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Report Highlights:

Australia's sugar production is forecast to increase to 4.45 million metric tons (MMT) in marketing year (MY) 2022/23, from an estimated 4.12 MMT in MY 2021/22. This increase is due to an expected rise in sugar cane crush to 32 MMT in MY 2022/23, from an estimate of 30.1 MMT in the previous year. The increase in production is driven by anticipated improvements in sugar cane yields, mainly in the northern tropical regions of Queensland, which has experienced much improved crop growth conditions for the first nine months of the season. Raw sugar exports are forecast to increase to 3.45 MMT in MY 2022/23 from the prior year estimate of 3.2 MMT, while refined sugar is expected to remain stable at 100,000 metric tons (MT).

Executive Summary

Australia's sugar production is forecast to increase to 4.45 million metric tons (MMT) in marketing year (MY) 2022/23, from an estimated 4.12 MMT in MY 2021/22. This increase is due to an expected rise in sugar cane crush to 32 MMT in MY 2022/23, from an estimate of 30.1 MMT in the previous year. The increase in production is driven by anticipated improvements in sugar cane yields, mainly in the northern tropical regions of Queensland, which has experienced much improved crop growth conditions for the first nine months of the season.

Of the total exports of sugar, over 95 percent is raw sugar and the balance is refined sugar. Raw sugar exports are forecast to increase to 3.45 MMT in MY 2022/23 from the prior year estimate of 3.2 MMT, while refined sugar is expected to remain stable at 100,000 metric tons (MT).

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Overview

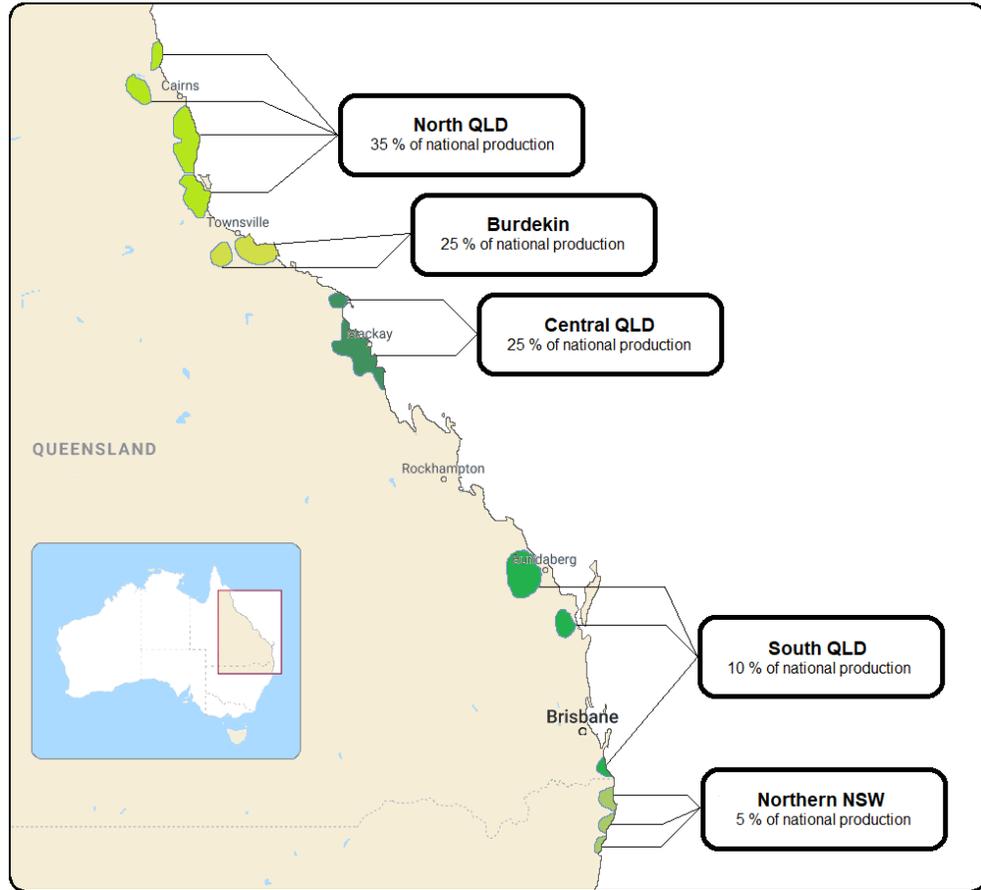
Australian sugar cane is grown on coastal plains and valleys along a 2,100km stretch of Australia's eastern coastline between Mossman in north Queensland (QLD) and Grafton in northern New South Wales (NSW). North QLD has a tropical climate with average rainfall in the area as high as 3,500mm (138 inches) per annum, transitioning to the sub-tropical climate in northern NSW with average rainfall of approximately 1,500mm (59 inches). The key growing regions are shown in Figure 1 and their general characteristics are:

North Queensland	35 percent of national production. Tropical climate with rainfall of up to 3,500mm (138 inches) per annum. Production is more likely to be impacted by excessive rain rather than drought.
Burdekin	25 percent of national production. Tropical climate with rainfall of less than 1,000mm (39 inches) per annum. Highly reliant on irrigation. Highest yielding region.
Central Queensland	25 percent of national production. Tropical climate with rainfall of approximately 1,500mm (59 inches) per annum. Some areas achieve good yields with no irrigation and others use partial irrigation after harvest in the lead up to wet season rainfalls.
South Queensland	10 percent of national production. Sub topical climate with average rainfall of approximately 1,100mm (43 inches) per annum. Dependent on irrigation water availability.

Northern NSW

5 percent of national production. Sub-tropical climate with average rainfall of approximately 1,500mm (59 inches) per annum. Lower average temperatures and humidity creating slower growing conditions. Crop growing cycles range from 12 months to 24 months dependant on prevailing conditions.

Figure 1 - Australian Sugarcane Production Areas



Source: FAS/Canberra

The major sugar cane producing areas are in tropical regions and are dependent on high rainfalls and humid sunny conditions during the wet season period that typically runs from January to March. A positive wet season not only assists production of the current crop in the lead up to harvest but also sets up a high soil moisture profile for a successful planting of fallow area and replant areas, which in the tropical northern areas typically occurs between April and July. It also assists the regrowth of the early harvested sugar cane crop. Well timed smaller follow-up rainfall after the wet season period is also important for final sugar cane production outcomes.

There are approximately 3,044 sugar cane growers in Australia (ABARES – Farm Survey Analysis 2021) in a deregulated market. With typically 75 to 80 percent of production exported, the domestic sugar price is directly influenced by the world market price - the benchmark of which is the ‘Sugar #11

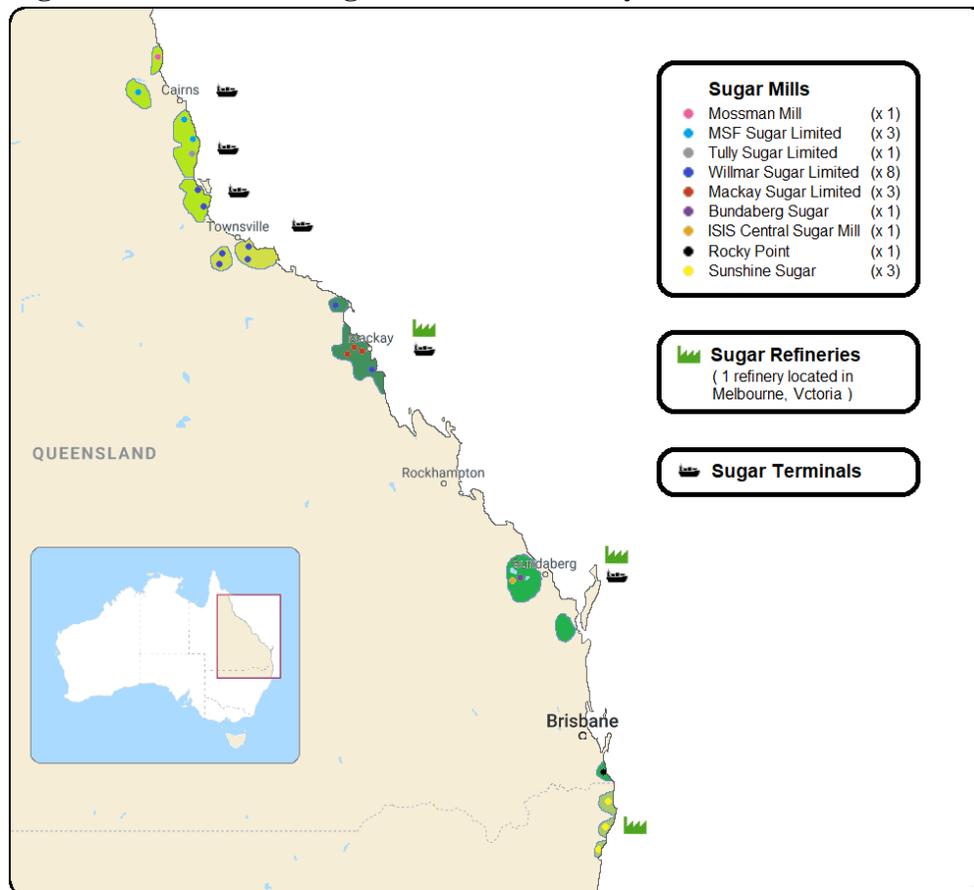
Futures'. Growers have three-year sugar cane supply agreements with the sugar mill in their area. Although the industry was deregulated in 2006, the sugar mills opted to continue a single desk marketing arrangement through Queensland Sugar Limited (QSL). In 2013, however, the millers decided to cease this single desk marketing arrangement and provided the required three years notice to end it. From 2017, growers have had the option to choose whether the rights to sell their sugar go to their own local sugar supply mill or QSL. The current structure enables other third-party marketers to also offer their services. Sugar cane growers also have the capacity to forward lock sugar prices on a portion of their annual production typically for up to three years. This assists in mitigating fluctuations in sugar prices from year to year. The industry grower representative body 'Canegrowers' has rolled out a 'Pricing Essentials' education program for their members to support growers to actively manage their price risk.

Sugar cane is a perennial tropical C4 plant originating from New Guinea. The crop germinates from billets (approximately a 30cm portion of a sugar cane stalk) planted in rows into a soil bed. The soil beds are raised to minimise waterlogging particularly during the high rainfall wet season periods. After germination plants will typically tiller and form 4-12 stems. The typical growing period between harvest is 12 months, however, in northern New South Wales the growing period is from 12 to 24 months, and it is varied according to prevailing climatic conditions. At harvest the entire plant is cut just above ground level and the stalks are cut into approximately 30cm lengths by machinery. The stalks are transported from the paddock by haulout wagons or trucks before being transported to the processing mill via small gauge rail or road transport. After the first planted sugar cane is harvested a series of successive crops regrow from the stubble which are referred to as ratoons. After the first harvest, annual production typically declines each successive year and farmers typically allow three to four ratoons. Farms typically have approximately 15 percent of their total sugar cane farming area as fallow in each season, which is planted from April to June in tropical regions. A further portion of the crop, typically 5-10 percent, is replanted (i.e. no fallow period) shortly after the final ratoon is harvested. This approach achieves a relatively even age profile of sugarcane plants across each farm and assists in optimising production and achieving a relatively stable production from year to year. The typical fallow and replant program and timing differs in the sub-tropical region of northern New South Wales from that of tropical regions.

There are a total of 22 sugar mills (see Figure 2) processing sugar cane typically from June through to late November. The mills are owned by nine different entities ranging from public listed companies, public unlisted companies, one private company and one cooperative. The MSF Mill in Maryborough and the Bingera Mill owned by Bundaberg Sugar, both located in Southern Queensland, closed prior to the MY 2021/22 sugar cane crush. Mills process sugar cane typically within 24 hours of harvest, producing raw sugar and by-products such as molasses, bagasse, ash and mill mud. Molasses is generally used in the animal feed industry and one of the Wilmar mills in central Queensland also produces ethanol from molasses. Multiple mills have cogeneration plants using bagasse to produce electricity for their own needs and surplus power is fed into the local electricity grid. Ash and mill mud are used as a fertiliser by sugar cane producers.

Approximately 75 to 80 percent of raw sugar production is delivered and stored at one of six ports on the Queensland coast for subsequent export. A small amount of raw sugar is also domestically refined for consumption in Australia and a relatively small volume of refined sugar is exported. There are a total of four sugar refineries owned by three entities. Three of the refineries are located in the growing regions (see Figure 2) and one is located in Melbourne, Victoria. There are six ports at which sugar is stored and loaded onto ships for export. These port facilities are all owned by Sugar Terminal Limited (STL) of which the major shareholder is QSL who also manage the terminals owned by STL.

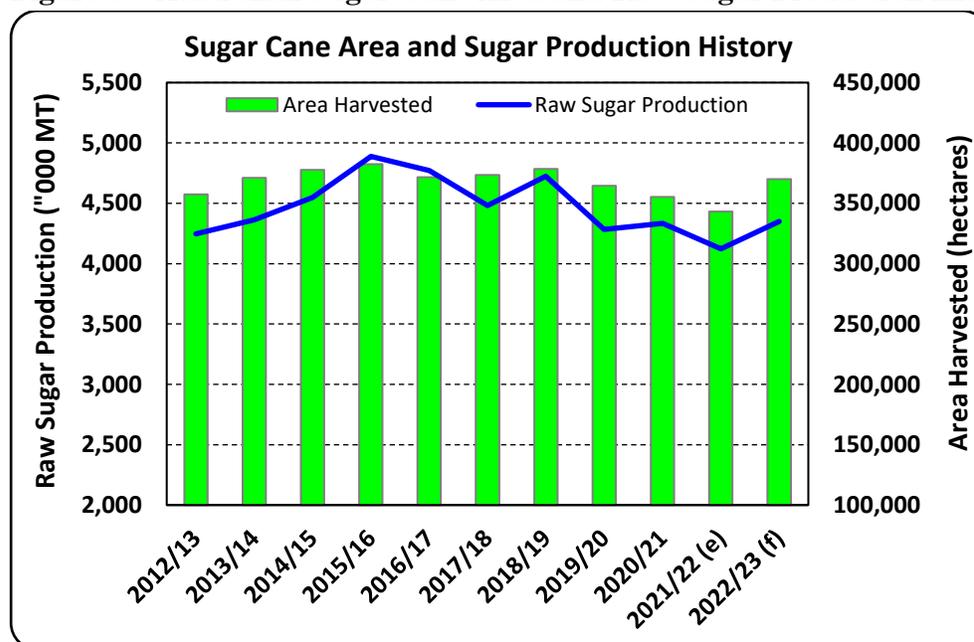
Figure 2 – Australian Sugar Mill and Refinery and Port Terminal Locations



Source: FAS/Canberra using data from Australian Sugar Milling Council

Despite the significant variations in rainfall from year to year, the risk of cyclone damage experienced in Australia, and large world sugar price fluctuations, nevertheless sugar cane and subsequently raw sugar production does not typically vary greatly from year to year. Over the last 10-year period, raw sugar production has varied from 4.12 MMT to 4.89 MMT (see Figure 3), a variation of around ± 8 percent. Raw sugar production is closely correlated to the area of sugar cane harvested (see Figure 3).

Figure 3 – Australian Sugar Cane Area and Raw Sugar Production History



Source: Australian Sugar Milling Council (ASCM)

Note: (e) ASCM Provisional results and (f) is FAS/Canberra forecast

There are a series of key factors that influence overall production:

- 1) Dry conditions around the time of planting can lead to a failed crop establishment, negatively impacting harvested area.
- 2) The impacts of cyclones which occur from time to time, mainly in the tropical regions, can significantly affect yields, and crops may take 2-3 seasons to fully recover.
- 3) Wet weather during harvest can lead to some area of sugar cane remaining unharvested and carried over to the following year. Although these carry over crops can have high yields, they usually have low sugar content and are far from optimal.
- 4) Significant mill breakdowns during the crush can extend the harvest period by weeks, and may increase overall yield in that season but will have a negative impact on the following season as the late harvested crop has a shorter growing period.
- 5) Grower sentiment associated with large variations in sugar prices not only influences planted area, but also the level of crop inputs such as fertilizer which influence yields.

However, the nature of the sugar cane plant with a 12-month growing cycle along with the crops typical 3 to 4 ratoons have a strong stabilizing influence over the crop and subsequent raw sugar production from year to year.

Policy & Other Industry Matters

WTO Sugar & Sugarcane Decision

After almost three years since Australia, along with other nations, initiated a dispute resolution process with the [World Trade Organization](#) (WTO), the panel ruled on December 14, 2021 that India had broken WTO caps on the maximum amount of support that a government can provide its farmers and flouted rules on export subsidies. India was also ruled to have breached legal requirements to notify the WTO of its support and subsidies.

India is the second largest sugar producer in the world and its actions from 2014 to 2019 allowed their farmers to ramp up production, oversupplying the world market and in the process drove down world sugar prices.

However, India appealed the decision to the WTO's Appellate Body on December 24, 2021, but this body has not been functional over the last two years. Until any appeal from India is heard, the WTO's dispute settlement panel's decision is not binding.

UK-AU FTA

The United Kingdom (UK) and Australia signed an in-principle Free Trade Agreement (FTA) on June 15, 2021 and has since been finalized and signed virtually on December 18, 2021.

The FTA was tabled in the Australian parliament on February 8, 2022, with an accompanying National Interest Analysis (NIA). Interested parties were invited to make submissions by March 18, 2022, before progressing towards acceptance by parliament.

After the FTA is formalized the Australian sugar industry is expected to receive immediate access to 80,000 MT of tariff-free quota to the UK with 20,000 MT annual increases reaching 220,000 MT in year eight, after which sugar tariffs will be eliminated. This is a marked improvement to current access of merely 9,925 MT. Although it is welcomed by the Australian sugar industry and provides a further significant market access option, it is anticipated that Australia will continue to focus its trade to nearby Asian markets.

Production

FAS/Canberra forecasts MY 2022/23 sugar cane production at 32 MMT, a six percent increase over the MY 2021/22 estimated production of 30.1 MMT. Although a significant increase, it merely brings production up near the average over the last 10 years of 32.15 MMT. The improvement in overall production is related to an increase in forecast yield, with little overall change to harvested area. The yield increase is driven by the improvement in rainfall in the large tropical Burdekin and north Queensland regions, which typically produce around 60 percent of the national crop. The south Queensland region, which produces around 10 percent of the national crop, after a series of dry years is now seeing one of the best seasons in many years with much improved rains improving its yield

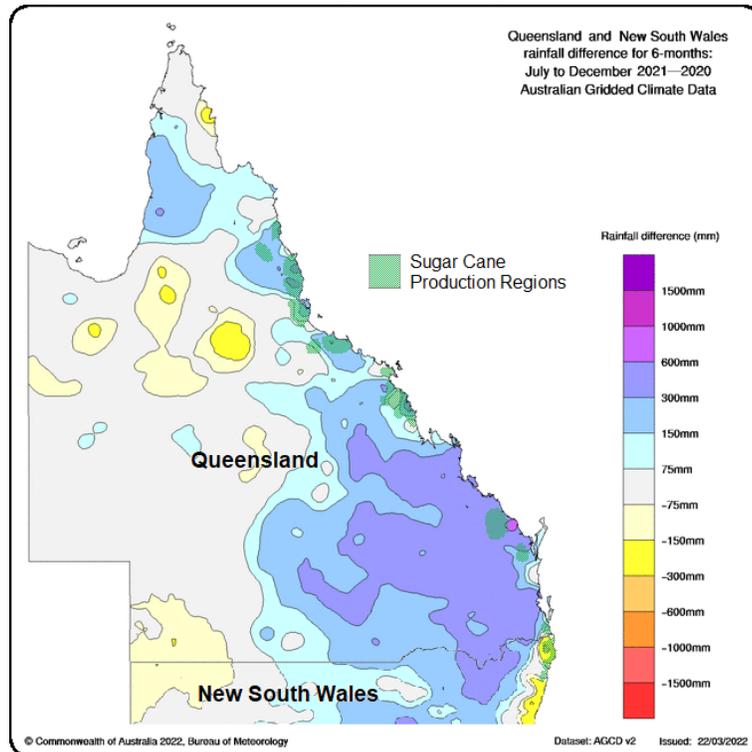
expectations. But the planted area in south Queensland has been declining due to encroachment from horticulture and this is expected to continue because of the closure of two sugar mills after the MY 2020/21 season. This fall in harvest area, however, is expected to be offset by increases in other regions.

In the initial six-month growing period from July to December 2021, prior to the onset of tropical wet season rains, all sugar production regions in Queensland received much improved rains compared to the prior year (see Figure 4). This sets up a significantly improved early crop growth phase immediately after harvest for existing ratoons but also improves the prospects of success for newly planted sugar cane. The northern New South Wales region, which accounts for around five percent of national production, received less rain in July to December 2021 compared to the prior year, but this was actually positive since there was excessive rain in the same period in the prior year. So, all sugar cane growing regions had much improved or above average rains in the early crop growth phase (July to December 2021), establishing a platform for improved yields for the MY 2022/23 crop.

Tropical wet season rains, mainly from January to March each year, also have a substantial bearing on the final crop yields. This period typically produces more than ample rainfalls in the tropical growing areas of north Queensland, Burdekin and central Queensland, but in some seasons there can be excessive rainfall with many overcast days with limited sunshine which limits crop growth. In an average wet season period this is typically the case for the north Queensland area which represents around 35 percent of overall production. For the January to March 2022 period the more northern parts of the north Queensland area have had less rainfall whereas the southern parts had far more rainfall than the prior year (see Figure 5). However, the rainfall in the January to March 2022 period for all for the north Queensland area has been below average, but still adequate. Also, with more sunlight hours in the wet season period, sugar cane crops are reportedly performing well, and coupled with a good early growth period, are primed to achieve improved yields.

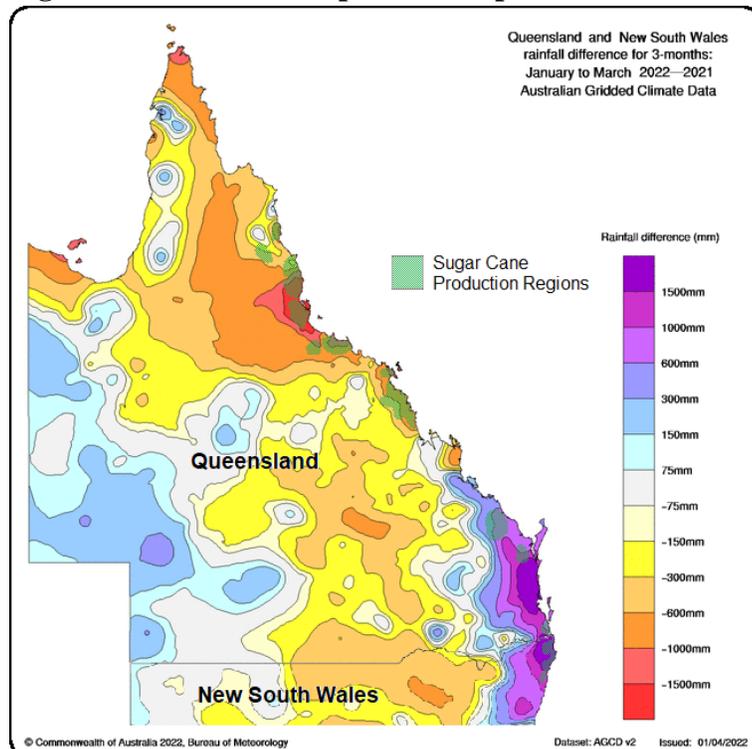
The only blemish to the improved crop yields is for the central Queensland region. Although rains have been good, suppliers to Mackay Sugar (by far the largest processor in the region) have been affected by the protracted harvest for the MY 2021/22 crop. Good practice is for harvest to be completed by early to mid-November each year, but in this instance it finished at the end of December 2021. The impact of the protracted harvest is that average yield would have been elevated and sugar content diminished for the MY 2021/22 crop. The flow on affect for the MY 2022/23 crop is that the sugar cane areas that were harvested far later than optimal will have a shorter growing period, reducing yield potential, and also likely a reduced sugar content. Despite the improved early crop growth conditions in the central Queensland region, the average sugar cane yield there is not expected to improve in the forecast year.

Figure 4 – Rainfall Comparison Map - Jul to Dec 2021 - 2020



Source: Australian Bureau of Meteorology / FAS/Canberra

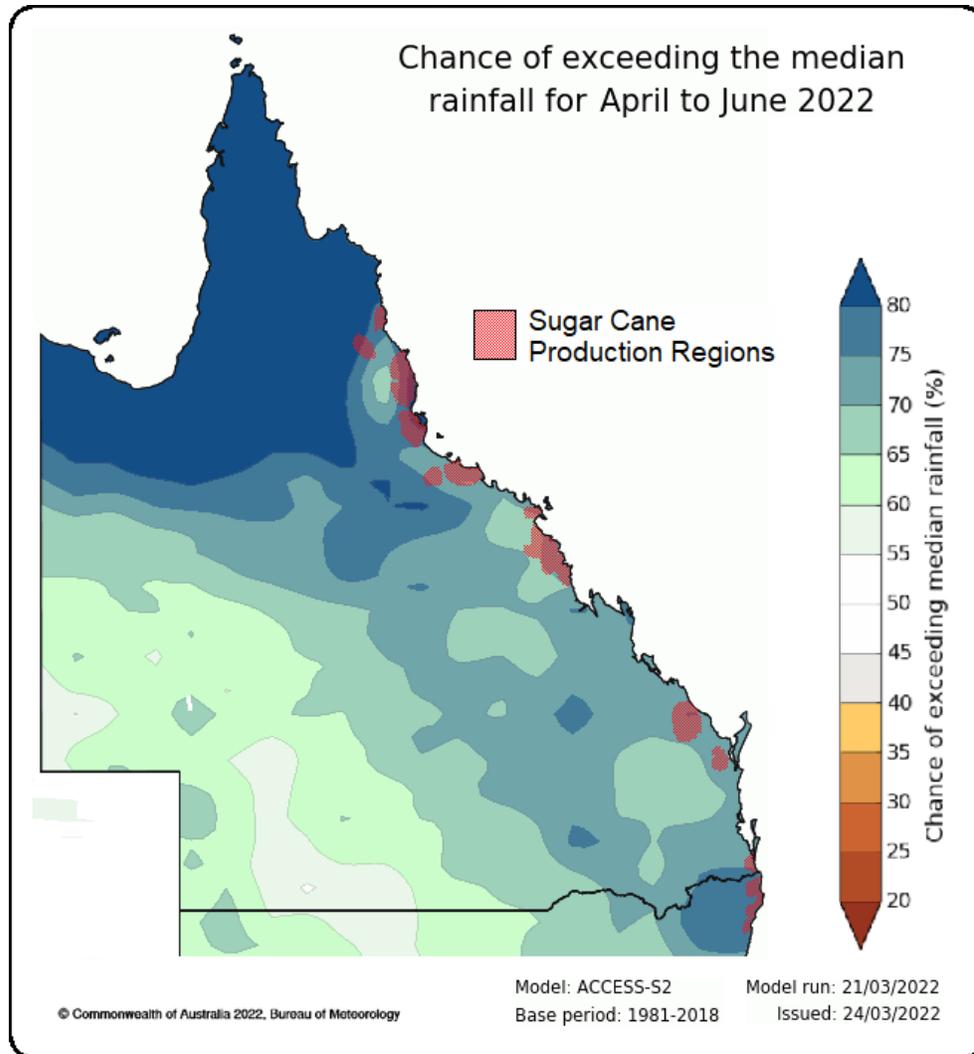
Figure 5 – Rainfall Comparison Map - Jan to Mar 2022 - 2021



Source: Australian Bureau of Meteorology / FAS/Canberra

At the end of March, sugar cane crops are well advanced and a short period away from the commencement of harvest at the end of May 2022. Some rainfall after the wet season period in the lead up to and during harvest is helpful to achieve higher yields. A positive sign for growers is that the Bureau of Meteorology forecast indicates a likelihood of above-average rainfall across all sugar cane producing areas for the April to June 2022 period (see Figure 6). If realized, this will continue to support the anticipated improvement in sugar cane yields for the MY 2022/23 crop.

Figure 6 - Rainfall Forecast Map - April to June 2022



Source: Australian Bureau of Meteorology / FAS/Canberra

MY 2021/22 sugar cane production has been revised downwards slightly by FAS/Canberra to 30.1 MMT, compared to the official USDA estimate of 31.0 MMT. This revision is based on Australian Sugar Millers Council results from the completed harvest.

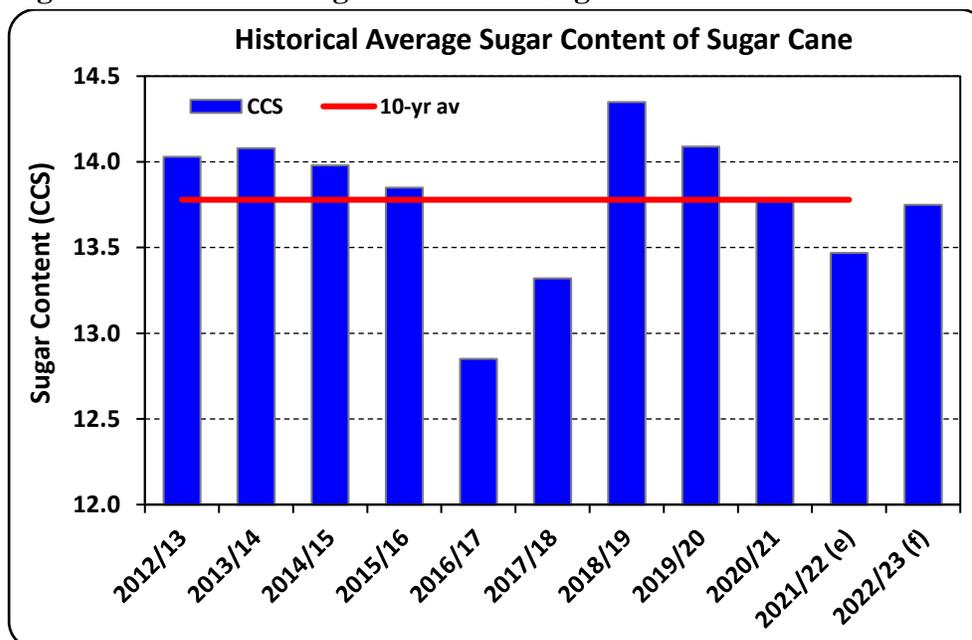
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Production

FAS/Canberra forecasts Australia's MY 2022/23 sugar production at 4.45 MMT, an eight percent increase over the MY 2021/22 estimated production of 4.12 MMT. The increase is mainly due to the forecast six percent increase in sugar cane production, but also supported by an expected improvement in overall sugar content.

The sugar content of sugar cane in the MY 2022/23 season is expected to improve slightly (see Figure 7) to around the previous 10-year average broadly due to improved growing conditions.

Figure 7 – Historical Sugar Content of Sugar Cane



Source: *Canegrowers / Australian Sugar Milling Council / FAS/Canberra*

Note: *CCS = Commercial Cane Sugar (a measure of sugar content of sugar cane used by millers)*

MY 2021/22 sugar production has been revised downwards by FAS/Canberra to 4.12 MMT, compared to the official USDA estimate of 4.4 MMT. This is in part due to sugar cane production being 900,000 MT lower and the sugar content result also being lower than anticipated.

Consumption

Domestic sugar consumption for MY 2022/23 is forecast at 900,000 MT, up six percent from the estimated 850,000 MT for MY 2021/22.

This increase is due to the improved COVID-19 conditions in Australia now with very few restrictions in place in most states since early 2022. International borders started to open in late 2021 for those fully

vaccinated for COVID-19. Within Australia, by the start of 2022 state border closures had almost all lifted with minimal restrictions. With both international travelers to Australia and domestic travelers able to freely travel throughout most of the country, there is an expectation of a significant benefit to the domestic food service sector. This is anticipated to drive up domestic sugar consumption.

The forecast consumption, although a considerable increase over the COVID-19 affected MY 2021/22, remains around 14 percent lower than the previous ten-year average. Sugar consumption in the future is not expected to recover to past levels, but population growth could support increased sugar consumption over time. The general decline in sugar consumption is due to changing dietary habits and increasing government focus on food labelling standards, particularly relating to the sugar content of drinks and foods.

Trade

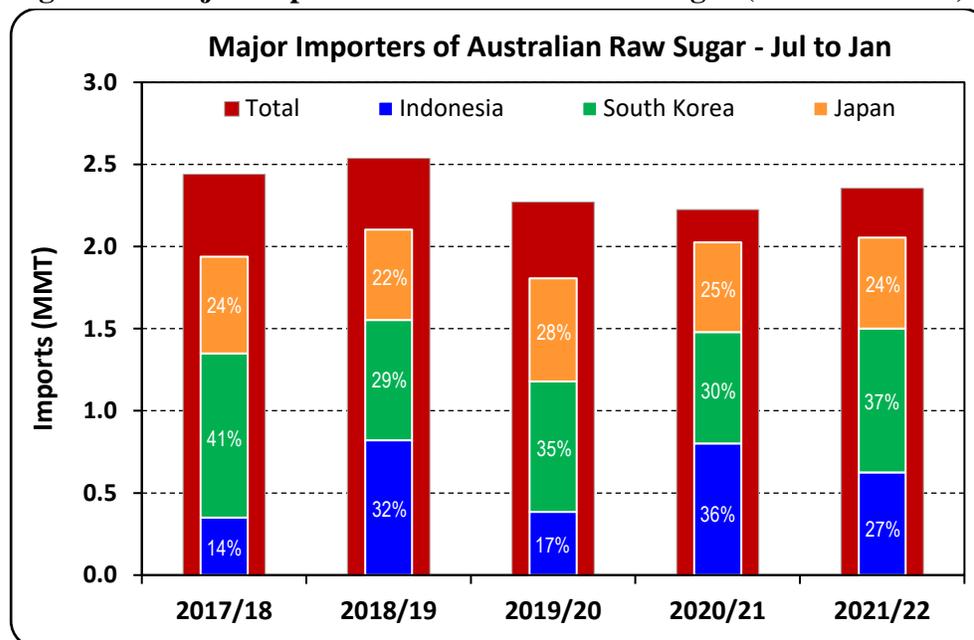
Raw sugar exports in MY 2022/23 are forecast to increase to 3.45 MMT from an estimate of 3.2 MMT in MY 2021/22. This increase in raw sugar exports mainly relates to the strong world demand for sugar and Australia's capacity to increase exports due to the forecast rise in sugar production.

Around 80 percent of Australian sugar is exported and of this, raw sugar represents over 95 percent, with the balance being refined sugar. With relatively high production costs in Australia relative to other major producers, there is no expectation that refined sugar exports will shift by any significant degree in the coming years.

The major importers of Australian raw sugar over recent years have consistently been South Korea, Indonesia and Japan (see Figure 8) and they now account for around 90 percent of the overall results. In the past China has been a significant importer of Australian raw sugar, but still well below that of the top three. However, in MY 2020/21 and so far for MY 2021/22 (July 2021 to February 2022), China has imported almost no raw sugar. Over the last two marketing years most of the remaining 10 percent of importers of Australian raw sugar have been the United States and Singapore. Australia has in the past exported well over 4 MMT of raw sugar, and with current high prices and demand there is little concern that Australia can find markets for the forecast of 3.45 MMT.

MY 2021/22 raw sugar exports have been revised downwards by FAS/Canberra to 3.2 MMT, compared to the official USDA estimate of 3.5 MMT. This revision is due to a lower sugar production estimate based on results from the Australian Sugar Millers Council. The year-to-date (July 2021 to February 2022) exports of raw sugar is at 2.5 MMT and on an annualized basis, taking into account monthly seasonality variations, exports for MY 2021/22 are well on track to achieve the estimated 3.2 MMT. The high pace of exports in the marketing year to date has been driven by high sugar prices and strong world demand, but the rate of exports is expected to slow simply due to a lack of available supply in Australia.

Figure 8 – Major Importers of Australian Raw Sugar (YTD – Jul-Jan)



Source: Trade Data Monitor (data as reported by importing countries)

Singapore typically imports over 85 percent of Australia’s total refined sugar exports. Refined sugar exports for MY 2022/23 are forecast to remain relatively stable at 100,000 MT (raw equivalent), remaining the same as the previous two years. The marketing year to date exports for MY 2021/22 (July 2021 to February 2022) are very similar to the same period in the previous year, indicating that refined sugar exports from Australia are currently stable. The forecast and MY 2021/22 estimate of 100,000 MT are around 40-percent below the previous 10-year average, after a gradual decline over this period.

Australian imports of refined sugar are very low and equate at just over one percent of domestic consumption. FAS/Canberra forecasts refined sugar imports to remain stable at 10,000 MT in MY 2022/23, in line with the estimate for MY 2021/22. Refined sugar exports have been trending down over the last decade and there is more likely to be downside risk to the forecast rather than an increase.

Stocks

End of year stocks of sugar in Australia are typically very low. This relates to the close alignment of the start of the sugar cane harvest season (June) with the beginning of the marketing year (July). Exports of sugar typically ramp up in July one month from the start of harvest and remain high through to December, one month after harvest is usually completed in November. For the remainder of the marketing year from January to June, export quantities are lower, and this period is used to clear stocks in the lead up the commencement of the following harvest.

Production, Supply, and Distribution of Sugar Cane

Sugar Cane for Centrifugal Market Year Begins Australia	2020/2021		2021/2022		2022/2023	
	Jul 2020		Jul 2021		Jul 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted (1000 HA)	0	0	0	0	0	0
Area Harvested (1000 HA)	355	355	355	345	0	350
Production (1000 MT)	31100	31100	31000	30100	0	32000
Total Supply (1000 MT)	31100	31100	31000	30100	0	32000
Utilization for Sugar (1000 MT)	31100	31100	31000	30100	0	32000
Utilizatn for Alcohol (1000 MT)	0	0	0	0	0	0
Total Utilization (1000 MT)	31100	31100	31000	30100	0	32000

(1000 HA) ,(1000 MT)

Production, Supply, and Distribution of Centrifugal Sugar

Sugar, Centrifugal Market Year Begins Australia	2020/2021		2021/2022		2022/2023	
	Jul 2020		Jul 2021		Jul 2022	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks (1000 MT)	38	38	135	135	0	118
Beet Sugar Production (1000 MT)	0	0	0	0	0	0
Cane Sugar Production (1000 MT)	4335	4335	4400	4120	0	4450
Total Sugar Production (1000 MT)	4335	4335	4400	4120	0	4450
Raw Imports (1000 MT)	3	3	3	3	0	3
Refined Imp.(Raw Val) (1000 MT)	9	9	10	10	0	10
Total Imports (1000 MT)	12	12	13	13	0	13
Total Supply (1000 MT)	4385	4385	4548	4268	0	4581
Raw Exports (1000 MT)	3300	3300	3500	3200	0	3450
Refined Exp.(Raw Val) (1000 MT)	100	100	135	100	0	100
Total Exports (1000 MT)	3400	3400	3635	3300	0	3550
Human Dom. Consumption (1000 MT)	850	850	850	850	0	900
Other Disappearance (1000 MT)	0	0	0	0	0	0
Total Use (1000 MT)	850	850	850	850	0	900
Ending Stocks (1000 MT)	135	135	63	118	0	131
Total Distribution (1000 MT)	4385	4385	4548	4268	0	4581

(1000 MT)

Attachments:

No Attachments