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Report Highlights:

Orange production is expected to decline in Australia in marketing year (MY) 2022/23 to 505,000 metric tons (MT) from an estimated 535,000 MT in MY 2021/22. However, exports are forecast to rise to 180,000 MT from an estimated 145,000 MT in MY 2021/22, due to an anticipated substantial improvement in fruit quality. Tangerine/mandarin production is forecast to reach 190,000 MT in MY 2022/23, a nine percent increase over MY 2020/21, and a record export level of 90,000 MT. After three successive years of La Niña weather conditions, expectations are for typical seasonal conditions in the forecast year. Irrigation storage dams are at or near capacity supporting the citrus crop irrigation program and forecast crop production and beyond with low-cost traded water. The harvest labor shortage is expected to ease somewhat further but remain tight for the forecast year. However, growers will continue to be impacted by high input costs for fertilizer, chemicals, energy and labor experienced in the current MY 2021/22.

Executive Summary

Overall citrus production is expected to decline slightly in Australia in marketing year (MY) 2022/23, with a smaller orange crop but larger expected mandarin crop. Despite the smaller orange crop, quality is expected to return to more normal levels, boosting exports. After three successive years of La Niña weather conditions producing above-average rainfall in the eastern states of Australia, expectations are for more normal seasonal conditions in the forecast year. These rains have resulted in most irrigation storage dams now being at or near capacity supporting the citrus crop irrigation program and forecast crop production in marketing year (MY) 2022/23 and beyond with low-cost traded water. Harvest labor shortage is expected to ease somewhat further but remain tight for the forecast year. However, growers will continue to be impacted by high input costs for fertilizer, chemicals, energy and labor experienced in the current MY 2021/22.

Orange production is forecast at 505,000 metric tons (MT) in MY 2022/23, a six percent decrease from the estimated MY 2021/22 crop production, but exports are forecast at 180,000 MT, a much higher result than the estimated 145,000 MT of exports in MY 2021/22 despite lower production expectations. This is because of an expected return to more normal orange fruit quality. The production estimate of 535,000 MT for MY 2021/22 is a strong result and if realized would be the highest level since MY 2004/05. The MY 2021/22 season was favored by a heavy crop load and timely rainfalls during the growing season which broadly resulted in larger than usual fruit. However, rainfall prevented timely pruning and humidity at harvest caused substantial quality issues limiting the volume of marketable oranges harvested for human consumption. The quality issue substantially reduced the volume of fruit suitable for the export market.

Mandarin planted area in Australia is continuing to expand and at a greater rate than for navel oranges (fresh), and also has a greater diversity of production regions than for oranges. Mandarin planted area has increased 43 percent since 2014 with particular focus on seedless varieties. Much of this expanded area will begin bearing fruit in the coming years, boosting production and export growth to record levels. Mandarin production is forecast to increase by nine percent in MY 2022/23 to 190,000 MT following a dip in MY 2021/22 after being affected by quality issues, but to a lesser degree than oranges. Exports are forecast to reach a record 90,000 MT after only reaching an estimated 75,000 MT in MY 2021/22 due to a shortage of mandarins of suitable quality for the export market. Domestic consumption is expected to remain unchanged at 101,000 MT in the forecast year despite inflationary pressures expected to continue to reduce the disposable income of households.

Australia is forecast to import 19,000 MT of orange juice, a little higher than the 18,000 MT estimated for MY 2021/22, and higher than the anticipated 16,100 MT of domestic juice production in MY 2022/23. Orange juice exports are forecast at 4,000 MT, a very low volume but similar to recent past years. Domestic consumption is forecast to remain stable at 31,000 MT from the estimate year of MY 2021/22. However, pressure on disposable incomes of households may see a slight reversal of the recent

past trend towards increased higher value fresh juice (mainly from domestic production), instead shifting back towards lower cost reconstituted orange juice (mainly imported from Brazil).

FRESH ORANGES

Industry Background

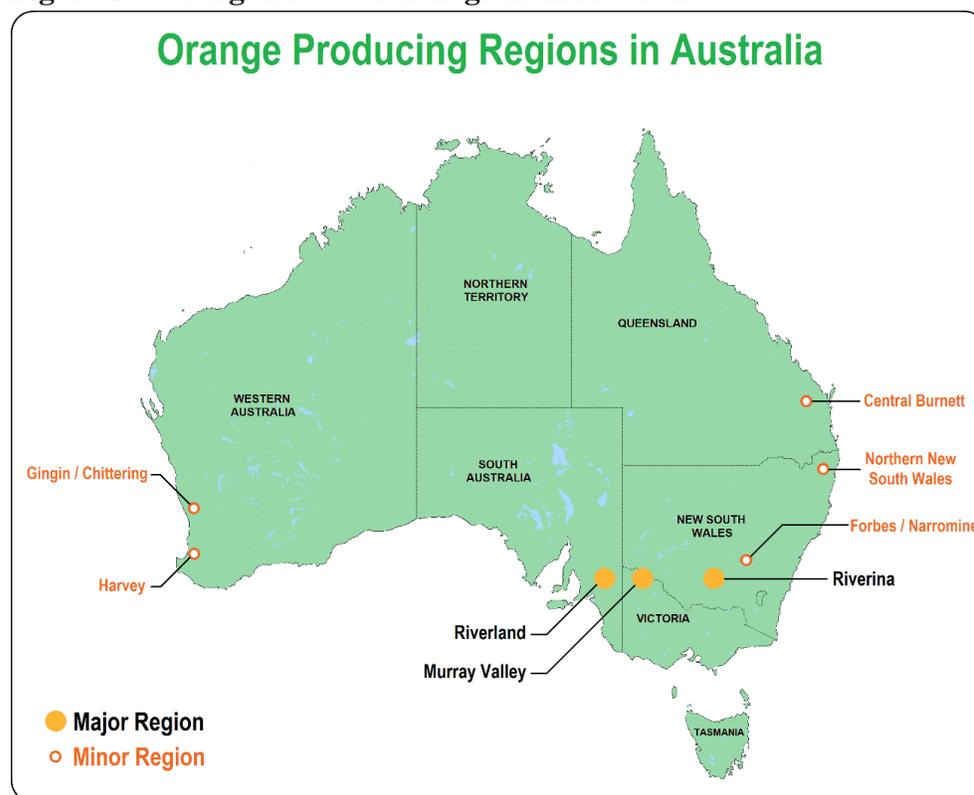
The major orange production areas in Australia are in the southern temperate climate regions with good availability and reliable supply of irrigation water (see Figure 1). These regions are known as:

- 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
- Riverland - located along the Murray river in the north west of South Australia

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 an 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 15,321 hectares (ha) representing 88 percent of the national area. Nationally, navel oranges have a total of 11,253 ha and Valencia oranges 6,408 ha (Source: Citrus Australia – Australian Citrus Tree Census 2021). The Riverina area is by far the largest producer of oranges. Around 54 percent of its total production area is Valencia and it represents 65 percent of the national area of juicing oranges. There are other small orange producing areas in northern New South Wales, Queensland and Western Australia.

Figure 1 – Orange Production Regions in Australia



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

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.

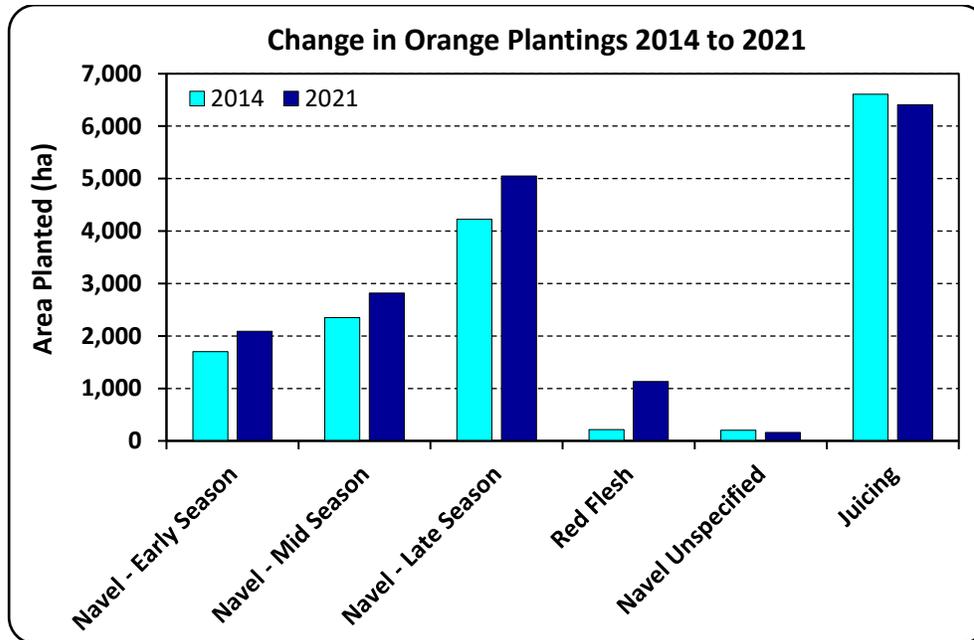
Citrus Australia carries out an annual tree census, the first of which was in 2014. The results from 2014 to 2021 show a significant increase in plantings of navel and red flesh orange varieties over the seven-year period in the major producing regions in Australia. However, the impact on overall production as the trees transition from non-bearing to mature production will take some time yet.

Around 90 percent of the non-juicing orange varieties are navel oranges and for the purpose of this report all non-juicing oranges are 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 are referred to as Valencia oranges.

The total planted area of navel and Valencia oranges has increased by 15 percent from 15,307 ha in 2014 to 17,661 ha in 2021. During this period, the area of Valencia oranges has declined by three percent and the area of navel oranges has increased by 29 percent. Of the growth in planted area of navel

oranges, late season and red flesh varieties had the largest growth of 824 ha (19 percent) and 916 ha (430 percent) respectively (see Figure 2).

Figure 2 – Change in Orange Plantings 2014 to 2021



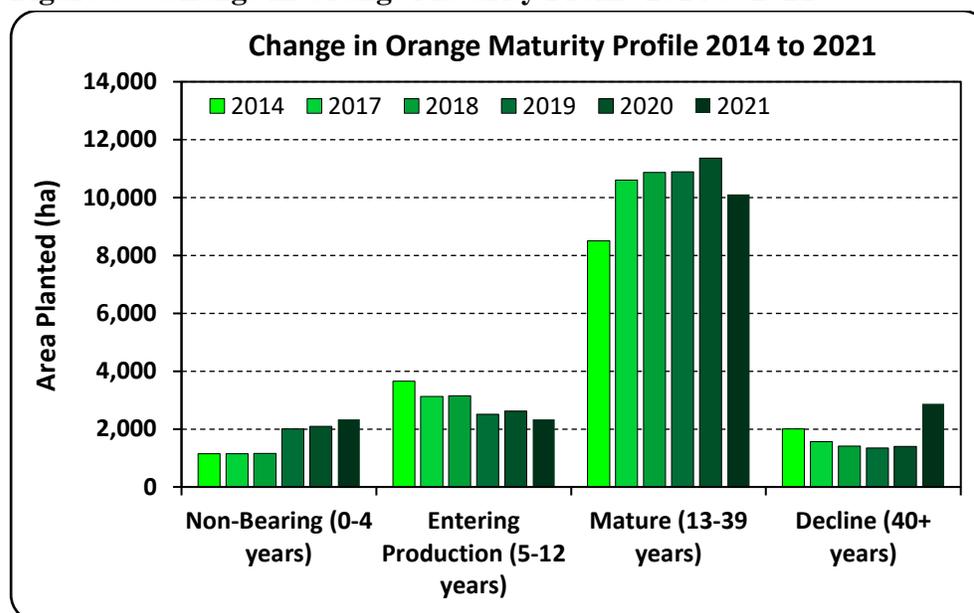
Source: Citrus Australia / Horticulture Innovation Australia

Overall, the long-term trend is rising production due to tree expansion, but there may be some lag time for a number of reasons:

- 1) There has been increasing area of new planting over recent years (non-bearing 0-4 years) which will take a number of years to start producing
- 2) There has been a shift to increased trees that are in their declining period (40+ years) from 2020 to 2021 which will impact production
- 3) The area of mature trees (13-39 years) that are in their prime period of production has fallen between 2020 and 2021

In the short to medium term while the new plantings are establishing production potential is likely to remain flat before the new planting reach a mature age and hit their peak production period.

Figure 3 – Change in Orange Maturity Profile 2014 to 2021



Source: Citrus Australia / Horticulture Innovation Australia

Production

FAS/Canberra forecasts fresh orange production of 505,000 MT in MY 2022/23 (April 2023 to March 2024), a six percent decrease on the MY 2021/22 estimate of 535,000 MT. This decrease is largely related to the combination of an expectation of a return to normal seasonal conditions and also impacted by the typical biennial effect of lower yields anticipated for the forecast year. However, crop quality is expected to recover from this past year. For MY 2021/22 the production estimate is the highest since MY 2004/05. This was anticipated due to the positive start to the growing conditions which then continued throughout the season resulting in the production of large fruit. However, there were substantial quality issues particularly towards the end of harvest when big rains caused humid conditions, resulting in a lower volume of saleable oranges. The industry anticipates a continuation of high input cost challenges for the forecast year but are hopeful of an improvement in the quality of navel oranges produced to improve the volume of higher value sales.

After the experience of the above-average rainfalls around the time of tree pruning for the MY 2021/22 season delaying and impeding their typical pruning program, many growers will treat the preparations for the forecast year with greater urgency than usual with above-average rains continuing post-harvest. In fact, the Murray Valley and Riverland regions are experiencing flooding events from big rains in October and November 2022 in upstream regions. Small areas of low-lying orange groves have been inundated which may remain for some weeks. This is hindering preparations for the forecast fresh orange crop but will also impact the MY 2021/22 Valencia orange harvest for juicing, which typically occurs from November to February.

Australian eastern states are experiencing the third successive year of La Niña weather events producing above-average rains which particularly affected orange producing regions in the current MY 2021/22 estimate year. The Bureau of Meteorology reports that it expects the La Niña pattern to dissipate in early 2023. Moreover, Australian eastern states have only on three previous occasions, since weather records have been kept, experienced three successive years influenced by La Niña weather patterns and never four successive years. With this, the likelihood that La Niña will remain beyond the Bureau of Meteorology forecast or return during the MY 2022/23 forecast year is highly improbable. As a result, the larger-than-usual fruit encouraged by above-average rainfall is not anticipated in the forecast year. Also, and more importantly for growers, a return to the typical drier conditions during harvest is more likely which would support good fruit quality for the forecast year.

As previously mentioned there has been a shift in tree age profile of orange trees between 2020 and 2021 with a significant decline in the area of Mature (13-39 years) and a substantial increase in the number of trees in the Decline (40+ years) phase. The number of trees Entering Production (5-12 years) had also declined. But overall, there has been a slight increase in overall area of oranges of bearing age and it is important to note that the area of juicing oranges was static meaning that the slight increase in area of oranges of bearing age was all navel oranges for fresh market supply. So, with little if any growth in oranges of bearing age for 2022 there is little impact on production potential expected for MY 2022/23. Also, according to industry sources there is a biennial effect on the yields of oranges and MY 2022/23 is expected to be a down year. This “down-year effect” will have the greatest bearing on forecast production of 505,000 MT for MY 2022/23, but input cost changes will also have an impact on the decision-making process of orange growers for the degree of inputs of into the forecast crop.

Industry sources indicate that there has been a slight easing of labor shortages compared to recent past years which were heavily impacted by the effects of COVID-19. This is expected to support more timely pruning and other preparations for the forecast crop and for harvest to occur in a timely manner, all having a positive influence for the expectation of improved fruit quality.

In addition, the three successive La Niña events have resulted in irrigation water storages being at capacity and with this there is ample traded irrigation water and costs are now low. With irrigation storage dams at such high levels, general expectations are that there will be ample irrigation water at low cost for at least the following irrigation season and likely for the next two seasons.

Not unlike most other agricultural industries in Australia, citrus growers have been impacted by rising input costs from which there is not expected to be any significant relief in the forecast year. The key cost impacts are on:

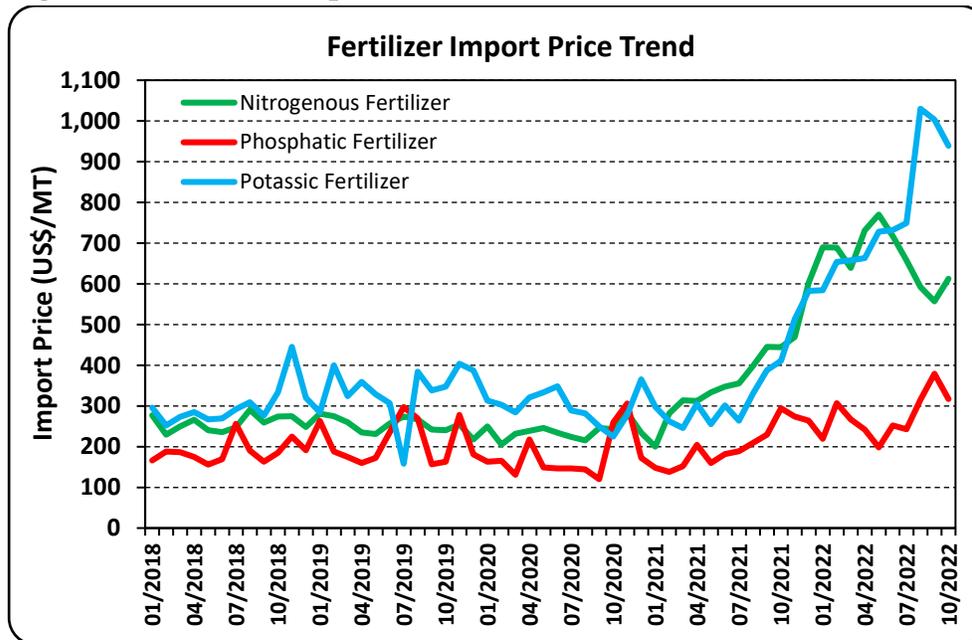
- 1) Fertilizer
- 2) Chemical
- 3) Energy (diesel and electricity)
- 4) Labor

High Fertilizer Prices

Australia produces around one-third of its overall fertilizer requirements which are mainly phosphatic or nitrogen-based, or blends of the two, but also imports almost all of its potash needs. Australia is highly dependent on nitrogen and potash fertilizer imports and so is exposed to world market prices. Nitrogen fertilizer production in particular requires large amounts of energy, usually gas, and with increasing gas prices since early 2021 (well before the start of the Russia-Ukraine war), nitrogenous fertilizer prices (which is the main fertilizer input for citrus producers), have escalated 3 to 4-fold (see Figure 4).

However, nitrogenous fertilizer prices have declined substantially in recent months, but this may be short lived with the northern hemisphere winter expected to increase energy demands and with it, gas prices. For the 2023 forecast year, expectations are that there is unlikely to be any substantial nitrogenous fertilizer price relief.

Figure 4 – Fertilizer Import Price Trend



Source: Australian Bureau of Statistics

High Chemical Prices

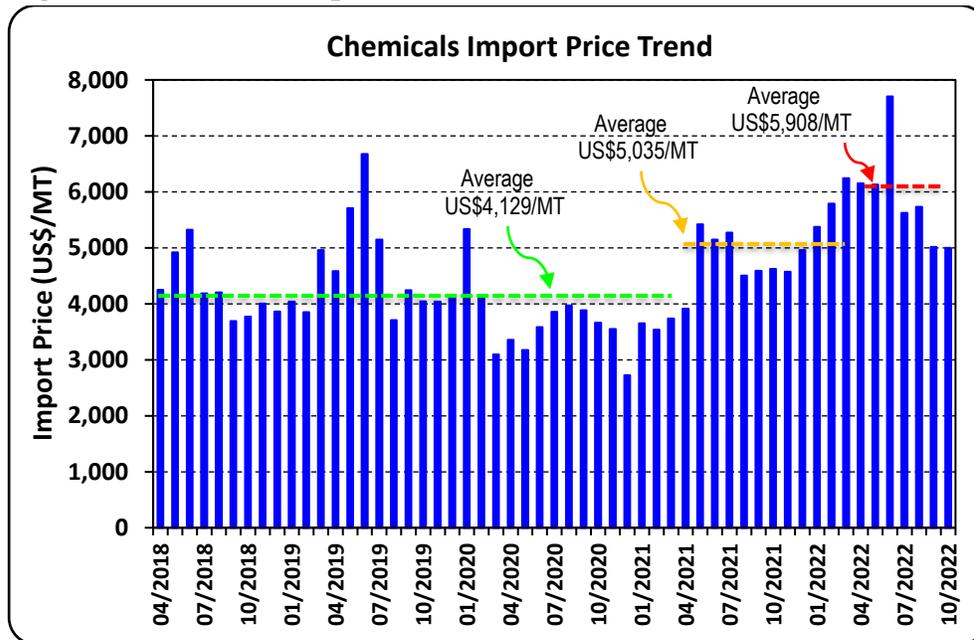
Australia produces very little of its chemical needs (including: insecticides, rodenticides, fungicides, herbicides, anti-sprouting products, etc.) and the majority (around 60 percent) of it imported from China. With rises in energy and shipping prices and COVID-19 disruptions and lockdowns in China, there have been sharp increases in chemical import costs for Australia.

Much like for fertilizer, the price of chemicals had been relatively flat for multiple years averaging US\$4,129 per MT for the four-year period from April 2018 to March 2021. But from the beginning of MY 2020/21 (April 2021) prices started to escalate and averaged US\$5,035 per MT (28 percent

increase). Chemical import prices continued to increase in MY 2021/22, peaking in June 2022 rising to an average of \$5,908 per MT for the marketing year so far (April to October 2022). A positive aspect is that prices have declined significantly over recent months but remain high at around the MY 2020/21 average.

With many economists indicating a slow-down in the world economy, a decline in chemical product demand may result in further downward pressure in prices in the coming months, providing some relief into the lead up to MY 2022/23. But chemical prices are not anticipated to fall to past lower levels.

Figure 5 – Chemical Import Price Trend



Source: Australian Bureau of Statistics

Note: HS Code 3808 (Insecticides, Rodenticides, Fungicides, Herbicides, Anti-sprouting Products etc., Packaged for Retail Sale or as Preparations or Articles)

Soaring Energy Prices

Although Australia is a large producer of coal and gas, it exports 80 to 90 percent of production, so domestic electricity and gas prices are exposed to world coal and gas prices. Australia is highly dependent on the import of diesel. Due to the world energy price increases, the domestic electricity and diesel prices have soared since the start of 2022. Diesel prices in Australia have increased by almost 50 percent since the start of 2022. World inflation pressures appear to have started to have an impact on gasoline and diesel demand which has seen some easing of world crude oil prices, particularly in late 2022. If this decline in demand persists there may be some diesel price relief for citrus producers across MY 2022/23.

Due to the complexity of electricity markets, it is difficult to gauge the extent of the price increases experienced by citrus producers since the start of 2022. Citrus producers use substantial amounts of electricity for electric pumps to extract irrigation water from rivers and bores and also for pumps delivering water to trees typically via drip irrigation systems. The rising costs of electricity have had a substantial impact on the input costs of citrus producers with no relief anticipated even if government intervention is formalized and implemented in the coming months.

Shortage of Labor

Tight labor availability is expected to continue to be a key limiting factor in the MY2022/23 forecast year, but with Australian borders opened to international travellers since early 2022 there may be some easing of labor availability pressures.

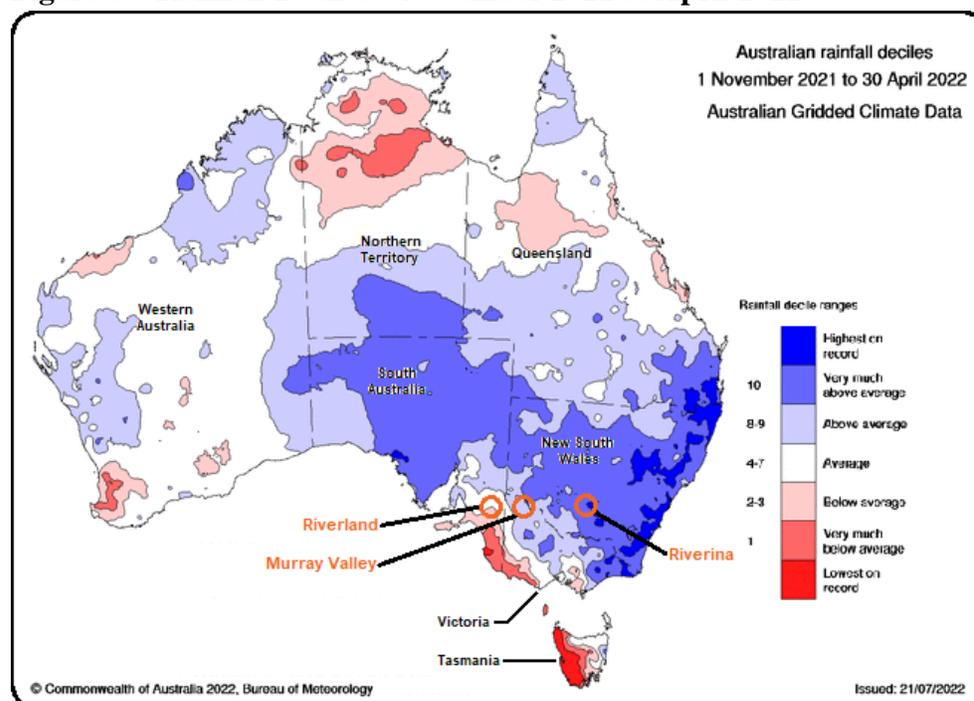
The horticulture industries in particular have been most impacted by the much lower current numbers of temporary visa holders, which are primarily backpackers (working holiday makers) and from the Pacific Australia Labor Mobility (PALM) scheme. There has been an increasing number of working holiday makers and PALM scheme workers entering Australia over around the last six months. With these numbers building there has been reports of some easing of harvest labor shortages.

Further exacerbating the labor shortage is that Australia's unemployment rate is around the lowest since 1974, and all industries across the economy are struggling to meet labor requirements. This is causing further competition for labor from other sectors in the economy. According to industry sources this circumstance has led to further increases in labor costs, particularly for semi-skilled and skilled labor who have skillsets that apply to other industry sectors. With inflation pressures persisting in the Australian economy, it is unlikely that there will be any significant easing of labor cost pressures for MY 2022/23, but rather more likely further upward pressure on labor cost.

The FAS/Canberra orange production estimate for MY 2021/22 of 535,000 MT is in line with the official USDA estimate. As mentioned, although production for this year is the highest in almost two decades, the low quality of fruit has resulted in some of the production that exceeded the volumes needed for juicing requirements being sent to the livestock cattle industry for supplementary feed.

For the six months (November 2021 to April 2022) in the lead up to the start of the MY 2021/22 navel orange harvest (May 2022) the main production region in the Murray Valley had above average-rains while the second largest region in the Riverina had well-above-average rains (see Figure 6). These conditions were positive for fruit growth but the conditions restricted grower capacity to prune the orange trees after the preceding harvest in a timely manner which impacted the risk of fruit skin blemishes.

Figure 6 – Rainfall Deciles – November 2021 to April 2022



Source: Bureau of Meteorology

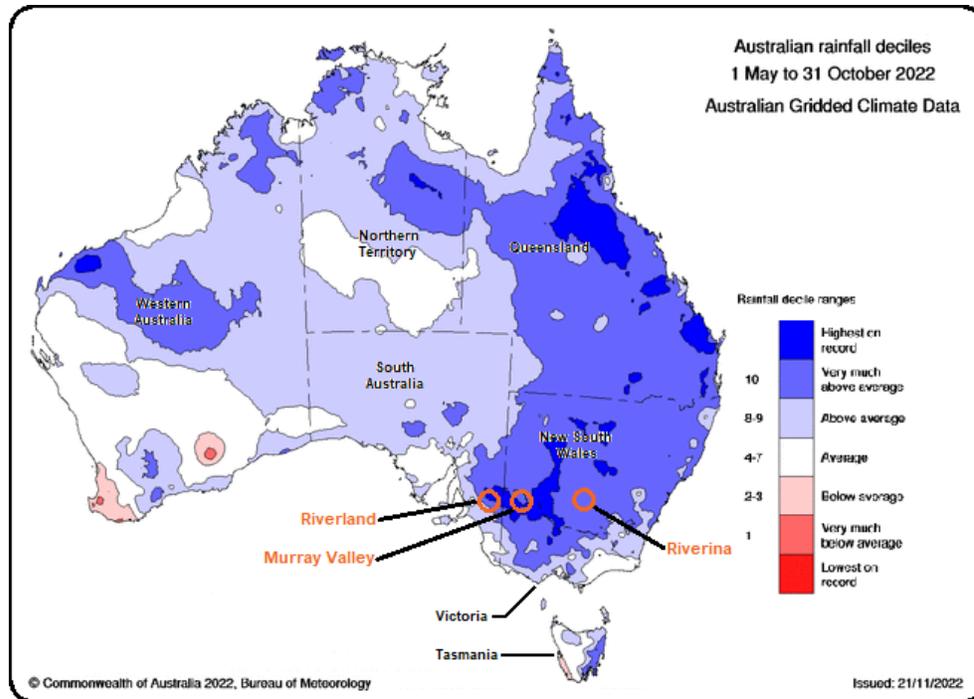
The period during the MY 2021/22 harvest (May 2022 to October 2022) had even greater rainfall across all three of navel orange producing regions (see Figure 7) with generally well-above-average to record levels, although these rainfalls were mostly towards the end of the harvest period in September and October 2022. These conditions are reported by growers to have produced unusually high humidity which had a substantial impact on, in particular, the amount of skin blemishes on the fruit.

The well-above-average rainfall during the navel orange harvest period coincides with the lead up to the Valencia (juicing) orange harvest which typically commences in November 2022. These conditions will have a positive impact on fruit size and overall production. Small quantities of the highest quality Valencia oranges will be channelled towards the fresh fruit market, but skin blemishes are far less of a consideration for juicing.

As previously mentioned, the Murray Valley and Riverland regions are currently experiencing flooding. This is not directly a result from rain falling in the region, but rather big rains in October and November in already saturated soils and full water storages in upstream areas are resulting in huge amounts of water surging through the Murray River and flooding agricultural lands (and towns) now impacting the Murray Valley and Riverland regions. The rains have cleared since the end of November bringing warmer days with sunshine allowing Valencia (juicing) orange areas to dry and harvest to proceed. The biggest Valencia producing area by far in the Riverina region has been somewhat less impacted. Overall, the volume of Valencia production for MY 2021/22 is expected to be negatively impacted by the flooding events and has been taken into consideration in the overall estimated orange production and

volume for processing. However, the true impact is difficult to estimate and will not be known until flood waters recede and the Valencia harvest is completed.

Figure 7 – Rainfall Deciles – May to October 2022



Source: Bureau of Meteorology

Citrus growers harvest all of their oranges for the health of the trees to optimize the subsequent production year. However, in this low-quality year a far greater than usual amount of navel oranges were not marketable as fresh fruit for the domestic and export markets, and there is a limit as to the quantity that can be accepted for juicing. As a result the balance is typically sold to the livestock industries as supplementary feed, and reports are that there has been a huge jump in this volume this year.

Consumption

FAS/Canberra forecasts domestic consumption of fresh oranges in MY 2022/23 to decrease to 130,000 MT from a big 185,000 MT in MY 2021/22. The forecast is mainly driven by an expected return to producing good quality oranges and with this a much larger quantity suitable for the export market after the orange quality for the MY 2021/22 season was significantly impacted by wet weather conditions. With the expectation of a return to typical fruit quality, consumption for the forecast year is expected to return to near past average levels.

Consumption for processing is forecast to decline to 210,000 MT in MY 2022/23 from a downward revised estimate of 215,000 MT in MY 2021/22 from the official USDA estimate of 225,000 MT. This downward revision is largely due to the flooding events impacting the major Valencia producing regions. The forecast decline is back towards a more typical level expected.

In MY 2021/22, the large fruit size of not only juicing varieties but also fresh varieties, as well as the lower quality of navel oranges, resulted in more of these being channelled to juicing. This had set the scene for a high volume of fruit for juicing, but the flooding impacts are preventing some Valencia producing areas from being harvested, which has resulted in the downward revised processing volume estimate for MY 2021/22.

The FAS/Canberra MY 2021/22 orange consumption estimate of 185,000 MT is far higher than the official USDA estimate of 135,000 MT. This variance is largely attributed to the volume of waste fruit, due to its low quality, being sold as supplementary feed for livestock.

Trade

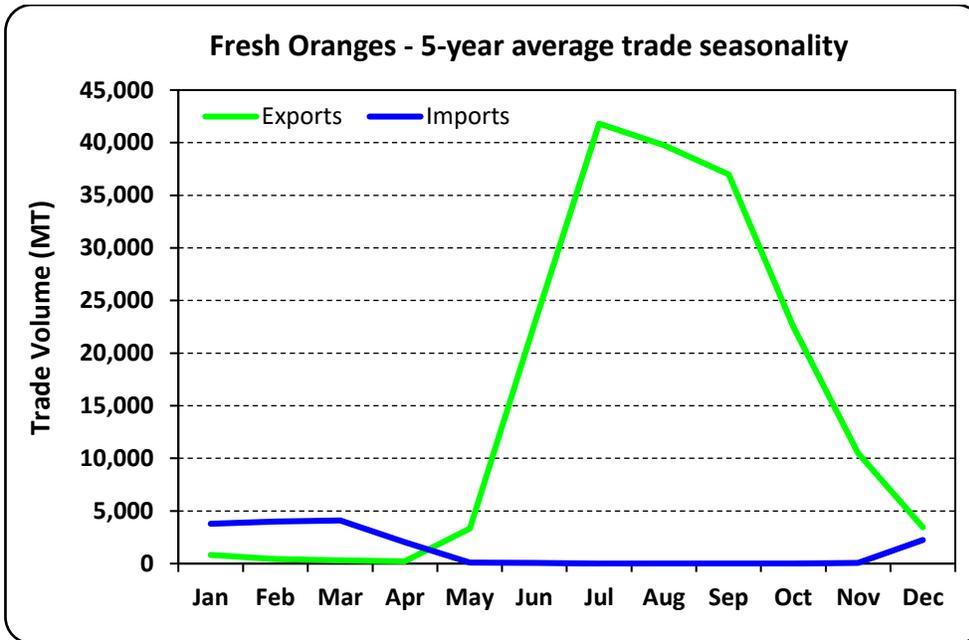
Exports

FAS/Canberra forecasts fresh orange exports of 180,000 MT in MY 2022/23, a 35,000-MT increase over the MY 2021/22 estimate of 145,000 MT. This is a return towards recent past levels ranging from 181,000 MT to 198,000 MT achieved between MY 2016/17 and MY 2019/20. If not for the biennial low year of yields anticipated in the forecast year, exports may have been expected to be within the recent past range.

Exports are largely influenced by production and quality. In seasons where overall quality is low, a larger proportion of fresh oranges are downgraded, reducing the available fresh orange supply for export. This typically also increases the supply for fresh domestic consumption to a point where the domestic supply is saturated. Any production that is surplus to domestic and juicing demand is supplied to the livestock industry as a supplementary feed. The industry has had a shortage of harvest labor related to the COVID-19 pandemic, but the shortage is starting to alleviate and although still likely to be a concern for MY 2022/23, is not expected to significantly influence fruit quality through timeliness of harvesting.

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 8). 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 8 – Seasonality of Australian Fresh Orange Trade



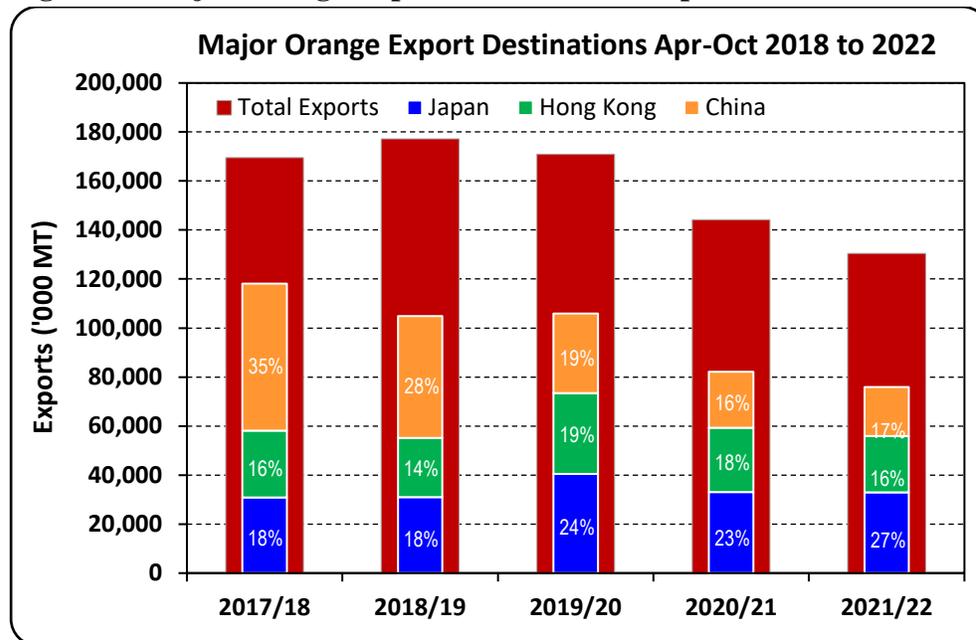
Source: Australian Bureau of Statistics

The major export destinations for Australian oranges are Japan, China and Hong Kong, typically accounting for around 60 percent of overall exports (see Figure 9). Australia exports fresh oranges to over 35 nations with most of the larger export destinations in the Asia region.

Japan over recent years has been the largest export destination, typically with a relatively stable volume from year to year of around 35,000 MT, but rose to almost 42,000 MT in MY 2019/20. Despite the significantly lower volume of export quality oranges produced in Australia for MY 2021/22, the decline in exports to Japan was small. The biggest change in exports has been a large decline to China. For the April to October period (which usually accounts for around 90 percent of exports for the full marketing year), the volume exported to China was a little over 18,000 MT for MY 2021/22, compared to 50,000 MT five years earlier.

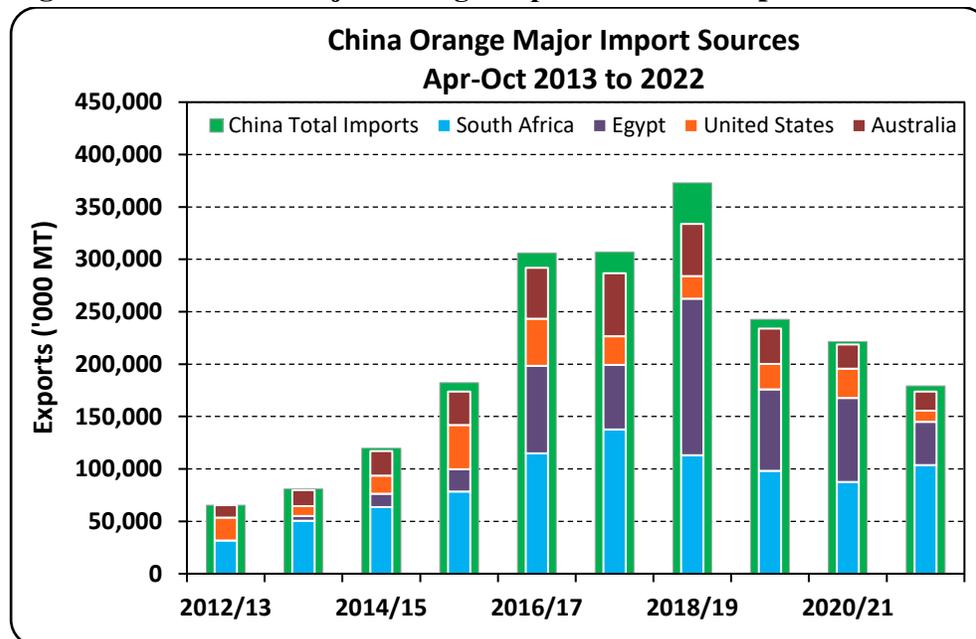
The decline in orange exports to China is part of an overall trend of decreasing imports by China. Peak imports of oranges by China for the April to October period was reached in MY 2018/19 of almost 373,000 MT and has declined to 179,000 MT in MY 2021/22, more than halving in four years (see Figure 10). This primarily relates to the rapid expansion of orange production in China over recent years. However, the result may in small part be related to demand constraints associated with ongoing COVID-19 lockdowns experienced over the last two years in China.

Figure 9 –Major Orange Export Destinations – Apr-Oct 2018 to 2022



Source: Australian Bureau of Statistics

Figure 10 – China’s Major Orange Import Sources – Apr-Oct 2013 to 2022



Source: Trade Data Monitor

The official USDA MY 2021/22 orange export estimate of 190,000 MT is downward revised by FAS/Canberra to 145,000 MT. The volume of orange exports to each of the three major destinations, which typically account for around 60 percent of overall exports, declined not due to a lack of

production but rather a lack of oranges of adequate quality suitable for the export market. Exports for April to October 2022 were 130,000 MT and this period on average accounts for around 90 percent of overall exports for the full marketing year. Based on this the full year estimate is expected to reach the revised estimate.

TRADE ACCESS

United Kingdom – Australia Free Trade Agreement

On December 17, 2021 the United Kingdom (UK) and Australia signed an in principle free trade agreement. On November 22, 2022 it passed the Australian Parliament but is yet to pass the UK parliament. After this domestic procedure is completed, the agreement will enter into force 30 days later, on another mutually agreed date.

As part of this agreement, Australia will get tariff free access for citrus fruits to the United Kingdom (UK). Australia's trade of citrus to the UK has mainly been very small volumes of mandarins and, due to the sea freight distance between the two nations, it is not anticipated that the elimination of tariffs will have a significant impact on the citrus trade from Australia to the UK.

European Union – Australia Free Trade Agreement

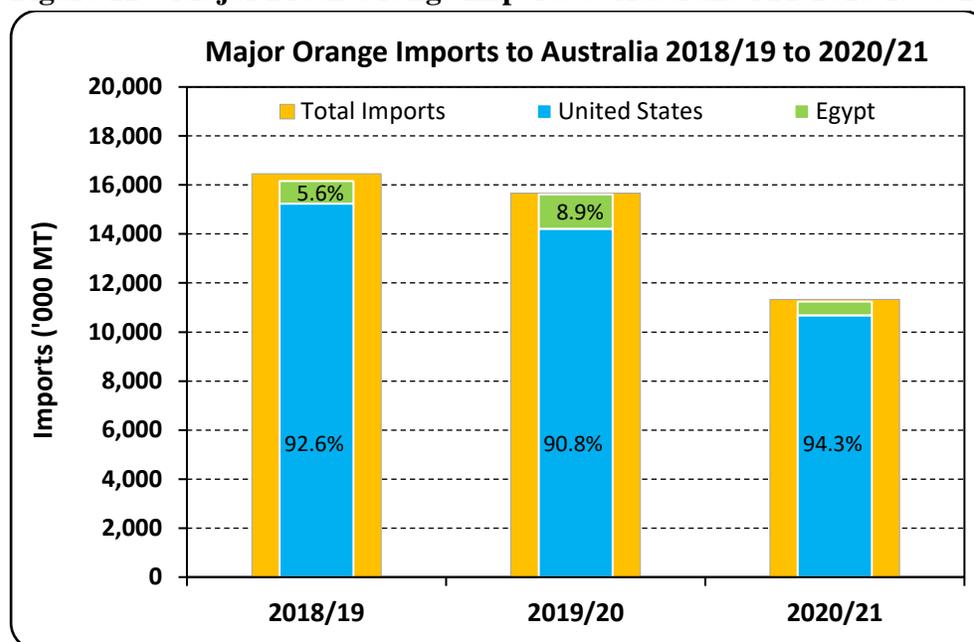
The European Union (EU) and Australia launched negotiations for a free trade agreement on June 18, 2018 but are yet to arrive at a mutually agreed position. Although the EU is a large trading partners, similarly to the UK, the limitation to trade for the citrus industry (if it is included in the negotiations) to benefit significantly is the large sea freight distance and cost compared to expanding trade into the Asian region.

Imports

FAS/Canberra forecasts orange imports to increase to 15,000 MT in MY 2022/23, a 5,000-MT increase from an estimated 10,000 MT for MY 2021/22. However, the forecast is a return to pre-pandemic levels which ranged from 14,000 to 16,000 MT. The easing of shipping costs in recent months may support a higher volume but this may be countered by inflationary pressures experienced in Australia, which may impact consumers disposable income and reduce out of season demand for oranges.

Imports of oranges from northern hemisphere countries are counter-seasonal to domestic production and occur between December and April each year. Almost all imports of navel oranges are from the United States, and the balance of less than 10 percent almost entirely from Egypt (see Figure 11). This ratio is not expected to change significantly in the forecast year.

Figure 11 – Major Fresh Orange Imports to Australia MY 2018/19 to 2020/21



Source: Australian Bureau of Statistics

Table 1 - Production, Supply, and Distribution of Fresh Oranges

| Oranges, Fresh Market Year Begins | 2020/2021 | | 2021/2022 | | 2022/2023 | |
|--------------------------------------|---------------|----------|---------------|----------|---------------|----------|
| | Apr 2021 | | Apr 2022 | | Apr 2023 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Australia | | | | | | |
| Area Planted (HECTARES) | 17500 | 17500 | 18400 | 17700 | 0 | 17800 |
| Area Harvested (HECTARES) | 15400 | 15400 | 16300 | 15300 | 0 | 15400 |
| 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) | 525 | 505 | 535 | 535 | 0 | 505 |
| Imports (1000 MT) | 12 | 11 | 15 | 10 | 0 | 15 |
| Total Supply (1000 MT) | 537 | 516 | 550 | 545 | 0 | 520 |
| Exports (1000 MT) | 160 | 160 | 190 | 145 | 0 | 180 |
| Fresh Dom. Consumption (1000 MT) | 127 | 130 | 135 | 185 | 0 | 130 |
| For Processing (1000 MT) | 250 | 226 | 225 | 215 | 0 | 210 |
| Total Distribution (1000 MT) | 537 | 516 | 550 | 545 | 0 | 520 |
| | | | | | | |

(HECTARES) ,(1000 TREES) ,(1000 MT)

ORANGE JUICE

Production

FAS/Canberra forecasts orange juice production in MY 2022/23 of 16,100 MT, a decrease of two percent from the downward revised estimate for MY 2021/22 of 16,500 MT. The MY 2021/22 estimate is revised down from 17,300 MT due to, as mentioned previously, flooding impacts preventing some areas from being harvested. A return to more typical seasonal conditions is anticipated for the forecast year and with this more normal fruit size and high-quality production is expected. As a result, a higher volume of navel oranges is expected to be suitable for export in MY 2022/23, decreasing the reject rate of navel oranges available for juicing back towards more typical levels. Also, with closer to normal seasonal conditions anticipated, Valencia orange production is expected to be at more typical levels in the forecast year.

As previously mentioned during the estimate year, navel oranges were of much lower quality than usual which resulted in a higher than usual reject rate at packing and greater than usual volumes channelled to processing for orange juice. Also, with favorable growing conditions, Valencia oranges for juicing are anticipated to be of large size and produce a big volume. However, the flooding impacts as previously outlined are expected to reduce the volume of Valencia oranges typically harvested between November and February for MY 2021/22.

Overall production potential of Valencia oranges is likely to remain relatively stable in the short term. The planted area of juicing varieties, which is now at 36 percent of overall orange planted area, unlike navel oranges has declined by three percent from 2014 to 2021 (see Figure 2).

The small decline in Valencia area (juicing varieties) is expected to be offset by the increase in navel orange production area, resulting in incremental increases in navel orange reject volume being channelled to juice production in the coming years. The industry expectation is that as the Mature (40+ years) Valencia trees productivity becomes unviable they will be removed, and the overall area of Valencia trees will decline at a more rapid rate than recent past years.

Consumption

FAS/Canberra forecasts domestic consumption of juice in MY 2022/23 at 31,000 MT, and in line with the estimate for MY 2021/22. This is consistent with the consumption for the five years prior to the pandemic which ranged from 30,000 to 32,000 MT. With inflationary pressures impacting Australian consumers, for the forecast year it is anticipated that there may be some reversing of the trend in recent years which was moving further towards fresh orange juice (mainly domestically produced) and away from reconstituted orange juice (mainly imported).

Australia is one of the wealthiest nations in the world and according to the Global Wealth Report 2022 by Credit Suisse, Australia ranked first in the world based on median wealth per adult in 2021. Combined with this, according to the Organisation for Economic Co-Operation and Development

(OECD), household expenditure on food and restaurants in Australia is among the lowest in the world. With this there is substantial scope for Australian consumers to adjust their spending patterns such as partially switch back towards reconstituted orange juice and less fresh juice to reduce household spending. For this reason, it is not anticipated that there will be any significant detrimental impact on overall orange juice consumption in Australia in the forecast year.

The FAS/Canberra MY 2021/22 orange juice consumption estimate of 31,000 MT is a slight downward revision from the official USDA estimate of 32,000 MT. This is largely due to lower-than expected domestic juice production as a result of flooding impacts in key production regions.

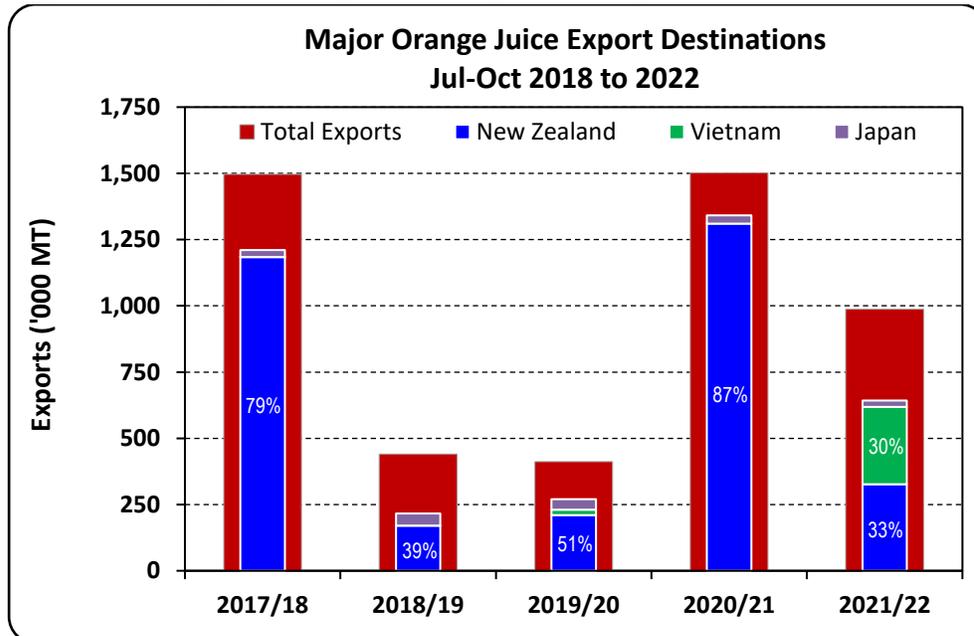
Trade

Exports

FAS/Canberra’s forecast for orange juice exports for MY 2022/23 is for a slight increase to 4,000 MT from the MY 2021/22 estimate of 3,500 MT. Exports are quite low at around 25 percent of production. Exports over the last 10 years have ranged from as low as 1,500 MT to as high as 6,000 MT, and averaged a little under 4,000 MT.

In years when Australia has achieved the higher end of export volumes, New Zealand has been the major destination and has largely driven those higher volumes (see Figure 12). However, so far in MY 2021/22, Vietnam has become a significant destination for orange juice exports from Australia, supporting the overall exports while exports to New Zealand have declined markedly.

Figure 12 – Major Orange Juice Exports – July to October MY 2017/18 to 2021/22



Source: Australian Bureau of Statistics

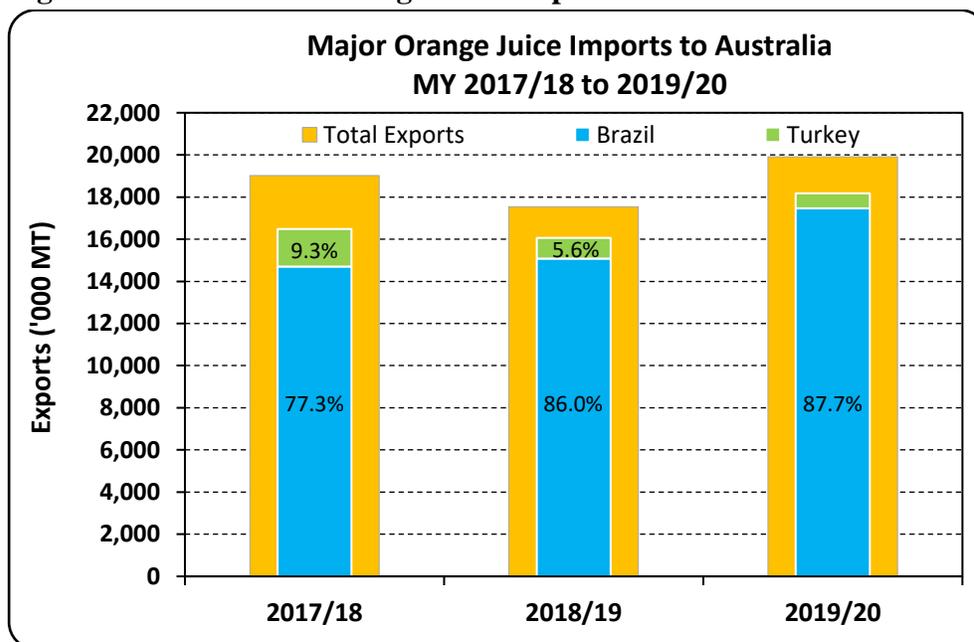
The FAS/Canberra MY 2021/22 orange juice export estimate of 3,500 MT is in line with the official USDA estimate. For the first four months of the marketing year, exports are at a little under 1,000 MT for a period in which over the last five years averaged around 30 percent of the annual export volume. Based on this seasonality if it were to hold true for the remainder of the year the estimate of 3,500 MT for MY 2021/22 would be achieved.

Imports

FAS/Canberra forecasts imports of orange juice in MY 2022/23 at 19,000 MT, slightly higher than the MY 2021/22 estimate of 18,000 MT. Although there was a major dip in imports in MY 2020/21, down to 13,300 MT, the forecast and estimate years are in line with the previous five years ranging from 16,900 MT to 20,000 MT.

Brazil has for many years been the major source of orange juice imports to Australia and in recent years has accounted for well over three-quarters of overall imports, with Turkey being the second largest source at less than 10 percent (see Figure 13). This trend is not expected to vary greatly in the coming years.

Figure 13 – Australian Orange Juice Imports MY 2017/18 to MY 2019/20



The FAS/Canberra MY 2021/22 orange juice import estimate of 18,000 MT is unchanged from the official USDA estimate. For the July to October 2022 period of the marketing year there has been 4,951 MT of orange juice imported. Over the last five years on average this period accounted for one-third of full marketing year imports. But there has been substantial variation of import patterns from year to year and it is anticipated that the rate of imports will increase for the remainder of the marketing year. This would particularly be the case as Australian consumers may seek to reduce their overall expenditure on

orange juice, to negate some inflationary pressures, by substituting back from fresh orange juice towards reconstituted juice.

Table 2 - Production, Supply, and Distribution of Orange Juice

| Orange Juice Market Year Begins | 2020/2021 | | 2021/2022 | | 2022/2023 | |
|------------------------------------|---------------|----------|---------------|----------|---------------|----------|
| | Jul 2021 | | Jul 2021 | | Jul 2023 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Australia | | | | | | |
| Deliv. To Processors (MT) | 250000 | 226000 | 225000 | 215000 | 0 | 210000 |
| Beginning Stocks (MT) | 1076 | 776 | 776 | 676 | 0 | 676 |
| Production (MT) | 19200 | 17400 | 17300 | 16500 | 0 | 16100 |
| Imports (MT) | 18000 | 13300 | 18000 | 18000 | 0 | 19000 |
| Total Supply (MT) | 38276 | 31476 | 36076 | 35176 | 0 | 35776 |
| Exports (MT) | 5000 | 4300 | 3500 | 3500 | 0 | 4000 |
| Domestic Consumption (MT) | 32500 | 26500 | 32000 | 31000 | 0 | 31000 |
| Ending Stocks (MT) | 776 | 676 | 576 | 676 | 0 | 776 |
| Total Distribution (MT) | 38276 | 31476 | 36076 | 35176 | 0 | 35776 |
| (MT) | | | | | | |

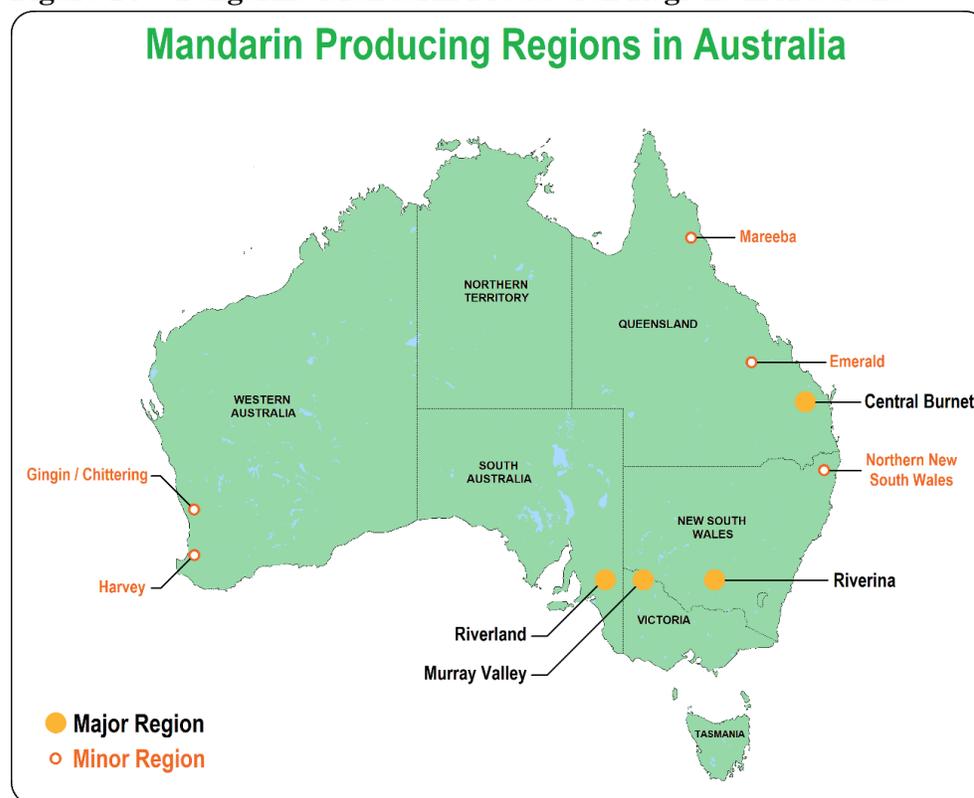
FRESH TANGERINES/MANDARINS

Industry Background

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 (and their respective derivatives) being 79 percent of overall area (Source: Citrus Australia – Australian Citrus Tree Census 2021).

Queensland has by far the largest area of mandarin production in Australia at 4,177 ha, accounting for 54 percent of national production (see Figure 14). The next largest regions are the Riverland in South Australia with 1,404 ha (18 percent) and Murray Valley in Victoria with 1,363 ha (17 percent). 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 14 – Tangerine/Mandarin Production Regions in Australia

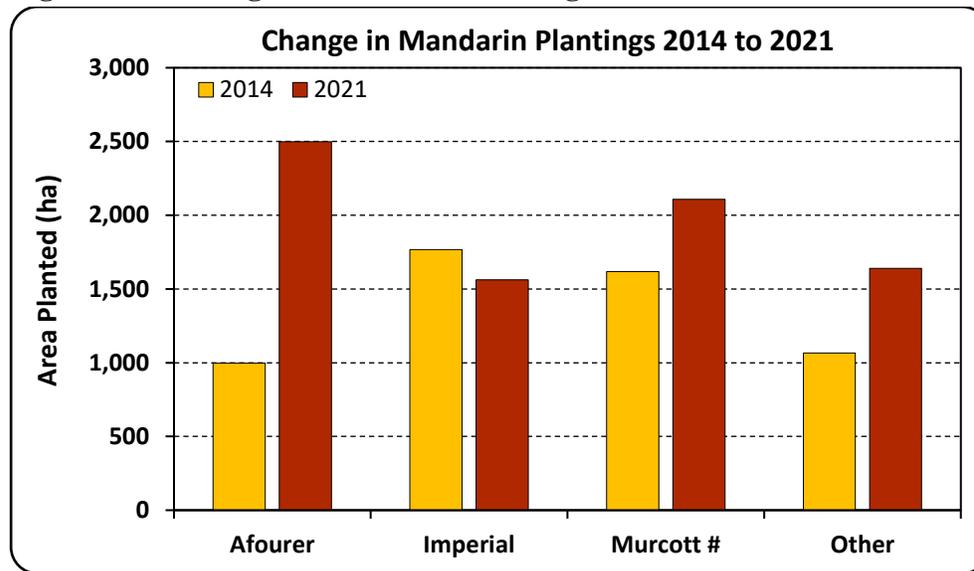


Source: Citrus Australia / Australian Bureau of Statistics Census / FAS/Canberra

Over the period from 2014 to 2021, since tree census data has been collected, there has been a 43-percent increase in mandarin plantings from 5,451 ha to 7,807 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 (including Amorette and Tango) variety has by far had the largest growth in production area over the 2014 to 2021 period, from 998 ha to 2,525 ha, now clearly the dominant variety (see Figure 15). The area of Murcott (includes low seeded Honey Bee and Royal Honey) has also increased by 30 percent over the same period, while the older variety Imperial (includes Goldup and Avana) has declined by 12 percent. In the ‘other’ category, including tangelos, there are 29 varieties, the total planted area of which has grown by 54 percent (572 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 15 – Change in Mandarin Plantings 2014 to 2021

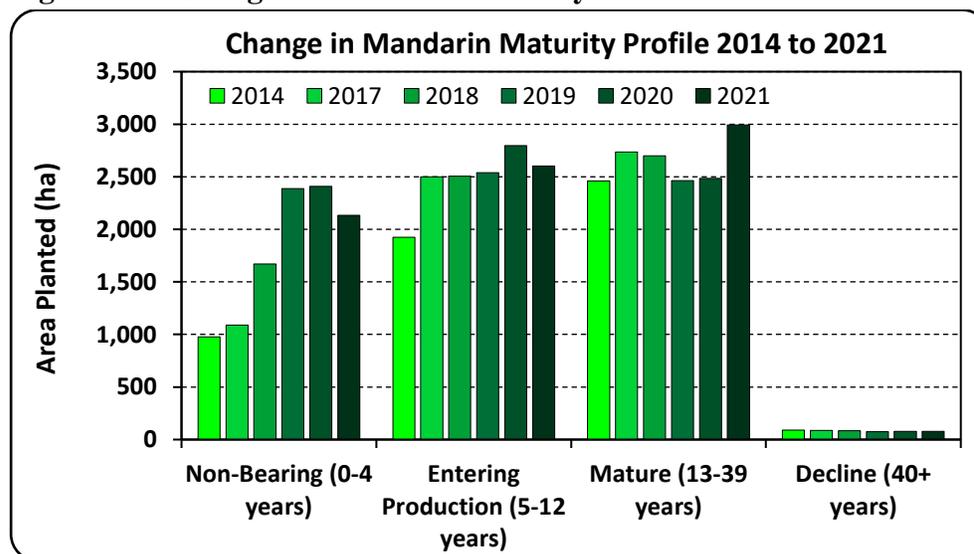


Source: Citrus Australia / Horticulture Innovation Australia

Notes: # Includes low seeded

The growth in mandarin plantings that has occurred over the 2014 to 2021 period is evident from the area of non-bearing (0 – 4 years) trees increasing by over 1,150 ha to 2,134 ha, a change of 118 percent (see Figure 16). The change in the number of trees entering production (5 – 12 years) is an increase of around 35 percent or over 678 ha. During the same period there has been a 533 ha (22 percent) increase in the area of mature (13 – 39 years) trees. With a mandarin tree age profile in 2020 of almost 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 16 – Change in Mandarin Maturity Profile 2014 to 2021



Source: Citrus Australia / Horticulture Innovation Australia

Production

FAS/Canberra forecasts production of tangerines/mandarins in MY 2022/23 at 190,000 MT, a nine percent increase over the MY 2021/22 estimate of 175,000 MT. This growth is predominantly related to a young tree age profile, with an increasing area of plantings entering production and boosting overall production. Overall fruit quality is also expected to improve in the forecast year with the anticipation of a return to more typical seasonal conditions.

Similar to orange production, mandarins can look forward to ample irrigation water availability, and with the forecast easing of La Niña weather conditions by early 2023, a return to normal seasonal conditions is anticipated for the forecast year, particularly during the harvest period. Also, with the post COVID-19 opening up of international borders from early 2022 there has been a gradual return of temporary visa holder entrants to Australia. This is expected to contribute to some further easing of harvest labor shortages for the forecast year.

However, similar to that for orange production, the headwinds of high input costs for fertilizer, chemicals, energy, and labor remain. Despite these headwinds, production is expected to increase mainly due to the expanding area and maturing age profile of tangerine/mandarin trees.

The FAS/Canberra mandarin production estimate for MY 2021/22 is at 175,000 MT and significantly below the official USDA estimate of 190,000 MT. Although there has generally good growing conditions in the major producing areas, similar to oranges there has been some quality issues for mandarins but not to the extent as that for oranges which has impacted the volume sent to market.

Consumption

FAS/Canberra forecasts domestic consumption of mandarins in MY 2022/23 at 101,000 MT, and in line with the MY 2021/22 estimate of 100,000 MT. The bulk of the production increase is expected to go to exports rather than domestic consumption. The forecast consumption is slightly higher than the pre pandemic years. With a shift to increasing production of seedless mandarin varieties a gradual trend of increasing consumption is anticipated.

A key consideration for domestic consumption is the inflationary pressures in Australia which is reducing consumers discretionary incomes. This is expected to continue well into the MY 2022/23 (April 2023 to March 2024) forecast year. As previously mentioned, Australian's economic position is strong, having among the lowest expenditure on food relative to income compared to other nations. With this and the increasing production of seedless mandarin varieties, there is no major expectation that there will be any significant impact on the domestic demand for mandarins.

The FAS/Canberra mandarin consumption estimate for MY 2021/22 is at 100,000 MT and marginally lower than the official USDA estimate of 101,000 MT.

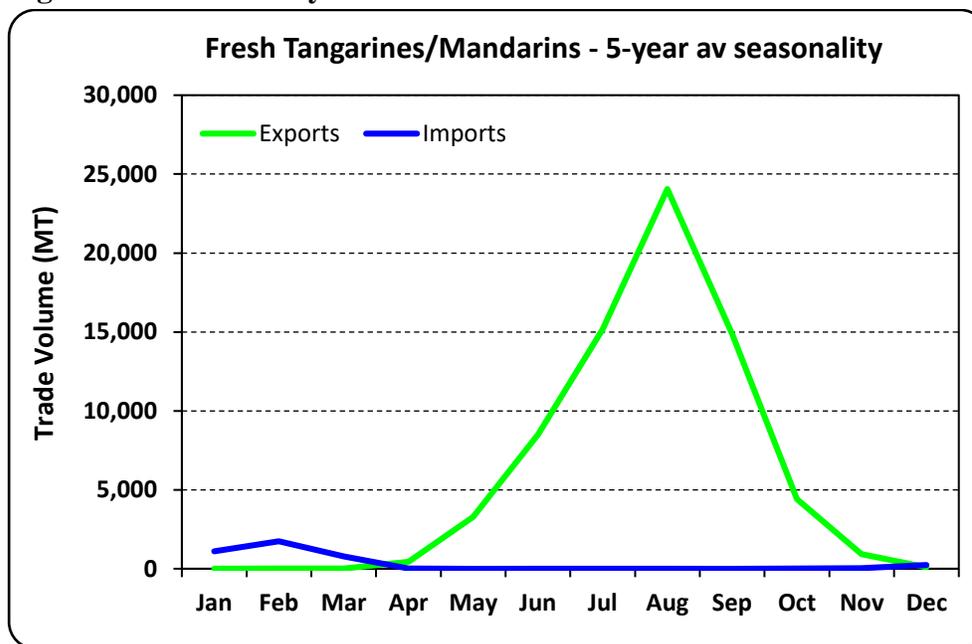
Trade

Exports

FAS/Canberra forecasts mandarin exports in MY 2022/23 of 90,000 MT from an estimated 75,000 MT in MY 2021/22. With a forecast increase in production of 15,000 MT for MY 2022/23, all of this increase is expected to go to exports. If realized, this would be a record level of exports and 3,000 MT higher than the previous record set in MY 2018/19. Based on an increase in plantings over recent years it is anticipated that, as trees mature, production will continue to increase, and exports are expected to reach new record peaks in the coming years.

Over the last five years exports of mandarins were almost all between May and October, peaking in August (see Figure 17). With April being the start of the marketing year, exports from April to October period typically captures 99 percent of full year results. This enables a high degree of reliability for the export estimate for MY 2021/22.

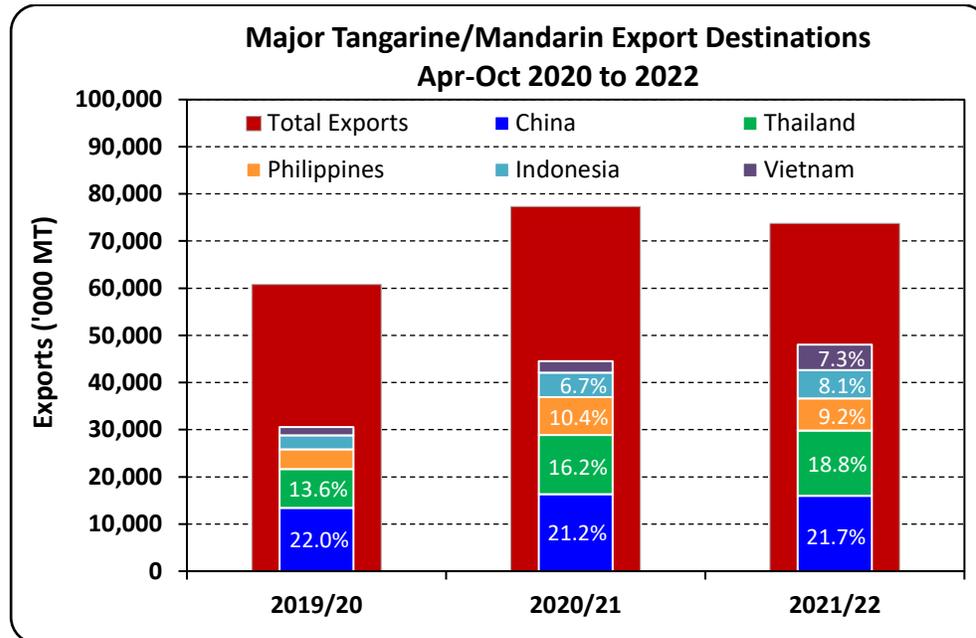
Figure 17 – Seasonality of Australian Fresh Mandarin Trade



Source: Australian Bureau of Statistics

Australian export destinations of mandarins are well diversified with around 35 destinations, and the top five nations accounting for half to two-thirds of all exports over the last three years (see Figure 18). China remains the major destination at around 22 percent in MY 2021/22 so far. Thailand has increased its appetite for Australian mandarins over the last two years and has become the clear second largest export destination at 19 percent of overall exports. The Philippines, Indonesia, and Vietnam each accounted for seven to nine percent of overall exports in MY 2021/22 so far, and similar to Thailand have generally increased their volumes over the last three years.

Figure 18 – Major Tangerine/Mandarin Export Destinations



Source: Australian Bureau of Statistics

The FAS/Canberra mandarin export estimate for MY 2021/22 of 75,000 MT is 15,000 MT lower than the official USDA estimate of 90,000 MT. Exports for April to October 2022 were 73,762 MT and this period on average accounts for almost 99 percent of overall exports for the full marketing year. Based on this, the full year export estimate is expected to reach near 75,000 MT.

Imports

FAS/Canberra forecasts tangerine/mandarin imports for MY 2022/23 at 4,000 MT, similar to the MY 2021/22 estimate of 3,000 MT. Past import results have been stable at around 4,000 MT per annum. These imports are counter-seasonal to production in Australia (see Figure 17) and are used to fill low level consumer demand during this period. Imports equate to around four percent of overall domestic consumption.

Table 3 - Production, Supply, and Distribution of Fresh Tangerines and Mandarins

| Tangerines/Mandarins, Fresh Market Year Begins | 2020/2021 | | 2021/2022 | | 2022/2023 | |
|---|---------------|----------|---------------|----------|---------------|----------|
| | Apr 2021 | | Apr 2022 | | Apr 2023 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Australia | | | | | | |
| Area Planted (HECTARES) | 7800 | 7800 | 8200 | 7800 | 0 | 7900 |
| Area Harvested (HECTARES) | 5400 | 5400 | 5800 | 5700 | 0 | 5800 |
| 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) | 180 | 185 | 190 | 175 | 0 | 190 |
| Imports (1000 MT) | 4 | 2 | 4 | 3 | 0 | 4 |
| Total Supply (1000 MT) | 184 | 187 | 194 | 178 | 0 | 194 |
| Exports (1000 MT) | 80 | 79 | 90 | 75 | 0 | 90 |
| Fresh Dom. Consumption (1000 MT) | 101 | 105 | 101 | 100 | 0 | 101 |
| For Processing (1000 MT) | 3 | 3 | 3 | 3 | 0 | 3 |
| Total Distribution (1000 MT) | 184 | 187 | 194 | 178 | 0 | 194 |
| | | | | | | |

(HECTARES) ,(1000 TREES) ,(1000 MT)

Attachments:

No Attachments