



Weekly Australian Climate, Water and Agricultural Update

No. 23/2023

15 June 2023

Summary of key issues

- For the week ending 14 June 2023, an intense low, cold front and a trough generated rainfall of between 10 and 50 millimetres across much of New South Wales, and parts of southern Queensland, southern South Australia and far southwest Western Australia. Rainfall up to 200 millimetres were recorded across in Victoria and Tasmania.
- Across cropping regions, rainfall totals of between 10 and 50 millimetres was recorded across much of New South Wales, and parts of southern South Australia and eastern Western Australia. Rainfalls of between 15 and 100 millimetres were recorded across Victoria. Little to no rainfall was recorded elsewhere. Most growers across eastern Australia are likely to have completed their winter planting programs and these falls would have provided a useful boost to soil moisture levels and will support the establishment and development of crops. In Western Australia the mainly dry conditions will have allowed for field access for the finalisation of planting programs in the south and for nitrogen and herbicide application following widespread rainfall early June (see Section 1.1).
- Above average rainfall globally during May is likely to result in improved wheat production potential in the United States, isolated parts of central and western Canada, western Kazakhstan, north-western India, western, central and eastern China and isolated parts of the southern and eastern Russian Federation. Below average rainfall and above average temperatures in recent months have also negatively affected corn and soybean production across parts of Argentina. Global production conditions have improved compared to those used to formulate ABARES forecasts of global grain supplies and world prices in its June 2023 edition of the *Agricultural Commodities Report*. As a result, global grain and oilseed production is currently expected to be higher than that published in early June (see Section 1.2).
- Over the 8-days to 22 June 2023, fronts and troughs crossing southern Australia are expected to bring cold and showery conditions to southern South Australia, much of Victoria, southern New South Wales and Tasmania. Cool onshore winds should bring showers to the southern Western Australian coast. A high-pressure system will keep the remainder of the country dry (see Section 1.3).
- Across cropping regions, rainfall totals of between 10 and 25 millimetres are expected across much of Victoria and South Australia. Lighter falls of between 1 and 10 millimetres are expected across Western Australia, New South Wales and southern Queensland. Little to no rainfall is expected across remaining cropping regions. This rainfall should be sufficient to allow for the germination and establishment of dry sown crops, and benefit soil moisture levels and the growth of earlier sown crops (see Section 1.3).
- Water storage levels in the Murray-Darling Basin (MDB) increased between 8 June 2023 and 15 June 2023 by 237 gigalitres (GL). Current volume of water held in storage is 20 563 GL. This is 1 percent or 182 GL more than at the same time last year.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$13 on 8 June 2023 to \$11 on 15 June 2023. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

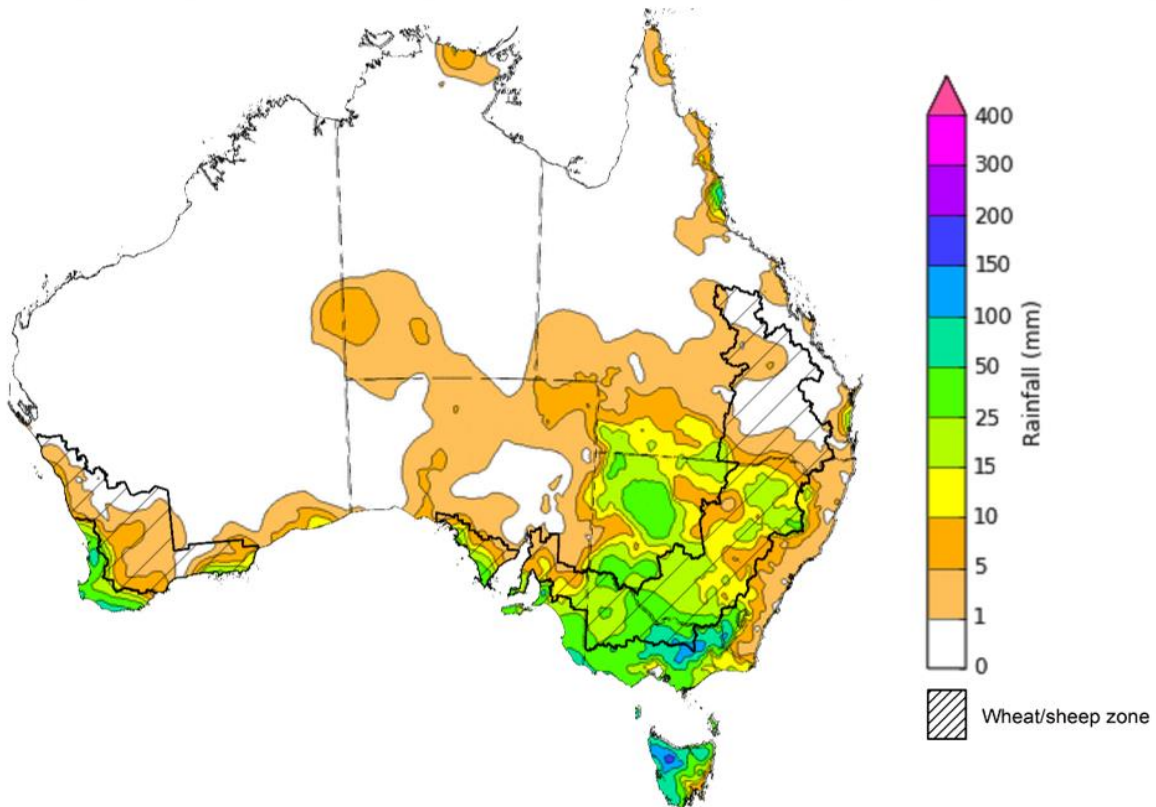
1. Climate

1.1. Rainfall this week

For the week ending 14 June 2023, an intense low, cold front and a trough generated rainfall of between 10 and 50 millimetres across much of New South Wales, and parts of southern Queensland, southern South Australia and far southwest Western Australia. Rainfall of up to 200 millimetres were recorded across in Victoria and Tasmania. A high-pressure system kept the remainder of the country dry.

In cropping regions, rainfall totals of between 10 and 50 millimetres was recorded across much of New South Wales, and parts of southern South Australia and eastern Western Australia. Falls of between 15 and 100 millimetres were recorded across Victoria. Little to no rainfall was recorded across remaining cropping regions. Most growers across eastern Australia are likely to have completed their winter planting programs and these falls would have provided a useful boost to soil moisture levels and will support the establishment and development of crops. In Western Australia the mainly dry conditions will have allowed for field access for the finalisation of planting programs in the south and for nitrogen and herbicide application following widespread rainfall last week.

Rainfall for the week ending 14 June 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/>
Issued: 14/06/2023

1.2. Global production conditions and climate outlook

Crop production is affected by long-term trends in average rainfall and temperature, interannual climate variability, shocks during specific growth stages, and extreme weather events. Some crops are more tolerant than others to certain types of stresses, and at each growth stage, different types of stresses affect each crop species in different ways.

The precipitation anomalies and outlooks presented here give an indication of the current and future state of production conditions for the major grain and oilseed producing countries which are responsible for over 80% of global production. This is an important input to assessing the global grain supply outlook.

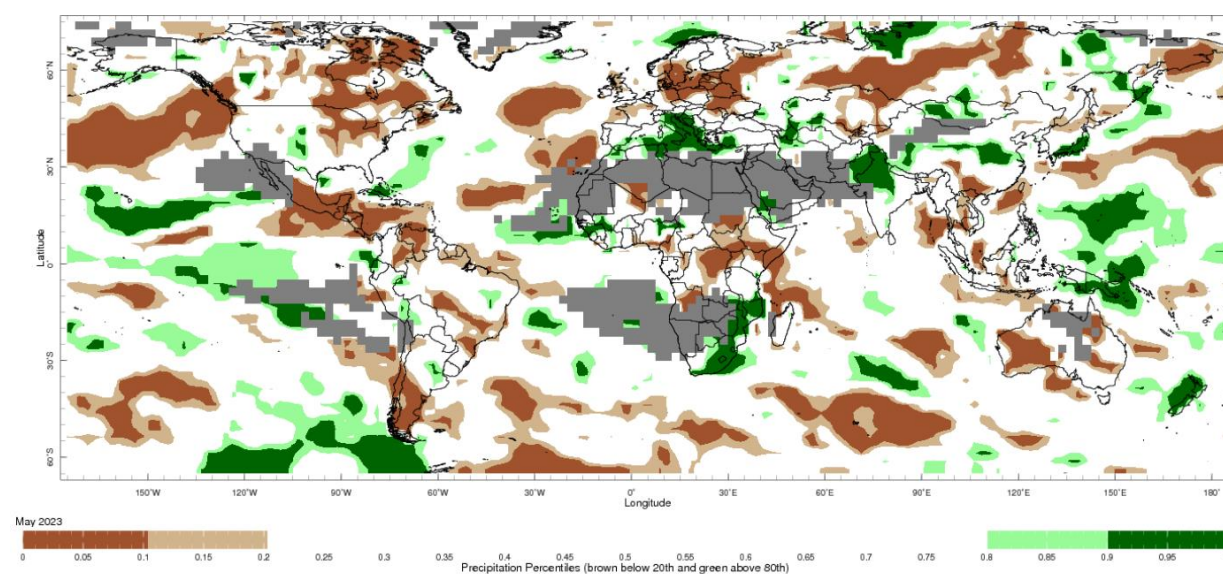
May precipitation percentiles and current production conditions

As of the end of May 2023, rainfall was mixed for the world's major grain-producing and oilseed-producing regions.

In the northern hemisphere, precipitation was below average in north-eastern United States, scattered areas in the west, central and much of eastern Canada, much of Europe and central Russian Federation, northern and southern Kazakhstan, southern China and across Thailand and Cambodia. Precipitation was above average for central United States, isolated part of central and western Canada, western Kazakhstan, north-western India, western, central and eastern China and isolated parts of the southern and eastern Russian Federation. Precipitation was close to average across the remainder of the major grain-producing and oilseed-producing regions in the northern hemisphere.

In the southern hemisphere, May precipitation was below average across southern Brazil and Argentina and much of western and eastern Australia. Precipitation was above average for a localised area of eastern Brazil and Argentina. Precipitation was close to average across the remainder of major grain-producing and oilseed-producing regions in the southern hemisphere.

Global precipitation percentiles, May 2023



Note: The world precipitation percentiles indicate a ranking of precipitation for May, with the driest (0th percentile) being 0 on the scale and the wettest (100th percentile) being 1 on the scale. Percentiles are based on precipitation estimates from the NOAA Climate Prediction Center's [Climate Anomaly Monitoring System Outgoing Precipitation Index](#) dataset. Precipitation estimates for May 2023 are compared with rainfall recorded for that period during the 1981 to 2010 base period.

Source: International Research Institute for Climate and Society

As of 28 May 2023, global production was generally favourable for maize and rice, while mixed for wheat and soybeans.

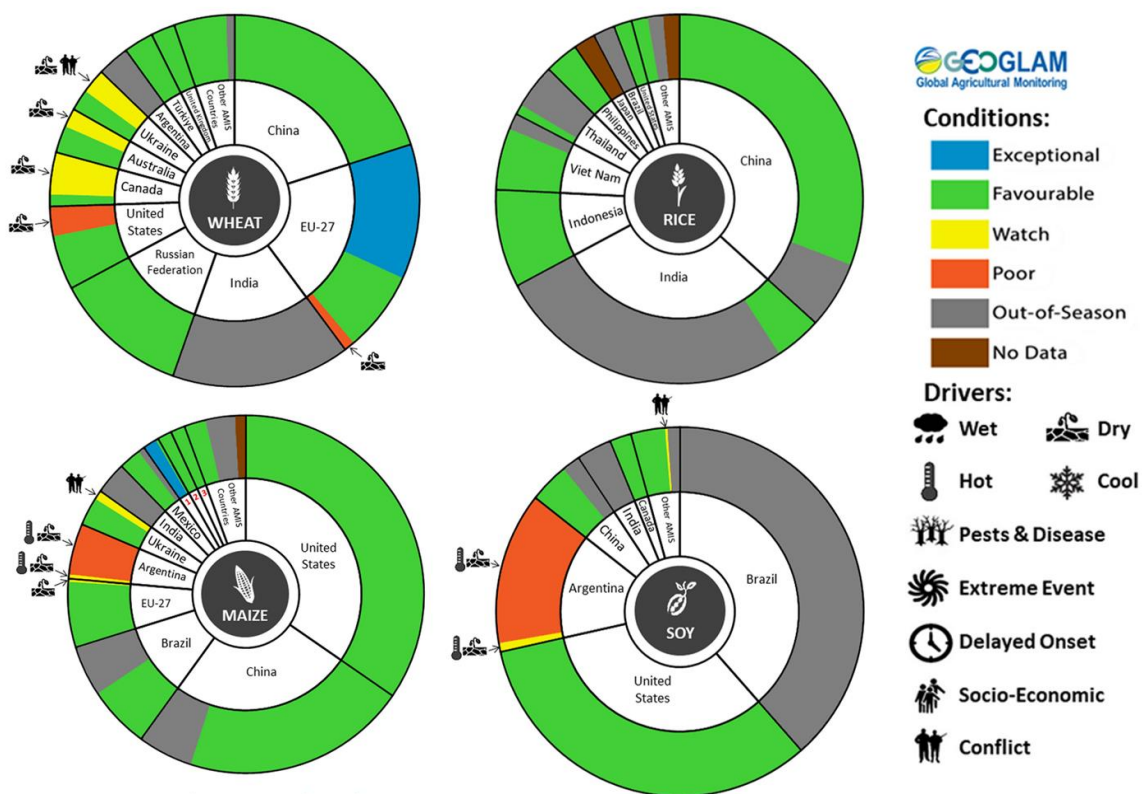
In the northern hemisphere production conditions for wheat have been favourable to exceptional except for in Spain, central and southern Great Plains of the United States due to prolonged drought and in the Ukraine due to the ongoing conflict. In the southern hemisphere, winter wheat sowing was carried out under mixed conditions in Australia and favourable conditions in Brazil.

For corn, production conditions are generally favourable except for Argentina where harvest is continuing with significantly reduced yields for both early- and late-planted crops. The summer planted crops in Brazil is in the reproductive stage under favourable conditions. In the northern hemisphere, sowing is beginning in Canada, well underway in Russian Federation and East Asia, and wrapping up in the US and EU under generally favourable conditions albeit dry conditions in Spain and Portugal and away from war zones in Ukraine. Conditions are favourable for spring-planted crops and sowing of summer crops in China.

For rice, early planted rice is in the reproductive stage in China and harvesting of Rabi crop and wet-season rice is wrapping up in India and Indonesia, respectively, under favourable conditions. Sowing is wrapping up in the US under favourable conditions.

For soybeans, production conditions are favourable in the US, Canada, China and Ukraine. In Argentina, harvesting is continuing for both early- and late planted crops with reduced yields across all regions. With an expected shift from La Nina to El Nino conditions in 2023–24, a return to more favourable growing conditions globally is likely to see global soybean production rebound to new record levels, mainly due to increased expected production across South America and the US.

Crop conditions, AMIS countries, 28 May 2023



South Africa¹, Russian Federation², Canada³

AMIS Agricultural Market Information System.

Source: AMIS

The global climate outlook for July 2023 to September 2023 indicates that variable rainfall conditions are expected for the world's major grain-producing and oilseed-producing regions. Outlooks and potential production impacts for the major grain and oilseed producing countries are presented in the table.

Rainfall outlook and potential impact on the future state of production conditions between July 2023 to September 2023

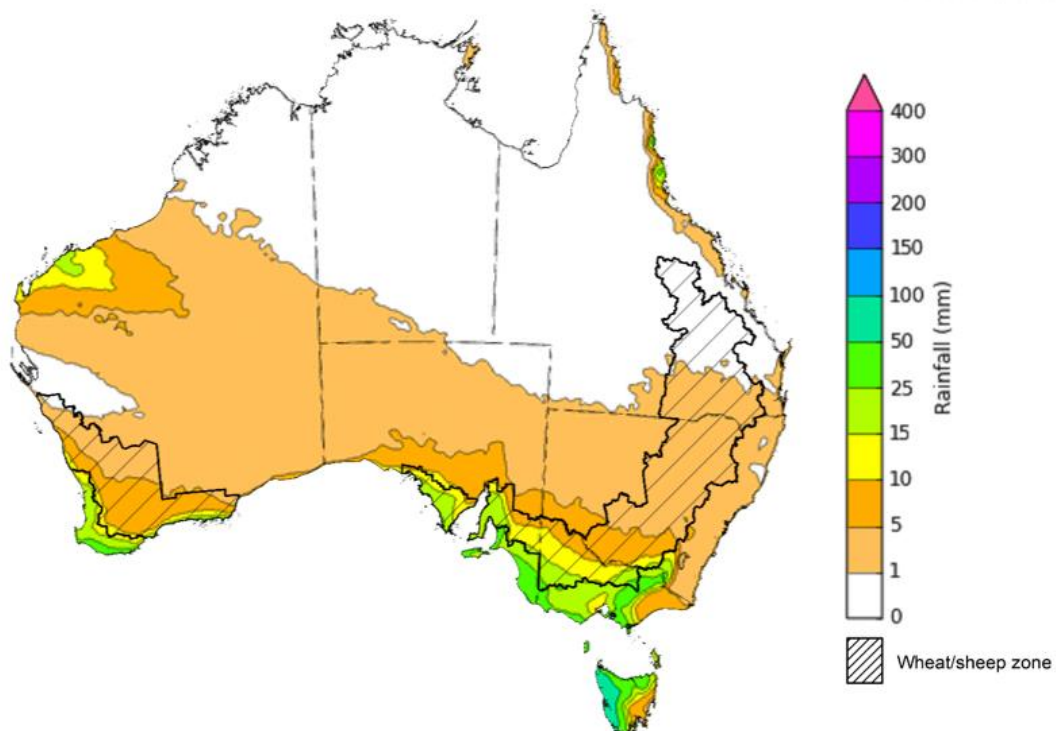
Region	July - September rainfall outlook	Potential impact on production
Argentina	Below average-to-average rainfall is expected across northern Argentina while above average rainfall is expected in southern Argentina between July and September 2023.	Below average rainfall across northern Argentina is likely to adversely affect the establishment and growth of wheat. Dry conditions in September could adversely affect wheat yields and delay planting of corn and cotton.
Black Sea Region	Average rainfall is likely in Ukraine, Kazakhstan and Russian Federation.	Average rainfall across much of The Russian Federation, Ukraine and Kazakhstan will support yield potential for spring wheat, corn, cotton and sunflower during flowering and grain filling in July and August 2023.
Brazil	Average to above average rainfall is more likely across southern Brazil and well below average rainfall is more likely across central and northern Brazil between July and September 2023.	Below average rainfall in July 2023 across central Brazil may adversely affect the establishment and growth of wheat. Dry conditions in August to September could adversely affect wheat yields and delay the planting of corn and soybean in northern and central areas.
Canada	Average rainfall is more likely for much of Canada, especially across major production regions between July and September 2023.	Average rainfall is likely to positively impact yields for spring wheat and canola during critical stages of flowering and filling in July and August. Likewise, average rainfall conditions will support the development and growth of corn, soybeans and sunflower.
China	Average to above average rainfall is more likely across China between July and September 2023.	Average to above average rainfall across China is likely to positively impact cotton, spring wheat, sunflower and rice yields. Above average rainfall across north-eastern China is likely to support the yield potential for corn, sorghum and soybean between July and September 2023.
Europe	Average to above average rainfall is more likely for Europe between July and September 2023.	Above average rainfall across Europe may boost the yield potential of corn, soybean, sorghum and sunflower seeds during flowering and grain development.
South Asia (India)	Average to above average rainfall is more likely across India between July and September 2023.	Average to above average rainfall across much of India is likely to benefit the yield potential of non-irrigated rice, corn, millet and sorghum from July 2023.
Southeast Asia (SEA)	Above average rainfall is more likely for Southeast Asian countries except for in Malaysia where below average rainfall is more likely between July and September 2023.	Average or better rainfall across most of Southeast Asia is likely to benefit corn and rice potential yields. Below average rainfall across Malaysia may adversely impact rice and corn production.
The United States of America	Above average rainfall is likely for much of the southern-east US and below average rainfall is more likely for southern-west growing regions between July and September 2023.	Average or better rainfall across the southern-east US is likely to support the yield potential of cotton, corn, groundnuts and soybeans during the flowering and grain development in July and August. Below average rainfall in southern-west US is likely to adversely impact canola, cotton, sorghum and spring wheat yields in affected regions.

1.3. Rainfall forecast for the next eight days

Over the 8-days to 22 June 2023, fronts and troughs crossing southern Australia are expected to bring cold, windy and showery conditions to southern South Australia, much of Victoria, parts of southern New South Wales and Tasmania. Cool onshore winds should bring showers to the southern Western Australian coast. A high-pressure system will keep the remainder of the country dry.

Across cropping regions, rainfall totals of between 10 and 25 millimetres are expected across much of Victoria and South Australia. Lighter falls of between 1 and 10 millimetres are expected across Western Australia, New South Wales and southern Queensland. Little to no rainfall is expected across remaining cropping regions. This rainfall should be sufficient to allow for the germination and establishment of dry sown crops, and benefit soil moisture levels and the growth of earlier sown crops.

Total forecast rainfall for the period 15 June 2023 to 22 June 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.

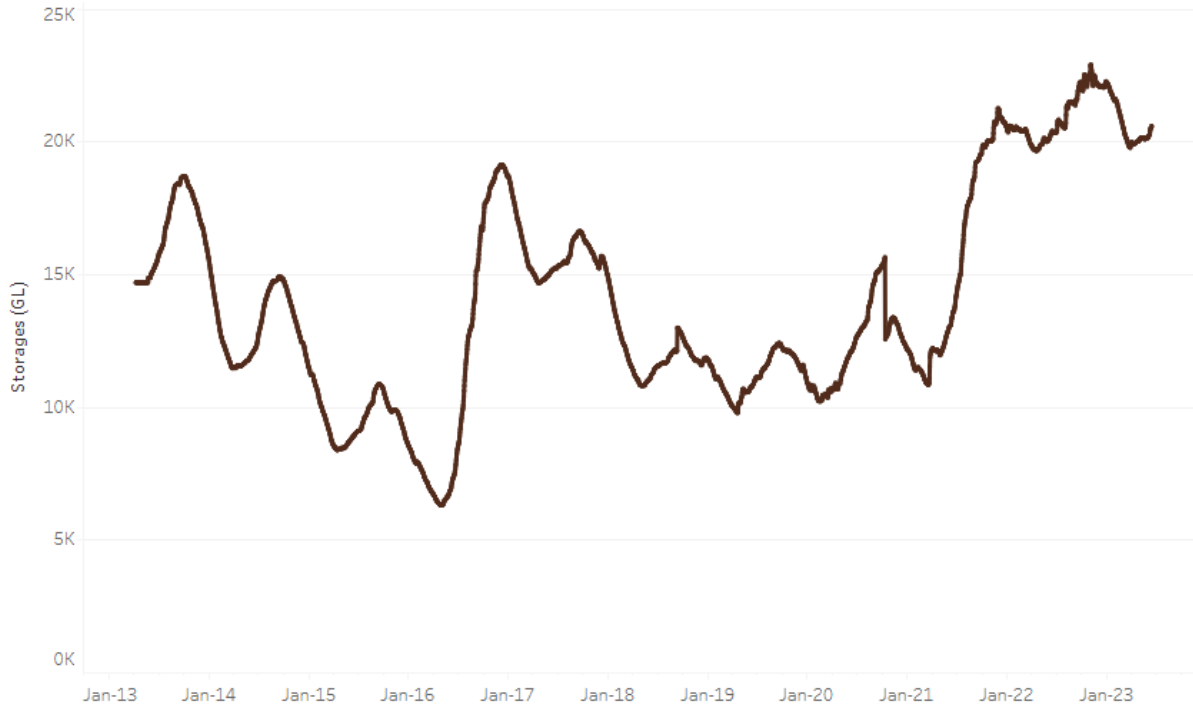
Issued 15/06/2023

2. Water

2.1. Water markets – current week

Water storage levels in the Murray-Darling Basin (MDB) increased between 8 June 2023 and 15 June 2023 by 237 gigalitres (GL). Current volume of water held in storage is 20 563 GL. This is 1 percent or 182 GL more than at the same time last year.

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

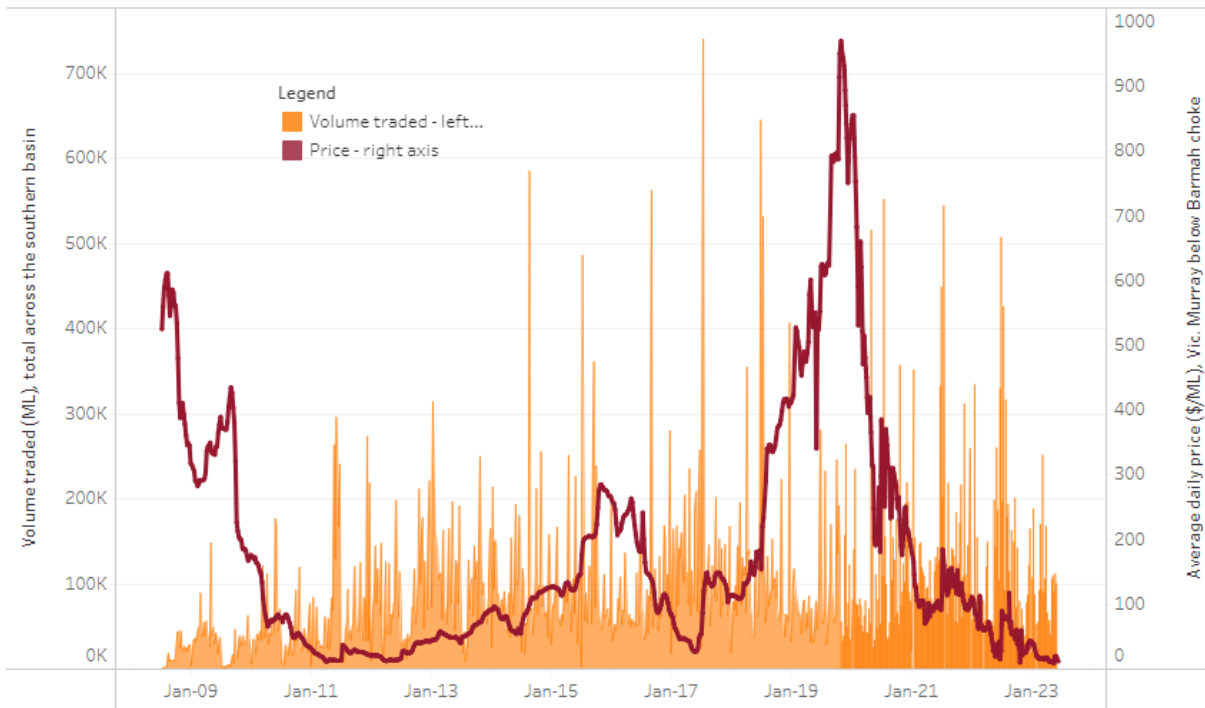


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$13 on 8 June 2023 to \$11 on 15 June 2023. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

Region	\$/ML
NSW Murray Above	5
NSW Murrumbidgee	3
VIC Goulburn-Broken	10
VIC Murray Below	11

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 15 June 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/weeakly-update-15623

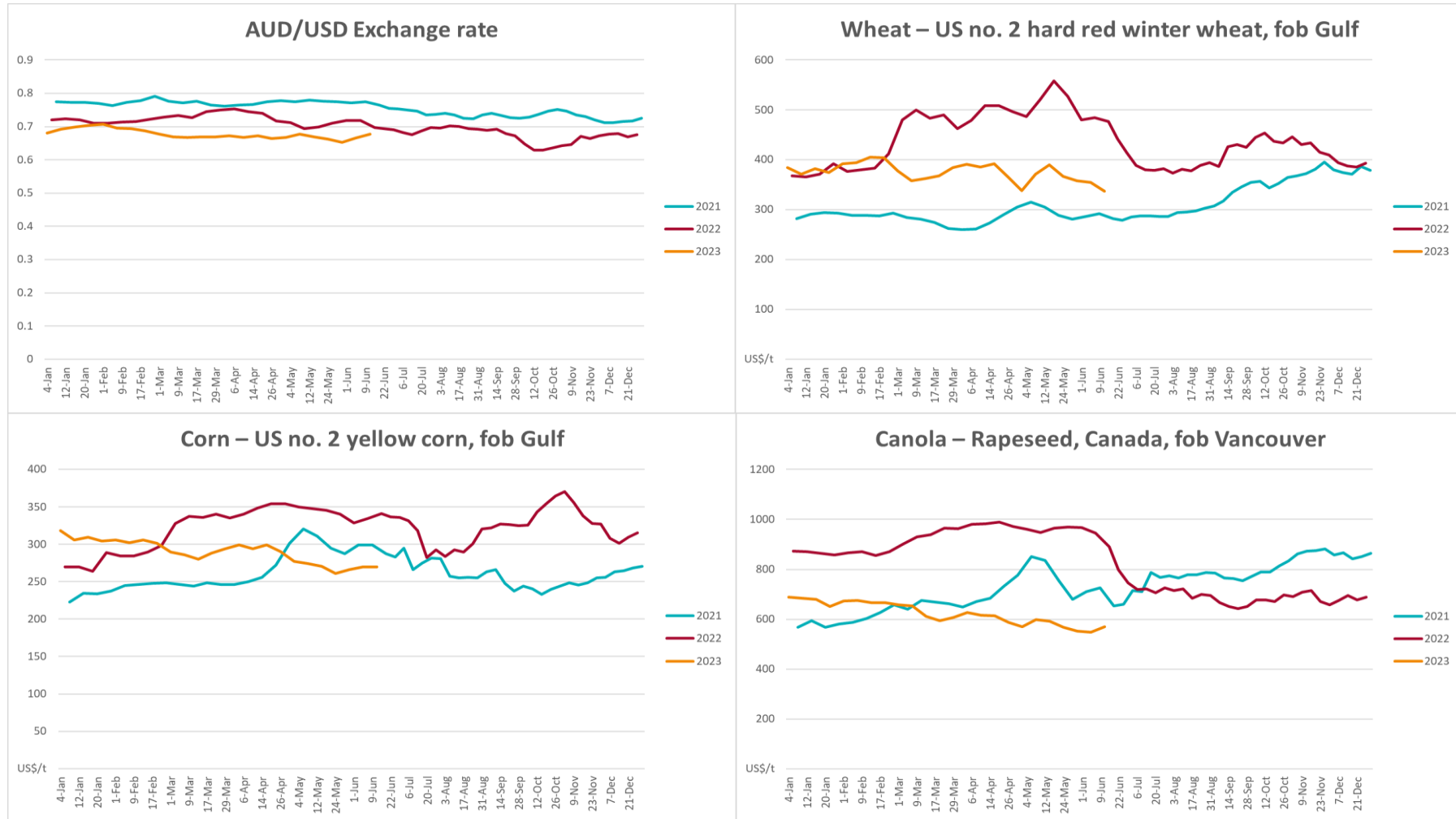
3. Commodities

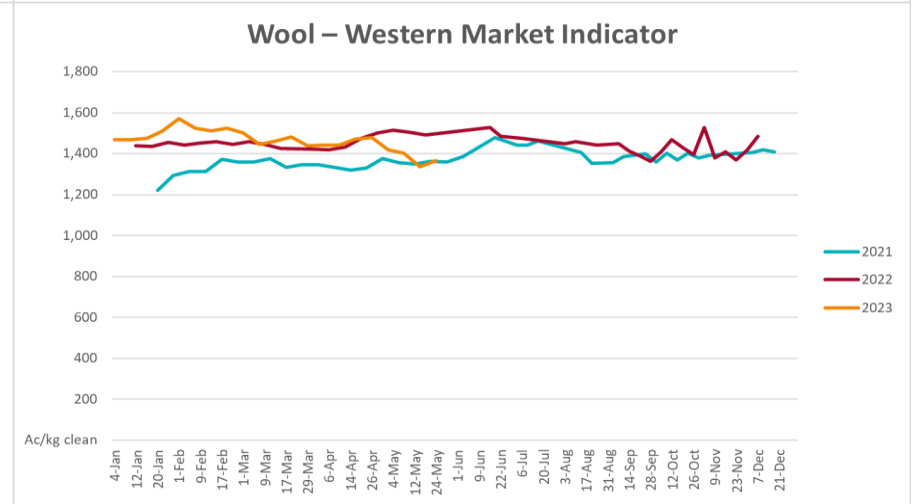
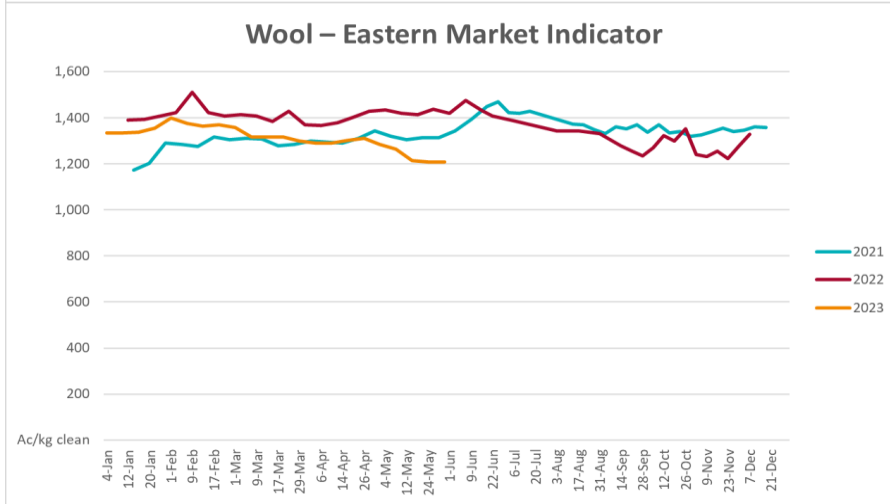
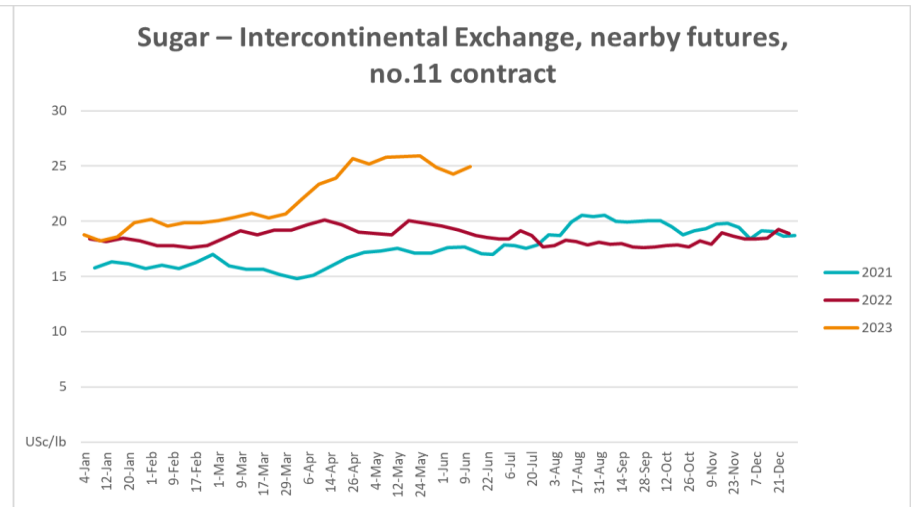
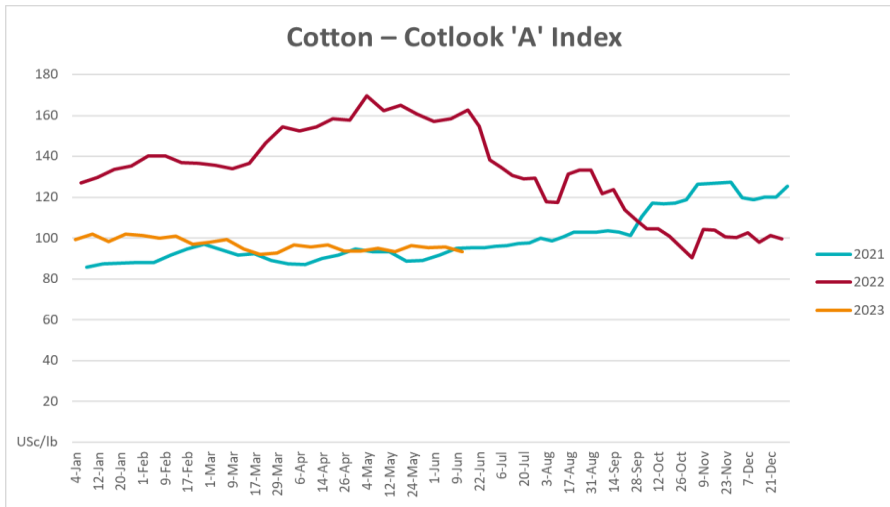
Indicator	Week ended	Unit	Latest Price	Previous Week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	14-Jun	A\$/US\$	0.68	0.66	2%	0.69	-2%
Wheat – US no. 2 hard red winter wheat, fob Gulf	14-Jun	US\$/t	337	354	-5%	441	-24%
Corn – US no. 2 yellow corn, fob Gulf	14-Jun	US\$/t	270	269	0%	336	-20%
Canola – Rapeseed, Canada, fob Vancouver	14-Jun	US\$/t	570	547	4%	799	-29%
Cotton – Cotlook 'A' Index	14-Jun	USc/lb	93	96	-2%	155	-40%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	14-Jun	USc/lb	25.0	24.2	3%	19	35%
Wool – Eastern Market Indicator	31-May	Ac/kg clean	1,208	1,209	0%	1,377	-12%
Wool – Western Market Indicator	24-May	Ac/kg clean	1,366	1,337	2%	1,457	-6%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	14-Jun	A\$/t	431	446	-3%	628	-31%
Feed Wheat – ASW, Port Adelaide, SA	14-Jun	A\$/t	401	416	-4%	593	-32%
Feed Barley – Port Adelaide, SA	14-Jun	A\$/t	346	353	-2%	557	-38%
Canola – Kwinana, WA	14-Jun	A\$/t	810	810	0%	1,210	-33%
Grain Sorghum – Brisbane, QLD	14-Jun	A\$/t	484	476	2%	473	2%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	14-Jun	Ac/kg cwt	556	574	-3%	1,121	-50%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	14-Jun	Ac/kg cwt	348	363	-4%	631	-45%
Lamb – Eastern States Trade Lamb Indicator	14-Jun	Ac/kg cwt	607	564	8%	805	-25%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	31-May	Ac/kg cwt	357	357	0%	368	-3%
Goats – Eastern States (12.1–16 kg)	07-Jun	Ac/kg cwt	324	330	-2%	838	-61%

Live cattle – Light steers ex Darwin to Indonesia	17-Aug	Ac/kg lwt	420	480	-13%	320	31%
Live sheep – Live wethers (Muehea WA saleyard) to Middle East	14-Sep	\$/head	93	113	-18%	114	-18%
Global Dairy Trade (GDT) weighted average prices^a							
Dairy – Whole milk powder	07-Jun	US\$/t	3,173	3,244	-2%	4,123	-23%
Dairy – Skim milk powder	07-Jun	US\$/t	2,755	2,766	0%	3,447	-20%
Dairy – Cheddar cheese	07-Jun	US\$/t	4,668	4,407	6%	4,321	8%
Dairy – Anhydrous milk fat	07-Jun	US\$/t	4,728	4,600	3%	5,730	-17%

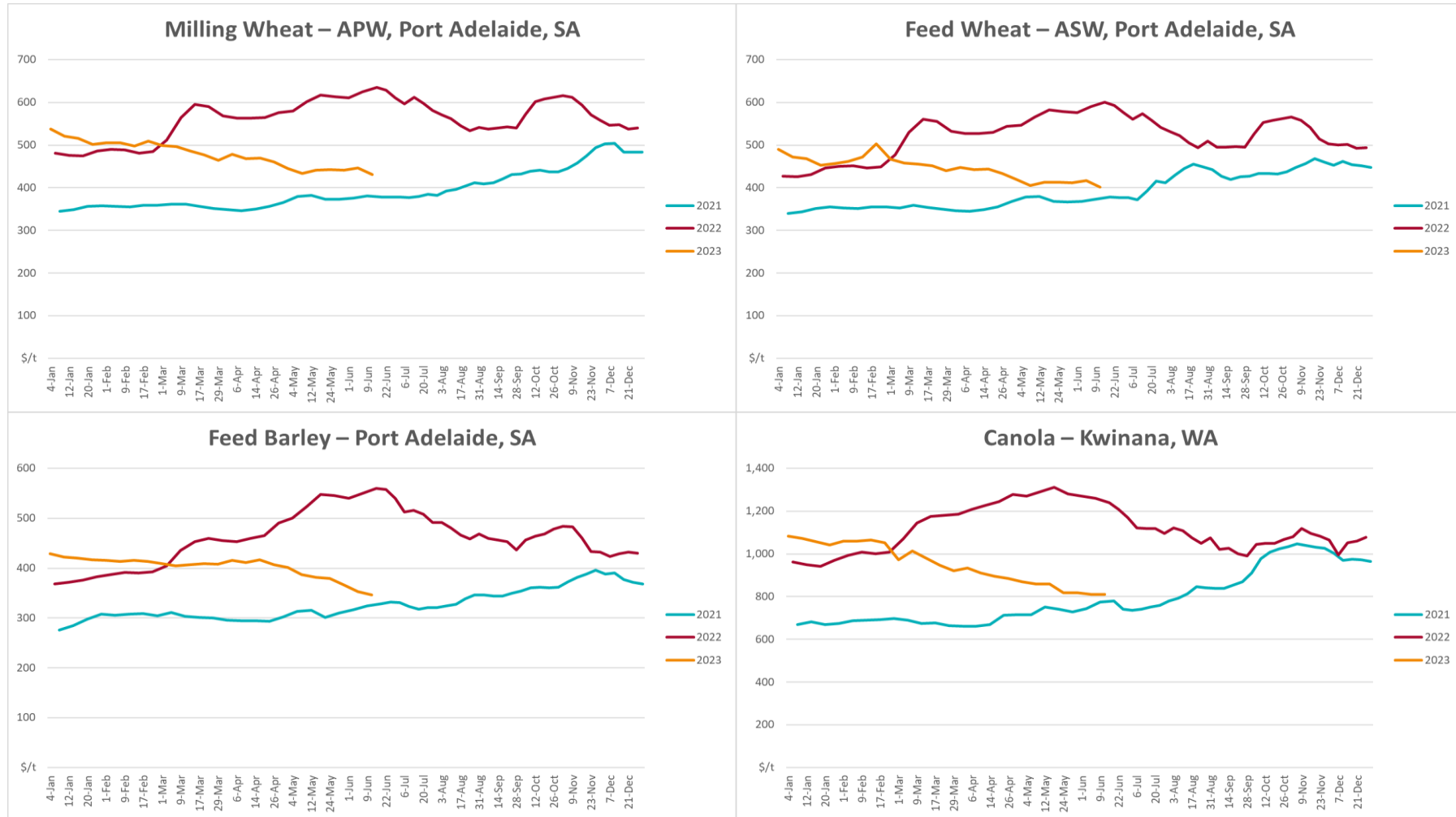
^a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

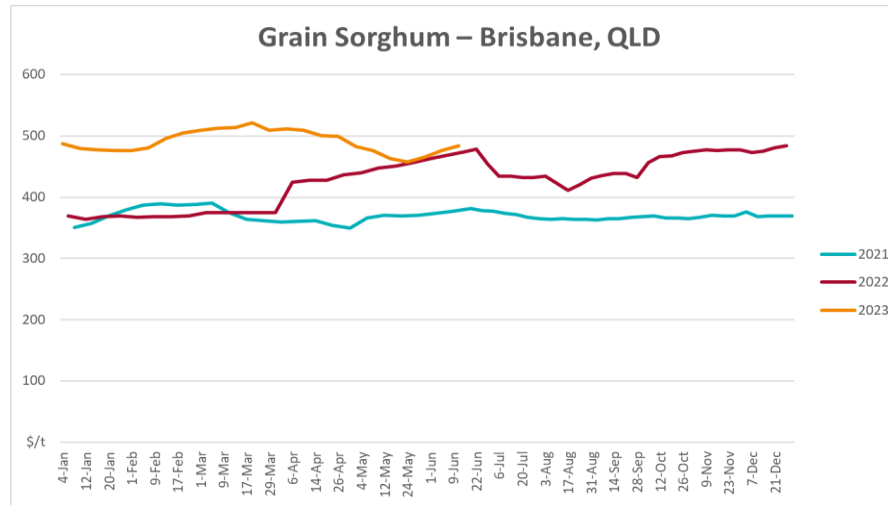
3.1. Selected world indicator prices



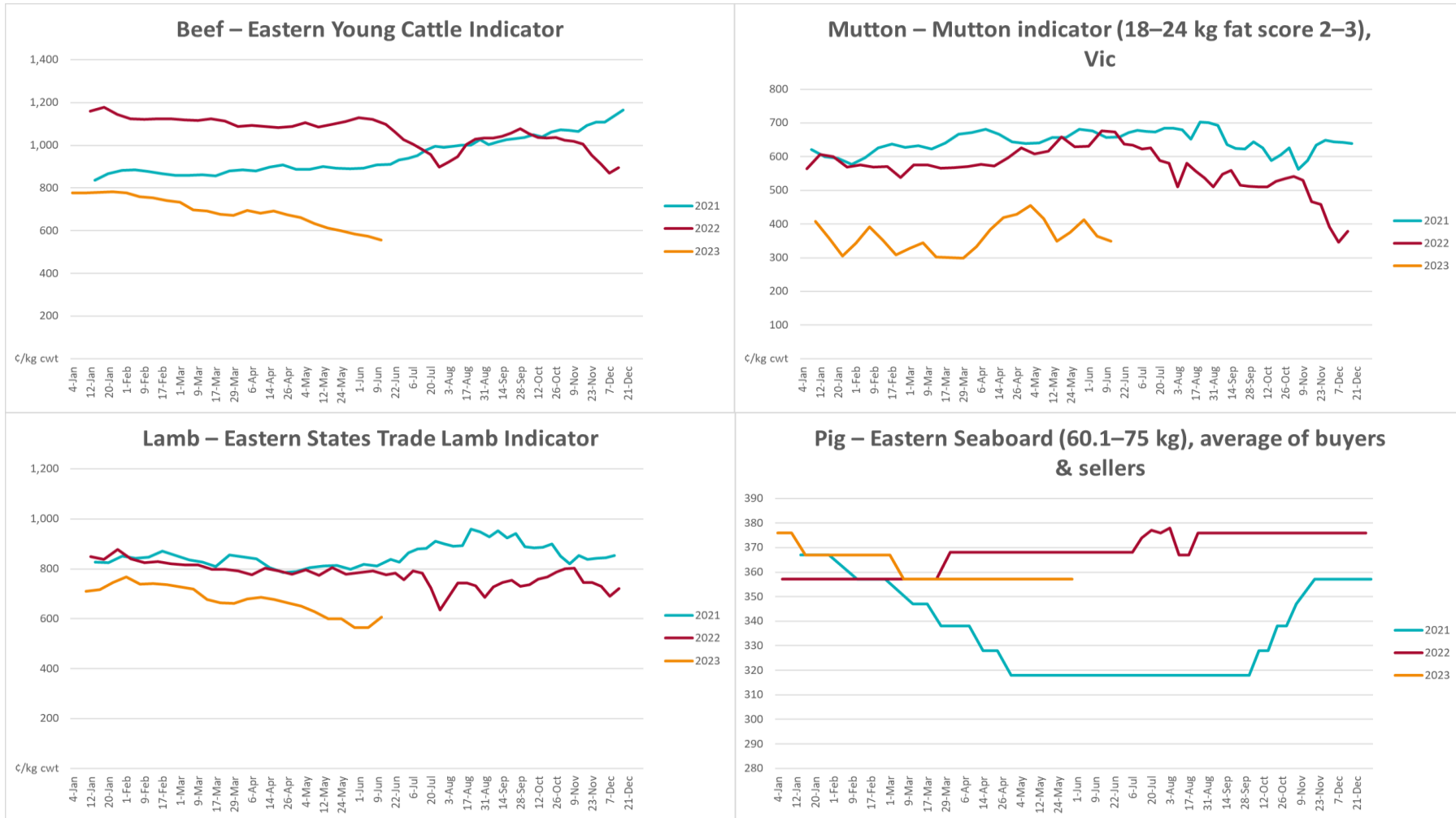


3.2. Selected domestic crop indicator prices

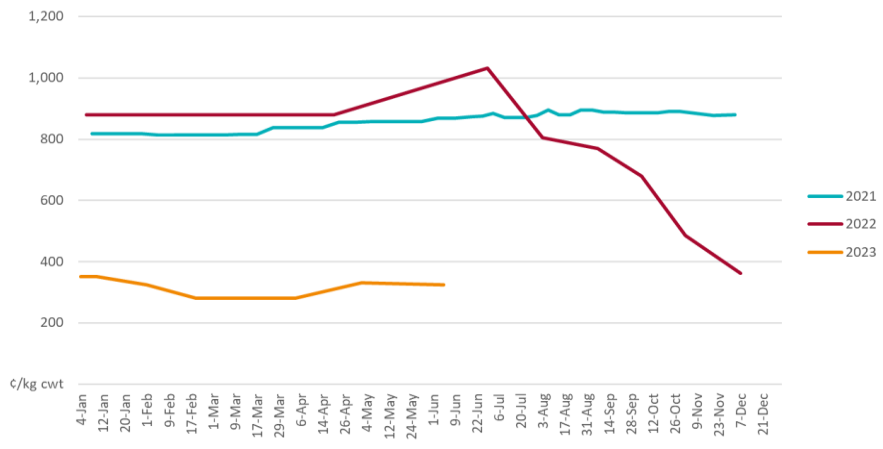




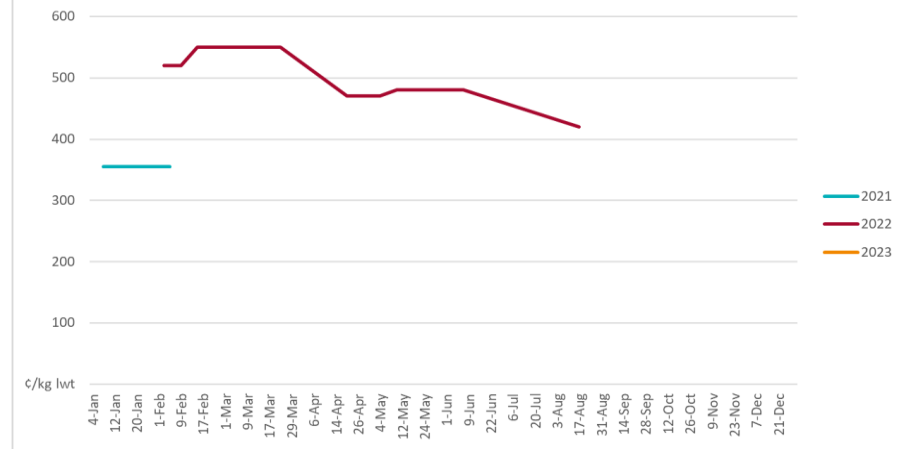
3.3. Selected domestic livestock indicator prices



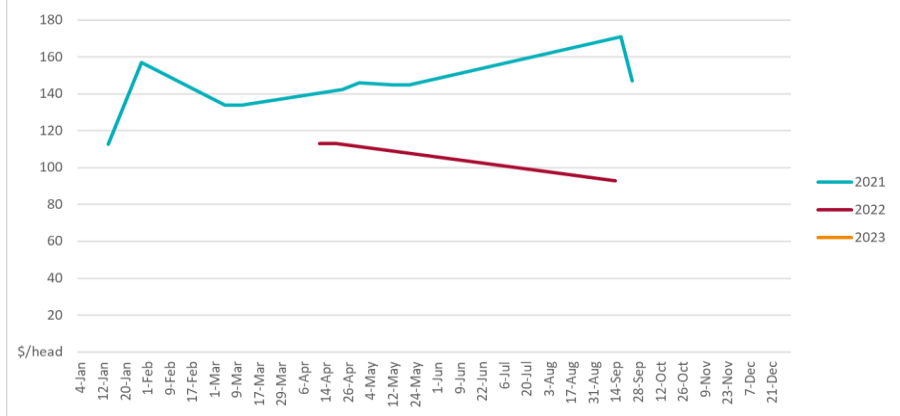
Goats – Eastern States (12.1–16 kg)



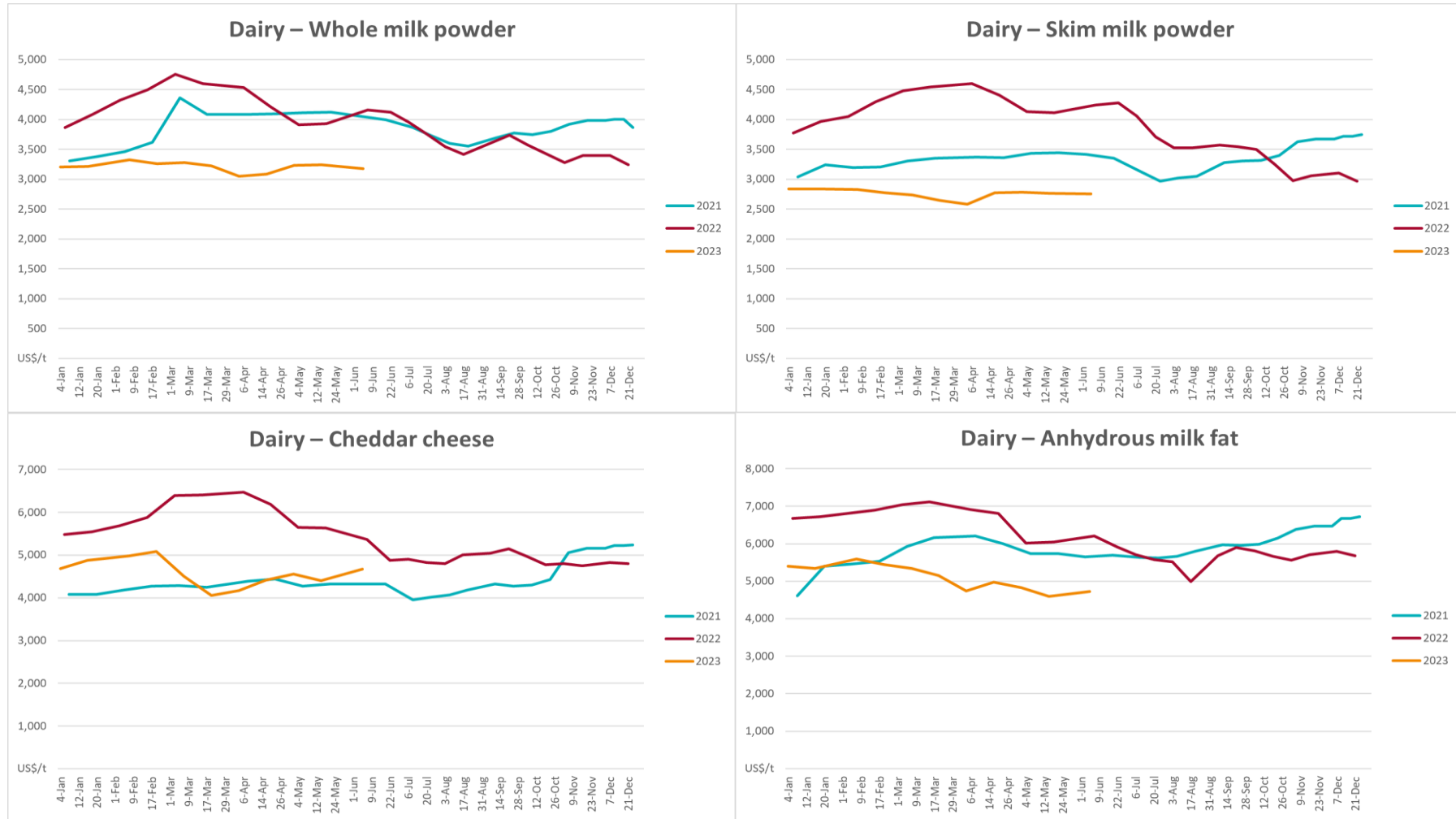
Live cattle – Light steers ex Darwin to Indonesia



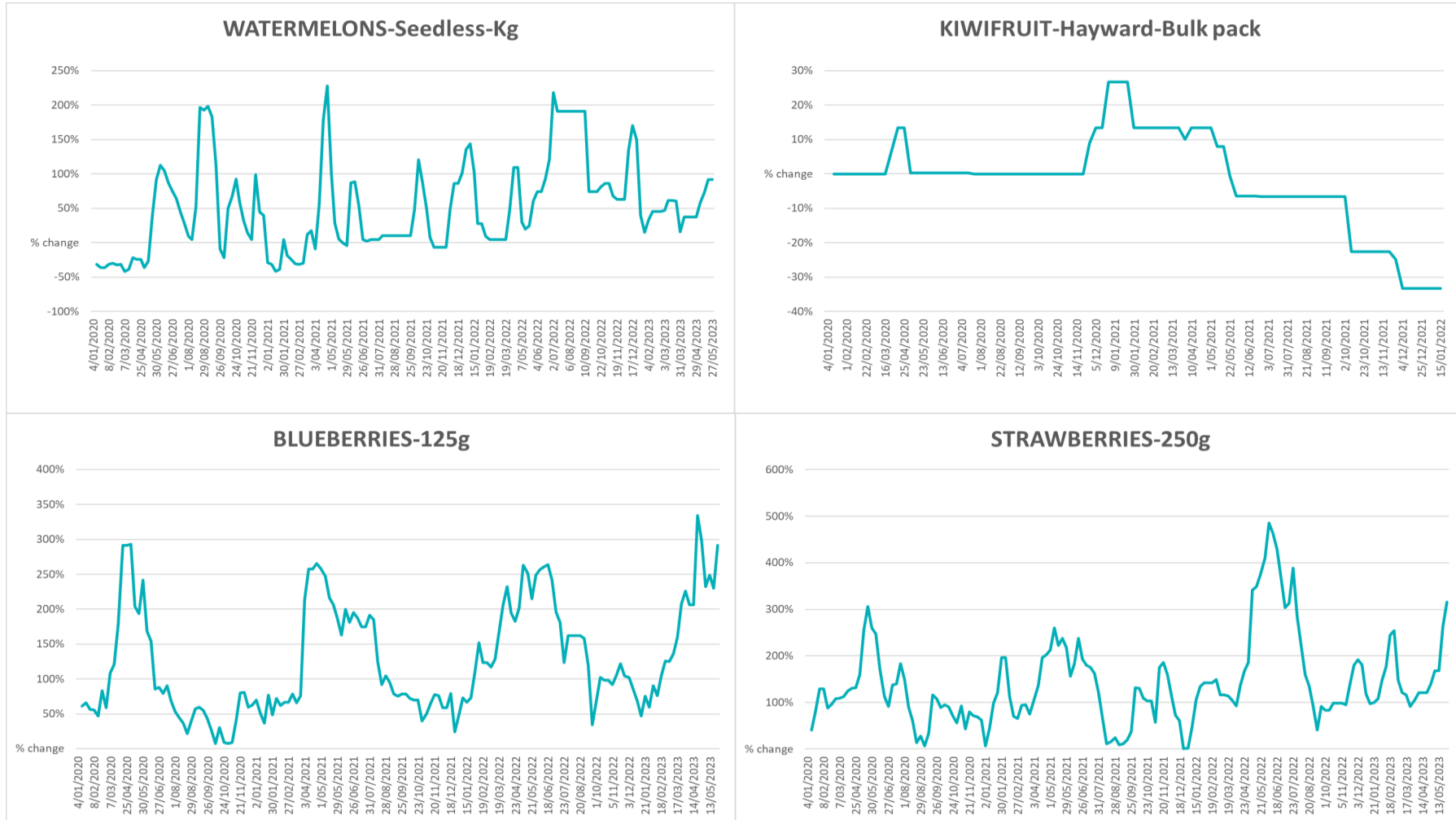
Live sheep – Live wethers (Muecha WA saleyard) to Middle East

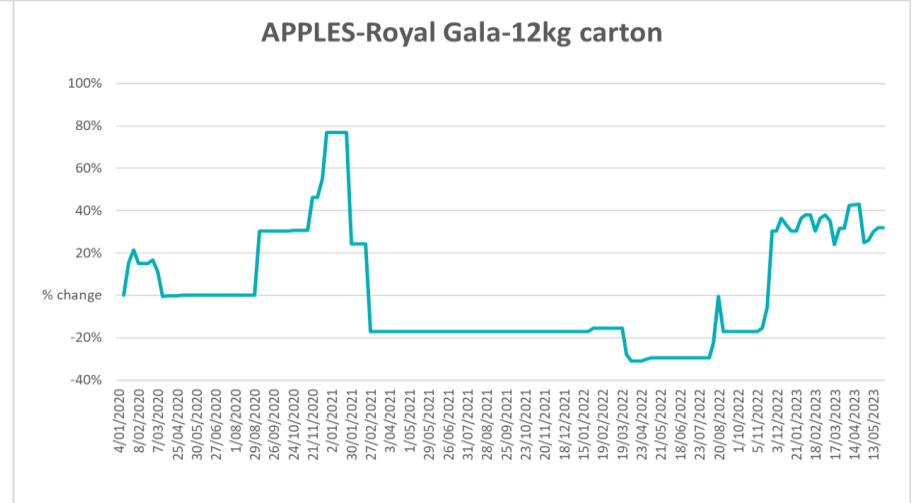
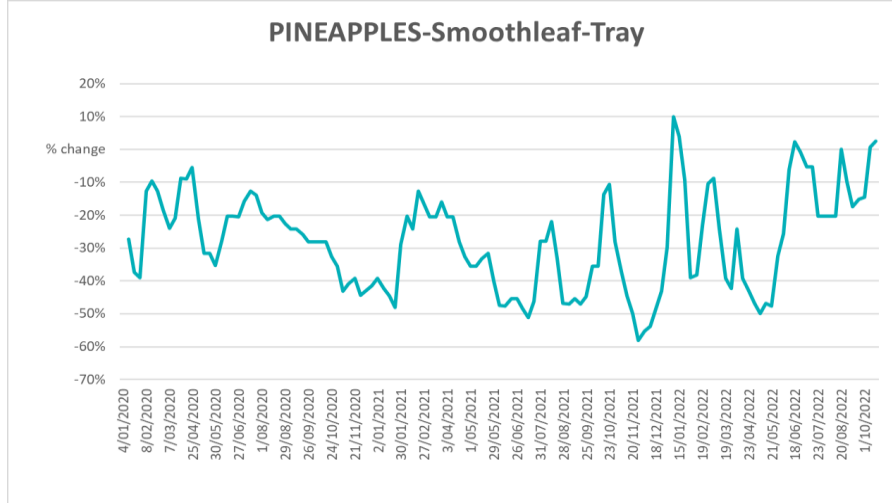
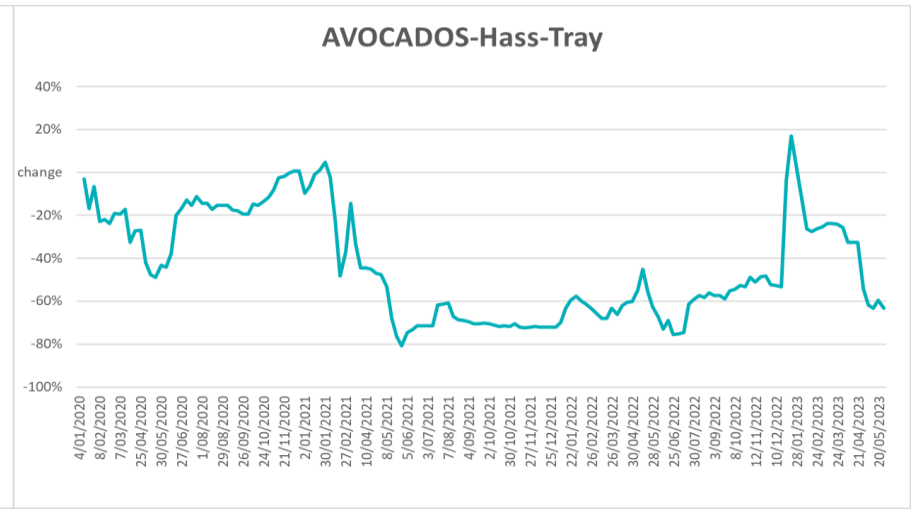
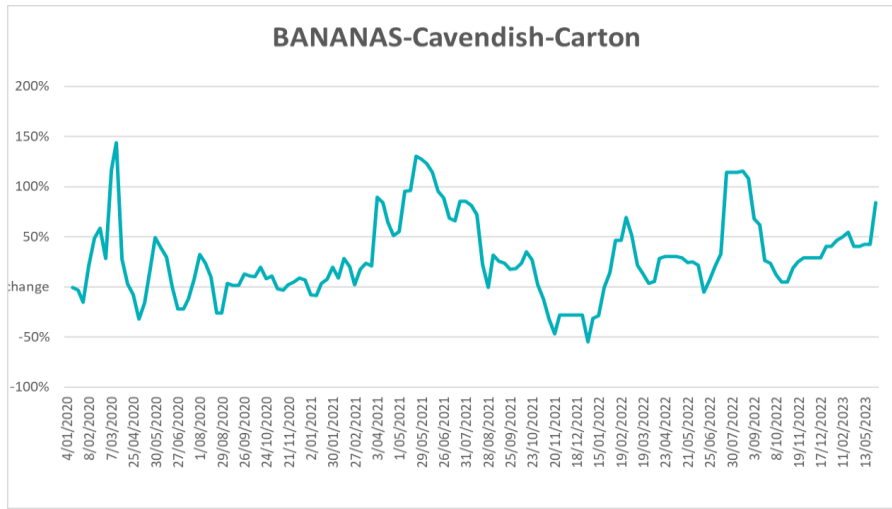


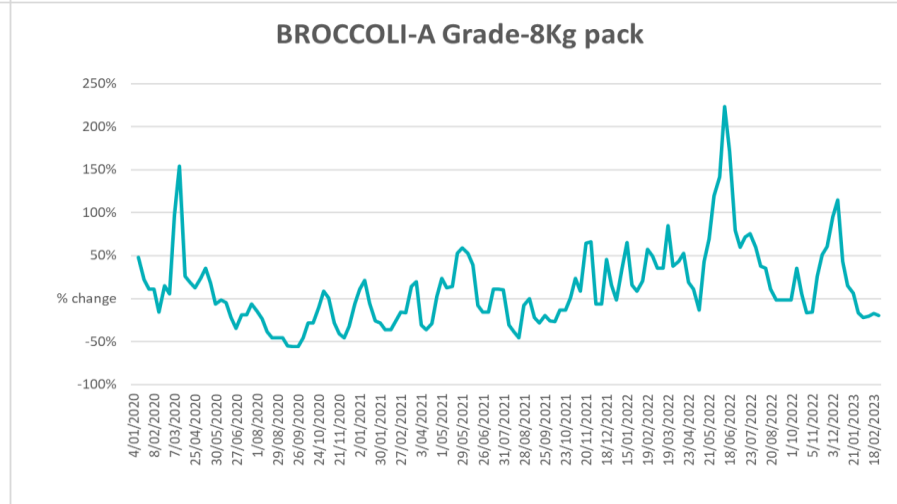
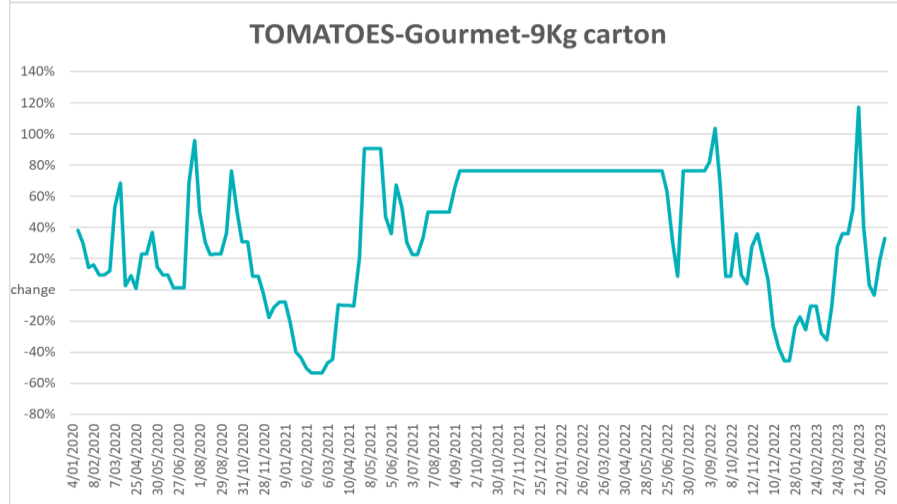
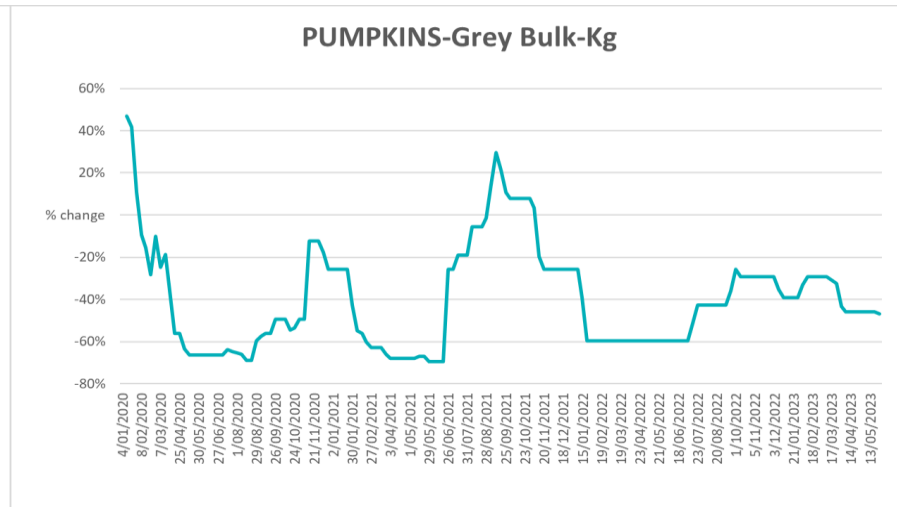
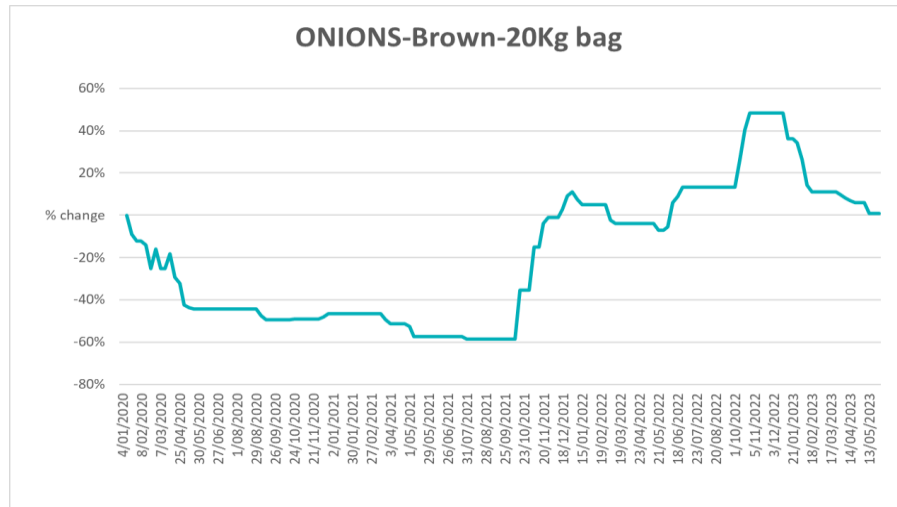
3.4. Global Dairy Trade (GDT) weighted average prices

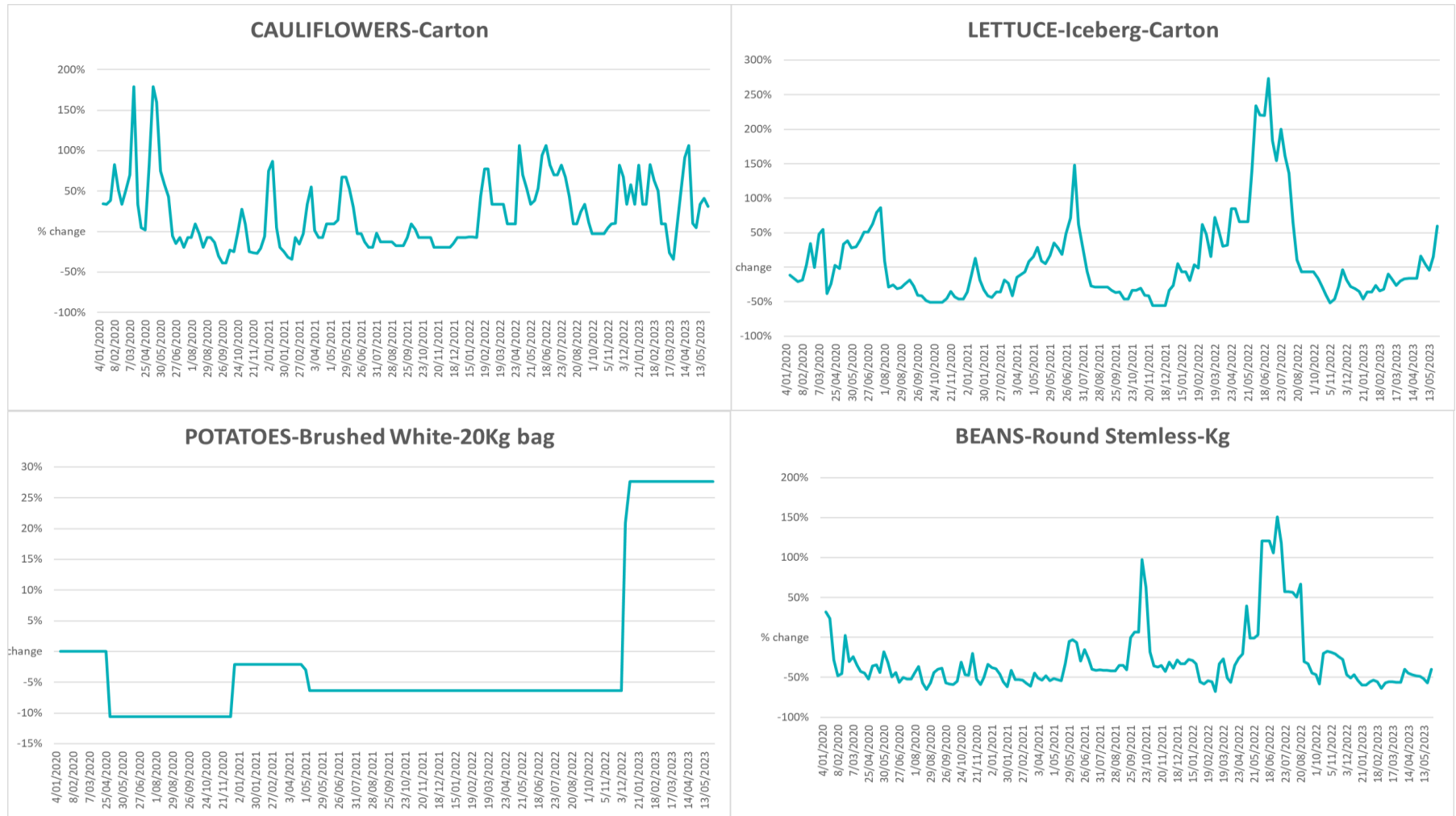


3.5. Selected fruit and vegetable prices

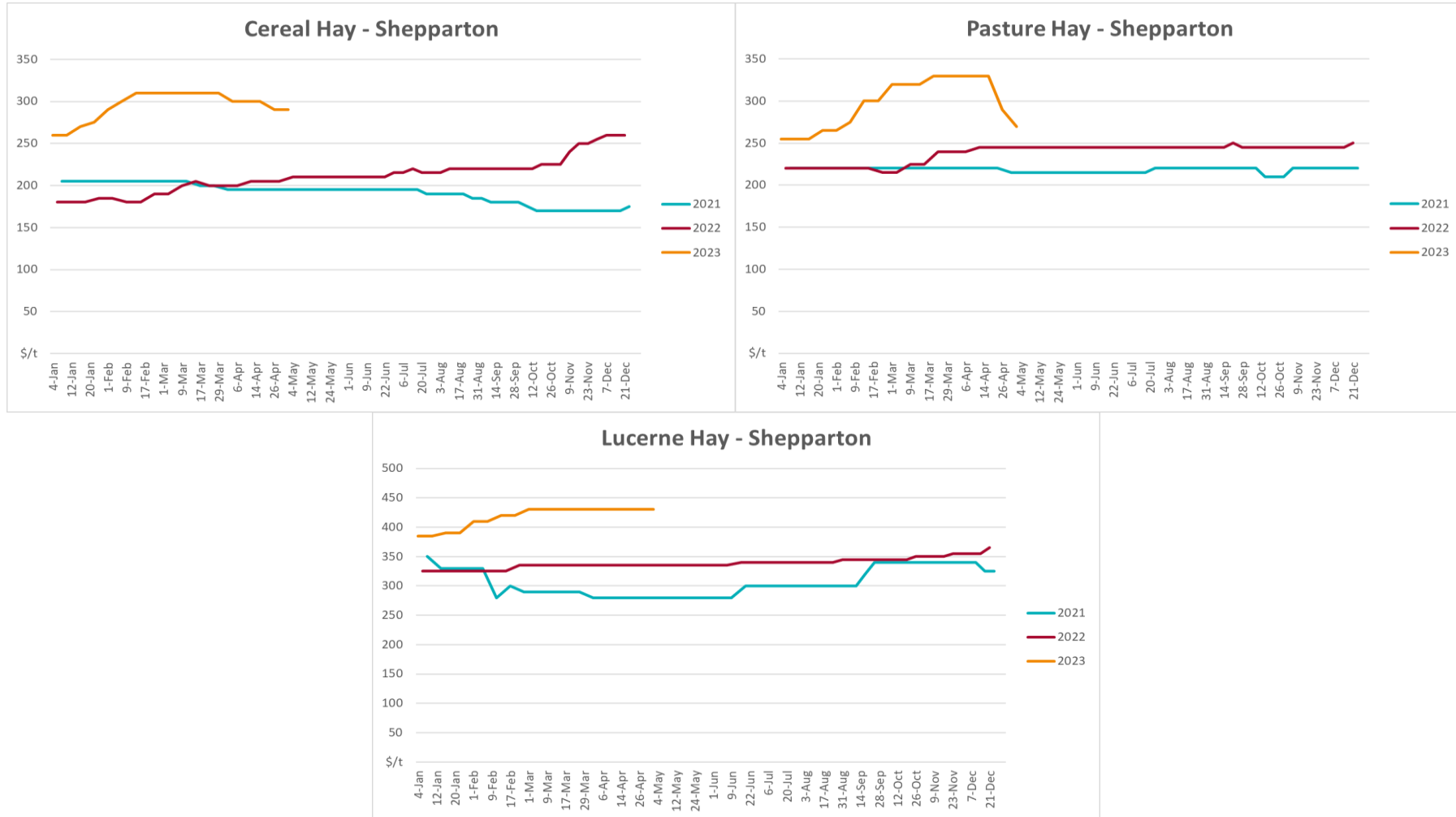








3.6 Selected domestic fodder indicator prices



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://rmetsonline.library.wiley.com/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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