



Weekly Australian Climate, Water and Agricultural Update

No. 3/2022

27 January 2022

Summary of key issues

- For the week ending 26 January 2022, remnants of ex-tropical cyclone *Tiffany* and low-pressure troughs brought heavy rain and storms to large areas of Australia's tropical north, as well as large areas of central and eastern Australia (see [Section 1.1](#)).
- The significant rainfall recorded in parts of South Australia has triggered localised flood warnings. However, given that harvest of winter crops has largely finished these falls are unlikely to impact 2021 production levels. Further rainfall across southern Queensland may have prevented the harvest of early planted summer crops. The falls over much of northern and central Australia are likely to benefit pasture growth and build soil moisture levels.
- El Niño–Southern Oscillation (ENSO) indicators suggest that La Niña remains active in the tropical Pacific. Most climate models suggest the 2021–22 La Niña will persist until early in the southern hemisphere autumn. La Niña events are associated with above-average rainfall for northern and eastern Australia during summer (see [Section 1.2](#)).
- The outlook for February 2022 indicates that there is a 75% chance of rainfall totals between 10 and 100 millimetres across most of eastern New South Wales, most of Queensland, eastern Victoria, and the north of the Northern Territory and Western Australia. Rainfall totals in excess of 100 millimetres are expected in parts of north-eastern New South Wales, northern Queensland, and the north of the Northern Territory and Western Australia (see [Section 1.3](#)).
- The outlook for February to April 2022 suggests there is a 75% chance of rainfall totals between 50 and 300 millimetres across much of eastern New South Wales, Queensland, southern Victoria, northern Western Australia, the Northern Territory and Tasmania. Rainfall totals in excess of 300 millimetres are forecast for the east coast of New South Wales and parts of eastern and northern Queensland, as well as northern parts of Western Australia and the Northern Territory.
- Over the 8-days to 3 February 2022, rainfall is expected across much of Australia. A monsoon trough and deep low-pressure system are expected to bring heavy rain and storms to large areas of Australia's tropical north, while troughs and frontal activity is expected to bring showers and storms to large area of central and eastern Australia (see [Section 1.4](#)).
- The forecast rainfall for parts of New South Wales and Queensland may further prevent the harvest of early planted summer crops. Rainfall across northern Australia likely to benefit pasture growth and build soil moisture levels.
- Water storage in the Murray–Darling Basin (MDB) decreased by 92 gigalitres (GL) between 19 January 2022 and 26 January 2022. The current volume of water held in storage is 22,419 GL, which represents 89% of total capacity. This is 62% or 8,616 GL more than at the same time last year.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$107 per ML on 14 January 2022 to \$92 per ML on 21 January 2022. Prices are lower in the Goulburn-Broken, Murrumbidgee, and regions above the Barmah Choke due to the binding of the Goulburn intervalley trade limit, Murrumbidgee export limit, and Barmah Choke trade constraint.

1. Climate

1.1. Rainfall this week

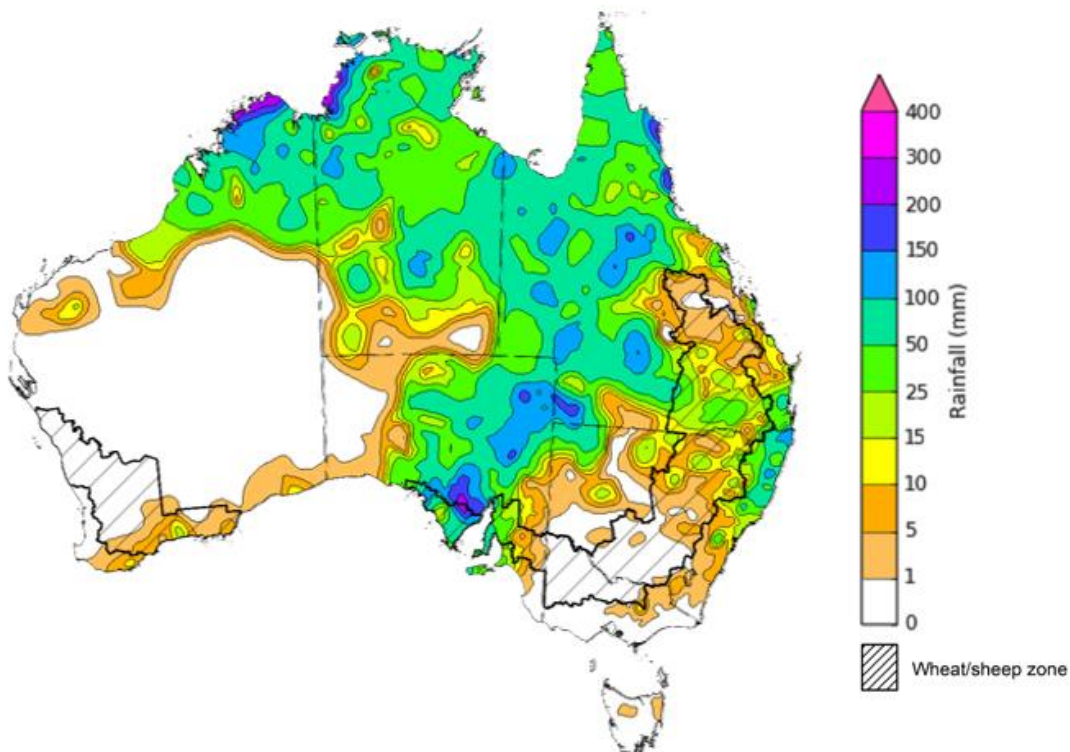
For the week ending 26 January 2022, remnants of ex-tropical cyclone *Tiffany* and low-pressure troughs brought heavy rain and storms to large areas of Australia's tropical north, as well as large area of central and eastern Australia.

Rainfall totals of between 10 and 50 millimetres were recorded across scattered areas of northern New South Wales, much of Queensland, central and northern South Australia, northern Western Australia and much of the Northern Territory. Rainfall totals in excess of 50 millimetres were recorded across parts of north-eastern New South Wales, through central Queensland and the Cape York Peninsula, central and north-eastern South Australia, northern and central areas of the Northern Territory and the northwest of Western Australia.

In cropping regions, rainfall totals of between 10 and 50 millimetres were recorded across scattered areas of northern New South Wales, southern Queensland and central and western South Australia. Little to no rainfall was recorded across remaining cropping regions in Queensland, Victoria, South Australia and Western Australia.

Significant rainfall in parts of South Australia has triggered localised flood warnings. However, given that harvest of winter crops has largely finished these falls are unlikely to impact 2021 production levels. Further rainfall across southern Queensland may have prevented the harvest of early planted summer crops. The falls over much of northern and central Australia are likely to benefit pasture growth and build soil moisture levels.

Rainfall for the week ending 26 January 2022



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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/>

1.2. Climate Drivers

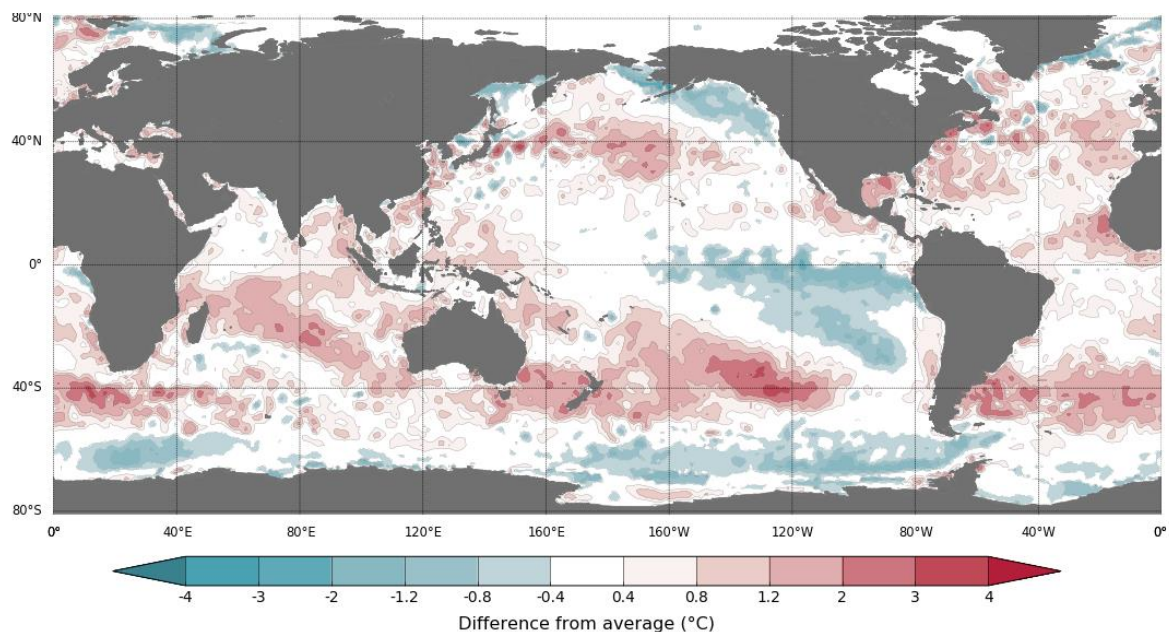
Throughout summer the climate drivers with the largest potential impact on Australia’s climate patterns are the El Niño–Southern Oscillation (ENSO), the Southern Annular Mode (SAM) and the Madden-Julian Oscillation (MJO). These climate drivers are likely to influence the growth and development of summer crops in northern growing regions and pasture growth across northern Australia with the onset of the northern wet season.

ENSO indicators suggest that La Niña remains active in the tropical Pacific. La Niña events are associated with above-average rainfall for northern and eastern Australia during summer. Climate models suggest the 2021–22 La Niña will persist until early in the southern hemisphere autumn. The presence of La Niña atmospheric and oceanic patterns is likely to influence rainfall patterns in northern and eastern Australia over the coming months.

The SAM currently neutral and the MJO is inactive in the Australian region reducing their influence on climatic conditions in Australia.

Both warm and cool sea surface temperature (SST) anomalies across the tropical Pacific Ocean remain similar to two weeks ago and show a well-developed La Niña pattern.

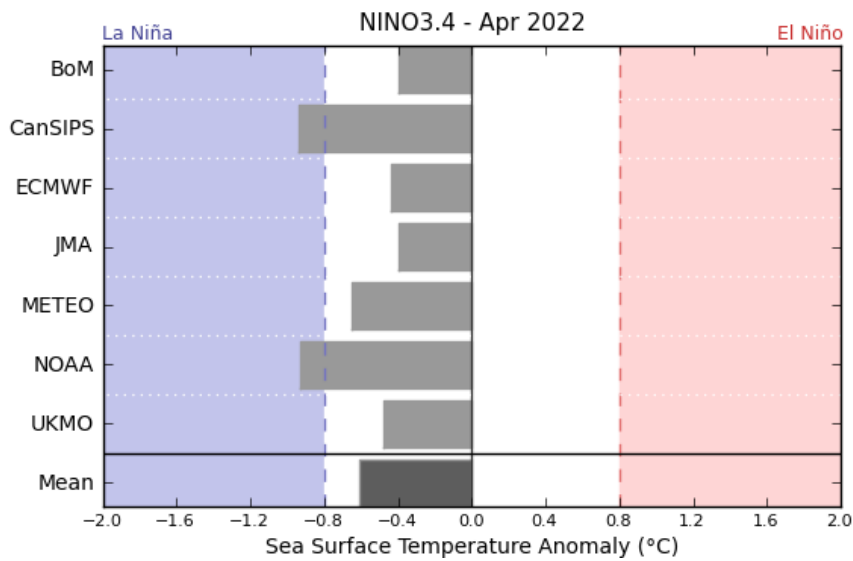
Difference from average sea surface temperature observations 10 January to 16 January 2022



Data: BOM SST
Climatology baseline: 1961 to 1990
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Weekly average: 16 January 2022
Created: 17/01/2022
<http://www.bom.gov.au/climate>

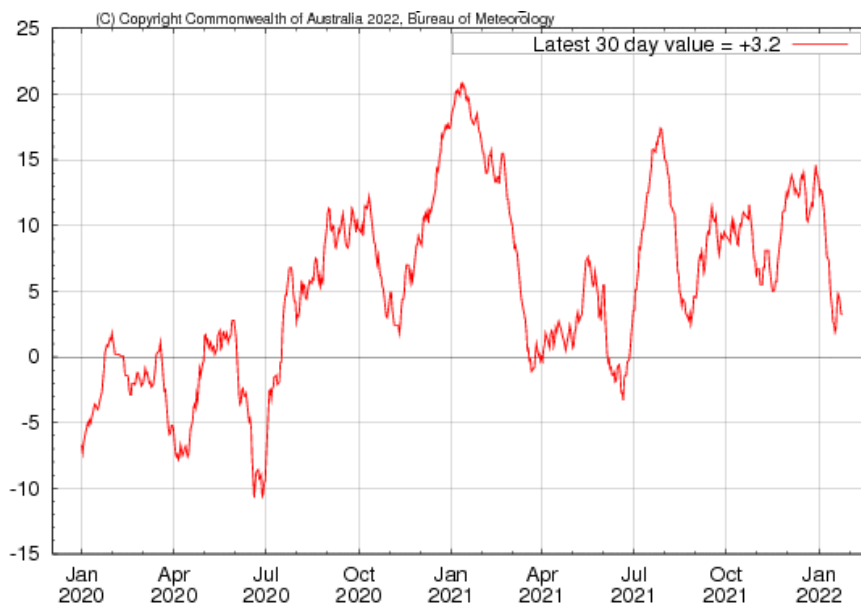
International climate model outlooks for the NINO 3.4 region in April 2022



A La Niña event has become firmly established in the Pacific Ocean. Most climate models surveyed by the Bureau of Meteorology expect the La Niña event to continue into February. However, five of the seven models expect it to dissipate by April 2022. For the period ending 16 January 2022, the 30-day Southern Oscillation Index (SOI) was +2.5 and the 90-SOI was +6.8, both below the La Niña threshold of +7. It should be noted that movement in the SOI like this is not uncommon during the northern wet season as the SOI can experience fluctuations from transient tropical weather. This means the recent SOI changes may be short-term, with other ENSO indicators continuing to maintain patterns broadly typical of La Niña.

Above average SST anomalies have continued across parts of the Maritime Continent and northern Australia. A slight strengthening of trade winds across parts of the central and western Pacific, while cloudiness near the Date Line has been consistently below average. All indications consistent with an ongoing La Niña event.

30-day Southern Oscillation Index (SOI) values ending 26 January 2022



1.3. National Climate Outlook

These climate outlooks are generated by ACCESS–S (Australian Community Climate Earth-System Simulator–Seasonal). ACCESS–S is the Bureau of Meteorology's dynamical (physics-based) weather and climate model used for monthly, seasonal and longer-lead climate outlooks.

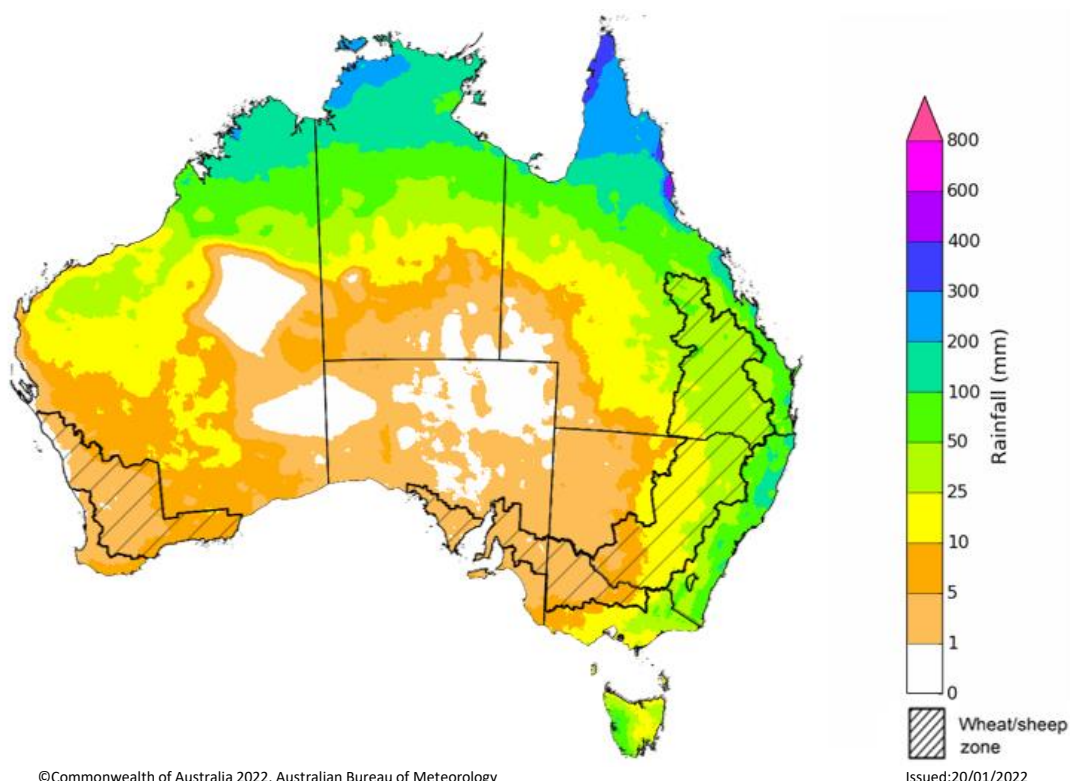
For further information, go to <http://www.bom.gov.au/climate/ahead/about/>

The Bureau of Meteorology's latest rainfall outlook indicated wetter than average conditions are expected across parts of eastern Australia during February. The ACCESS-S climate model suggests there is close to a 60% chance of exceeding median February rainfall totals across parts of eastern New South Wales, Victoria and Queensland.

The outlook for February 2022 indicates that there is a 75% chance of rainfall totals between 10 and 100 millimetres across most of eastern New South Wales, most of Queensland, eastern Victoria, and the north of the Northern Territory and Western Australia. Rainfall totals in excess of 100 millimetres are expected in parts of north-eastern New South Wales, northern Queensland, and the north of the Northern Territory and Western Australia.

Across cropping regions there is a 75% chance of rainfall totals of between 10 and 50 millimetres across much of New South Wales and Queensland. There is a 75% chance of rainfall less than 10 millimetres for most remaining cropping regions. The wetter than average conditions expected for most eastern Australian cropping regions is likely to support the growth and development of later-planted summer crops, as well as continuing to support above pasture growth rates for this time of year across much of eastern and northern Australia.

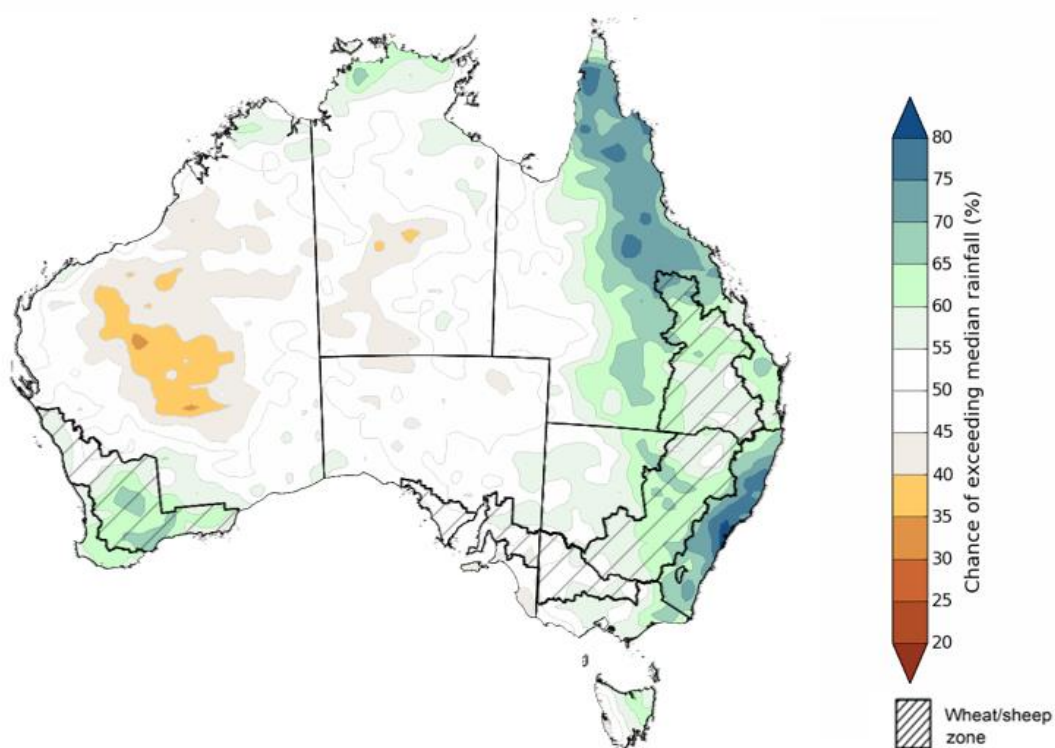
Rainfall totals that have a 75% chance of occurring February 2022



The rainfall outlook for February to April 2022 suggests there is a greater than 60% chance of exceeding median rainfall across parts of eastern and central New South Wales, Queensland, and the north of the Northern Territory. For remaining regions of Australia, there is roughly an equal chance of above and below median rainfall, with only isolated areas of Western Australia expecting to receive below average rainfall between February to April 2022 (Bureau of Meteorology 'National Climate Outlook', 20 January 2022).

Bureau of Meteorology rainfall outlooks for February to April have greater than 55% past accuracy across most of Australia. Outlook accuracy is greater than 65% across isolated parts of the country. However, there is low past accuracy for parts of north-western New South Wales, western Queensland, central Western Australia, as well as south-eastern parts of the Northern Territory.

Chance of exceeding the median rainfall February to April 2022



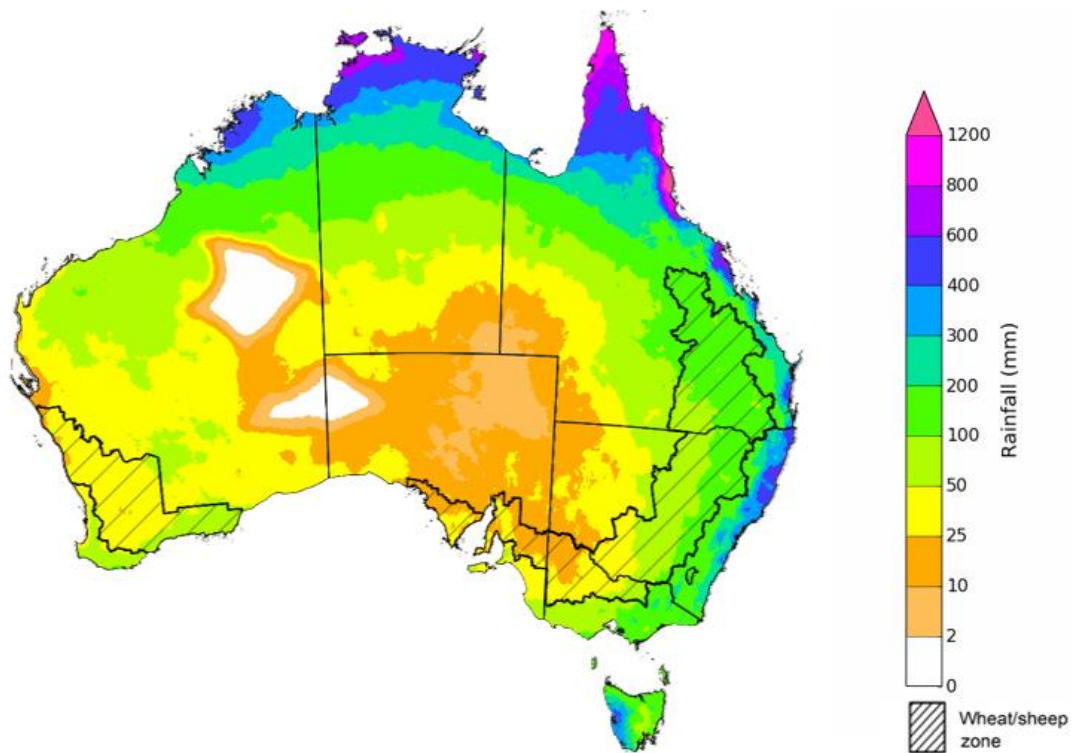
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The outlook for February to April 2022 suggests there is a 75% chance of rainfall totals between 50 and 300 millimetres across much of eastern New South Wales, Queensland, southern Victoria, northern Western Australia, the Northern Territory and Tasmania. Rainfall totals in excess of 300 millimetres are forecast for the east coast of New South Wales and parts of eastern and northern Queensland, as well as northern parts of Western Australia and the Northern Territory.

Across cropping regions, there is a 75% chance of receiving between 50 and 200 millimetres across much of New South Wales and Queensland. Totals of less than 50 millimetres are expected across remaining cropping regions in Victoria, and South Australia and Western Australia.

These rainfall totals are slightly below average for this three-month period across most cropping regions. However, soil moisture levels across northern cropping regions are well above average due to the substantial rainfall in November, December and early January. Therefore, below average rainfall during the February to April period is unlikely to negatively impact summer crop growth and yield prospects.

Rainfall totals that have a 75% chance of occurring February to April 2022

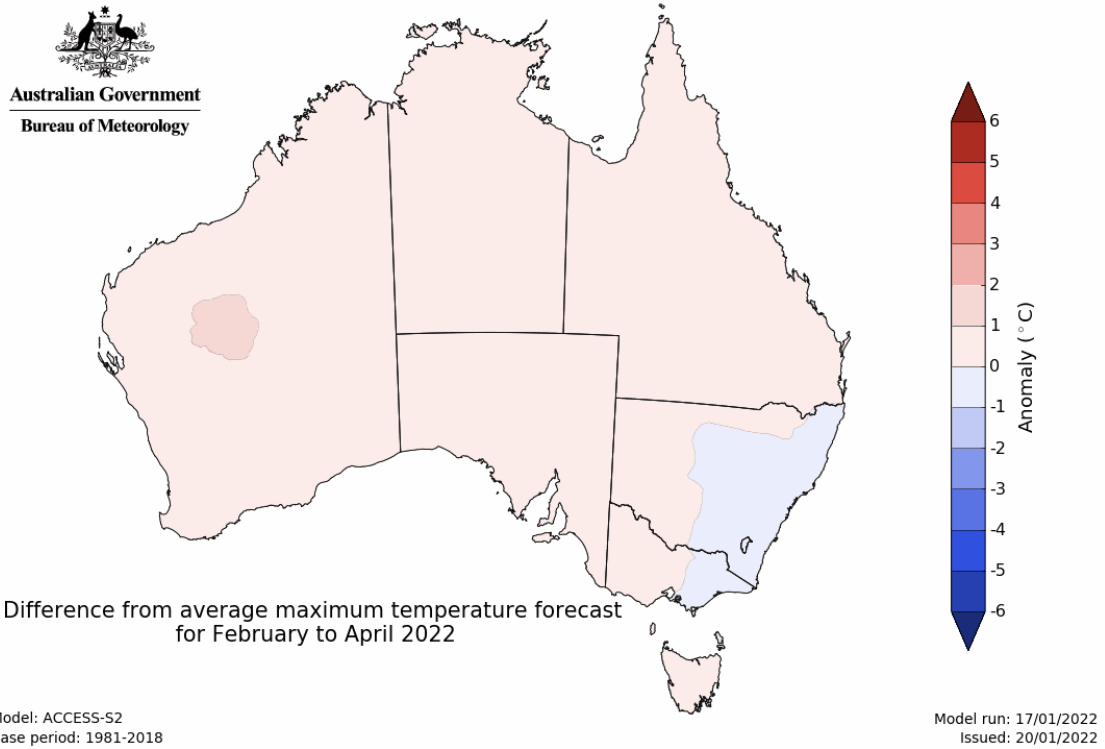


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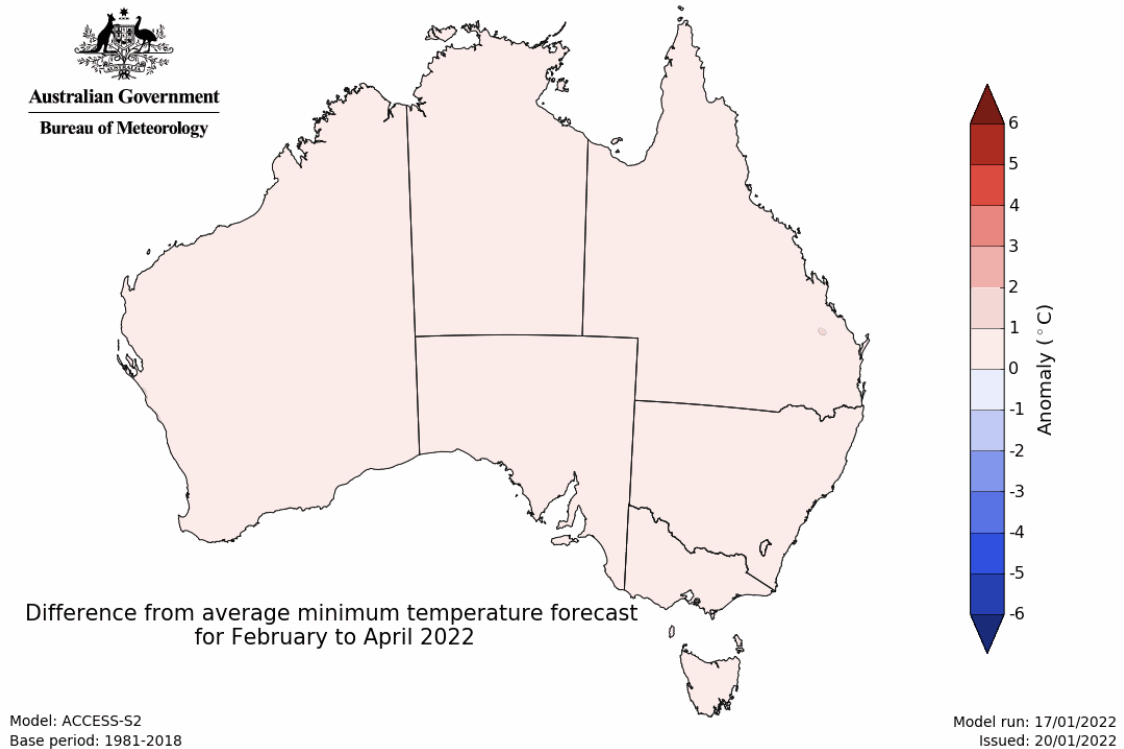
Issued: 20/01/2022

The temperature outlook for February to April 2022 indicates that maximum and minimum temperatures across most of Australia are likely to be close to the 1990-2012 average (- 1°C to 1°C), with an isolated area of above average maximum temperatures in Western Australia and below average maximum temperatures in eastern New South Wales and Victoria (Bureau of Meteorology 'National Climate Outlook', 20 January 2022).

Predicted maximum temperature anomaly for February to April 2022



Predicted minimum temperature anomaly for February to April 2022



1.4. Rainfall forecast for the next eight days

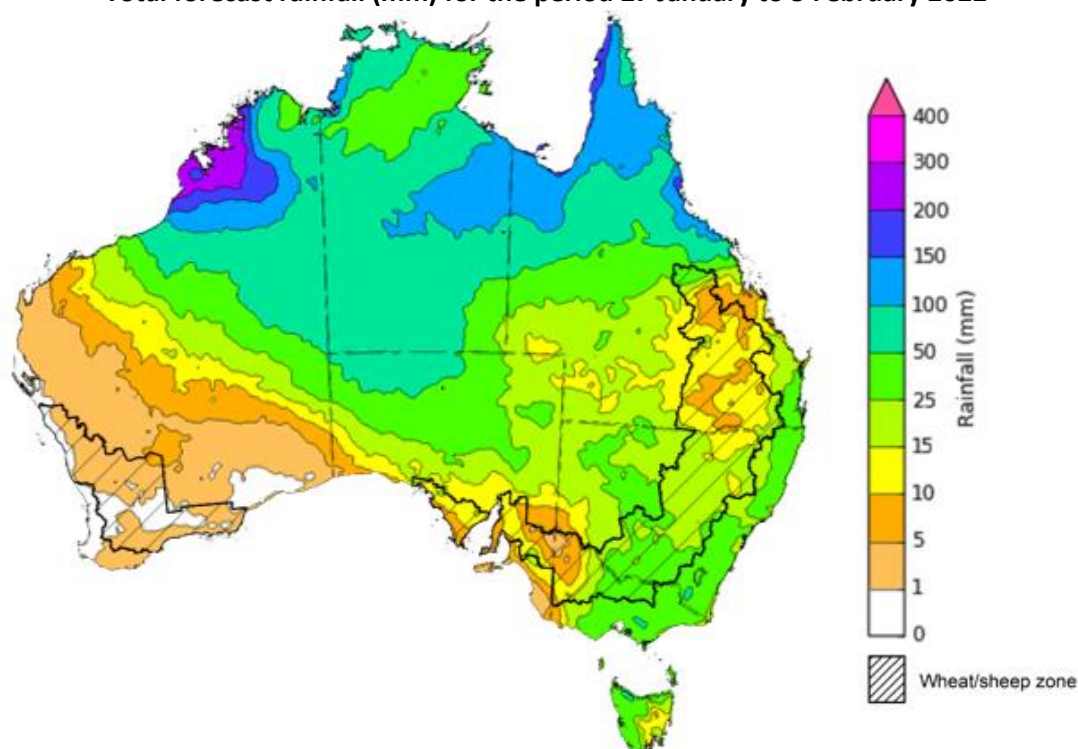
Over the 8-days to 3 February 2022, rainfall is expected across much of Australia. A monsoonal trough and deep low-pressure system are expected to bring heavy rain and storms to large areas of Australia's tropical north, while troughs and frontal activity is expected to bring showers and storms to large area of central and eastern Australia. Meanwhile, high pressure systems are expected to bring mostly dry conditions to much of southern Western Australia.

Rainfall totals of between 10 and 50 millimetres are forecast for New South Wales and Victoria, as well as much of Queensland, South Australia, the Northern Territory and north-eastern Western Australia. Rainfall in excess of 50 millimetres is expected across parts of northern South Australia, northern Queensland, the northeast of Western Australia and much of the Northern Territory.

In Australian cropping regions, rainfall totals of between 10 and 25 millimetres are expected across New South Wales and Victoria, as well as most of Queensland and parts of South Australia. Falls in excess of 25 millimetres are expected across much of southern New South Wales and eastern Victoria. Little to no rainfall is forecast for cropping regions of Western Australia and remaining areas in Queensland, South Australia and western Victoria during the next 8-days.

Soil moisture levels across eastern Australian cropping regions remain well above average. The forecast rainfall for parts of New South Wales and Queensland may further prevent the harvest of early planted summer crops. However, the falls are likely to benefit pasture growth and build soil moisture levels across affected areas and extent the peak pasture production season across southern growing regions.

Total forecast rainfall (mm) for the period 27 January to 3 February 2022



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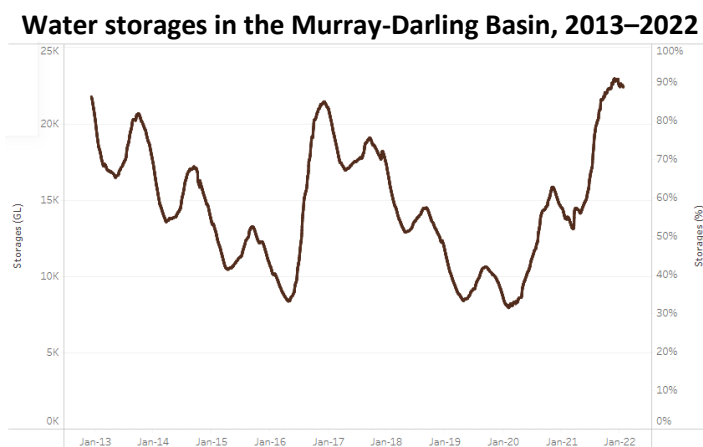
Issued: 27/01/2022

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) decreased by 92 gigalitres (GL) between 19 January 2022 and 26 January 2022. The current volume of water held in storage is 22,419 GL, which represents 89% of total capacity. This is 62% or 8,616 GL more than at the same time last year.

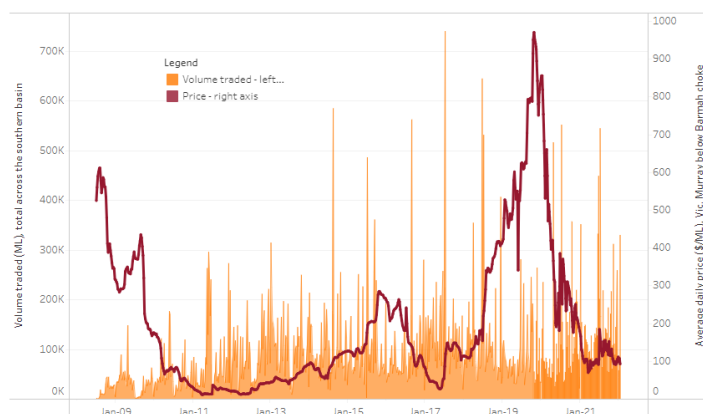


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$107 per ML on 14 January 2022 to \$92 per ML on 21 January 2022. Prices are lower in the Goulburn-Broken, Murrumbidgee, and regions above the Barmah Choke due to the binding of the Goulburn intervalley trade limit, Murrumbidgee export limit, and Barmah Choke trade constraint.

Region	\$/ML
NSW Murray Above	47
NSW Murrumbidgee	45
VIC Goulburn-Broken	75
VIC Murray Below	92

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 27 January 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-270122

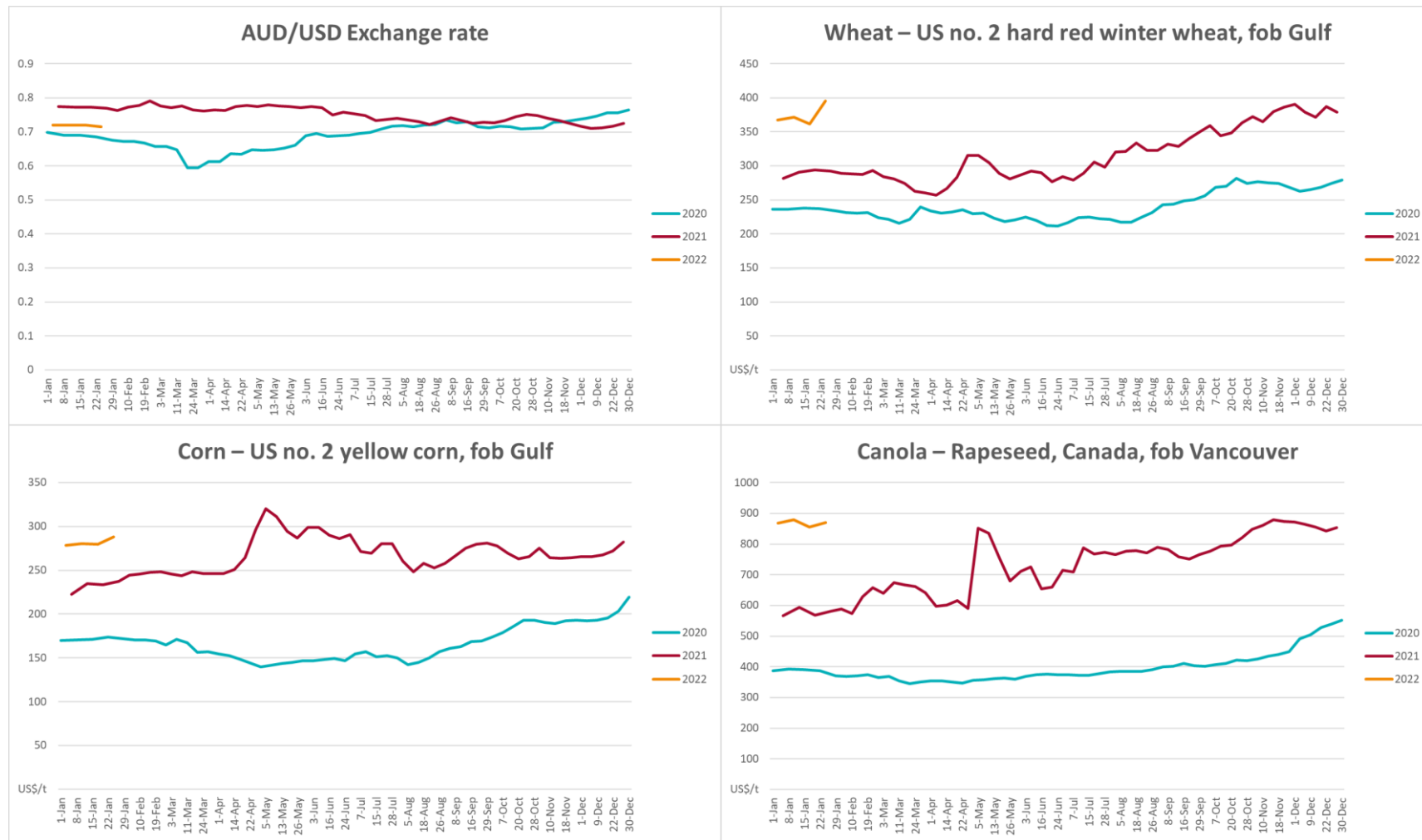
3. Commodities

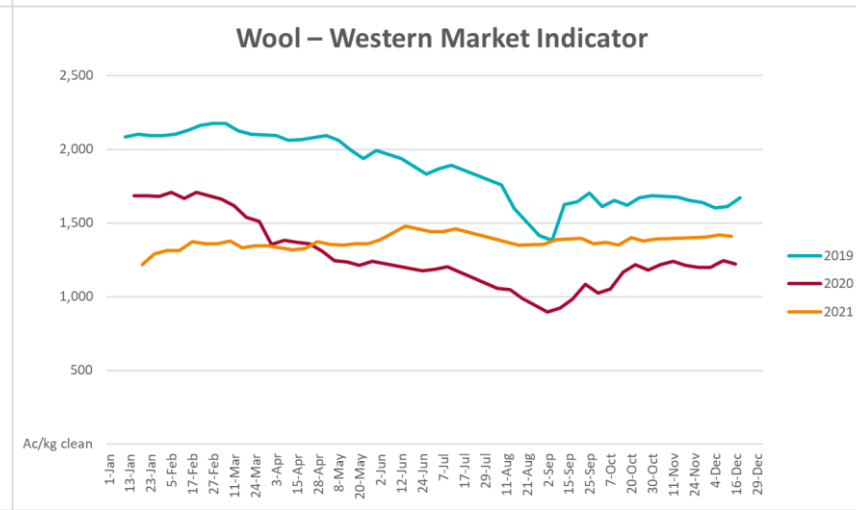
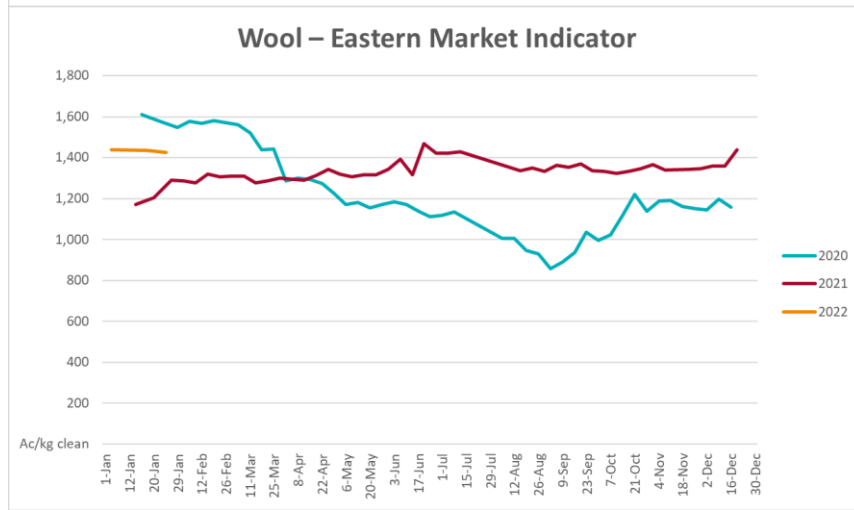
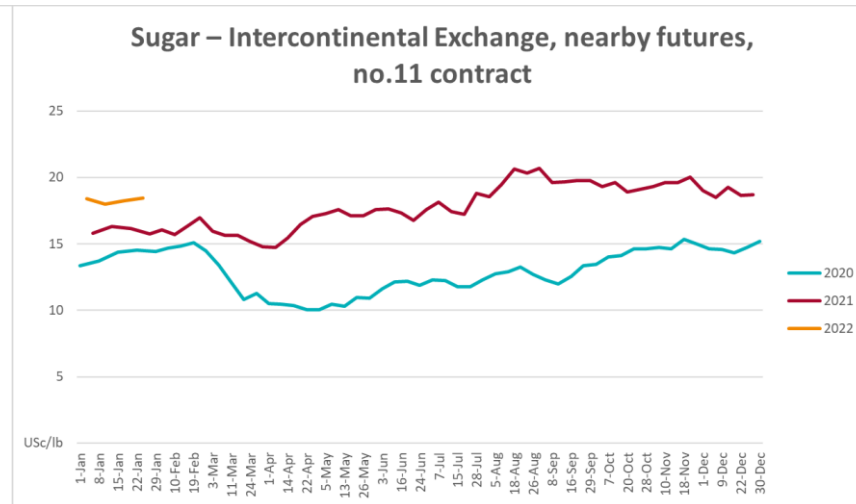
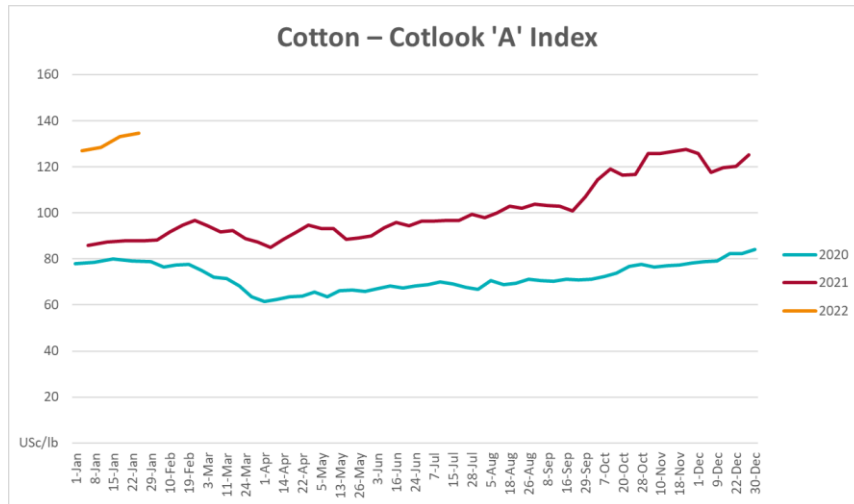
Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	26-Jan	A\$/US\$	0.72	0.72	-1%	0.76	-6%
Wheat – US no. 2 hard red winter wheat, fob Gulf	26-Jan	US\$/t	395	362	9%	289	37%
Corn – US no. 2 yellow corn, fob Gulf	26-Jan	US\$/t	288	280	3%	244	18%
Canola – Rapeseed, Canada, fob Vancouver	26-Jan	US\$/t	869	854	2%	587	48%
Cotton – Cotlook 'A' Index	26-Jan	USc/lb	135	133	1%	88	53%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	26-Jan	USc/lb	18.5	18.3	1%	16	15%
Wool – Eastern Market Indicator	26-Jan	Ac/kg clean	1,426	1,435	-1%	1,159	23%
Wool – Western Market Indicator	15-Dec-2021	Ac/kg clean	1,408	1,417	-1%	984	43%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	26-Jan	A\$/t	482	472	2%	356	35%
Feed Wheat – ASW, Port Adelaide, SA	26-Jan	A\$/t	452	441	3%	353	28%
Feed Barley – Port Adelaide, SA	26-Jan	A\$/t	379	375	1%	305	24%
Canola – Kwinana, WA	26-Jan	A\$/t	960	938	2%	687	40%
Grain Sorghum – Brisbane, QLD	26-Jan	A\$/t	367	368	0%	387	-5%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	26-Jan	Ac/kg cwt	1,170	1,167	0%	836	40%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	26-Jan	Ac/kg cwt	576	648	-11%	609	-5%
Lamb – Eastern States Trade Lamb Indicator	26-Jan	Ac/kg cwt	834	847	-1%	770	8%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	19-Jan	Ac/kg cwt	357	357	0%	309	16%
Goats – Eastern States (12.1–16 kg)	19-Jan	Ac/kg cwt	879	879	0%	818	8%
Live cattle – Light steers ex Darwin to Indonesia	17-Feb-2021	Ac/kg lwt	355	355	0%	360	-1%
Live sheep – Live wethers (Muchea WA saleyard) to Middle East	22-Sep-2021	\$/head	147	171	-14%	126	17%

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	19-Jan	US\$/t	4,082	3,866	6%	3,331	23%
Dairy – Skim milk powder	19-Jan	US\$/t	3,963	3,773	5%	3,068	29%
Dairy – Cheddar cheese	19-Jan	US\$/t	5,546	5,487	1%	3,869	43%
Dairy – Anhydrous milk fat	19-Jan	US\$/t	6,720	6,668	1%	4,866	38%

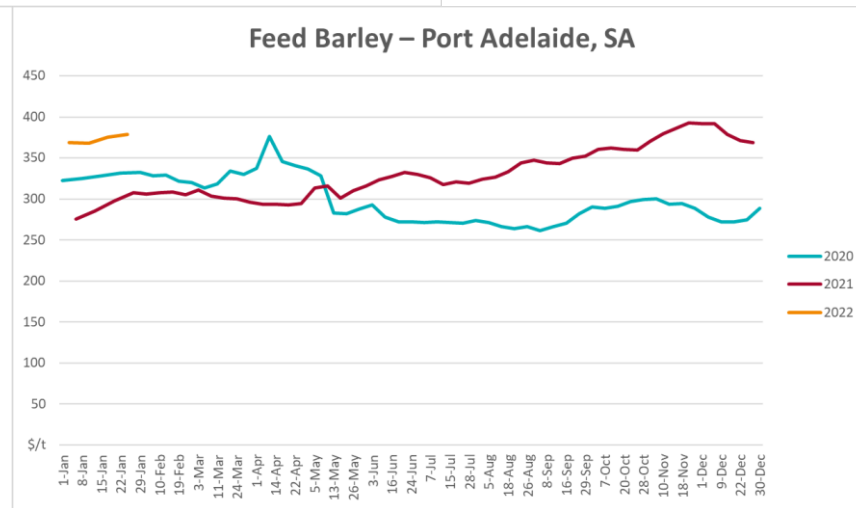
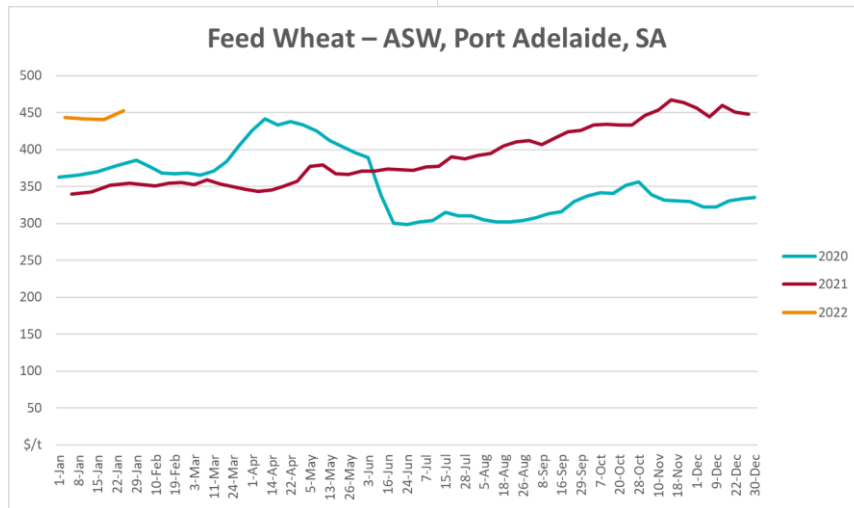
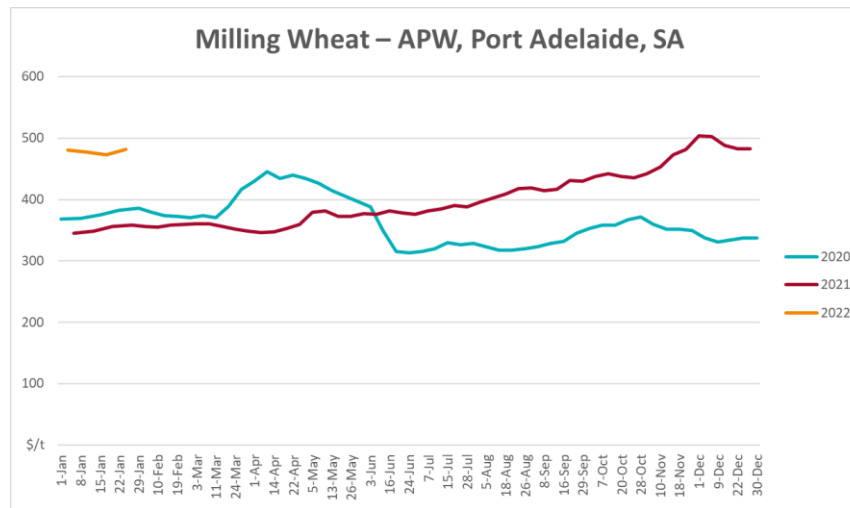
^a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

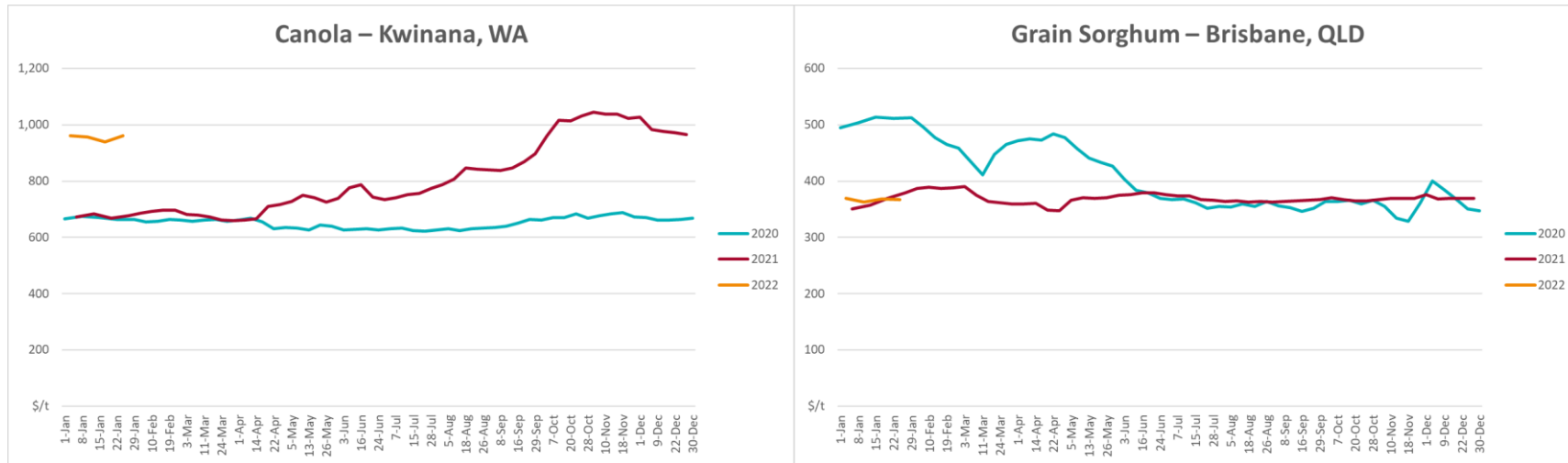
3.1. Selected world indicator prices



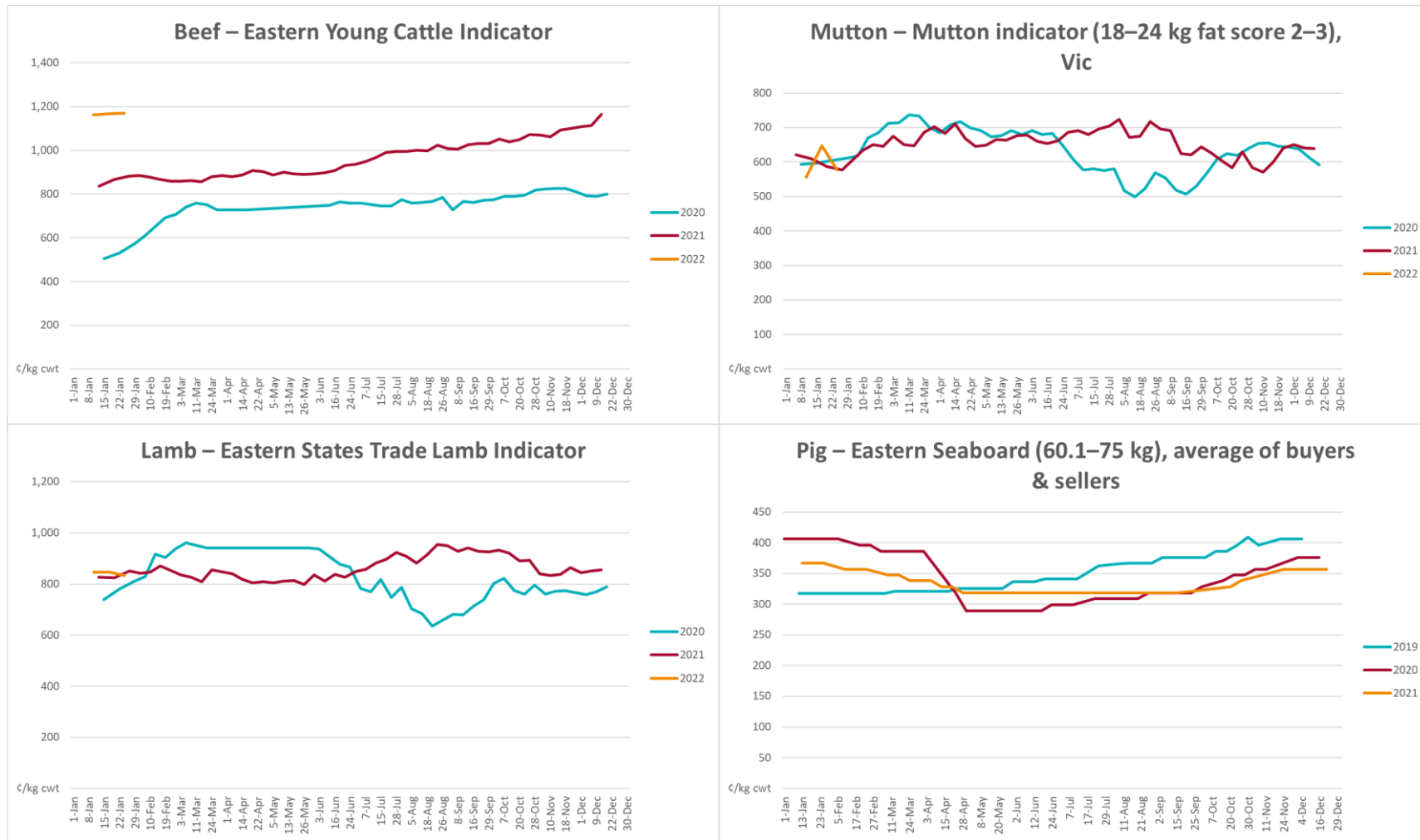


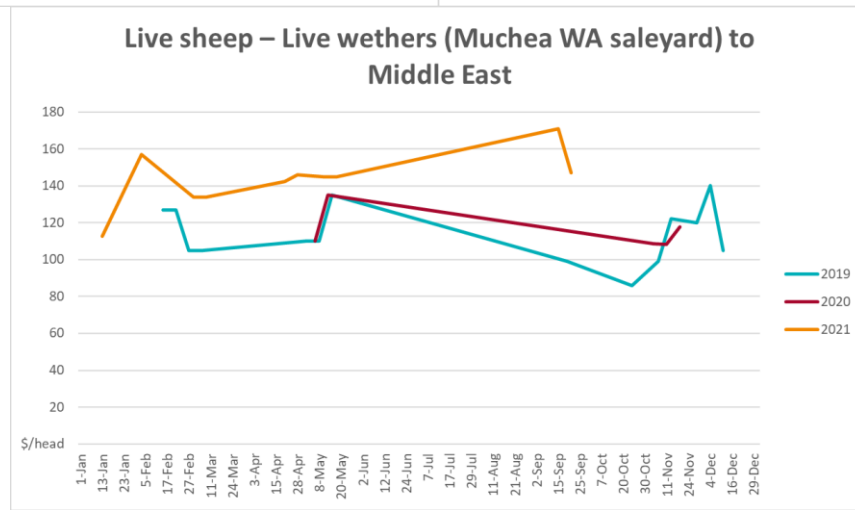
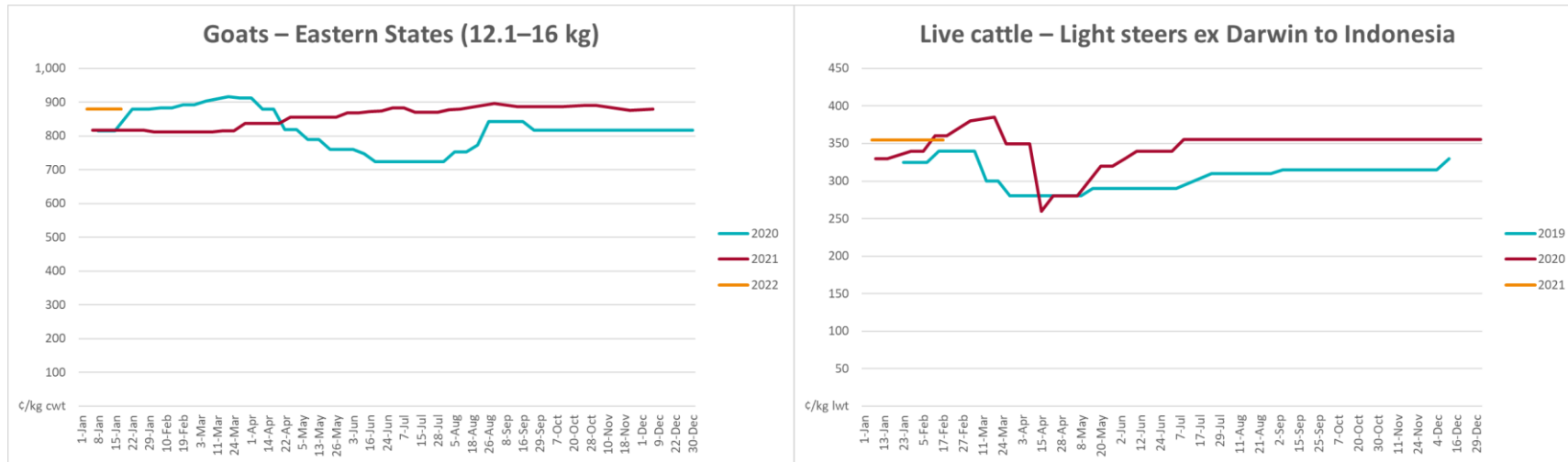
3.2. Selected domestic crop indicator prices



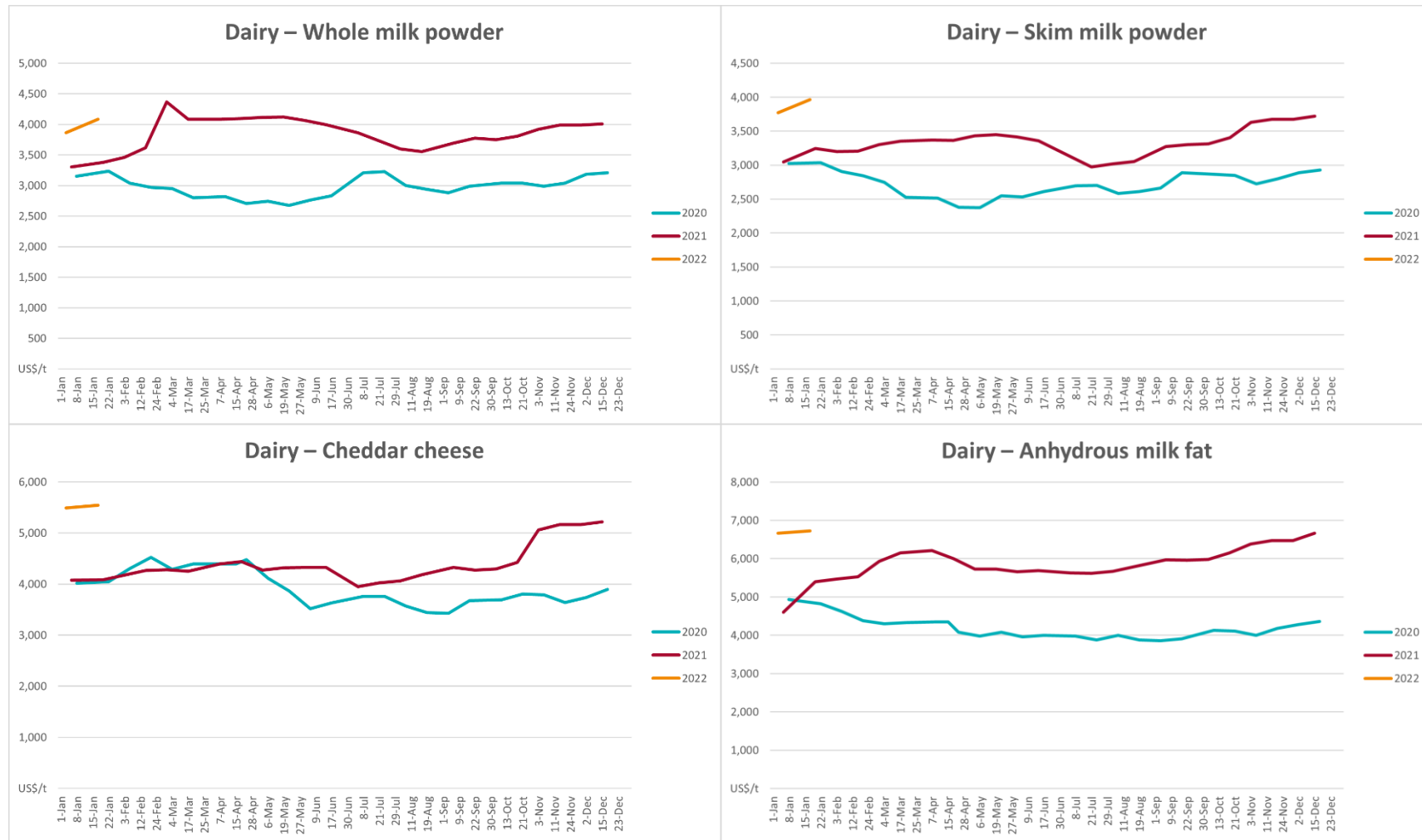


3.3. Selected domestic livestock indicator prices

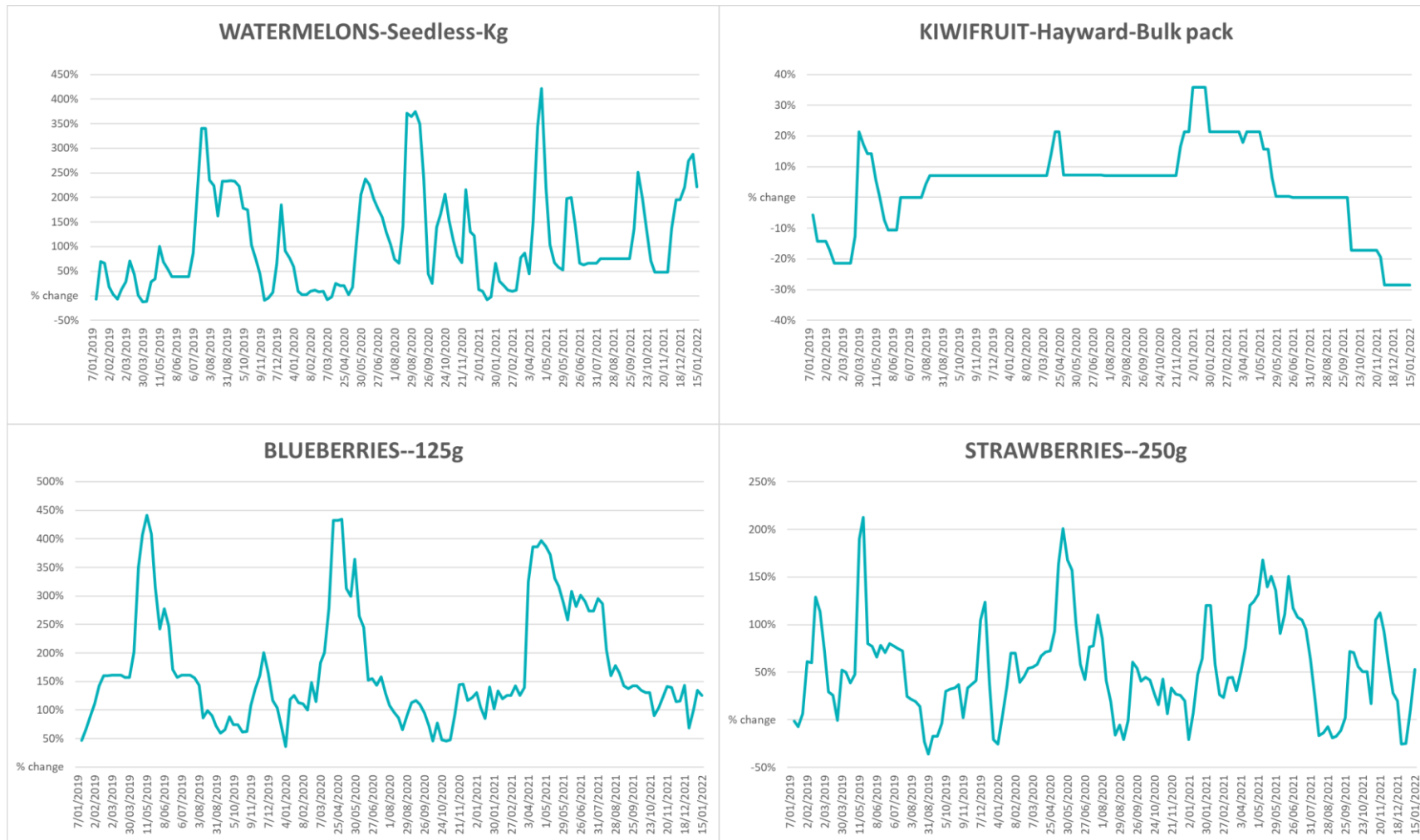


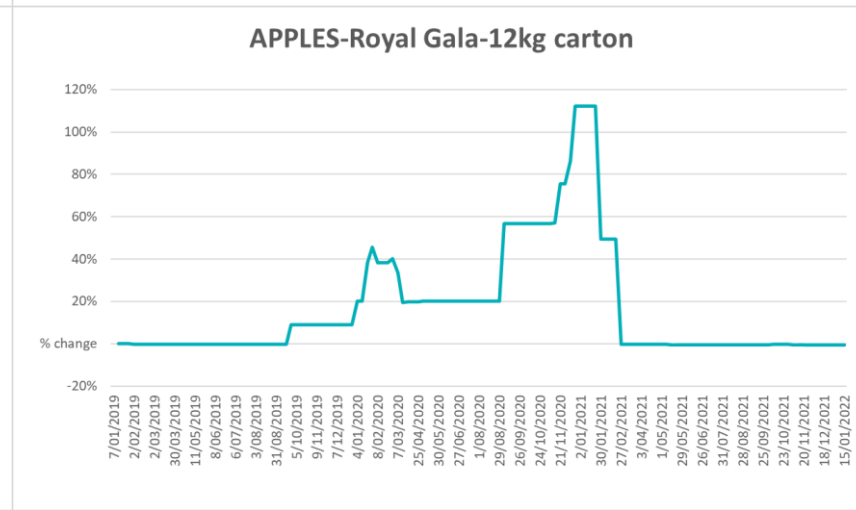
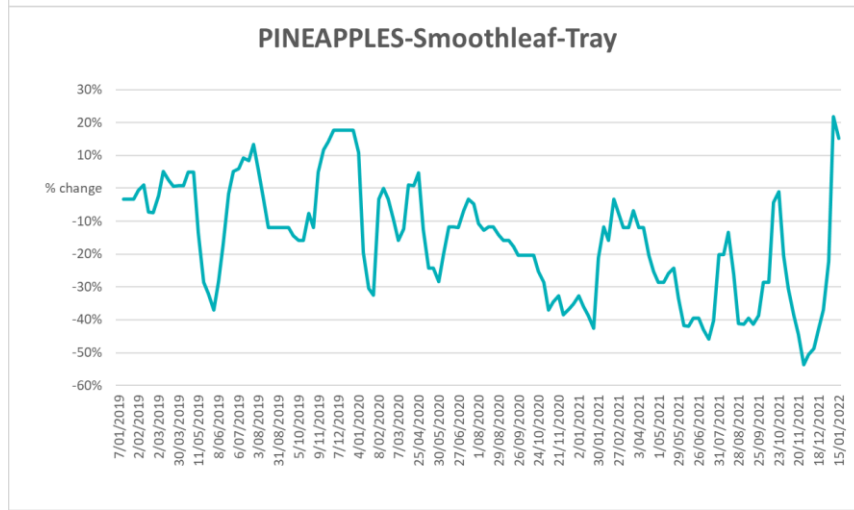
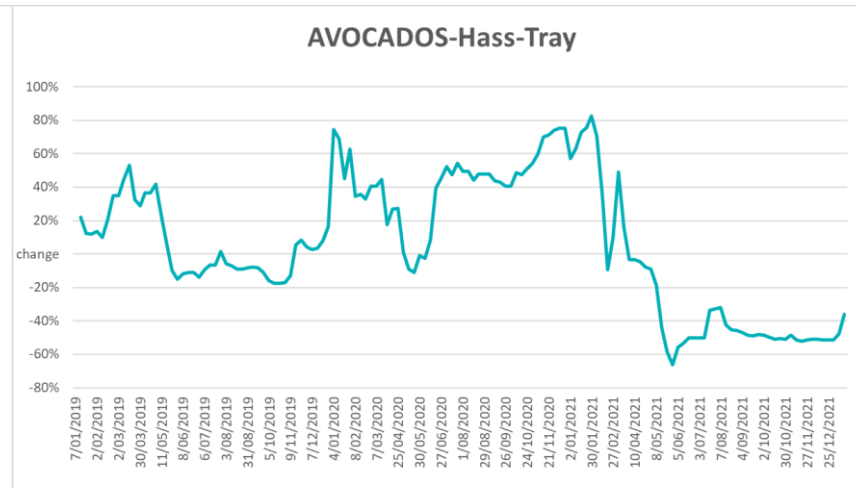
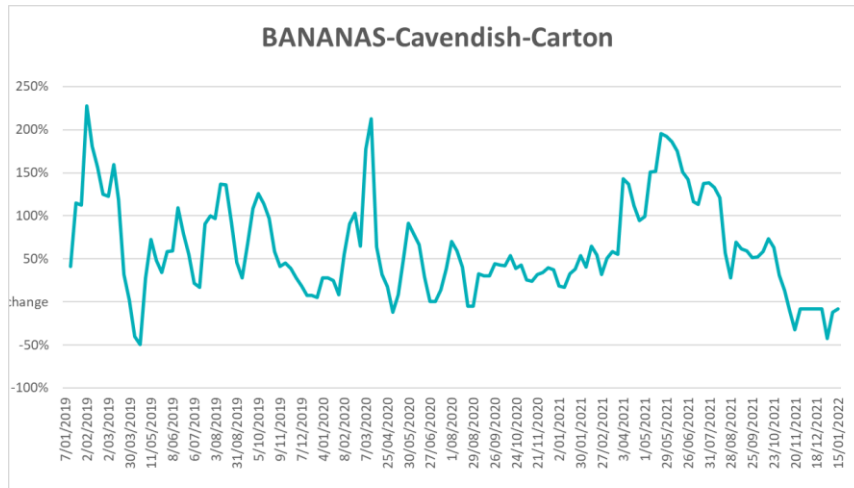


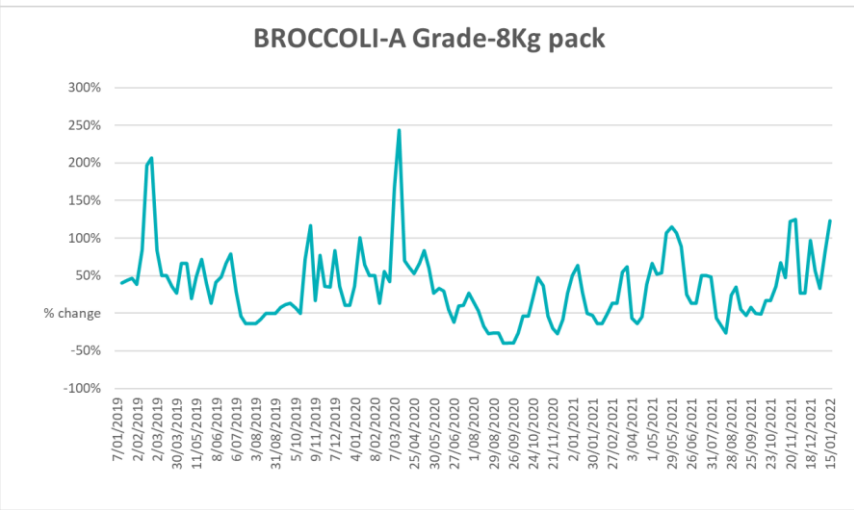
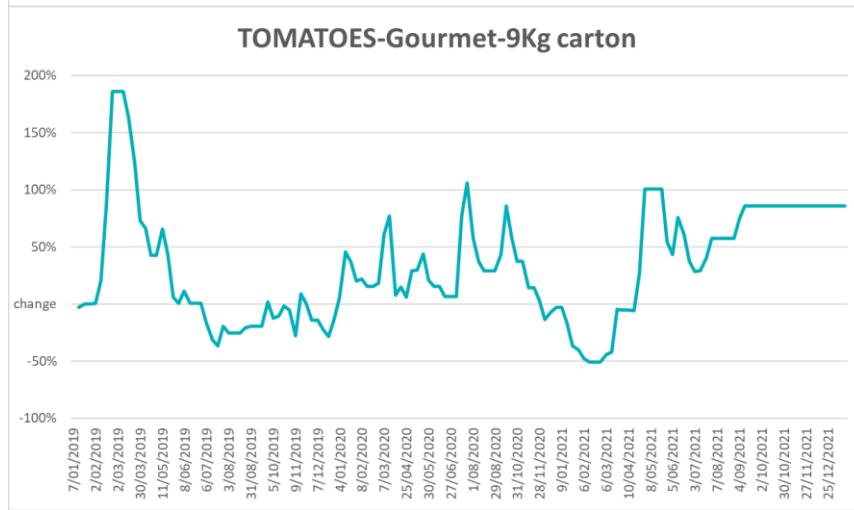
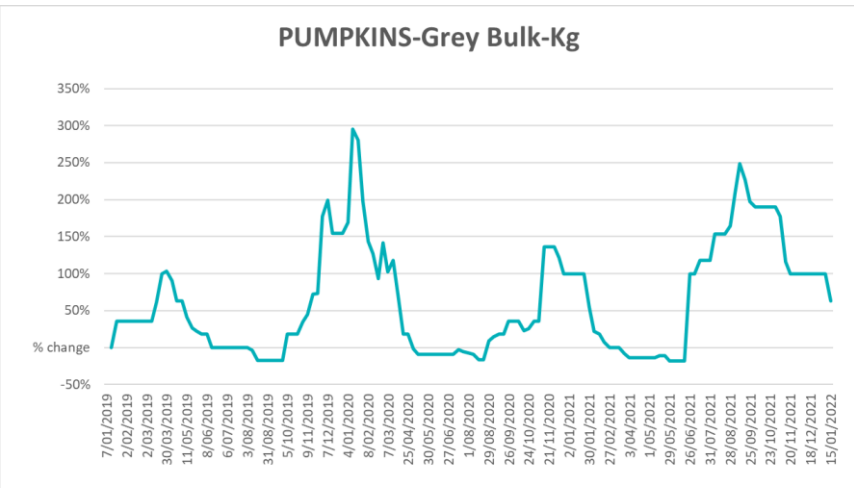
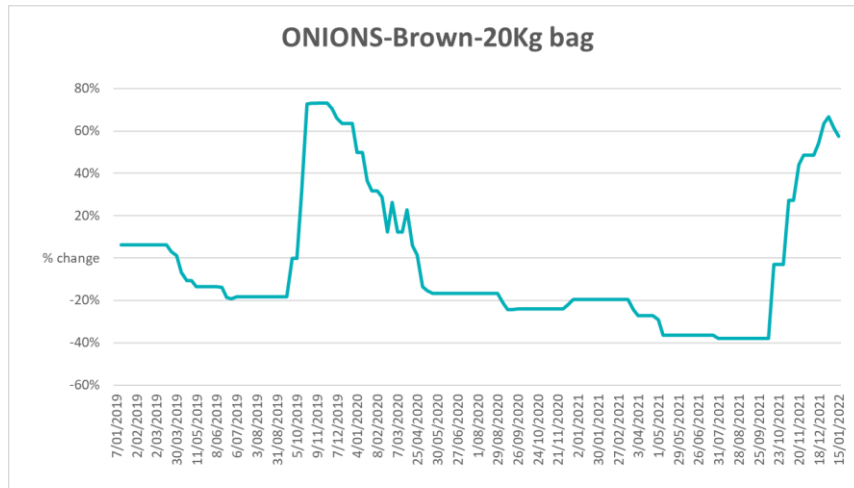
3.4. Global Dairy Trade (GDT) weighted average prices

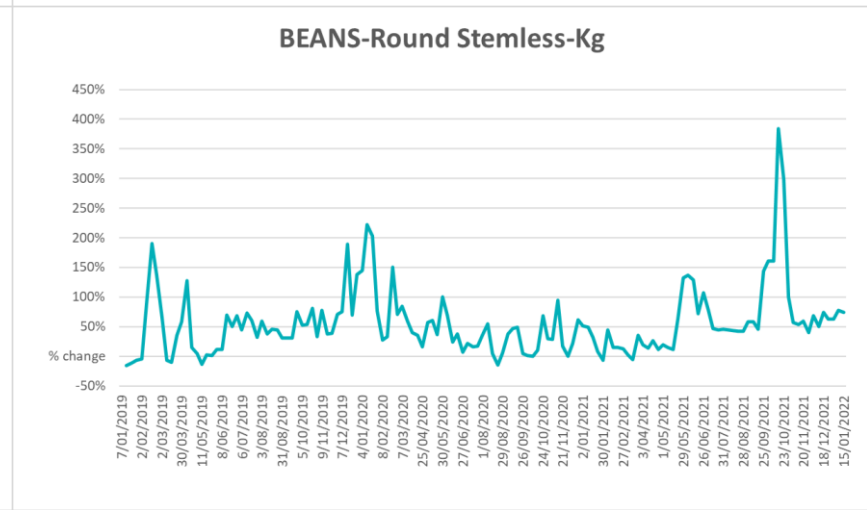
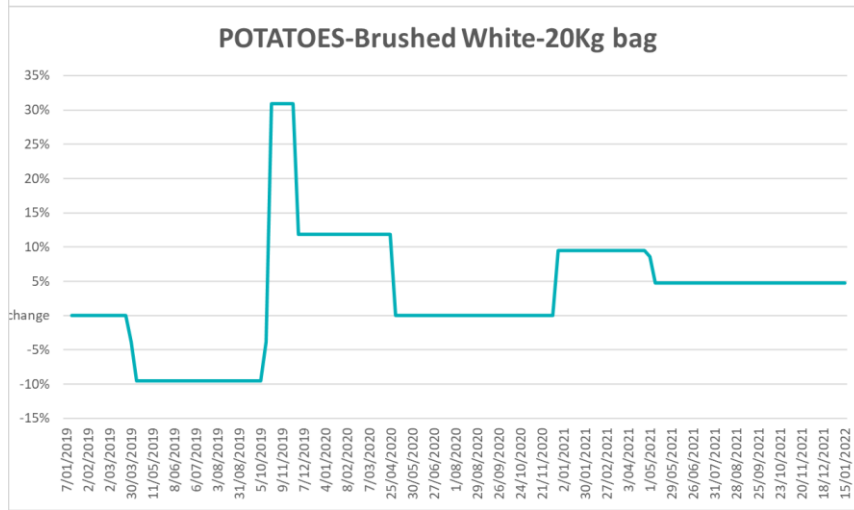
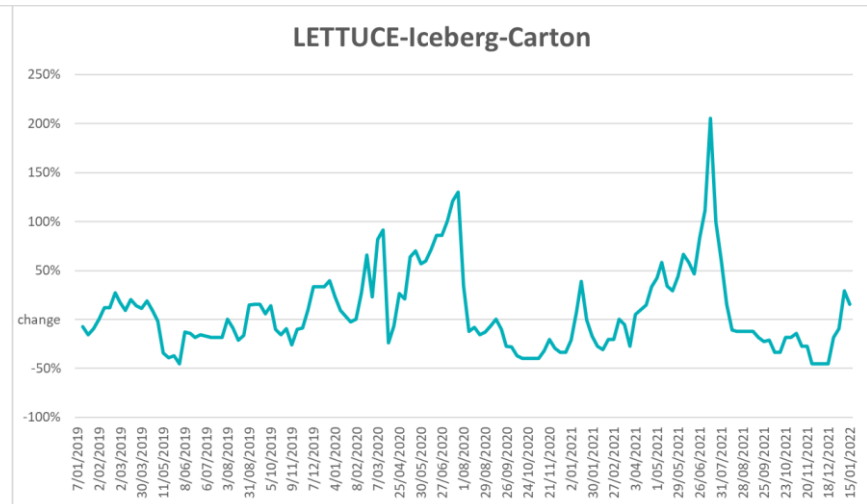
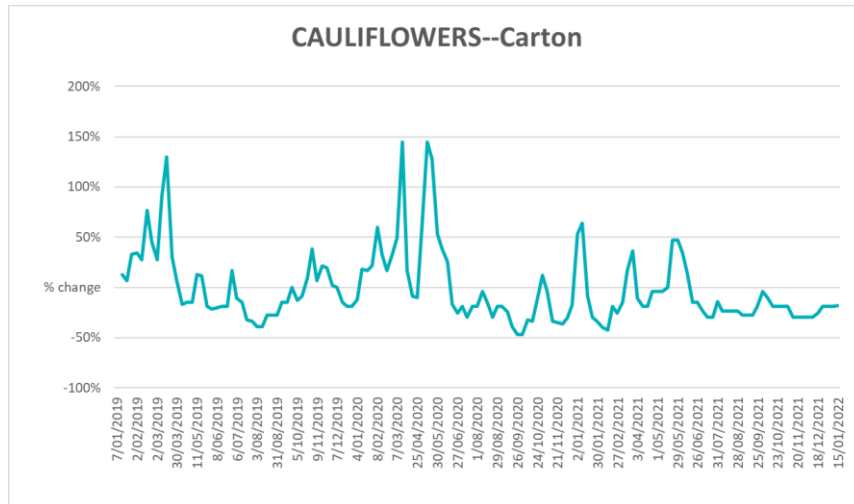


3.5. Selected fruit and vegetable prices

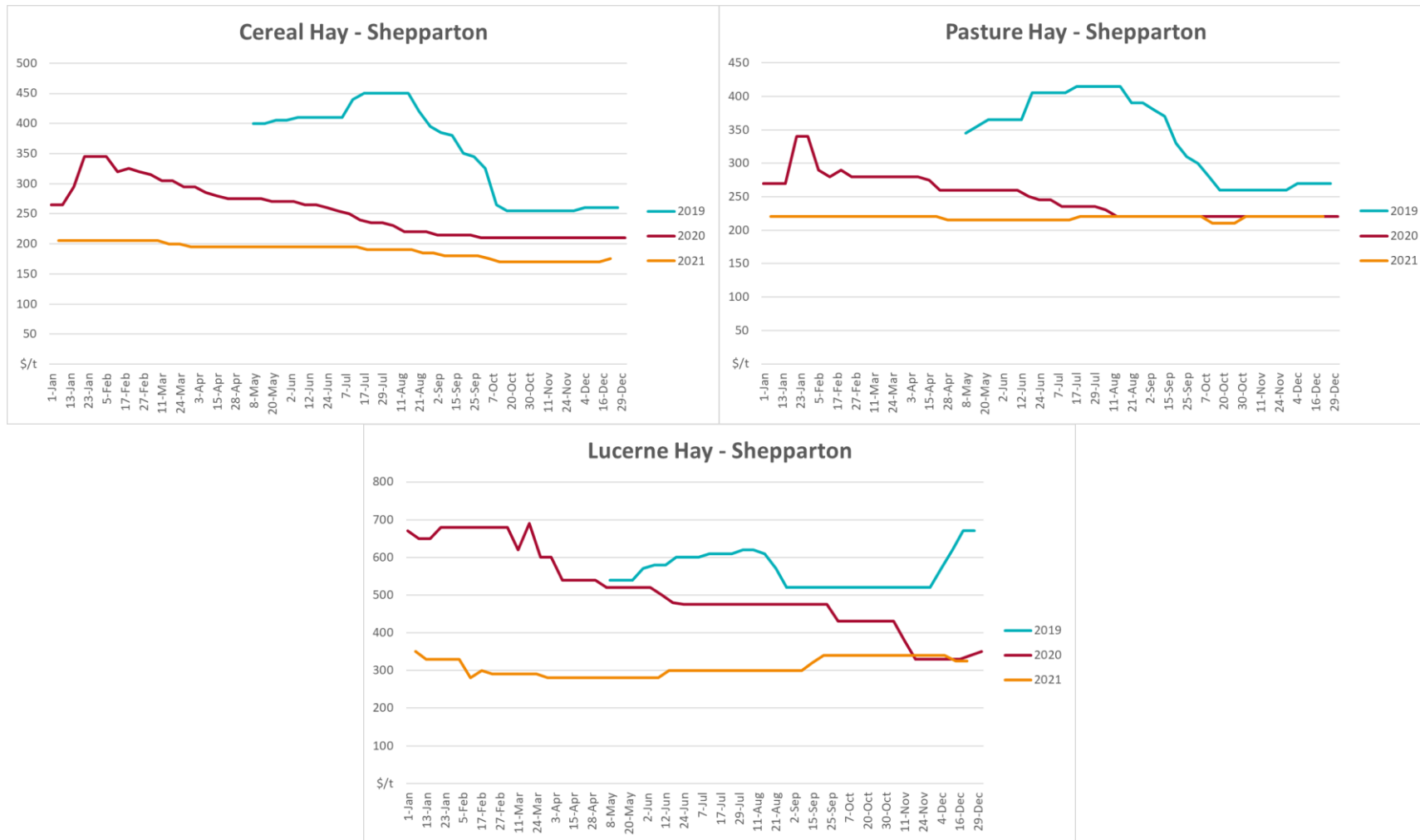








3.6. Selected domestic fodder indicator prices



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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Department of Agriculture, Water and the Environment

GPO Box 858 Canberra ACT 2601

Telephone 1800 900 090

Web awe.gov.au/abares

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