Australian Government
Department of Agriculture, Fisheries and Forestry

ABARES

Weekly Australian Climate, Water and Agricultural Update

No. 16/2024

2 May 2024

Summary of key issues

- In the week ending 1 May 2024, dry conditions dominated much of Australia. Rainfall was limited to the far north, parts of the eastern and southern coasts, Tasmania, and in patchy areas in the inland Western Australia.
    - Across cropping regions, rainfall totals of up to 25 millimetres were observed in central New South Wales. Little to no rainfall was recorded in remaining cropping areas. A lack of rainfall in the recent week will likely delay germination of dry sown winter crops, especially in areas where upper layer soil moisture is low.
- Over the coming days, much of the western parts of the country is forecast to be dry. Onshore winds in the east are expected to bring rainfall totals of up to 200 millimetres in New South Wales and up to 50 millimetres in southern Queensland.
    - Across cropping areas, conditions are expected to be largely dry in the south. In the east, a maximum of 50 millimetres is expected in New South Wales and southern Queensland.
    - A dry week in Western Australia and South Australia will continue to see a decline in soil moisture levels.
- In April, the national rainfall was 26% below average. Rainfall was generally high across the east and northern tropics, and below average across southern, central and south-western parts of the country.
    - Following March and April rainfall, large areas of cropping regions in New South Wales, southern Queensland, eastern Victoria and eastern parts of Western Australia have received an early autumn break. However, April rainfall has consolidated early autumn break in March only in parts of New South Wales and southern Queensland.
    - Across cropping regions, April upper- and lower-layer soil moisture was generally average to well above average in New South Wales, Queensland and Victoria. This likely has placed the eastern states in an ideal start to planting winter crops. However, extremely low soil moisture in South Australia and Western Australia was recorded.
- For the 3 months to April 2024, above average rainfall totals resulted in average to well above average pasture production for this time of year across most grazing regions. High pasture availability will likely enable farmers to continue to maintain current stock numbers and provide opportunities to build standing dry matter availability.
- Water storage levels in the Murray-Darling Basin (MDB) decreased between 18 April 2024 and 29 April 2024 by 255 gigalitres (GL). Current volume of water held in storage is 16 605 GL, equivalent to 75% of total storage capacity. This is 15 percent or 3397 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 $21 on 18 April 2024 to $20 on 02 May 2024. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

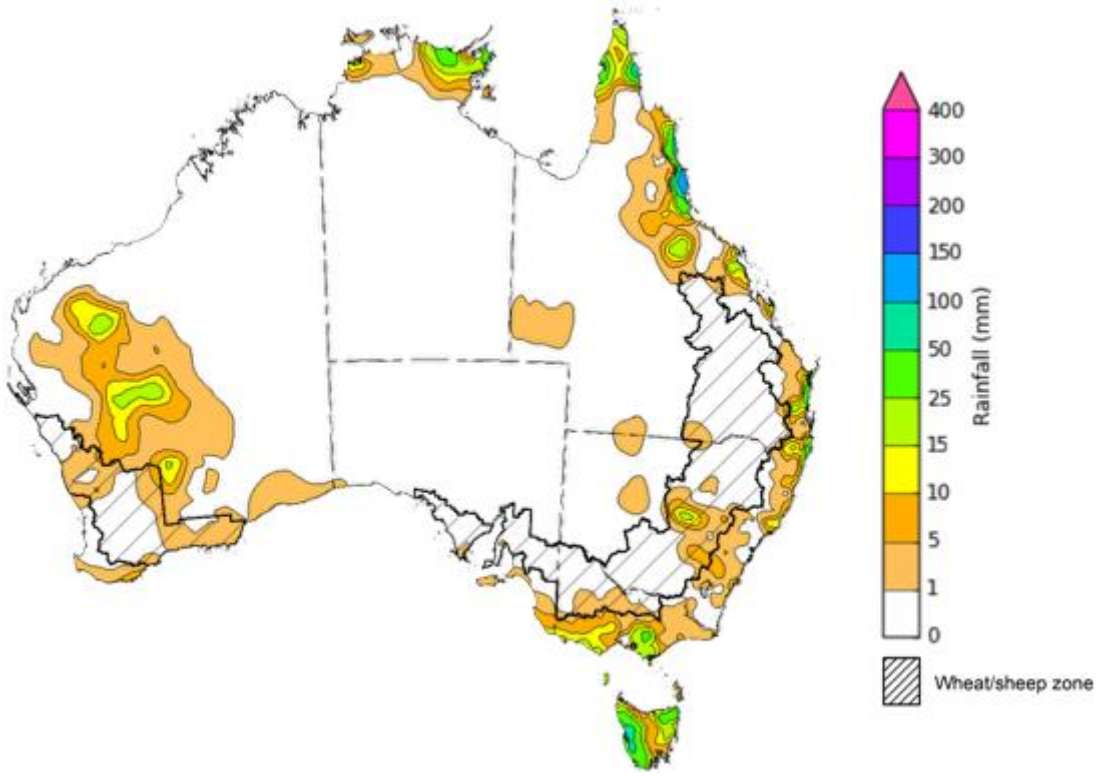
1. Climate

1.1. Rainfall this week

For the week ending 1 May 2024, dry conditions dominated much of Australia. Rainfall was limited to the far north, parts of the eastern and southern coasts, Tasmania, and in patchy areas in the inland Western Australia. A cold front passed over Tasmania, bringing rainfall totals of up to 100 millimetres in the west.

Across cropping regions, rainfall totals of up to 25 millimetres were observed in in central New South Wales. Little to no rainfall was observed in remaining cropping areas. Moving into the winter growing season, a lack of rainfall in the recent week will likely delay germination of dry sown winter crops in areas where upper layer soil moisture is low.

Rainfall for the week ending 1 May 2024



 Issued: 01/05/2024

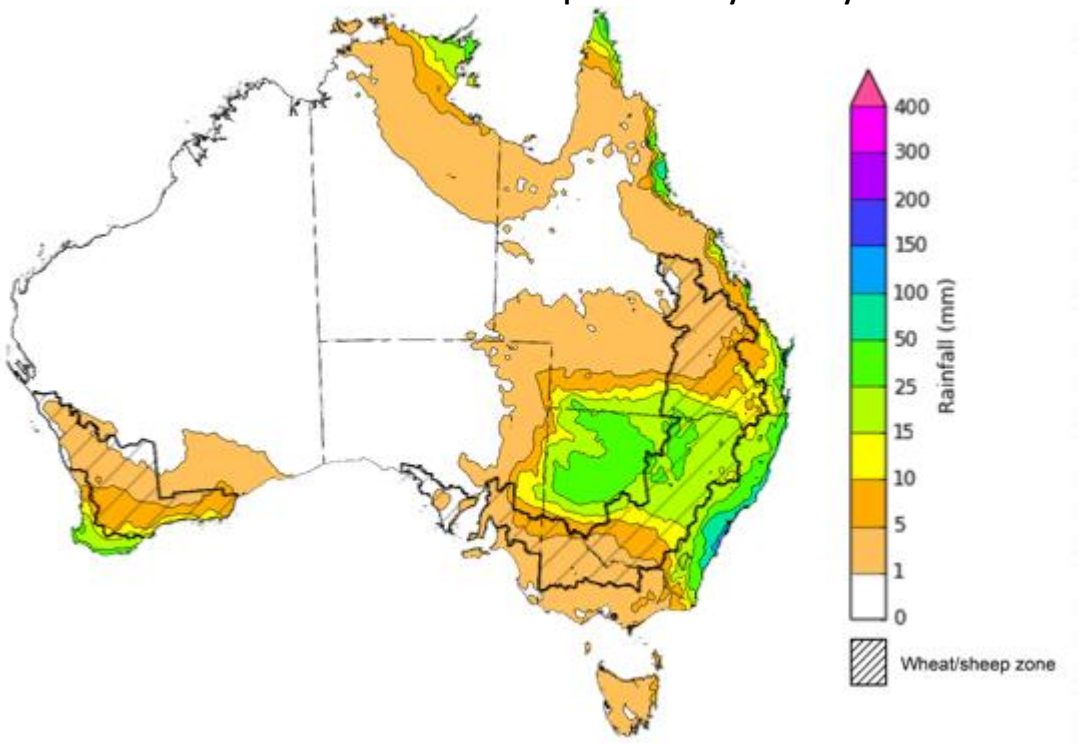
Note: The rainfall analyses and associated maps utilise data contained in the Bureau of Meteorology climate database, the Australian Data Archive for Meteorology (ADAM). The analyses are initially produced automatically from real-time data with limited quality control. They are intended to provide a 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. Rainfall forecast for the next eight days

Over the 8 days to 9 May, low-pressure systems and troughs are expected to bring rainfall in the southwest, east, and far north coasts. Onshore winds in the east are expected to bring rainfall totals of up to 200 millimetres in New South Wales and up to 50 millimetres in southern Queensland. Up to 50 millimetres of rainfall is forecast in the far-north Northern Territory, north Queensland, and southwestern Western Australia. A high-pressure system is expected to keep much of Australia largely dry.

Across cropping regions, conditions are expected to be largely dry in the south, with a maximum of 15 millimetres of rainfall forecast for Western Australian cropping regions, and 5 millimetres in South Australia and Victoria. These areas are likely to see a continuing decline in upper layer soil moisture and may present a downside production risk for winter cropping systems. In the east, a maximum of 50 millimetres is expected in New South Wales and south Queensland. This will boost soil moisture reserves for the beginning winter cropping season.

Total forecast rainfall for the period 02 May to 9 May 2024



 Issued 02/05/2024
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.

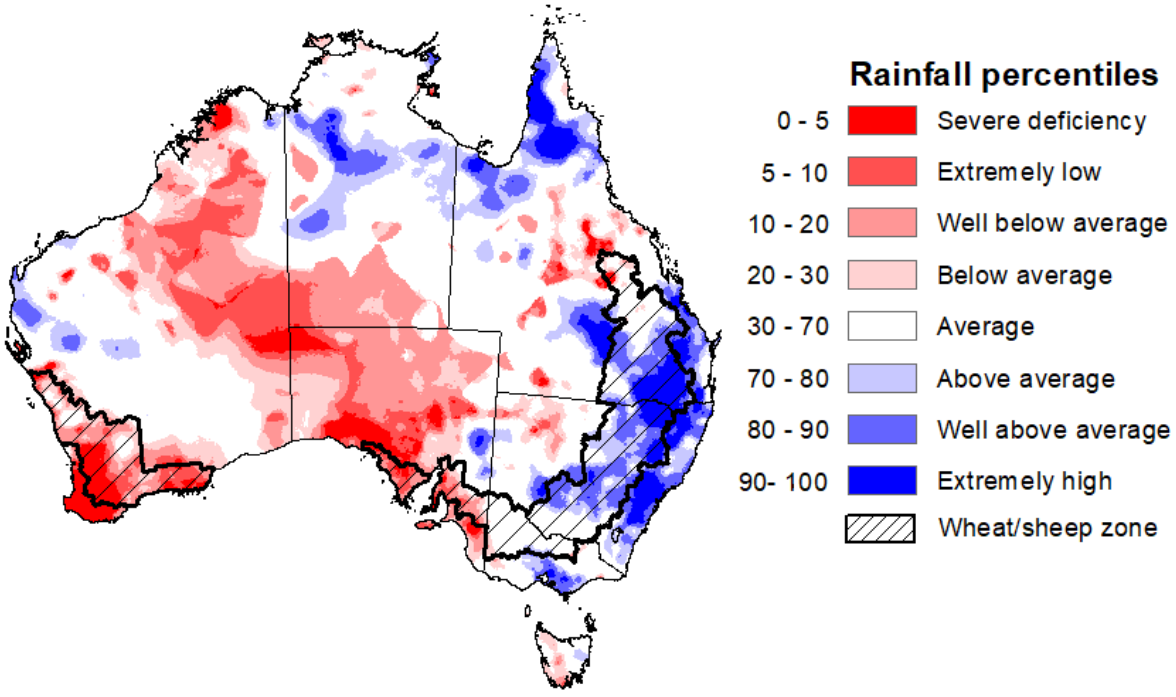
1.3. Monthly rainfall

In April 2024, national rainfall was 26% below average, and 86% below average in South Australia (the 8th driest April on record), and 69% below average in Western Australia. Rainfall was generally high across the east and northern tropics, and below average across southern, central and south-western parts of the country. Rainfall was average to very much above average for eastern New South Wales extending into inland areas, Victoria, small areas in Western Australia's Pilbara region, Top End of Northern Territory, and much of northern and south-eastern Queensland.

In cropping regions, rainfall across Western Australia and South Australia was predominately below average to extremely low. By contrast Queensland and New South Wales saw rainfall ranging from average in north Queensland and southern New South Wales to extremely high in the remaining areas. Victorian cropping regions saw average rainfall over the period.

As we transition into the remainder of the autumn season, the focus shifts from summer crop and pasture growth across Northern Australia to ensuring adequate rainfall to prepare for the winter cropping season and peak pasture production in the south. This is especially crucial in regions that received below-average rainfall in April. Given a below median rainfall outlook for May, and May to July period in parts of the southern regions, this necessitates a careful monitoring and strategic planning to mitigate potential impacts on upcoming winter crops and managing ground cover and livestock numbers.

Rainfall percentiles for April 2024



Note: Rainfall for April 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. Autumn break

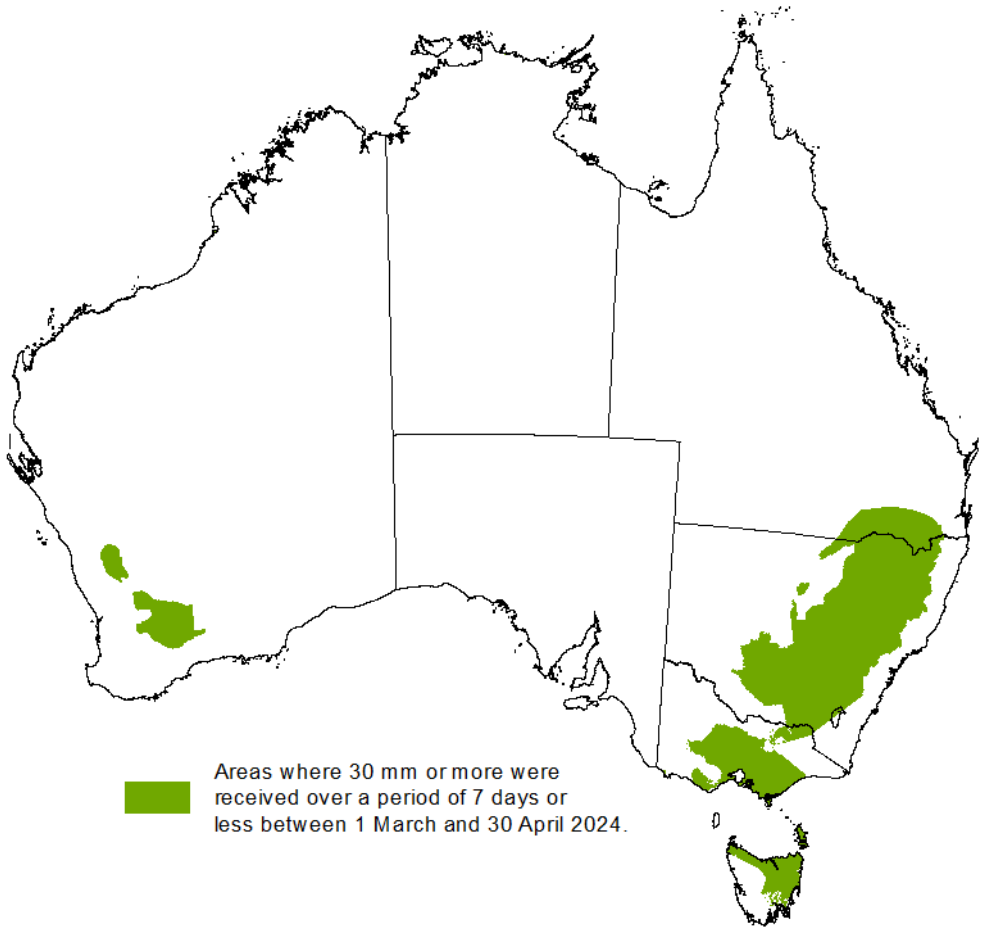
An early autumn break was achieved between March and April 2024 across cropping regions of most of New South Wales, areas in southern Queensland, eastern Victoria and eastern parts of Western Australia.

An early autumn break can increase the length of the growing season, potentially improving production and yield. The definition of the autumn break in southern Australia varies. Pook et al. (2009) suggested an ideal break for north-western Victoria occurs during March–June when a mean fall of 25 millimetres or more is recorded over a period of 3 days or less, or when a mean fall of 30 millimetres or more is recorded over a period of 7 days or less.

ABARES has adapted the Pook et al. (2009) autumn break definition of falls of 30 millimetres or more recorded within any 7-day period from 1 March to 30 April to identify where the autumn break threshold has been achieved across southern Australia.

ABARES analysis of daily rainfall data sourced from the Bureau of Meteorology indicates that the autumn break has been achieved across most cropping regions in New South Wales, eastern Victoria, southern Queensland and eastern parts of Western Australia. An autumn break has not been achieved in the remaining cropping regions.

Southern pasture and cropping areas that have achieved 30 millimetres in any 7-day period in March to April, 2024

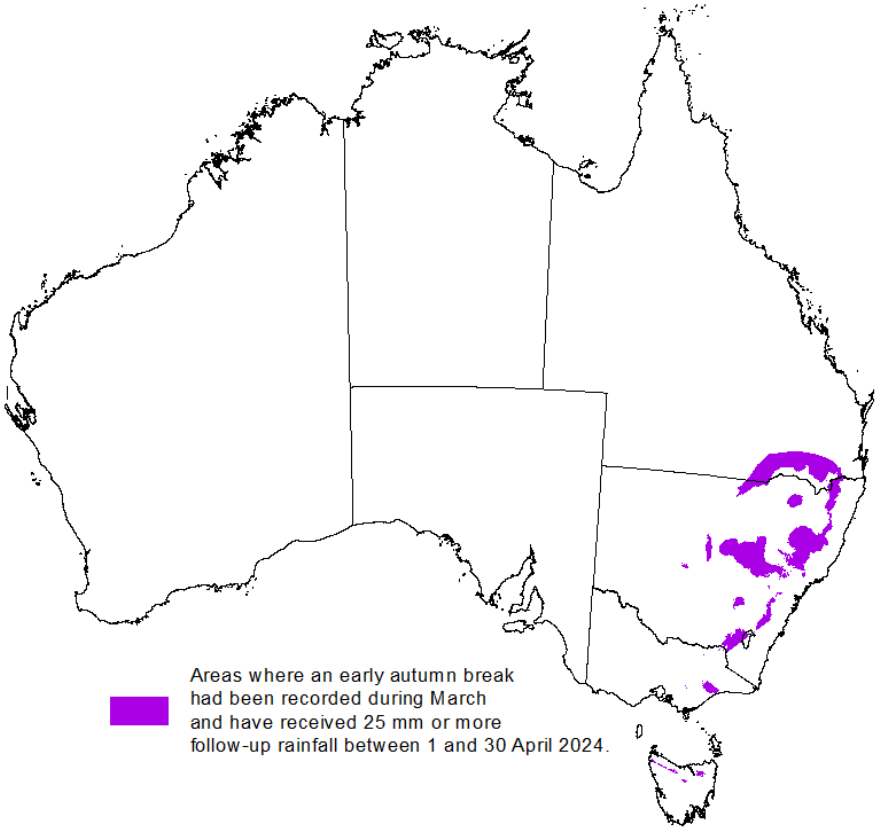


Source: Bureau of Meteorology, ABARES

The timing of the early autumn break can have an influence on the production outcome of the upcoming winter growing season. However, the consolidation of this break with timely follow-up falls is important in determining the ultimate benefits of the autumn break. For example, a 30mm rainfall event over a period of 7 days or less in March followed by warm, dry weather during April is likely to constitute a 'false' break and can have a net negative impact on production. An early autumn break does not guarantee a successful growing season; sufficient winter and spring rainfall is still required, particularly in areas with little to no stored soil moisture, to deliver a successful crop and pasture production season.

Rainfall during April has consolidated the early autumn break across central and eastern margins of New South Wales, and southern Queensland. These falls have continued to improve soil moisture profiles and allowed for an ideal start to winter crop planting and autumn pasture growth in these areas. In South Australia, Victoria and Western Australia, the dry period increases the risk of plants experiencing moisture stress after germination, with a disconnect emerging between upper- and lower-layer soil moisture.

Areas that have received at least 25 millimetres of follow-up rainfall from 1 to 30 April 2024



Source: Bureau of Meteorology, ABARES
Note: The autumn break generally applies to the southern pasture and cropping areas mainly in New South Wales, Victoria, South Australia, Western Australia and Tasmania — and occasionally parts of southern Queensland. Areas that are not typically influenced by the autumn break have been shaded out.

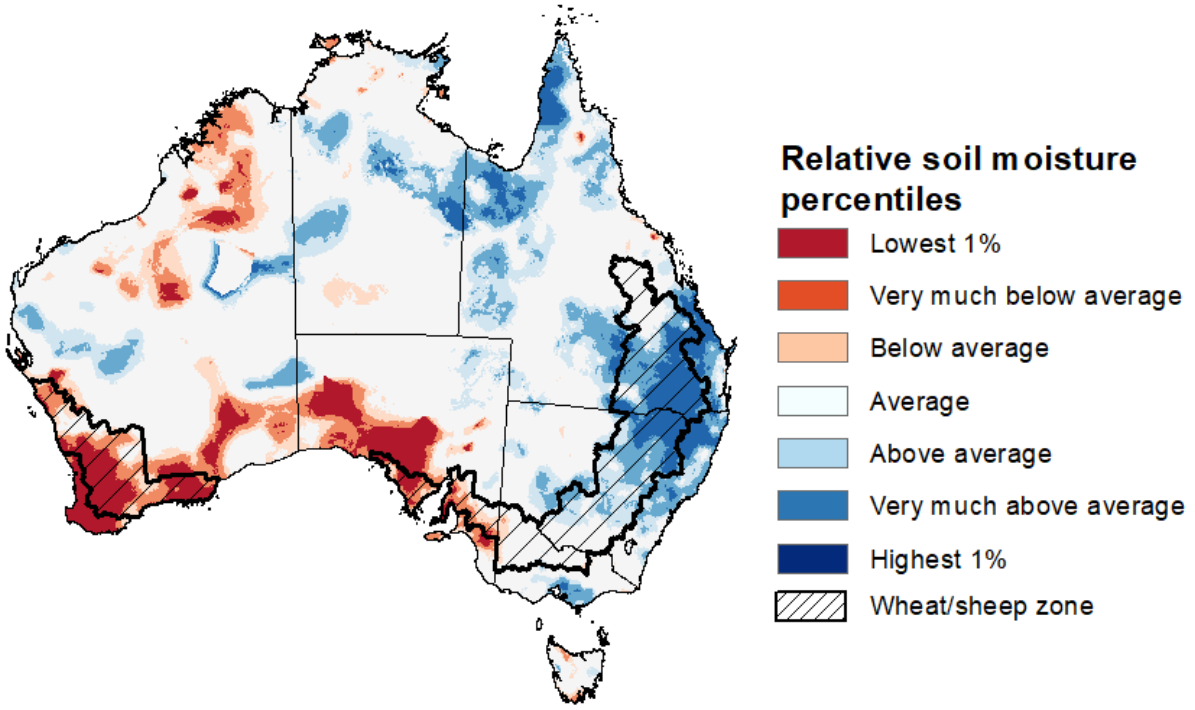
1.5. Monthly soil moisture

Upper layer soil moisture levels for April 2024 varied considerably throughout Australia. High levels of upper layer soil moisture were modelled in the northern and eastern Australia, showing very much above average upper layer soil moisture. In contrast, upper layer soil moisture in the south and northwest was modelled to be below average. Average levels of upper layer soil moisture was modelled for much of Australia.

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

Across cropping regions, April upper layer soil moisture was highly variable, with Western Australia, South Australia and far western Victoria having below average. By contrast, upper layer was average in most of eastern Victoria, southern New South Wales and northern Queensland, and very much above average in northern New South Wales and much of central to southern Queensland.

Modelled upper layer soil moisture for April 2024

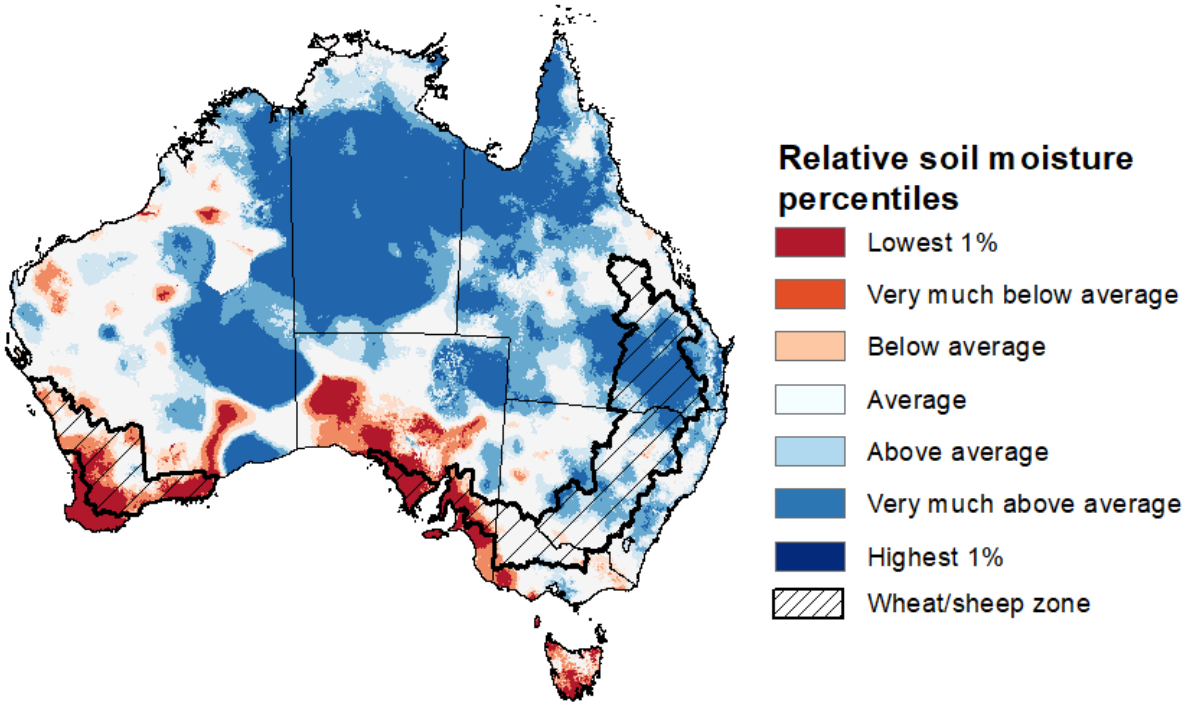


Note: This map shows the levels of modelled upper layer soil moisture (0 to 10 centimetres) during April 2024. This map shows how modelled soil conditions during March 2024 compare with March conditions modelled over the reference period (1911 to 2016). Dark blue areas on the maps were much wetter in April 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 Australia, lower layer soil moisture was average to very much above average in April. However, areas of below average lower layer soil moisture were evident in southern Australia. Average levels of lower layer soil moisture was modelled for remaining 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 in Victoria. Deficient levels of soil moisture in South Australia and much of Western Australia may impact the establishment of forthcoming winter crops since the climate outlook for the next three months is below the median rainfall.

Modelled lower layer soil moisture for April 2024



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

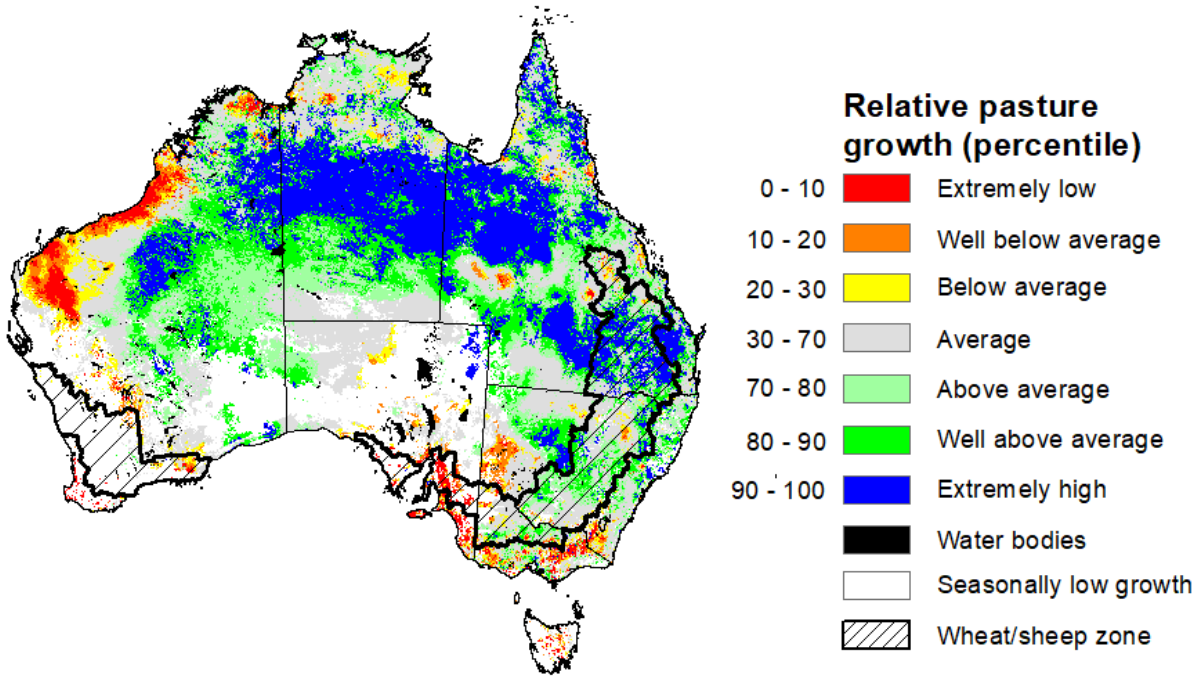
1.6. Pasture growth

February to April forms the final 3-months of the pasture growing season across much of northern Australia, providing a late season boost in growth and the bulk of feed to maintain production through the low pasture growth months of the northern dry season. Pasture availability during this period influences the growth and branding and marking rates of lambs and calves, livestock turnoff and the production of meat, milk, and wool.

For the 3 months to April 2024, above average rainfall totals resulted in average to well above average pasture production for this time of year across most grazing regions. However, extremely low to below average pasture growth rates were recorded across western parts of Western Australia, western New South Wales, southern South Australia, and parts of southern and eastern Victoria and central Tasmania.

Above average to extremely high pasture availability will likely enable farmers to continue to maintain current stock numbers and provide opportunities to build standing dry matter availability.

Relative pasture growth for 3-months ending April 2024 (1 February to 30 April 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.

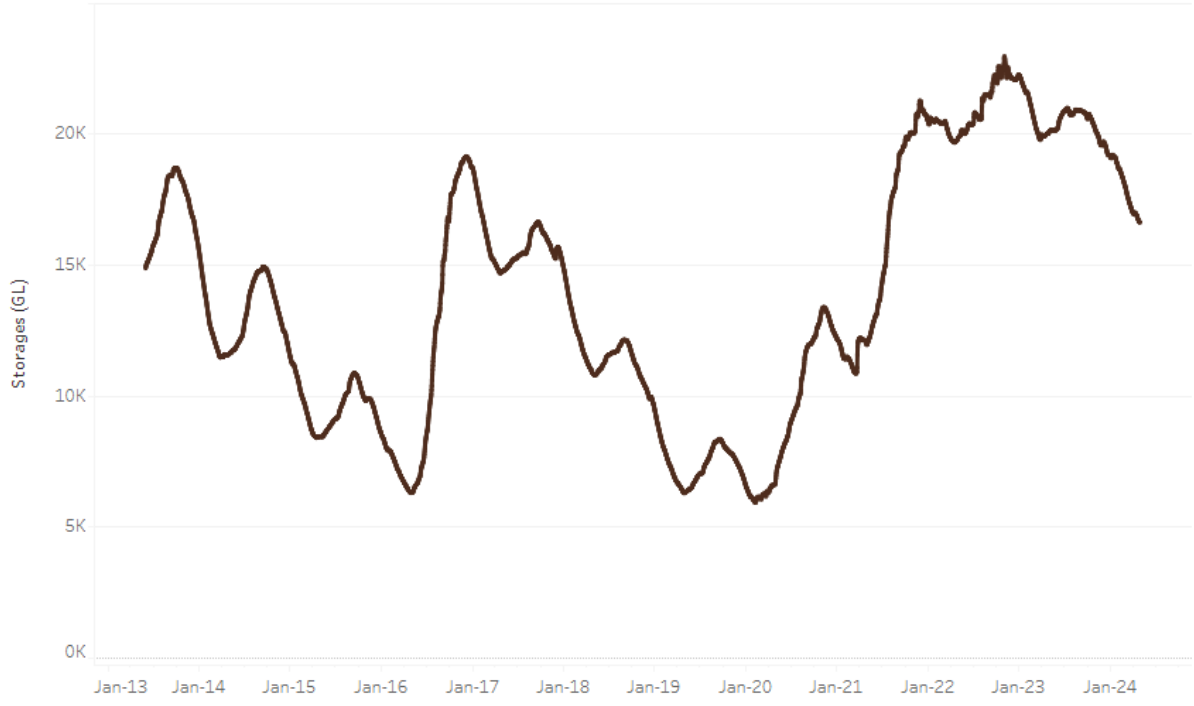
Source: Queensland Department of Science, Information Technology and Innovation

2. Water

2.1. Water markets – current week

Water storage levels in the Murray-Darling Basin (MDB) decreased between 18 April 2024 and 29 April 2024 by 255 gigalitres (GL). Current volume of water held in storage is 16 605 GL, equivalent to 75% of total storage capacity. This is 15 percent or 3397 GL less than at the same time last year. Water storage data is sourced from the BOM.

Water storages in the Murray-Darling Basin, 2013–2024

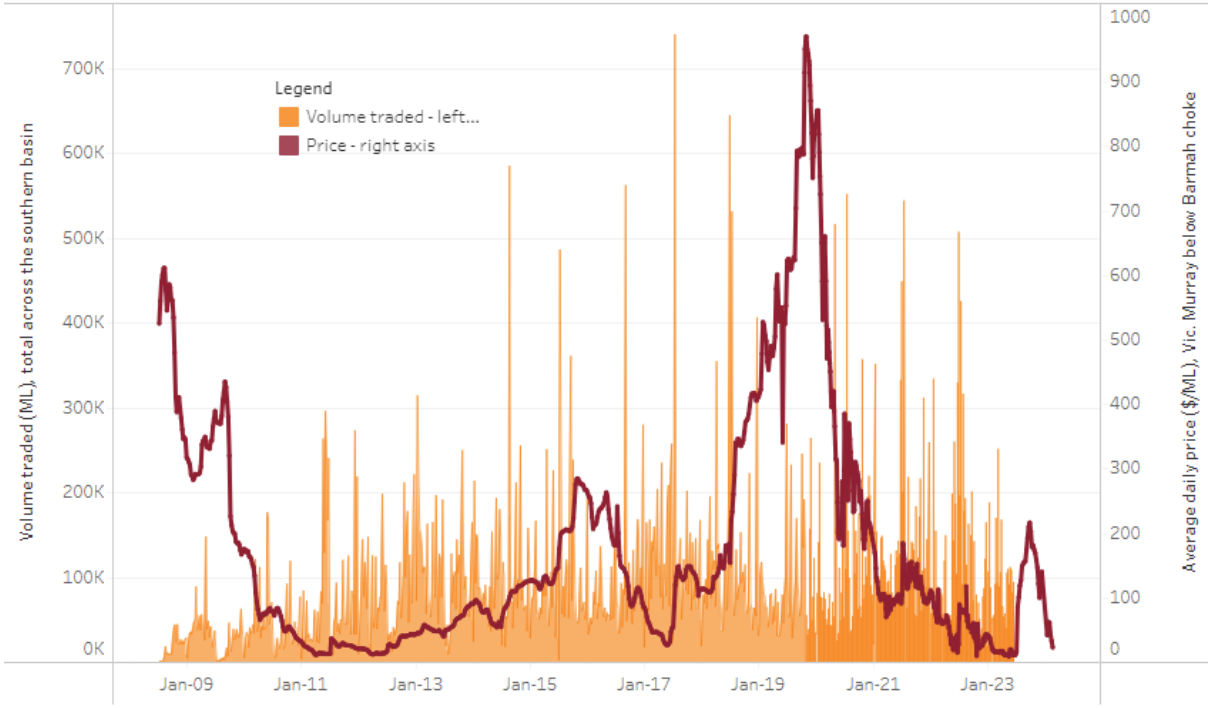


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from $21 on 18 April 2024 to $20 on 02 May 2024. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

Region	$/ML
NSW Murray Above	12
NSW Murrumbidgee	20
VIC Goulburn-Broken	24
VIC Murray Below	20

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 2 May 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-2524

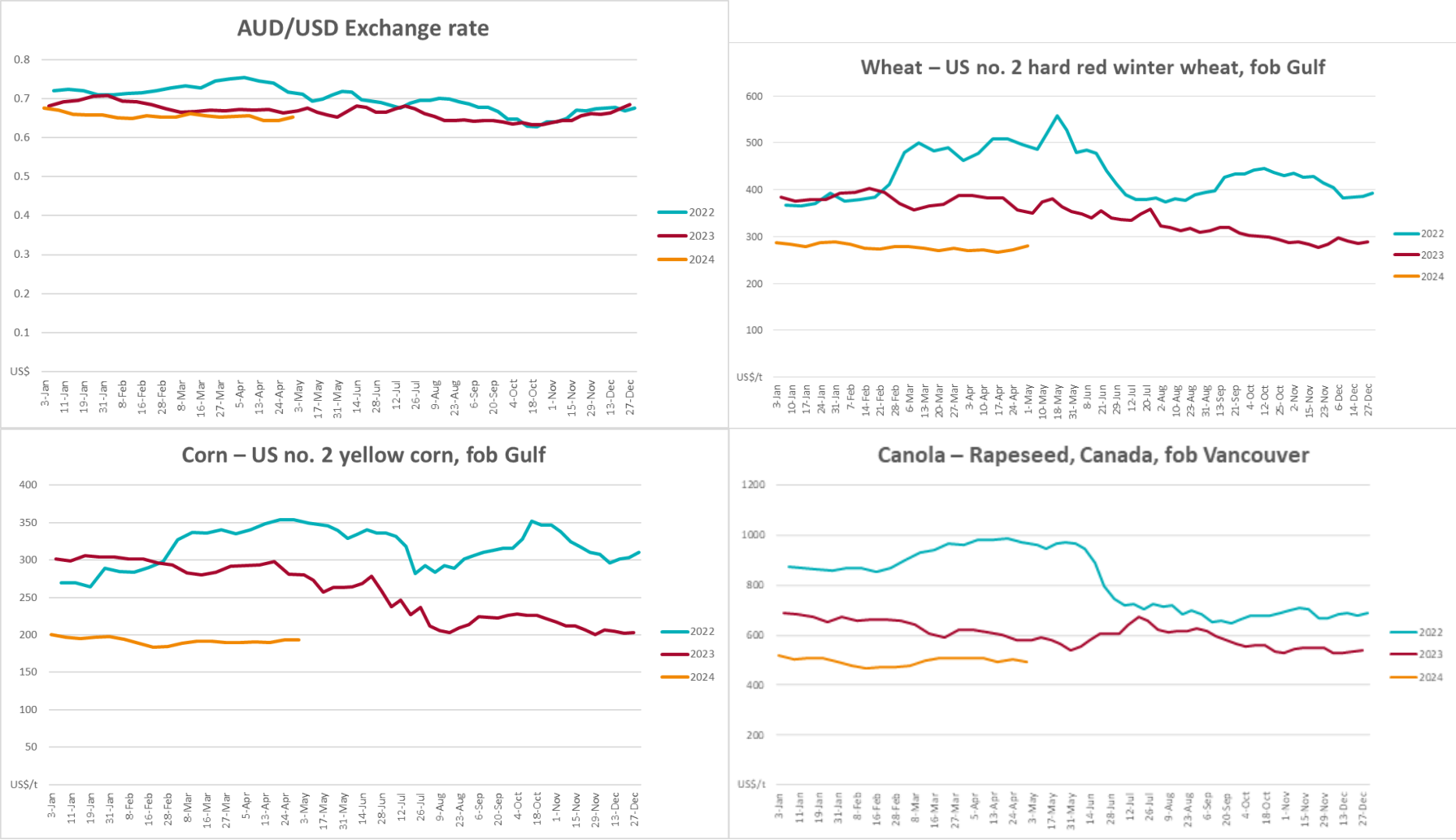
3. Commodities

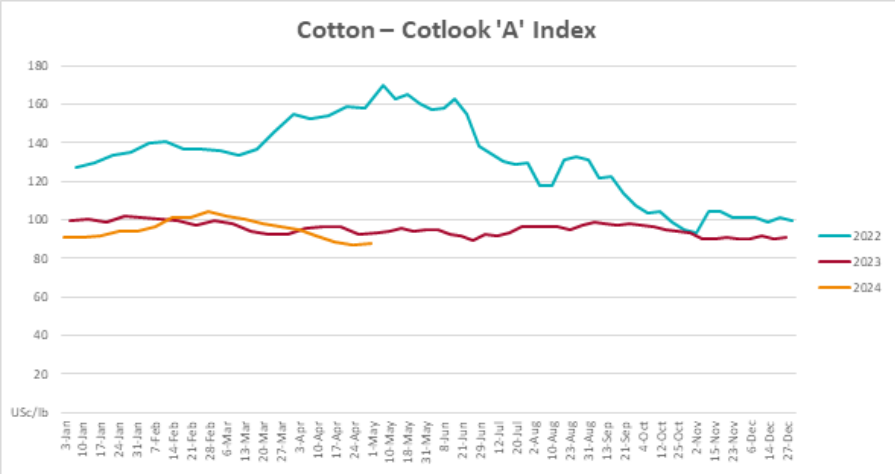
Indicator	Week ended	Unit	Latest Price	Previous Week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	01-May	A$/US$	0.65	0.64	1%	0.68	-3%
Wheat – US no. 2 hard red winter wheat, fob Gulf	01-May	US$/t	280	271	3%	374	-25%
Corn – US no. 2 yellow corn, fob Gulf	01-May	US$/t	193	194	0%	273	-29%
Canola – Rapeseed, Canada, fob Vancouver	01-May	US$/t	494	504	-2%	591	-17%
Cotton – Cotlook 'A' Index	01-May	USc/lb	88	87	1%	94	-6%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	01-May	USc/lb	19.6	19.6	0%	26	-24%
Wool – Eastern Market Indicator	01-May	Ac/kg clean	1,152	1,158	-1%	1,368	-16%
Wool – Western Market Indicator	01-May	Ac/kg clean	1,287	1,303	-1%	1,525	-16%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	01-May	A$/t	405	392	3%	436	-7%
Feed Wheat – ASW, Port Adelaide, SA	01-May	A$/t	390	373	5%	407	-4%
Feed Barley – Port Adelaide, SA	01-May	A$/t	373	365	2%	387	-4%
Canola – Kwinana, WA	01-May	A$/t	711	695	2%	860	-17%
Grain Sorghum – Brisbane, QLD	01-May	A$/t	449	448	0%	471	-5%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	01-May	Ac/kg cwt	592	591	0%	659	-10%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	01-May	Ac/kg cwt	255	236	8%	412	-38%
Lamb – National Trade Lamb Indicator	01-May	Ac/kg cwt	670	636	5%	655	2%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	03-Apr	Ac/kg cwt	411	411	0%	357	15%
Goats – Eastern States (10.1–12 kg)	27-Dec	Ac/kg cwt	180	180	0%	350	-49%
Live cattle – Light steers to Indonesia	01-May	Ac/kg lwt	340	350	-3%	375	-9%
Global Dairy Trade (GDT) weighted average prices [a]							

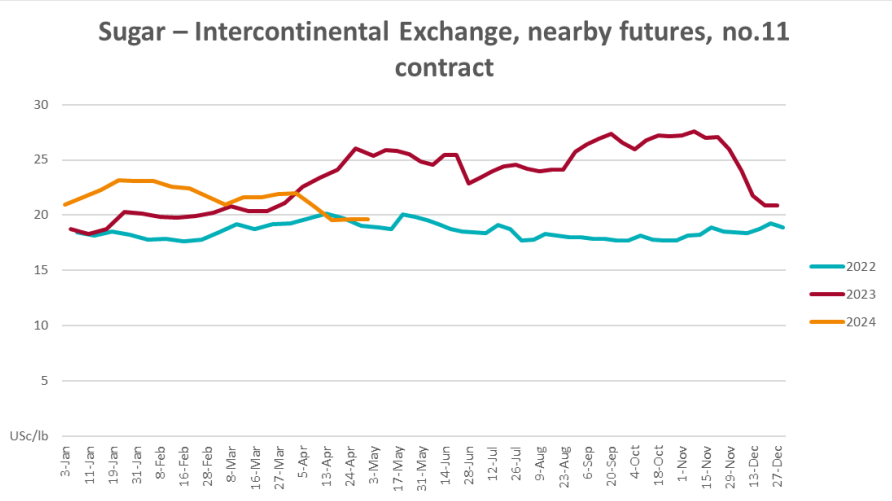
Dairy – Whole milk powder	17-Apr	US$/t	3,269	3,246	1%	3,053	7%
Dairy – Skim milk powder	17-Apr	US$/t	2,541	2,550	0%	2,579	-1%
Dairy – Cheddar cheese	17-Apr	US$/t	3,974	4,340	-8%	4,167	-5%
Dairy – Anhydrous milk fat	17-Apr	US$/t	7,062	6,934	2%	4,736	49%

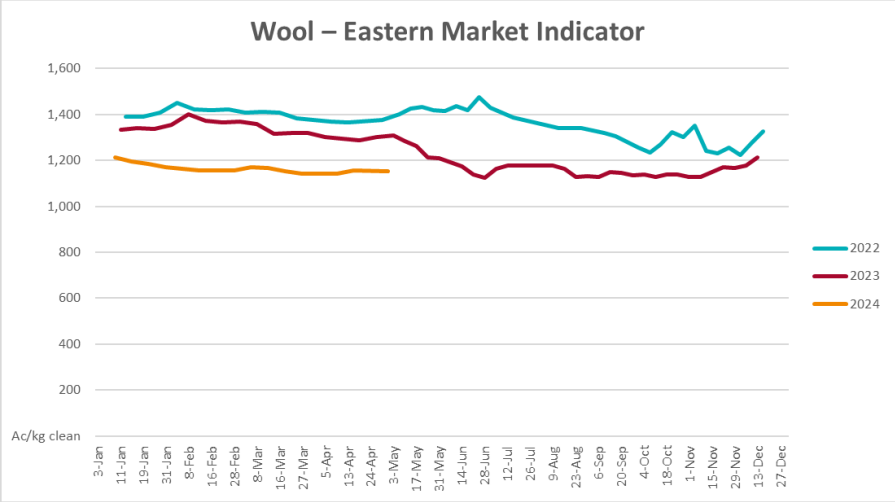
a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

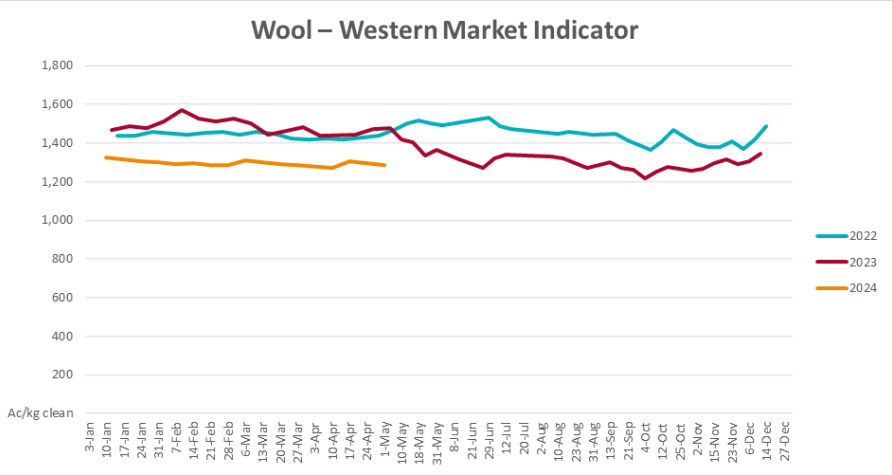
3.1. Selected world indicator prices



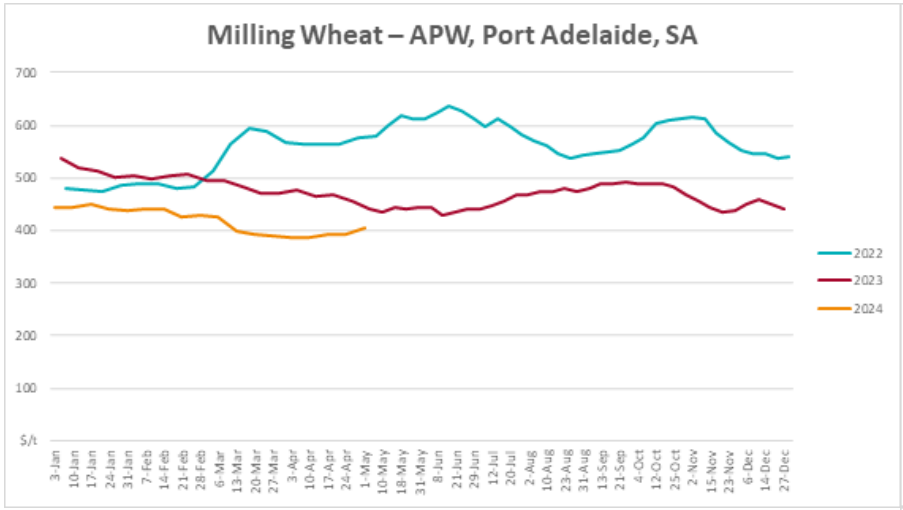

Cotton – Cotlook 'A' Index
USc/lb
2022
2023
2024

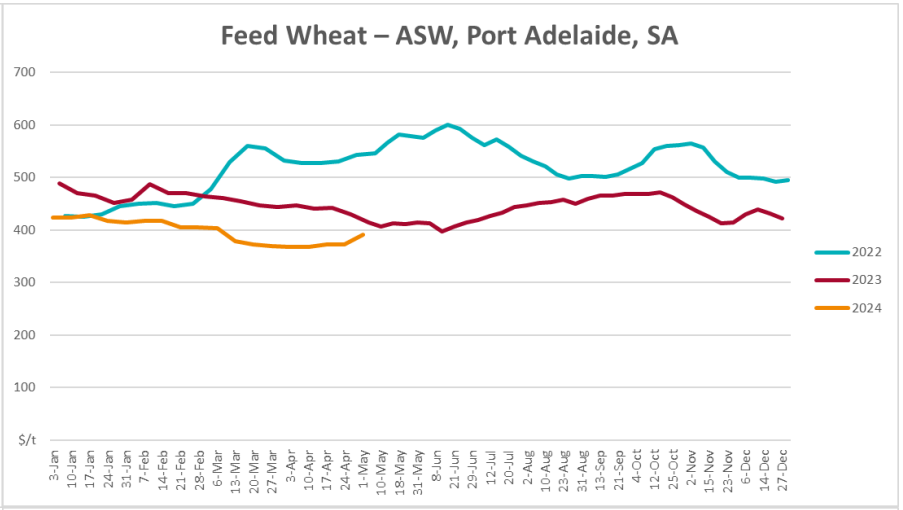

Sugar – Intercontinental Exchange, nearby futures, no.11 contract
USc/lb
2022
2023
2024

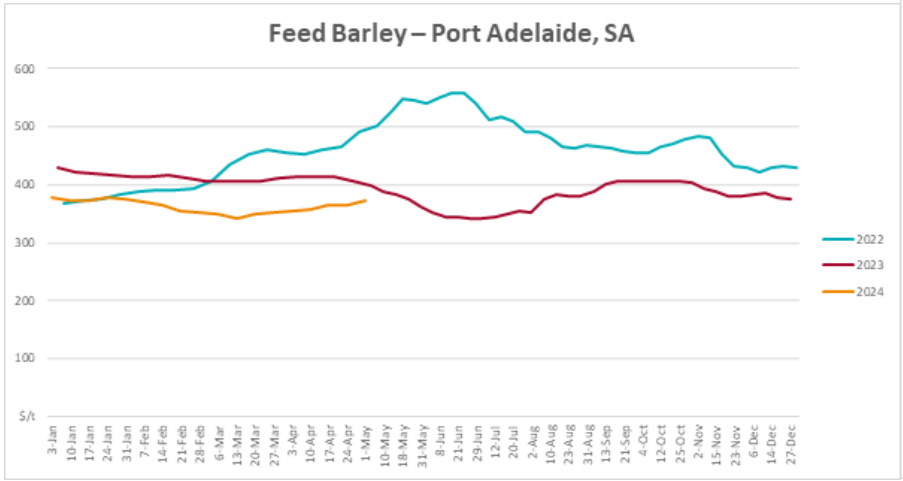

Wool – Eastern Market Indicator
Ac/kg clean
2022
2023
2024

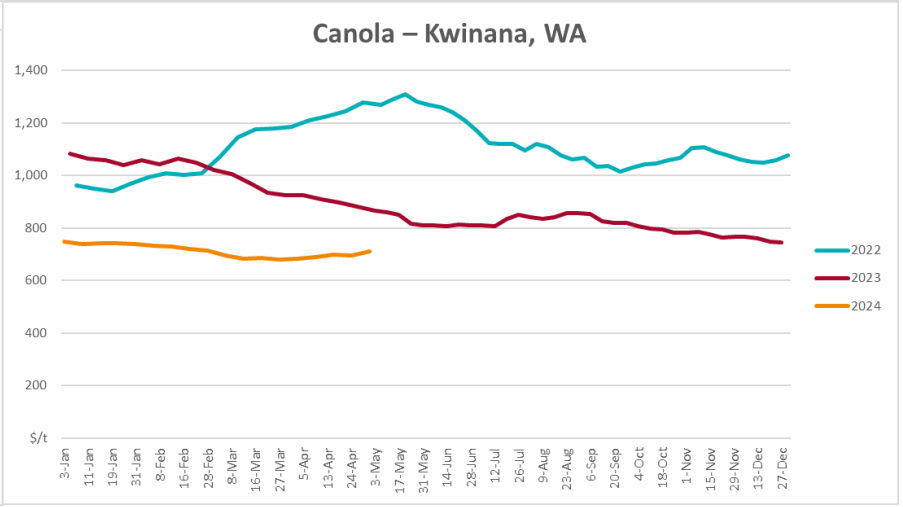

Wool – Western Market Indicator
Ac/kg clean
2022
2023
2024

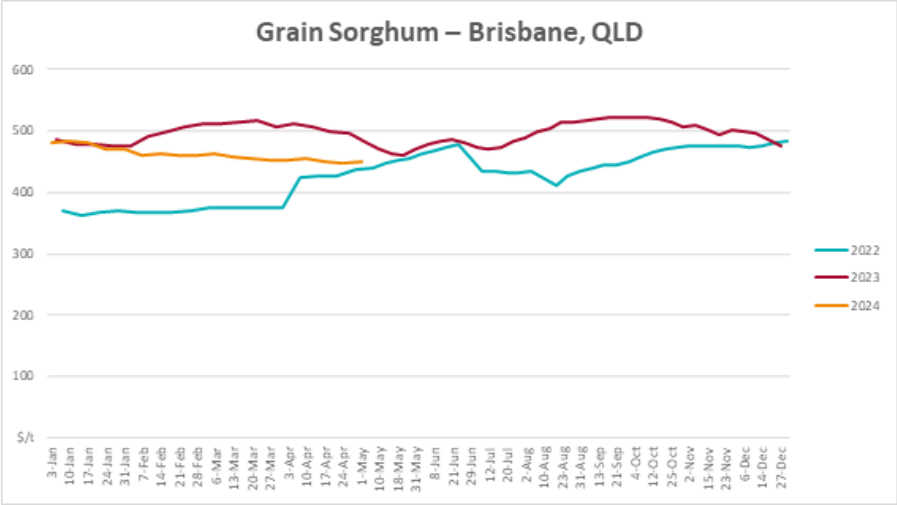
3.2. Selected domestic crop indicator prices



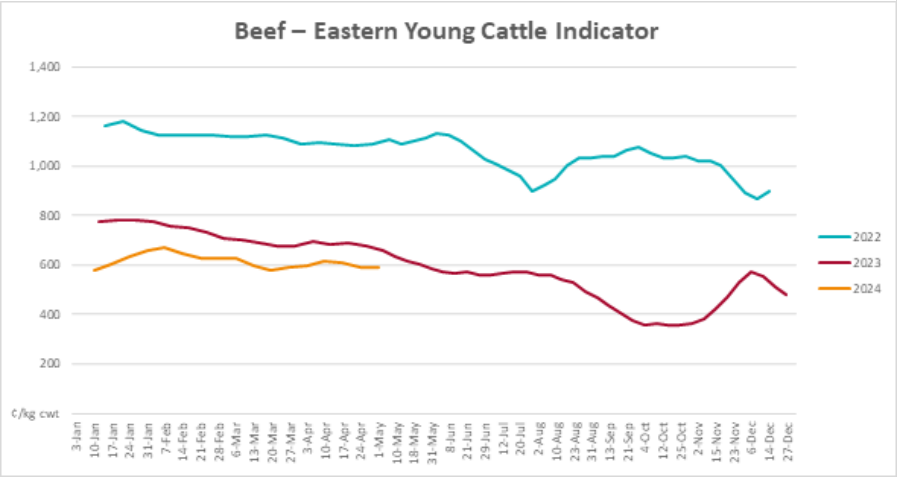


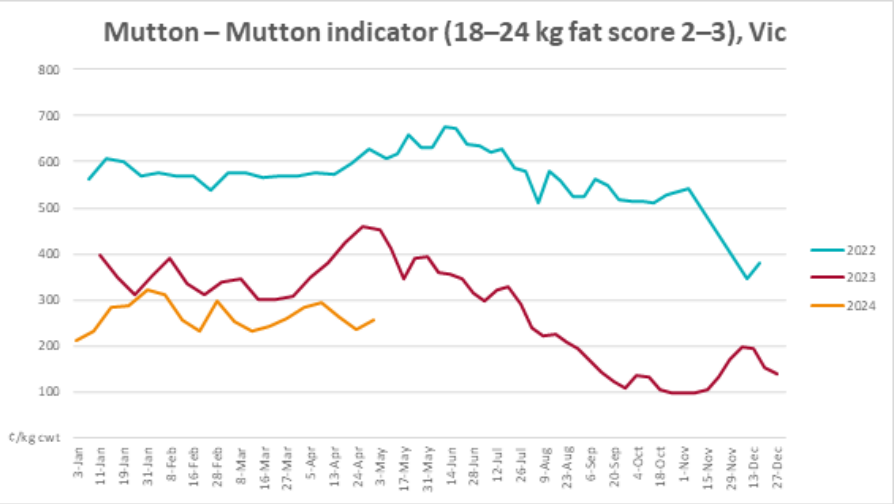


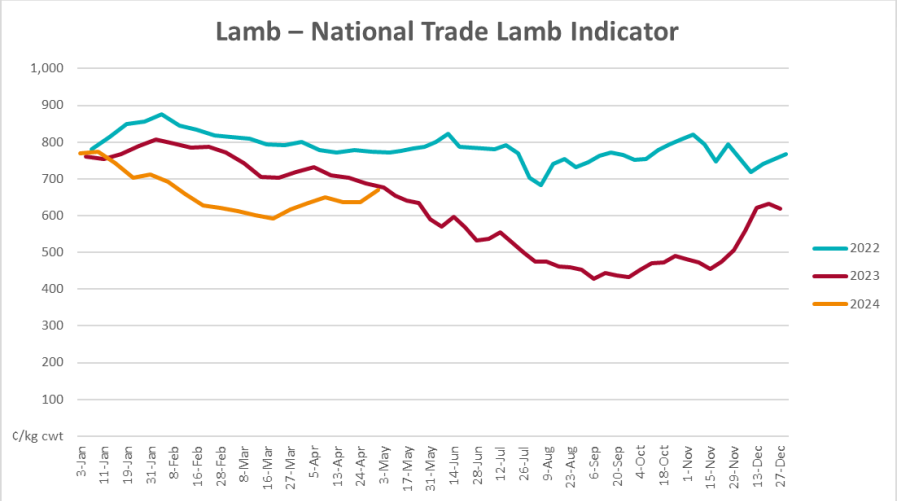


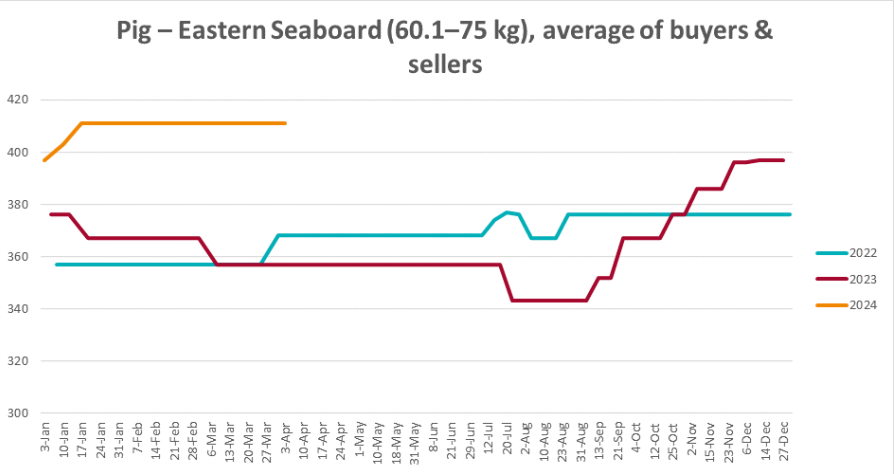

Grain Sorghum – Brisbane, QLD
600
500
400
300
200
100
$/t
3-Jan
10-Jan
17-Jan
24-Jan
31-Jan
7-Feb
14-Feb
21-Feb
28-Feb
6-Mar
13-Mar
20-Mar
27-Mar
3-Apr
10-Apr
17-Apr
24-Apr
1-May
10-May
18-May
31-May
8-Jun
21-Jun
29-Jun
12-Jul
20-Jul
2-Aug
10-Aug
23-Aug
31-Aug
13-Sep
21-Sep
4-Oct
12-Oct
25-Oct
2-Nov
15-Nov
23-Nov
6-Dec
14-Dec
27-Dec
2022
2023
2024

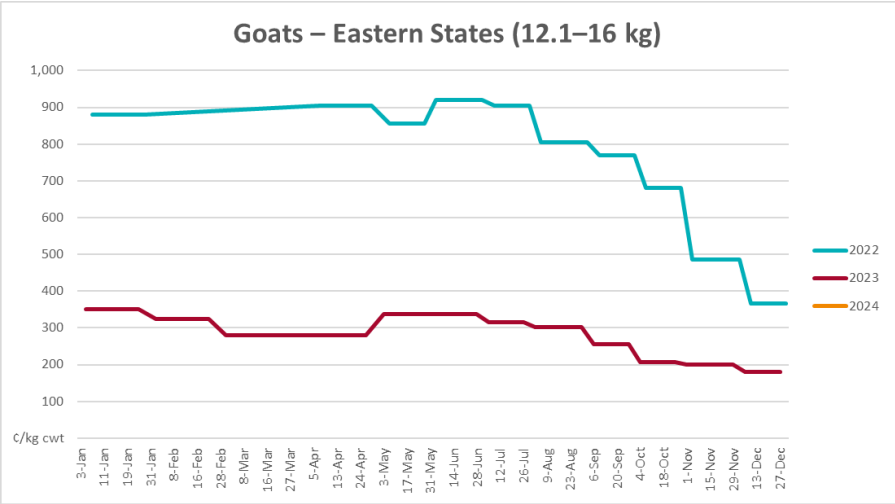
3.3. Selected domestic livestock indicator prices

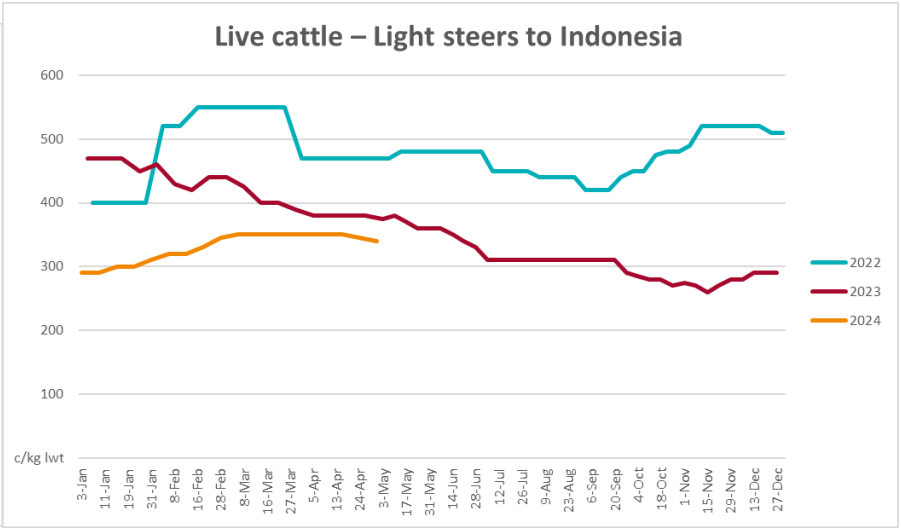




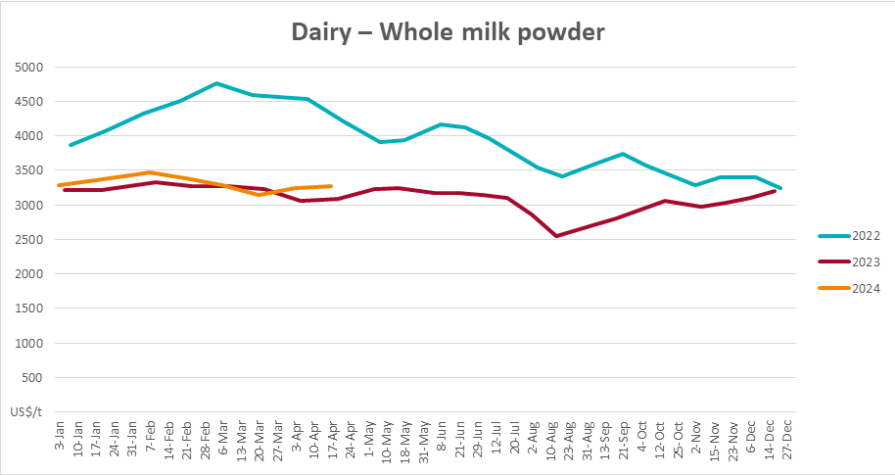


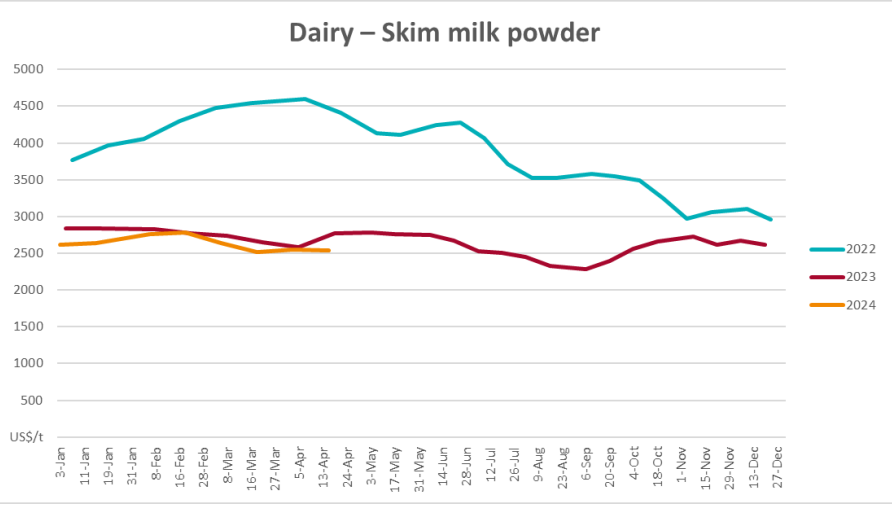


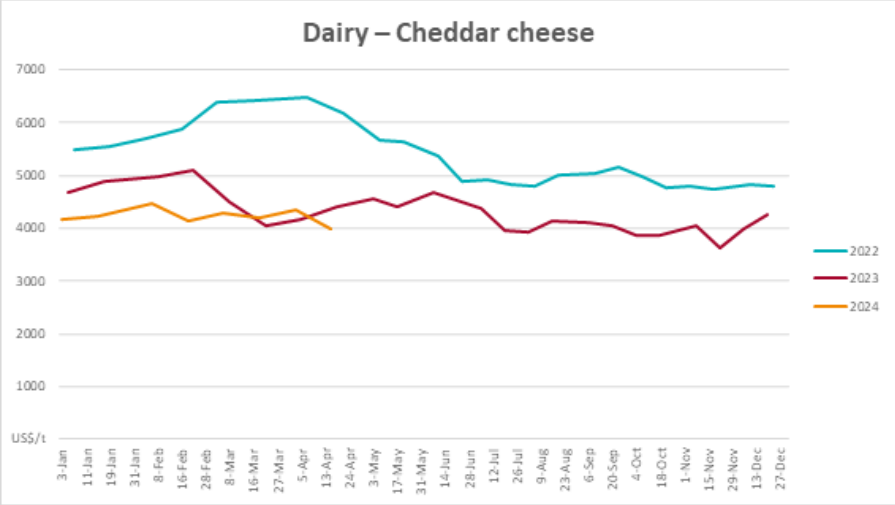

Goats – Eastern States (12.1–16 kg)
1,000
900
800
700
600
500
400
300
200
100
c/kg cwt
3-Jan
11-Jan
19-Jan
31-Jan
8-Feb
16-Feb
28-Feb
8-Mar
16-Mar
27-Mar
5-Apr
13-Apr
24-Apr
3-May
17-May
31-May
14-Jun
28-Jun
12-Jul
26-Jul
9-Aug
23-Aug
6-Sep
20-Sep
4-Oct
18-Oct
1-Nov
15-Nov
29-Nov
13-Dec
27-Dec
2022
2023
2024

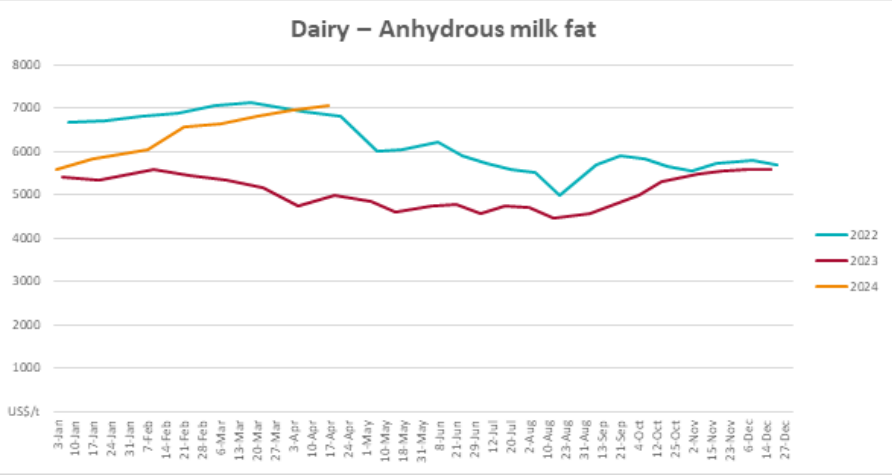

Live cattle – Light steers to Indonesia
600
500
400
300
200
100
c/kg lwt
3-Jan
11-Jan
19-Jan
31-Jan
8-Feb
16-Feb
28-Feb
8-Mar
16-Mar
27-Mar
5-Apr
13-Apr
24-Apr
3-May
17-May
31-May
14-Jun
28-Jun
12-Jul
26-Jul
9-Aug
23-Aug
6-Sep
20-Sep
4-Oct
18-Oct
1-Nov
15-Nov
29-Nov
13-Dec
27-Dec
2022
2023
2024

3.4. Global Dairy Trade (GDT) weighted average prices

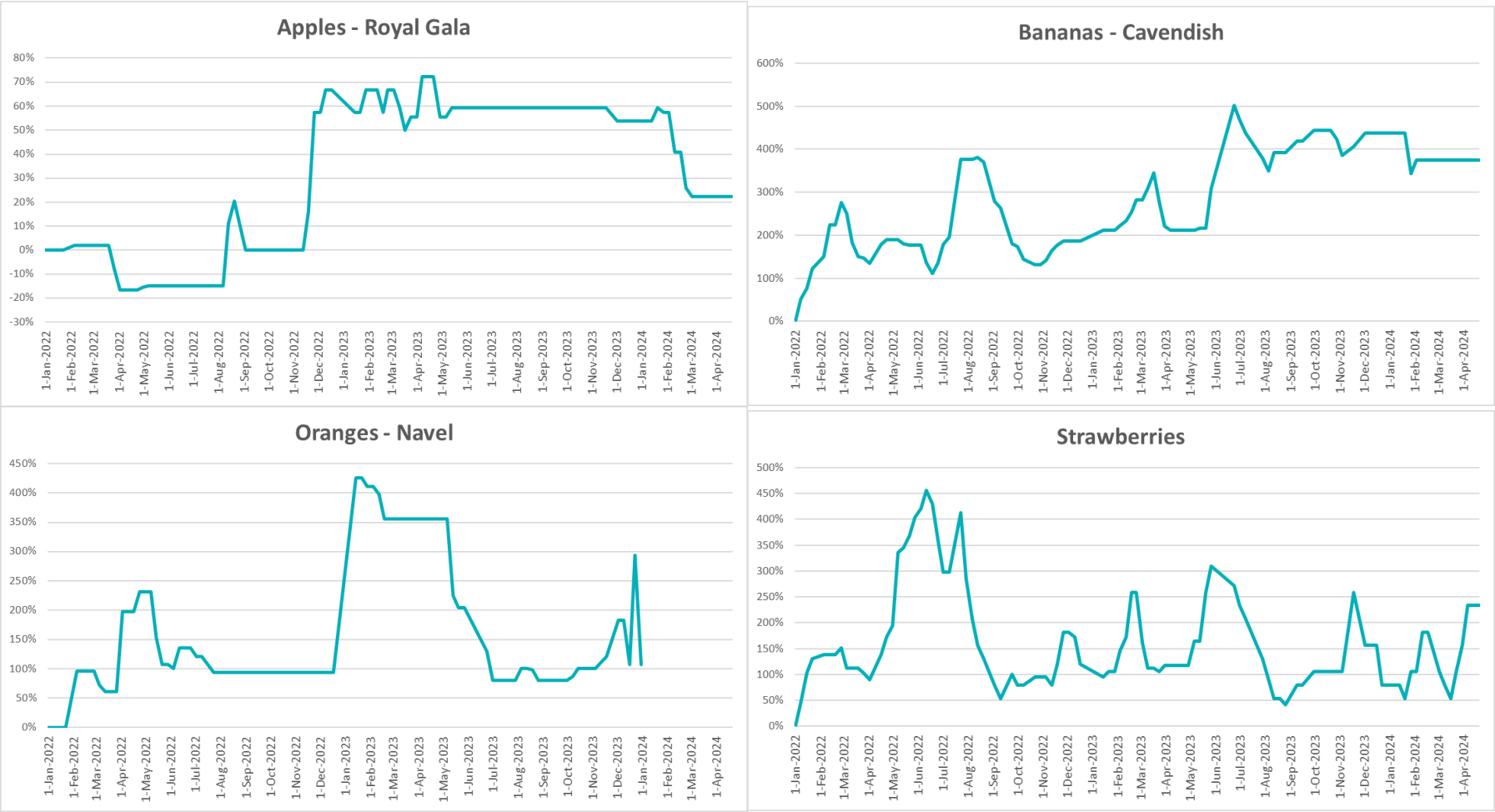


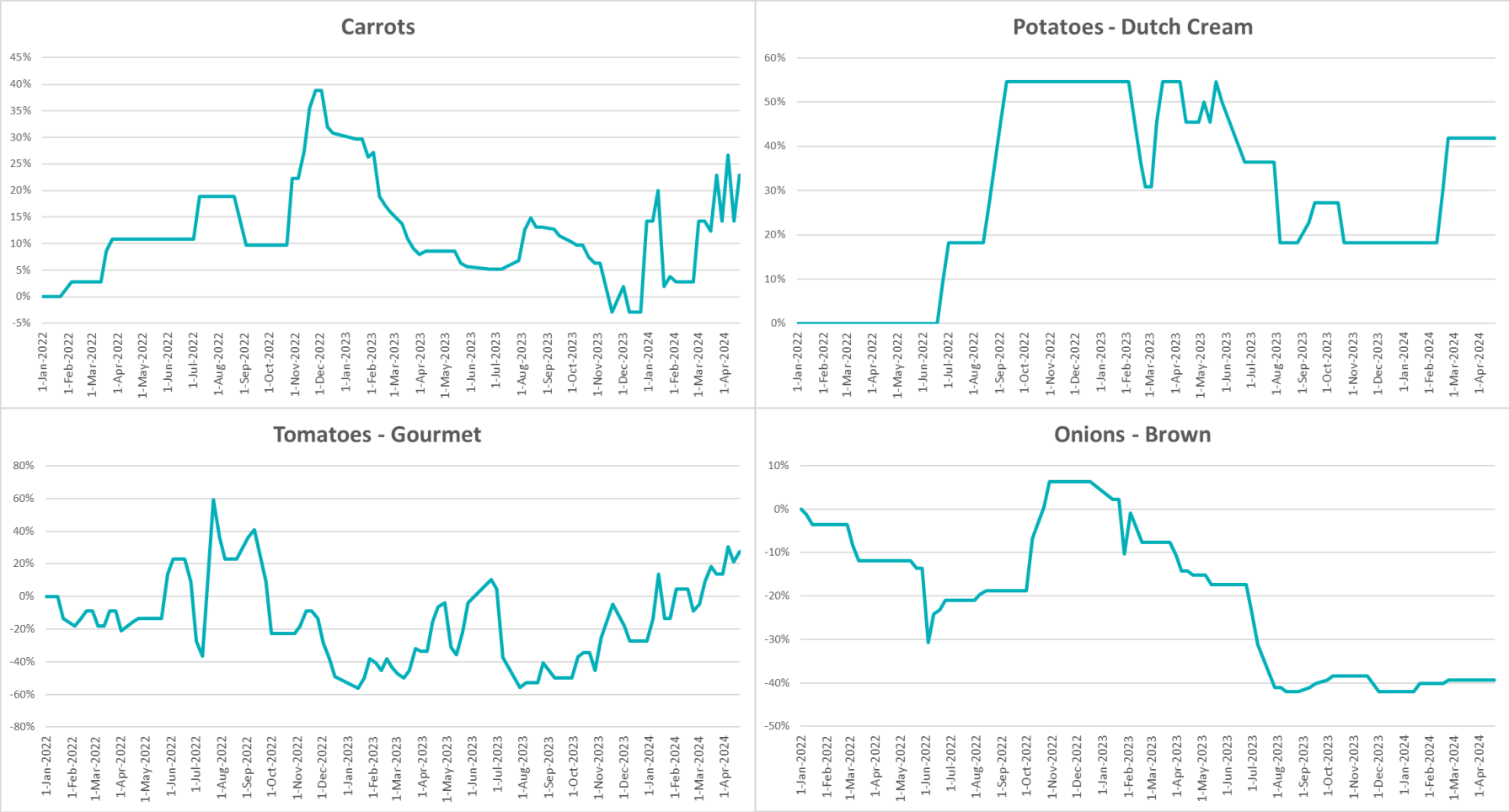




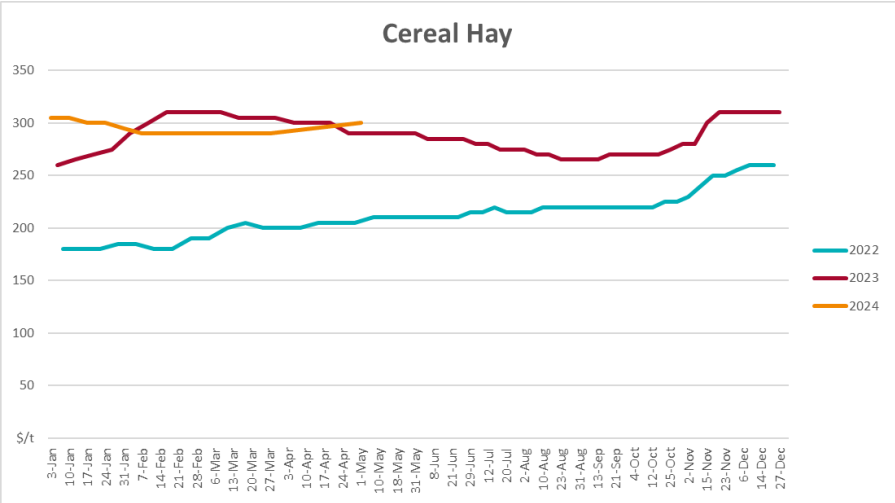


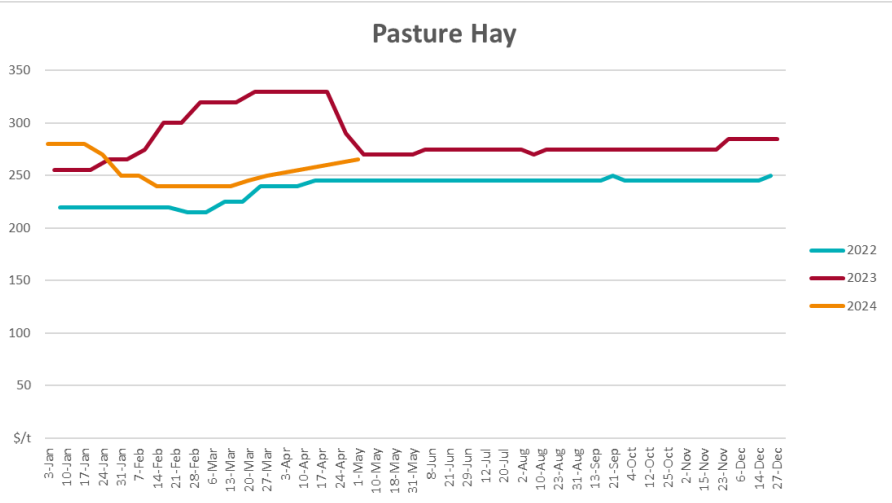
3.5. Selected fruit and vegetable prices

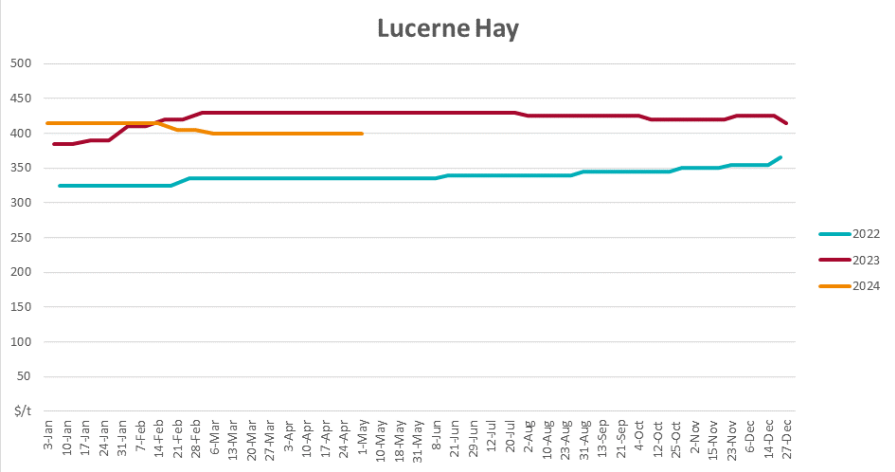



Carrots
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
-5%
1-Jan-2022
1-Feb-2022
1-Mar-2022
1-Apr-2022
1-May-2022
1-Jun-2022
1-Jul-2022
1-Aug-2022
1-Sep-2022
1-Oct-2022
1-Nov-2022
1-Dec-2022
1-Jan-2023
1-Feb-2023
1-Mar-2023
1-Apr-2023
1-May-2023
1-Jun-2023
1-Jul-2023
1-Aug-2023
1-Sep-2023
1-Oct-2023
1-Nov-2023
1-Dec-2023
1-Jan-2024
1-Feb-2024
1-Mar-2024
1-Apr-2024
Potatoes - Dutch Cream
60%
50%
40%
30%
20%
10%
0%
Tomatoes - Gourmet
80%
60%
40%
20%
0%
-20%
-40%
-60%
-80%
Onions - Brown
10%
0%
-10%
-20%
-30%
-40%
-50%

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.waternsw.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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