



Weekly Australian Climate, Water and Agricultural Update

No. 10/2021

18 March 2021

Summary of key issues

- During the 7 days to 17 March 2021, troughs and cold fronts generated thunderstorms and showers across parts of eastern, western and northern Australia ([see Section 1.1](#)).
- The substantial rainfall in eastern cropping regions is likely to have caused delays to harvest activities for summer crops and raise grain quality concerns in a number of key growing regions. However, the substantial falls are likely to provide a boost to soil moisture which will allow for early winter crop sowing and benefit pasture growth across large areas ([see Section 1.1](#)).
- Global crop production conditions continue to be favourable despite dry conditions across parts of Argentina, Brazil, China, the Russian Federation and the United States, affecting the production potential of wheat, corn and soybeans ([see Section 1.2](#)).
- February rainfall percentiles and current production conditions indicate a slight deterioration to the global conditions seen during January, which were used to formulate ABARES forecasts of global grain supplies and world prices in its March 2021 edition of *Agricultural commodities* ([see Section 1.2](#)).
- The global climate outlook indicates that average to above average rainfall is more likely between April and June 2021 for most of the world's major grain- and oilseed-producing regions. Partly due to the influence of the weakening La Niña event, below average rainfall is expected for large parts of Brazil, India, Indonesia and the western United States ([see Section 1.2](#)).
- Over the next 8 days, troughs, onshore winds and a cold front are expected to generate showers and storms over much of northern and eastern Australia.
- In Australia's cropping regions, rainfall of between 15 and 50 millimetres is expected for Queensland and Victoria. Rainfall of between 25 and 100 millimetres is expected in cropping regions across New South Wales over the next 8 days. If this rainfall eventuates, it may represent an early autumn break in south-eastern cropping regions ([see Section 1.4](#)).
- Water storage levels in the Murray-Darling Basin (MDB) decreased by 83 gigalitres (GL) between 10 March 2021 and 17 March 2021. The current volume of water held in storage is 12,878 GL, which represents 51% of total capacity.
- Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$105 per ML on 11 March 2021 to \$100 per ML on 18 March 2021. Prices are lower in the Murrumbidgee due to the binding of the Murrumbidgee export limit.

1. Climate

1.1. Rainfall this week

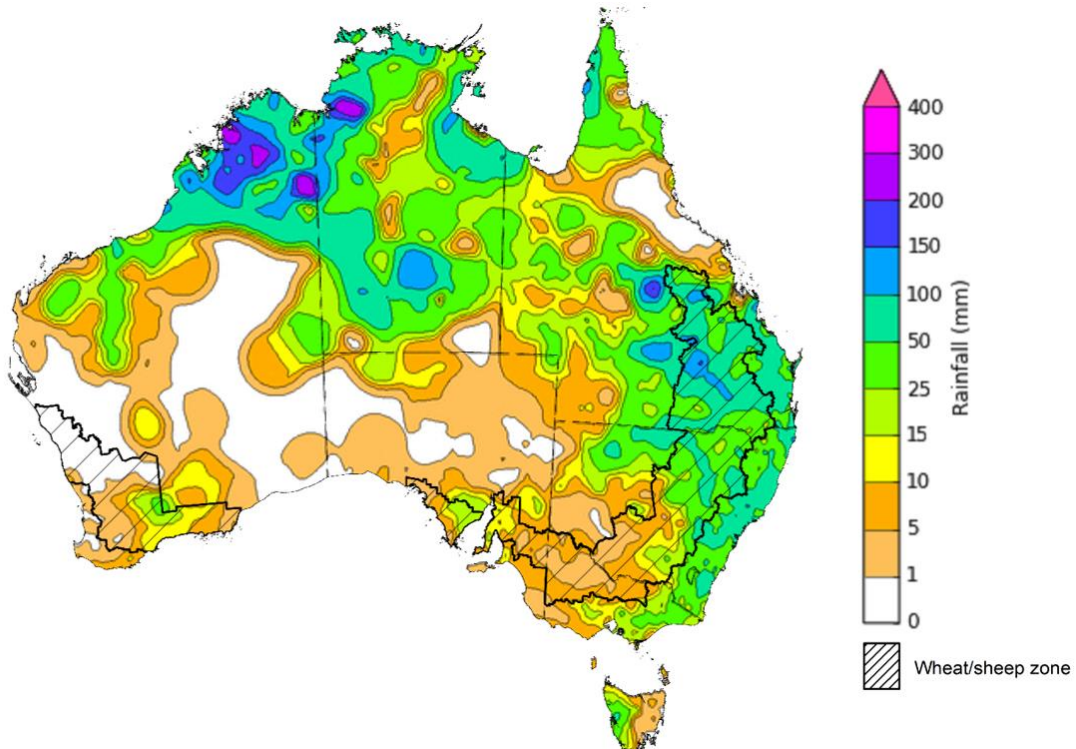
During the week ending 17 March 2021, troughs and cold fronts generated thunderstorms and showers across parts of eastern, western and northern Australia.

Rainfall totals of between 15 and 100 millimetres were recorded across much of Queensland and the Northern Territory, and parts of eastern and northern New South Wales, eastern Victoria, south-eastern and north-western South Australia, the north and south of Western Australia, and western Tasmania. Rainfall in excess of 100 millimetres was recorded across parts of south-eastern and central Queensland, northern Western Australia and the Northern Territory.

In Australia's cropping regions, rainfall totals of between 25 and 100 millimetres were recorded across northern New South Wales and Queensland, with rainfall in excess of 100 millimetres across parts of central and northern Queensland cropping regions. Rainfall totals between 10 and 25 millimetres were recorded in cropping regions across parts of south-eastern New South Wales, central South Australia and eastern Western Australia. Little to no rainfall was recorded across remaining cropping regions.

The substantial rainfall in eastern cropping regions is likely to have caused delays to harvest activities for summer crops and raise grain quality concerns in a number of key growing regions due to grain sprouting or fungal staining. However, the substantial falls this week across eastern and northern Australia are likely to provide a boost to soil moisture which will allow for early winter crop sowing and benefit pasture growth across large areas.

Rainfall for the week ending 17 March 2021



©Commonwealth of Australia 2021, Australian Bureau of Meteorology

Issued: 17/03/2021

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. 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.

February precipitation percentiles and current production conditions

As at the end of February 2021, precipitation was mixed for the world's major grain and oil producing regions.

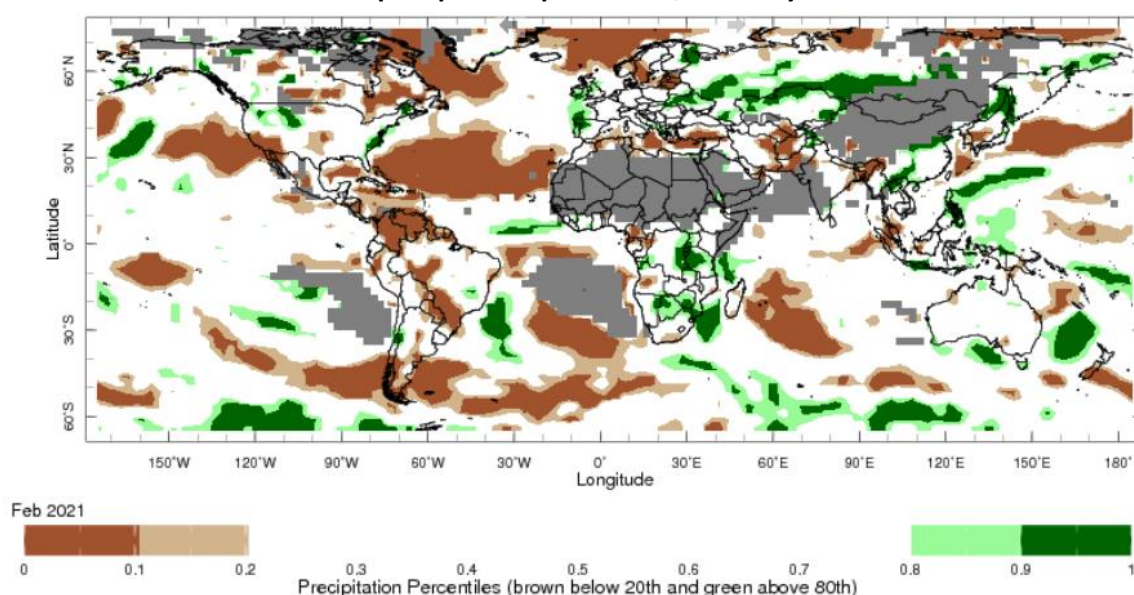
In the northern hemisphere, February precipitation was above average in parts of south-eastern China, south-western Europe, Greece, Indonesia, northern and eastern Kazakhstan, the Philippines, the south of the Russian Federation, the north of Southeast Asia, Ukraine, the centre of the United Kingdom and the north-west and east of the United States of America.

Precipitation was below average across parts of central and eastern Canada, far northern Europe, western Indonesia, Malaysia, Turkey, and the central and south-east of the United States of America. Snow cover in the United States of America has been low this season for much of the winter wheat belt, resulting in less insulation for dormant crop and increasing the risk of frost damage.

Precipitation was generally average across the remainder of major grain and oil producing regions in the northern hemisphere.

In the southern hemisphere, February rainfall was above average across parts of southern Africa. Conditions have deteriorated in parts of South America as below average rainfall became more widespread across southern and central Argentina and below average rainfall occurred in western and southern Brazil across major cropping regions. Rainfall was generally average across the remainder of major grain and oil producing regions in the southern hemisphere.

Global precipitation percentiles, February 2021



Note: The world precipitation percentiles indicate a ranking of precipitation for February, 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 February 2021 are compared with rainfall recorded for that period during the 1981 to 2010 base period.

Source: International Research Institute for Climate and Society

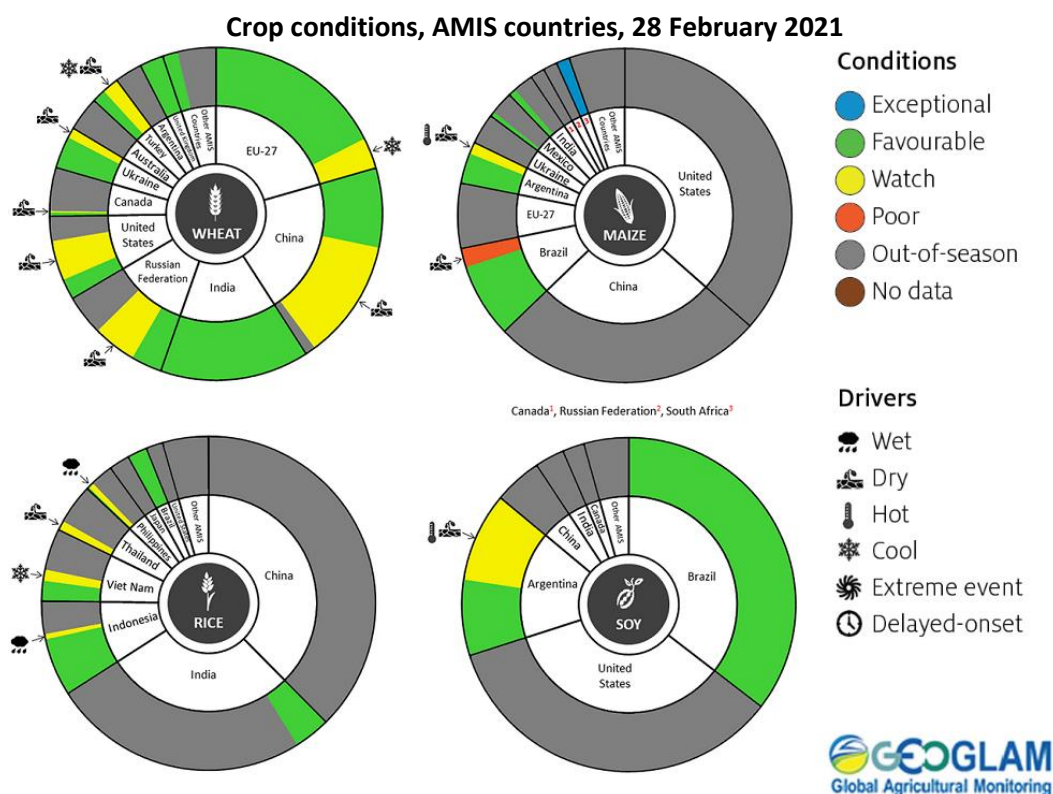
As at 28 February 2021 global production conditions were generally favourable. A lack of precipitation and temperature extremes have affected the production potential of wheat, corn, rice and soy in some key grain exporters and importers

Conditions for wheat development were generally favourable in Canada, the European Union, India, United Kingdom and Ukraine. Below average rainfall in eastern China has reduced crop growth for winter wheat. In the south-eastern European Union and parts of the Russian Federation, Turkey and the United States of America reduced snowfall and cold weather have placed the crop at risk of winterkill.

Conditions for corn in Argentina improved for the early-planted crop, while a lack of rain during grain-filling has significantly reduced yields for the late-planted crop. Likewise, in Brazil, a lack of rainfall during grain-filling has reduced yields for spring-planted corn in the south, while summer sowing of corn has commenced under favourable conditions in the north. Conditions in India and Mexico remain favourable, while conditions in South Africa were exceptional.

Conditions for rice were favourable in Brazil as harvest begun and in India as Rabi rice transplanting finishes in the east. In Indonesia, harvesting of wet-season rice was generally favourable; however, flooding and reduced rainfall in parts have impacted yields. Conditions in the Philippines are mixed for dry-season rice as flooding has damaged crops in multiple regions. A lack of irrigation water in Thailand has resulted in mixed conditions for dry-season rice and a reduction in total area sown is expected. Cold conditions in northern Vietnam were expected to reduce total area sown of dry-season rice. Conditions in southern Vietnam were favourable as harvesting of dry-season rice commences.

Conditions for soybeans in Argentina were mixed for early- and late-planted crops as some regions have experienced high temperatures and a lack of rainfall. As the crops are in critical grain developmental stages, rainfall will be needed to ensure good yields. In Brazil, conditions have remained favourable as harvesting continues.



AMIS Agricultural Market Information System.
Source: AMIS

Rainfall outlook and potential impact on the future state of production conditions between April and June 2021

Region	April-June rainfall outlook	Potential impact on production
Argentina	Average rainfall is more likely across most of Argentina between April and June 2021.	Average rainfall across most of Argentina is likely to support the development of sorghum, rice, millet and soybeans in April, the harvesting of soybeans, corn, sunflower, cotton and nuts from April, and the planting of wheat from May.
Black Sea Region	Ukraine - Average rainfall is more likely across Ukraine. Kazakhstan - Above average rainfall is more likely across parts of north-eastern Kazakhstan. The Russian Federation - Above average rainfall more likely across large parts of central and southern Russia.	Average or better rainfall across the Black Sea Region is likely to support spring wheat planting and development in the north, and the development of winter wheat and planting of canola, cotton, corn and sunflower in the south.
Brazil	Below average rainfall is more likely across large parts of north-eastern and southern Brazil and above average rainfall is more likely across parts of north-western Brazil between April and June 2021.	Below average rainfall across large parts of Brazil may adversely affect the development of cotton and corn in the central-west between April and May, the development of rice, sorghum, millet and sunflower in the south during April, and the planting of wheat in the south from May. Conversely, below average rainfall is likely to allow harvest to proceed without delay from April for soybeans, cotton, nuts, millet, rice, sorghum, sunflower and corn.
Canada	Average rainfall is more likely for most of Canada between April and June 2021.	Average rainfall is likely to support winter wheat development in Canada prior to harvest in June and the planting and development of spring wheat, canola, corn, soybeans and sunflower from May.
China	Above average rainfall is more likely across parts of eastern and south-western China and below average rainfall is more likely across parts of north-western and north-eastern China between April and June 2021.	Average or better rainfall across much of eastern China is likely to support the development of winter wheat, canola and early rice, and the planting and development of single rice, cotton, spring wheat, corn, sorghum, soybeans, sunflower and nuts. Below average rainfall in parts of the north-east may adversely affect the planting and development of crops between April and June 2021.
Europe	Below average rainfall more likely for parts of south-western Europe and above average rainfall is more likely for parts of far northern Europe between April and June 2021.	Below average rainfall in parts of the south-west may adversely affect the planting and development of corn, cotton and sorghum between April and June 2021. Average or better rainfall across most of Europe is likely to support winter wheat and canola development, and the planting and development of corn, cotton, spring wheat, soybeans, sunflower and sorghum.
South Asia (India)	Below average rainfall is more likely across parts of north-western and southern India and above average rainfall is more likely parts of the eastern and far southern India between April and June 2021.	Below average rainfall across parts of India in April 2021 is likely to allow wheat and canola harvesting without delay. Below average rainfall across parts of north-western and southern India may adversely impact the planting of cotton, corn, sorghum, rice, millet, nuts and sunflower in June. Average or better rainfall across the remainder of India is likely to benefit crop planting.
Southeast Asia (SEA)	Above average rainfall is more likely for most northern SEA countries and below average rainfall is more likely for much of Indonesia between April and June 2021.	Average or better rainfall across most of Southeast Asia is likely to benefit corn and rice planting and development from May 2021. Below average rainfall across much of Indonesia may adversely impact rice and corn production.
The United States of America	Above average rainfall is more likely for parts of the north-eastern US and below average rainfall is more likely for parts of the western US between April and June 2021.	Average or better rainfall across much of the northern and eastern US is likely to support winter wheat as it comes out of dormancy, as well as the planting and development of spring wheat, canola, corn, cotton, rice, soybeans, sorghum, sunflower, nuts and millet. Below average rainfall in the western US may adversely impact the development of these crops and pastures.

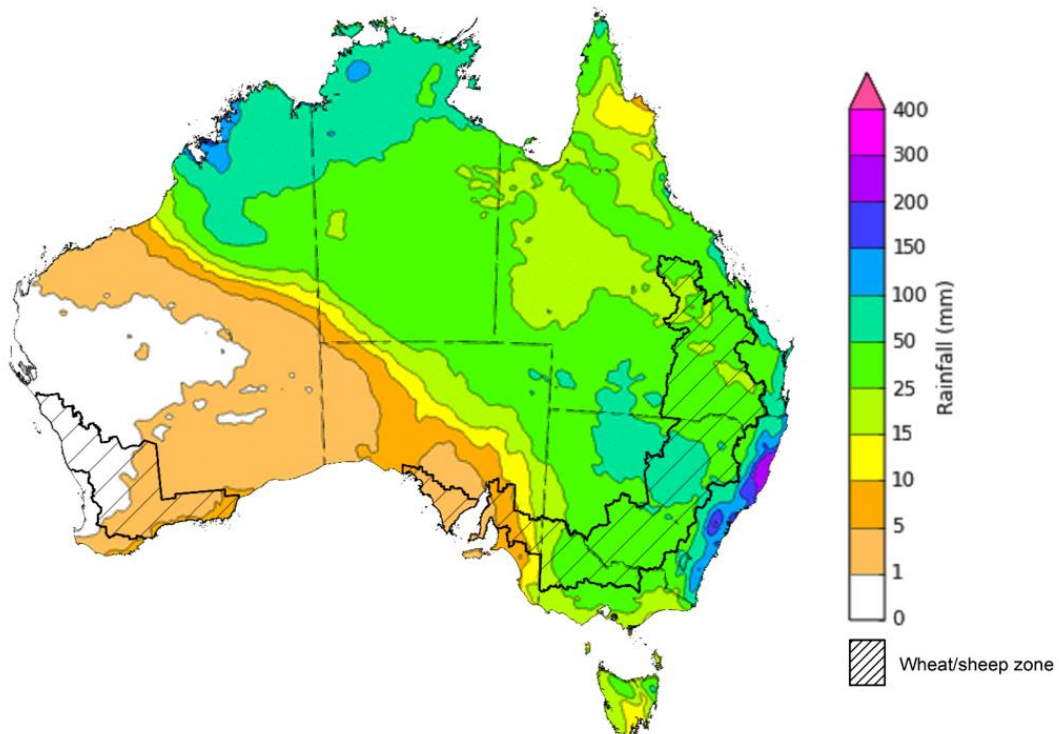
1.3. Rainfall forecast for the next eight days

Troughs, onshore winds and a cold front are expected to generate showers and storms over much of northern and eastern Australia during the next 8 days.

Rainfall totals of between 15 and 50 millimetres are forecast for much of New South Wales, Queensland, Victoria, northern and eastern South Australia, northern Western Australia, the Northern Territory and Tasmania. Rainfall totals in excess of 50 millimetres are forecast for parts of northern and eastern New South Wales, southern Queensland, northern Western Australia and the north of the Northern Territory.

In Australia's cropping regions, rainfall of between 15 and 50 millimetres is expected for Queensland and Victoria. Rainfall of between 25 and 100 millimetres is expected in cropping regions across New South Wales. If this rainfall eventuates, it may represent an early autumn break in south-eastern cropping regions. The autumn break is the first significant rainfall of the winter growing season and provides enough moisture to initiate crop and pasture germination and support early plant growth.

Total forecast rainfall (mm) for the period 18 March to 25 March 2021



©Commonwealth of Australia 2021, Australian Bureau of Meteorology

Issued: 18/03/2021

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 83 gigalitres (GL) between 10 March 2021 and 17 March 2021. The current volume of water held in storage is 12,878 GL, which represents 51% of total capacity. This is 56% or 4,612 GL more than at the same time last year.

Water storages in the Murray-Darling Basin, 2013–2021

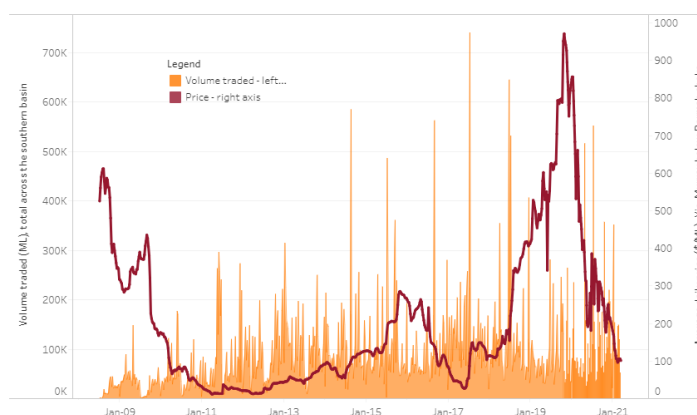


Water storage data is sourced from the Bureau of Meteorology.

Allocation prices in the Victorian Murray below the Barmah Choke decreased from \$105 per ML to \$100 per ML between 11 March 2021 and 18 March 2021. Prices are lower in the Murrumbidgee due to binding of the Murrumbidgee export limit.

Region	\$/ML
NSW Murray Above	88
NSW Murrumbidgee	55
VIC Goulburn-Broken	95
VIC Murray Below	100

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 March 2021.

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-180321

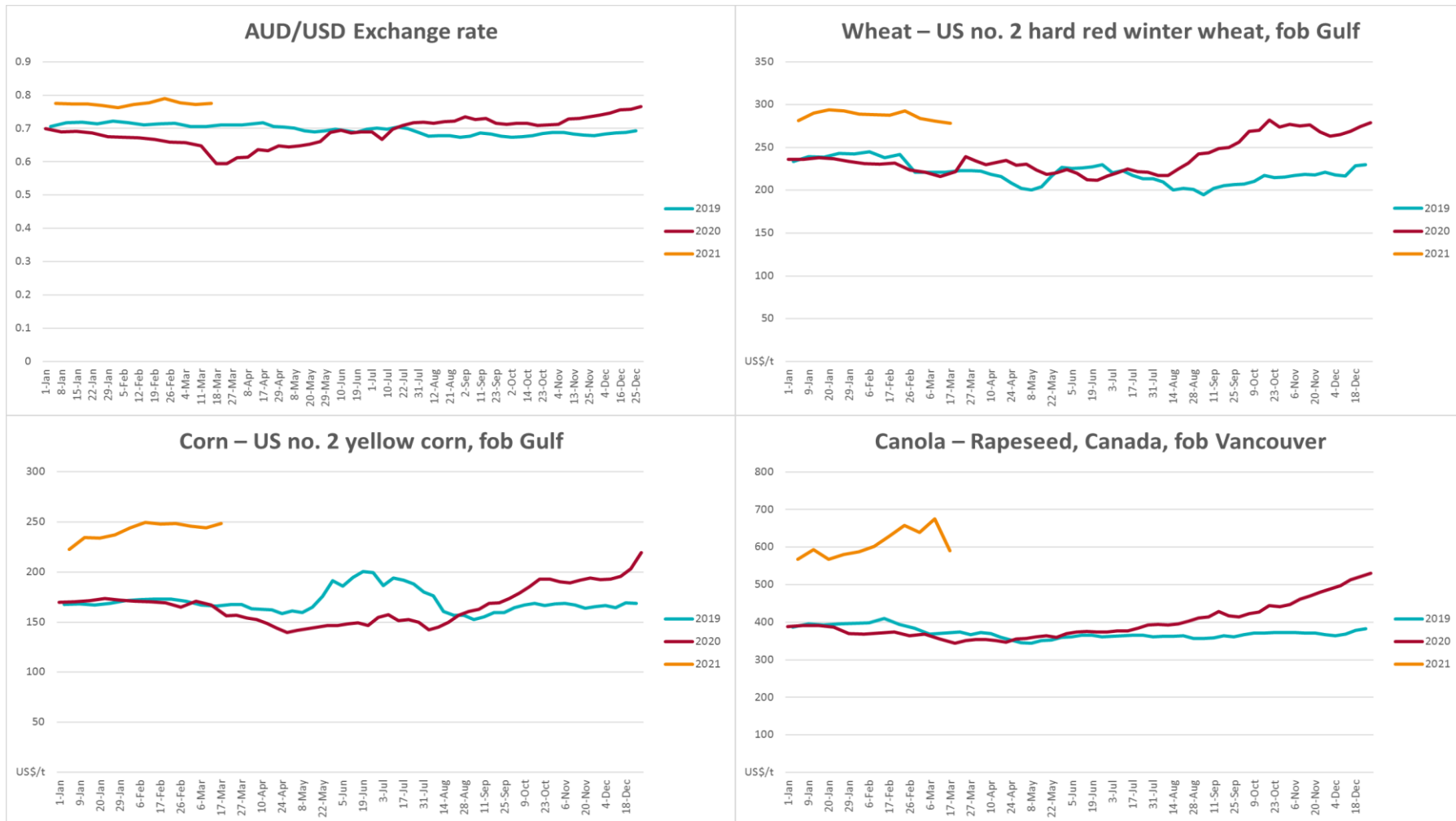
3. Commodities

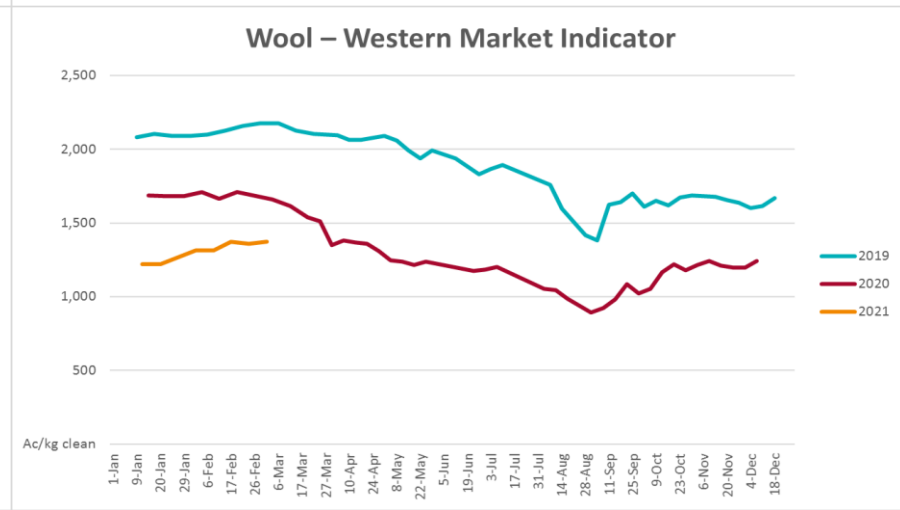
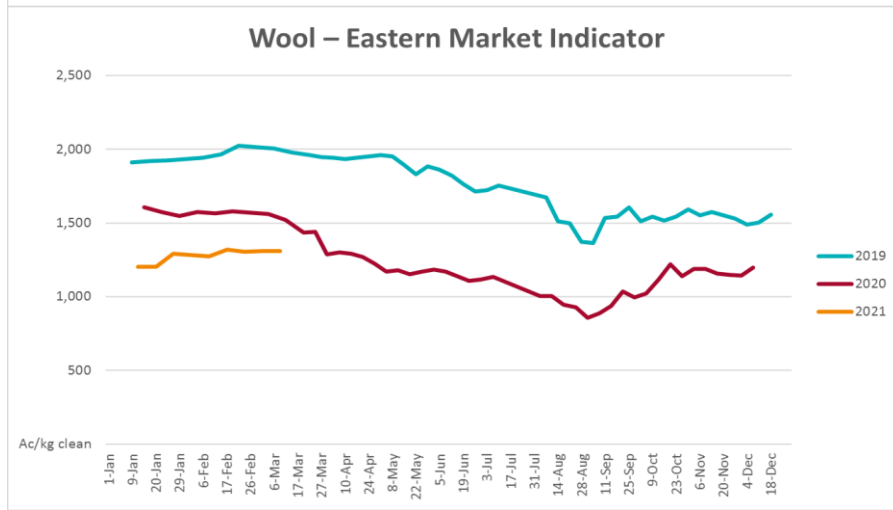
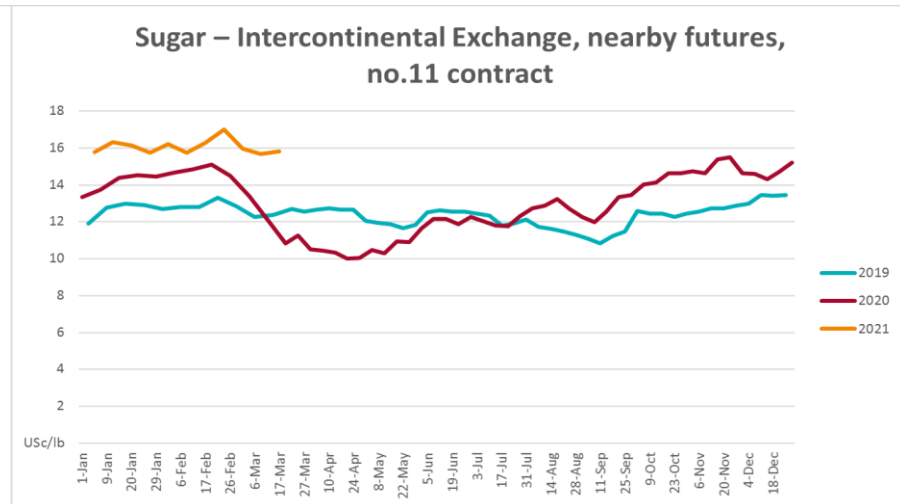
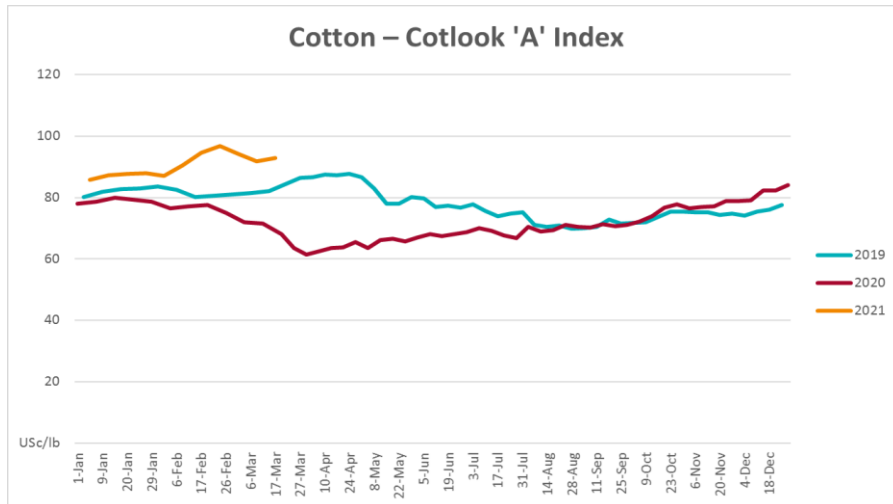
Indicator	Week ended	Unit	Latest price	Previous week	Weekly change	Price 12 months ago	Annual change
Selected world indicator prices							
AUD/USD Exchange rate	17-Mar	A\$/US\$	0.77	0.77	0%	0.59	30%
Wheat – US no. 2 hard red winter wheat, fob Gulf	17-Mar	US\$/t	278	280	-1%	239	16%
Corn – US no. 2 yellow corn, fob Gulf	17-Mar	US\$/t	248	244	2%	157	58%
Canola – Rapeseed, Canada, fob Vancouver	17-Mar	US\$/t	590	674	-13%	351	68%
Cotton – Cotlook 'A' Index	17-Mar	USc/lb	93	92	1%	63	46%
Sugar – Intercontinental Exchange, nearby futures, no.11 contract	17-Mar	USc/lb	16	16	1%	11	46%
Wool – Eastern Market Indicator	10-Mar	Ac/kg clean	1,309	1,310	0%	1,576	-17%
Wool – Western Market Indicator	03-Mar	Ac/kg clean	1,376	1,359	1%	1,655	-17%
Selected Australian grain export prices							
Milling Wheat – APW, Port Adelaide, SA	17-Mar	A\$/t	361	361	0%	416	-13%
Feed Wheat – ASW, Port Adelaide, SA	17-Mar	A\$/t	359	359	0%	406	-12%
Feed Barley – Port Adelaide, SA	17-Mar	A\$/t	302	303	0%	330	-9%
Canola – Kwinana, WA	17-Mar	A\$/t	685	678	1%	657	4%
Grain Sorghum – Brisbane, QLD	17-Mar	A\$/t	364	375	-3%	465	-22%
Selected domestic livestock indicator prices							
Beef – Eastern Young Cattle Indicator	24-Feb	Ac/kg cwt	860	867	-1%	522	65%
Mutton – Mutton indicator (18–24 kg fat score 2–3), Vic	17-Mar	Ac/kg cwt	639	637	0%	616	4%
Lamb – Eastern States Trade Lamb Indicator	17-Feb	Ac/kg cwt	870	847	3%	800	9%
Pig – Eastern Seaboard (60.1–75 kg), average of buyers & sellers	24-Feb	Ac/kg cwt	357	357	0%	418	-15%
Goats – Eastern States (12.1–16 kg)	10-Mar	Ac/kg cwt	815	813	0%	893	-9%
Live cattle – Light steers ex Darwin to Indonesia	03-Feb	Ac/kg lwt	355	355	0%	330	8%
Live sheep – Live wethers (Muchea WA saleyard) to Middle East	18-Nov	\$/head	118	108	9%	N/A	N/A

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	03-Mar	US\$/t	4,364	3,615	21%	2,777	57%
Dairy – Skim milk powder	03-Mar	US\$/t	3,302	3,207	3%	2,405	37%
Dairy – Cheddar cheese	03-Mar	US\$/t	4,280	4,268	0%	3,504	22%
Dairy – Anhydrous milk fat	03-Mar	US\$/t	5,929	5,527	7%	5,924	0%

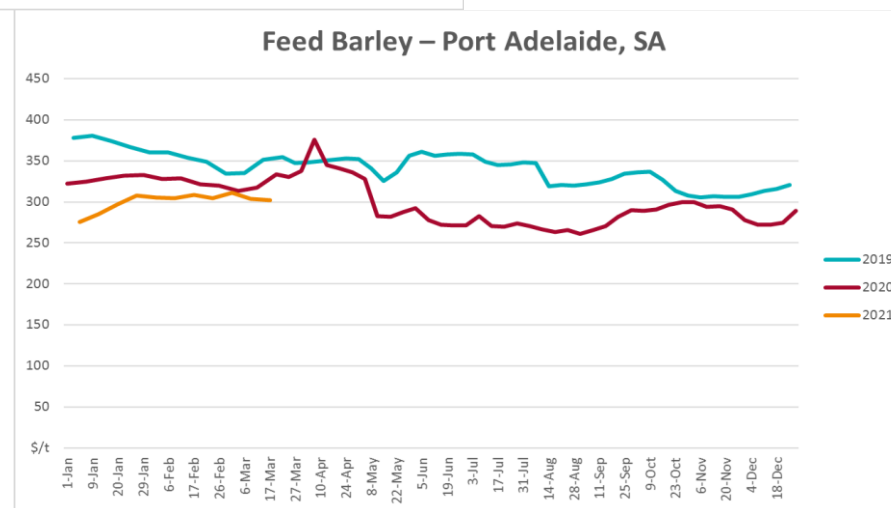
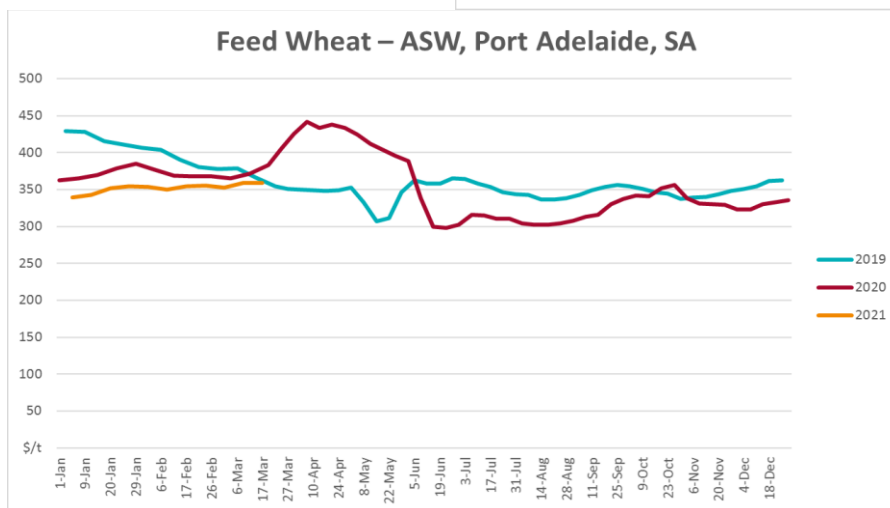
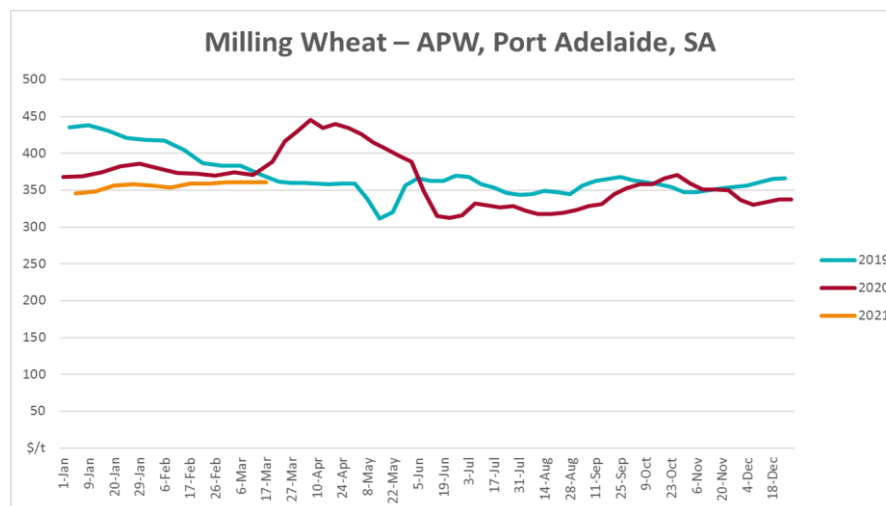
^a Global Dairy Trade prices are updated twice monthly on the first and third Tuesday of each month.

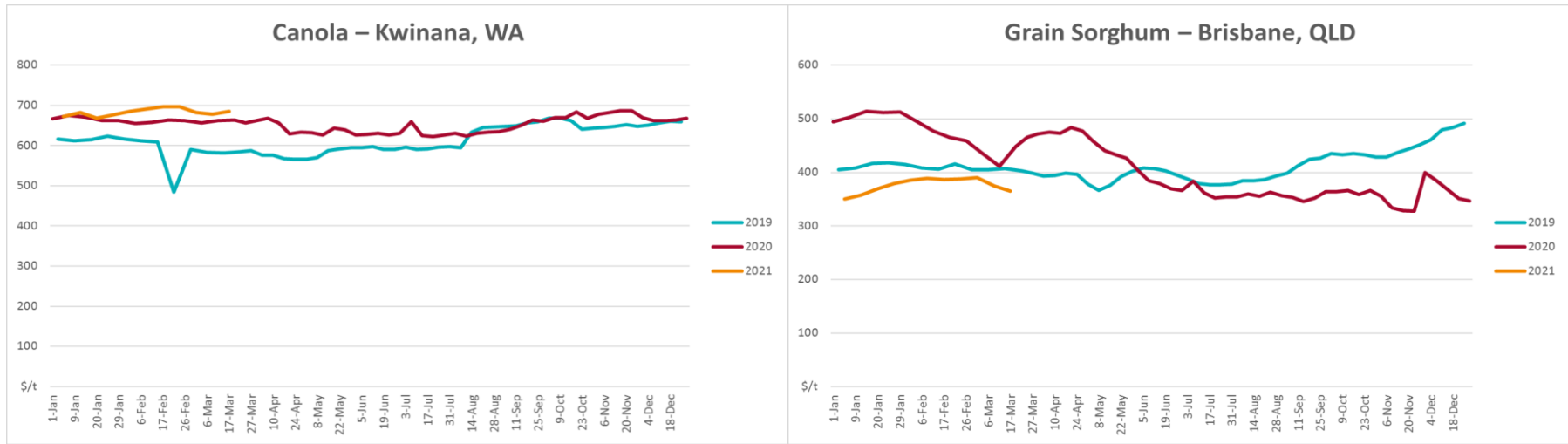
3.1. Selected world indicator prices



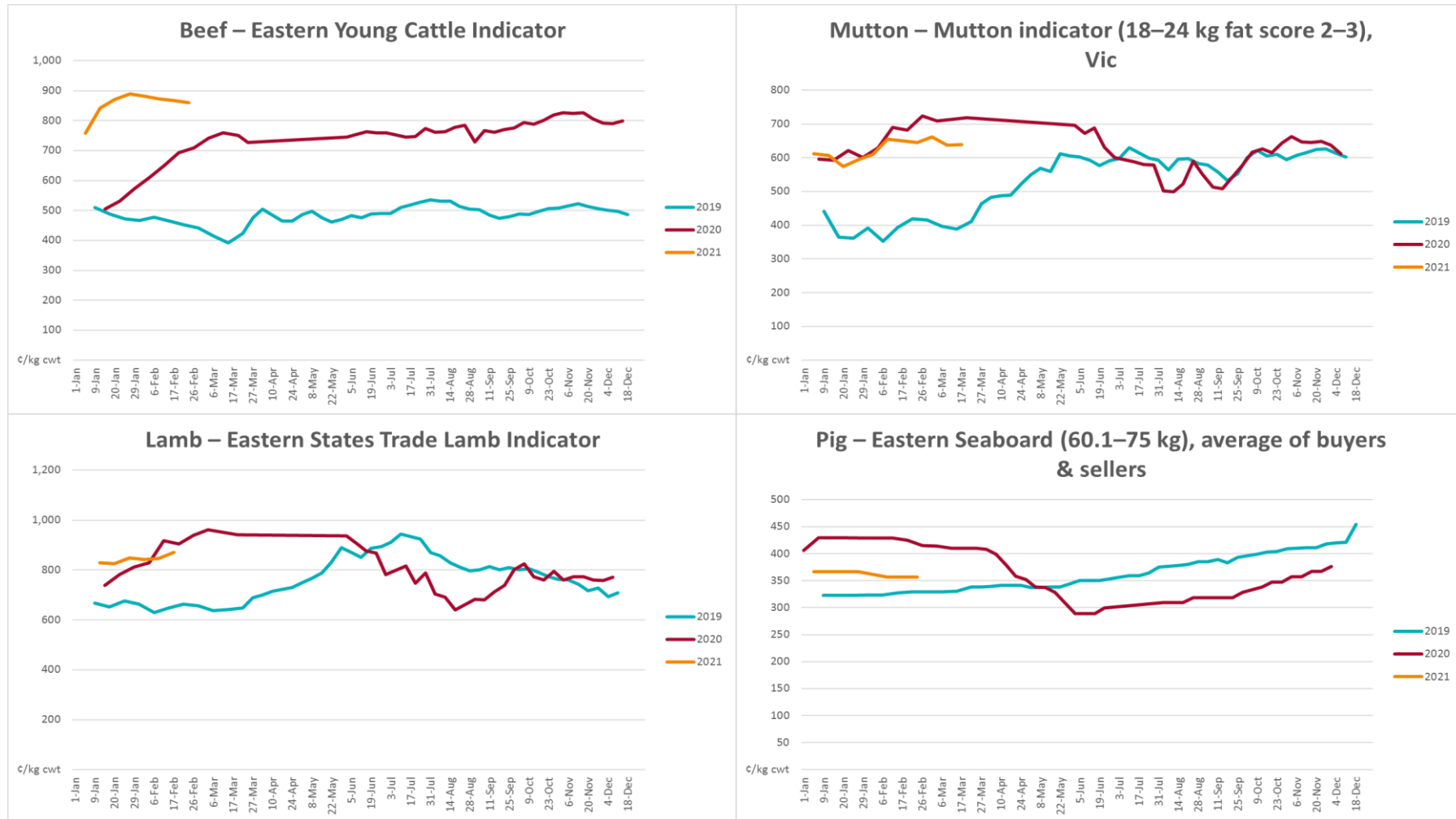


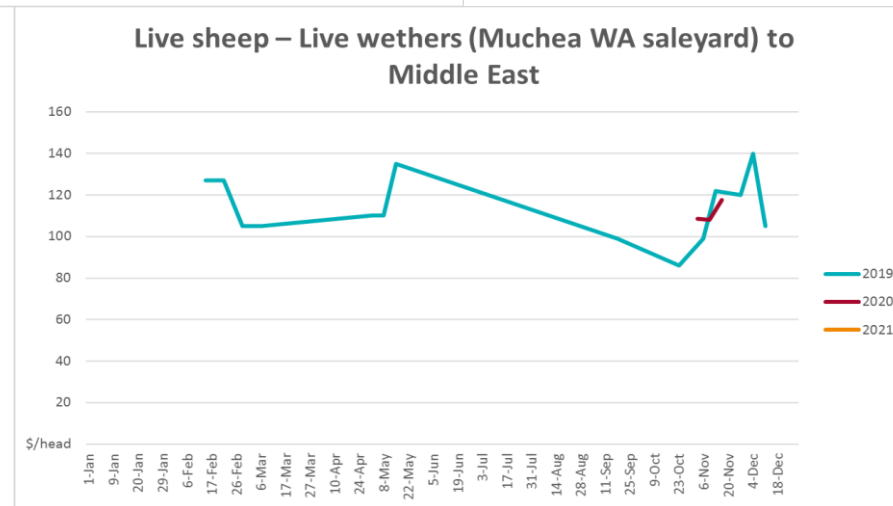
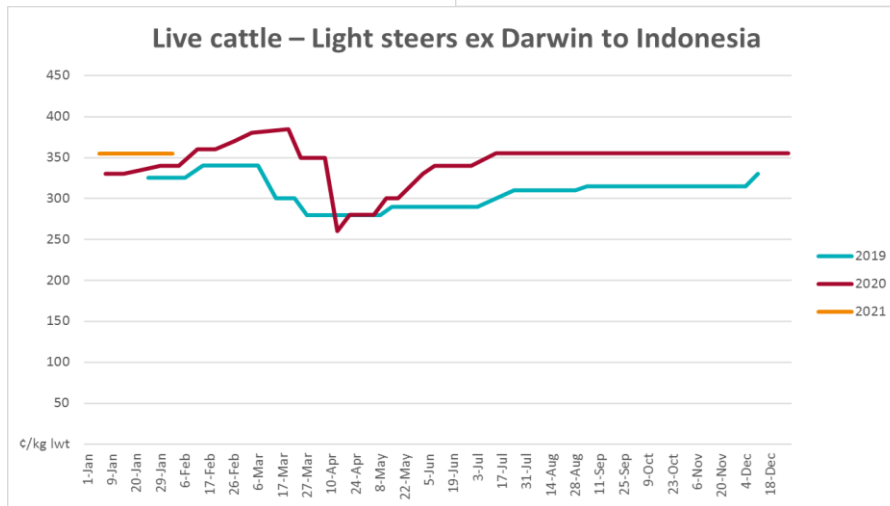
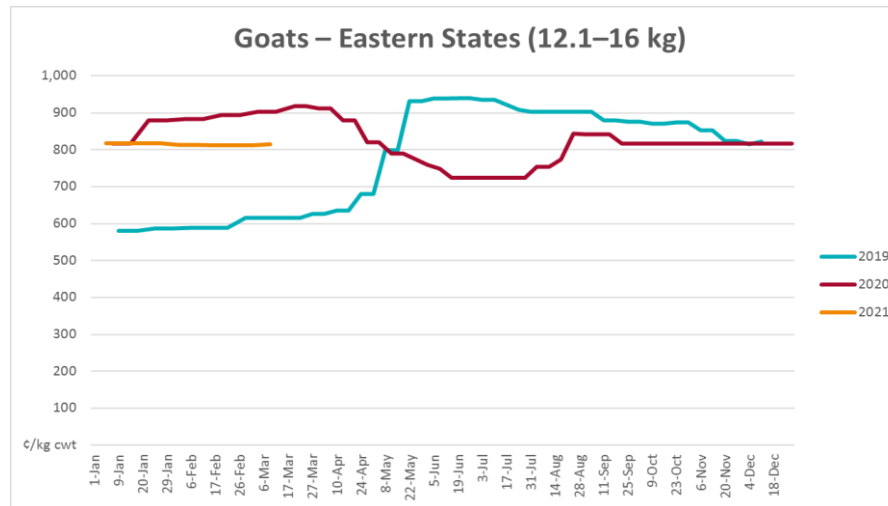
3.2. Selected domestic crop indicator prices



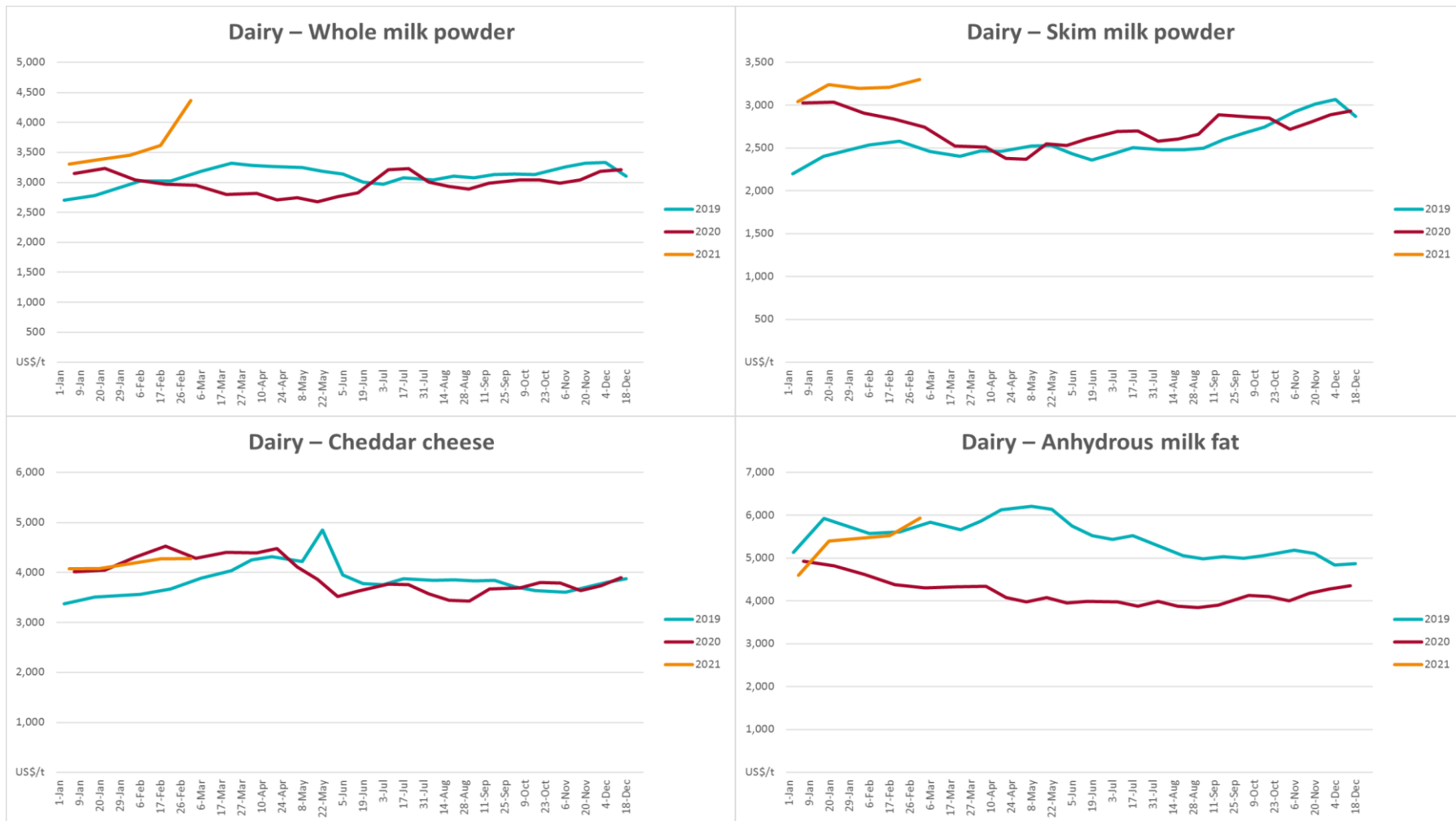


3.3. Selected domestic livestock indicator prices

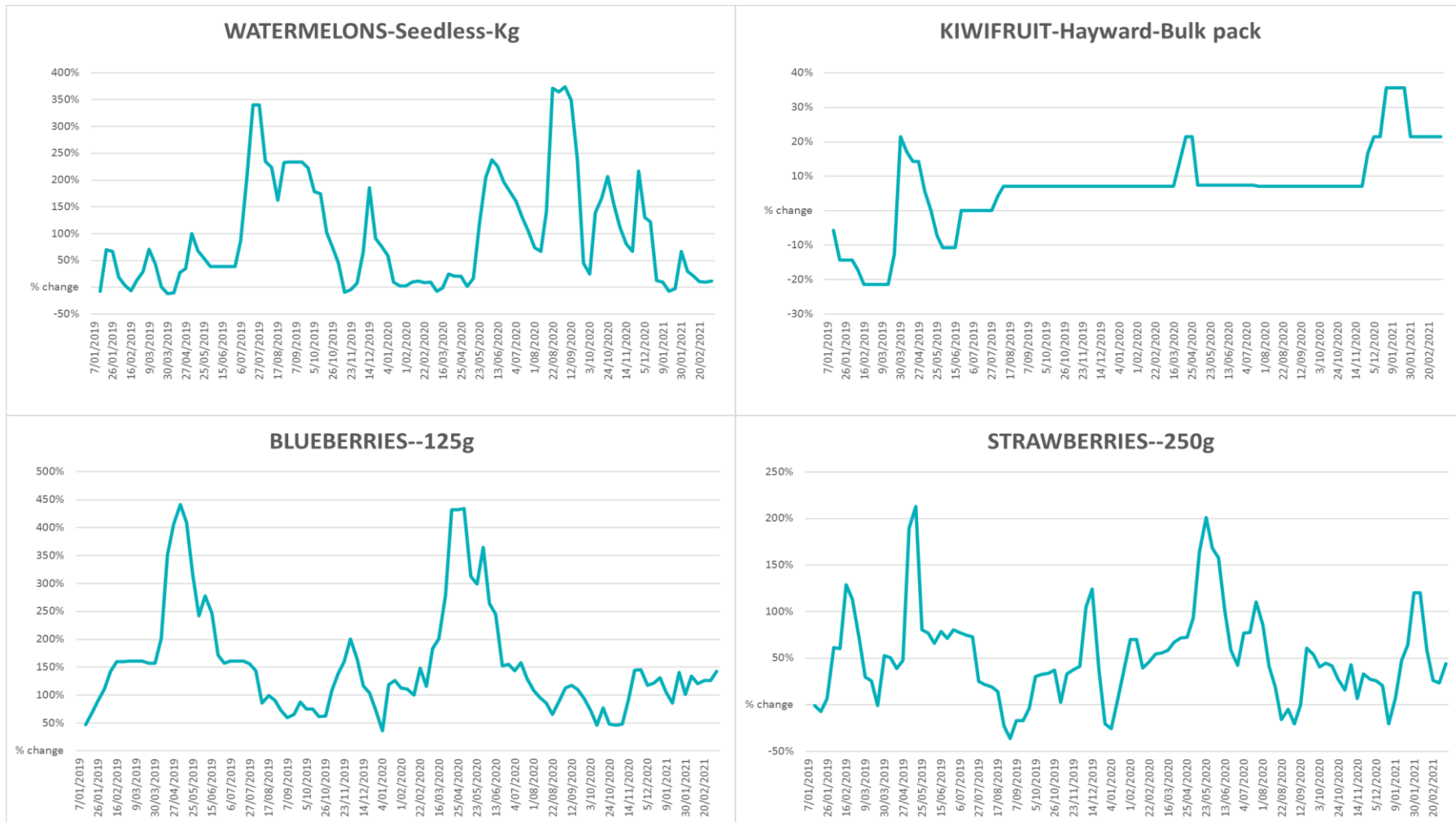


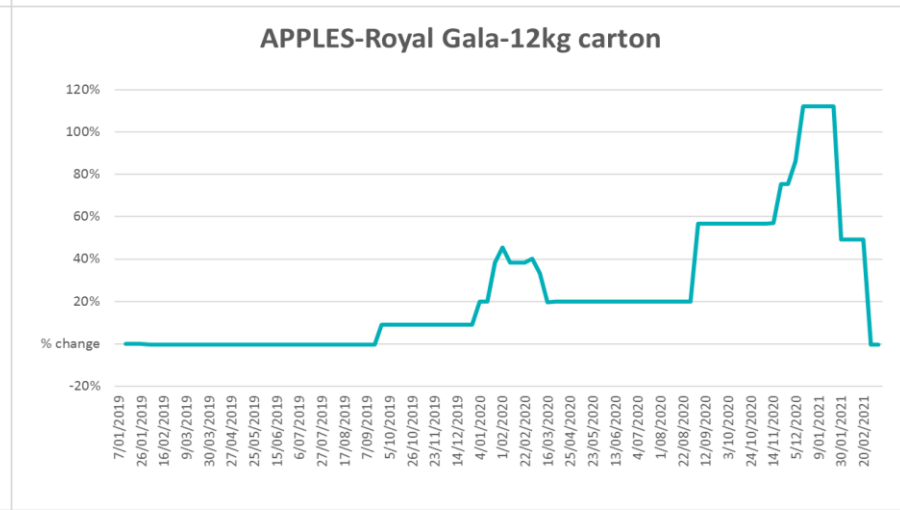
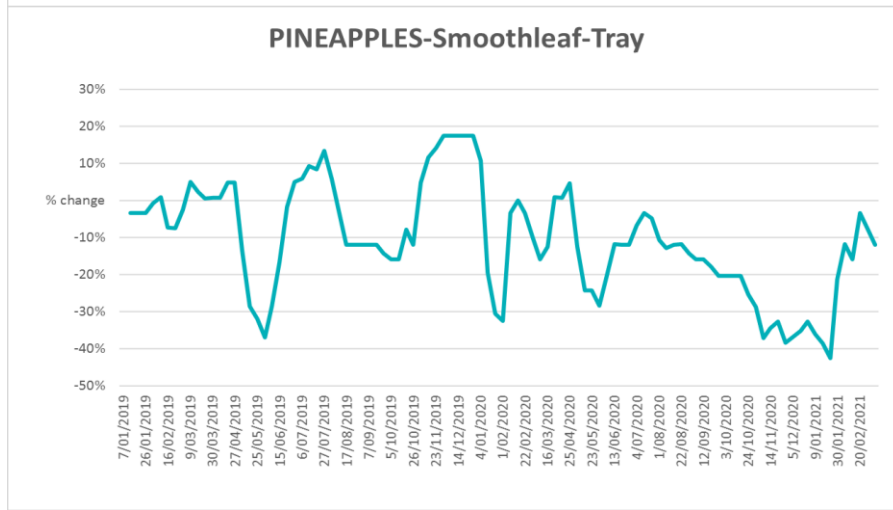
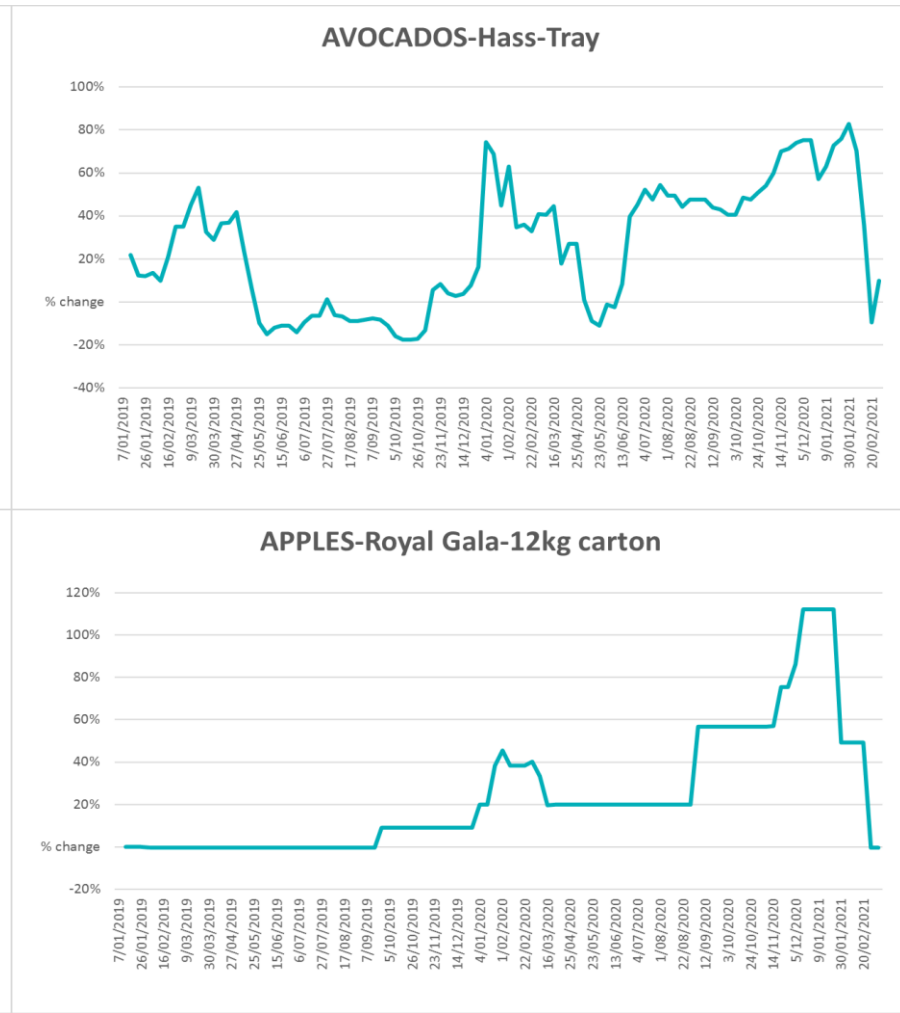
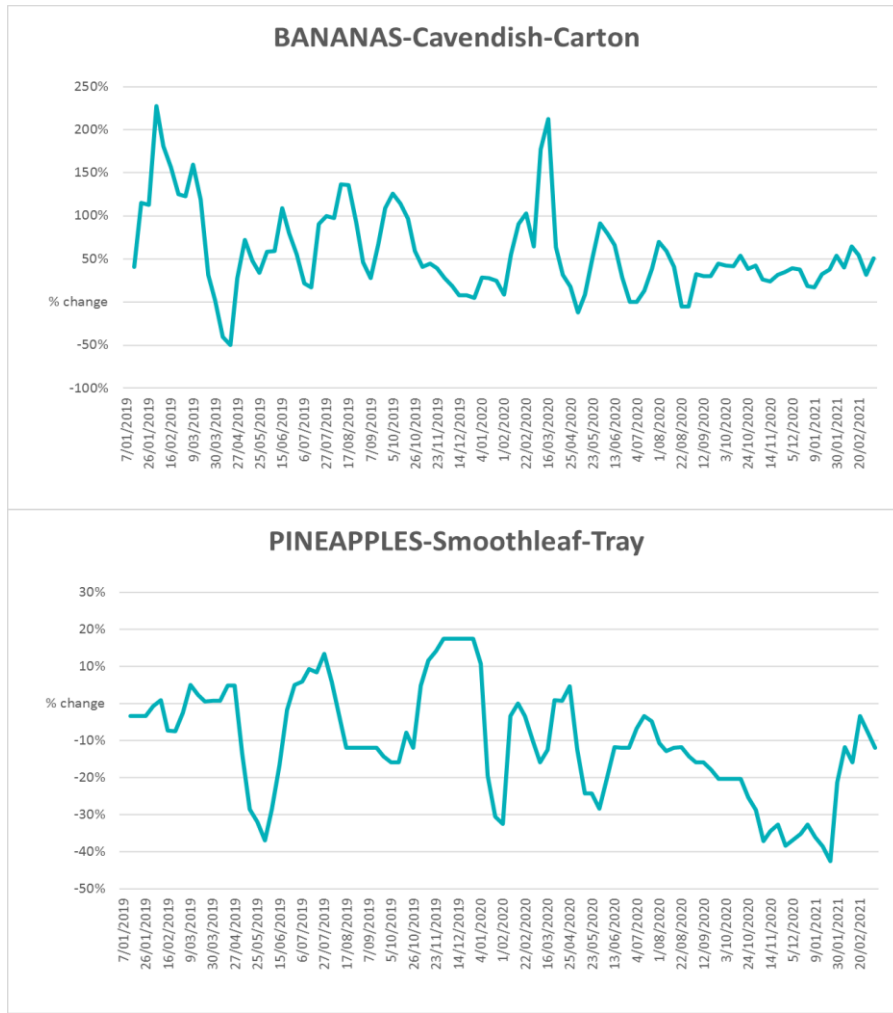


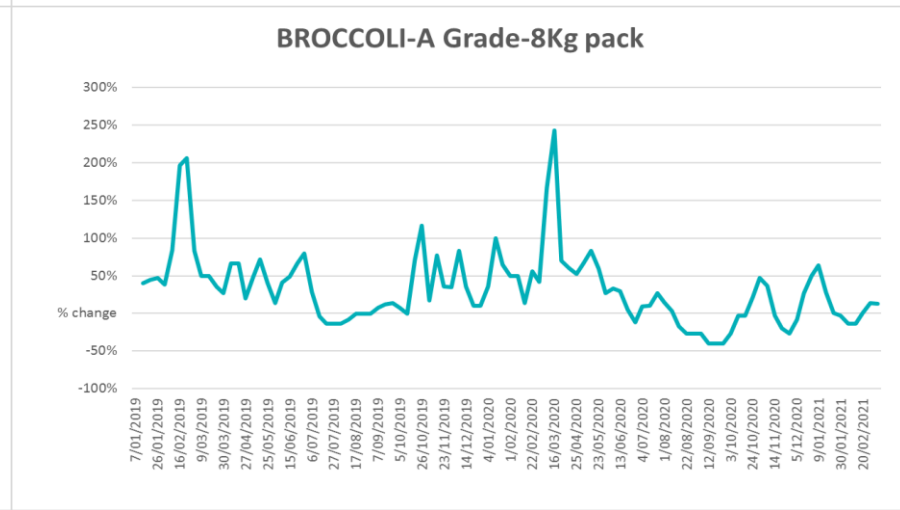
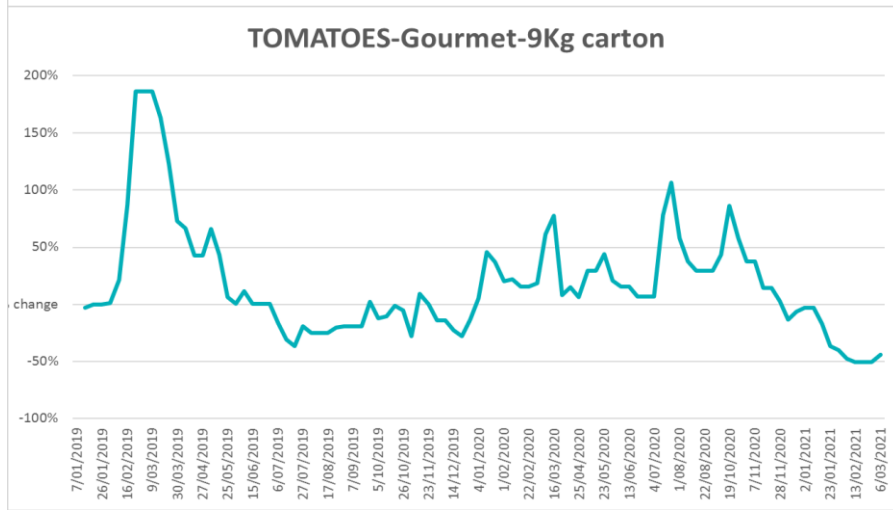
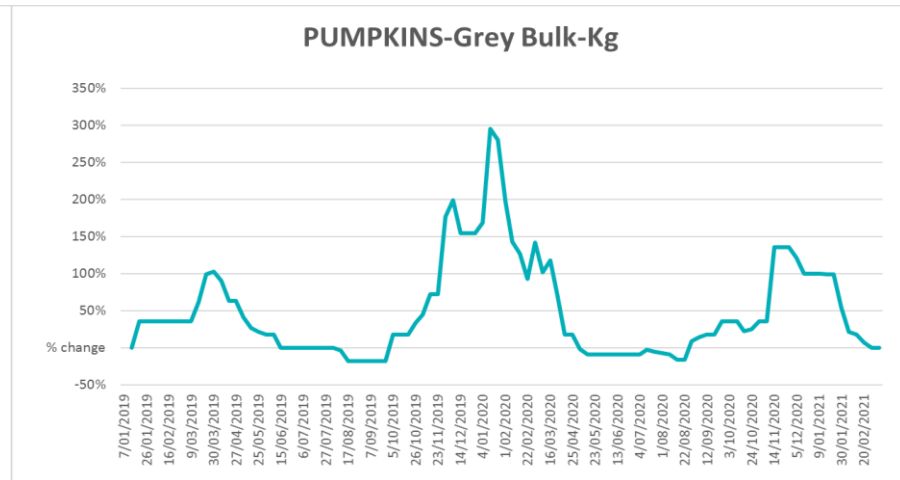
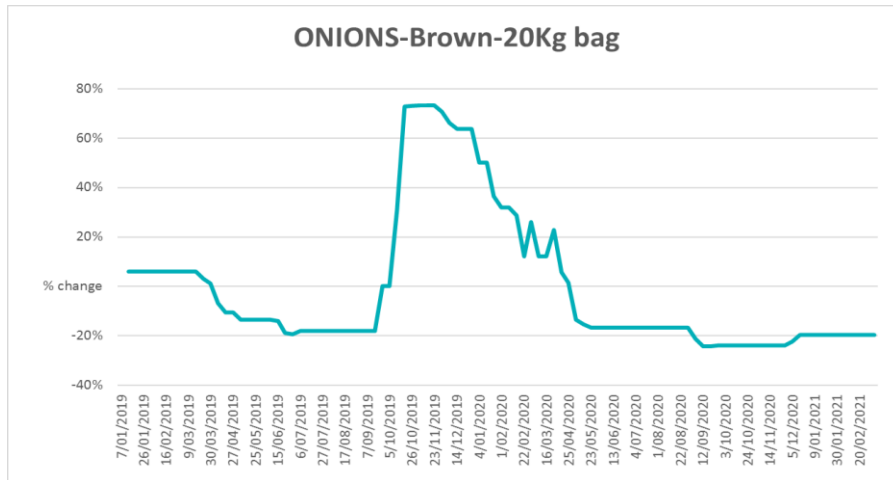
3.4. Global Dairy Trade (GDT) weighted average prices

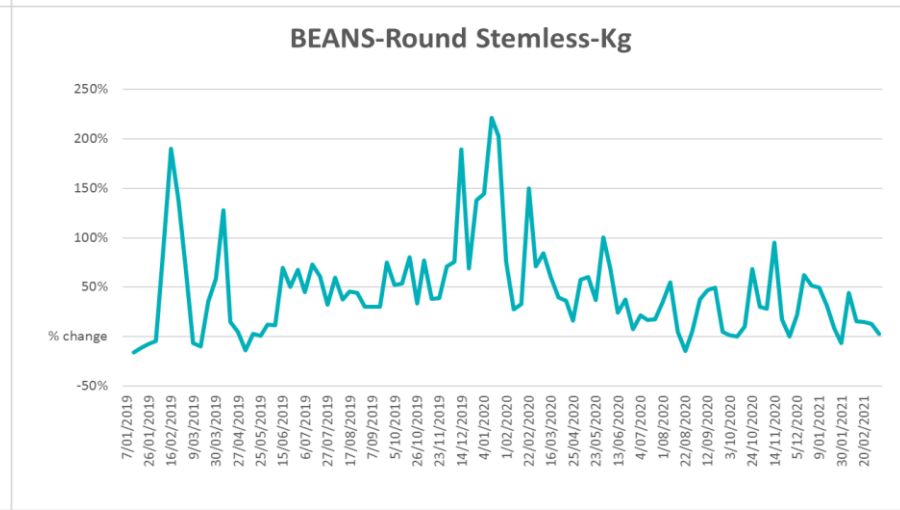
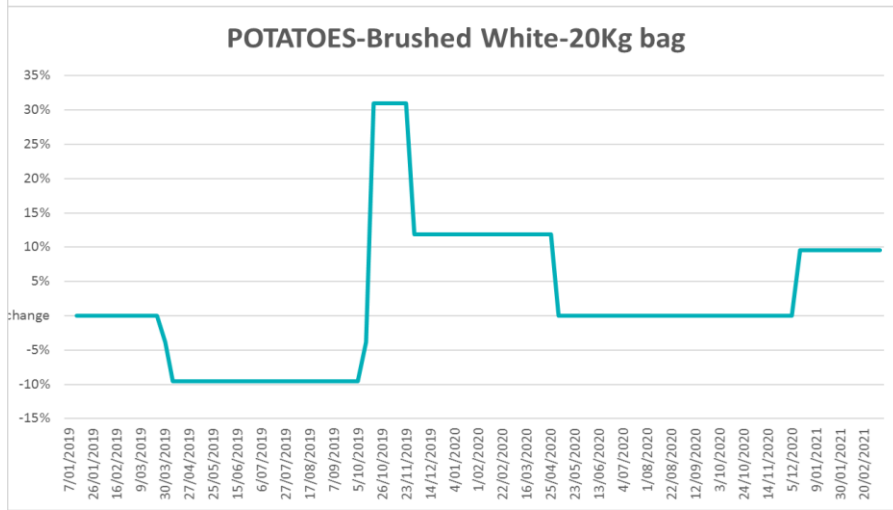
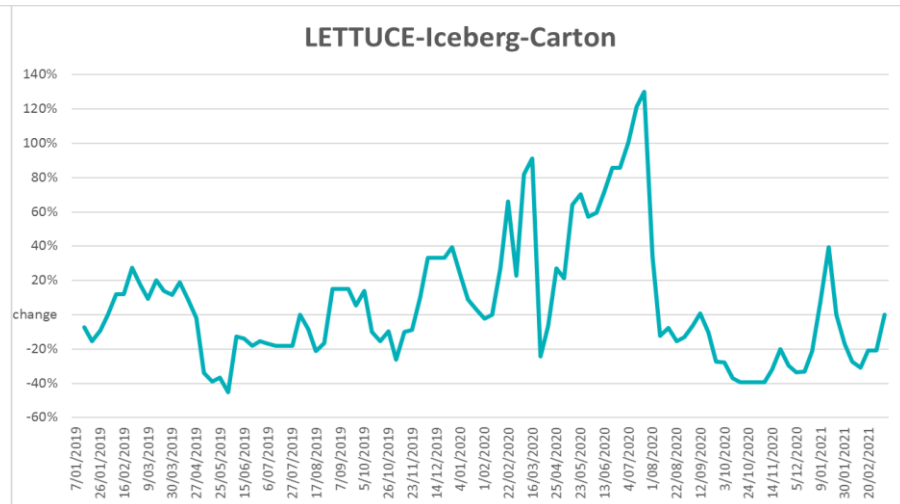
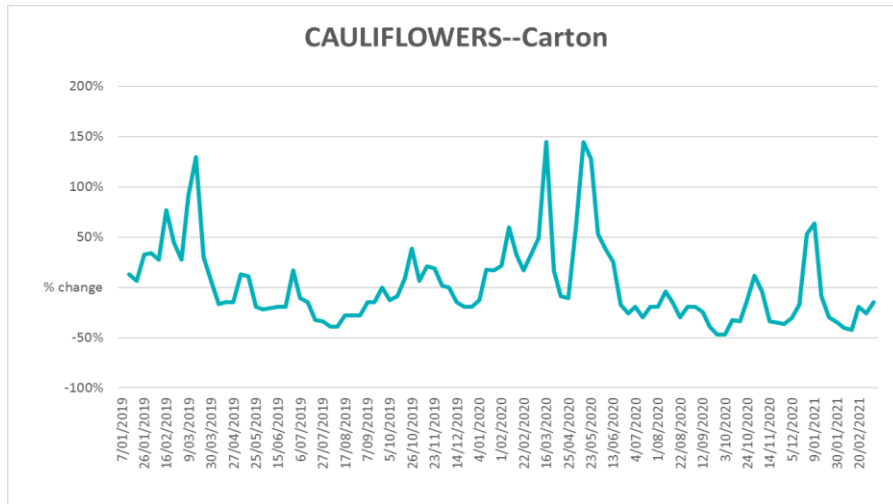


3.5. Selected fruit and vegetable prices









4. Data attribution

Climate

Bureau of Meteorology

- Weekly rainfall totals: www.bom.gov.au/jsp/awap/rain/index.jsp
- Monthly and last 3-month rainfall percentiles: www.bom.gov.au/jsp/awap/rain/index.jsp
- 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/
- Drought statement: www.bom.gov.au/climate/drought/drought.shtml
- Soil moisture: www.bom.gov.au/water/landscape/

Other

- Pasture growth: <https://www.longpaddock.qld.gov.au/aussiegrass/>
- 3-month global outlooks: [Environment and Climate Change Canada](#), [NOAA Climate Prediction Center](#), [EUROBRISA CPTC/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>

Water

New South Wales

- New South Wales Water Information: <http://waterinfo.nsw.gov.au/>
- New South Wales Office of Water, Department of Primary Industries: www.water.nsw.gov.au/Home/default.aspx
- Available water determinations register: www.water.nsw.gov.au/water-licensing/registers

Queensland

- Sunwater: www.sunwater.com.au
- Seqwater: <http://seqwater.com.au>

South Australia

- SA Water: www.sawater.com.au/community-and-environment/the-river-murray/river-reports/daily-flow-report
- South Australian Department of Environment, Water and Natural Resources: www.environment.sa.gov.au

Victoria

- Goulburn–Murray Water: www.g-mwater.com.au

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 and canola

- 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

© Commonwealth of Australia 2021

Ownership of intellectual property rights

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia (referred to as the Commonwealth).

Creative Commons licence

All material in this publication is licensed under a [Creative Commons Attribution 4.0 International Licence](#) except content supplied by third parties, logos and the Commonwealth Coat of Arms.

Inquiries about the licence and any use of this document should be emailed to copyright@awe.gov.au.



Cataloguing data

This publication (and any material sourced from it) should be attributed as:

ABARES 2021, Weekly Australian Climate, Water and Agricultural Update, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, 18 March 2021. CC BY 4.0 DOI:

<https://doi.org/10.25814/5f3e04e7d2503>

ISSN 2652-7561

This publication is available at https://www.agriculture.gov.au/abares/products/weekly_update

Department of Agriculture, Water and the Environment

GPO Box 858 Canberra ACT 2601

Telephone 1800 900 090

Web awe.gov.au/abares

Disclaimer

The Australian Government acting through the Department of Agriculture, Water and the Environment, represented by the Australian Bureau of Agricultural and Resource Economics and Sciences, has exercised due care and skill in preparing and compiling the information and data in this publication. Notwithstanding, the Department of Agriculture, Water and the Environment, ABARES, its employees and advisers disclaim all liability, including liability for negligence and for any loss, damage, injury, expense or cost incurred by any person as a result of accessing, using or relying on any of the information or data in this publication to the maximum extent permitted by law.

Statement of Professional Independence

The views and analysis presented in ABARES publications, including this one, reflect ABARES professionally independent findings, based on scientific and economic concepts, principles, information and data. These views, analysis and findings may not reflect or be consistent with the views or positions of the Australian Government, or of organisations or groups who have commissioned ABARES reports or analysis. More information on [professional independence](#) is provided on the ABARES website.

Acknowledgements

This report was prepared by Emma Pearce, Cameron Van-Lane and Matthew Miller.