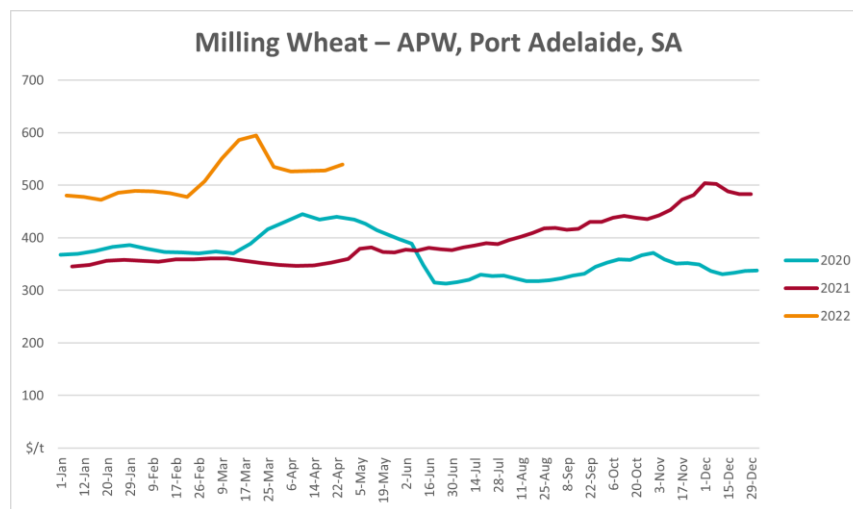
a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

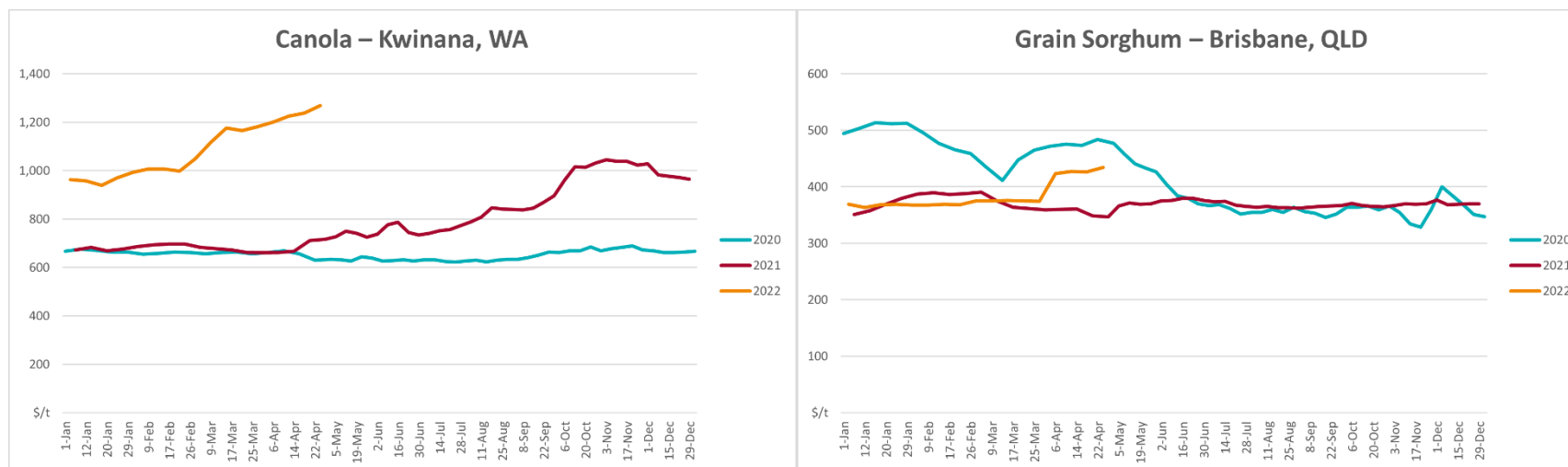
3.1. Selected world indicator prices



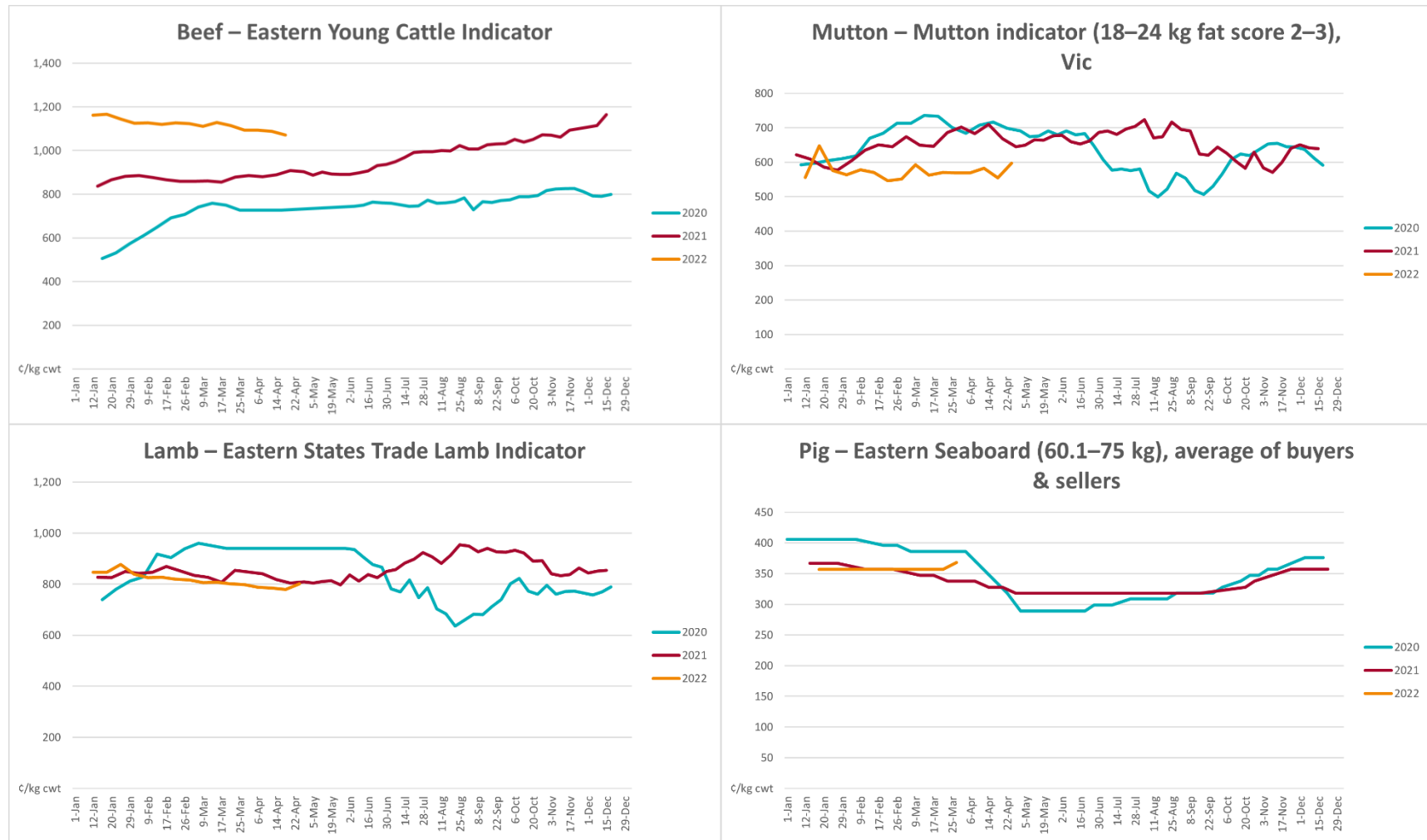


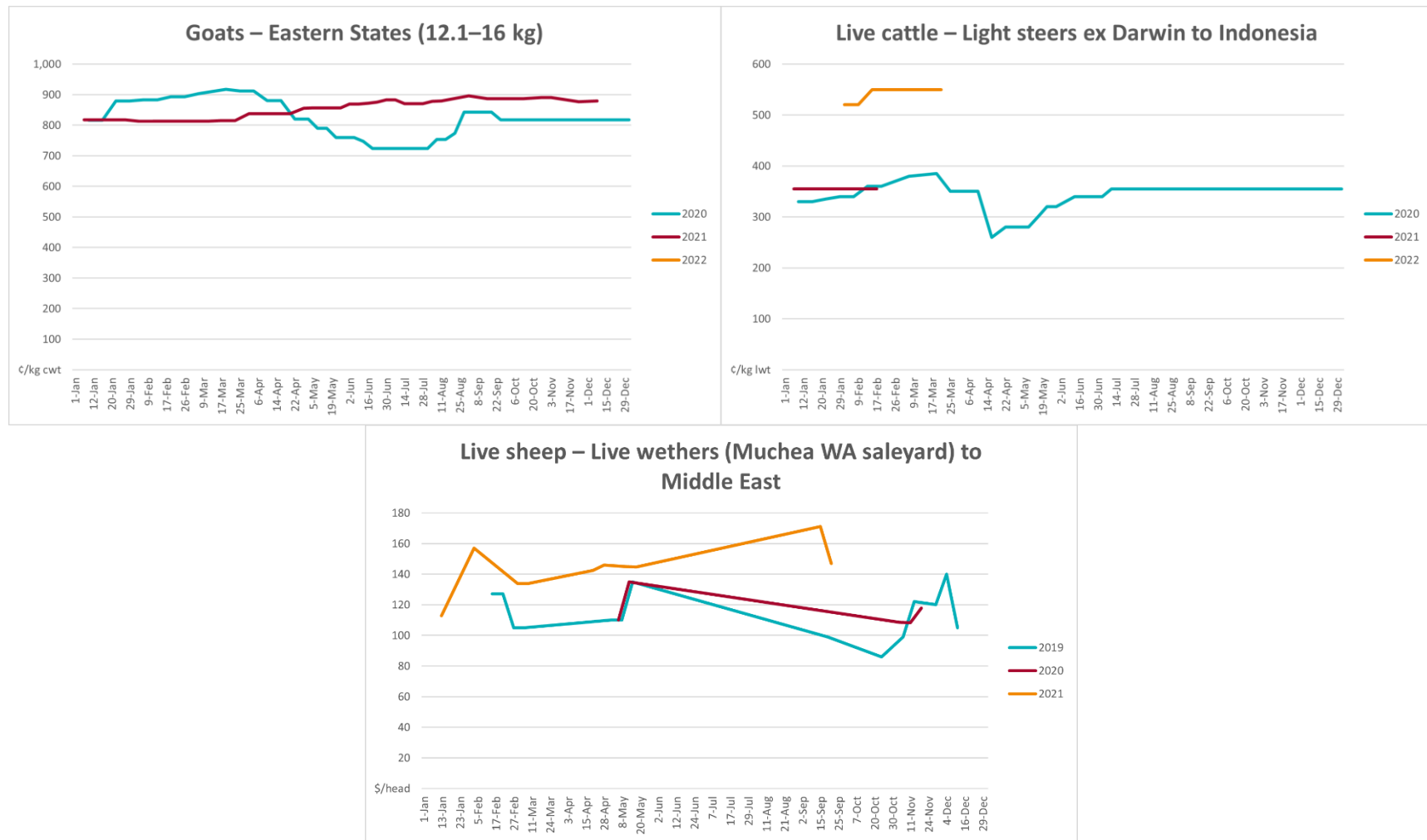
3.2. Selected domestic crop indicator prices



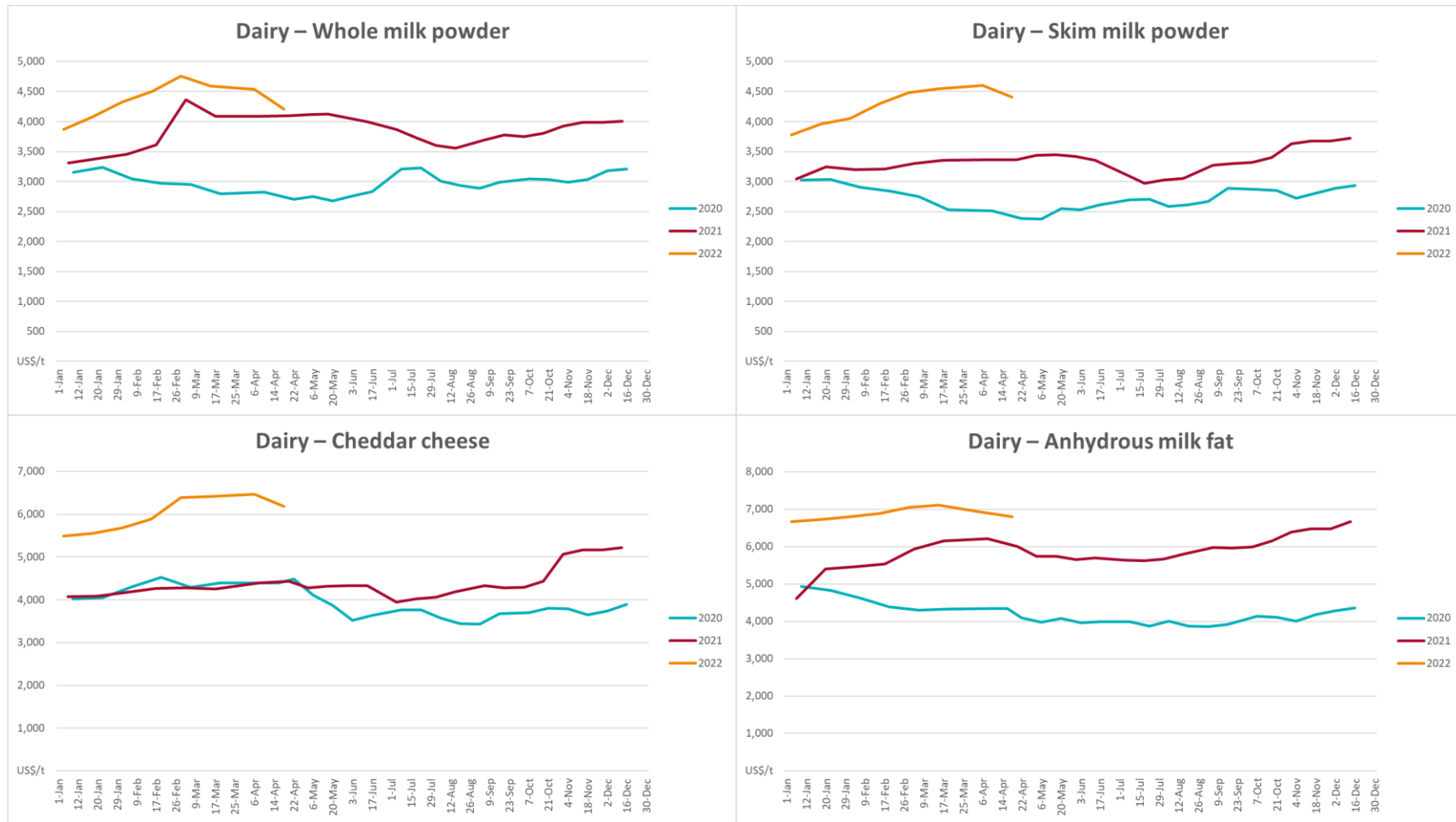


3.3. Selected domestic livestock indicator prices

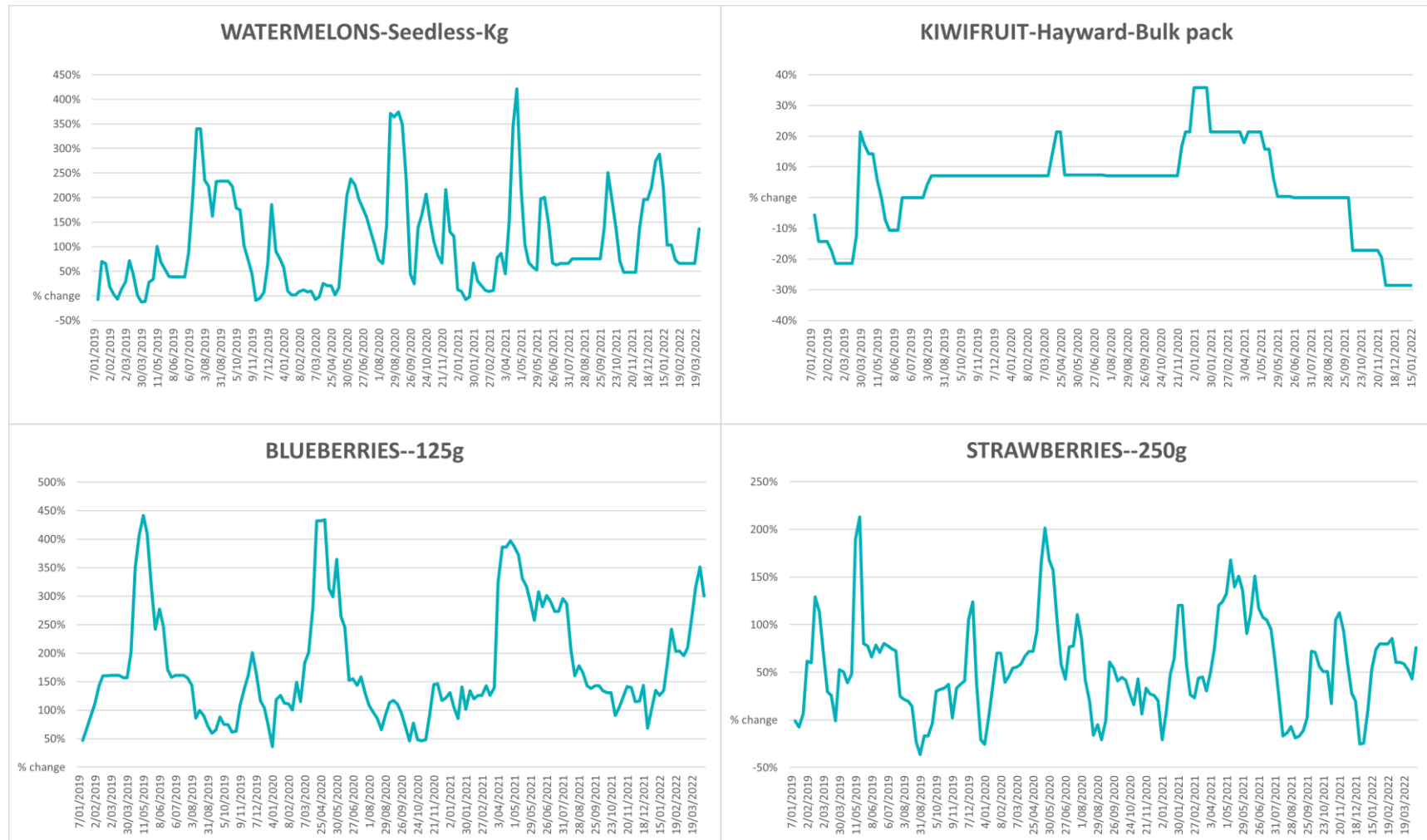


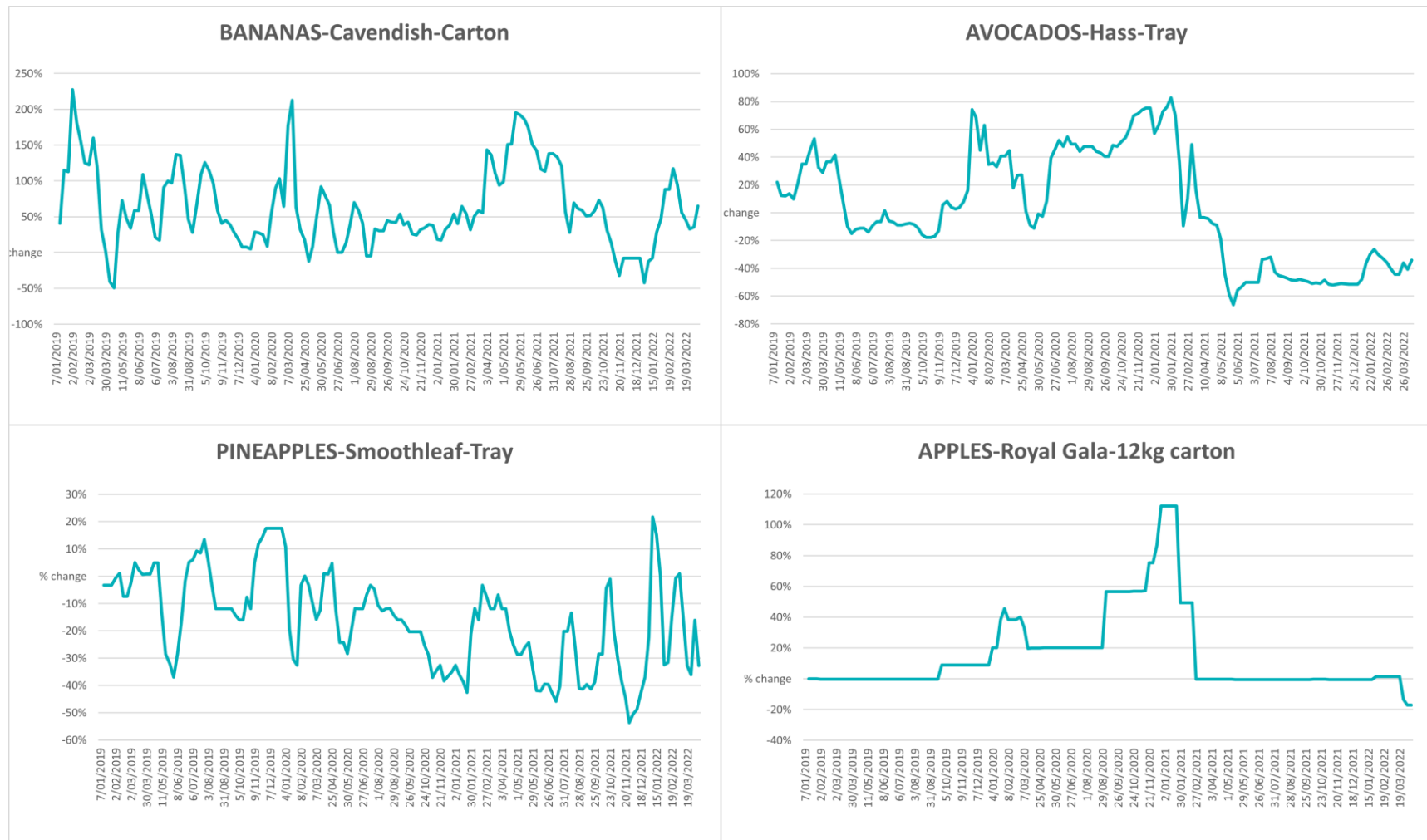


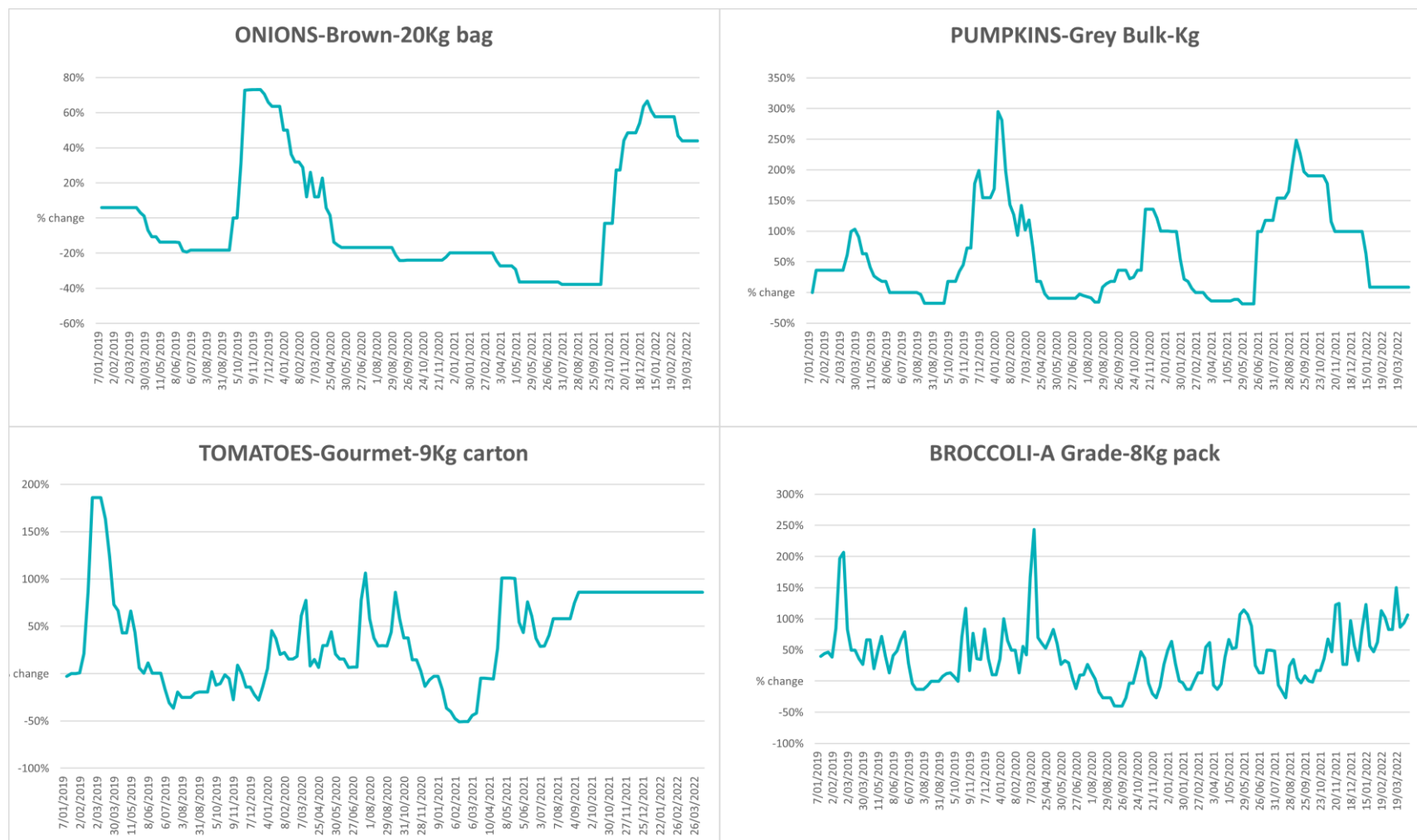
3.4. Global Dairy Trade (GDT) weighted average prices

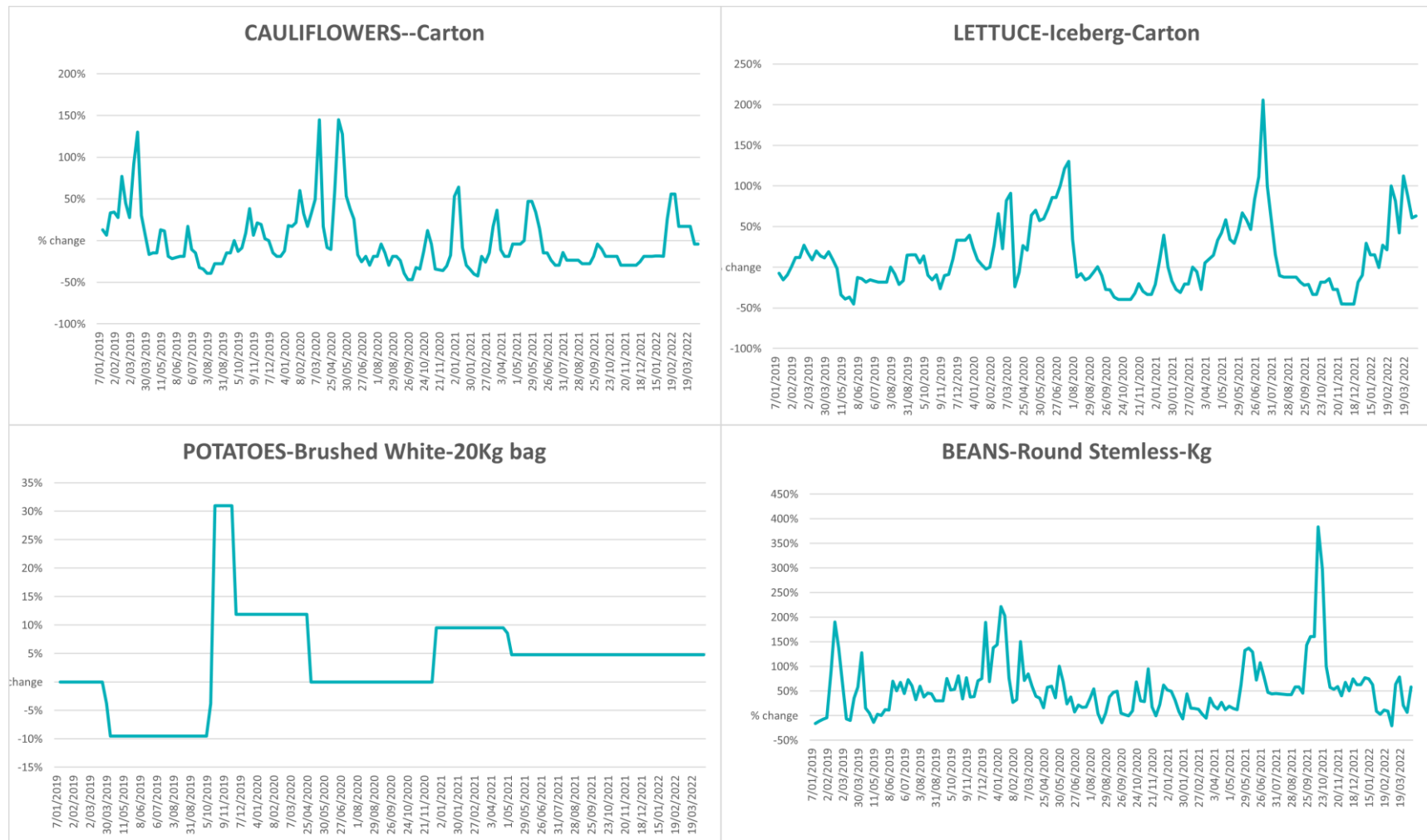


3.5. Selected fruit and vegetable prices

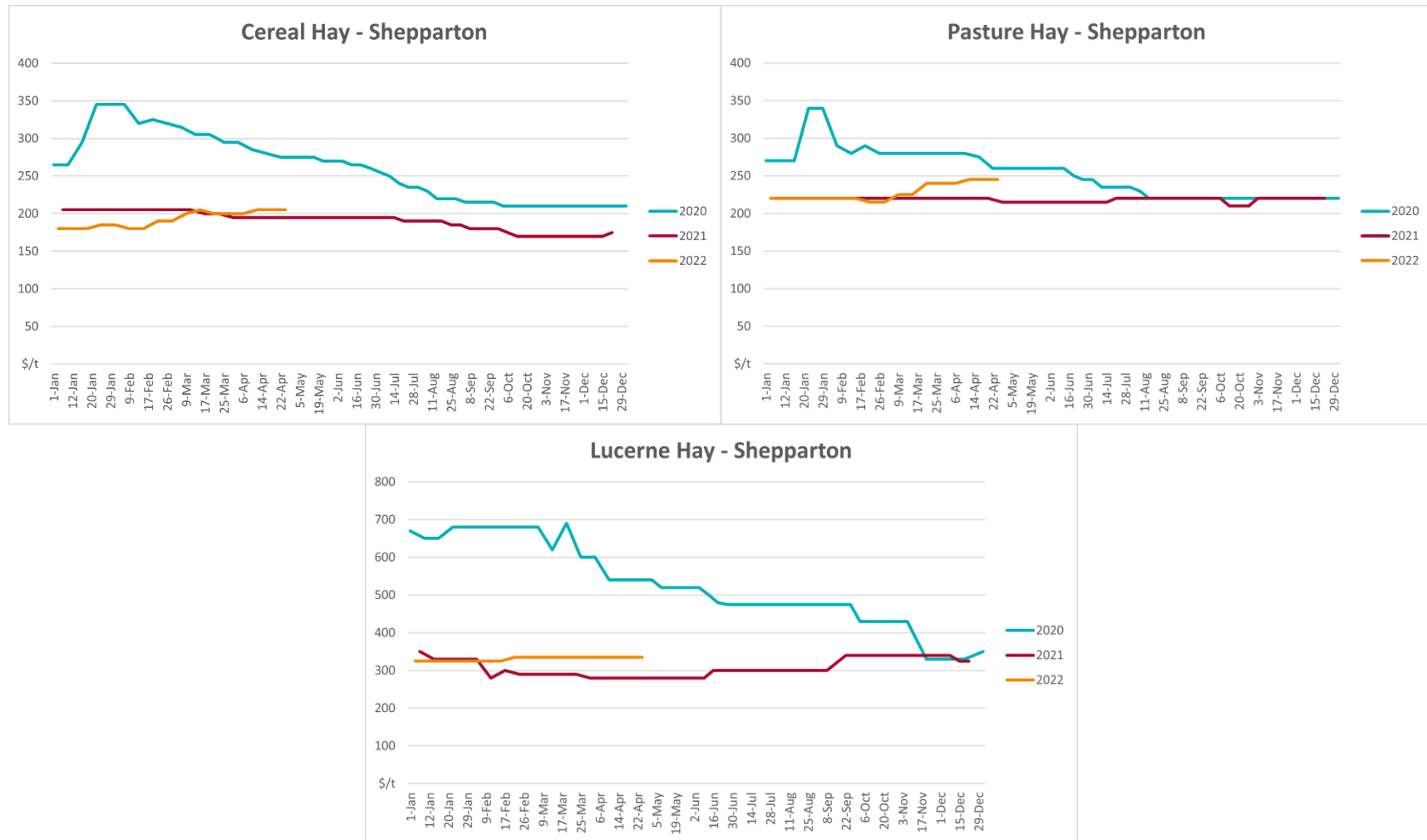








3.6. Selected domestic fodder indicator prices



4. Data attribution

Climate

Bureau of Meteorology

- Weekly rainfall totals: www.bom.gov.au/climate/maps/rainfall/
- Monthly and last 3-month rainfall percentiles: www.bom.gov.au/water/landscape/
- 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/
- Climate drivers: <http://www.bom.gov.au/climate/enso/>
- Soil moisture: www.bom.gov.au/water/landscape/

Other

- Pasture growth: 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>
- Autumn break: Pook et al., 2009, <https://rmets-onlinelibrary-wiley-com.virtual.anu.edu.au/doi/epdf/10.1002/joc.1833>

Water

Prices

- Waterflow: <https://www.waterflow.io/>
- Ruralco: <https://www.ruralcowater.com.au/>

Bureau of Meteorology:

- Allocation trade: <http://www.bom.gov.au/water/dashboards/#/water-markets/mdb/at>
- Storage volumes: <http://www.bom.gov.au/water/dashboards/#/water-storages/summary/drainage>

Trade constraints:

- Water NSW: <https://www.watarnsw.com.au/customer-service/ordering-trading-and-pricing/trading/murrumbidgee>
- Victorian Water Register: <https://www.waterregister.vic.gov.au/TradingRules2019/>

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, canola and fodder
 - 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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Department of Agriculture, Water and the Environment

GPO Box 858 Canberra ACT 2601

Telephone 1800 900 090

Web awe.gov.au/abares

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