



Weekly Australian Climate, Water and Agricultural Update

No. 21/2024

6 June 2024

Summary of key issues

- In the week ending 5 June 2024, rainfall was recorded across much of Australia.
 - Across cropping regions, northern Queensland, central to southeastern parts of Western Australia, and localised areas in central South Australia, New South Wales, western Victoria and southern Queensland recorded up to 10 millimetres of rainfall. Remaining cropping regions recorded rainfall ranging from 10 to 100 millimetres.
 - This rainfall has likely provided a relief to most cropping areas where topsoil moisture had dried out and will allow for germination of dry sown winter crops.
- Over coming days, little to no rainfall is forecast for central and northern parts of the country. The passage of a series of cold fronts is expected deliver heavy rainfall to parts of southern Australia. Onshore flow is expected to bring significant falls to south-eastern New South Wales.
 - Across cropping regions, widespread falls of between 10 and 100 millimetres are expected in Western Australia, with between 5 and 50 millimetres forecast for central New South Wales and southern Victoria. Little to no rainfall is expected in the remaining cropping regions.
 - If realised, this rainfall will boost soil moisture levels across cropping regions in Western Australia, allowing for the germination and establishment of winter crops.
- In May, the national rainfall was 35% below average. Rainfall was above average in a broad band extending from central New South Wales, into south Queensland and northern South Australia, and through to the northwest Western Australia. Extremely low rainfall was observed across large areas of southern Australia, with southern Victoria, southern South Australia, and western Tasmania seeing the highest deficiencies.
- For the 3 months to May 2024, above average rainfall totals resulted in average to well above average pasture production for this time of year across most grazing regions across northern and eastern Australia. High pasture availability will likely enable farmers to continue to maintain current stock numbers and provide opportunities to build standing dry matter availability. Across southern Australia, graziers will be more reliant on the supplementary feed to maintain current stocking rate and production given extremely low pasture growth in these areas.
- Water storage levels in the Murray-Darling Basin (MDB) increased between 30 May 2024 and 6 June 2024 by 114 gigalitres (GL). Current volume of water held in storage is 16 939 GL, equivalent to 76% of total storage capacity. This is 16 percent or 3,296 GL less than at the same time last year. Water storage data is sourced from the BOM.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$22 on 30 May 2024 to \$21 on 6 June 2024. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

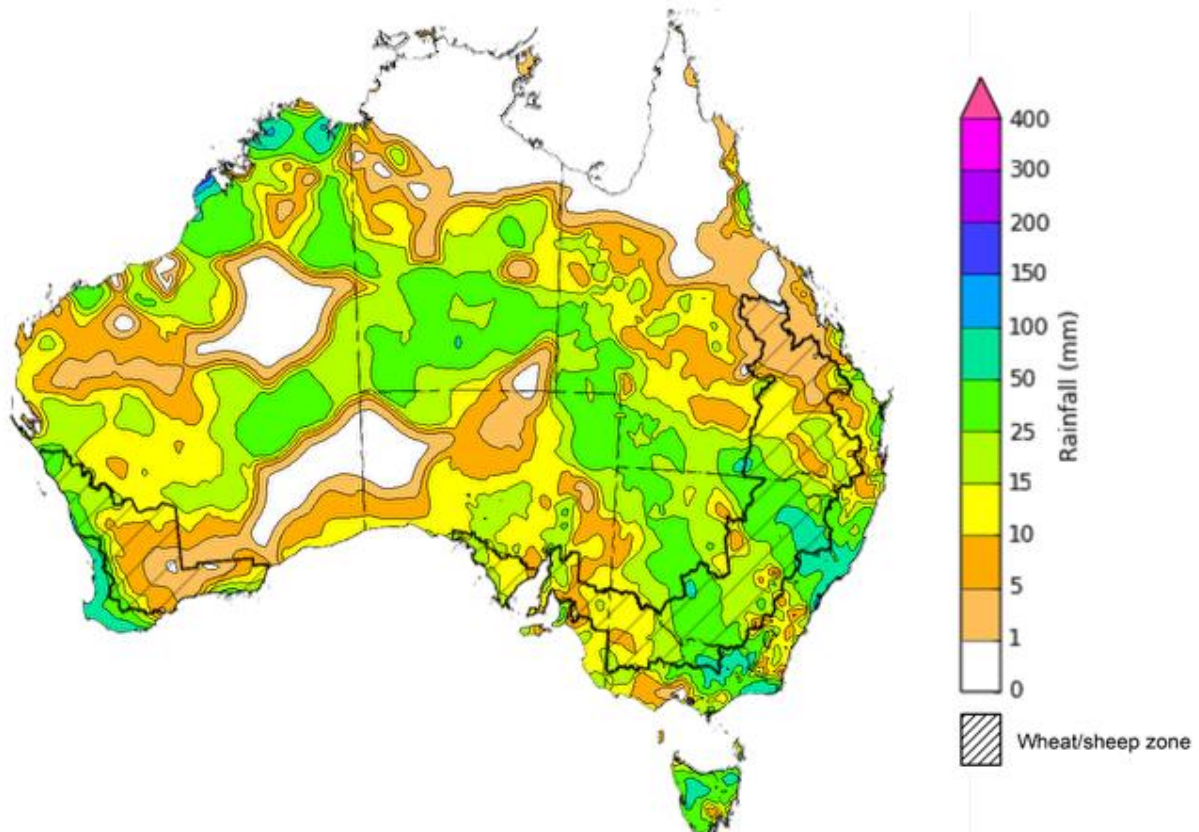
1. Climate

1.1. Rainfall this week

For the week ending 5 June 2024, rainfall was recorded across much of Australia. Cold fronts brought isolated thunderstorms and rainfall to the far south-west of Western Australia. A low-pressure trough interacted with tropical moisture, generating rainfall over broad area extending from the northwest to the southeast of Australia. Meanwhile, an offshore low-pressure system brought significant rainfall totals of up to 100 millimetres to parts of eastern New South Wales and Victoria, and southern Queensland.

Across cropping regions, rainfall totals were highly variable for the week ending 5 June 2024. Northern Queensland, central to southeastern parts of Western Australia, and localised areas in central South Australia, New South Wales, western Victoria and southern Queensland recorded up to 10 millimetres of rainfall. Remaining cropping regions recorded falls ranging from 10 to 100 millimetres. This week rainfall has likely provided a relief to most cropping areas where topsoil moisture had dried out and will allow for germination of dry sown winter crops. Rainfall in New South Wales, eastern Victoria and southern areas of Queensland will continue to built-up layer soil moisture profiles.

Rainfall for the week ending 5 June 2024



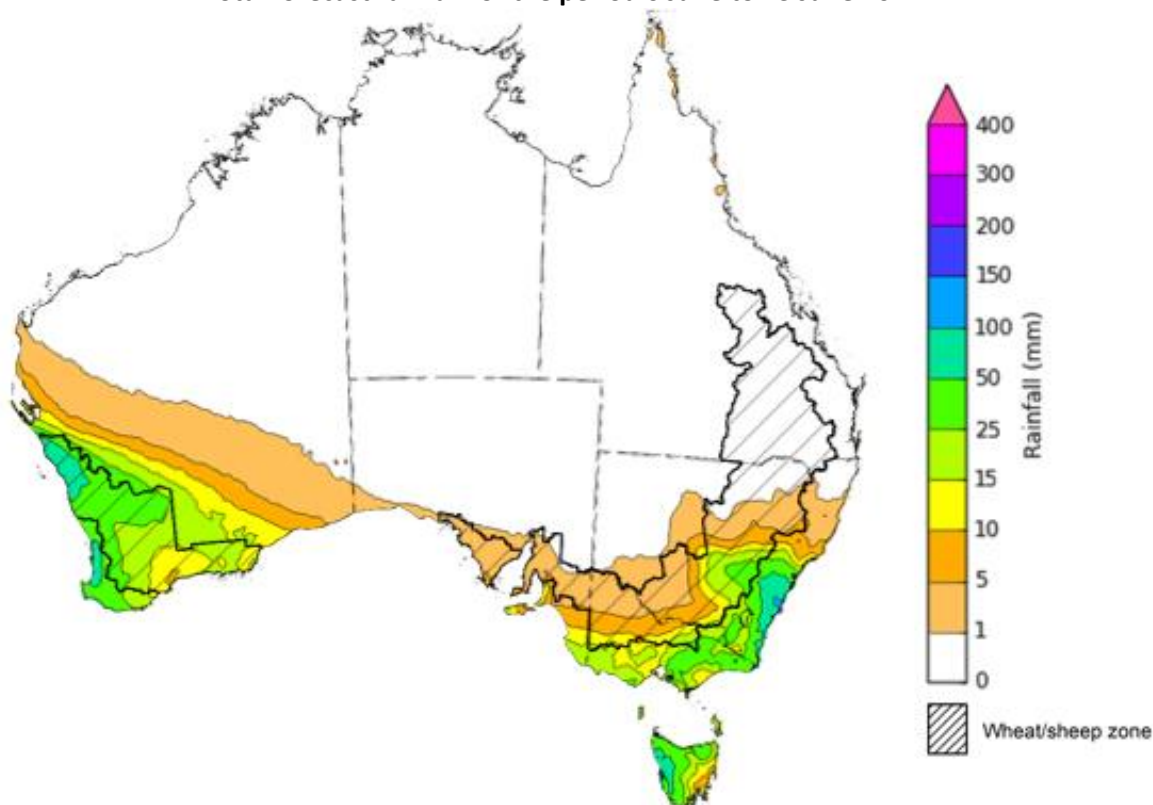
©Commonwealth of Australia 2024, Australian Bureau of Meteorology
Note: The rainfall analyses and associated maps utilise data contained in the Bureau of Meteorology climate database, the Australian Data Archive for Meteorology (ADAM). The analyses are initially produced automatically from real-time 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/>
Issued: 05/06/2024

1.2. Rainfall forecast for the next eight days

Over the 8 days to 13 June 2024, little to no rainfall is forecast for central and northern parts of the country. The passage of a series of cold fronts is expected deliver heavy rainfall to parts of southern Australia. The onshore flow is expected to bring significant amounts of rainfall to south-eastern New South Wales.

Across cropping regions, widespread falls of between 10 and 100 millimetres are expected in Western Australia, with falls of between 5 and 50 millimetres forecast for central New South Wales and southern Victoria. Little to no rainfall is expected in the remaining cropping regions. If realised, this rainfall will provide further boost soil moisture levels across cropping regions in Western Australia, allowing for the germination and establishment of winter crops.

Total forecast rainfall for the period 6 June to 13 June 2024



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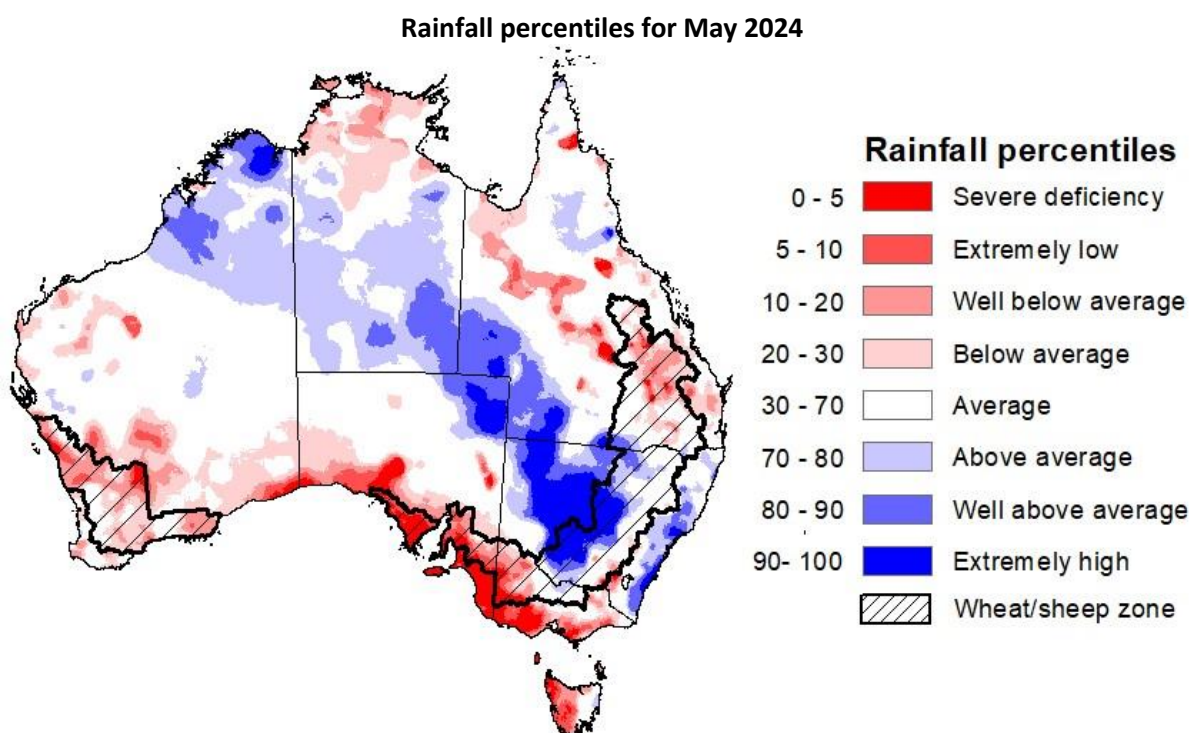
Issued 06/06/2024

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.

1.3. Monthly rainfall

During May 2024, across the nation as a whole rainfall was 35% below average, and over 50% below average in Queensland, Victoria, Tasmania, and South Australia. Rainfall was above average in a broad band extending from central New South Wales, into south Queensland and northern South Australia, and through to the northwest Western Australia. Extremely low rainfall was observed across large areas of southern Australia, with southern Victoria, southern South Australia, and western Tasmania seeing the highest rainfall deficiencies.

In cropping regions, rainfall across South Australia, Victoria, northern Queensland, and Western Australia was generally below average to extremely low. The only cropping region to experience extremely high rainfall being western regions of New South Wales, with southern Queensland and the remainder of New South Wales experiencing generally average rainfall.



Note: Rainfall for May 2024 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/>
Source: Bureau of Meteorology

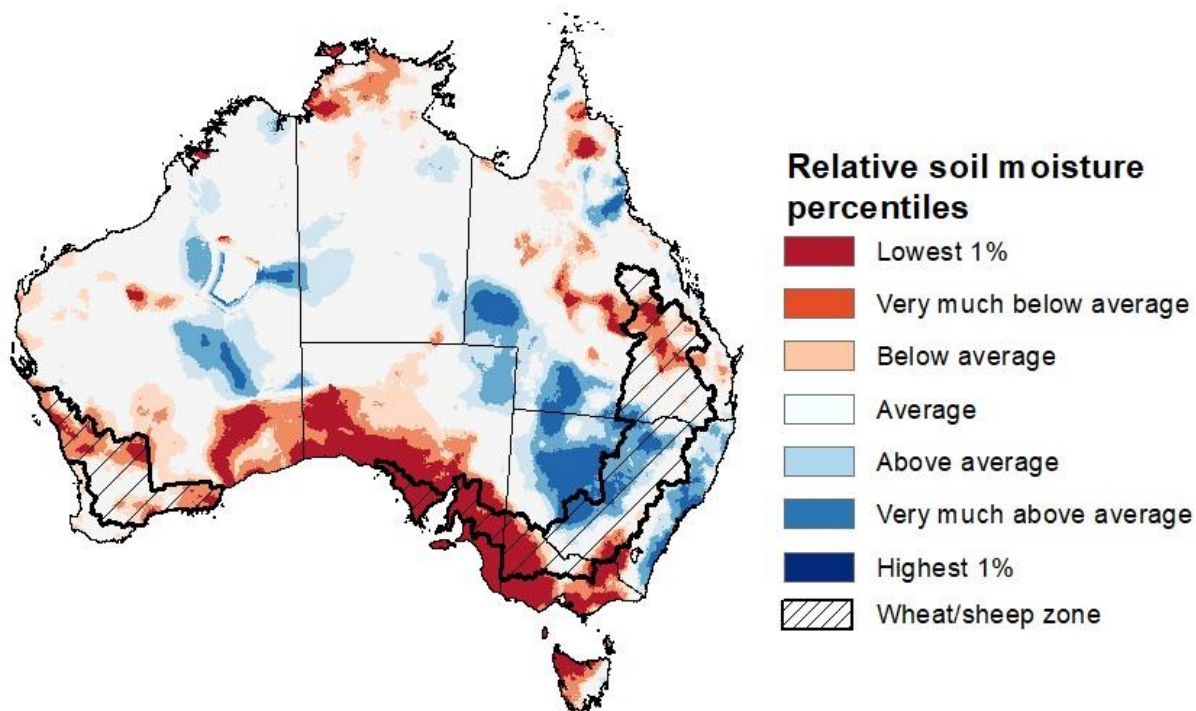
1.4. Monthly soil moisture

Upper layer soil moisture levels for May 2024 varied considerably throughout Australia. High levels of upper layer soil moisture were modelled in New South Wales, eastern parts of Western Australia, north-eastern parts of South Australia, and across parts of south-western and north-eastern Queensland. In contrast, upper layer soil moisture in the south, parts of east, and far-north was modelled to be below average, with large parts of Victoria, South Australia and Tasmania at the lowest 1% percentile of upper layer soil moisture.

At this time of the year, upper layer soil moisture is important for the germination and establishment of early sown winter crops across Australian cropping regions.

Across cropping regions, May upper layer soil moisture was highly variable. Much of South Australia, western Victoria, northern Queensland and northern and southern Western Australia showing below average levels of upper layer soil moisture. By contrast, upper layer soil moisture was average to very much above average in New South Wales, southern Queensland and central areas of Western Australia and Victoria. Low levels of upper layer soil moisture have seen a high proportion of this year's winter crop dry sown and will require adequate and timely rainfall during June to allow for crop germination and establishment. For areas with below average levels of stored soil moisture, dry autumn conditions are also expected to have discouraged some growers from committing to their full planting intentions.

Modelled upper layer soil moisture for May 2024



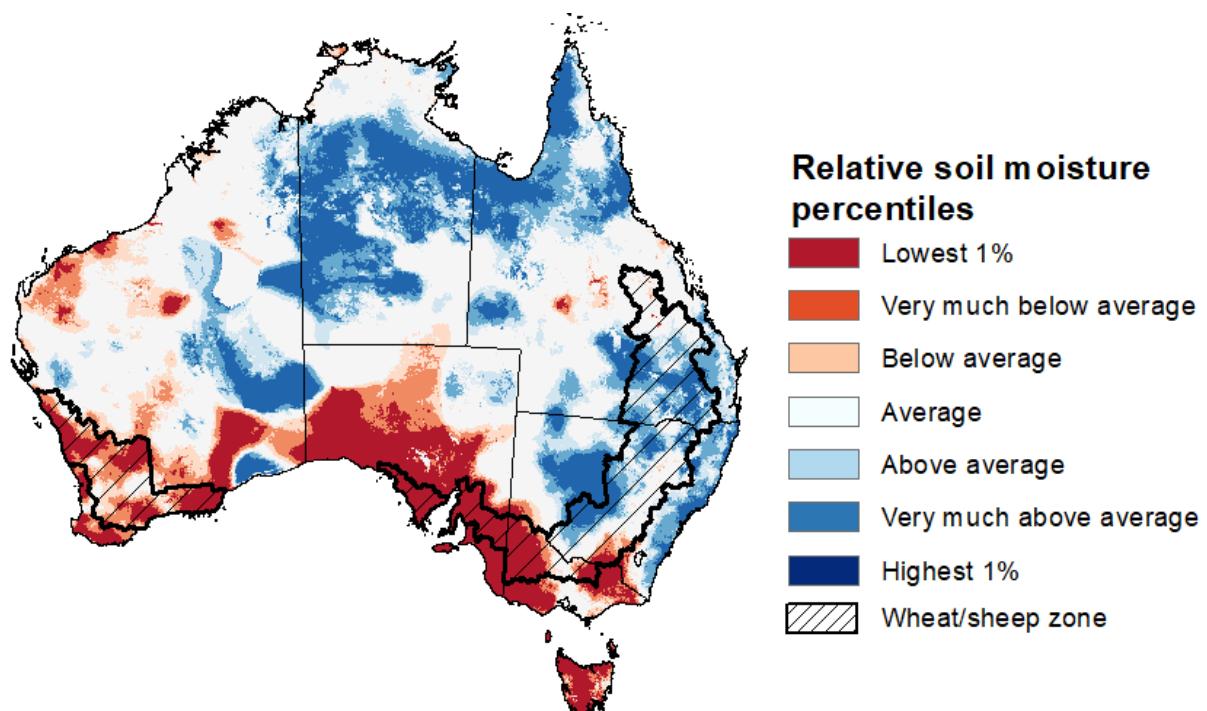
Note: This map shows the levels of modelled upper layer soil moisture (0 to 10 centimetres) during May 2024. This map shows how modelled soil conditions during May 2024 compare with May conditions modelled over the reference period (1911 to 2016). Dark blue areas on the maps were much wetter in May 2024 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.

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

Across northern and eastern Australia, lower layer soil moisture was average to very much above average in May. However, large areas of extremely low lower layer soil moisture were evident in southern Australia. Modelled lower layer soil moisture was generally average for remaining areas of Australia.

Lower layer soil moisture plays a pivotal role in sustaining the growth of winter crops and pasture during their critical development stages. Across Australian cropping regions, lower layer soil moisture generally ranged from average to very much above average across New South Wales and Queensland, and generally average across central areas of Victoria and Western Australia. Extremely low levels of lower layer soil moisture were modelled across much of South Australia, Western Australia and Victoria. These extremely low levels of stored soil moisture across much of South Australia, Western Australia and Victoria will mean that adequate and timely rainfall will be required during winter and spring to support current level of forecast crop and livestock production.

Modelled lower layer soil moisture for May 2024



Note: This map shows the levels of modelled lower layer soil moisture (10 to 100 centimetres) during May 2024. This map shows how modelled soil conditions during May 2024 compare with May conditions modelled over the reference period (1911 to 2016). Dark blue areas on the maps were much wetter in May 2024 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.

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

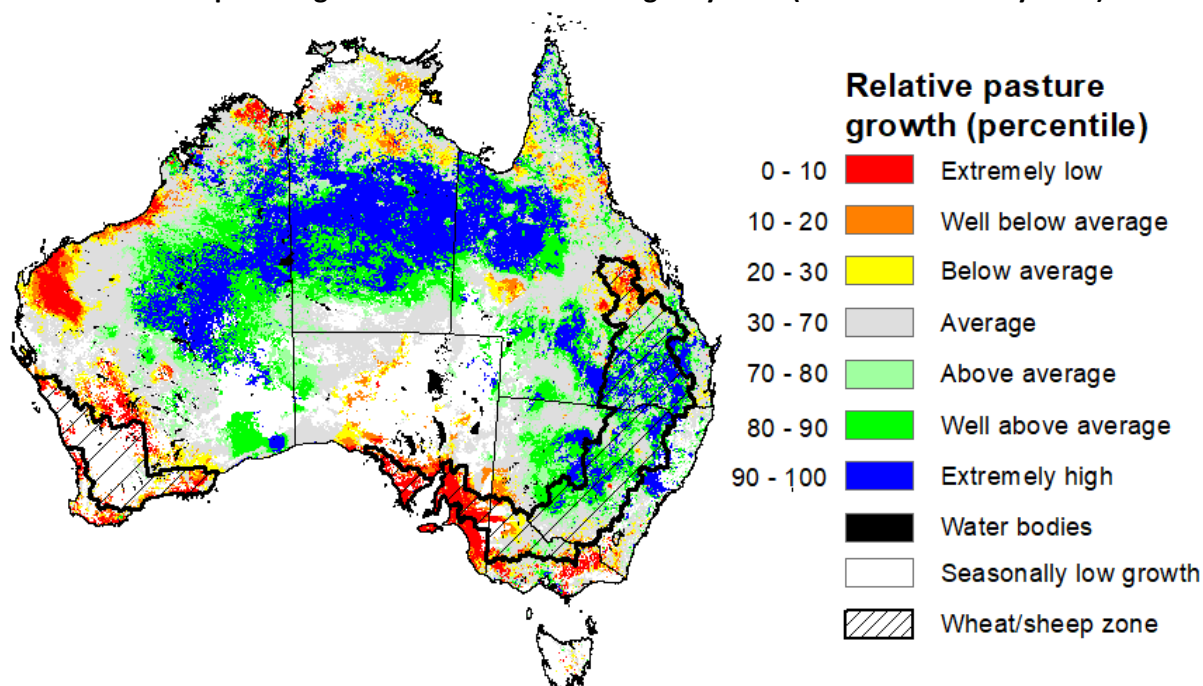
1.5. Pasture growth

Pasture growth during the March to May period affects the availability of fodder to support livestock production across northern Australia as it enters a seasonally low growth period. Across southern Australia, autumn pasture growth influences the standing biomass available to support livestock production over winter and the reliance on hay and grain during this period.

For the 3 months to May 2024, above average rainfall totals resulted in average to extremely high pasture production for this time of year across most grazing regions across northern and eastern Australia. Average to extremely high pasture production across grazing regions will likely enable farmers to continue to maintain current stock numbers and provide opportunities to build standing dry matter availability.

In contrast, extremely low to below average pasture growth rates were recorded across western parts of Western Australia, parts of central Queensland, southern South Australia, and parts of southern and eastern Victoria and central Tasmania. Across southern Australia, graziers will be more reliant on the supplementary feed to maintain current stocking rate and production.

Relative pasture growth for 3-months ending May 2024 (1 March to 31 May 2024)



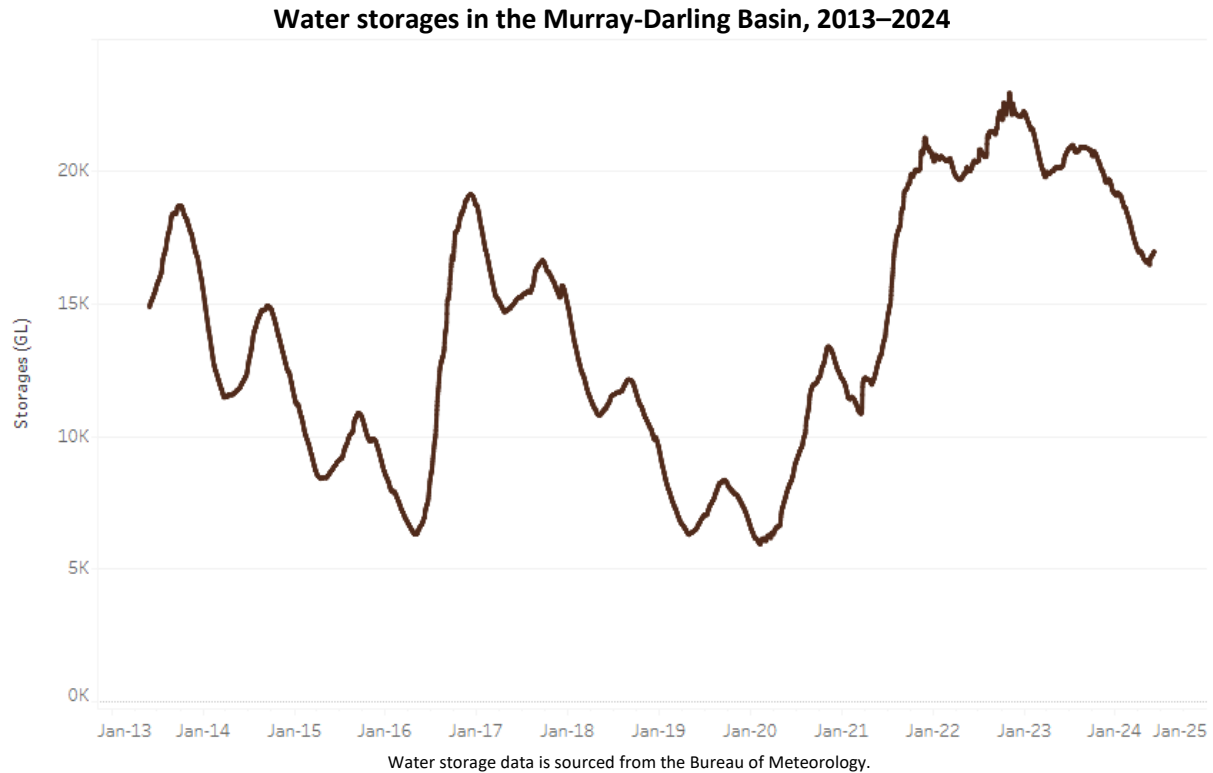
Notes: AussieGRASS pasture growth estimates are relative to the long-term record and shown in percentiles. Percentiles rank data on a scale of zero to 100. This analysis ranks pasture growth for the selected period against average pasture growth for the long-term record (1957 to 2016). Pasture growth is modelled at 5km² grid cells.

Source: Department of Environment, Science and Innovation

2. Water

2.1. Water markets – current week

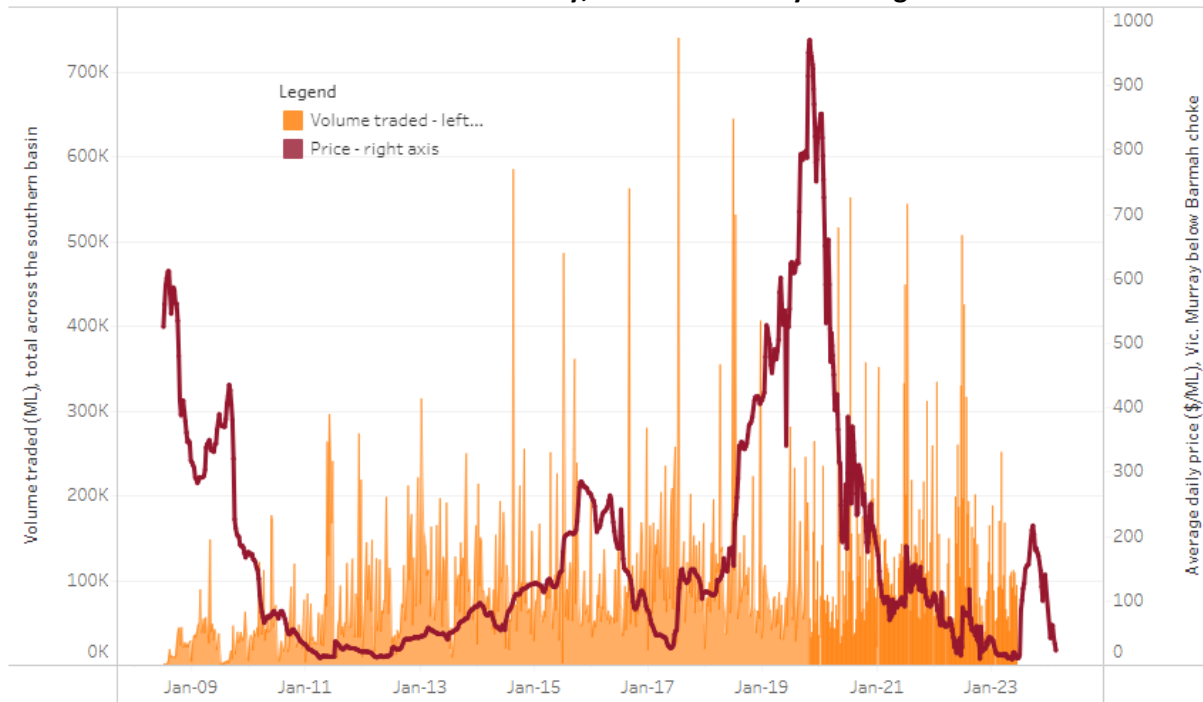
Water storage levels in the Murray-Darling Basin (MDB) increased between 30 May 2024 and 6 June 2024 by 114 gigalitres (GL). Current volume of water held in storage is 16 939 GL, equivalent to 76% of total storage capacity. This is 16 percent or 3,296 GL less than at the same time last year. Water storage data is sourced from the BOM.



Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$22 on 30 May 2024 to \$21 on 6 June 2024. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

Region	\$/ML
NSW Murray Above	15
NSW Murrumbidgee	5
VIC Goulburn-Broken	15
VIC Murray Below	21

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. Only the price data shown is current on 6 June 2024.

To access the full, interactive, weekly water dashboard, which contains the latest and historical water storage, water market and water allocation information, please visit https://www.agriculture.gov.au/abares/products/weekly_update/weekly-update-30524

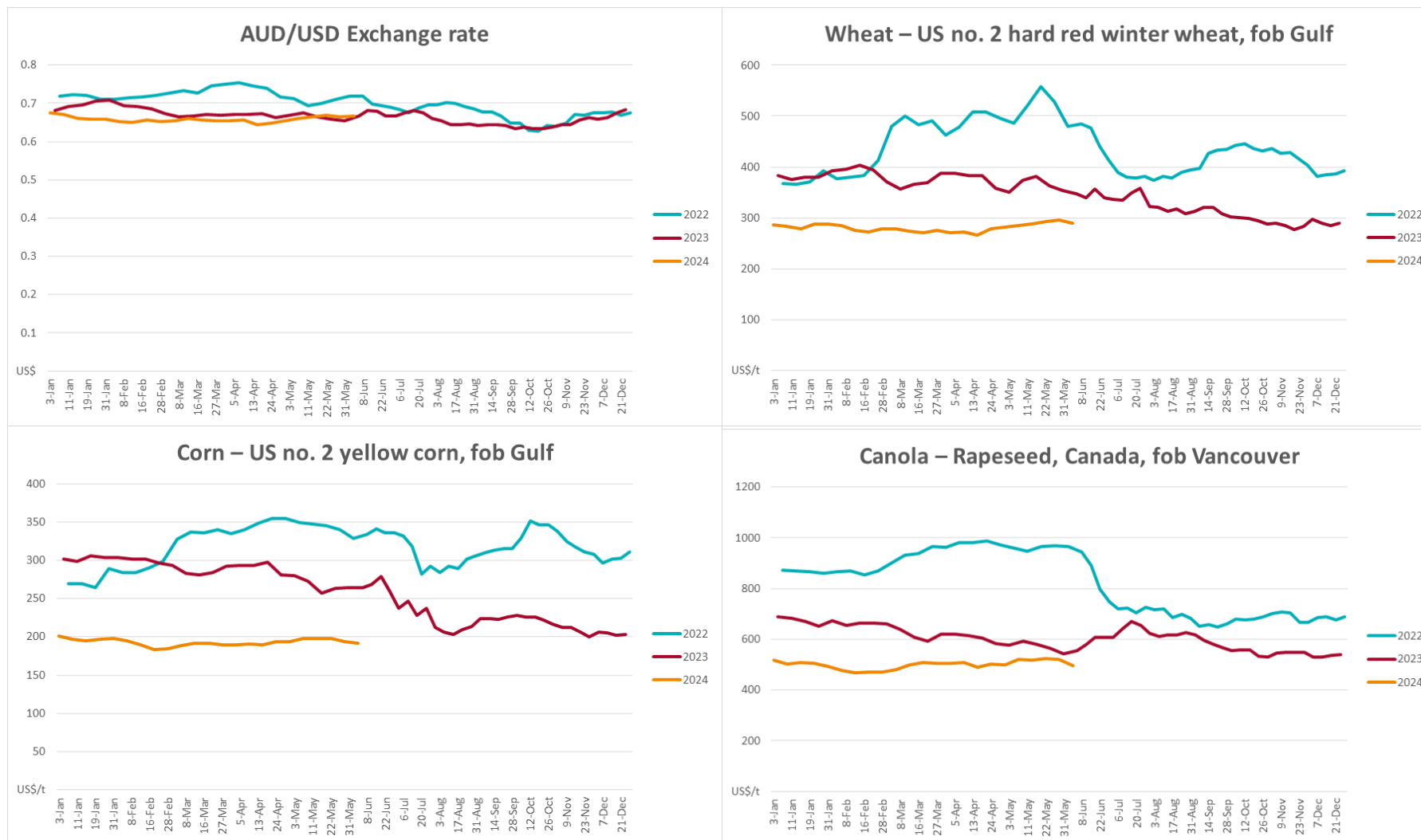
3. Commodities

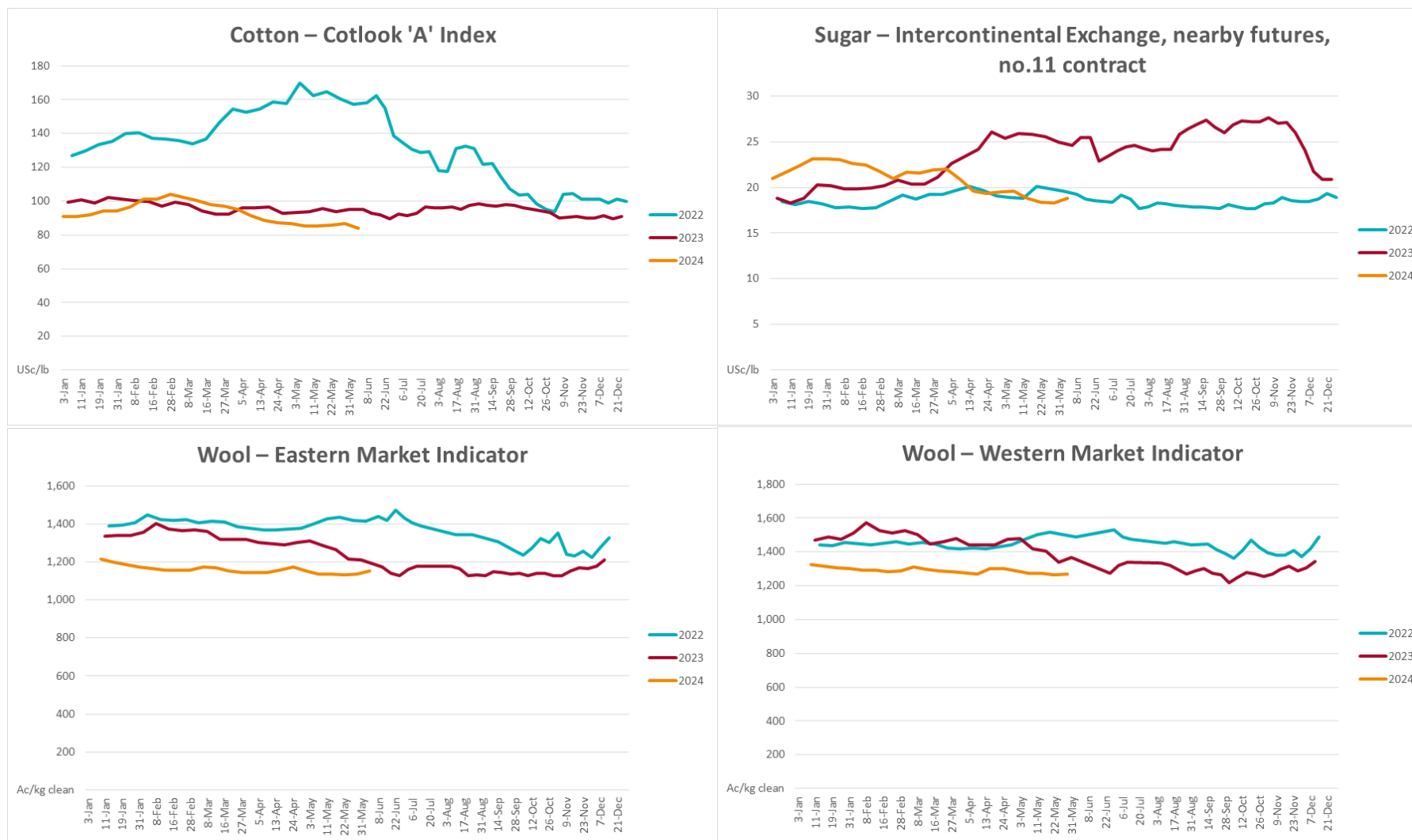
Indicator	Week average	Unit	Latest Price	Previous Week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	05-Jun	A\$/US\$	0.67	0.66	0%	0.68	-2%
Wheat – US no. 2 hard red winter wheat, fob Gulf	05-Jun	US\$/t	290	295	-2%	339	-15%
Corn – US no. 2 yellow corn, fob Gulf	05-Jun	US\$/t	192	193	-1%	269	-29%
Canola – Rapeseed, Canada, fob Vancouver	05-Jun	US\$/t	497	520	-5%	579	-14%
Cotton – Cotlook 'A' Index	05-Jun	USc/lb	84	87	-3%	93	-10%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	05-Jun	USc/lb	18.8	18.3	3%	25	-26%
Wool – Eastern Market Indicator	05-Jun	Ac/kg clean	1,152	1,137	1%	1,289	-11%
Wool – Western Market Indicator	29-May	Ac/kg clean	1,269	1,262	1%	1,462	-13%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	05-Jun	A\$/t	431	427	1%	427	1%
Feed Wheat – ASW, Port Adelaide, SA	05-Jun	A\$/t	421	417	1%	398	6%
Feed Barley – Port Adelaide, SA	05-Jun	A\$/t	382	382	0%	343	11%
Canola – Kwinana, WA	05-Jun	A\$/t	782	794	-2%	806	-3%
Grain Sorghum – Brisbane, QLD	05-Jun	A\$/t	454	455	0%	484	-6%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	05-Jun	Ac/kg cwt	602	608	-1%	572	5%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	05-Jun	Ac/kg cwt	343	314	9%	355	-3%
Lamb – National Trade Lamb Indicator	05-Jun	Ac/kg cwt	691	679	2%	597	16%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	22-May	Ac/kg cwt	407	407	0%	357	14%
Live cattle – Light steers to Indonesia	05-Jun	Ac/kg lwt	310	310	0%	350	-11%
Global Dairy Trade (GDT) weighted average prices ^a							
Dairy – Whole milk powder	05-Jun	US\$/t	3,478	3,408	2%	3,244	7%

Dairy – Skim milk powder	05-Jun	US\$/t	2,722	2,629	4%	2,766	-2%
Dairy – Cheddar cheese	05-Jun	US\$/t	4,248	4,239	0%	4,407	-4%
Dairy – Anhydrous milk fat	05-Jun	US\$/t	7,417	7,365	1%	4,600	61%
AUD/USD Exchange rate	05-Jun	A\$/US\$	0.67	0.66	0%	0.68	-2%

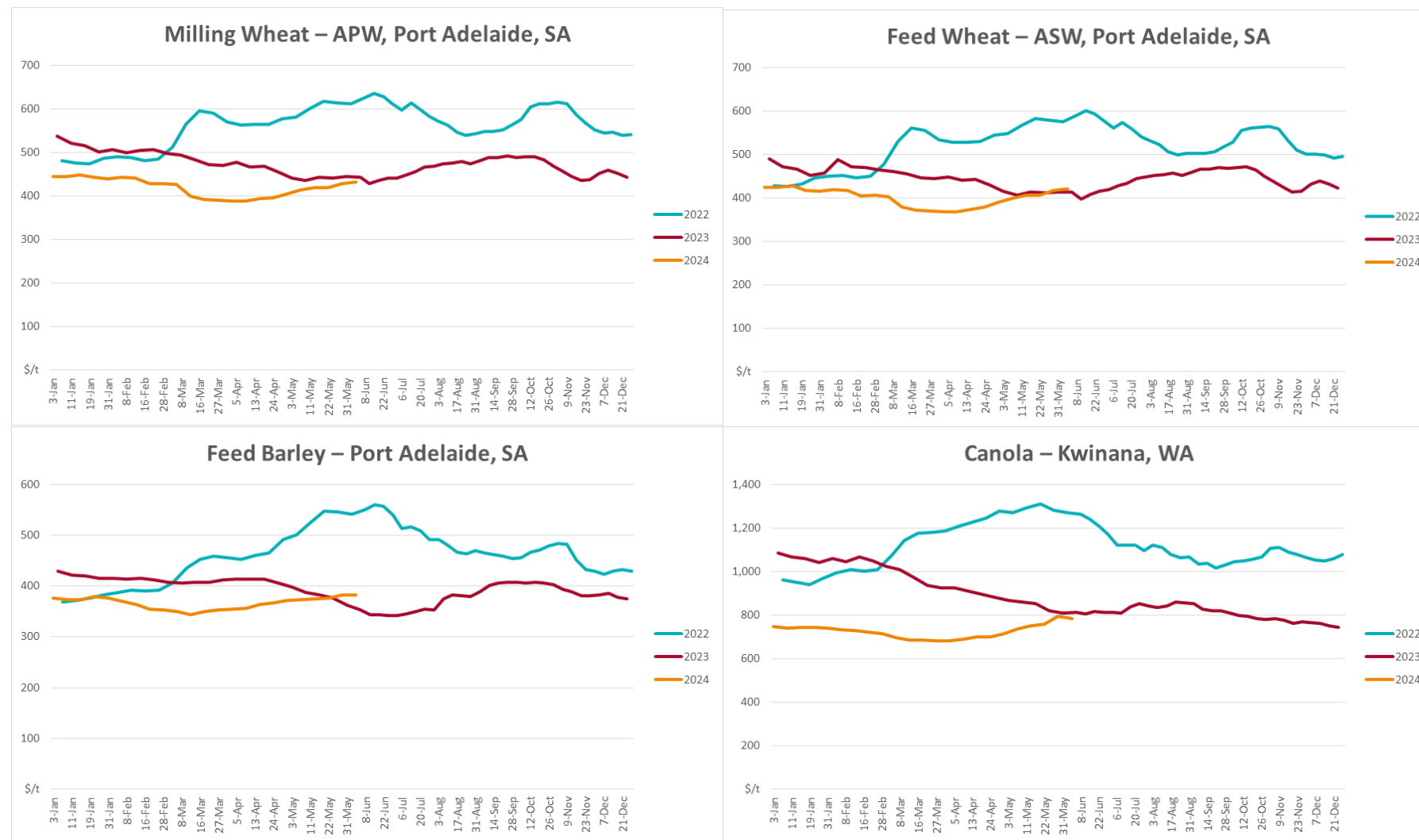
a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

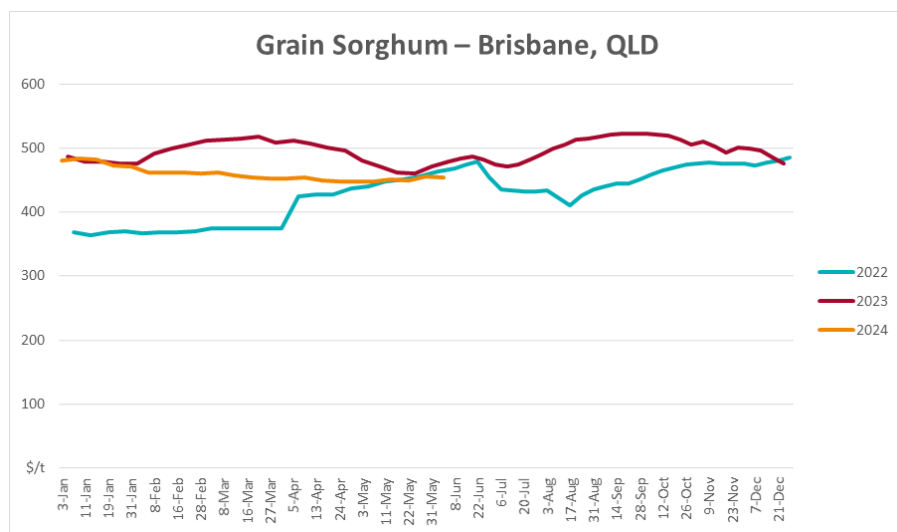
3.1. Selected world indicator prices



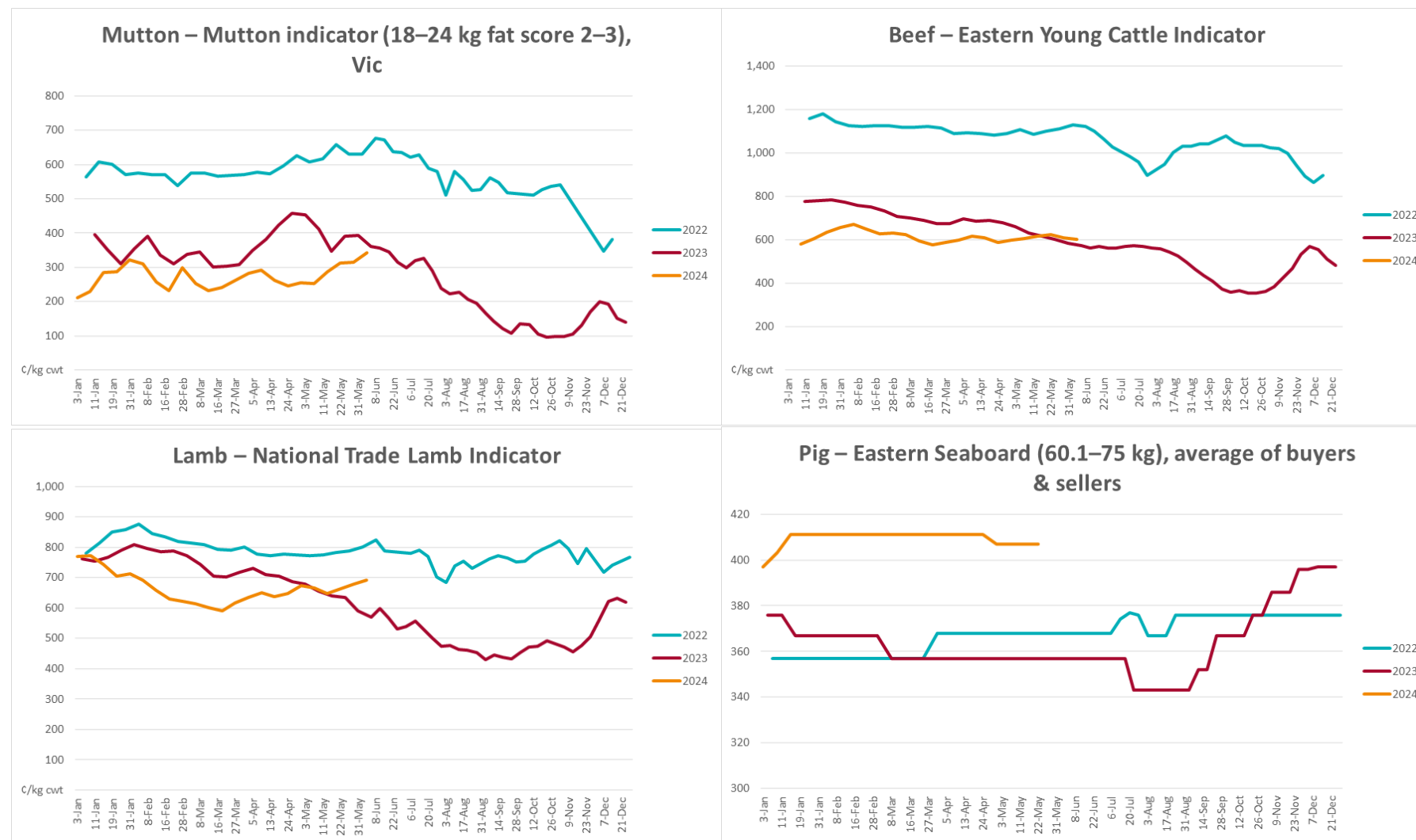


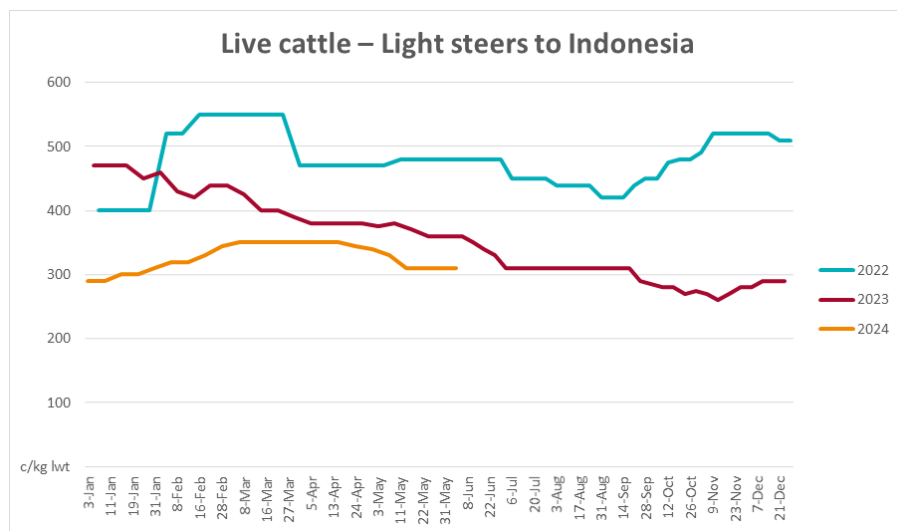
3.2. Selected domestic crop indicator prices



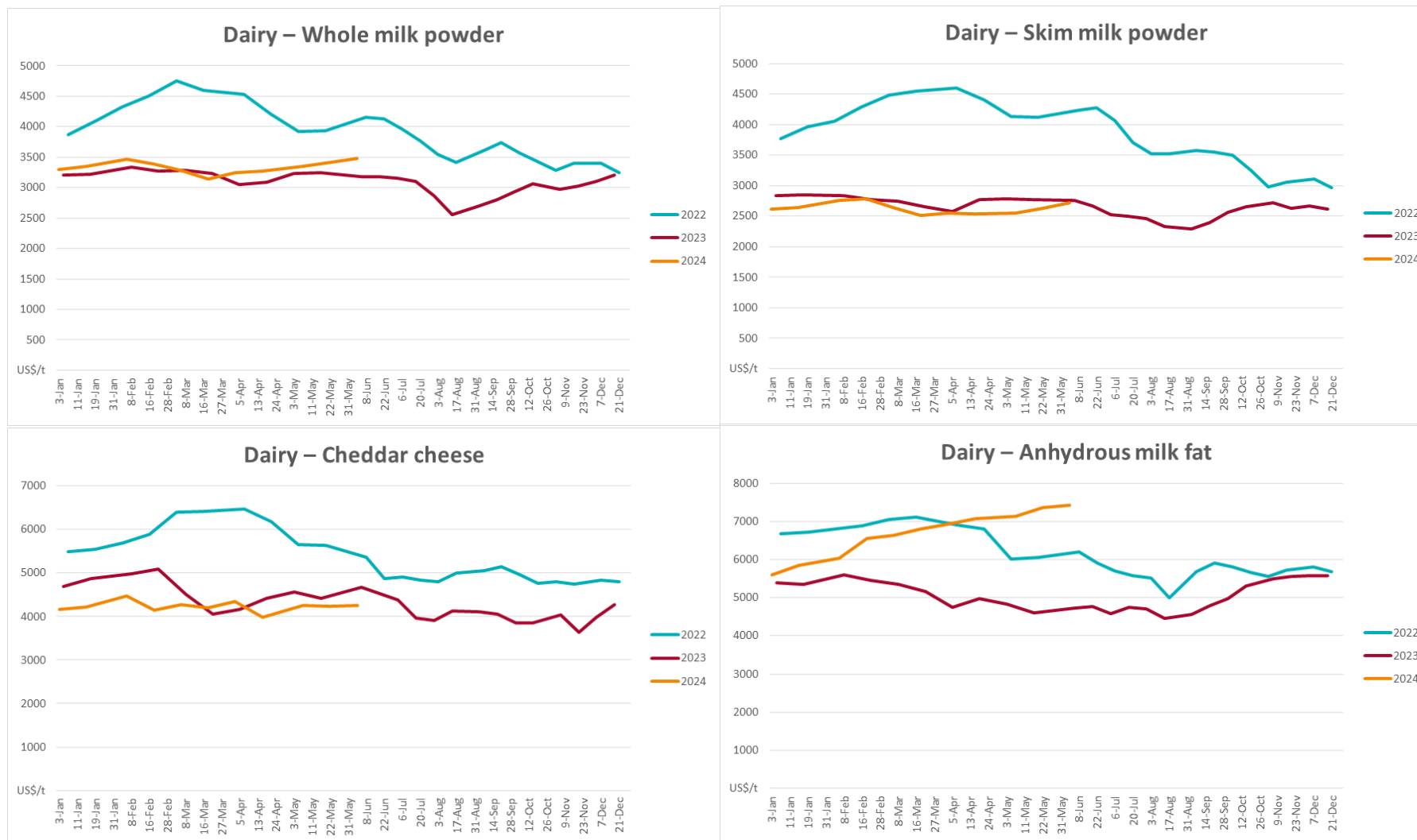


3.3. Selected domestic livestock indicator prices

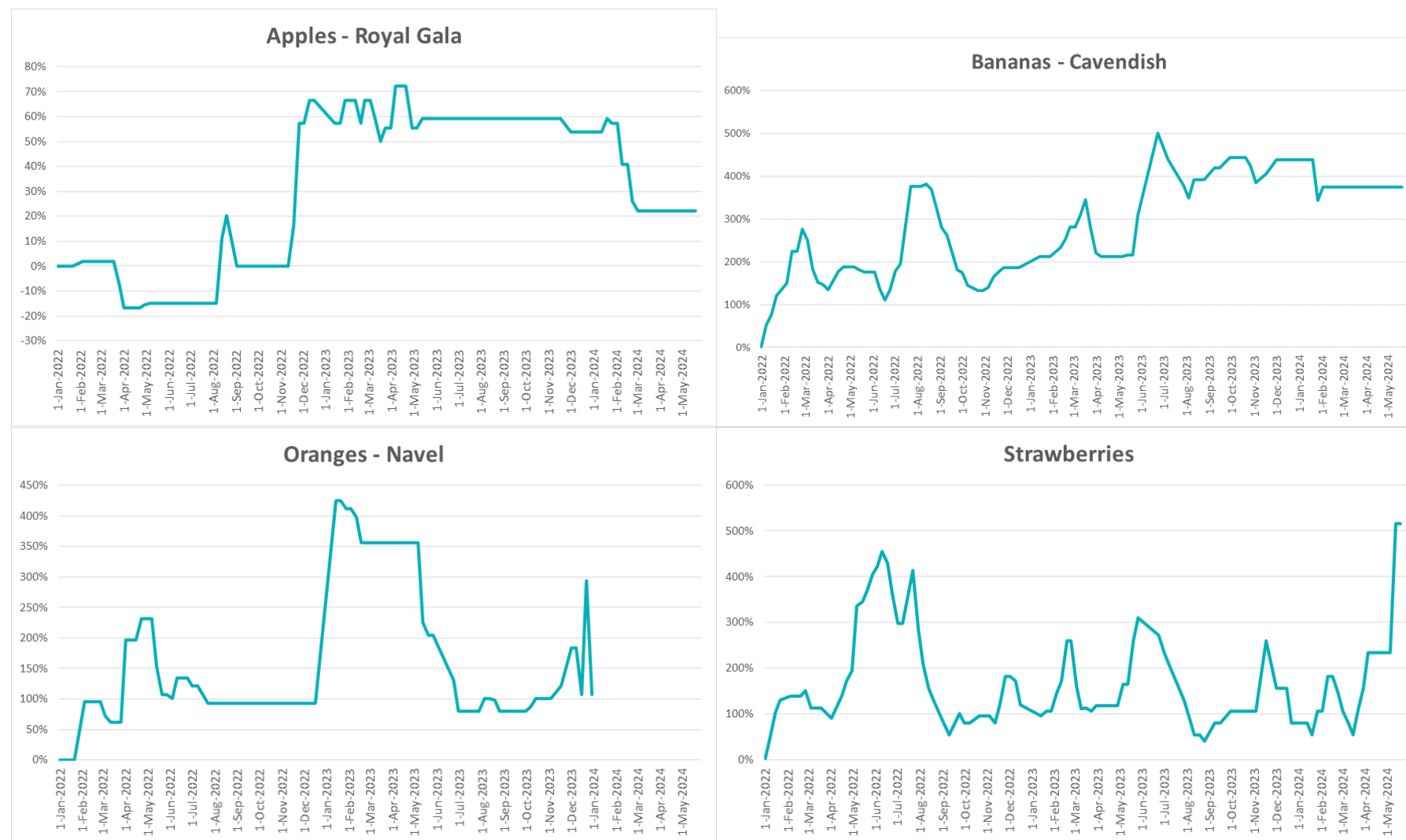


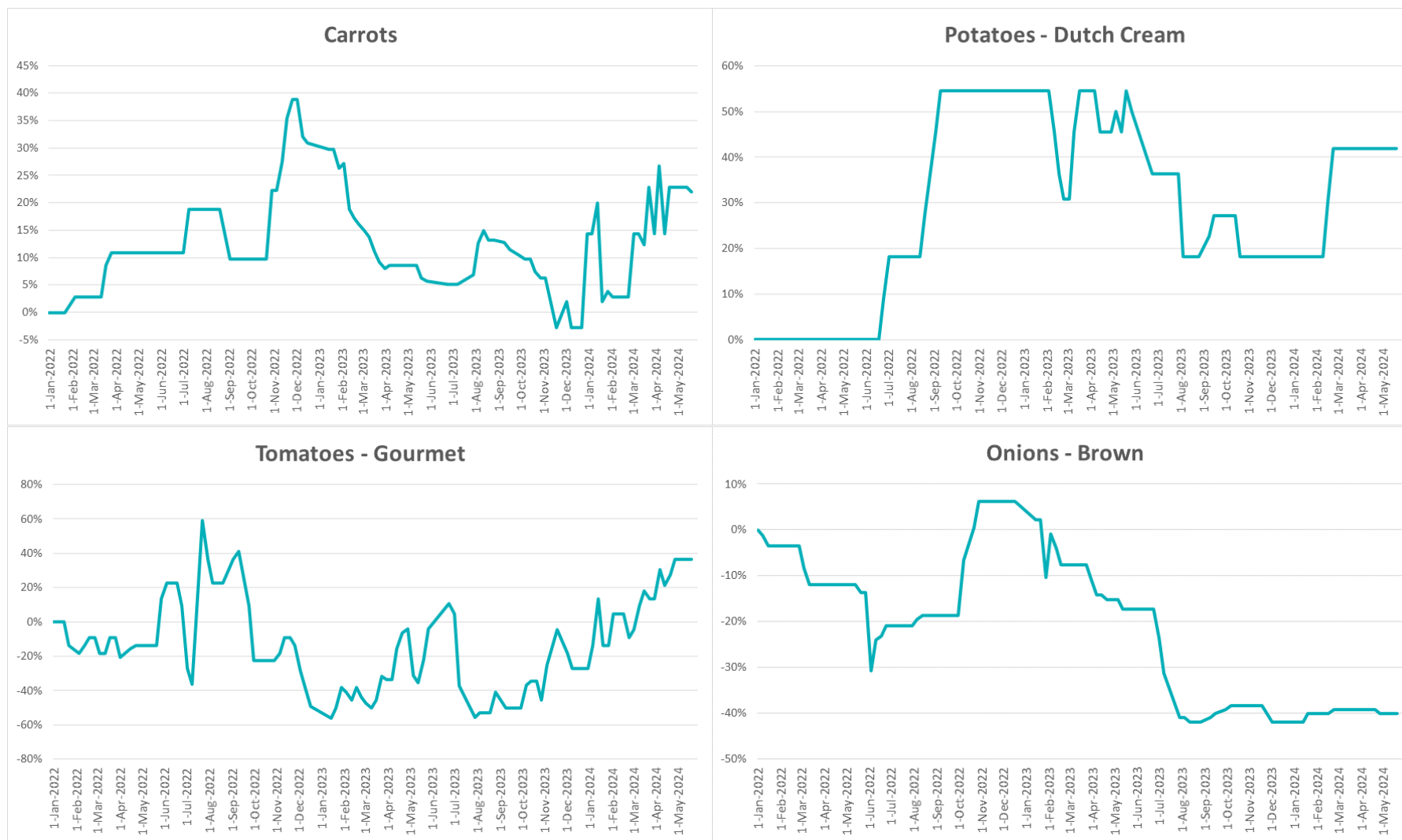


3.4. Global Dairy Trade (GDT) weighted average prices

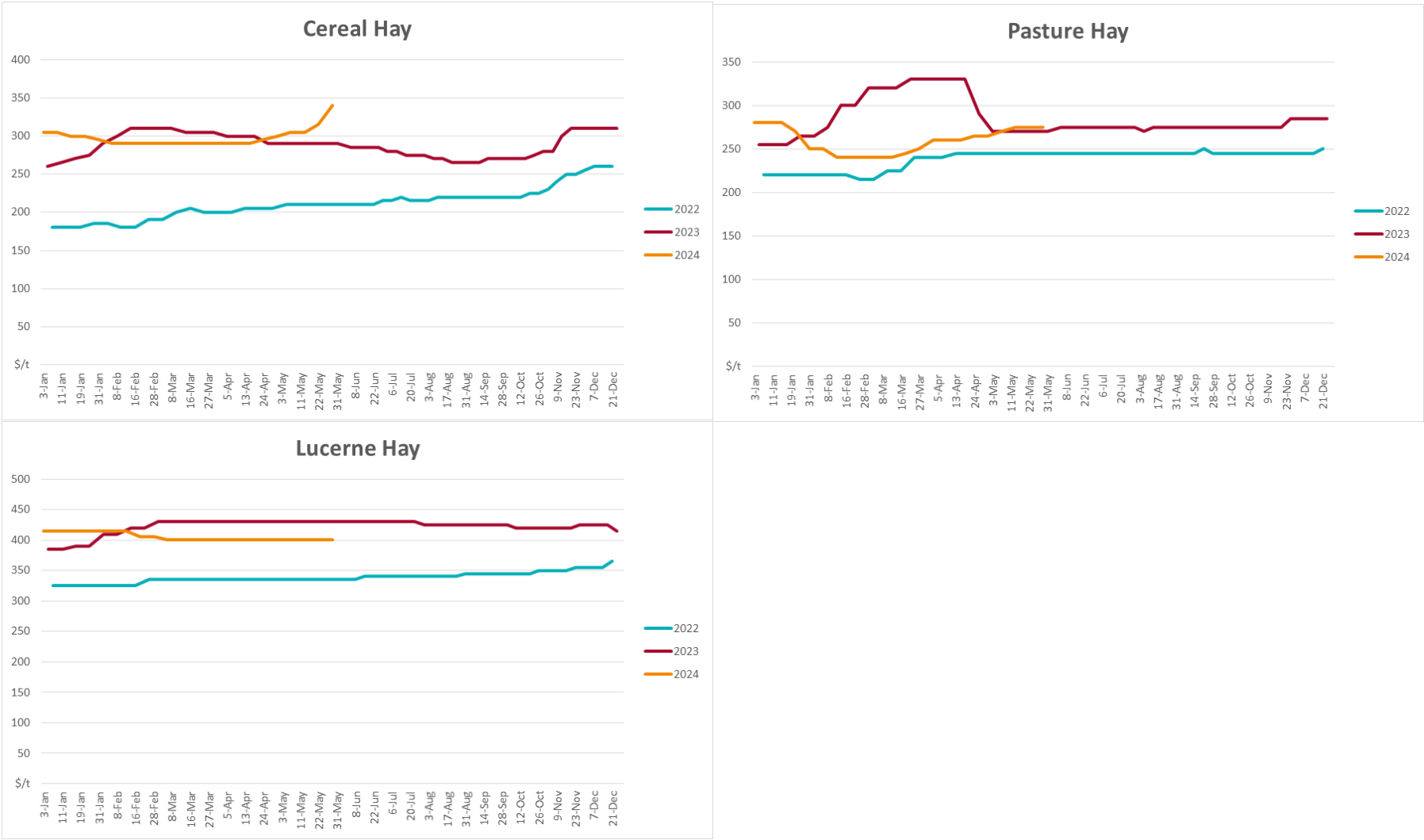


3.5. Selected fruit and vegetable prices





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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