



Weekly Australian Climate, Water and Agricultural Update

No. 38/2022

29 September 2022

Summary of key issues

- For the week ending 28 September 2022, a low-pressure system and onshore flow brought moderate to heavy rainfall to large areas of eastern Australia, with troughs and cold fronts resulting in isolated falls in other parts of the country. Weekly rainfall totals exceeding 50 millimetres were recorded in parts of eastern New South Wales and Victoria, as well as south-east Queensland and the far north of the Northern Territory. High-pressure systems over western and southern parts of the country resulted in clear, dry conditions (see Section 1.1).
- Another week of moderate to heavy rainfall across major cropping regions of eastern Australia has exacerbated waterlogging in low lying areas. Major flooding was also recorded across rivers in northern New South Wales, including the Culgoa, Bogan, Gwydir, Lachlan, Macquarie, Namoi and Narran rivers. Harvesting of winter crops is underway in Central Queensland, with the pace of activity expected to increase over the coming weeks if conditions allow.
- The northern rainfall onset occurs when the total rainfall after 1 September reaches 50 millimetres. This is considered approximately the amount of rainfall required to stimulate plant growth. Since 1 September 2022, rainfall in excess of 50 millimetres has been recorded across most of southern Queensland, as well as isolated parts of northern Queensland, Western Australia and the Northern Territory. The northern rainfall onset across cropping regions of eastern Australia is likely to impede the harvesting of winter crops and the sowing of summer crops, especially in areas that have already received above average rainfall throughout winter. However, the rainfall will boost soil moisture for summer crops and northern pastures (see Section 1.2).
- Over the 8 days to 6 October 2022, low-pressure systems and troughs are forecast to result in showers across eastern and north-western Australia. High-pressure systems will provide clear, dry conditions across remaining parts of the country. Limited rainfall in parts of Central Queensland over the coming week will allow the harvest of winter crops and the sowing of long-season summer crops to gather pace. Significant rainfall across remaining cropping regions of eastern and southern Australia will contribute to ongoing issues of waterlogging across low-lying areas (see Section 1.3).
- Water storage in the Murray–Darling Basin (MDB) increased by 60 gigalitres (GL) between 21 September 2022 and 28 September 2022. The current volume of water held in storage is 23,870 GL, which represents 95% of total capacity. This is 10% or 2,139 GL more than at the same time last year.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$55 per ML on 16 September to \$45 per ML on 23 September 2022. Prices are lower in the Goulburn-Broken and regions above the Barmah choke due to the binding of the Goulburn intervalley trade limit and the Barmah choke trade constraint.

1. Climate

1.1. Rainfall this week

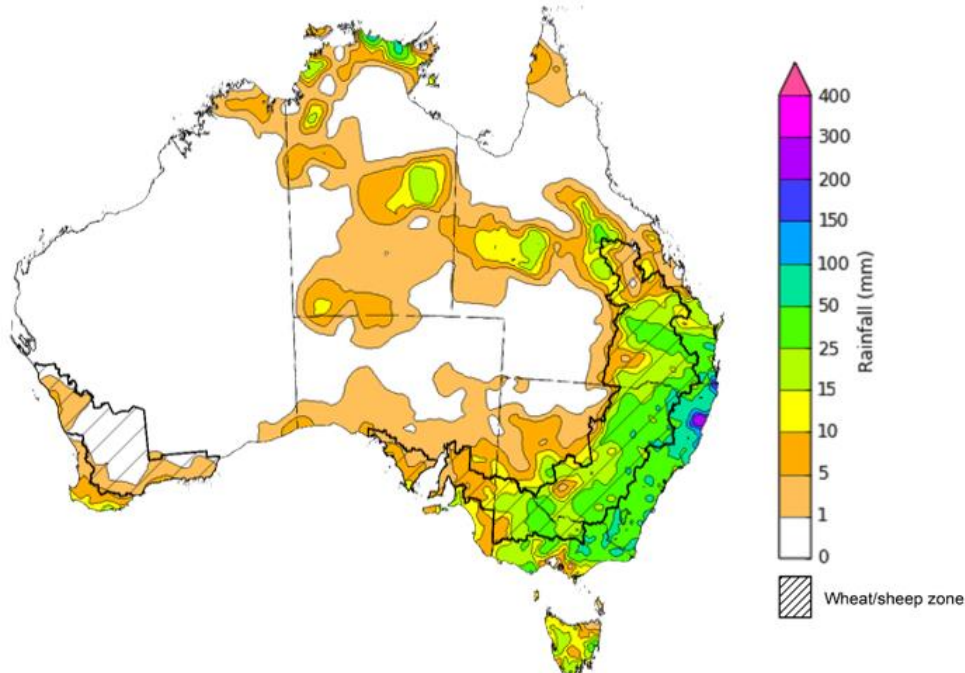
For the week ending 28 September 2022, a low-pressure system and onshore flow brought moderate to heavy rainfall to large areas of eastern Australia, with troughs and cold fronts resulting in isolated falls in other parts of the country. Weekly rainfall totals exceeding 50 millimetres were recorded in parts of eastern New South Wales and Victoria, as well as south-east Queensland and the far north of the Northern Territory. High-pressure systems over western and southern parts of the country resulted in clear, dry conditions.

In Australian cropping regions, rainfall totals of between 10 and 50 millimetres were recorded across most of New South Wales, southern Queensland, Victoria and isolated parts of south-eastern South Australia. Rainfall in excess of 50 millimetres was recorded in isolated parts of New South Wales. Little to no rainfall was recorded in remaining cropping regions of northern Queensland, South Australia and Western Australia for the week ending 28 September 2022.

Another week of moderate to heavy rainfall across major cropping regions of eastern Australia has exacerbated waterlogging in low lying areas. Major flooding was also recorded across rivers in northern New South Wales, including the Culgoa, Bogan, Gwydir, Lachlan, Macquarie, Namoi and Narran rivers. The flooding is expected to result in isolated crop losses. More broadly, wet conditions will delay crop development and increase the risk of fungal damage. Root zone soil moisture levels remain well above average across most eastern and southern cropping regions, with further rainfall likely to diminish yield potentials.

Harvesting of winter crops is underway in Central Queensland, with the pace of activity expected to increase over the coming weeks if conditions allow. There are also reports of early harvesting in parts of Western Australia, however harvesting activity is unlikely to get underway in earnest for some weeks yet. The risk of frost and extreme heat will weigh on yield potentials through flowering and grain filling. Wet conditions across New South Wales, southern Queensland, Victoria and South Australia are expected to delay the start of harvesting of winter crops, especially for late sown crops.

Rainfall for the week ending 28 September 2022



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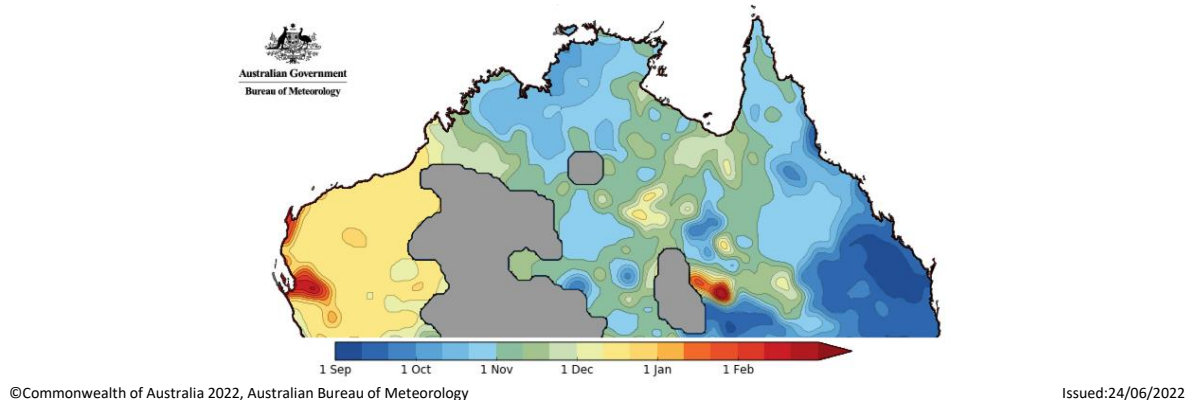
Issued: 28/09/2022

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. Northern rainfall onset

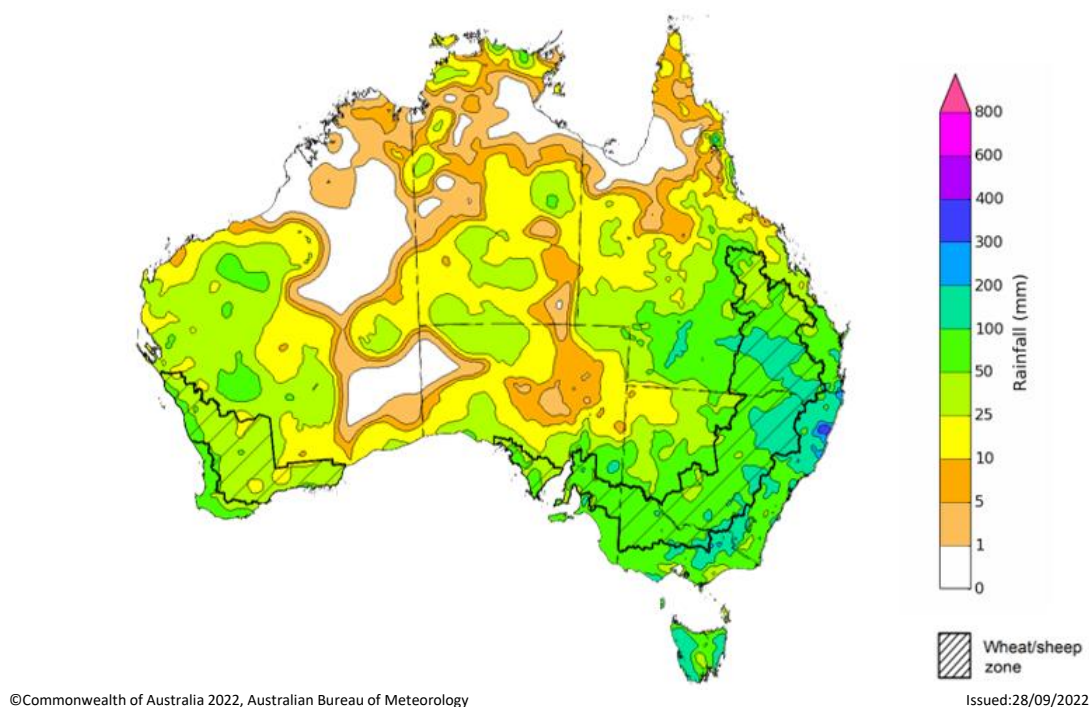
The northern rainfall onset occurs when the total rainfall after 1 September reaches 50 millimetres. This is considered approximately the amount of rainfall required to stimulate plant growth. Coastal parts of northern Australia usually accumulate 50 millimetres of rainfall by late October or early November, spreading to inland areas over subsequent weeks. The presence of La Niña conditions is associated with earlier than normal northern rainfall onset. Negative Indian Ocean Dipole conditions may also contribute to a higher likelihood of an earlier than normal northern rainfall onset.

Median northern rainfall onset in La Niña years 1981 to 2018



Since 1 September 2022, rainfall in excess of 50 millimetres has been recorded across most of southern Queensland, as well as isolated parts of northern Queensland, Western Australia and the Northern Territory. For summer cropping regions, rainfall in excess of 50 millimetres has been recorded across New South Wales and most of Queensland. Rainfall in excess of 100 millimetres has also been received in parts of eastern and northern New South Wales and southern Queensland, causing localised flooding. The northern rainfall onset across cropping regions of eastern Australia is likely to impede the harvesting of winter crops and the sowing of summer crops, especially in areas that have already received above average rainfall throughout winter. However, the rainfall will boost soil moisture for summer crops and northern pastures.

Month-to-date rainfall at 28 September 2022



1.3. Rainfall forecast for the next eight days

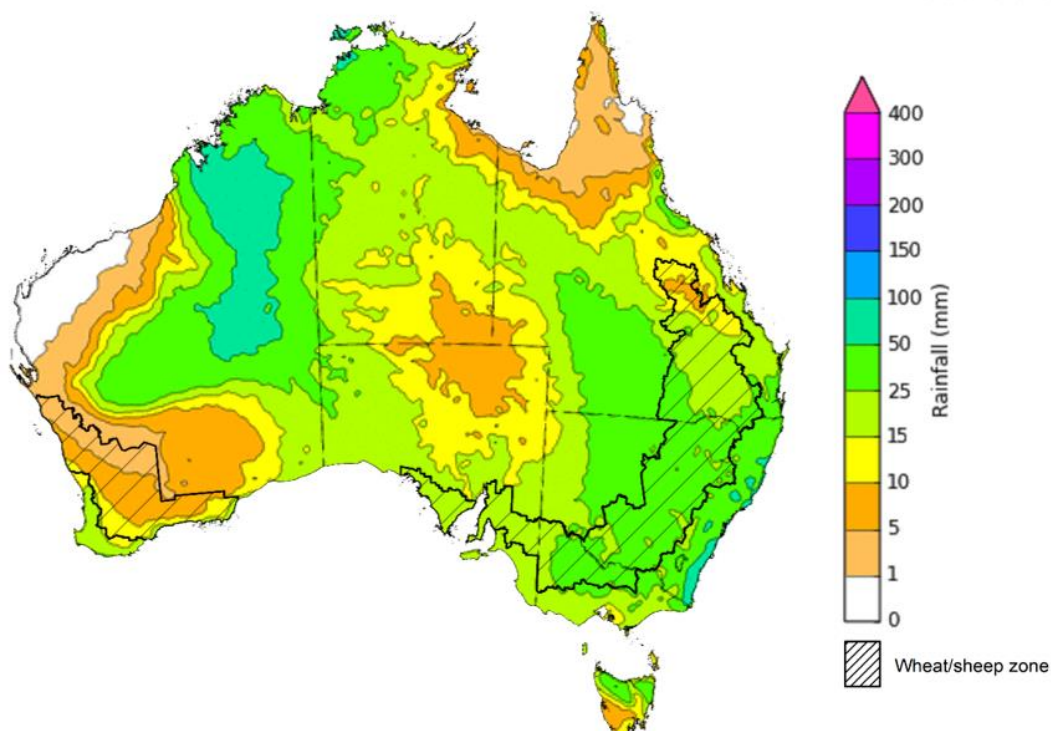
Over the 8-days to 6 October 2022, low-pressure systems and troughs are forecast to result in showers across eastern and north-western Australia. High-pressure systems will provide clear, dry conditions across remaining parts of the country.

In Australian cropping regions, rainfall totals of between 10 and 50 millimetres are expected across New South Wales, Victoria, South Australia, most of Queensland and isolated parts of the south of Western Australia. Little to no rainfall is forecast for remaining cropping regions in northern Queensland and Western Australia during the next 8-days.

Limited rainfall in parts of Central Queensland over the coming week will allow the harvest of winter crops and the sowing of long-season summer crops to gather pace. Significant rainfall across remaining cropping regions of eastern and southern Australia will contribute to ongoing issues of waterlogging across low-lying areas. These wet conditions are expected to prolong inundation of crops, negatively impacting yield potentials, as well as restricting the ability to access fields for disease management. Yield potentials remain above average across cropping regions, but rainfall over the coming weeks is unlikely to improve them further.

The biggest threat to yield potentials across eastern and southern cropping regions remain waterlogging and frost as winter crops enter flowering and grain filling. For Western Australia, frost and extreme heat present the biggest downside risk, given the favourable conditions to date. The continued influence of a negative Indian Ocean Dipole and the establishment of a La Niña event in the Pacific Ocean suggests a continuation of wet conditions over the coming months for eastern Australia. A likely consequence will be delays in harvesting winter crops and planting summer crops, as well as increased crop damage.

Total forecast rainfall (mm) for the period 29 September to 6 October 2022



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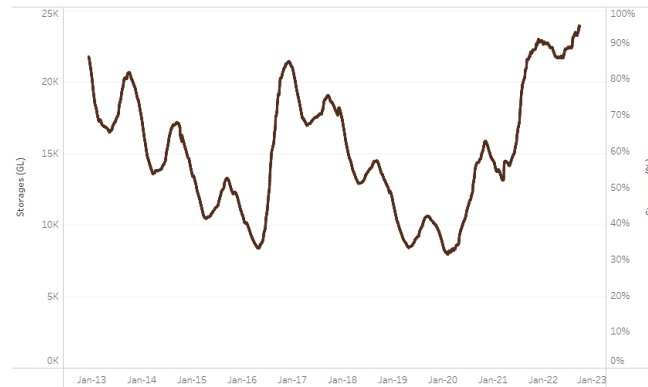
Note: This rainfall forecast is produced from computer models. As the model outputs are not altered by weather forecasters, it is important to check local forecasts and warnings issued by the Bureau of Meteorology.

2. Water

2.1. Water markets – current week

Water storage in the Murray–Darling Basin (MDB) increased by 60 gigalitres (GL) between 21 September 2022 and 28 September 2022. The current volume of water held in storage is 23,870 GL, which represents 95% of total capacity. This is 10% or 2,139 GL more than at the same time last year.

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

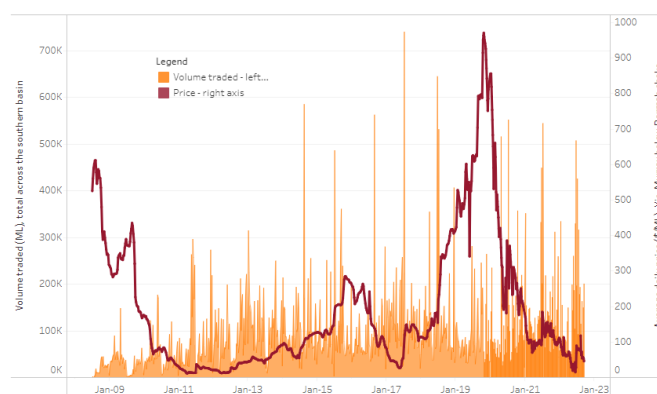


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$55 per ML on 16 September to \$45 per ML on 23 September 2022. Prices are lower in the Goulburn-Broken and regions above the Barmah choke due to the binding of the Goulburn intervalley trade limit and the Barmah choke trade constraint.

Region	\$/ML
NSW Murray Above	31
NSW Murrumbidgee	64
VIC Goulburn-Broken	35
VIC Murray Below	45

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 29 September 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-290922

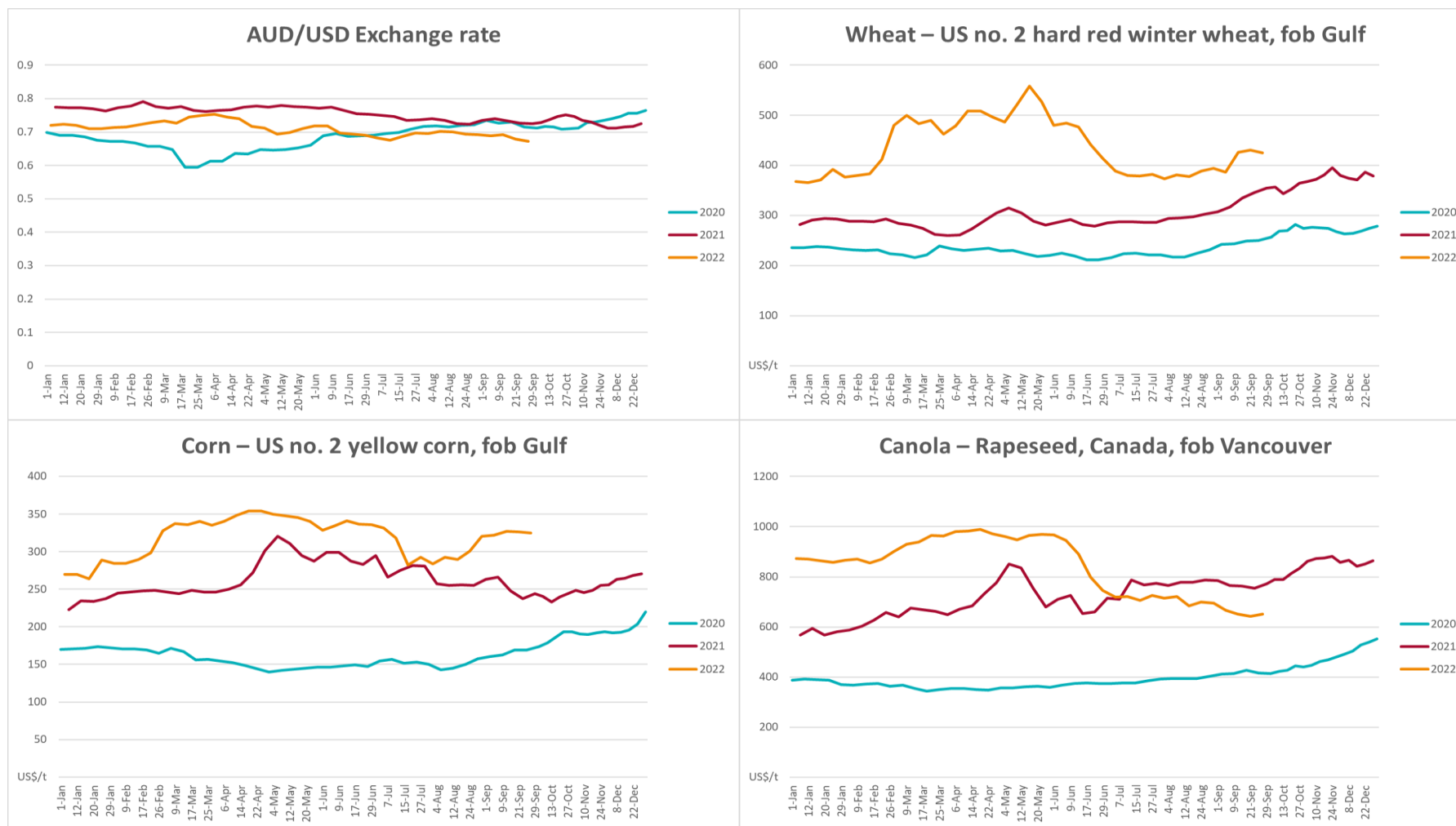
3. Commodities

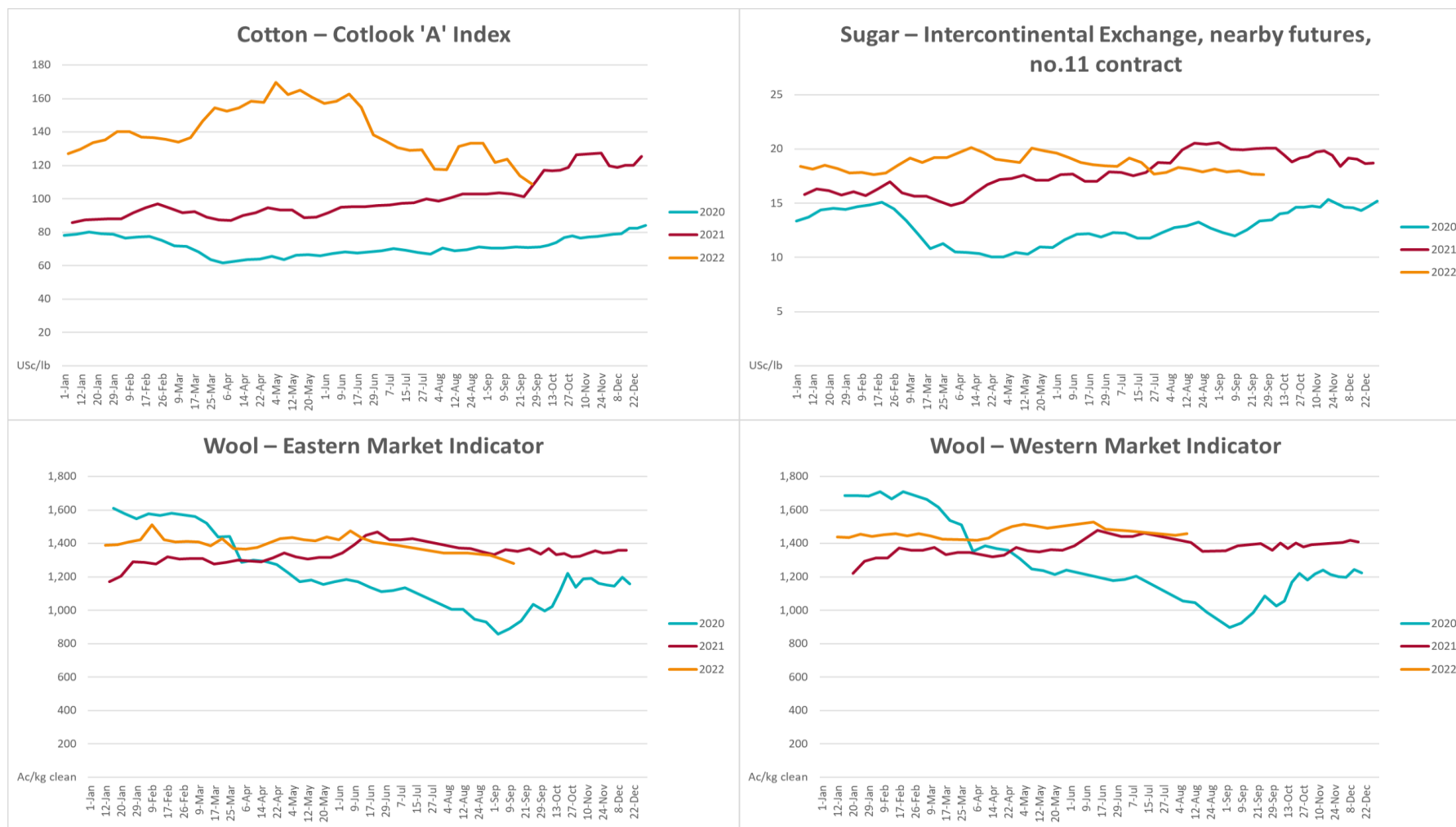
Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	28-Sep	A\$/US\$	0.67	0.68	-1%	0.73	-8%
Wheat – US no. 2 hard red winter wheat, fob Gulf	28-Sep	US\$/t	425	430	-1%	357	19%
Corn – US no. 2 yellow corn, fob Gulf	28-Sep	US\$/t	325	326	0%	241	35%
Canola – Rapeseed, Canada, fob Vancouver	28-Sep	US\$/t	650	643	1%	790	-18%
Cotton – Cotlook 'A' Index	28-Sep	USc/lb	109	114	-4%	117	-7%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	28-Sep	USc/lb	17.6	17.7	0%	20	-12%
Wool – Eastern Market Indicator	14-Sep	Ac/kg clean	1,279	1,306	-2%	1,420	-10%
Wool – Western Market Indicator	10-Aug	Ac/kg clean	1,459	1,449	1%	1,346	8%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	28-Sep	A\$/t	540	542	0%	439	23%
Feed Wheat – ASW, Port Adelaide, SA	28-Sep	A\$/t	495	497	0%	433	14%
Feed Barley – Port Adelaide, SA	28-Sep	A\$/t	436	453	-4%	360	21%
Canola – Kwinana, WA	28-Sep	A\$/t	989	1,001	-1%	976	1%
Grain Sorghum – Brisbane, QLD	28-Sep	A\$/t	432	438	-1%	368	17%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	28-Sep	Ac/kg cwt	1,079	1,056	2%	1,027	5%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	28-Sep	Ac/kg cwt	517	516	0%	622	-17%
Lamb – Eastern States Trade Lamb Indicator	21-Sep	Ac/kg cwt	754	746	1%	958	-21%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	10-Aug	Ac/kg cwt	378	378	0%	318	19%
Goats – Eastern States (12.1–16 kg)	29-Jun	Ac/kg cwt	1,030	879	17%	818	26%
Live cattle – Light steers ex Darwin to Indonesia	17-Aug	Ac/kg lwt	420	480	-13%	320	31%
Live sheep – Live wethers (Mucnea WA saleyard) to Middle East	14-Sep	\$/head	93	113	-18%	114	-18%

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	07-Sep	US\$/t	3,610	3,417	6%	2,936	23%
Dairy – Skim milk powder	07-Sep	US\$/t	3,575	3,524	1%	2,608	37%
Dairy – Cheddar cheese	07-Sep	US\$/t	5,046	5,005	1%	3,442	47%
Dairy – Anhydrous milk fat	07-Sep	US\$/t	5,677	4,990	14%	3,873	47%

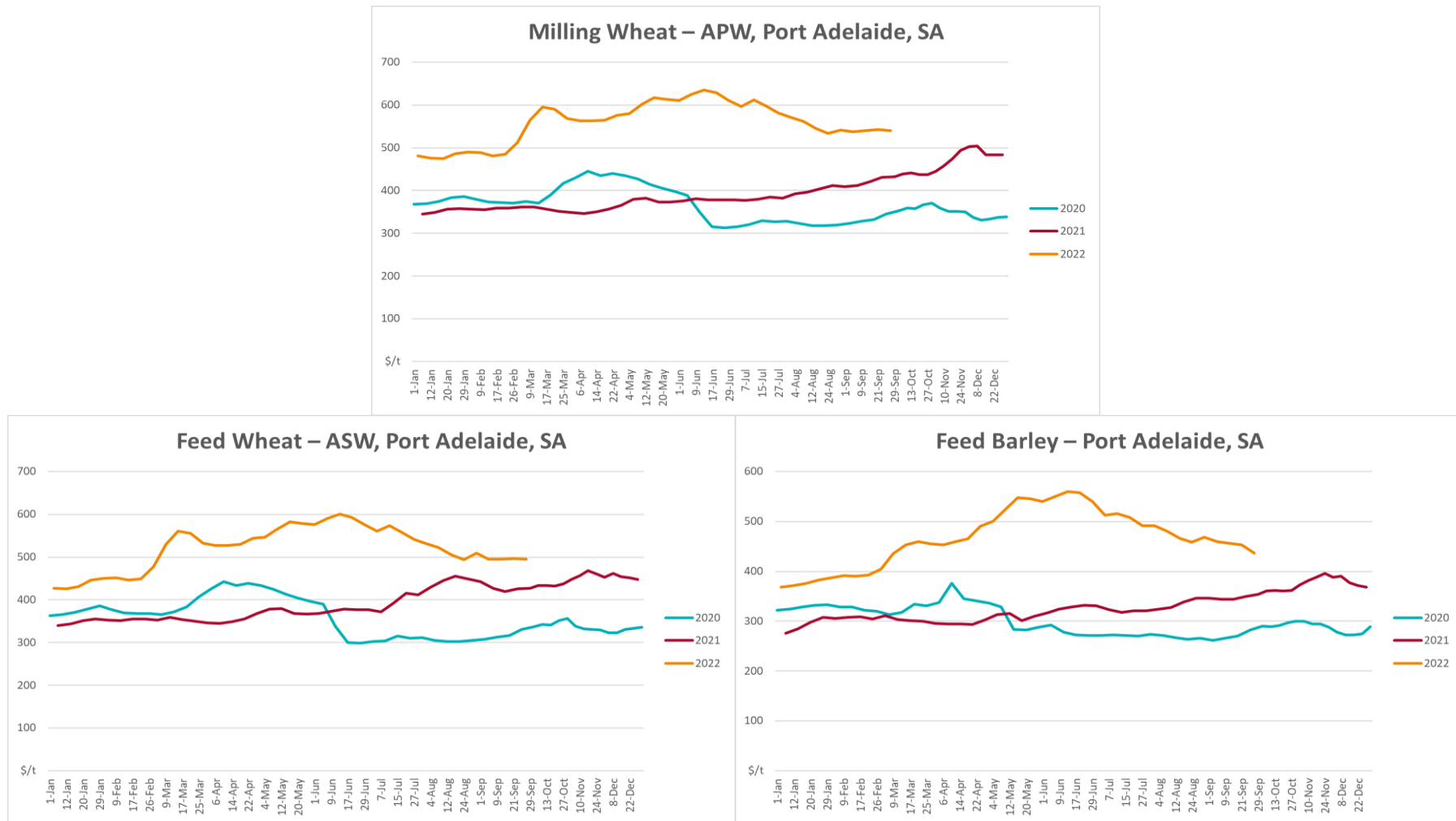
a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

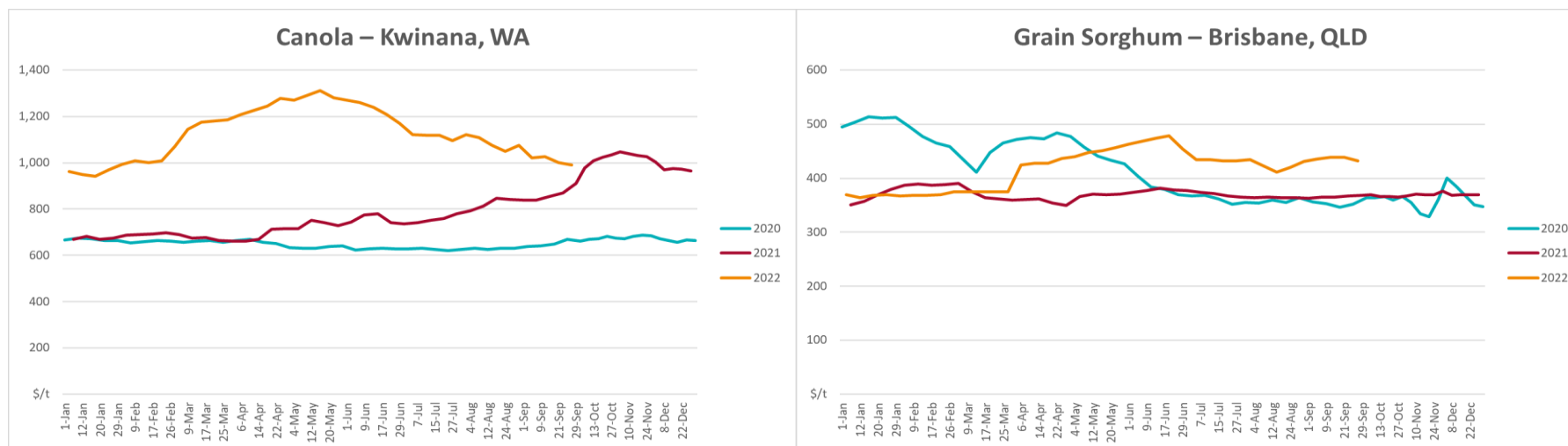
3.1. Selected world indicator prices



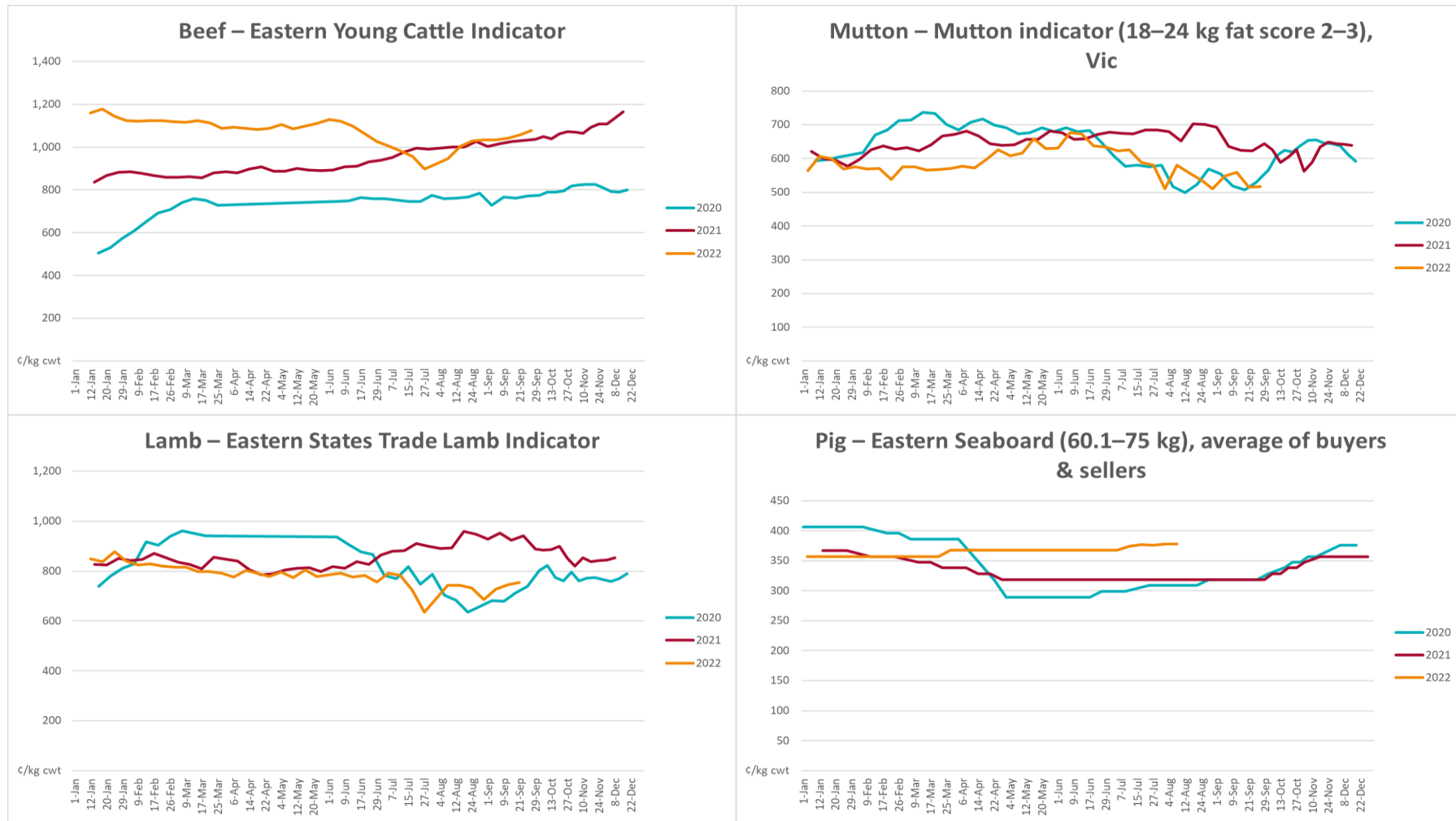


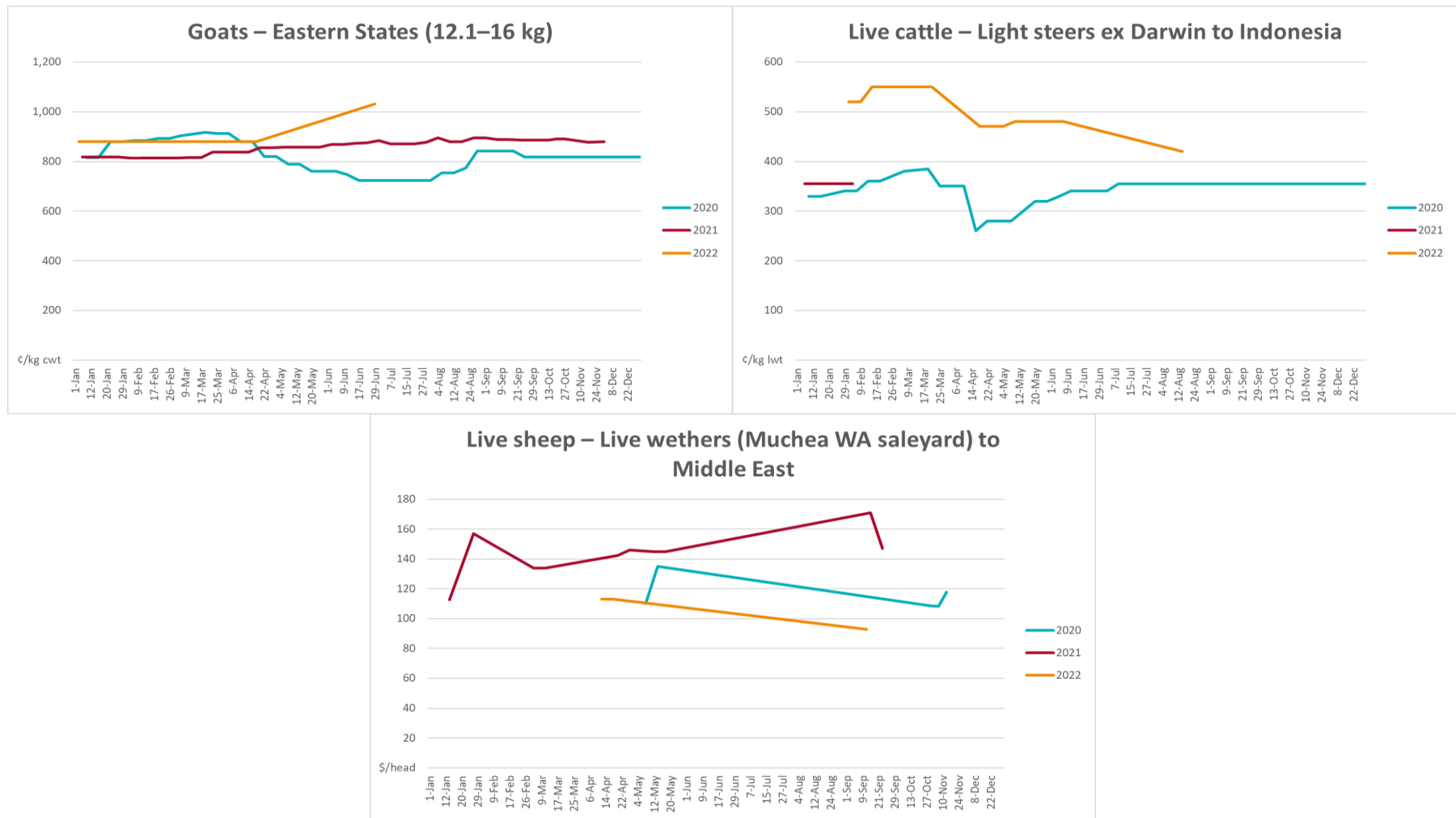
3.2. Selected domestic crop indicator prices



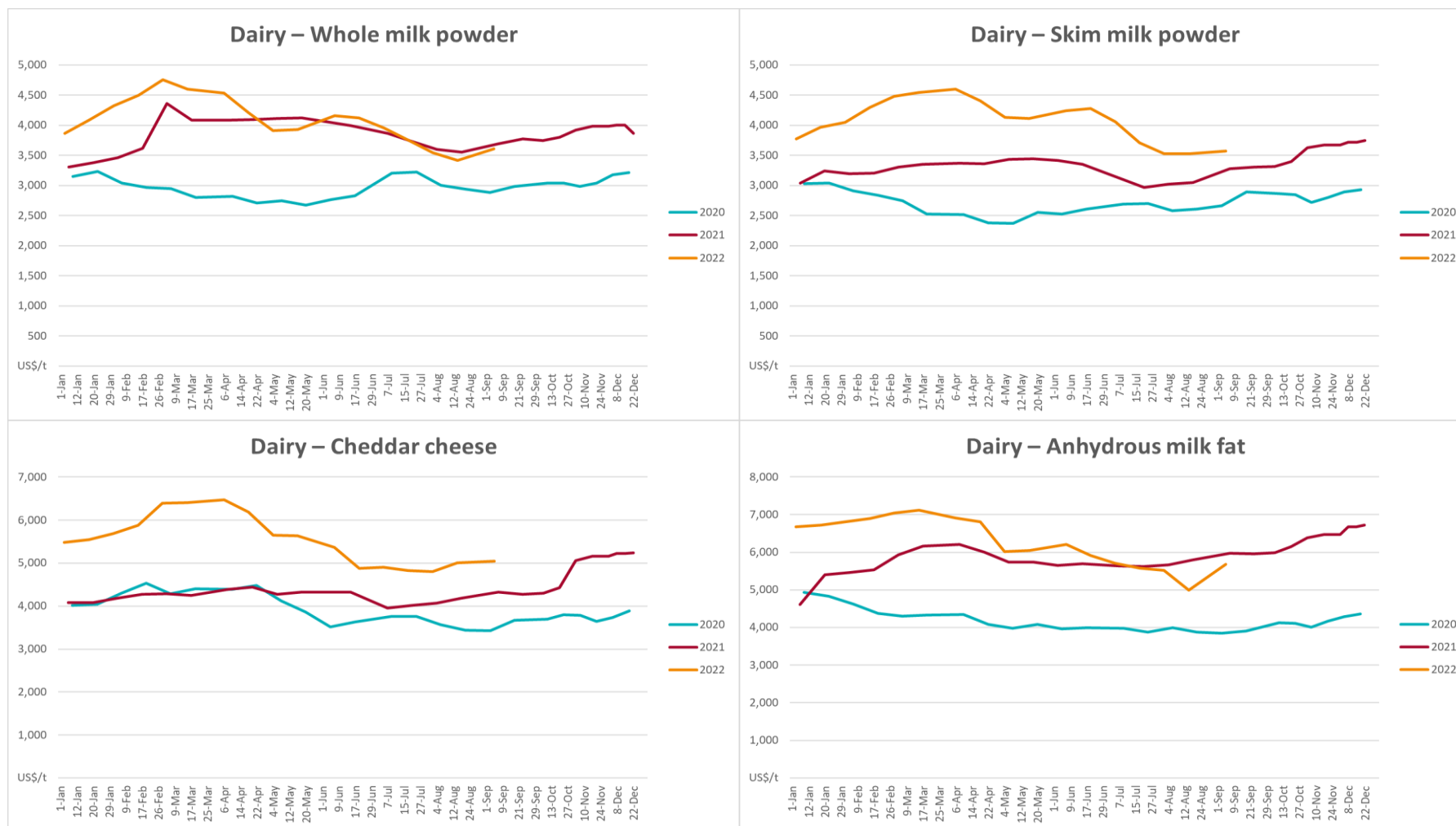


3.3. Selected domestic livestock indicator prices

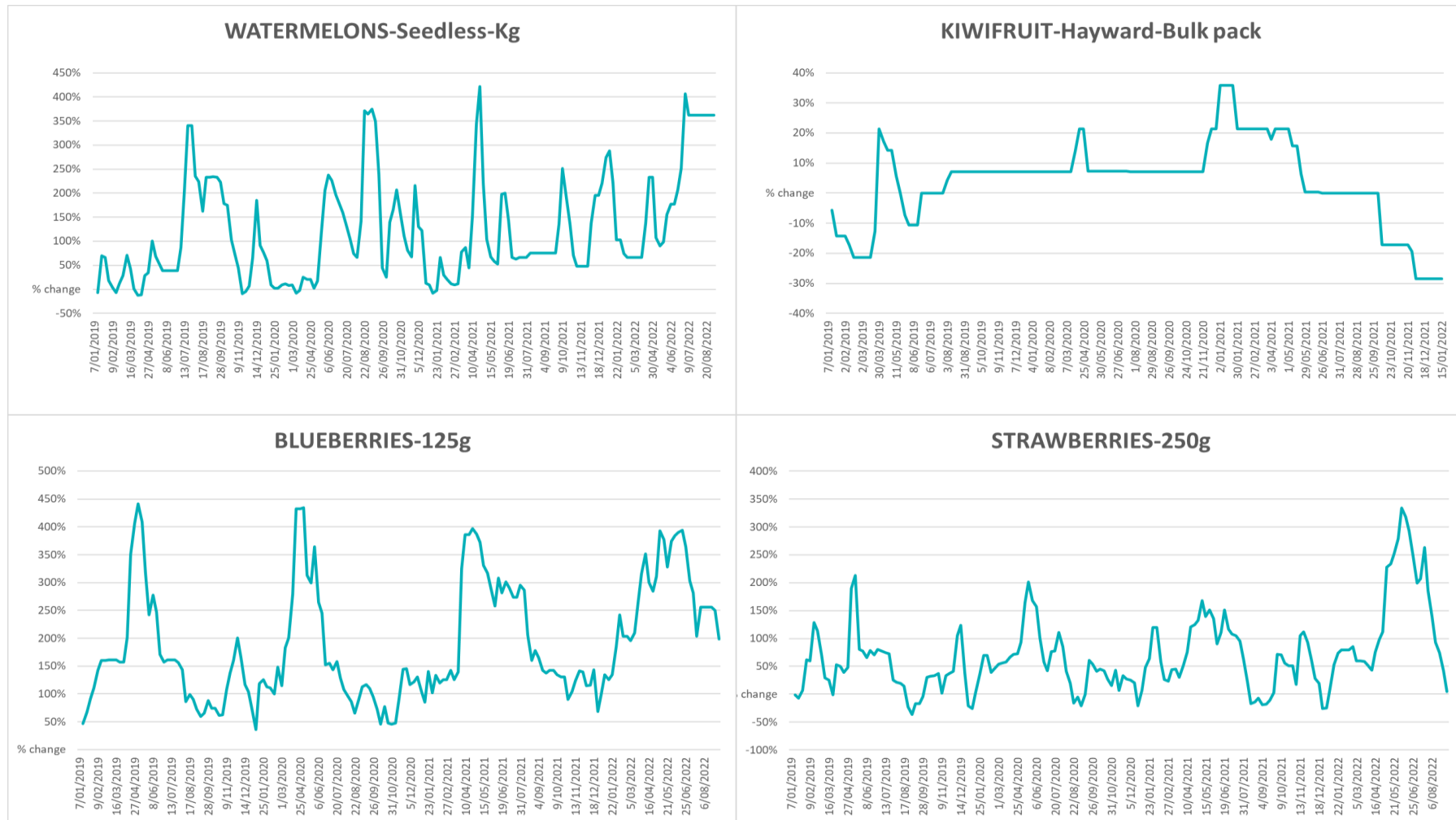


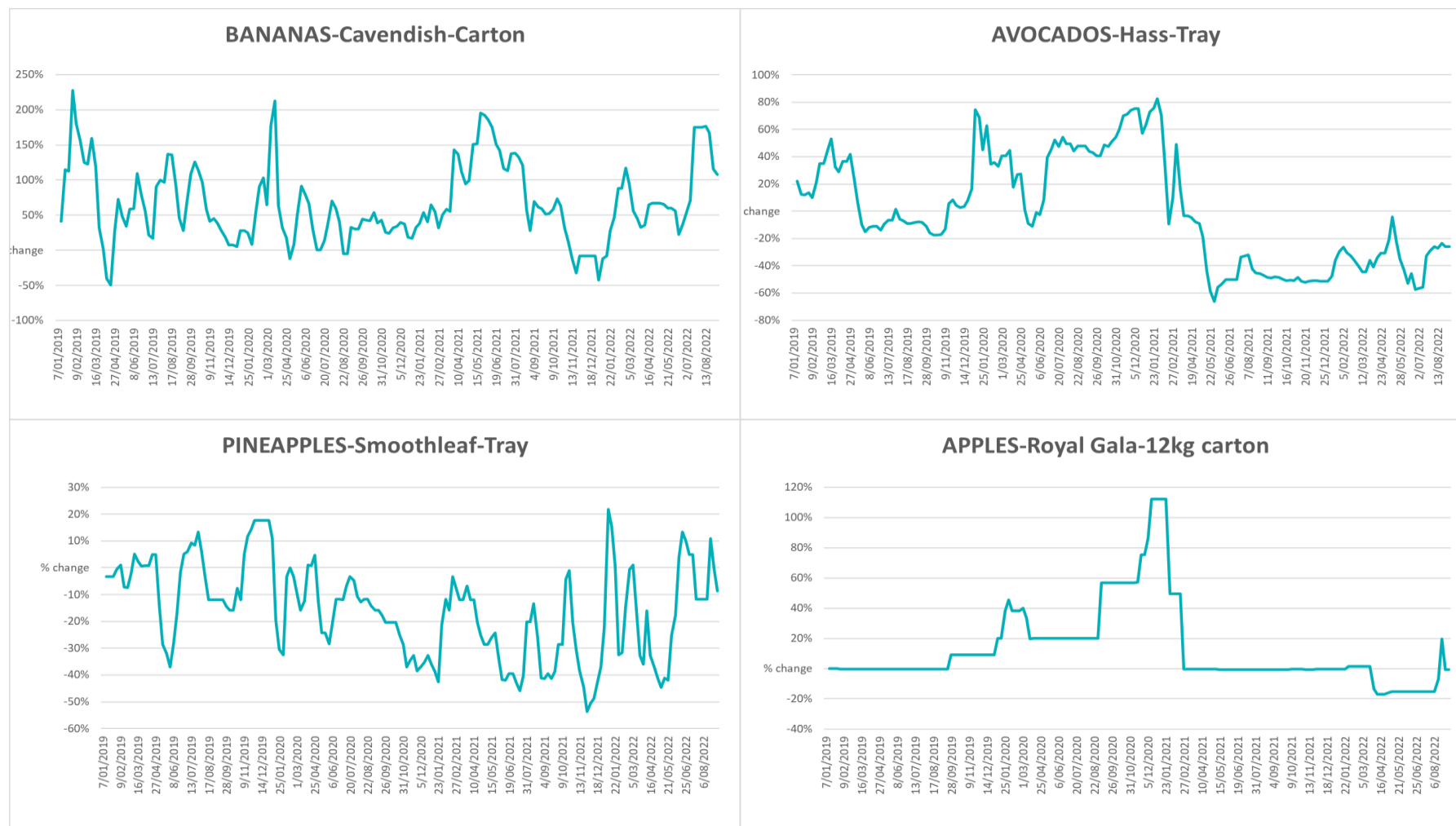


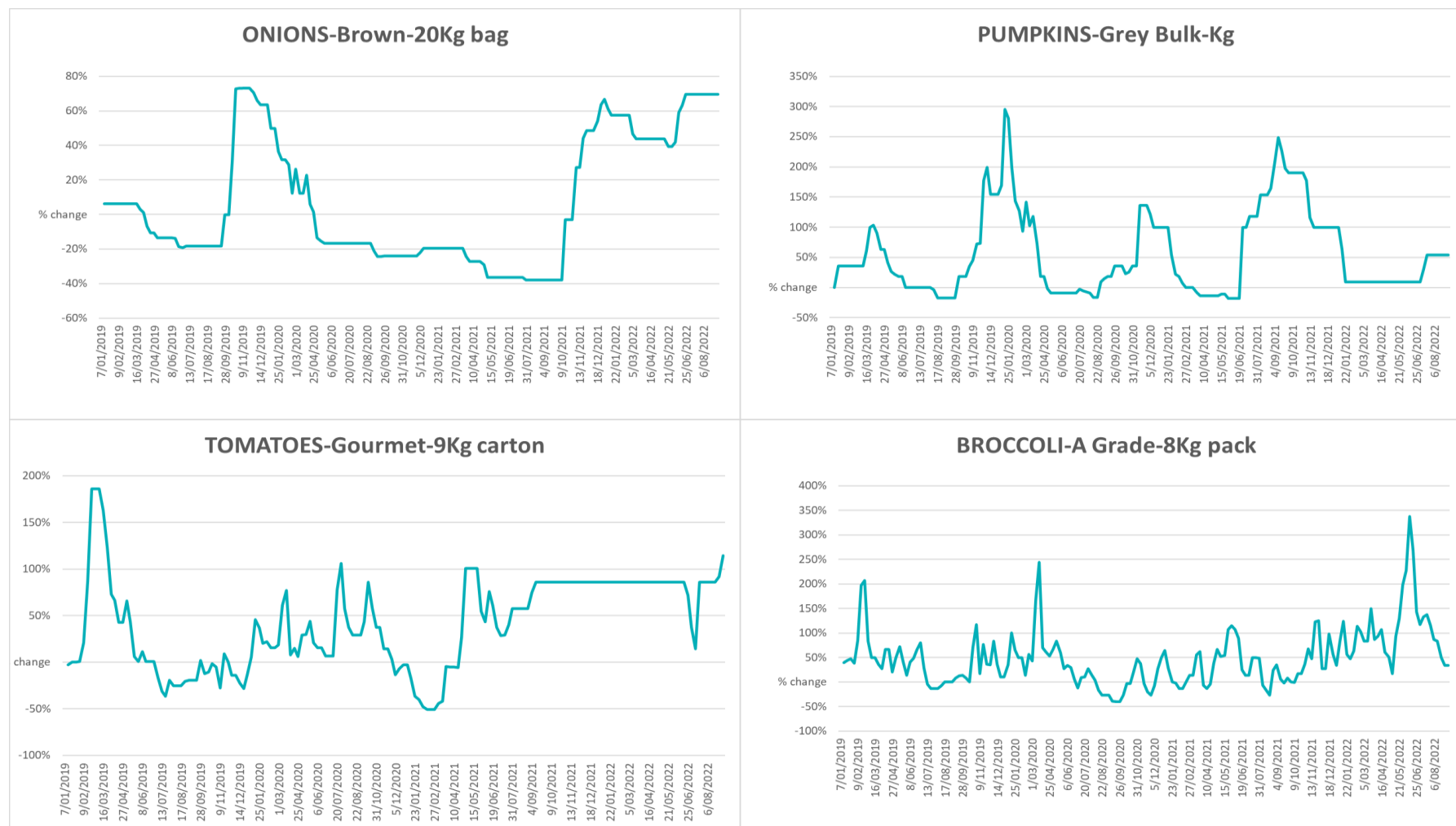
3.4. Global Dairy Trade (GDT) weighted average prices

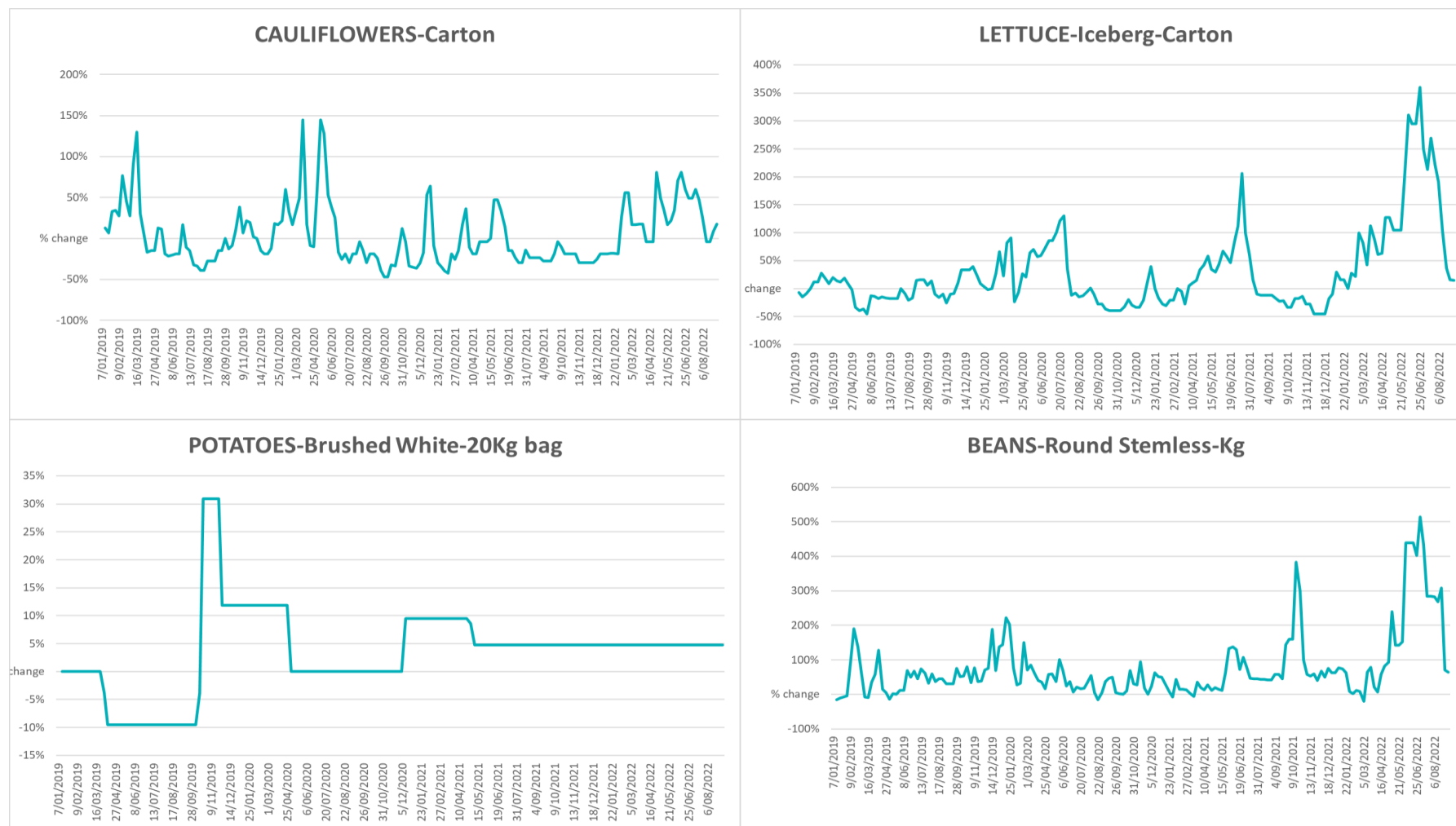


3.5. Selected fruit and vegetable prices

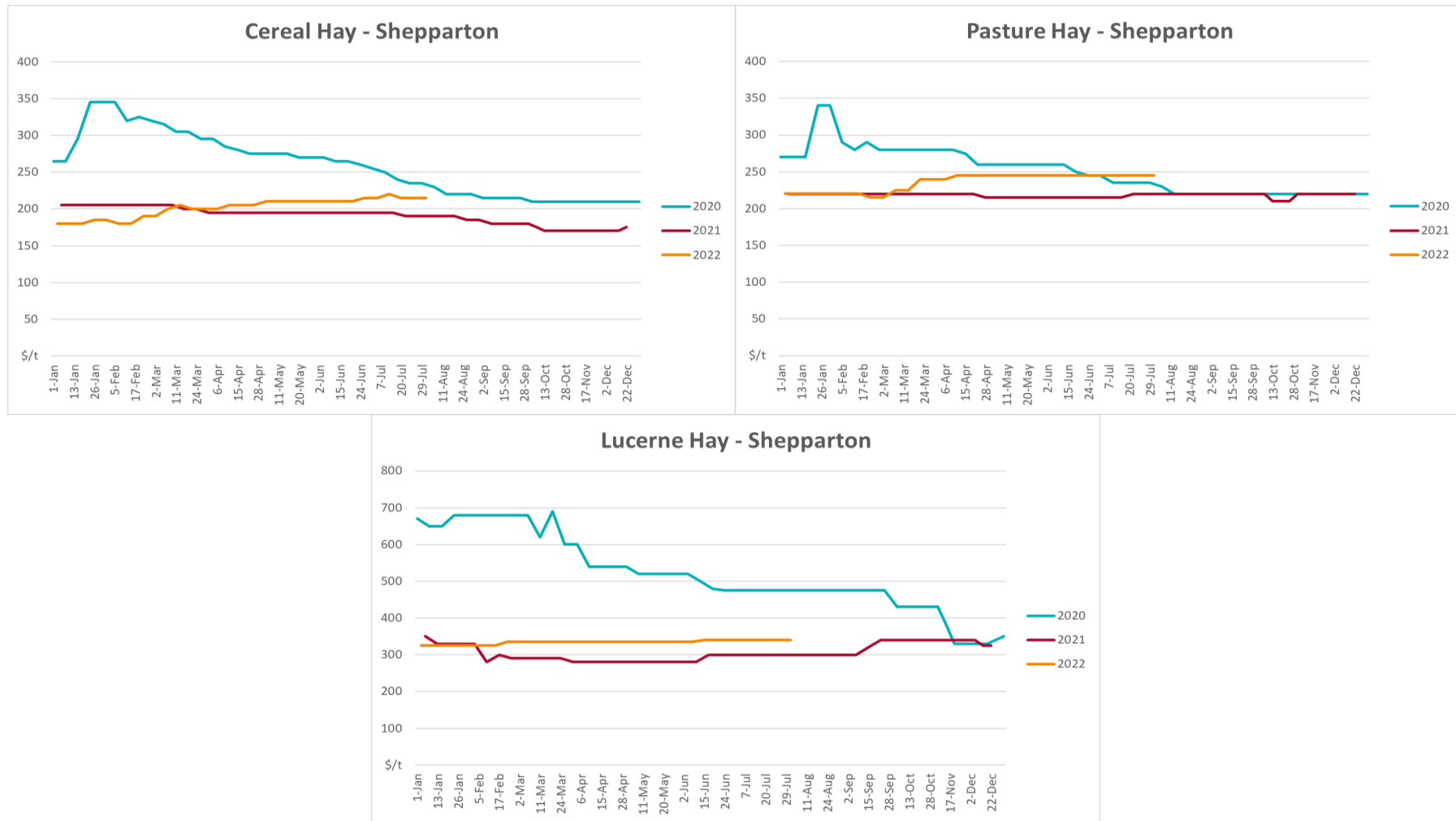








3.6. Selected domestic fodder indicator prices



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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