



Weekly Australian Climate, Water and Agricultural Update

No. 44/2023

9 November 2023

Summary of key issues

- For the week ending 8 November 2023, troughs brought widespread showers and storms in Queensland and New South Wales, and in country's northwest. The remainder of the country remained dry.
 - While welcomed, the rainfall recorded over the weekend is unlikely to spark widespread planting of dry land summer crops.
- Over the next 8 days to 16 November 2023, troughs and lows will generate showers and thunderstorms over eastern New South Wales and Victoria, and parts of northern Australia.
 - Dry conditions elsewhere would allow for winter/spring crop harvest to continue but delay timely planting of dry land summer crops.
- An El Niño and a positive IOD event are currently underway. Drier than normal conditions are expected in December for large areas of Australia.
 - This represents a significant downside production risk for dry land summer crop production as well as pasture growth.
- Between December 2023 to February 2024, there is a close to equal chances of above or below median central and southern Australia, while below median rainfall is more likely for the remainder of the country.
 - If these falls are realised, it is likely to be sufficient to support late spring and summer pasture growth across eastern and northern Australia. While the dry start to spring has limited early planting of dry land summer crops, the expected rainfall may be sufficient to allow for later plantings.
- Water storage levels in the Murray-Darling Basin (MDB) decreased between 2 November 2023 and 9 November 2023 by 17 gigalitres (GL). Current volume of water held in storage is 20 176 GL. This is 10 percent or 2284 GL less than at the same time last year.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$169 on 2 November 2023 to \$158 on 9 November 2023. Prices are lower in regions above the Barmah choke due to the binding of the Barmah choke trade constraint.

1. Climate

1.1. Rainfall this week

For the week ending 8 November 2023, troughs brought widespread showers and storms to Queensland and New South Wales, and in country's northwest. In contrast, little to no rainfall was recorded across the remainder of the country.

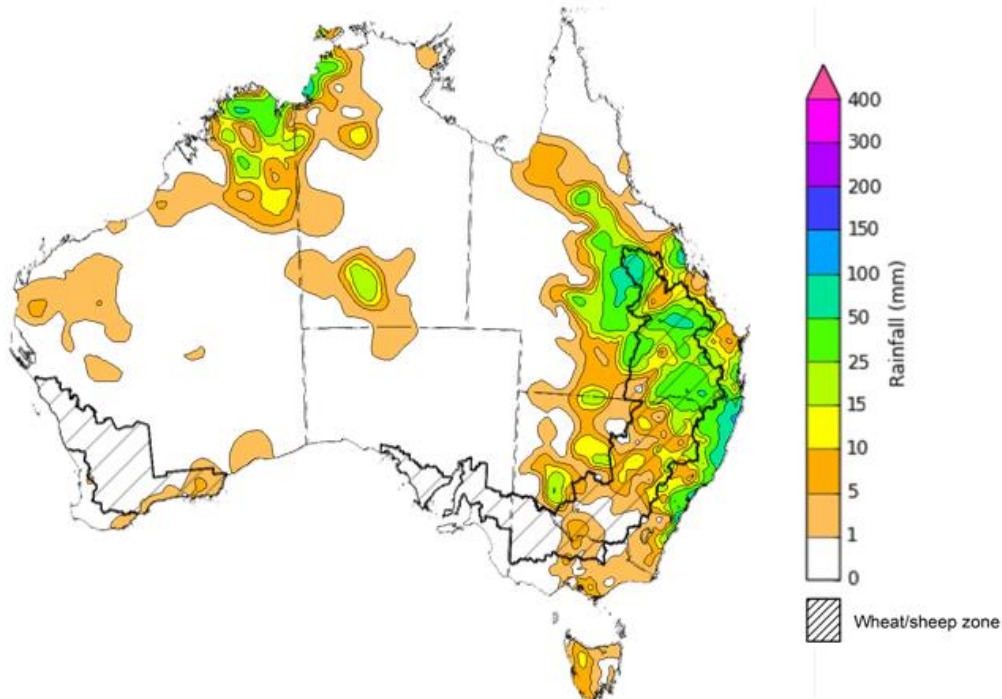
Across cropping regions, rainfall totals of up to 100 millimetres were recorded in Queensland and up to 50 millimetres in northern New South Wales. While welcomed, the rainfall recorded over the weekend is unlikely to spark widespread sorghum planting in northern New South Wales and Queensland but has brought some paddocks one fall closer to their next crop.

With the early sorghum-planting window now closing in southern Queensland and much of northern New South Wales, these falls are unlikely to spark any widespread sowing. In Central Queensland, where sorghum is not planted until January, falls were patchy, and has provided a boost to soil moisture levels.

In northern New South Wales some regions such as the Liverpool Plains can plant sorghum up to Christmas, some producers who recorded 40 millimetres or more may advance put in a dryland paddock to add to what has already gone in under irrigation. However, planting activity is unlikely to widespread planting activity because there's just not enough soil moisture to plant with confidence.

Little to no rainfall recorded across remaining cropping areas. The dry conditions across remaining cropping regions would have allowed for the uninterrupted harvest of winter crops.

Rainfall for the week ending 8 November 2023



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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. Pasture Growth

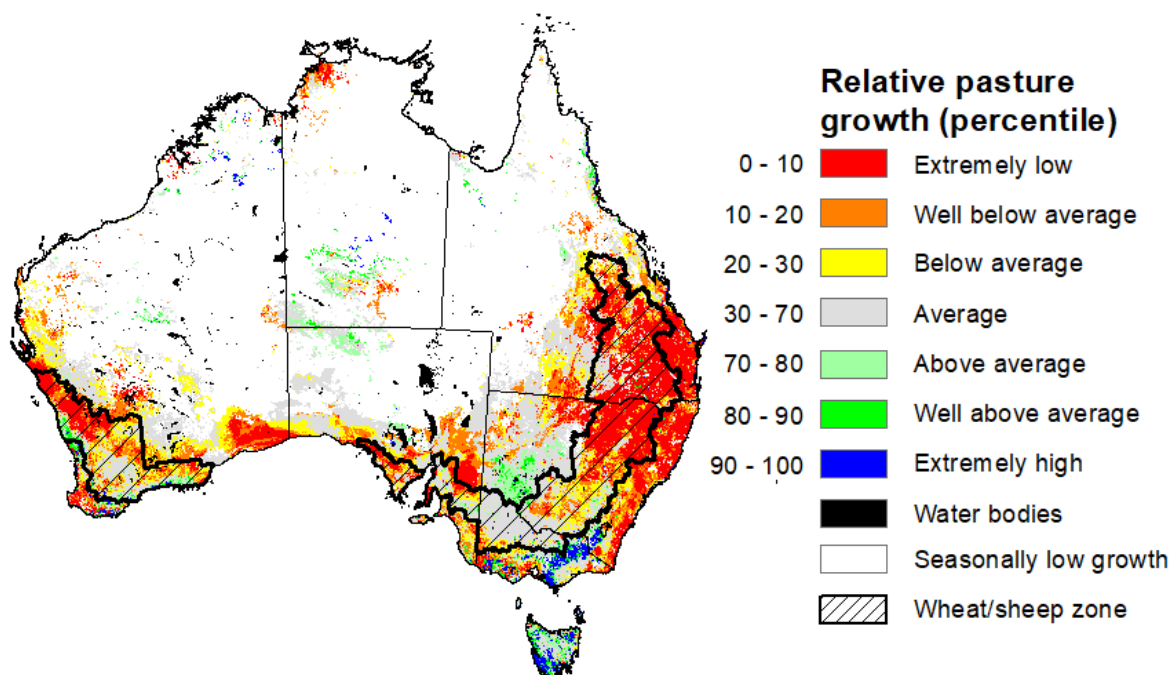
Pasture growth during the August to October period is typically low across large areas of central and northern Australia as it is firmly in the dry season. Across southern Australia, August to October pasture growth provides the spring flush which typically allows producers to cease winter supplementary feeding with grain and hay. It also influences the growth, branding and marking rates of lambs and calves, and the production of meat, milk, and wool over this peak production period.

For the 3 months to October 2023 below average rainfall totals and high temperatures resulted in well below average pasture production for this time of year across many grazing regions in eastern and southern Australia.

Modelled pasture growth was average to above average in Tasmania and parts of southern Victoria, southern and western New South Wales, and eastern South Australia. This growth will likely enable farmers to maintain current stock numbers and provide opportunities to replenish fodder supplies during late spring, if suitable fodder conservation conditions arise.

In contrast, modelled pasture growth was extremely low to below average across much of eastern and northern New South Wales, southern Queensland, South Australia, and southern parts of Western Australian grazing areas. This has led to a decline in pasture availability and precipitated a rapid increase in saleyard activity.

Relative pasture growth for 3-months ending October 2023 (1 August 2023 to 31 October 2023)

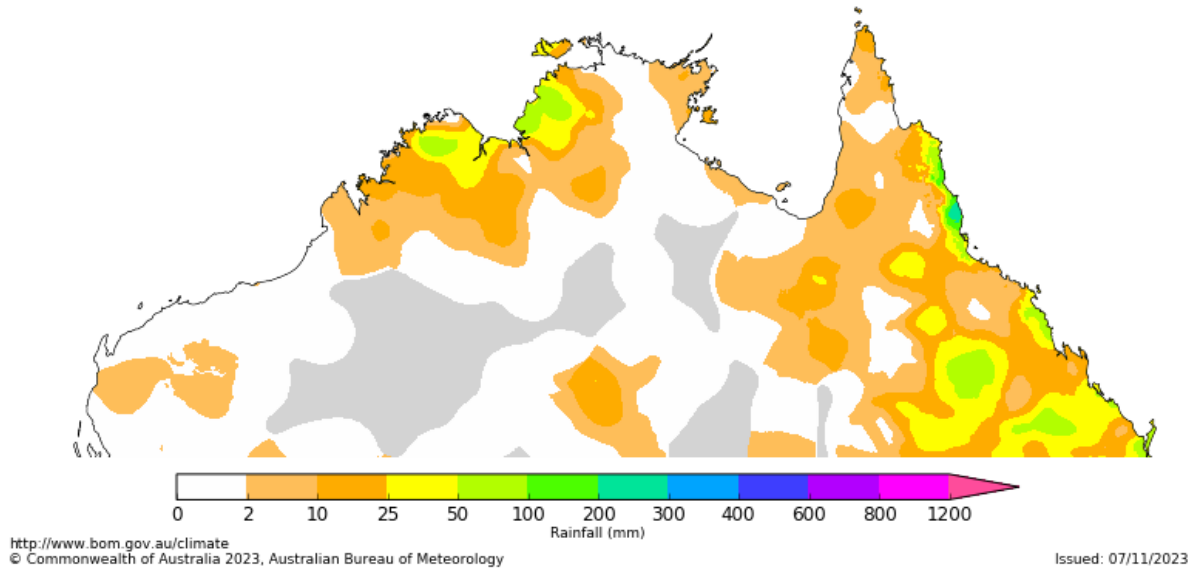


Notes: AussieGRASS pasture growth estimates are relative to the long-term record and shown in percentiles. Percentiles rank data on a scale of zero to 100. This analysis ranks pasture growth for the selected period against average pasture growth for the long-term record (1957 to 2016). Pasture growth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

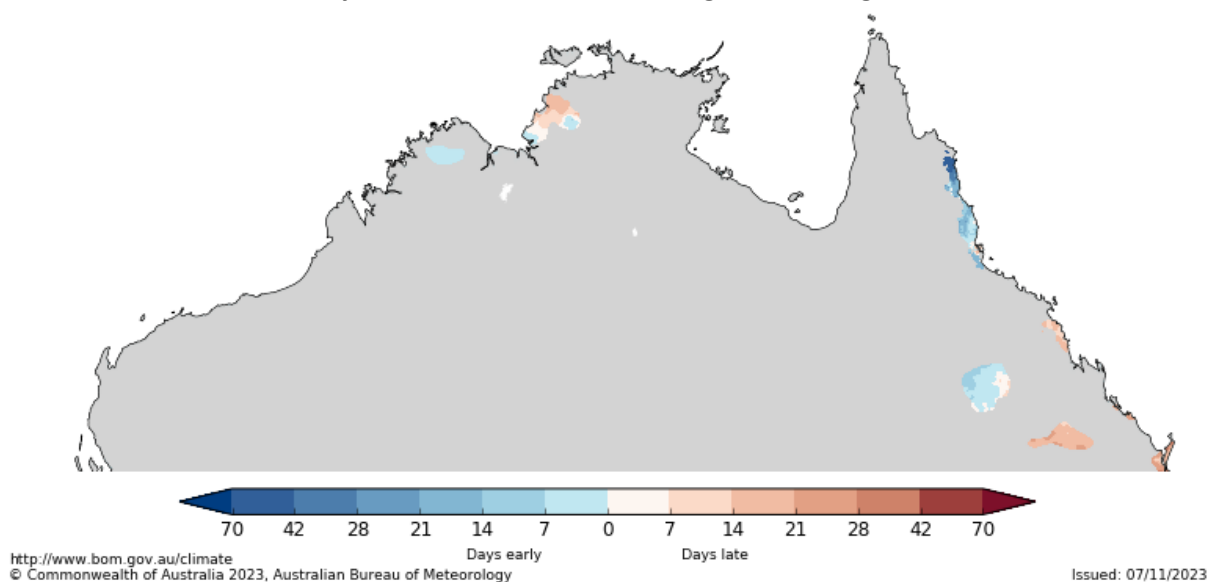
1.3. Northern Australia rainfall onset

The timing of Northern Australia rainfall onset is an important indicator for seasonal pasture growth and potential livestock production. The rainfall onset gives an indication of the accumulation of at least 50 millimetres of rainfall after 1 September to stimulate plant growth after the northern dry season. Between 1 September and 7 November 2023, much of northern Australia is yet to receive at least 50 millimetres of rainfall. The only regions that have recorded an early onset with at least 50 millimetres of rain is the coastal northeast and parts of interior southeast Queensland, part of northern Western Australia and Northern Territory.

Northern rainfall totals: 1 September to 7 November 2023



Number of days earlier or later than the long-term average onset date



1.4. Climate Drivers

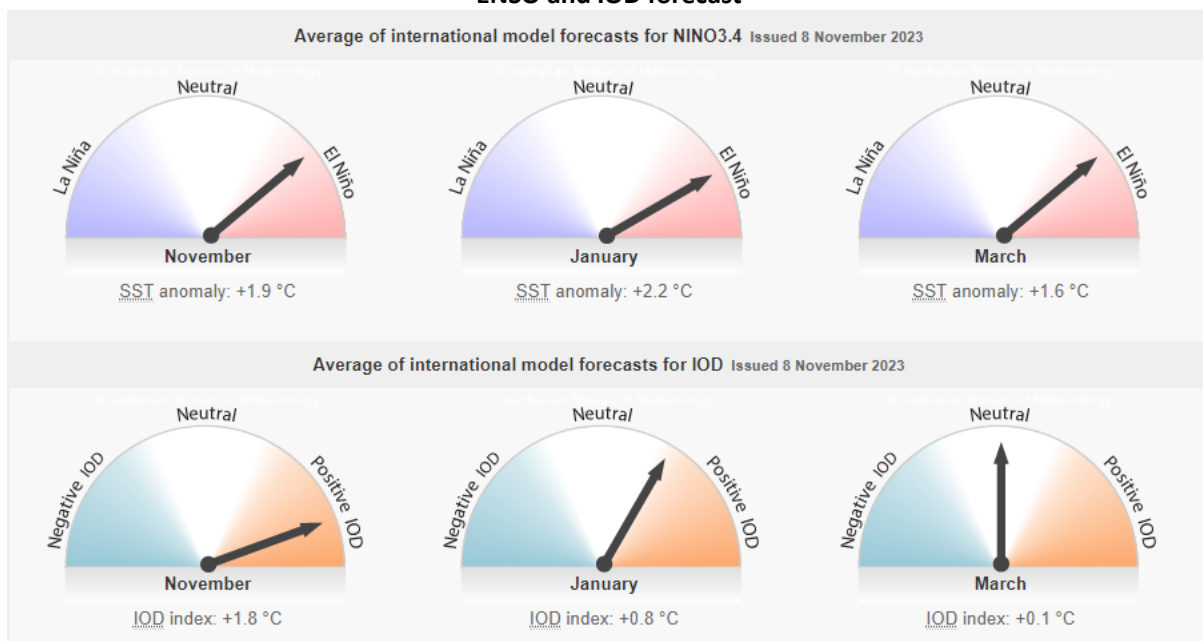
The climate drivers with the largest potential impact on Australia's climate patterns are the El Niño–Southern Oscillation (ENSO), Madden-Julian Oscillation (MJO), Indian Ocean Dipole (IOD) and Southern Annular Mode (SAM). These climate drivers are likely to influence pasture growth across southern Australia and the growth and yield prospects for winter crops.

The SAM is currently in positive stage and is expected to return to neutral stage in the coming weeks. During Spring, neutral SAM is associated with average climate conditions in southern Australia.

The MJO is currently weak but will strengthen and move eastwards into western Pacific later this week and lead to increased chance of showers and rain over northern Australia.

An El Niño and a positive IOD event are currently underway. When a positive IOD and El Niño occur together, their drying effect is typically stronger and more widespread across Australia. Their effect on spring rainfall is currently being observed. The El Niño is expected to persist till at least March 2024, while positive IOD is expected to remain active till January 2024.

ENSO and IOD forecast



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1.5. National Climate Outlook

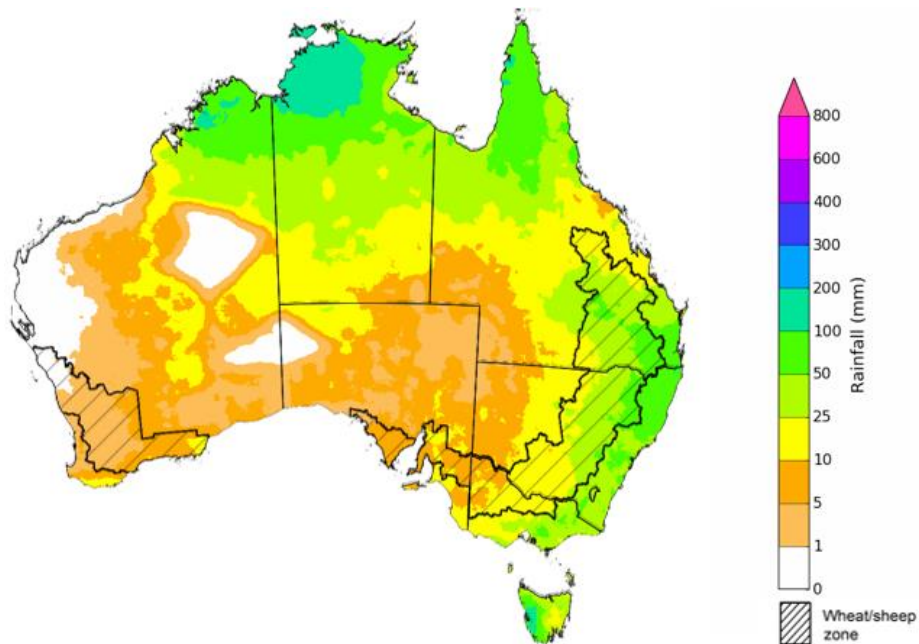
The Bureau of Meteorology's latest rainfall outlook for December 2023 indicates drier than average conditions are expected across large areas of northern, western and southern Australia.

The Bureau of Meteorology's climate model suggests that for December 2023, there is a 75% chance of rainfall totals between 10 and 100 millimetres across eastern New South Wales, south-eastern Queensland, and southern Victoria. Rainfall totals in excess of 100 millimetres are expected across western Tasmania, northern Western Australia and Northern Territory.

Across cropping regions, there is a 75% chance of rainfall totals of between 10 and 100 millimetres in New South Wales and Queensland. December rainfall totals are expected to be below 25 millimetres for the remaining cropping regions.

These relatively low expected rainfall totals continue to represent a significant downside production risk for dry land summer crop production as well as pasture growth, particularly given the lack of rainfall in recent weeks and declining soil moisture levels across large areas of the cropping regions.

Rainfall totals that have a 75% chance of occurring in December 2023



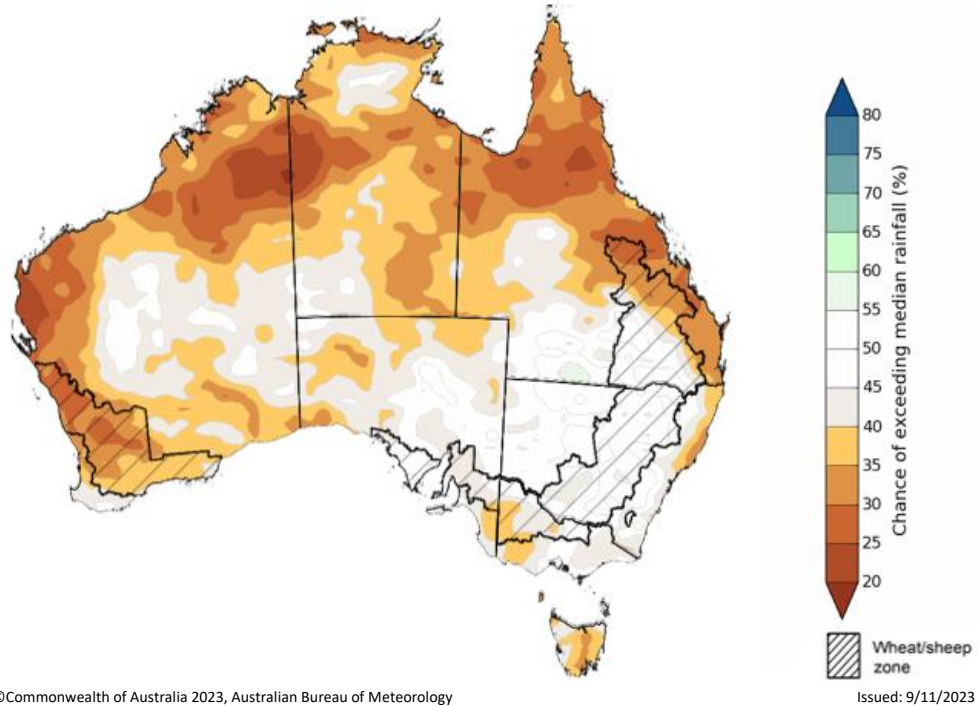
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The rainfall outlook for December 2023 to February 2024 suggests that there is close to equal chances of above or below median rainfall for central and south-eastern Australia, while below median rainfall is more likely for the remainder of the country.

Across cropping regions, close to equal chances of above or below median rainfall is likely across most cropping regions in south-eastern Australia and below median rainfall is likely in the western cropping areas.

Chance of exceeding the median rainfall December 2023 to February 2024

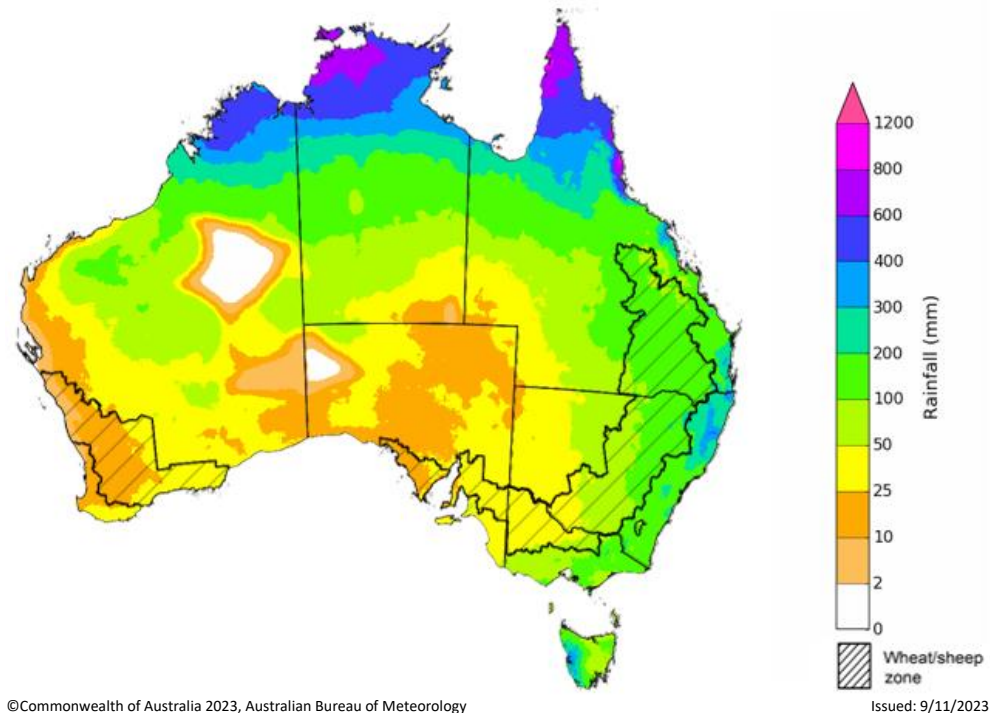


The outlook for December 2023 to February 2024 suggests there is a 75% chance of rainfall totals between 25 and 200 millimetres across much of Australia. The main exceptions are in large areas of South Australia and western and central parts of Western Australia where below 25 millimetres of rainfall are expected, and in areas of across tropical northern Australia, coastal New South Wales and western Tasmania, where rainfall totals in excess of 200 millimetres are expected.

In cropping regions, there is a 75% chance of receiving between 50 and 200 millimetres across New South Wales, Queensland and eastern Victoria while less than 50 millimetres of rainfall are likely across remaining cropping regions.

If these falls are realised, it is likely to be sufficient to support late spring and summer pasture growth across eastern and northern Australia. Additional while the dry start to spring has limited early planting of summer crops these falls may be sufficient to allow for later summer crop planting.

Rainfall totals that have a 75% chance of occurring December 2023 to February 2024

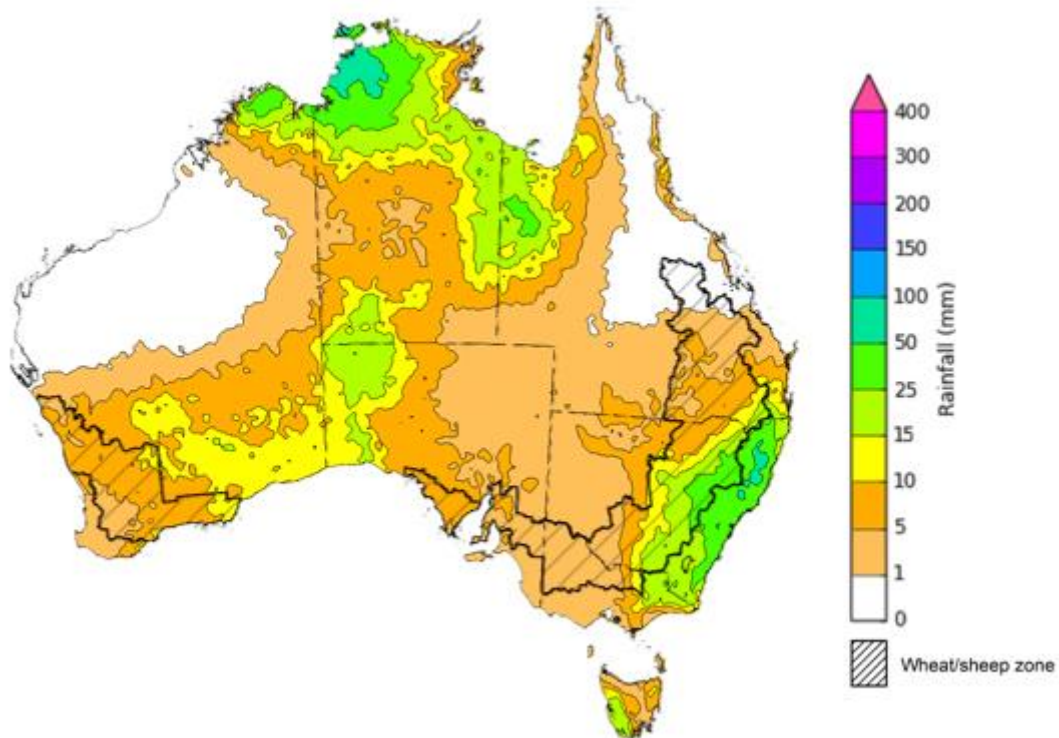


1.6. Rainfall forecast for the next eight days

Over the 8 days to 16 November 2023, troughs and lows will generate showers and thunderstorms over eastern New South Wales and Victoria, northern Western Australia and Queensland, the north and east of the Northern Territory, and in central parts of Australia.

Across cropping regions, rainfall totals up to 50 millimetres are forecast for eastern New South Wales and the far southeast of Queensland, while little to no rainfall is expected elsewhere. The dry expected condition across most cropping regions will allow for the uninterrupted harvest of early planted winter crops. However, these dry conditions are expected to result in further delays to the timely planting of dryland summer crops.

Total forecast rainfall for the period 9 November 2023 to 16 November 2023



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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 levels in the Murray-Darling Basin (MDB) decreased between 2 November 2023 and 9 November 2023 by 17 gigalitres (GL). Current volume of water held in storage is 20 176 GL. This is 10 percent or 2284 GL less than at the same time last year.

Water storages in the Murray-Darling Basin, 2013–2023

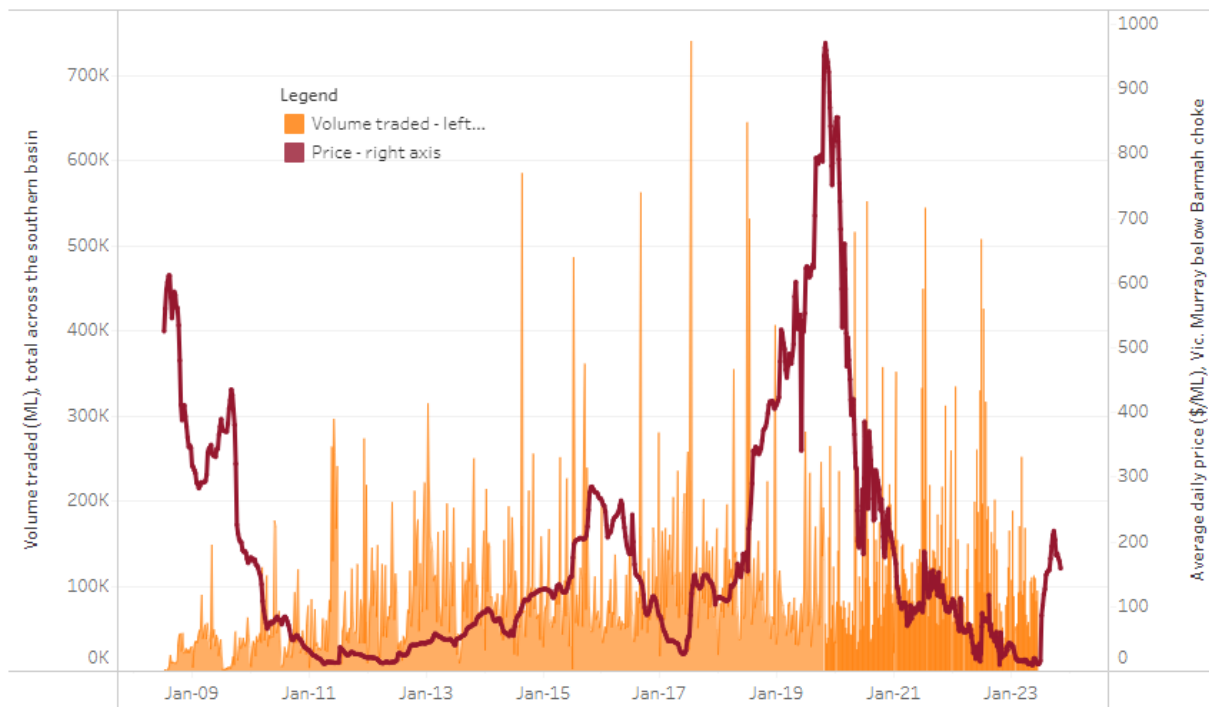


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$169 on 2 November 2023 to \$158 on 9 November 2023. Prices are lower in regions above the Barmah choke due to the binding of the Barmah choke trade constraint.

Region	\$/ML
NSW Murray Above	99
NSW Murrumbidgee	200
VIC Goulburn-Broken	144
VIC Murray Below	158

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 9 November 2023.

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-91123

3. Commodities

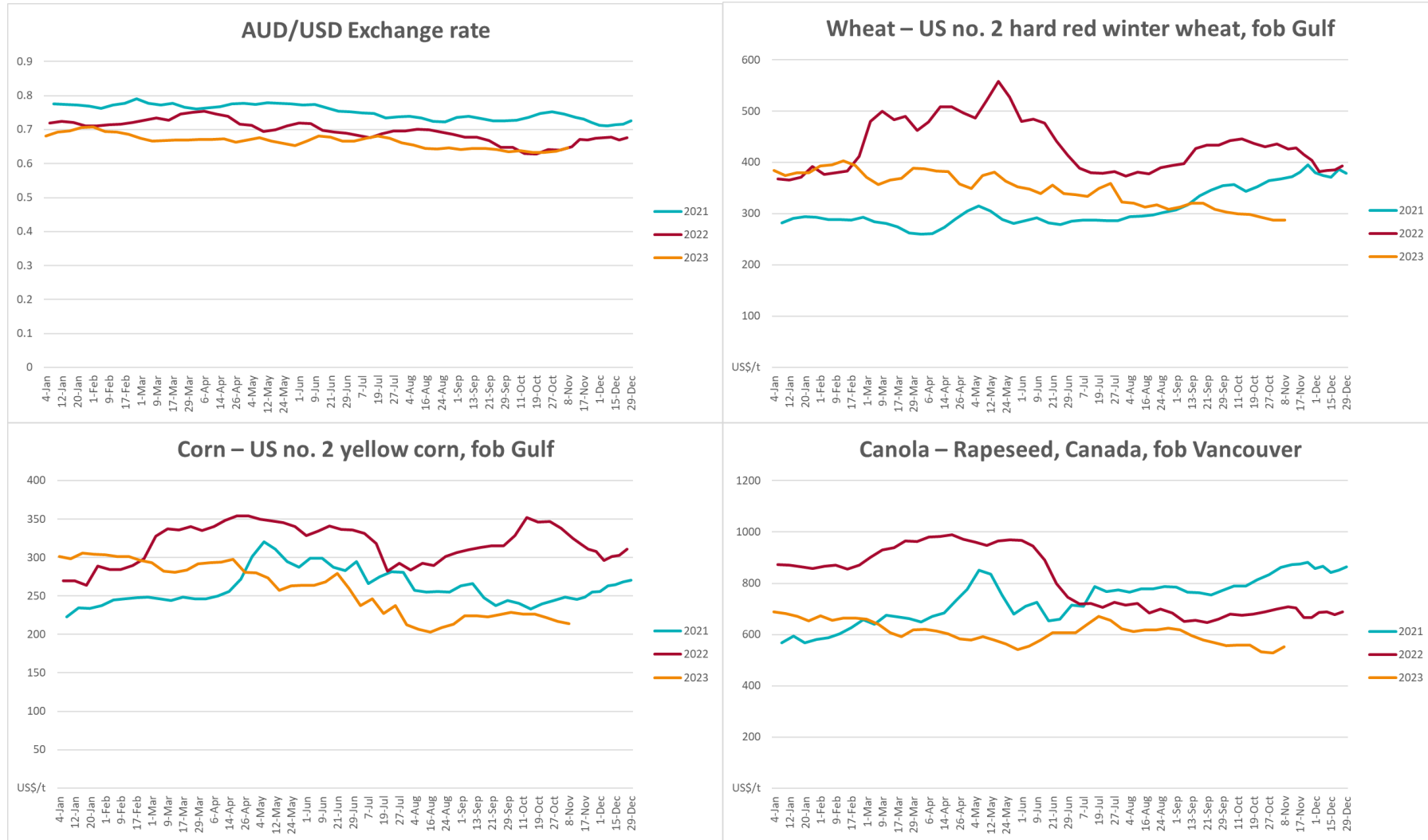
Indicator	Week ended	Unit	Latest Price	Previous Week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	08-Nov	A\$/US\$	0.65	0.64	2%	0.67	-4%
Wheat – US no. 2 hard red winter wheat, fob Gulf	08-Nov	US\$/t	287	287	0%	428	-33%
Corn – US no. 2 yellow corn, fob Gulf	08-Nov	US\$/t	214	217	-1%	318	-33%
Canola – Rapeseed, Canada, fob Vancouver	08-Nov	US\$/t	552	529	5%	703	-21%
Cotton – Cotlook 'A' Index	08-Nov	USc/lb	91	93	-2%	105	-13%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	08-Nov	USc/lb	27.8	27.2	2%	19	47%
Wool – Eastern Market Indicator	01-Nov	Ac/kg clean	1,129	1,139	-1%	1,306	-14%
Wool – Western Market Indicator	01-Nov	Ac/kg clean	1,255	1,266	-1%	1,459	-14%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	08-Nov	A\$/t	457	469	-3%	586	-22%
Feed Wheat – ASW, Port Adelaide, SA	08-Nov	A\$/t	437	450	-3%	531	-18%
Feed Barley – Port Adelaide, SA	08-Nov	A\$/t	394	404	-2%	451	-13%
Canola – Kwinana, WA	08-Nov	A\$/t	785	782	0%	1,089	-28%
Grain Sorghum – Brisbane, QLD	08-Nov	A\$/t	509	506	1%	475	7%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	08-Nov	Ac/kg cwt	375	363	3%	1,035	-64%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	08-Nov	Ac/kg cwt	97	97	-1%	515	-81%
Lamb – National Trade Lamb Indicator	08-Nov	Ac/kg cwt	477	482	-1%	746	-36%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	25-Oct	Ac/kg cwt	376	367	2%	376	0%
Goats – Eastern States (12.1–16 kg)	25-Oct	Ac/kg cwt	200	200	0%	485	-59%
Live cattle – Light steers to Indonesia	08-Nov	Ac/kg lwt	270	275	-2%	520	-48%

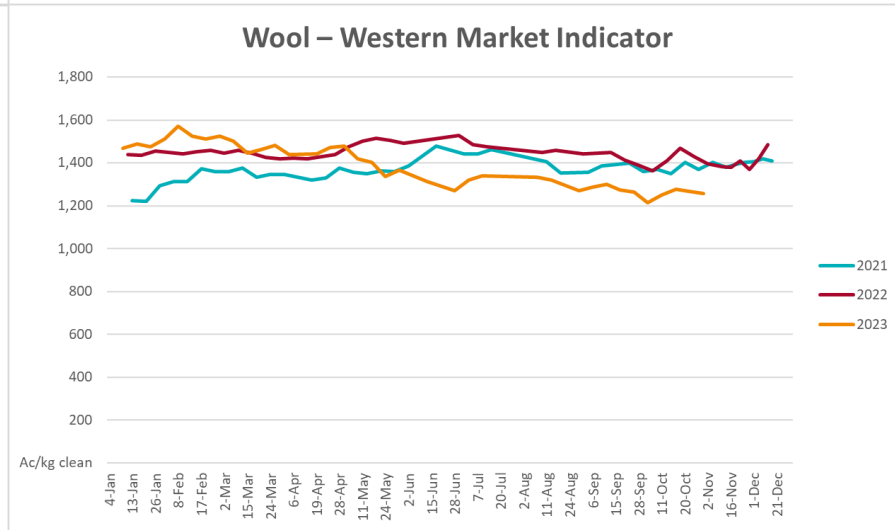
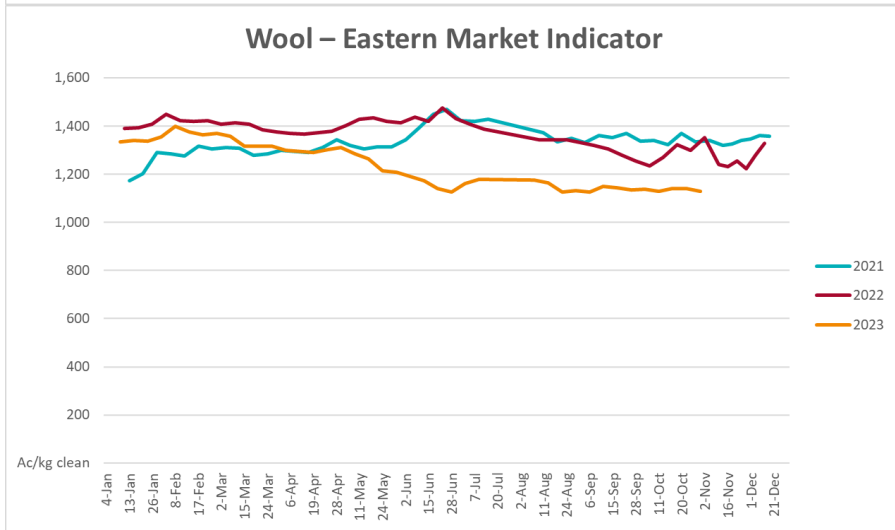
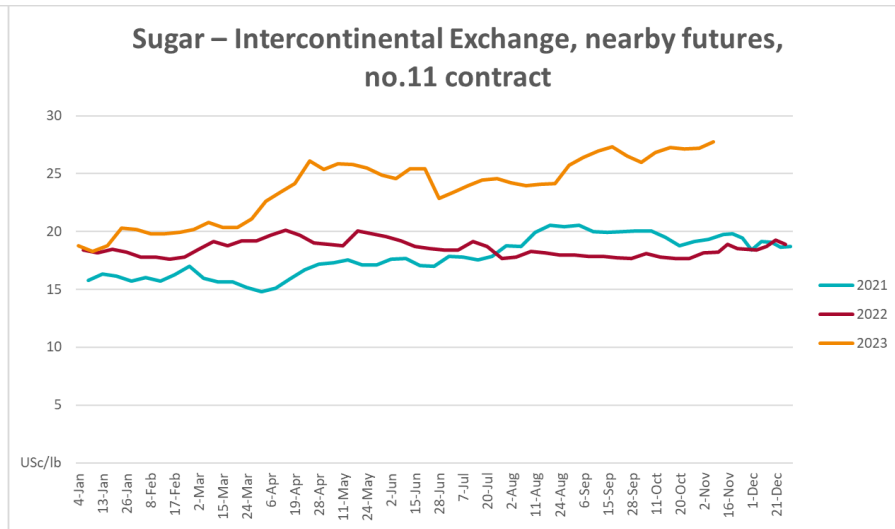
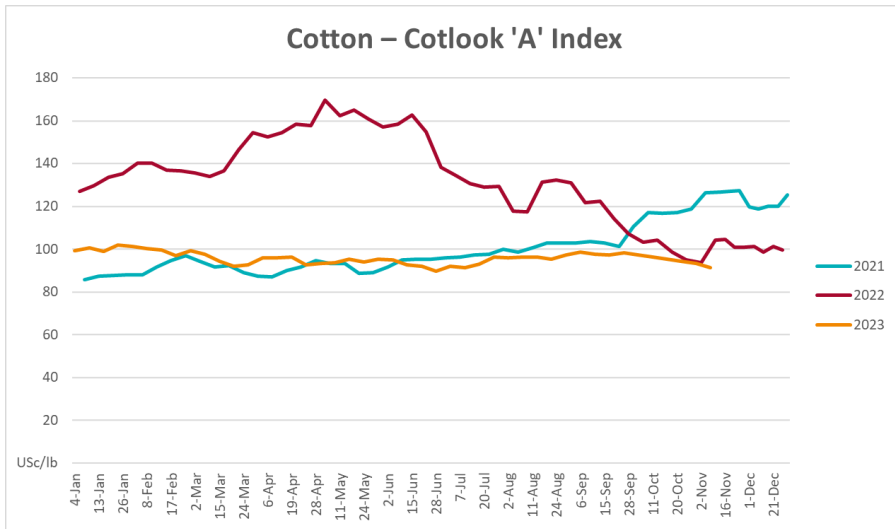
Global Dairy Trade (GDT) weighted average prices ^a

Dairy – Whole milk powder	08-Nov	US\$/t	2,971	3,059	-3%	3,421	-13%
Dairy – Skim milk powder	08-Nov	US\$/t	2,724	2,659	2%	3,250	-16%
Dairy – Cheddar cheese	08-Nov	US\$/t	4,042	3,858	5%	4,769	-15%
Dairy – Anhydrous milk fat	08-Nov	US\$/t	5,489	5,310	3%	5,661	-3%

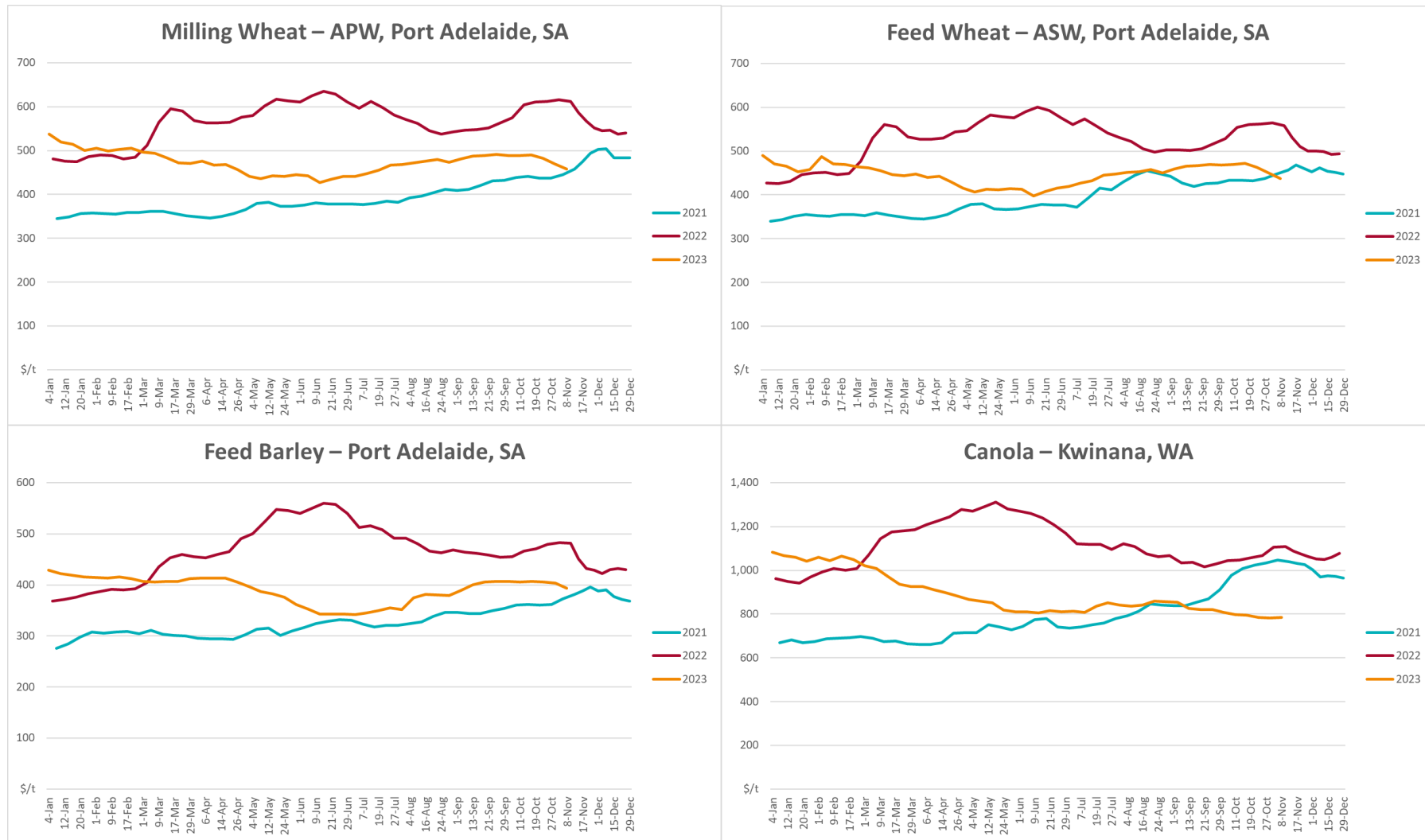
^a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

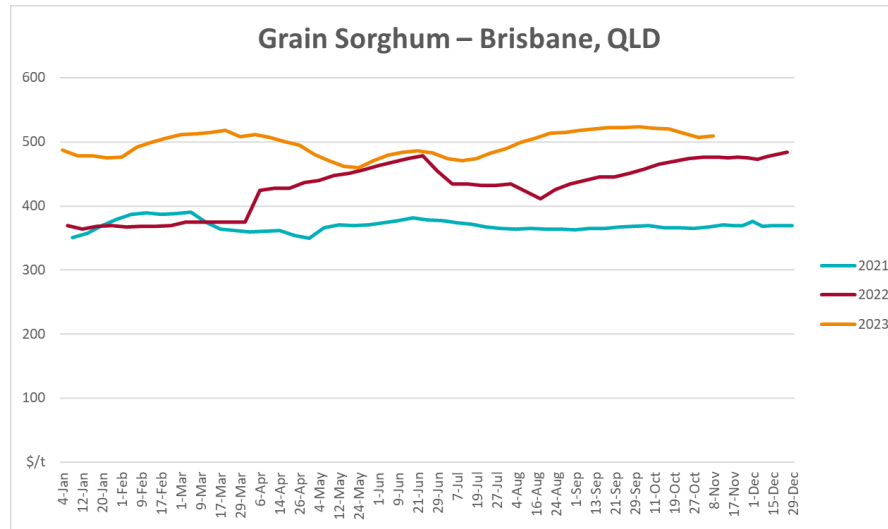
3.1. Selected world indicator prices



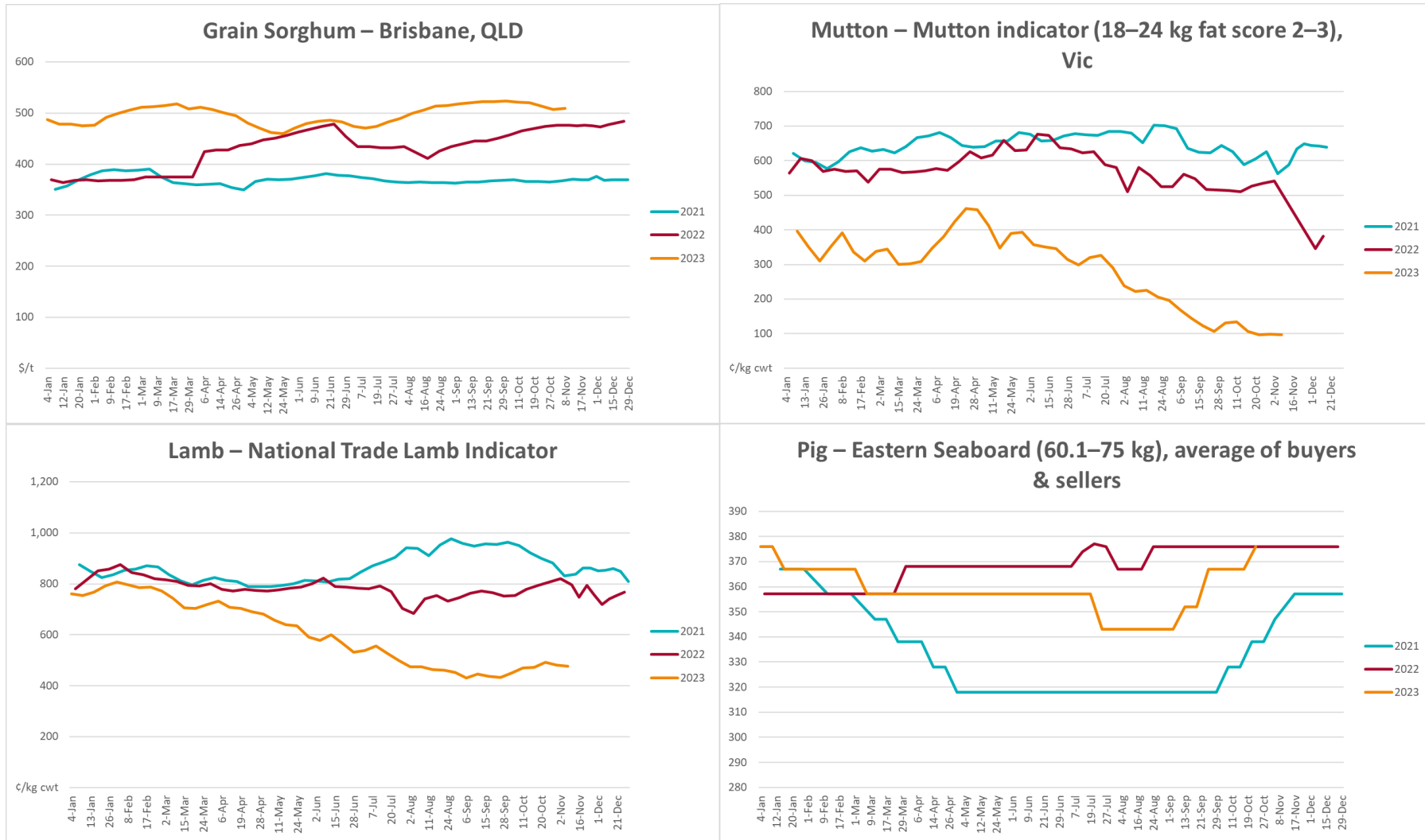


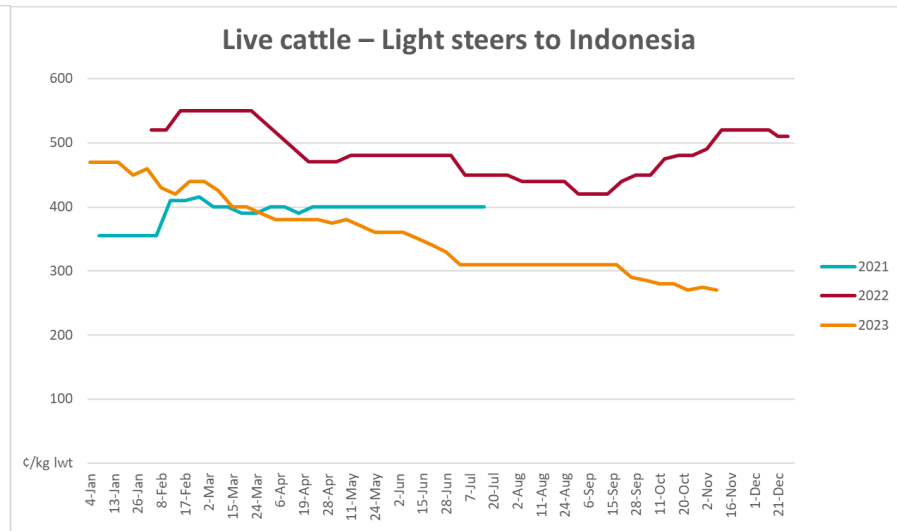
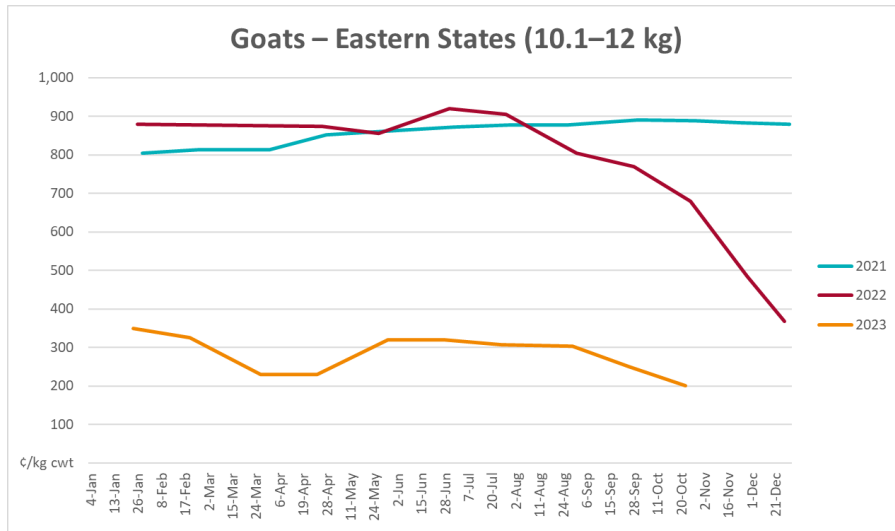
3.2. Selected domestic crop indicator prices



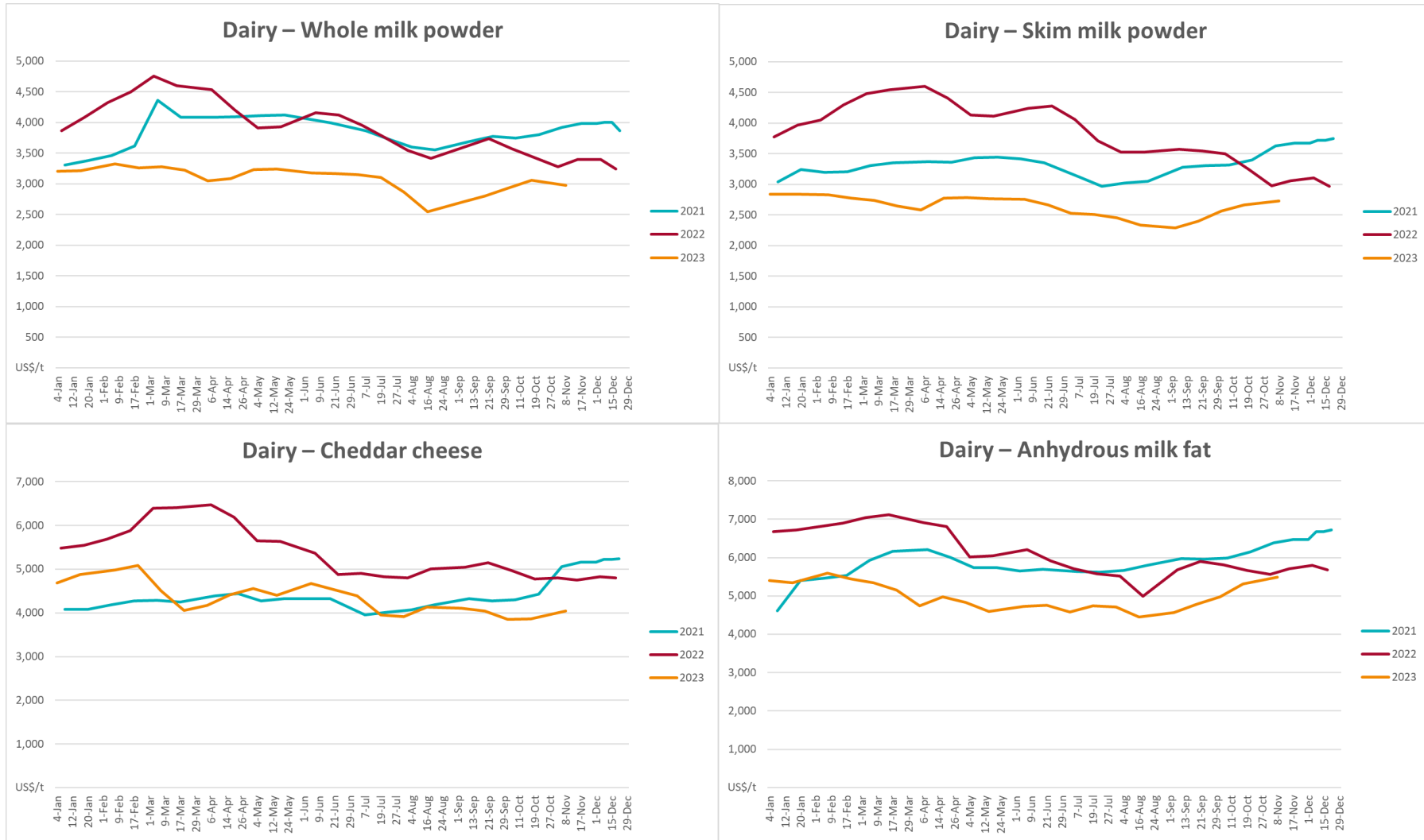


3.3. Selected domestic livestock indicator prices

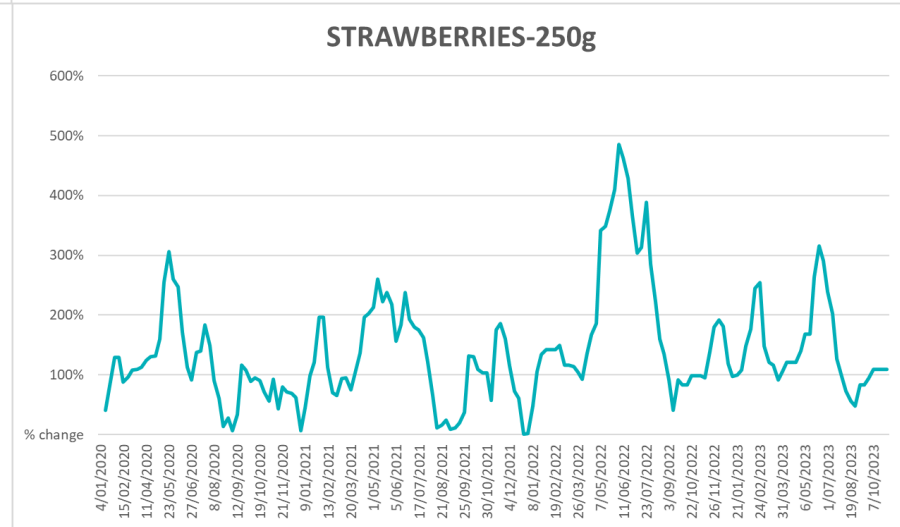
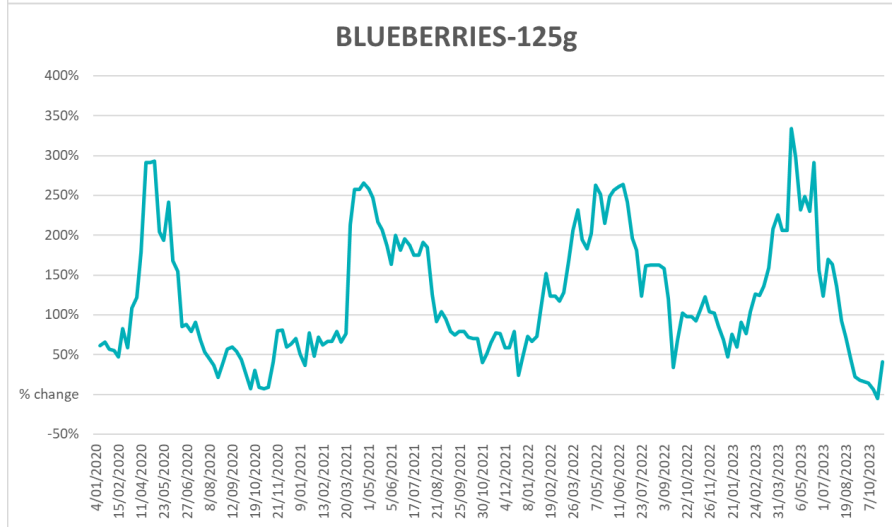
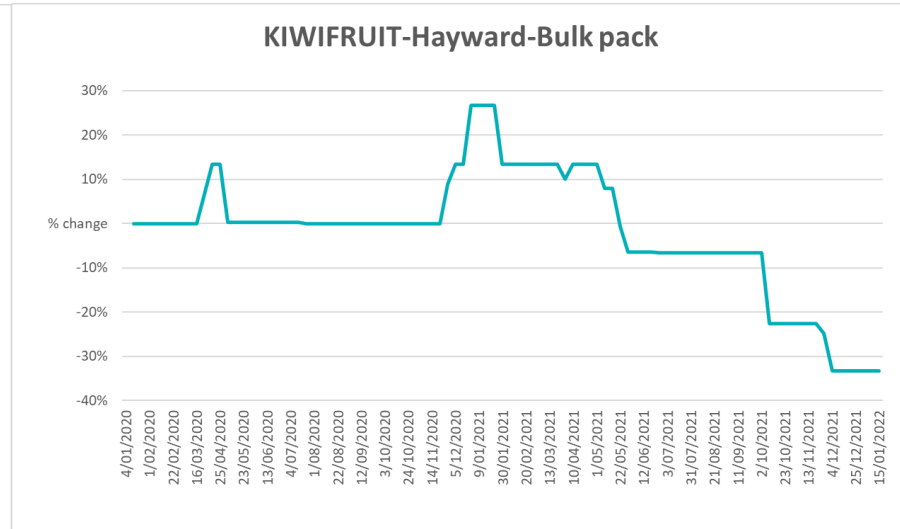
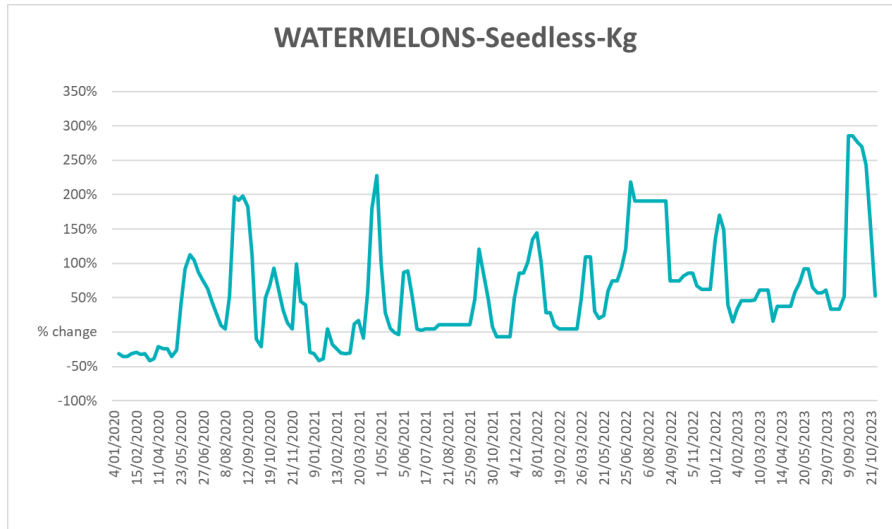


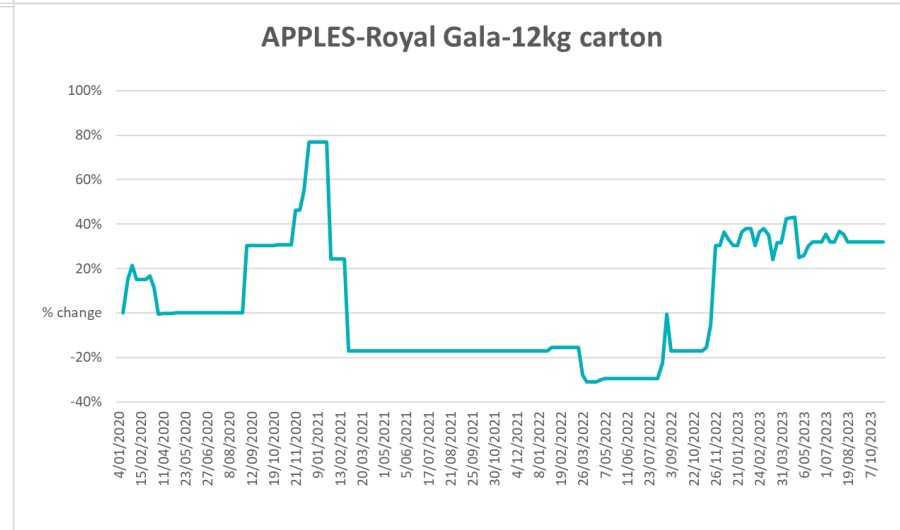
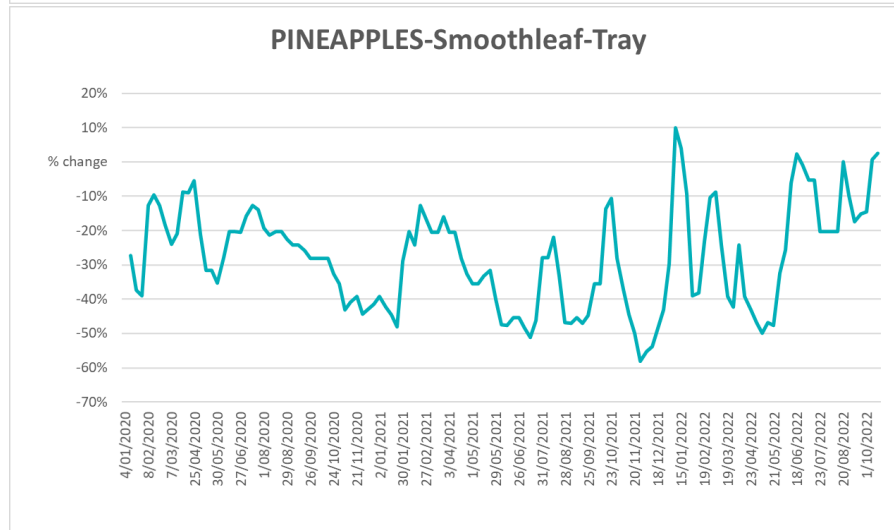
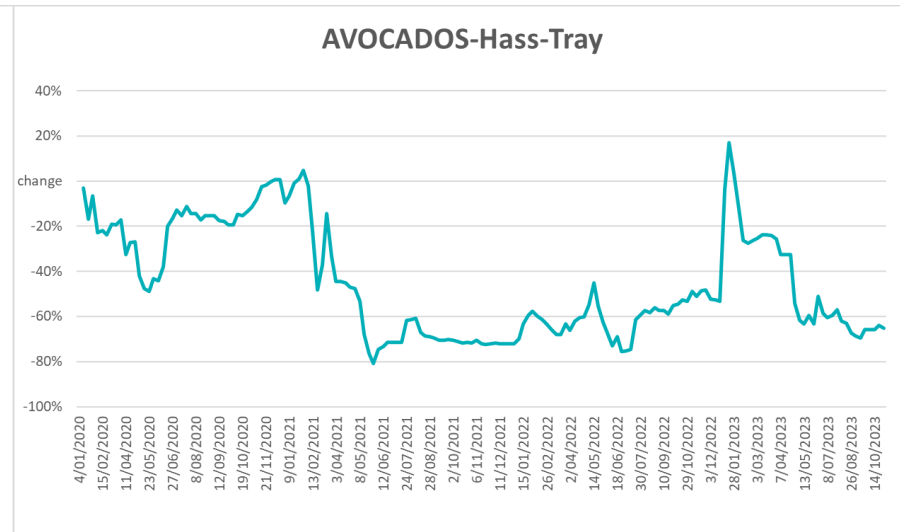
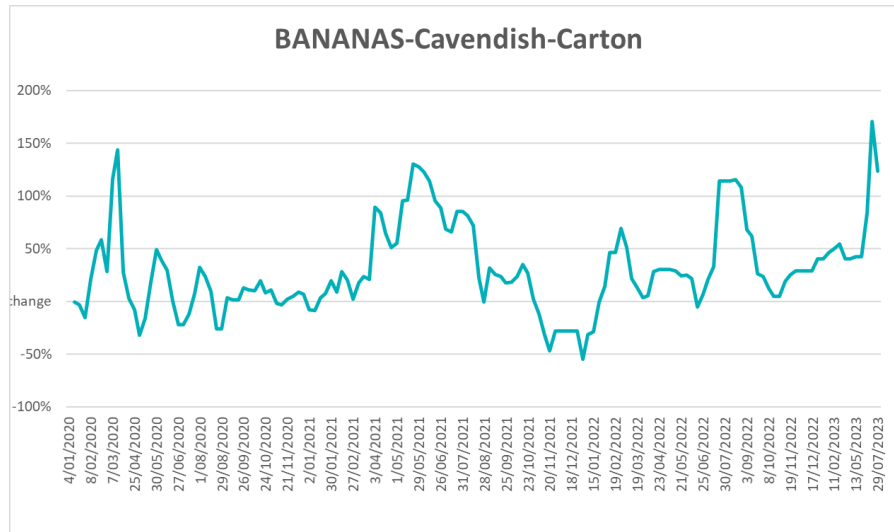


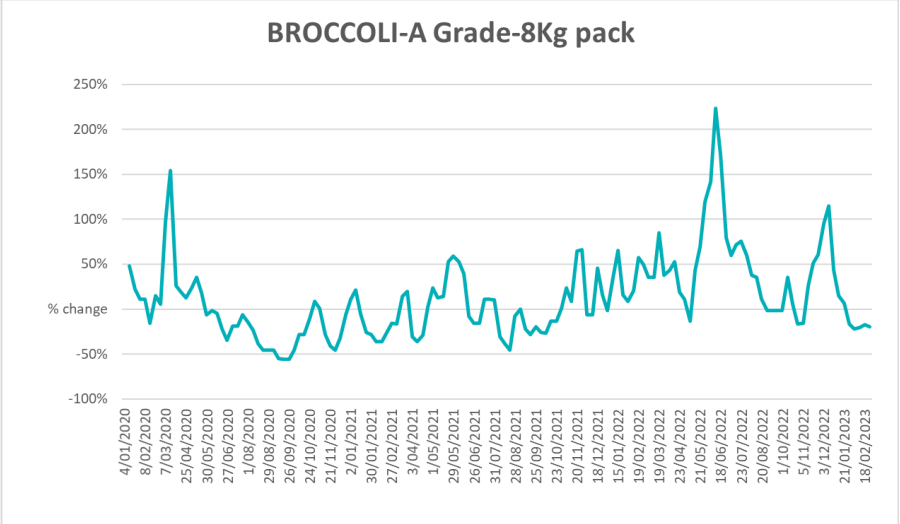
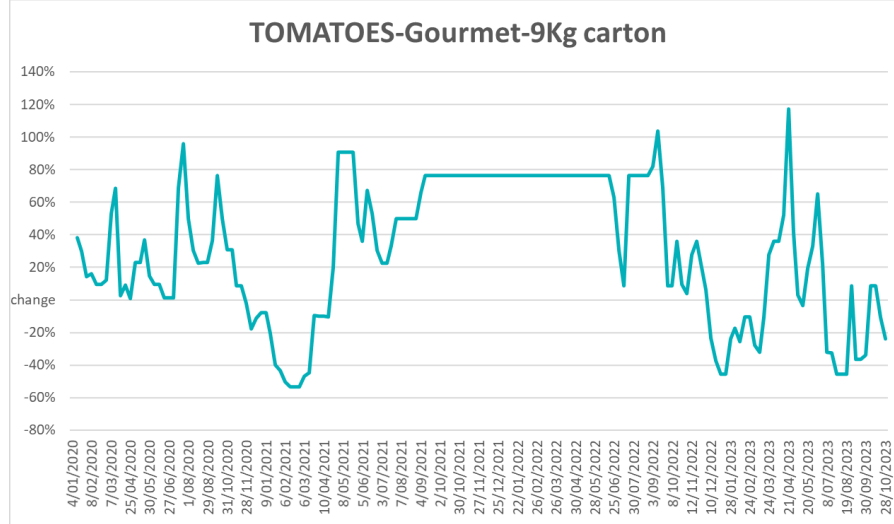
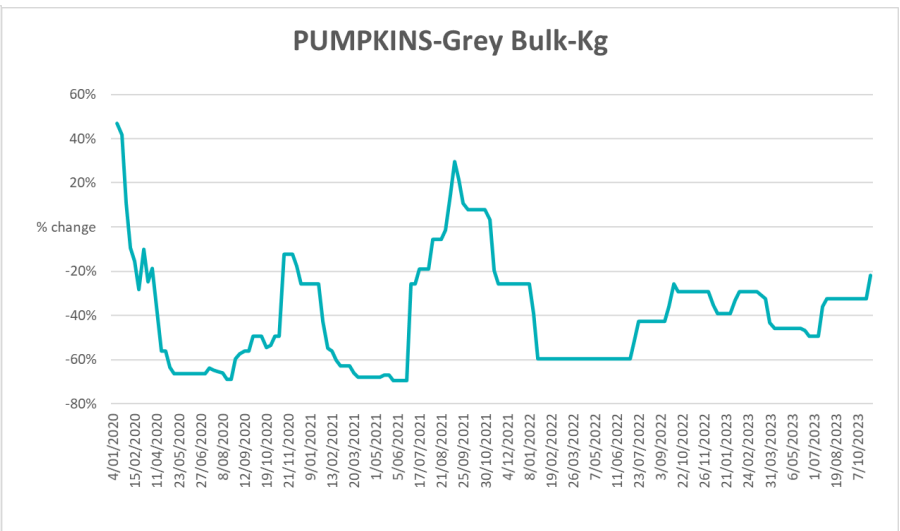
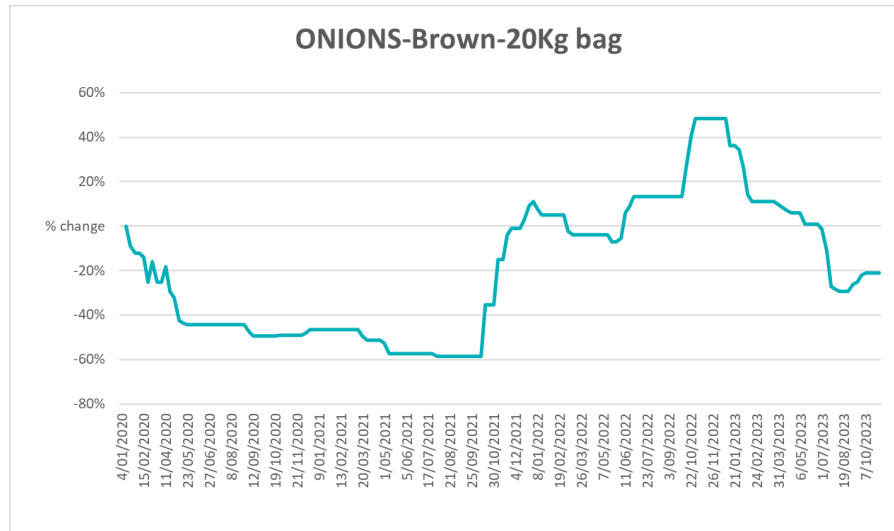
3.4. Global Dairy Trade (GDT) weighted average prices

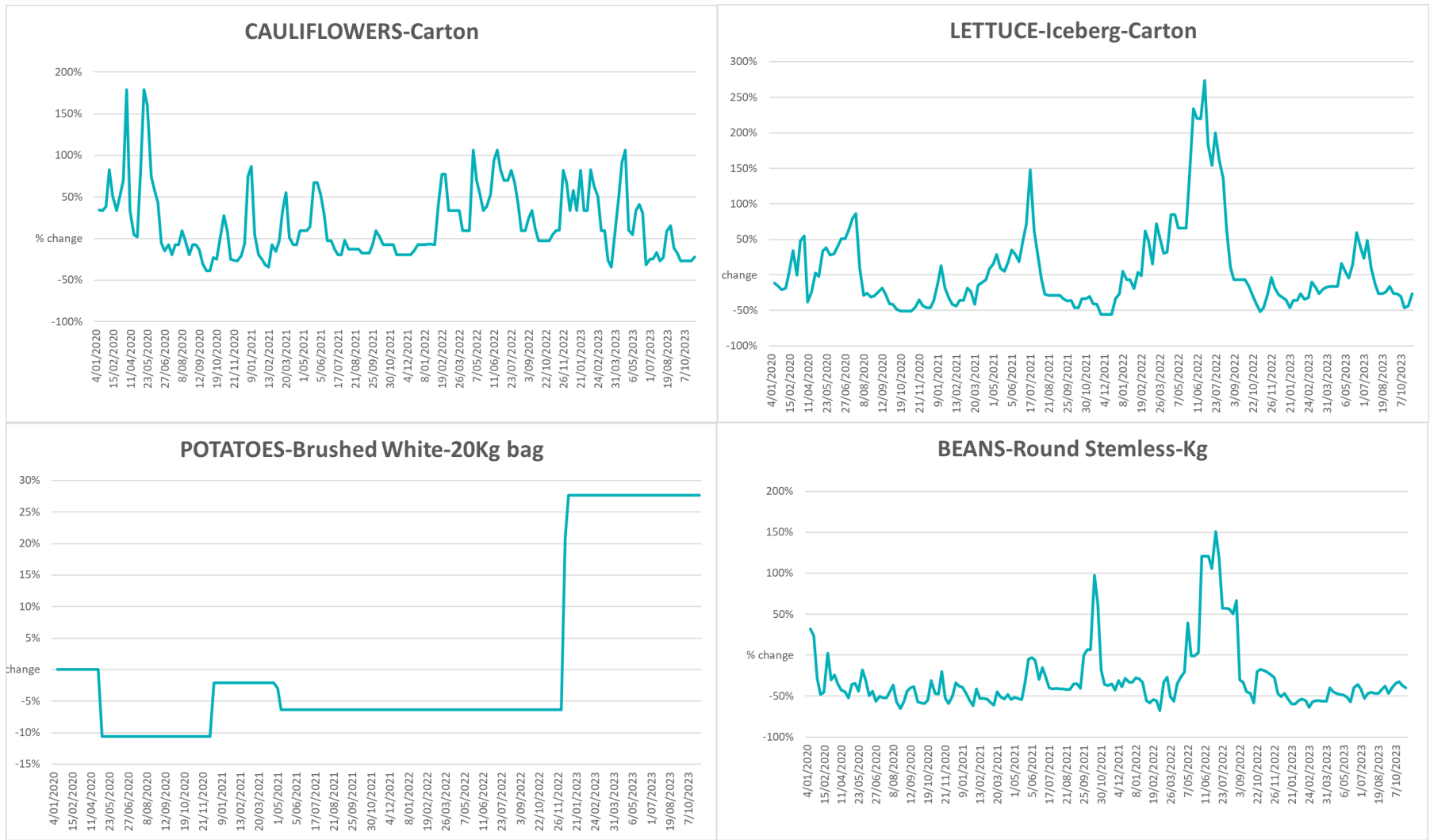


3.5. Selected fruit and vegetable prices

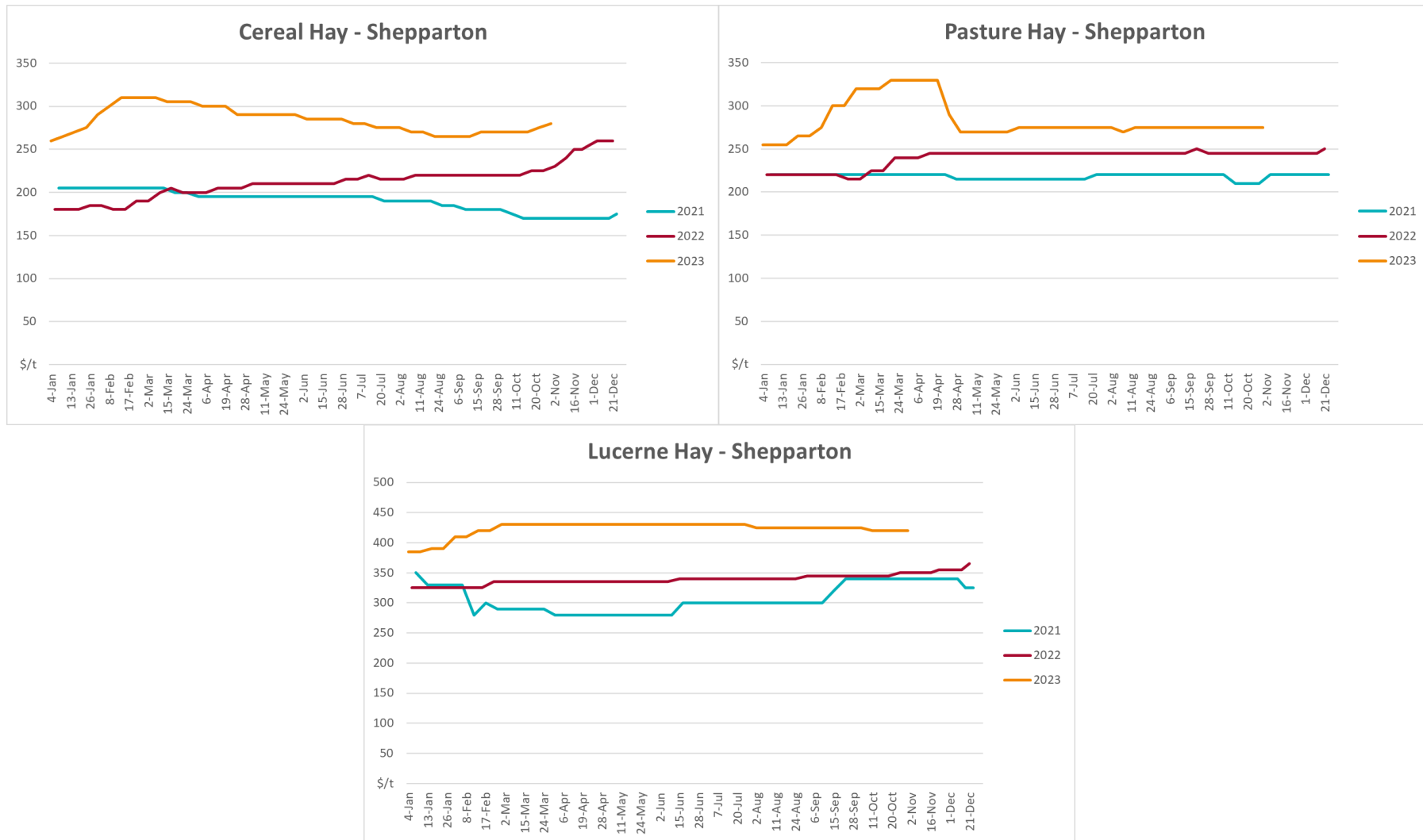








3.6 Selected domestic fodder indicator prices



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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