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## **Report Name:** Sugar Annual

**Country:** Australia

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### **Report Highlights:**

Australia's sugar production is forecast to increase to 4.4 million metric tons (MMT) in marketing year (MY) 2021/22, from an estimated 4.335 MMT in MY 2020/21. This increase is due to an expected rise in sugar cane crush to 31.5 MMT in MY 2021/22, from an estimate of 31.1 MMT in the previous year. The increase is driven by anticipated improvements in sugar cane yield in the northern tropical regions of Queensland and in sub-tropical northern New South Wales. However, this is partially offset by expected decreases in sugar cane production area and yield in the sub-tropical southern Queensland region. Raw sugar exports are forecast to increase to 3.4 MMT in MY 2021/22 from the prior year estimate of 3.2 MMT, while refined sugar is expected to remain stable at 135,000 metric tons (MT).

## **Executive Summary**

Australia's sugar production is forecast to increase to 4.4 million metric tons (MMT) in marketing year (MY) 2021/22, from an estimated 4.335 MMT in MY 2020/21. This increase is due to an expected rise in sugar cane crush to 31.5 MMT in MY 2021/22, from an estimate of 31.1 MMT in the previous year. The increase in production is driven by anticipated improvements in sugar cane yield in the northern tropical regions of Queensland and in sub-tropical northern New South Wales. However, this is partially offset by expected decreases in sugar cane production area and yield in the sub-tropical southern Queensland region, due to competition from higher value horticulture and below-average rainfall.

Of the total exports of sugar, 95 percent is raw sugar and five percent refined. Raw sugar exports are forecast to increase to 3.4 MMT in MY 2021/22 from the prior year estimate of 3.2 MMT, while refined sugar is expected to remain stable at 135,000 metric tons (MT).

## **SUGAR CANE**

### **Overview**

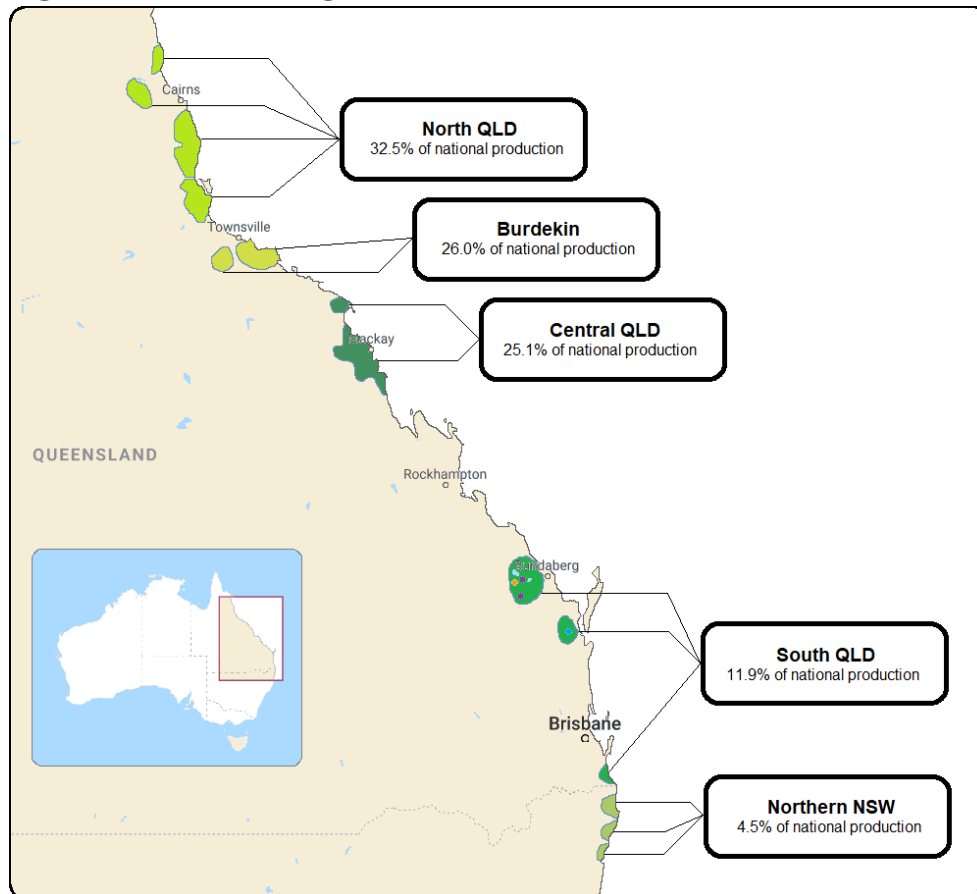
Australian sugar cane is grown on coastal plains and valleys along a 2,100km stretch of Australia's eastern coastline between Mossman in north Queensland (QLD) and Grafton in northern New South Wales (NSW). North QLD has a tropical climate with average rainfall in the area as high as 3,500mm (138 inches) 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	32.5 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	26.0 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	25.1 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	11.9 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

4.5 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 4,050 sugar cane growers in Australia in a deregulated market. With approximately 76 percent of production exported, the domestic sugar price is directly influenced by the

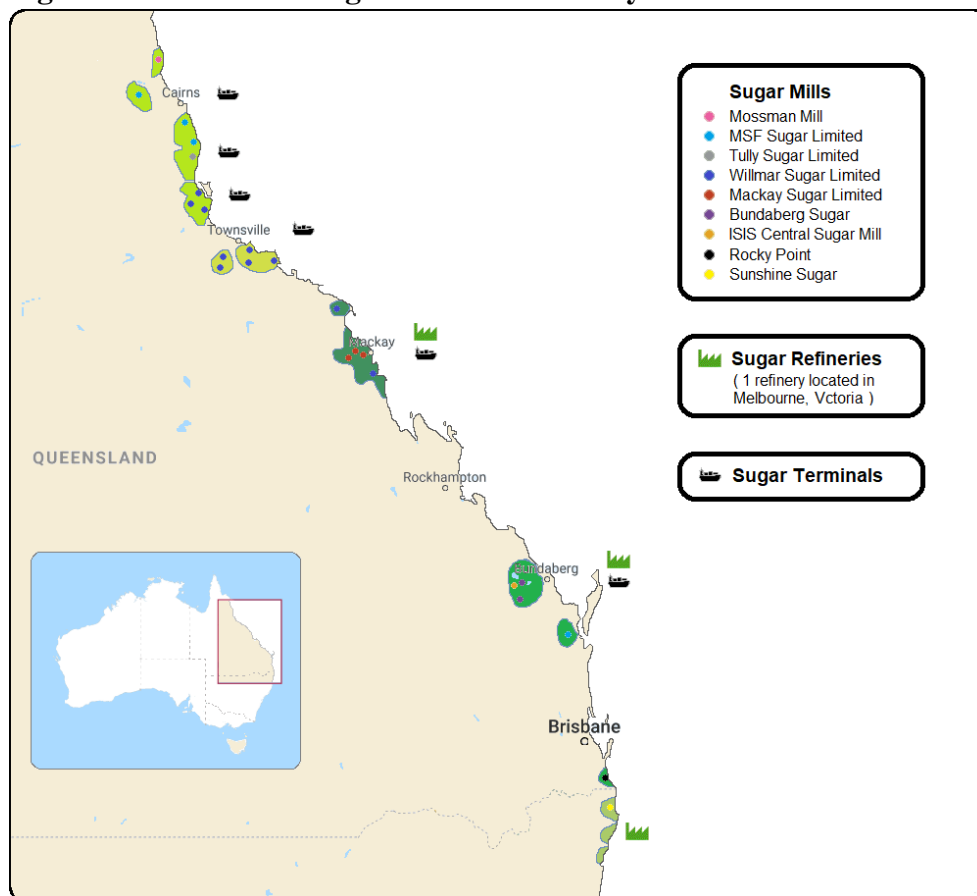
world market price - the benchmark of which is the 'Sugar #11 Futures'. Growers have three-year sugar cane supply agreements with the sugar mill in their area. Although the industry was deregulated in 2006, the sugar mills opted to continue a single desk marketing arrangement through Queensland Sugar Limited (QSL). In 2013, however, the millers decided to cease this single desk marketing arrangement and provided the required three years notice. 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 recently initiated 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 haul-out 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 would 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 23 sugar mills (shown in Figure 2) processing sugar cane typically from June through to late November. The mills are owned by 9 different entities ranging from public listed companies, public unlisted companies, one private company and one cooperative. The MSF Mill in Maryborough in southern Queensland has announced the closure of the mill and will not process sugar cane from MY 2021/22. The 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 mill 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 fertilizer by sugar cane producers.

Approximately 76 percent of raw sugar production is delivered and stored at one of six ports on the Queensland coast for subsequent export. 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.

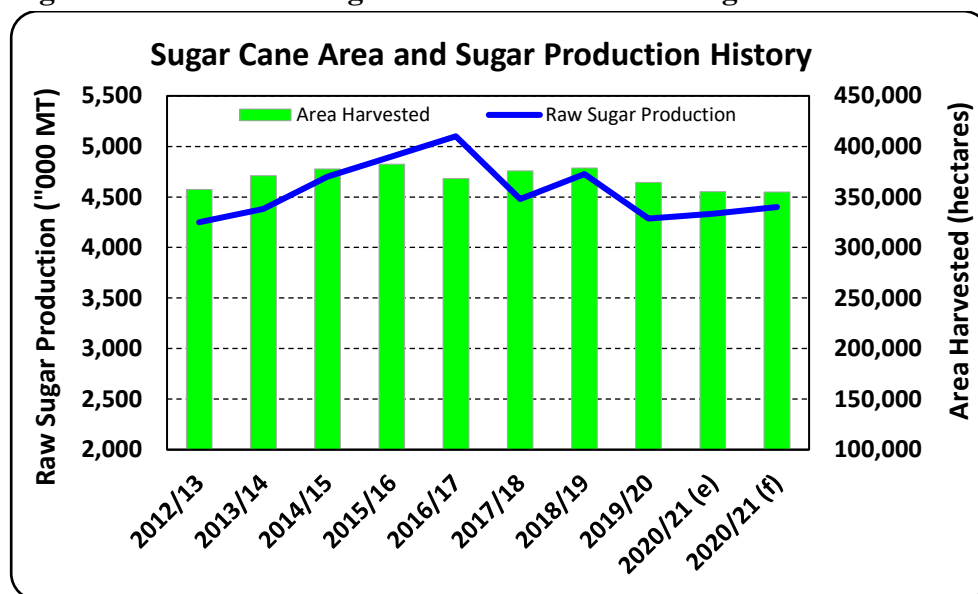
**Figure 2 – Australian Sugar Mill and Refinery and Port Terminal Locations**



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 along with large world sugar price fluctuations, 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 4.285 MMT to 5.1 MMT (see figure 3), a variation of  $\pm 8.7$  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: FAS PS&D

Note: (e) is FAS/Canberra estimate 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) 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.

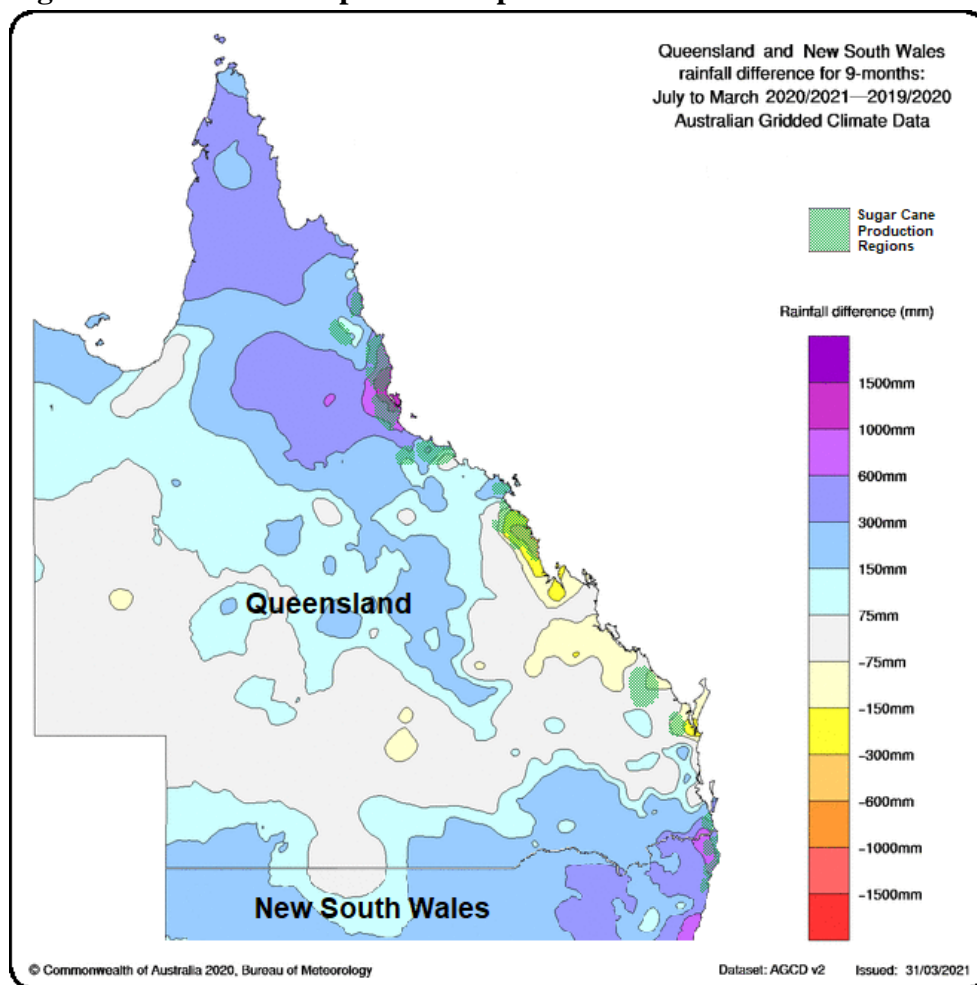
However, the nature of the sugar cane plant with a 12-month growing cycle along with the crops typical 3 to 4 ratoons have a strong stabilizing influence over the crop and subsequent raw sugar production from year to year.

### **Production**

FAS/Canberra forecasts MY 2021/22 sugar cane production at 31.5 MMT, a 400,000 MT increase over the MY 2020/21 estimated production. The improvement in overall production is related to an increase in forecast yield, with harvested area expected to remain stable. The harvest area in the south Queensland region is forecast to fall but is offset by increases in other regions. The yield increase is driven by the improvement in rainfall in the large tropical Burdekin and north Queensland regions and in the small northern New South Wales area. However, the gains in these areas are partially offset by reduced rainfall in the central and southern Queensland areas.

There has been a significant improvement in rainfall, in the sugar regions in the nine-month growing period (July 2020 to March 2021), for the MY 2021/22 forecast crop, in comparison to the previous year. North Queensland areas have generally received from 150mm to 1,000mm more rain than the same period in the previous year (see figure 4). At times this region can receive too much rain which can be detrimental to production. However, industry sources indicate that these areas have dried out well after big tropical wet season rains and the sugar cane is performing well and the region is looking forward to increased production for the upcoming MY 2021/22 harvest. The Burdekin region has a much lower average rainfall and is heavily reliant on irrigation, but the improved rainfall this area has been welcomed and will also contribute to improved production expectations.

**Figure 4 – Rainfall Comparison Map - Jul 2019 to Mar 2020 v’ Jul 2020 to Mar 2021**



Source: Australian Bureau of Meteorology / FAS/Canberra

Northern New South Wales, similarly, to north Queensland, has also received much improved rainfall for the MY 2021/22 crop and, although representing around 4.5 percent of total Australian production, will contribute to improved national production.

The tropical central Queensland region has received as much as 300mm less rainfall for the July 2020 to March 2021 period (see figure 4) compared to the same time the previous year, which equates to average to below-average rainfall. This would typically suggest an expected reduction in production in the region for MY 2021/22. However, the takeover of the struggling Mackay Sugar Limited in 2020 by German sugar beet processor Nordzucker AG has reportedly injected some grower confidence into the region, and an increase in harvest area and increased crop inputs is anticipated, more than offsetting the impact of the lower rainfall.

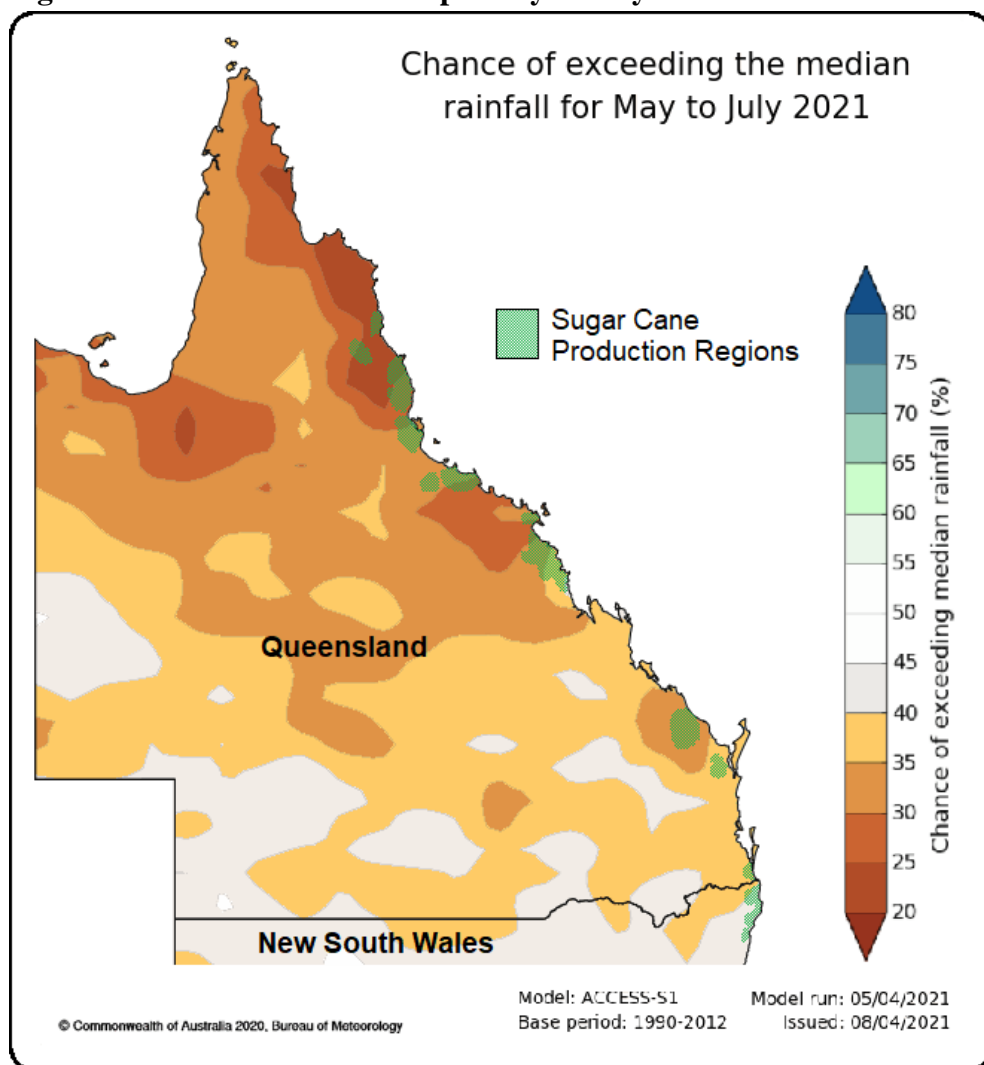
The sub-tropical region of south Queensland is forecast to be the one area that looks to have lower production via a combination of significantly reduced harvest area, particularly in the Maryborough area, and lower rainfall for the current crop growing period compared to the previous MY 2020/21 season. Production in the Bundaberg area in south Queensland has also been affected by lower rainfall. The reduced harvest area around Maryborough is related to the encroachment of horticulture crops, mainly macadamia nuts in recent years. In 2020 MSF sugar sold 5,409 hectares of sugar cane producing land to Rural Funds Management (RFM) group for gradual conversion to macadamia nuts. Since the sale, MSF sugar has made arrangements for their other suppliers to transport their sugar cane to ISIS Central sugar mill, due to their obligations under a 3-year supply agreement between growers and the mill. This has enabled MSF to announce the closure of the mill. This is likely to lead to further reductions in sugar cane planted area around Maryborough in the coming years.

At the end of March, sugar cane crops were well advanced and a short period away from the commencement of harvest at the end of May 2021. Some rainfall after the wet season period in the lead up to and during harvest is helpful to achieve higher yields. Unfortunately for growers, the Bureau of Meteorology forecast indicates a likelihood of below-average rainfall across all sugar cane producing areas for the May to July 2021 period (see figure 5). If not for this likely impact, the MY 2021/22 sugar cane production forecast would have been even a little higher.

MY 2020/21 sugar cane production has been revised upwards slightly by FAS/Canberra to 31.1 MMT, compared to the official USDA estimate of 31.0 MMT. This revision is based on preliminary industry results from the completed harvest.



**Figure 5 - Rainfall Forecast Map - May to July 2021**



Source: Australian Bureau of Meteorology / FAS/Canberra

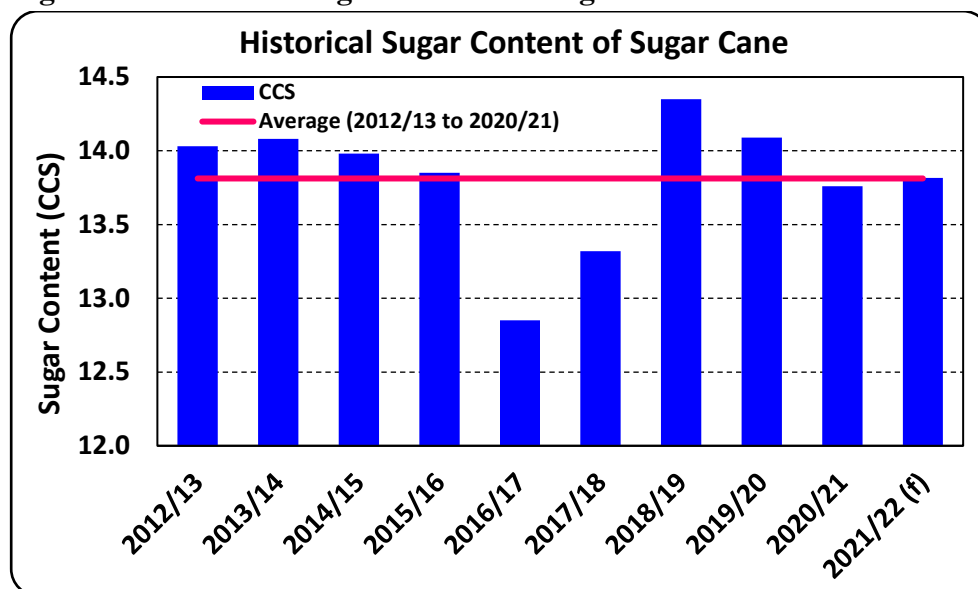
## SUGAR

### Production

FAS/Canberra forecasts Australia's MY 2021/22 sugar production at 4.4 MMT, a 65,000 MT increase over the MY 2020/21 estimated production. The increase is primarily due to the forecast rise in sugar cane production but also a moderate increase in sugar content to around the long-term average.

The sugar content of sugar cane in the MY 2021/22 season is expected to improve slightly (see figure 6) on the back of dry conditions forecast for the early part of the harvest period (see figure 5). However, if the dry conditions persist throughout harvest, this may be detrimental to the sugar content of the sugar cane harvested late in the season and potentially result in a lower result than forecast.

**Figure 6 – 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 2020/21 sugar production has been revised upwards by FAS/Canberra to 4.335 MMT, compared to the official USDA estimate of 4.3 MMT. This revision is based on preliminary industry results from the completed harvest.

### **Consumption**

Domestic sugar consumption for MY 2021/22 is forecast at 900,000 MT, an increase of 50,000 MT over the MY 2020/21 estimated outcome. This six-percent increase is due to the improved COVID-19 conditions in Australia with very few instances of community transmission outbreaks and the commencement of the vaccine rollout. With international borders set to remain closed for much of 2021, domestic travel is expected to increase, which is anticipated to provide a significant benefit to the domestic food service sector.

The forecast consumption, although a considerable increase over the COVID-19 affected MY 2020/21, remains around 17 percent lower than the previous ten-year average. Sugar consumption in the future is not expected to recover to past levels, other than through significant population growth. This is due to changing dietary habits and increasing government focus on food labelling standards, particularly relating to sugar content.

### **Trade**

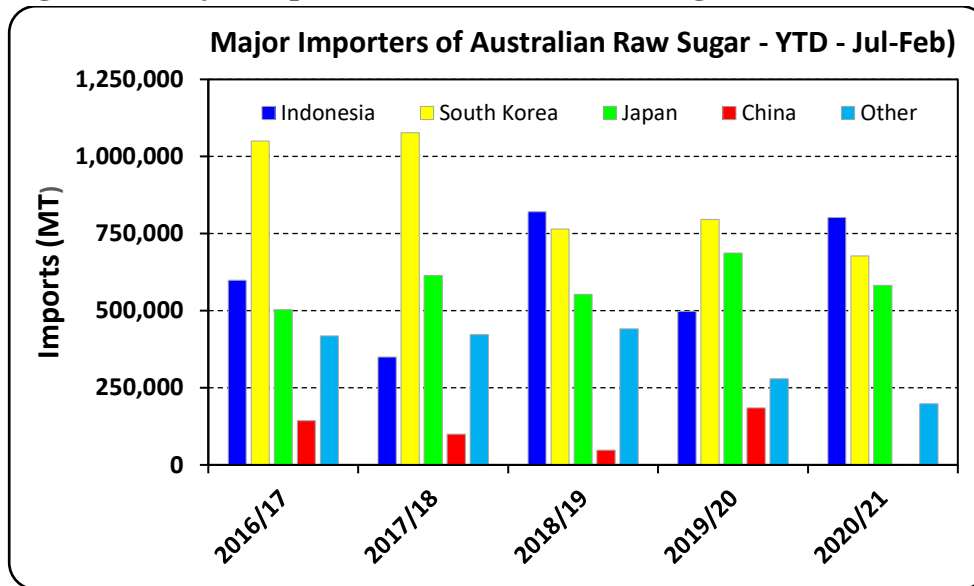
Raw sugar exports in MY 2021/22 are forecast to increase to 3.4 MMT from an estimate of 3.2 MMT in MY 2020/21. This increase in raw sugar exports in part relates to the increased production of sugar, but

also a broader gradual opening up of international economies as the management of COVID-19 continues to improve.

Around 76 percent of Australian sugar is exported and of this raw sugar represents 95 percent, with the balance of five percent being refined sugar. There is no known impetus for any change in world demand for Australian refined sugar.

The major importers of Australian raw sugar are South Korea, Japan, Indonesia, and China (see figure 7). Over the last five years South Korea has significantly reduced its imports of Australian raw sugar while Indonesia and Japan have increased. Over the same period these countries have accounted for around 80 percent of world imports of Australian raw sugar. China has on average imported around six percent but has varied significantly from year to year. However, the year-to-date result for MY 2020/21 shows that China has imported almost no raw sugar from Australia (see figure 7). Although there has been a significant trade dispute between China and Australia over recent months there has been no formal trade barrier placed by China on Australian raw sugar imports.

**Figure 7 – Major Importers of Australian Raw Sugar (YTD – Jul-Feb)**



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

The year-to-date (July 2020 to February 2021) exports of raw sugar is at 2.271 MMT and on an annualized basis, taking into account monthly seasonality variations, exports for MY 2020/21 are on track to achieve the estimated 3.2 MMT.

MY 2020/21 raw sugar exports have been revised downwards by FAS/Canberra to 3.2 MMT, compared to the official USDA estimate of 3.3 MMT. This revision is based on the year-to-date results of raw sugar world imports from Australia.

Singapore imports around 85 percent of Australia’s total refined sugar exports. Refined sugar exports for MY 2021/22 are forecast to remain stable at 135,000 MT in-line with the revised MY 2020/21 estimate. The forecast is also in line with the MY 2018/19 result but still well below the previous 10-year average of 176,000 MT.

Australian imports of refined sugar are very low and equate to around 1.5 percent of domestic consumption. FAS/Canberra forecasts refined sugar imports to rise to 11,000 MT in MY 2021/22 from a significantly downward revised estimate of 8,000 MT for MY 2020/21. This revision is from the official USDA estimate of 15,000 MT and is based on the year-to-date (July 2020 to February 2021) result of slightly below 5,000 MT.

### 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.

Sugar Cane for Centrifugal Market Year Begins	2019/2020		2020/2021		2021/2022	
	Jul 2019		Jul 2020		Jul 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>Australia</b>						
<b>Area Planted</b> (1000 HA)	0	0	0	0	0	0
<b>Area Harvested</b> (1000 HA)	364	364	370	355	0	355
<b>Production</b> (1000 MT)	30000	30000	31000	31100	0	31500
<b>Total Supply</b> (1000 MT)	30000	30000	31000	31100	0	31500
<b>Utilization for Sugar</b> (1000 MT)	30000	30000	31000	31100	0	31500
<b>Utilizatn for Alcohol</b> (1000 MT)	0	0	0	0	0	0
<b>Total Utilization</b> (1000 MT)	30000	30000	31000	31100	0	31500
(1000 HA) ,(1000 MT)						

Sugar, Centrifugal Market Year Begins Australia	2019/2020		2020/2021		2021/2022	
	Jul 2019		Jul 2020		Jul 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
<b>Beginning Stocks</b> (1000 MT)	137	137	38	38	0	196
<b>Beet Sugar Production</b> (1000 MT)	0	0	0	0	0	0
<b>Cane Sugar Production</b> (1000 MT)	4285	4285	4300	4335	0	4400
<b>Total Sugar Production</b> (1000 MT)	4285	4285	4300	4335	0	4400
<b>Raw Imports</b> (1000 MT)	3	3	3	1	0	1
<b>Refined Imp.(Raw Val)</b> (1000 MT)	13	13	12	7	0	10
<b>Total Imports</b> (1000 MT)	16	16	15	8	0	11
<b>Total Supply</b> (1000 MT)	4438	4438	4353	4381	0	4607
<b>Raw Exports</b> (1000 MT)	3500	3500	3300	3200	0	3400
<b>Refined Exp.(Raw Val)</b> (1000 MT)	100	100	100	135	0	135
<b>Total Exports</b> (1000 MT)	3600	3600	3400	3335	0	3535
<b>Human Dom. Consumption</b> (1000 MT)	800	800	850	850	0	900
<b>Other Disappearance</b> (1000 MT)	0	0	0	0	0	0
<b>Total Use</b> (1000 MT)	800	800	850	850	0	900
<b>Ending Stocks</b> (1000 MT)	38	38	103	196	0	172
<b>Total Distribution</b> (1000 MT)	4438	4438	4353	4381	0	4607
(1000 MT)						

**Attachments:**

No Attachments