



Weekly Australian Climate, Water and Agricultural Update

No. 32/2022

18 August 2022

Summary of key issues

- For the week ending 17 August 2022, low-pressure systems and cold fronts brought moderate to heavy rainfall across southern Australia. High-pressure systems over northern parts of the country resulted in clear, dry conditions (see Section 1.1).
- Another week of moderate rainfall across central New South Wales and parts of southern Queensland has potentially exacerbated waterlogging concerns in low lying areas, with soil moisture levels already well above average for this time of year. Western Australian cropping regions also received another week of moderate rainfall, with soil moisture levels above average to very much above average for this time of year. The rainfall will positively influence yield prospects across most cropping areas, but for areas where crops have been planted on heavy clay soils in Western Australia, there is increased risk of waterlogging.
- Below average rainfall globally during July is likely to result in lower-than-expected wheat production potential in Argentina, the European Union, and parts of Canada. Further, the conflict in Ukraine continues to generate uncertainty around wheat, corn and sunflower production for 2022. Below average rainfall and above average temperatures in recent months have also negatively affected corn production across parts of Argentina, Brazil, the European Union and the United States. Global production conditions have deteriorated compared to those used to formulate ABARES forecasts of global grain supplies and world prices in its June 2022 edition of the *Agricultural Commodities Report*. As a result, global grain and oilseed production is likely to be lower than that forecast in June (see Section 1.2).
- Over the 8-days to 25 August 2022, cold fronts are forecast to bring light to moderate rainfall to areas across south-eastern Australia. Across the remainder of the country, high-pressure systems will persist, providing clear, dry conditions. The light to moderate rainfall forecast for cropping regions in southern New South Wales, Victoria and South Australia will benefit winter crops where soil moisture levels are currently below average to average. The dry conditions expected across northern New South Wales, Queensland and Western Australia will be a welcome relief, allowing soil moisture levels and the risk of waterlogging to subside. Overall, yield prospects across major cropping regions look very favourable for this point in the season. However, the most sensitive periods for yield development (flowering and grain filling) are yet to come. A lack of plant available moisture and frost damage during these periods would negatively impact the production outlook (see Section 1.3).
- Water storage in the Murray–Darling Basin (MDB) increased by 143 gigalitres (GL) between 10 August 2022 and 17 August 2022. The current volume of water held in storage is 23,041 GL, which represents 91% of total capacity. This is 14% or 2,884 GL more than at the same time last year.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$78 per ML on 5 August 2022 to \$77 per ML on 12 August 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 Barmah choke trade constraint.

1. Climate

1.1. Rainfall this week

For the week ending 17 August 2022, low-pressure systems and cold fronts brought moderate to heavy rainfall across southern Australia. High-pressure systems over northern parts of the country resulted in clear, dry conditions.

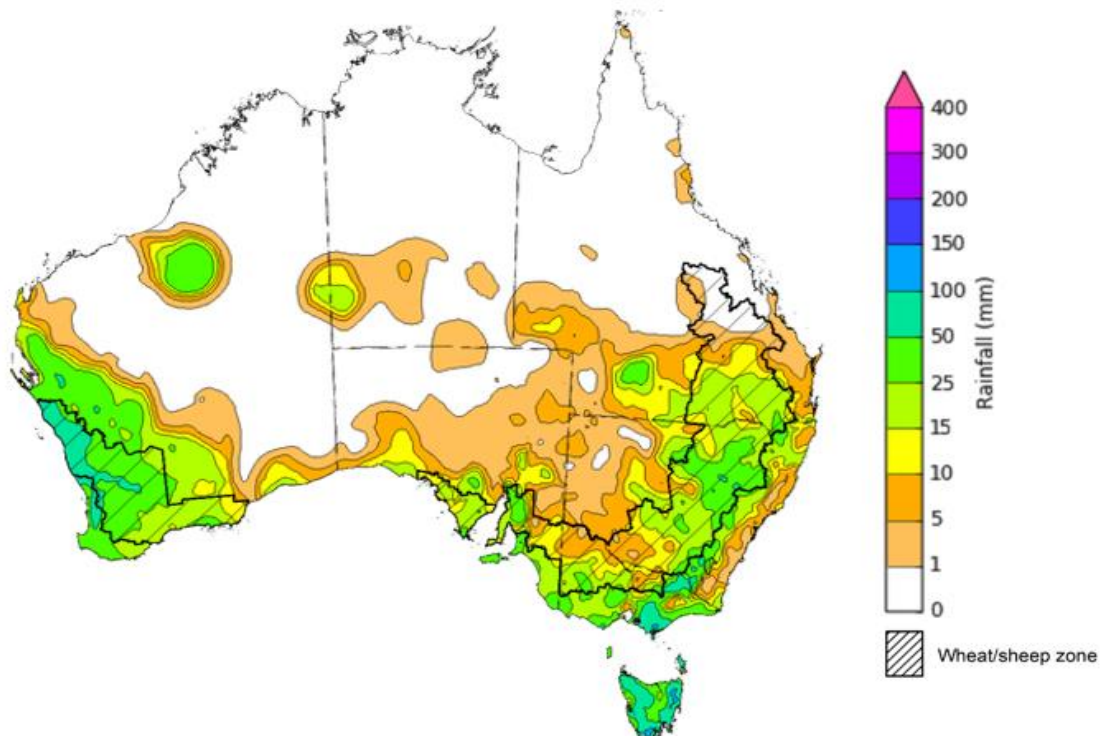
Rainfall totals of between 10 and 50 millimetres were recorded across much of central New South Wales, southern Queensland, Victoria, the south of South Australia, the south-west and other isolated parts of Western Australia, and the south-west of the Northern Territory. Rainfall totals in excess of 50 millimetres were recorded in parts of eastern Victoria, the south-west of Western Australia and most of Tasmania. Remaining parts of Australia received little to no rainfall.

In Australian cropping regions, rainfall totals of between 10 and 50 millimetres were recorded across most of New South Wales, South Australia and Western Australia, as well as southern Queensland and Victoria. Rainfall totals in excess of 50 millimetres were recorded across western parts of cropping regions in Western Australia. Little to no rainfall was recorded across remaining cropping regions for the week ending 10 August 2022.

Another week of moderate rainfall across central New South Wales and parts of southern Queensland has potentially exacerbated waterlogging concerns in low lying areas, with soil moisture levels already well above average for this time of year. For winter crops not impacted by ongoing waterlogging, the recent rainfalls will have supported yield potentials and boosted soil moisture levels, which crops can draw on through critical plant and grain development periods in spring.

Western Australian cropping regions also received another week of moderate rainfall, with soil moisture levels above average to very much above average for this time of year. The rainfall will positively influence yield prospects across most cropping areas, but for areas where crops have been planted on heavy clay soils in Western Australia, there is increased risk of waterlogging. In central and northern cropping regions of South Australia, rainfall over the past week has provided much needed relief to winter crops, where plant available water had steadily declined over recent weeks.

Rainfall for the week ending 17 August 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/>

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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 (IPCC 2012). 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.

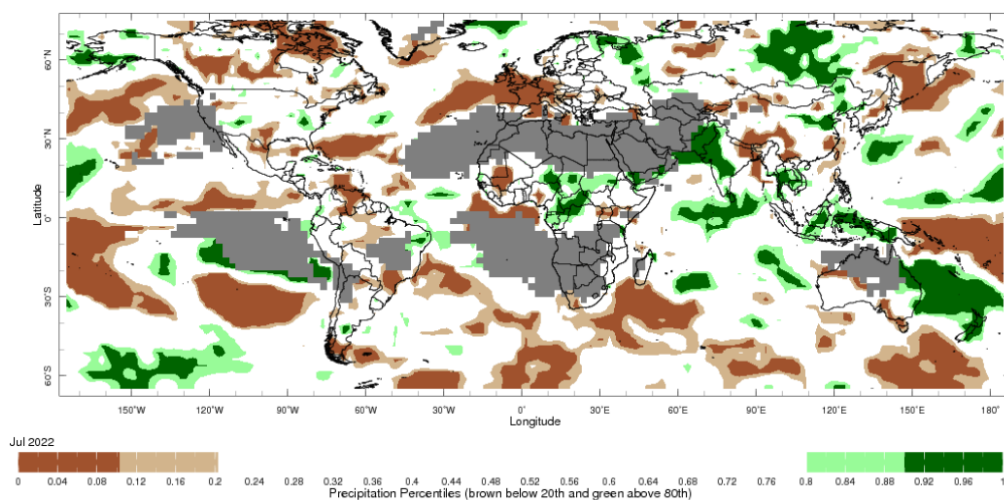
July precipitation percentiles and current production conditions

As of the end of July 2022, rainfall was mixed for the world's major grain-producing and oilseed-producing regions.

In the northern hemisphere, precipitation was below average across parts of southern United States, western areas of the European Union, central Canada and parts of southern and north-western China. Precipitation was above average for parts of eastern and south-western United States and north-eastern China. 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, July precipitation was below average for parts of northern Argentina, as well as parts of southern Brazil and southern Australia. Precipitation was above average for parts of eastern Australia and the northeast of Brazil. Precipitation was close to average across the remainder of major grain-producing and oilseed-producing regions in the southern hemisphere.

Global precipitation percentiles, July 2022



Note: The world precipitation percentiles indicate a ranking of precipitation for July, 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 July 2022 are compared with rainfall recorded for that period during the 1981 to 2010 base period.

Source: International Research Institute for Climate and Society

As at 28 July 2022 global production conditions were generally favourable for rice and soybeans, but mixed for the production of wheat and corn.

In the northern hemisphere production conditions for wheat have been mixed. Climatic conditions have been favourable for wheat development in China, the Russian Federation, Turkey and the United Kingdom. Production conditions were variable for the European Union, Canada, Kazakhstan and the United States with dryness and excess heat in some areas and excessive moisture in others negatively affecting yield prospects. In the Ukraine, the ongoing war has reduced the area that can be harvested in and near the conflict zones. In the southern hemisphere, production conditions are

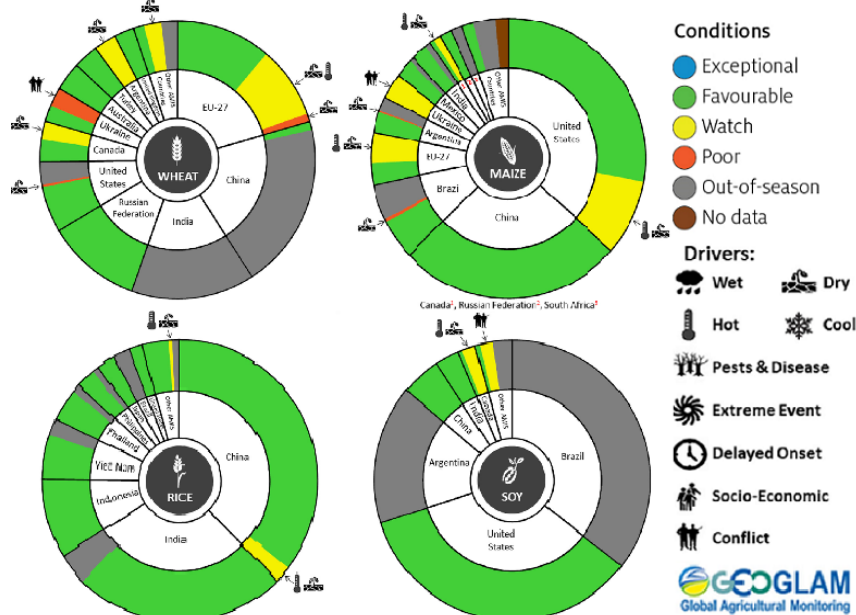
favourable in Australia but in Argentina dry conditions continues to hamper sowing throughout the country, which is expected to reduce the total area sown compared to last year.

In Argentina, harvesting of late-planted corn crops is progressing well with some reduced yields due to earlier hot and dry weather. In Brazil, production conditions are variable as harvest continues for the summer-planted crop as a lack of rain in the south-east region negatively impacted yields. In Mexico, harvesting is wrapping up under favourable conditions. In the European Union, Canada and the United States, growing conditions are mixed, with hot and dry conditions negatively affecting yield prospects in some regions. In India sowing is progressing under favourable conditions. In China production conditions have improved across the Northern China Plain on the back of recent rainfall. In Ukraine, production conditions remain mixed due the ongoing war.

In China, hot and dry conditions in the south are reducing potential yields of late-season rice, while single-season rice is seeing favourable growing conditions. In the Philippines and Thailand, plant growth of wet-season rice is continuing under generally favourable conditions. In Thailand the total sown area is expected to increase compared to last year due to ample rainfall. In Vietnam, the harvest of winter-spring rice is ongoing in the north while the sowing of summer-autumn rice begins. In the south, the summer-autumn rice growth is proceeding under favourable conditions. In Indonesia, harvesting of wet-season rice is wrapping up under favourable conditions with an increase in the total harvested area compared to last year.

In the United States, growing conditions remain favourable for soybeans despite recent hot weather along the western and southern growing regions. There is a slight increase in total sown area compared to last year. In Canada, dry conditions have developed over the main producing province of Ontario, while conditions have improved in Manitoba. There is a reduction in the sown area compared to the 5-year average, most likely driven by a mixed beginning to the season in the Prairies. In China, conditions are favourable with the crop in the vegetative to reproductive stage of growth. In India, sowing is wrapping up under favourable conditions and an increase in total sown area compared to last year. In Ukraine, climatic conditions remain supportive of plant growth while the war continues to bring uncertainties.

Crop conditions, AMIS countries, 28 July 2022



AMIS Agricultural Market Information System.

Source: AMIS

The global climate outlook for September 2022 to November 2022 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 September 2022 to November 2022

Region	September- November rainfall outlook	Potential impact on production
Argentina	Below average rainfall is expected across most of Argentina between September to November 2022.	Below average rainfall is likely to adversely affect the heading and filling of wheat and the planting of corn, cotton and soybeans through September and October. These conditions may also adversely impact early corn silking, and the planting of soybeans, sunflower, rice, sorghum and millet in November.
Black Sea Region	Kazakhstan, Ukraine and The Russian Federation - No strong tendency towards either above or below average rainfall between September to November 2022.	Average rainfall is likely to support spring wheat harvesting in the north-east of Russia and early cotton harvesting in southern regions. Average rainfall across Kazakhstan and Ukraine is likely to support winter wheat and rapeseed planting in September, and corn and sunflower filling in September and October.
Brazil	Above average rainfall is more likely in northern Brazil while below average rainfall is more likely across the south of Brazil.	Below average rainfall in parts of southern Brazil is likely to adversely affect wheat filling leading up to harvest in October, as well as corn and soybean planting and development in September and October. This may also affect the planting of groundnuts, sorghum, cotton, sunflower, rice and millet in November.
Canada	There is no strong tendency towards below or above average rainfall across much of Canada between September to November 2022.	Average rainfall is unlikely to be sufficient to increase the yield potential of corn, soybeans and sunflower at the grain filling and maturing stage through September and October.
China	Above average rainfall is likely across central China and below average across western, southern and north-eastern China between September to November 2022.	Below average rainfall is likely to adversely affect the development and harvest of cotton, corn, sorghum, soybean, sunflower, groundnuts and spring wheat across north-eastern, southern and western China. In central China, above average rainfall is likely to support the planting of winter wheat and rapeseed in October.
Europe	Below average rainfall more likely for western and central Europe between September to November 2022.	Below average rainfall may adversely impact the development and harvest of corn, cotton and sorghum in western and central Europe. Below average rainfall may also impact winter wheat and rapeseed planting in parts of western and central Europe during October and November.
South Asia (India)	Above average rainfall between September to November 2022 is likely across much of India.	Average to above average rainfall is likely to benefit cotton blooming in the south during September. It will also assist corn, sorghum, rice, millet, groundnuts and sunflower filling in September leading up to harvest in October and November, and winter wheat and rapeseed planting in November.
Southeast Asia (SEA)	Above average rainfall is likely for northern SEA, with a strong likelihood of above average rainfall for Indonesia between September to November 2022.	Above average rainfall in SEA is likely to support corn and rice maturing during September leading up to harvest in October.
The United States of America	Above average rainfall is more likely for parts of eastern US and below average rainfall is more likely across much of the centre and the western half of the US.	Below average rainfall is likely to adversely affect the filling and maturing of soybeans, sunflower, millet, cotton, rice, corn, sorghum and groundnuts in September leading up to harvest in October and November.

1.3. Rainfall forecast for the next eight days

Over the 8-days to 25 August 2022, cold fronts are forecast to bring light to moderate rainfall to areas across south-eastern Australia. Across the remainder of the country, high-pressure systems will persist, providing clear, dry conditions.

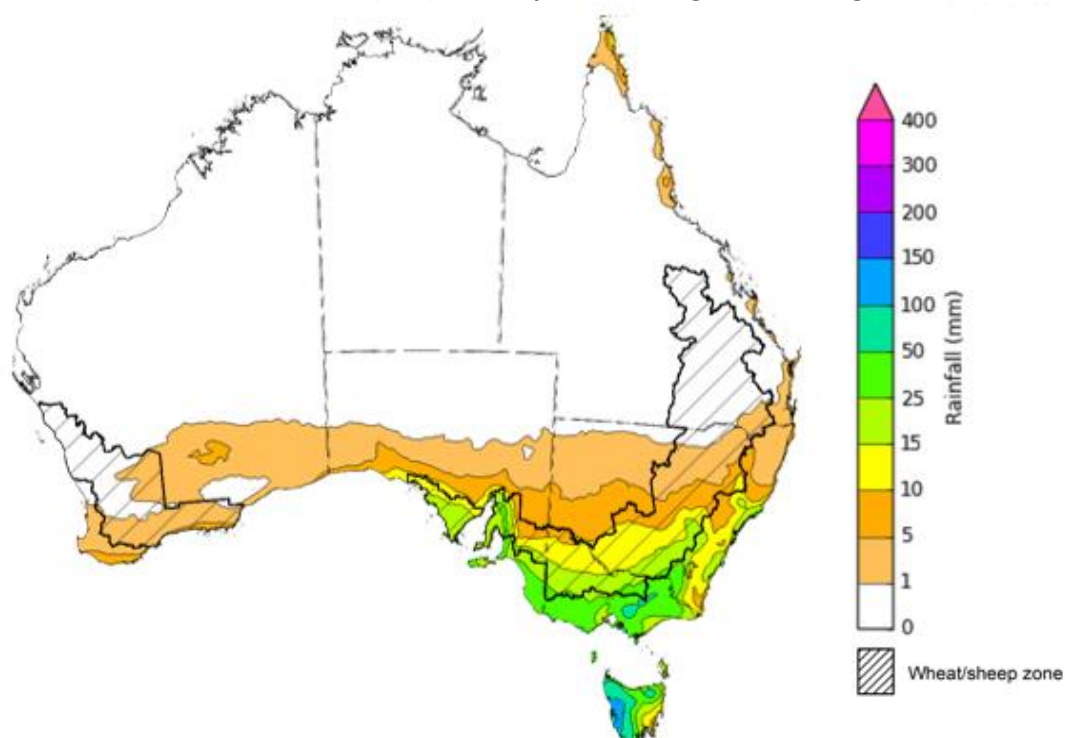
Rainfall totals of between 10 and 50 millimetres are forecast across southern and eastern New South Wales, Victoria, the south of South Australia and eastern Tasmania. Rainfall totals in excess of 50 millimetres are forecast for parts of eastern Victoria and western Tasmania. Little to no rainfall is forecast across remaining parts of Australia over the next 8-days.

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

The light to moderate rainfall forecast for cropping regions in southern New South Wales, Victoria and South Australia will benefit winter crops where soil moisture levels are currently below average to average. Across south-eastern cropping regions, the rainfall will consolidate falls received over the past week and improve yield potentials. However, further rainfall will be required as we enter spring.

The dry conditions expected across northern New South Wales, Queensland and Western Australia will be a welcome relief, allowing soil moisture levels and the risk of waterlogging to subside. Overall, yield prospects across major cropping regions look very favourable for this point in the season. However, the most sensitive periods for yield development (flowering and grain filling) are yet to come. A lack of plant available moisture and frost damage during these periods would negatively impact the production outlook. Growers in Queensland will also be looking to start field preparation over the coming weeks for planting of summer crops in September.

Total forecast rainfall (mm) for the period 18 August to 25 August 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 143 gigalitres (GL) between 10 August 2022 and 17 August 2022. The current volume of water held in storage is 23,041 GL, which represents 91% of total capacity. This is 14% or 2,884 GL more than at the same time last year.

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

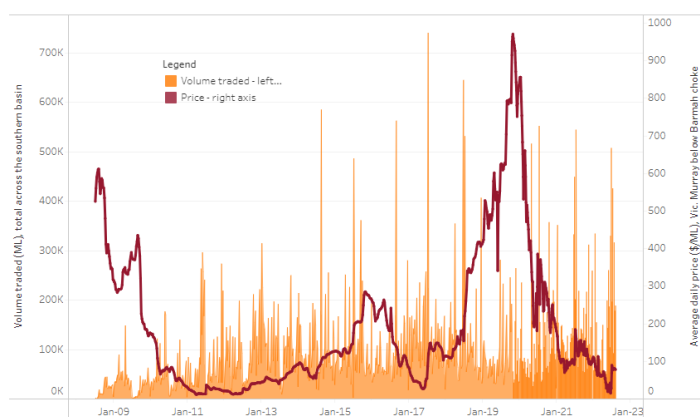


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$78 per ML on 5 August 2022 to \$77 per ML on 12 August 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 Barmah choke trade constraint.

Region	\$/ML
NSW Murray Above	48
NSW Murrumbidgee	90
VIC Goulburn-Broken	63
VIC Murray Below	77

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 18 August 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-180822

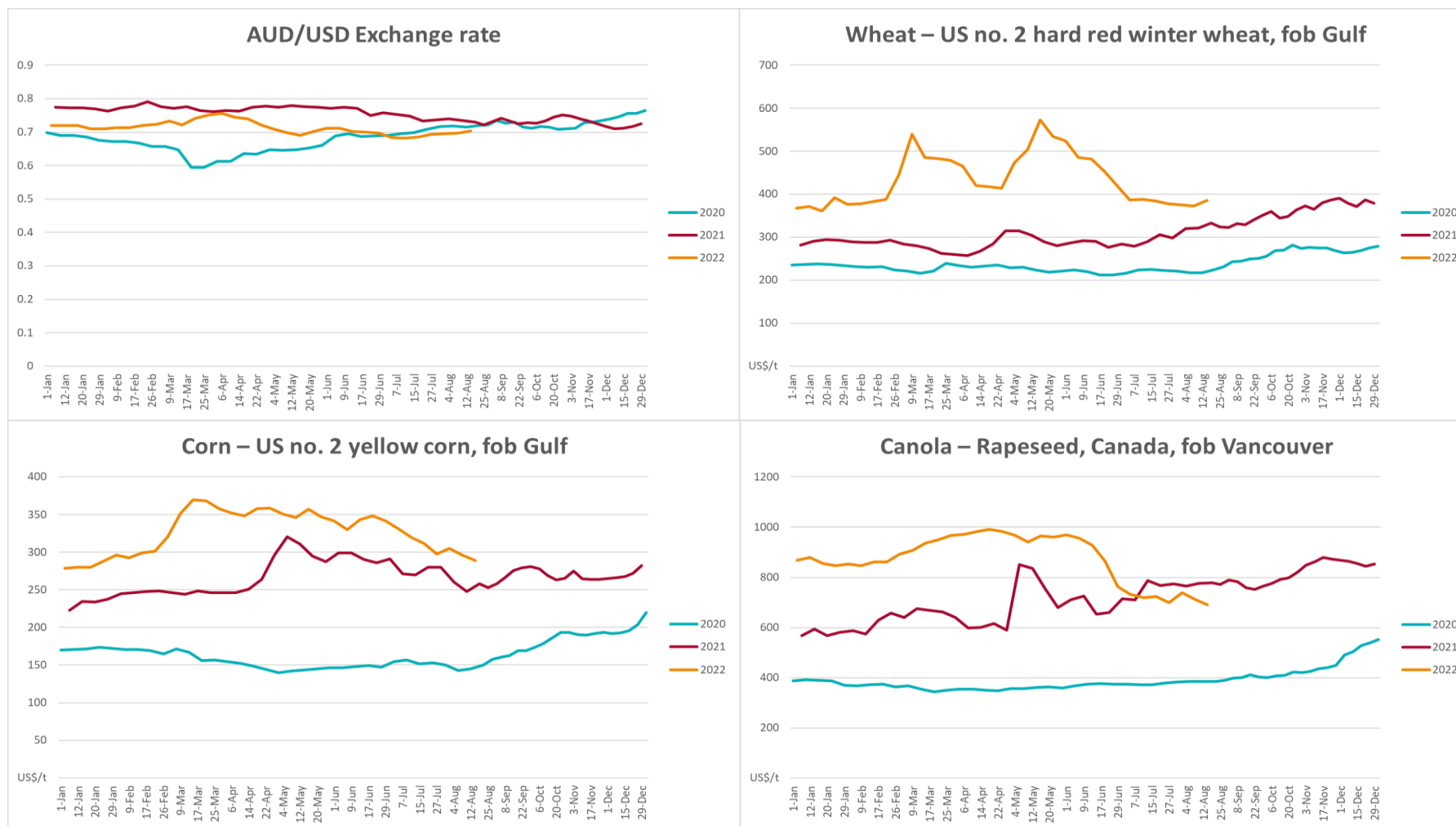
3. Commodities

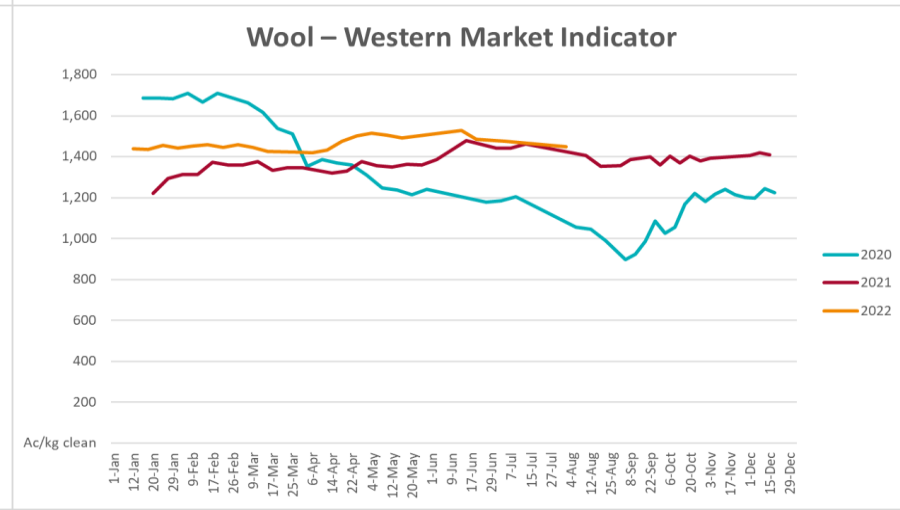
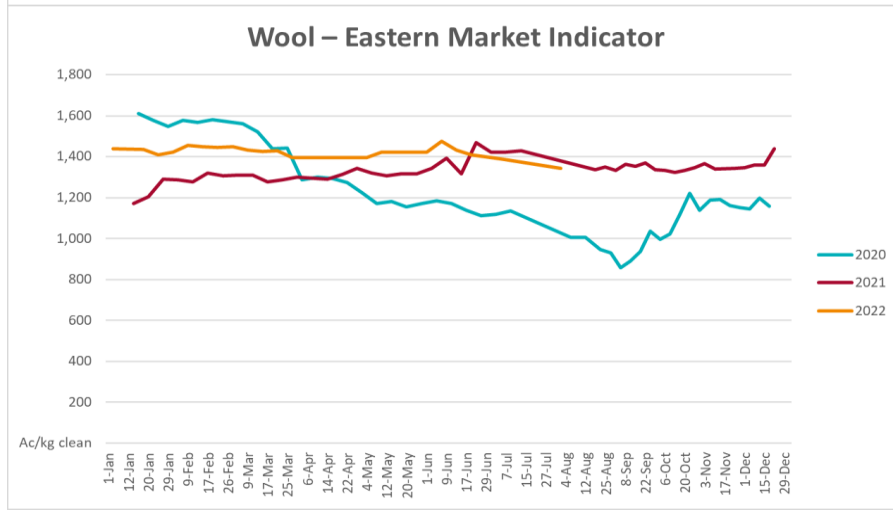
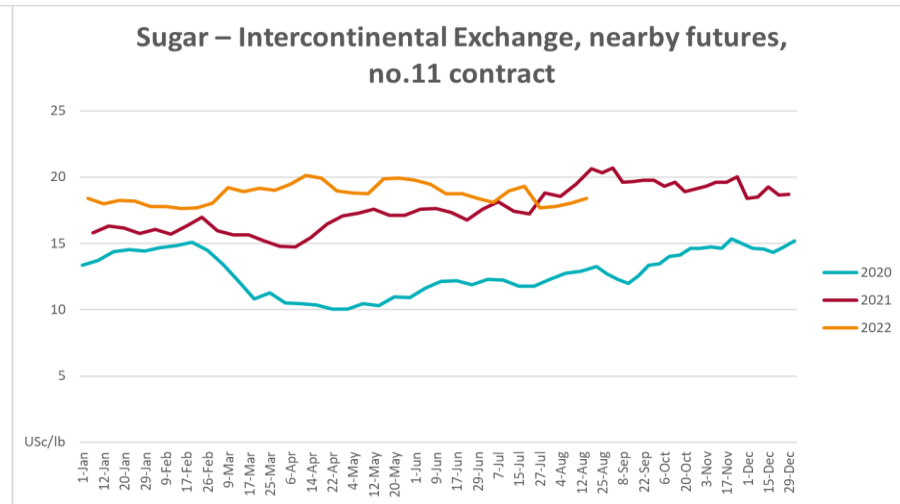
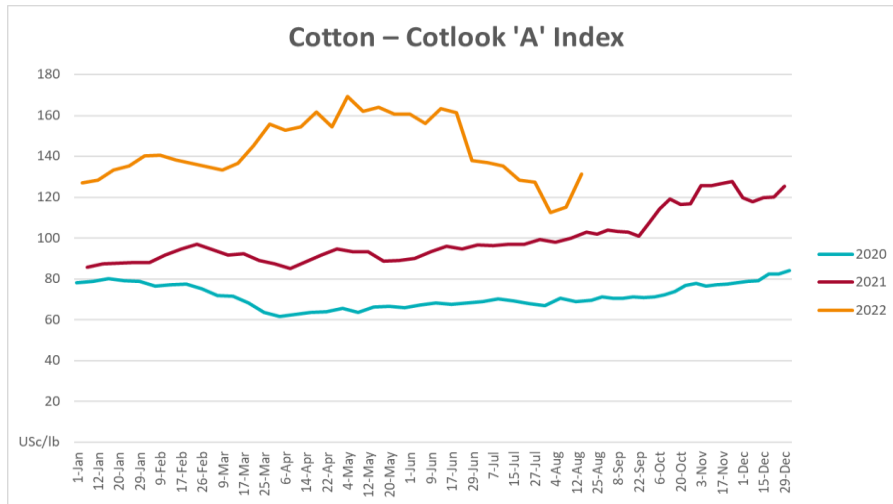
Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	17-Aug	A\$/US\$	0.70	0.70	1%	0.72	-3%
Wheat – US no. 2 hard red winter wheat, fob Gulf	17-Aug	US\$/t	386	373	3%	323	19%
Corn – US no. 2 yellow corn, fob Gulf	17-Aug	US\$/t	289	296	-2%	252	14%
Canola – Rapeseed, Canada, fob Vancouver	17-Aug	US\$/t	691	712	-3%	771	-10%
Cotton – Cotlook 'A' Index	17-Aug	USc/lb	131	115	14%	102	29%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	17-Aug	USc/lb	18.4	18.0	2%	20	-9%
Wool – Eastern Market Indicator	03-Aug	Ac/kg clean	1,342	1,388	-3%	1,315	2%
Wool – Western Market Indicator	03-Aug	Ac/kg clean	1,449	1,473	-2%	1,346	8%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	17-Aug	A\$/t	552	561	-2%	418	32%
Feed Wheat – ASW, Port Adelaide, SA	17-Aug	A\$/t	512	521	-2%	410	25%
Feed Barley – Port Adelaide, SA	17-Aug	A\$/t	472	481	-2%	344	37%
Canola – Kwinana, WA	17-Aug	A\$/t	1,089	1,107	-2%	841	30%
Grain Sorghum – Brisbane, QLD	03-Aug	A\$/t	436	434	1%	365	19%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	17-Aug	Ac/kg cwt	994	935	6%	995	0%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	17-Aug	Ac/kg cwt	517	517	0%	723	-29%
Lamb – Eastern States Trade Lamb Indicator	17-Aug	Ac/kg cwt	704	716	-2%	907	-22%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	03-Aug	Ac/kg cwt	367	376	-2%	328	12%
Goats – Eastern States (12.1–16 kg)	12-Jan	Ac/kg cwt	879	879	0%	818	8%
Live cattle – Light steers ex Darwin to Indonesia	01-Jun	Ac/kg lwt	480	480	0%	320	50%
Live sheep – Live wethers (Muchea WA saleyard) to Middle East	20-Apr	\$/head	113	113	0%	122	-7%

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	17-Aug	US\$/t	3,417	3,544	-4%	3,208	7%
Dairy – Skim milk powder	17-Aug	US\$/t	3,524	3,524	0%	2,694	31%
Dairy – Cheddar cheese	17-Aug	US\$/t	5,005	4,798	4%	3,762	33%
Dairy – Anhydrous milk fat	17-Aug	US\$/t	4,990	5,518	-10%	3,981	25%

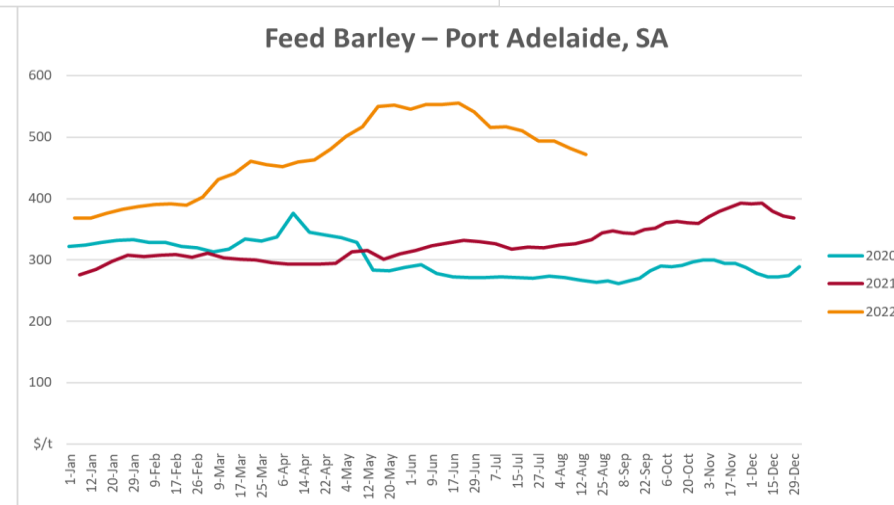
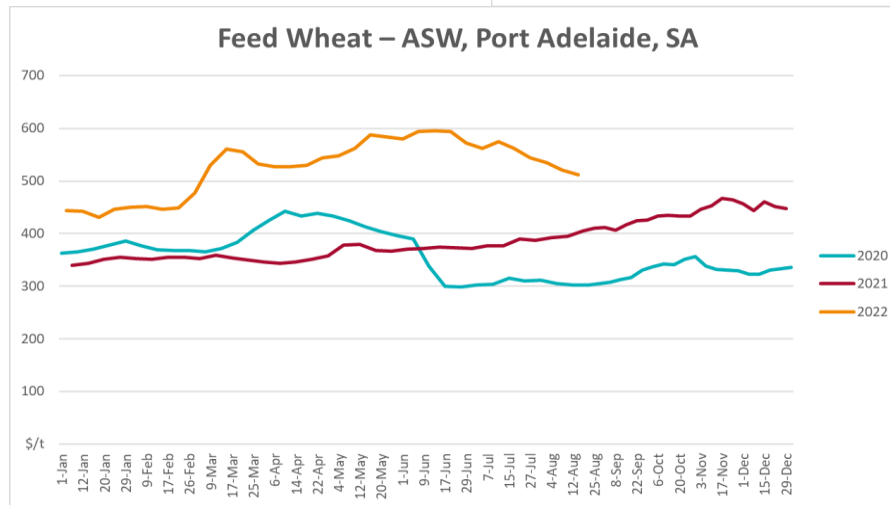
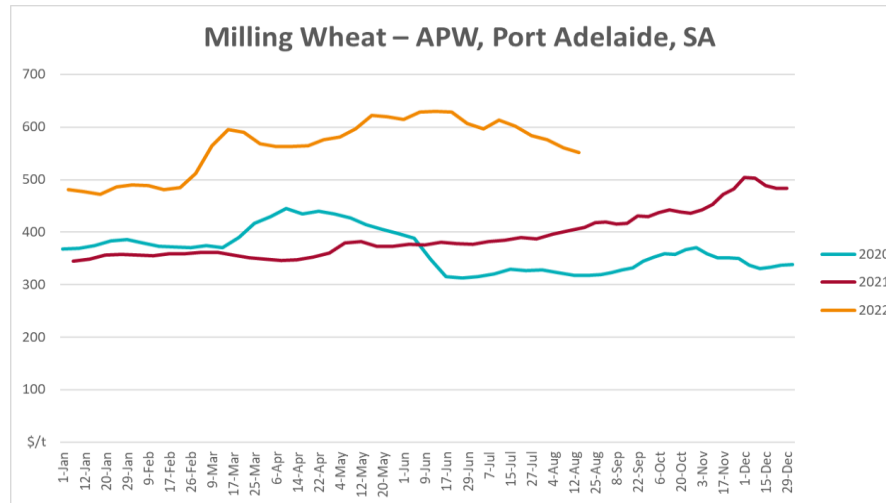
^a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

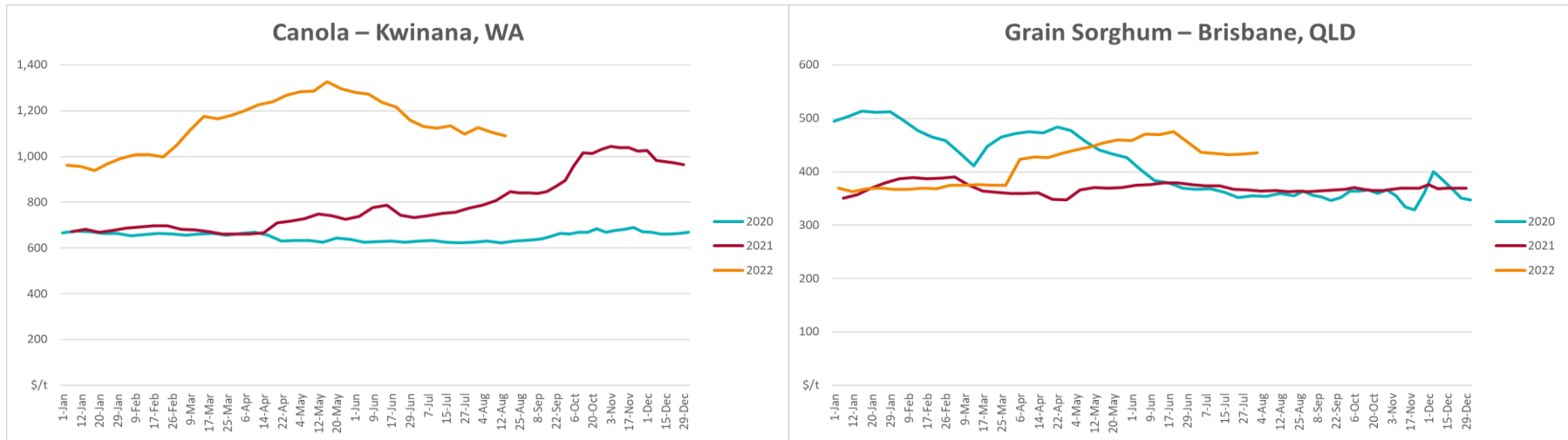
3.1. Selected world indicator prices



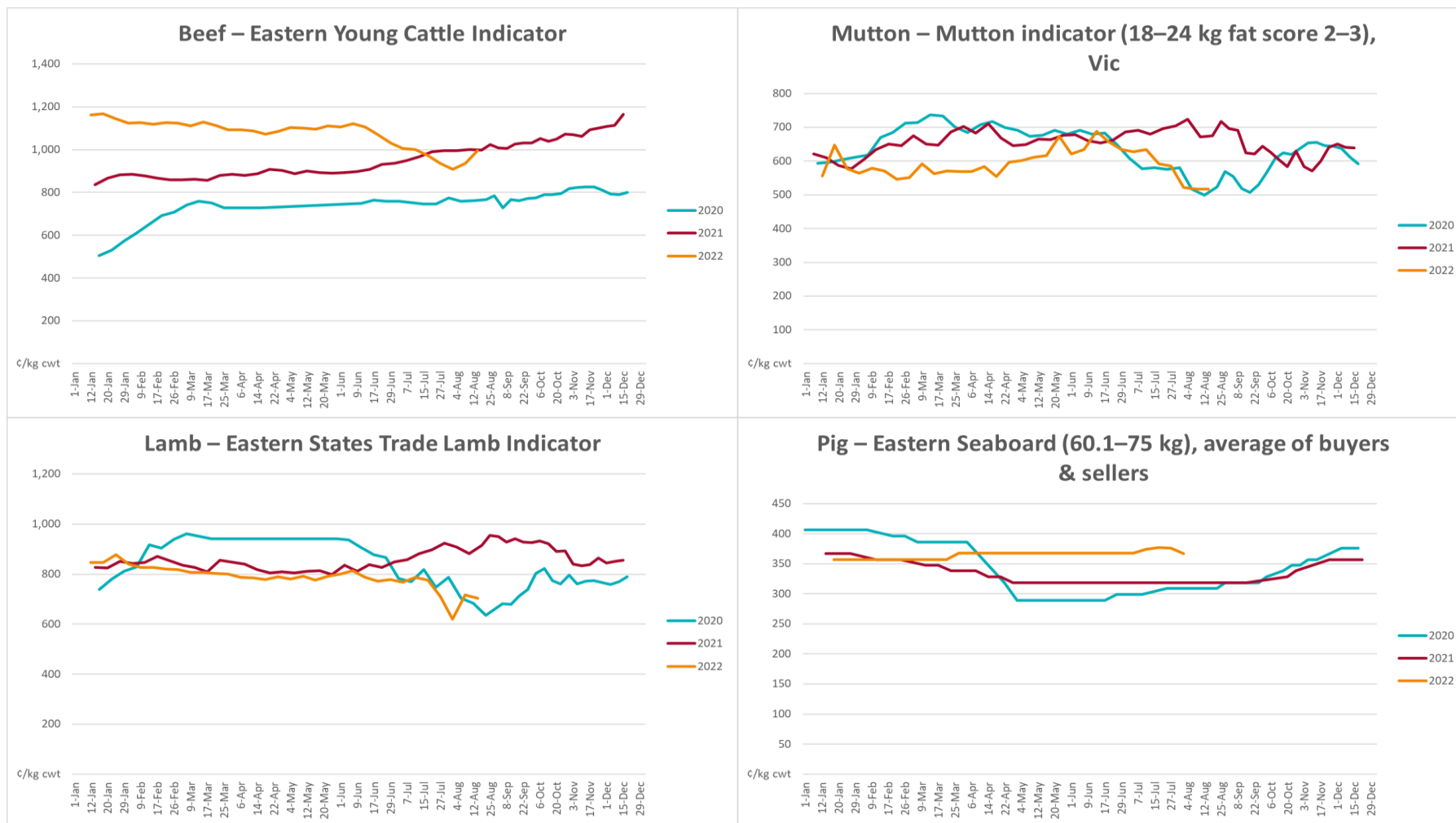


3.2. Selected domestic crop indicator prices

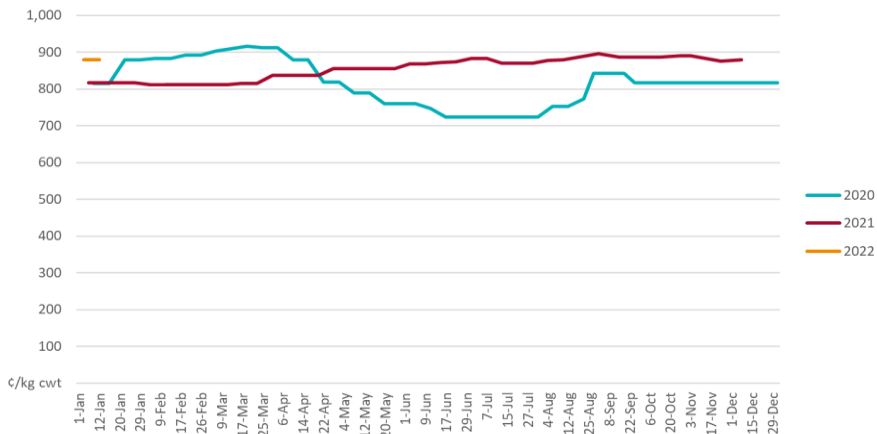




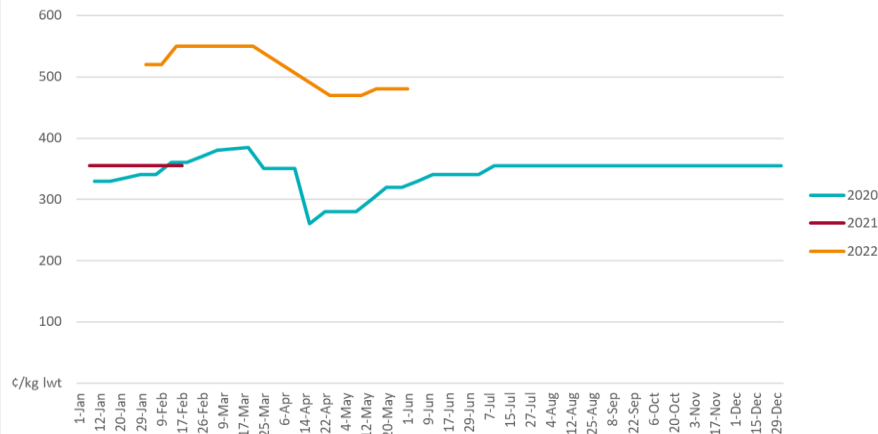
3.3. Selected domestic livestock indicator prices



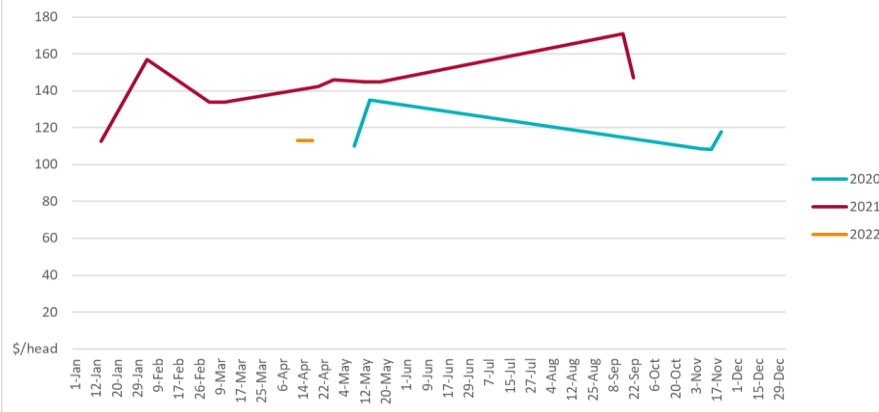
Goats – Eastern States (12.1–16 kg)



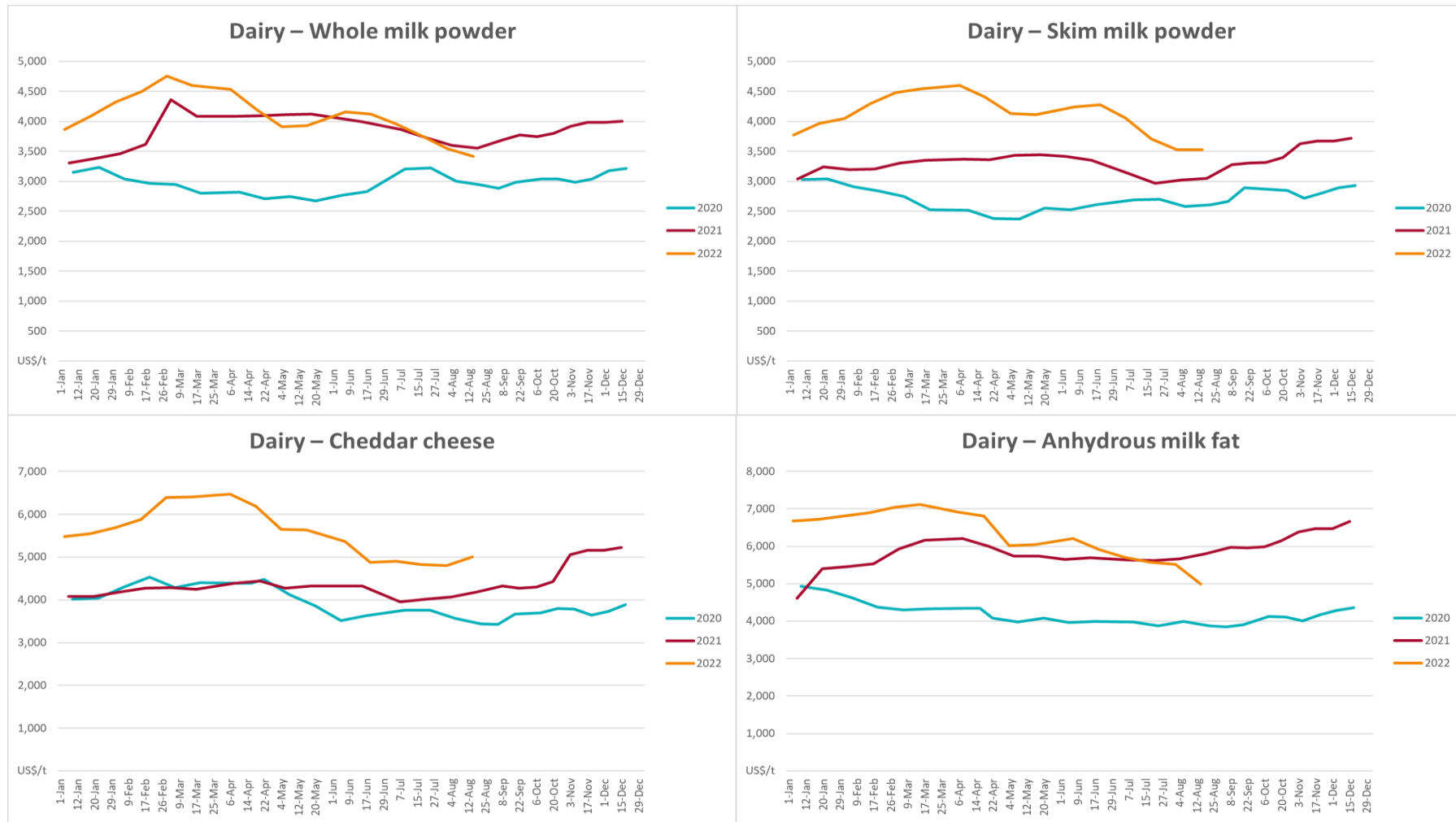
Live cattle – Light steers ex Darwin to Indonesia



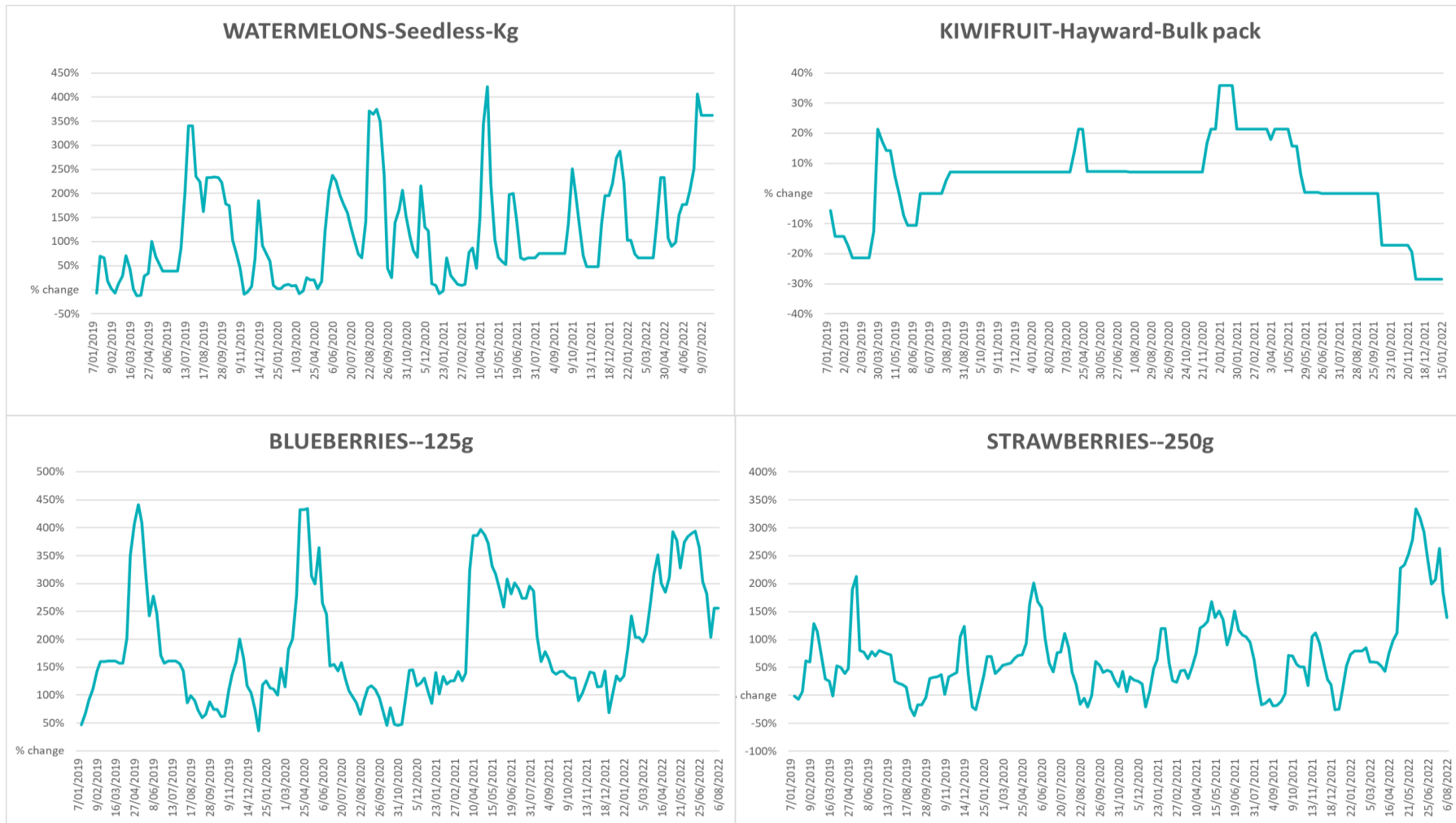
Live sheep – Live wethers (Muechea WA saleyard) to Middle East

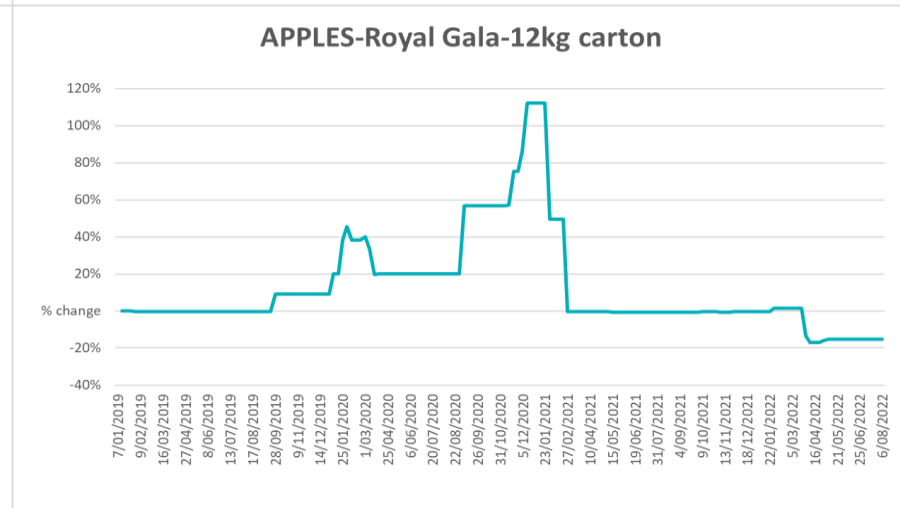
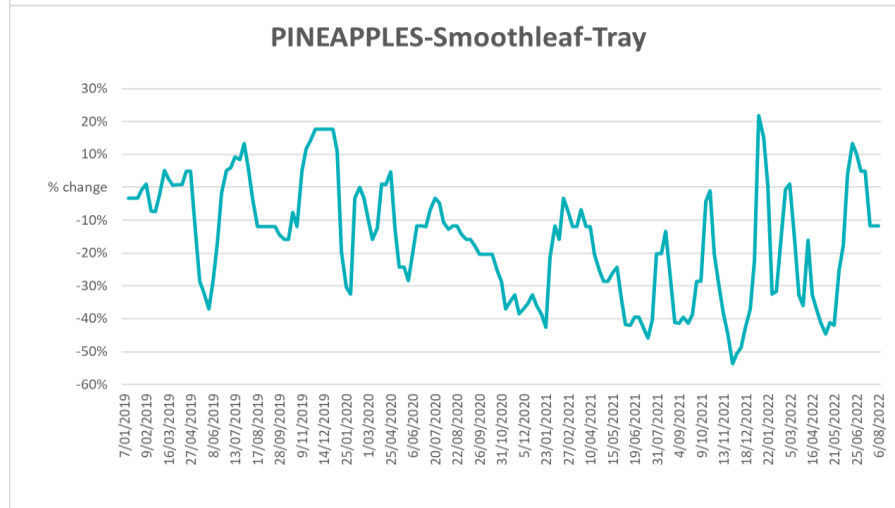
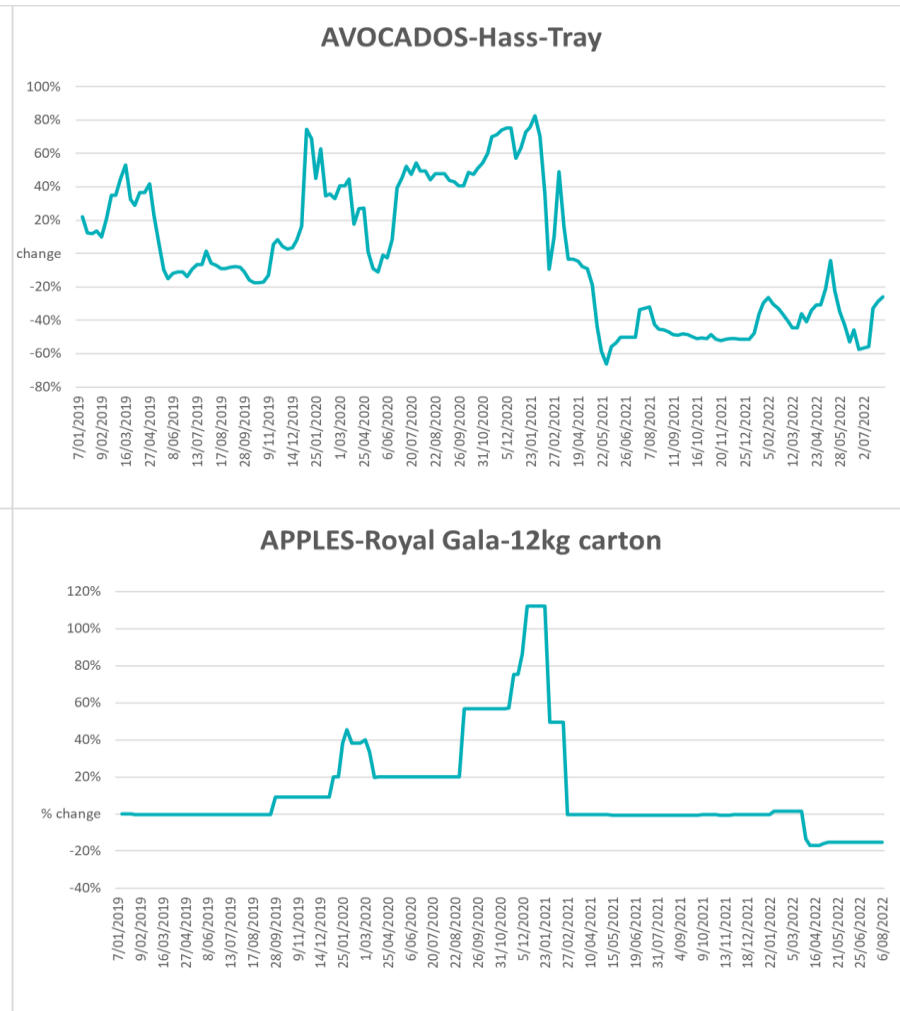
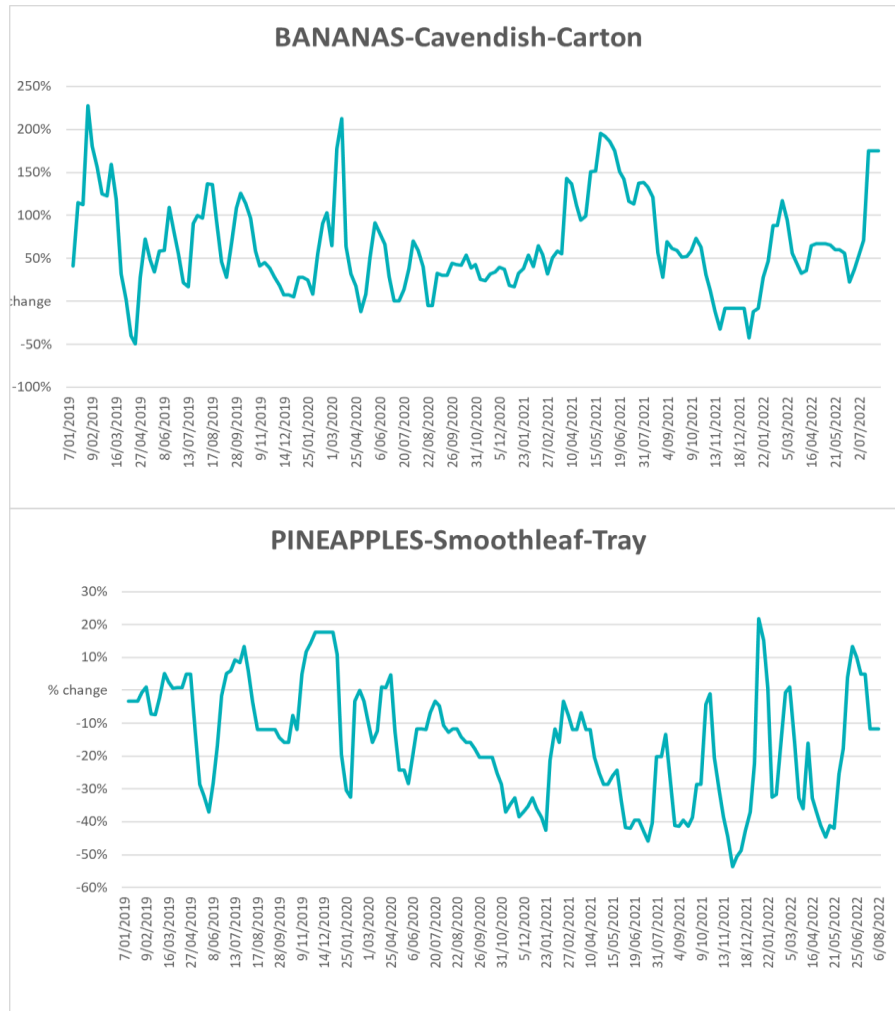


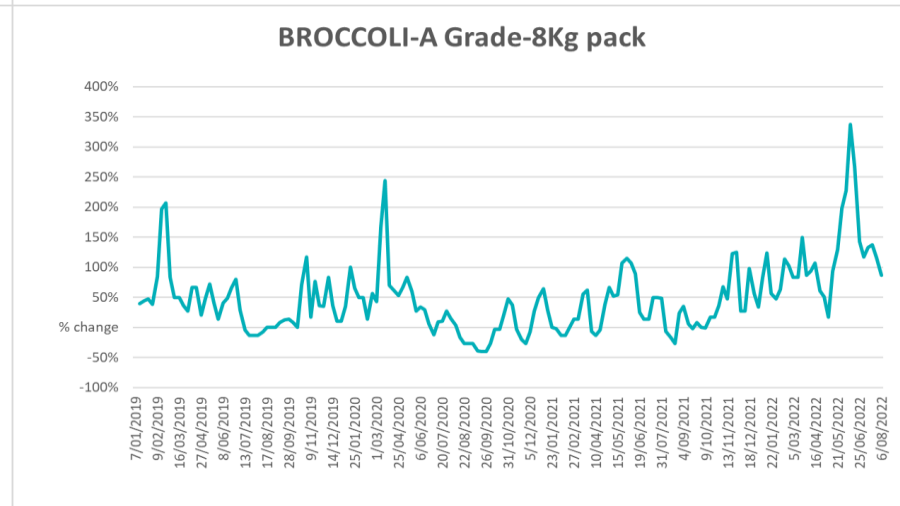
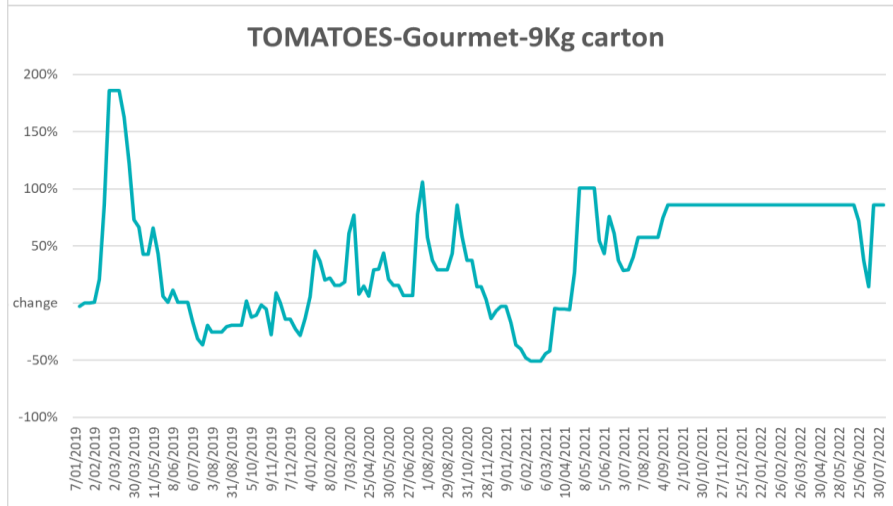
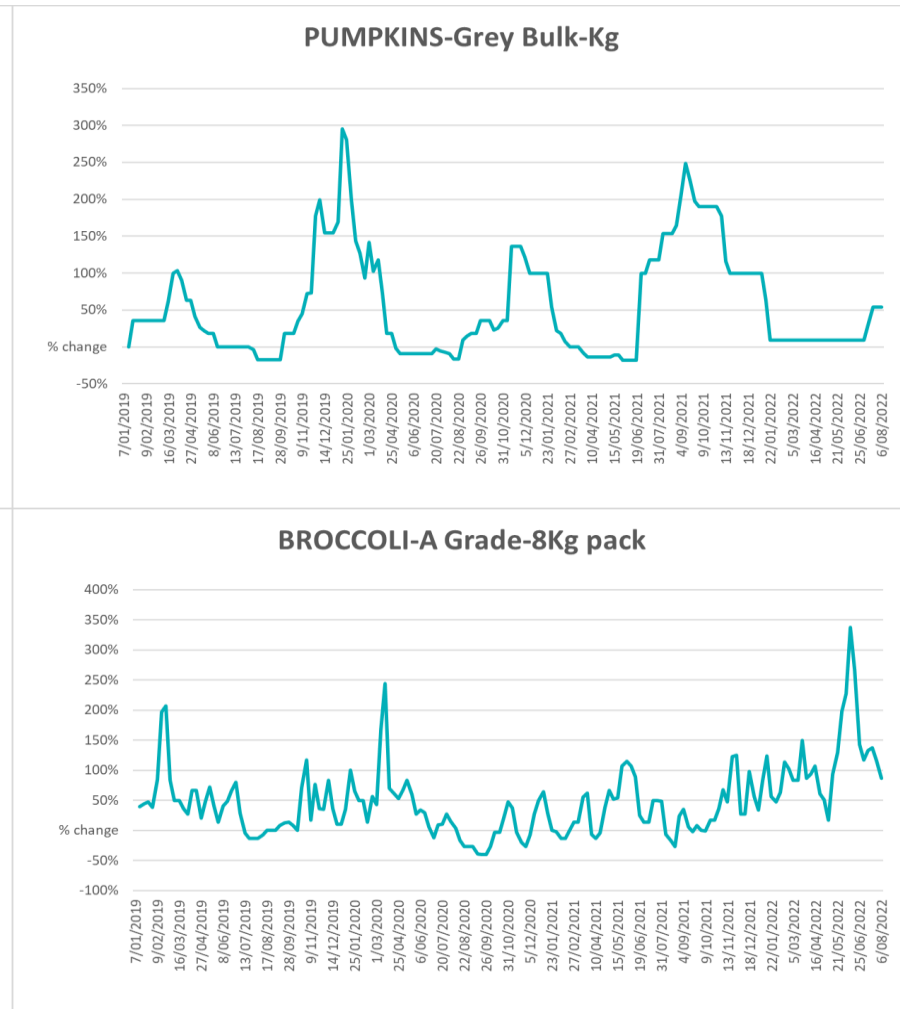
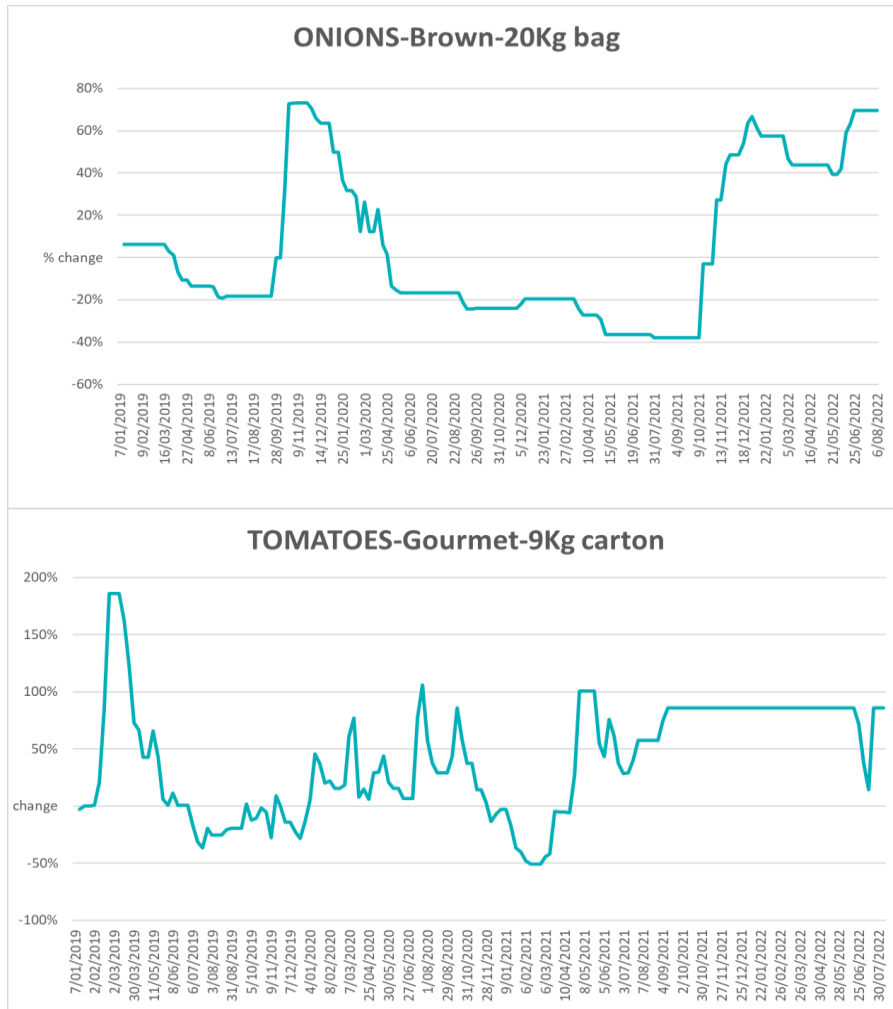
3.4. Global Dairy Trade (GDT) weighted average prices



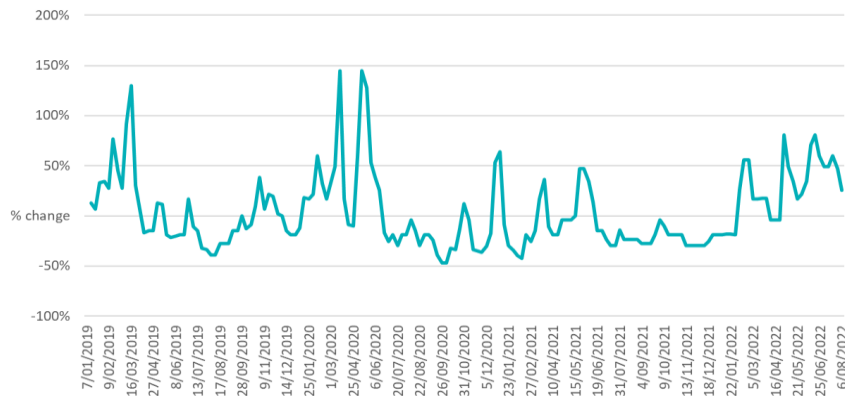
3.5. Selected fruit and vegetable prices



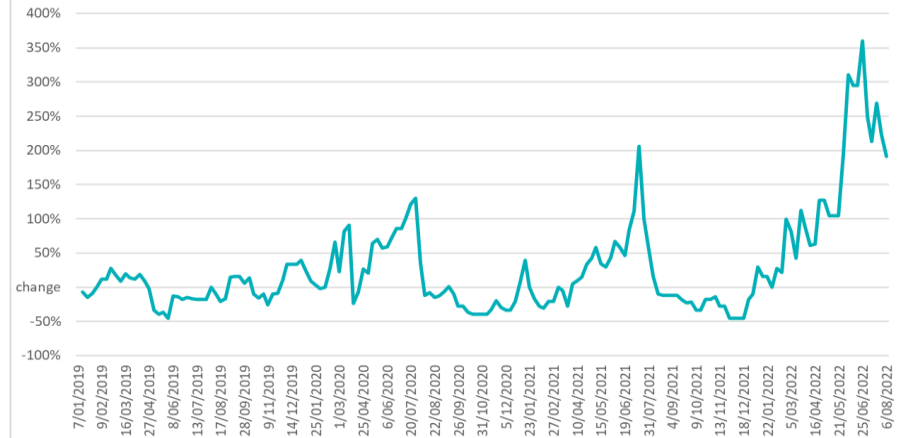




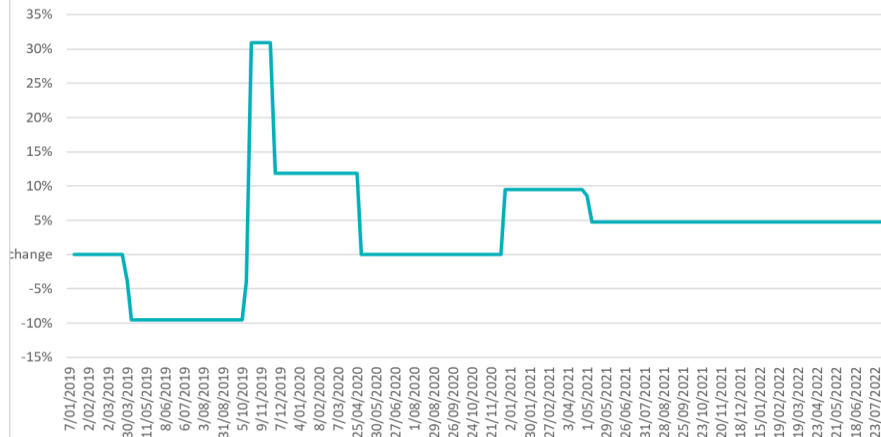
CAULIFLOWERS--Carton



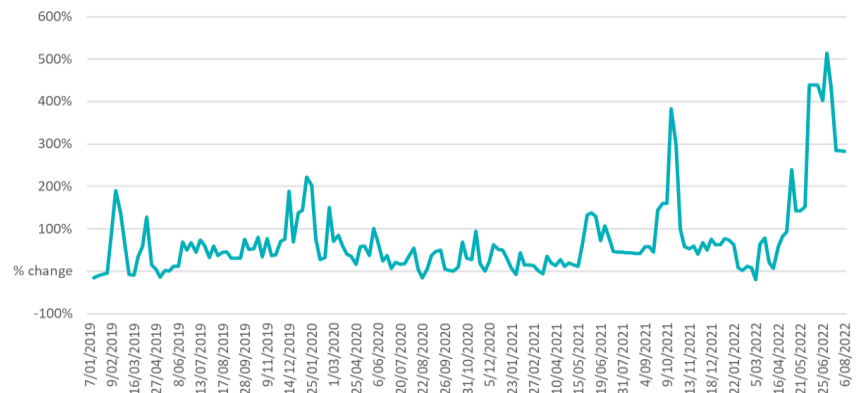
LETTUCE-Iceberg-Carton



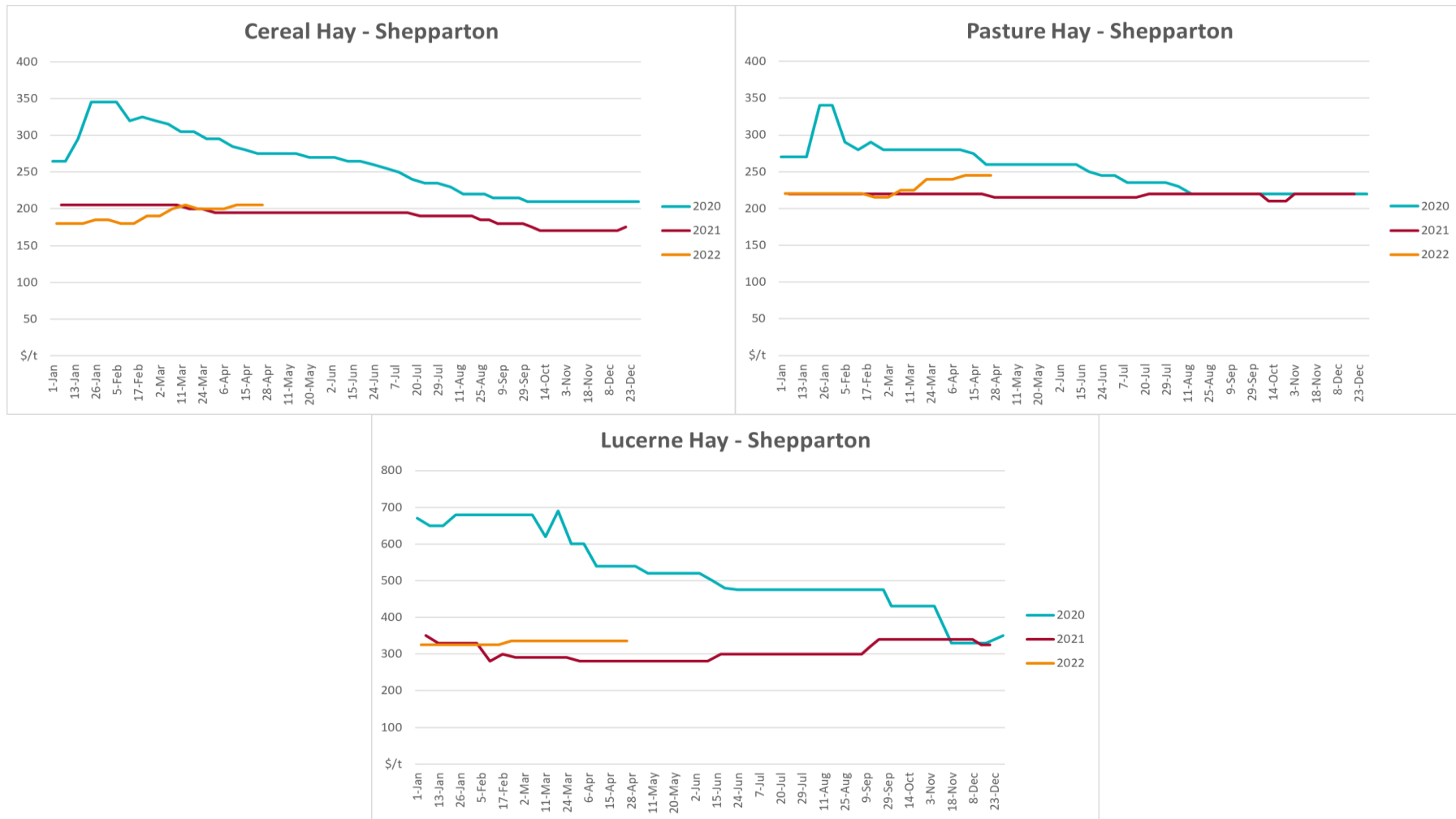
POTATOES-Brushed White-20Kg bag



BEANS-Round Stemless-Kg



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/mbd/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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