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## Report Name: Citrus Annual

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## Report Highlights:

Citrus production in Australia is experiencing a major turnaround as a result of drought-breaking rains in 2020 throughout much of the citrus producing regions. The improved rainfall in 2020 will have a significant positive impact on forecast production in 2021 (marketing year 2020/21) with orange production at 535,000 metric tons (MT), and tangerine/mandarin production at $175,000 \mathrm{MT}$, both around a 10 percent increase over the drought-impacted marketing year (MY) 2019/20. Orange exports are forecast at $195,000 \mathrm{MT}$, a three percent increase over the strong campaign in MY 2019/20, and tangerine/mandarin exports are set to rebound by 29 percent to 80,000 MT. The citrus industry is concerned by an expected further reduction of labor available for harvest in 2021, an impact of the COVID-19 pandemic. However, the federal and state governments are working with the industry to try and mitigate this impact.

## Executive Summary

Citrus production in Australia is experiencing a major turnaround as a result of drought-breaking rains in 2020 throughout much of the citrus producing regions. The improved rainfall in 2020 will have a significant positive impact on production in 2021 (marketing year 2020/21) with fresh orange production forecast at 535,000 metric tons (MT), around a 10-percent increase over the droughtimpacted production in marketing year (MY) 2019/20. Timely rainfalls in the major orange producing regions in 2020 has promoted good bud burst and fruit set resulting in a heavy crop load. These good rainfalls in the early production period, prior to the commencement of the irrigation season, has enabled growers to apply additional nutrients to the trees to encourage fruit growth and minimize the impact of reduced fruit size, which can be typical when there is a heavy crop load. Exports of Australian oranges are forecast to grow by three percent in MY 2020/21 to 195,000 MT. The increase in production is largely expected to go for increased domestic consumption, which is forecast at 140,000 MT in MY 2020/21.

Mandarin production in Australia was similarly affected by the drought conditions, and some key regions benefited from drought-breaking rains in 2020. However, there is a greater diversity of mandarin production regions in Australia than oranges, and planted area has been expanding. Mandarin planted area has increased 37 percent over the last five years, much of which will begin bearing fruit in the coming years, boosting overall production. Mandarin production is forecast to increase by around nine percent in MY 2020/21 to 175,000 MT. The export demand for mandarins is set to rebound to 80,000 MT in MY 2020/21, from an estimated 62,000 MT in MY 2019/20, accounting for all of the forecast production increase. Domestic consumption is expected to remain largely unchanged at 96,000 MT.

Australia is forecast to continue its trend of importing more orange juice than it produces. Orange juice production is forecast to increase to 16,500 MT in MY 2020/21, a four-percent increase over the prior year. This is due to the forecast 10 -percent increase in orange production, leading to the amount of oranges used for processing returning to pre-drought levels. Imports are forecast to decrease to 18,000 MT in MY 2020/21 from an estimated 20,000 MT in the prior year. The estimated spike in orange juice imports in MY 2019/20 was due to a combination of reduced production and increased domestic consumption. Health consciousness triggered by the COVID-19 pandemic has led to the estimated increase in consumption.

The citrus industry has faced the challenge of reduced availability of harvest labor in 2020, mostly made up of workers on the Pacific Seasonal Worker Program and overseas backpackers. Their numbers declined significantly during 2020 due to the COVID-19 pandemic, and despite the Australian government introducing some initiatives to mitigate this issue. Due to the cost of a 14-day quarantine period for travellers coming to Australia and the time line to roll out COVID-19 vaccines around the world, growers are very concerned that there will be significantly less available harvest labor at the commencement of the orange harvest in May 2021, possibly leading to unharvested fruit.

## FRESH ORANGES

## Production

FAS/Canberra forecasts fresh orange production of 535,000 MT in MY 2020/21 (April 2021 to March 2022), a 10-percent increase on the downward revised MY 2019/20 estimate of 485,000 MT. This large increase is in part related to increased tree plantings over recent years, but also largely related to muchimproved conditions after the drought in 2018 and 2019. Average to above-average rainfall in 2020 in the major fresh orange producing regions has had a direct impact on the trees and has also improved irrigation water availability and prices.

The three key factors influencing the significantly improved MY 2020/21 production are:

1) Increased planting of navel and red flesh orange varieties (non-juicing)
2) Improved climatic conditions during 2020
3) Improved irrigation water availability and lower costs in the key production regions
4) Increased planting of navel and red flesh orange varieties (non-juicing)

The increased plantings of navel and red flesh orange varieties over the last five years has been significant in the major producing regions in Australia, but it will take some time before there is a positive impact on overall production as the trees transition from non-bearing to mature production.

Around 93 percent of the non-juicing orange varieties are navel oranges and for the purpose of this report all non-juicing oranges will be referred to as navel oranges. The majority of the juicing varieties (86 percent) are Valencia orange varieties and for the purpose of this report all juicing varieties will be referred to as Valencia oranges.

Over the last five years (from 2014 to 2019), the total planted area of navel and Valencia oranges has increased by nine percent from 15,307 hectares (ha) to 16,757 ha. During this period the area of Valencia oranges has declined by three percent and the area of navel oranges has increased by 19 percent. Of the growth in planted area of navel oranges, late season and red flesh varieties have had the largest growth of 589 ha ( 14 percent) and 515 ha ( 242 percent), respectively (see figure 1 ).

Interestingly, although there has been a nine percent growth in orange planted area, the tree age profile shows that there has been a large growth in total area of mature ( $13-39$ years) trees, a significant decline in the area of trees entering production (5-12 years), but an increase in the area of non-bearing ( $0-4$ years) trees (see figure 2 ). This indicates that there was a previous period whereby new plantings were relatively low but have improved considerably in recent years. Based on the tree age profile, despite the increasing area of orange planting over the last five years, it will take some time for this to translate into higher production.

Figure 1 - Change in Orange Plantings 2014 to 2019


Source: Citrus Australia / Horticulture Innovation Australia

Figure 2 - Change in Orange Maturity Profile 2014 to 2019


Source:
Citrus Australia / Horticulture Innovation Australia

The major orange production areas in Australia are in the southern temperate climate regions with good availability and reliable supply of irrigation water (see figure 3). These regions are known as:

| Riverina | - located in southern New South Wales around Griffith and Leeton |
| :--- | :--- |
| Murray Valley | - located along the Murray river in the north west of Victoria mostly between |
|  | Mildura and Swan Hill |

The key characteristics of these regions are that they are a temperate climate with free draining sandy loam soil types and low annual rainfall of around 300 millimeters ( mm ), most of which falls between May and October during harvest and the early growth phases of the subsequent crop. Although winters are mild there is adequate cold chill period for the trees. These regions are very dependent upon irrigation to meet the tree water demands. These conditions support good bud burst offering high potential yield, and the low rainfall and warmer temperatures from spring to autumn minimizes risk of frosts, humidity and hail while optimizing growth rates with well managed drip irrigation and fertilizer programs.

These three regions have a total orange production area of $15,095 \mathrm{ha}$, representing 90 percent of the national area. Navel oranges have a total of 9,454 ha and Valencia oranges 5,641 ha (Source: Citrus Australia - Australian Citrus Tree Census 2019). The Riverina is by far the largest producer of oranges. Around 56 percent of its total production area is Valencia and it represents 66 percent of the national area of juicing oranges. There are other small orange producing areas in northern New South Wales, Queensland and Western Australia.

The harvest period in the three major production regions for navel oranges is typically from May to October and for Valencia oranges it is usually from November to February. Some of the highest quality Valencia oranges are sold in the fresh market (rather than being juiced) which extends the domestic season of available fresh oranges to consumers.

Figure 3 - Orange Production Regions in Australia


Source: Citrus Australia / Australian Bureau of Statistics Census / FAS/Canberra

## 2) Improved climatic conditions during 2020

The primary influence on the orange production forecast for MY 2020/21 is improved rainfall across the three key producing regions during 2020. This is in vast contrast to the two-year drought in 2018 and 2019 (see figure 4).

The conditions in the lead up to flowering, fruit set, and early growth period during 2020 have had a significant impact on the forecast harvest (which will begin in May 2021). According to growers, there had been good cold chill temperatures which initiated strong bud burst and was followed up by very good fruit set. Growers have reported that the orange crop load is heavy. Along with above-average and well timed rainfalls during 2020, this has offered them the opportunity to apply above-average nutrients to the trees in order to promote good fruit growth, and minimize the impact of reduced fruit size (which typically occurs when there is a heavy crop load).

Figure 4 - Australia Rainfall Decile Maps - Jan-Nov 2018 to 2020


Source: Bureau of Meteorology

The Bureau of Meteorology has forecast a La Niña event to at least February 2021. This is the culmination of a series of indicators leading to a strong likelihood of above-average rainfall in the tropical Pacific, which has a strong influence on rainfall in Australia. This La Niña event has led to the forecast of a high chance of exceeding median rainfall across most of Australia, including the three key fresh orange producing regions for the December 2020 to February 2021 period (see figure 5). If the forecast is realized this will further benefit the current crop and support the MY 2020/21 forecast.

Figure 5 - Chance of Above Average Rainfall - December 2020 to February 2021


Source: Bureau of Meteorology
3) Improved irrigation water availability and lower costs in the key production regions

The majority of orange orchards are located in the following irrigation systems:
Southern New South Wales in the Murrumbidgee Irrigation Scheme
North western Victoria in the Vic Murray Irrigation System
South east South Australia in the SA Murray Irrigation System

Citrus growers in these regions had to contend with lower irrigation water availability and very high traded irrigation water prices during the drought period. During the peak of the drought in 2019, irrigation water prices reached over AU\$600 (US\$450) per million liters (ML) but have since declined to well below AU\$150 (US\$113) per ML at the start of the irrigation season in August 2020, and have declined further through to December 2020 (see figure 6). All three irrigation schemes have been similarly impacted, although the water trade prices in the Vic Murray and SA Murray Irrigation Schemes are trading at around $\$ 50$ per ML higher in December 2020.

Figure 6 - Irrigation Water Trade Volume and Price History


Source: Bureau of Meteorology

Current prices are still far higher than long term average prices of well below AU $\$ 100$ per ML. This is due to water catchments yet to fully replenish after being heavily depleted during the drought. If forecasts of above-average rainfall in the coming months are realized, there is likely to be further increases in water availability and reductions in traded water prices for the remainder of the irrigation season in 2021. This will ensure that citrus orchards are fully irrigated and support the forecast increase in the MY 2020/21 production.

One mitigating factor to the positive outlook for orange production is uncertainty over the availability of harvest labor in 2021. The main impact of the COVID-19 pandemic on agricultural industries in Australia has been a significant decline in available labor for harvest and it is expected to worsen in 2021.

The majority of harvest labor is typically made up of temporary visa holders from the Pacific Islands associated with a Pacific Seasonal Worker Program and overseas backpackers. Many of these groups had exited Australia during the pandemic and there is currently a much-reduced pool of labor available for harvest. The federal government's first initiative was to extend the visas of those in the Pacific Seasonal Worker Program by 12 months to partly mitigate the reduction in the pool of harvest labor available. The federal and state governments have implemented other initiatives including an Agricultural Workers Code, which was very important for the citrus industry, to allow harvest workers to cross state borders during a period when state borders were closed.

Growers are reporting that many harvest workers have stayed in Australia for longer than usual, by extending their temporary visas, to support harvest requirements in Australia. However, many are now returning home for Christmas 2020. Given that Australia's international border closure due to COVID19 is unlikely to be lifted until there is a broad rollout of vaccinations, industry is preparing for a harvest labor shortage. However, federal and state governments are continuing to work with agricultural industries to implement additional measures to mitigate this issue.

The FAS/Canberra orange production estimate for MY 2019/20 has been revised down to 485,000 MT from the official USDA estimate of $500,000 \mathrm{MT}$. The revised estimate is based on industry sources who indicate that orange yields were significantly impacted by the drought conditions in 2019 which:

1) negatively impacted bud burst resulting in a low crop load;
2) slowed the growth rate of fruit;
3) reduced quality, due to the major orange producing areas predominantly being in sandy loam soils and low rainfall areas the higher than usual wind-blown sand caused skin blemishes on the fruit;
4) caused some growers to reduce irrigation water application to sub-optimal levels because of low irrigation water availability and high traded water prices.

As a consequence of these factors, the overall quality of the MY 2019/20 crop was also below-average, resulting in a proportionally higher volume of navel oranges being processed for juice.

## Consumption

FAS/Canberra forecasts domestic consumption of fresh oranges in MY 2020/21 to increase to 140,000 MT from a downward revised 106,000 MT in MY 2019/20. The forecast increase is driven by a large rise in production from the prior drought-affected season. The forecast domestic consumption of 140,000 MT is similar to consumption during pre-drought orange production levels in MY 2016/17 and MY 2017/18.

The FAS/Canberra MY 2019/20 orange consumption estimate is revised down to 106,000 MT, some 24,000 MT lower than the official USDA estimate. This is largely driven by the downward revised orange production estimate. Industry has reported a noticeable decline in navel oranges on the supermarket shelves to date during MY 2019/20.

## Trade

## Exports

FAS/Canberra forecasts fresh orange exports of 195,000 MT in MY 2020/21, a small 5,000 MT increase over the MY 2019/20 estimate of 190,000 MT. Despite the large increase in forecast production of $50,000 \mathrm{MT}$, this small increase in exports is largely due to the fact that MY 2019/20 exports were already strong. Further to this, if realized the forecast export volume would still be the second largest orange export result for the industry behind the previous peak of 198,000 MT in MY 2018/19, and nine percent above the last five-year average of 178,400 MT.

Exports of Australian oranges are highly seasonal, with a small volume of exports in May from smaller production regions in the northern parts of Australia, followed by the commencement of significant volumes beginning in June as harvest in the three major producing regions commences (see figure 7). Peak exports are in the July to September period before tailing off through to December. This seasonal harvest offers the opportunity to export navel oranges to nearby low-producing Asian countries, and also counter-seasonal northern hemisphere countries.

Figure 7 - Seasonality of Australian Fresh Orange Trade


Source: Australian Bureau of Statistics

The major export destination for Australian oranges is China, which has varied somewhat over recent years from 35 to 50 percent of overall exports (see figure 8). Total Chinese imports of oranges over the last five years have increased by 169 percent, while Australia and its major southern hemisphere competitor, South Africa, have enjoyed similar growth rates of exports to China (see figure 9).
However, by far the biggest increase of orange imports into China has come from Egypt in the northern hemisphere. Tense trade relations with China have created some concern among Australian citrus exporters.

Japan is the second largest export destination with a relatively stable volume from year to year representing around 18 percent of total exports. Other destinations including India, Philippines, Vietnam, Saudi Arabia and Taiwan have broadly been expanding over the last five years.

Figure 8 - Fresh Orange - Major Export Destinations


Source: Australian Bureau of Statistics

Figure 9 - China Import Trends of Fresh Oranges from Major Suppliers


Source: Trade Data Monitor

The official USDA MY 2019/20 orange export estimate of 190,000 MT is unrevised by FAS/Canberra with results so far on track to achieve the estimate. Exports of fresh oranges from Australia on average commence in late May and tail off in early December (see figure 4). Exports for the April to October period over the last five years have consistently accounted for around 90 percent of the full marketing year. For MY 2019/20, the exports from April to October have reached 177,486 MT and are well on track to achieve the full year estimate of 190,000 MT.

## Imports

FAS/Canberra forecasts orange imports to remain low and stable at 15,000 MT in MY 2020/21 and a minor decline compared to the revised MY 2019/20 estimate of 16,000 MT. Imports of oranges are relatively stable from year to year and are counter-seasonal to domestic production. These imports occur between December and April each year (see figure 4). Almost all imports of navel oranges are from the United States (see figure 10). Five to ten years ago over 95 percent of imports were from the United States after which this declined to a low of 70 percent in MY 2016/17 (April 2017 to March 2018) with an increase in imports from Egypt. However, this has recovered to 93 percent in MY 2018/19 with a similar trend in the year to date results for MY 2019/20.

Figure 10-10 Year Fresh Orange Imports to Australia


Source:

| Oranges, Fresh Market Year Begins Australia | 2018/2019 |  | 2019/2020 |  | 2020/2021 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Apr 2019 |  | Apr 2020 |  | Apr 2021 |  |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Planted (hectares) | 20600 | 16800 | 20600 | 17000 | 0 | 17100 |
| Area Harvested (HECTARES) | 20600 | 14750 | 20600 | 14900 | 0 | 15000 |
| Bearing Trees (1000 TReEs) | 9350 | 0 | 9350 | 0 | 0 | 0 |
| Non-Bearing Trees (1000 trees) | 85 | 0 | 85 | 0 | 0 | 0 |
| Total No. Of Trees (1000 TREes) | 9435 | 0 | 9435 | 0 | 0 | 0 |
| Production (1000 MT) | 510 | 515 | 500 | 485 | 0 | 535 |
| Imports (1000 MT) | 20 | 16 | 20 | 16 | 0 | 15 |
| Total Supply (1000 MT) | 530 | 531 | 520 | 501 | 0 | 550 |
| Exports (1000 MT) | 195 | 198 | 190 | 190 | 0 | 195 |
| Fresh Dom. Consumption (1000 MT) | 245 | 123 | 140 | 106 | 0 | 140 |
| For Processing (1000 MT) | 90 | 210 | 190 | 205 | 0 | 215 |
| Total Distribution (1000 MT) | 530 | 531 | 520 | 501 | 0 | 550 |
|  |  |  |  |  |  |  |
| (HECTARES),(1000 TREES) ,(1000 MT) |  |  |  |  |  |  |

## ORANGE JUICE

## Production

FAS/Canberra forecasts orange juice production in MY 2020/21 of 16,500 MT, an increase of four percent over the downward revised MY 2019/20 estimate of $15,800 \mathrm{MT}$. The forecast production is driven by a return to normal orange production and is in line with the very stable pre-drought orange juice production of between 16,300 MT to 16,500 MT from MY 2013/14 to MY 2017/18.

As mentioned earlier the major orange production regions were subject to drought conditions in 2018 and 2019 which had a partial affect in MY 2018/19 and a significant impact on orange production in MY 2019/20. The reduced Valencia and navel orange production is estimated to have caused a reduction in orange juice production.

The overall trend shows that there is an increasing navel orange production area, and as new plantings begin to mature, there is expected to be higher navel orange production (see figure 11). Although there has been a modest decline trend in the Valencia orange planted area, orange juice production (other than during the drought-impacted seasons) has broadly been flat. This decline in Valencia area appears to have been offset by increasing navel orange production area, resulting in increased navel orange rejects being channelled to juice production.

Figure 11 - Change in Orange Areas and Fresh \& Juice Production


Source: $\quad$ Citrus Australia and Horticulture Innovation Australia

Orange juice consumption in Australia could be negatively impacted by proposed changes to the Health Star Rating (HSR) system of foods. After a five-year review of the HSR system handed down to the Australian and New Zealand Ministerial Forum on Food Regulation on August 16, 2019, recommendations are to more strongly focus on the sugar content of foods, which will have a negative impact on orange juice.

The citrus industry does not support some of the HSR changes based on the current set of accepted recommended changes. Based on the changes, industry representatives have stated that 100 percent Australian juice, with no added sugar, would receive a HSR of 2.5 stars, from the current 5 stars, whereas diet soft drink containing chemicals including artificial sweeteners could receive 3.5 stars. Citrus industry representatives have also stated that the proposed HSR targets sugar and disregards health benefits of natural orange juice and its contribution to the recommended daily intake of such things as Vitamin C, folate and thiamin.

A further review of juices including an alternate algorithm taking into consideration additional health benefits is scheduled in February 2021. The proposed HSR system, if implemented, could have a negative impact on the domestic consumption of orange juice in Australia.

The FAS/Canberra MY 2019/20 orange juice production estimate is 15,800 MT, a downward revision of merely 200 MT from the official USDA estimate. As discussed earlier this is largely driven by the drought-impacted decrease in orange production but also countered by lower fresh orange fruit quality, resulting in a proportionally higher volume of oranges being processed for juice.

## Consumption

FAS/Canberra forecasts domestic consumption of juice in MY 2020/21 of 33,000 MT, a decrease of 1,000 MT from the upward revised MY 2019/20 estimate of $34,000 \mathrm{MT}$, but still at a higher level than the recent past. Industry reports strong demand was driven by consumers increased health consciousness during the COVID-19 pandemic period.

Over the last decade, orange juice consumption in Australia has been slowly declining despite an increasing population (see figure 12). Although there is an estimated spike in consumption in MY 2019/20, driven by consumers changing habits during the COVID-19 pandemic, it is anticipated that the broad trend of general decline will continue, recommencing in the forecast MY 2020/21 year. However, industry sources indicate that the major impact has been a declining trend in reconstituted orange juice consumption, while demand for 100 percent fresh orange juice has remained strong.

Figure 12 - Orange Juice Consumption Trend


The FAS/Canberra MY 2019/20 orange juice consumption estimate of 34,000 MT is an upward revision of merely 500 MT from the official USDA estimate. As discussed earlier this is largely driven by the changed consumer sentiment towards health consciousness due to the COVID-19 pandemic.

## Trade

## Exports

Exports of orange juice by Australia are forecast by FAS/Canberra to be 1,500 MT in MY 2020/21, a 100 MT increase over the revised MY 2019/20 estimate of 1,400 MT. Exports are less than one-tenth the volume of imports. The current year estimate and next year forecast are in line with the MY 2018/19 exports of around 1,500 MT. Volumes are expected to remain stable.

The FAS/Canberra MY 2019/20 orange juice export estimate of 1,400 MT is an upward revision of from the official USDA estimate of 500 MT. This is primarily the result of a correction in the conversion calculations to a harmonized 65 degrees Brix weight basis.

Imports
FAS/Canberra forecasts import of orange juice in MY 2020/21 of 18,000 MT, a decrease of 2,000 MT from the upward revised MY 2019/20 estimate of 20,000 MT. The forecast decrease in orange juice imports is the result of a return to pre-drought orange production and pre-COVID-19 consumption levels.

Brazil has for many years been the major source of orange juice imports to Australia representing from 72 to 86 percent of overall imports over the last decade. The next largest source of imported orange juice is Turkey, at five to ten percent of overall imports in recent years.

The FAS/Canberra MY 2019/20 orange juice import estimate of 20,000 MT is an upward revision from the official USDA estimate of 2,000 MT. As mentioned, this is driven by the estimated decrease in orange juice production and increased consumption triggered by the COVID-19 pandemic.

| Orange Juice Market Year Begins Australia | 2018/2019 |  | 2019/2020 |  | 2020/2021 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Jul 2019 |  | Jul 2020 |  | Jul 2021 |  |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Deliv. To Processors (MT) | 90000 | 210000 | 190000 | 205000 | 0 | 215000 |
| Beginning Stocks (MT) | 614 | 776 | 614 | 876 | 0 | 1276 |
| Production (MT) | 16500 | 16100 | 16000 | 15800 | 0 | 16500 |
| Imports (MT) | 18000 | 17500 | 18000 | 20000 | 0 | 18000 |
| Total Supply (mT) | 35114 | 34376 | 34614 | 36676 | 0 | 35776 |
| Exports (MT) | 500 | 1500 | 500 | 1400 | 0 | 1500 |
| Domestic Consumption (MT) | 34000 | 32000 | 33500 | 34000 | 0 | 33000 |
| Ending Stocks (MT) | 614 | 876 | 614 | 1276 | 0 | 1276 |
| Total Distribution (MT) | 35114 | 34376 | 34614 | 36676 | 0 | 35776 |
|  |  |  |  |  |  |  |
| (MT) |  |  |  |  |  |  |

## FRESH TANGERINES/MANDARINS

## Production

FAS/Canberra forecasts production of tangerines/mandarins in MY 2020/21 of 175,000 MT, a ninepercent increase over the MY 2020/19 estimate of 160,000 MT. As with oranges, this is in part due to a return back towards normal production after the drought-impacted MY 2019/20. It is also due to a young tree age profile, with an increasing area of plantings entering production and boosting overall production.

As mentioned earlier, much of Australia was impacted by drought in 2018 and 2019 (see figure 4), with tangerine/mandarin producing areas recording between record low to below-average rainfall. This lack of rainfall directly impacted the mandarin production estimate for MY 2019/20. The drought has largely broken across much of the country in 2020, although some production areas in Queensland have not fully recovered and have below-average to average rainfall to date (January to November). However, other major tangerine/mandarin producing areas have recorded average to above-average rainfall to date in 2020.

Mandarin and tangerine production regions in Australia are far more diverse than the three major orange producing regions. While there are tangerines produced in Australia, the overall area is very small, so almost all production is mandarin varieties with Afourer, Imperial and Murcott's being 74 percent of overall area (Source: Citrus Australia - Australian Citrus Tree Census 2019).

Queensland by far has the largest area of mandarin production in Australia at 3,810 ha, over 170 percent higher than the next nearest regions of the Riverland (1,402 ha) and Murray Valley (1,318 ha) (see figure 13). The largest mandarin producing area in Queensland is in the Central Burnett area in the south east of the state around Gayndah and Mundubbera, but they are also produced in Emerald (Central Queensland) and Mareeba (Far North Queensland). Other small mandarin producing areas are in northern New South Wales, Northern Territory and Western Australia.

Figure 13 - Tangerine/Mandarin Production Regions in Australia

## Mandarin Producing Regions in Australia



Source: Citrus Australia / Australian Bureau of Statistics Census / FAS/Canberra

Over the last five years (from 2014 to 2019) there has been a 37-percent increase in mandarin plantings from 5,451 ha to $7,465 \mathrm{ha}$. This is a much larger growth rate and total area growth than oranges over the same period. Also this growth has broadly occurred across all producing regions in Australia.

The Afourer variety has by far had the largest growth in production area over the last five years, almost doubling, to now having the largest area of production at 1,984 ha (see figure 9). The area of Murcott has also increased by 18 percent over the same period, while the older variety Imperial has declined slightly. In the 'other' category (see figure 14) there are 35 varieties, the total planted area of which has grown by 60 percent ( 738 ha ). The varieties in this 'other' category that have had the greatest increase in planted area are all relatively new low seed or seedless varieties, Daisy, Phoenix and Tango.

Figure 14 - Change in Mandarin Plantings 2014 to 2019


Source: Citrus Australia / Horticulture Innovation Australia
Notes: \# Includes low seeded

The industry growth in mandarin plantings that has occurred over the last five years is evident from the area of non-bearing ( $0-4$ years) trees increasing by over 1,400 ha to 2,389 ha, a change of over 140 percent (see figure 15). The change in the number of trees entering production ( $5-12$ years) is an increase of around 32 percent or over 600 ha . During the same five-year period there has been no change in the area of mature ( $13-39$ years) trees. With a mandarin tree age profile in 2019 of around one-third non-bearing, the industry can expect a rapid growth in production in the coming years as these trees begin to bear fruit.

Figure 15 - Change in Mandarin Maturity Profile 2014 to 2019


Source: Citrus Australia / Horticulture Innovation Australia

## Consumption

FAS/Canberra forecasts domestic consumption of mandarins in MY 2020/21 at 96,000 MT, only slightly below the MY 2019/20 estimate of 99,000 MT. The bulk of the production increase will likely go to exports. The forecast consumption is in line with the average of the estimate for the past five years.

## Trade

Exports
FAS/Canberra forecasts an increase in mandarin exports in MY 2020/21 to 80,000 MT from an estimated 62,000 MT in MY 2019/20. With a forecast increase in production of 15,000 MT for MY $2020 / 21$, all of this increase is expected to go to exports. The export estimate of 62,000 MT for MY $2019 / 20$ is low, due to the smaller estimated production, in comparison to the prior year result of 87,000 MT. The forecast export volume is a partial correction towards the MY 2018/19 year when production was not significantly affected by the first year of drought.

Over the last five years exports of mandarins were almost all between May and October, peaking in August (see figure 16). Over the April to October period, the average of the annual exports over the last five years is over 98 percent. For the April 2020 to October 2020 period (relating to MY 2019/20) the export volume was already at $60,901 \mathrm{MT}$.

Figure 16 - Seasonality of Australian Fresh Mandarin Trade


Source: Australian Bureau of Statistics

Australia exports mandarins to almost 40 countries, however the top two destinations account for around half of all exports (see figure 17). China and Hong Kong combined represent around 35 percent, and Thailand a further 15 percent. China has been the greatest export growth destination over the last five years. The next six major export destinations of New Zealand, Japan, United States, Indonesia, Philippines and the United Arab Emirates over the last five years have accounted for over one-third of all exports.

Figure 17 - Top Tangerine/Mandarin Export Destinations over the Last Five Years


Source: Australian Bureau of Statistics

Imports
FAS/Canberra forecasts tangerine/mandarin imports for MY 2020/21 at 4 MT and in line with the MY 2019/20 estimate. Past import results have been stable at around 4 MT per annum. These imports are counter-seasonal to production in Australia (see figure 16) and used to fill low level consumer demand during this period. Imports equate to around five percent of overall domestic consumption.

| Tangerines/Mandarins, Fresh Market Year Begins Australia | 2018/2019 |  | 2019/2020 |  | 2020/2021 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Apr 2019 |  | Apr 2020 |  | Apr 2021 |  |
|  | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Planted (hectares) | 0 | 7465 | 0 | 7700 | 0 | 7900 |
| Area Harvested (Hectares) | 0 | 5076 | 0 | 5400 | 0 | 5700 |
| Bearing Trees (1000 Trees) | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Bearing Trees (1000 trees) | 0 | 0 | 0 | 0 | 0 | 0 |
| Total No. Of Trees (1000 trees) | 0 | 0 | 0 | 0 | 0 | 0 |
| Production (1000 MT) | 0 | 175 | 0 | 160 | 0 | 175 |
| Imports (1000 MT) | 0 | 3 | 0 | 4 | 0 | 4 |
| Total Supply (1000 MT) | 0 | 178 | 0 | 164 | 0 | 179 |
| Exports (1000 MT) | 0 | 87 | 0 | 62 | 0 | 80 |
| Fresh Dom. Consumption ${ }_{(1000}$ MT) | 0 | 88 | 0 | 99 | 0 | 96 |
| For Processing (1000 MT) | 0 | 3 | 0 | 3 | 0 | 3 |
| Total Distribution (1000 MT) | 0 | 178 | 0 | 164 | 0 | 179 |
|  |  |  |  |  |  |  |
| (HECTARES),(1000 TREES),(1000 MT) |  |  |  |  |  |  |

## Attachments:

No Attachments

