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## Report Name: Citrus Semi-annual

Country: Brazil
Post: Brasilia
Report Category: Citrus

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## Report Highlights:

The Brazilian orange crop for Marketing Year (MY) 2022/23 is forecast at 410.6 million $40.8-\mathrm{kg}$ boxes (MBx) or 16.75 million metric tons (MMT), a slight decrease of 1.1 percent vis-à-vis the current season, with the resumption of the biennial crop cycle and consequently, a lower fruit load per tree. Meanwhile, orange weight at harvest is projected to increase 3.71 percent in relation previous crop, due to heavy rains throughout the citrus belt since October 2022. FCOJ 65 Brix equivalent production for MY 2022/23 is forecast at 1.125 million metric tons (MMT), a decrease of nine percent from the estimated orange juice production for MY 2021/22, which was revised upward to 1.135 MMT. A larger share will supply the U.S. market to compensate Florida's juice production, which was damaged significantly by hurricane Ian.

## FRESH ORANGES

## Production

## PS\&D Tables

The following table provides revised data for Sao Paulo and total Brazilian fresh orange production, supply, and distribution (PS\&D) for Brazilian (BR) marketing years (MY, July-June) 2021/22, 2022/23, and 2023/24. The MY mentioned above are equivalent to U.S. MY 2020/21, 2021/22, and 2022/23, respectively.

Table 1
Production, Supply and Distribution for Brazilian Fresh Oranges

| Brazil: Fresh Oranges PS\&D (Jul-Jun, 1,000 ha, million trees \& million 40.8 kg <br> boxes) |  |  |  |
| :--- | ---: | ---: | ---: |
| Item/U.S. Marketing Year | US 20/21 | US 21/22 | US 22/23 |
| Item/ Brazilian Marketing Year | $\mathbf{2 0 2 1 / 2 2}$ | $\mathbf{2 0 2 2 / 2 3}$ | $\mathbf{2 0 2 3 / 2 4}$ |
| Area Planted | 604.4 | 614.1 | 617.6 |
| Sao Paulo | 379.4 | 387.1 | 388.5 |
| Others | 225.0 | 227.0 | 229.0 |
| Area Harvested | 546.1 | 546.4 | 537.1 |
| Sao Paulo | 346.1 | 344.4 | 337.1 |
| Others | 200.0 | 202.0 | 200.0 |
| Bearing Trees | 221.6 | 228.0 | 231.0 |
| Sao Paulo | 166.6 | 169.9 | 169.3 |
| Others | 55.0 | 58.0 | 62.0 |
| Non-Bearing Trees | 28.0 | 34.3 | 38.8 |
| Sao Paulo | 23.0 | 29.3 | 33.3 |
| Others | 5.0 | 5.0 | 5.5 |
| Total Trees | 249.6 | 262.3 | 269.8 |
| Total Production | 359.7 | 415.0 | 410.6 |
| Sao Paulo | 263.0 | 314.2 | 309.3 |
| Others | 96.7 | 100.8 | 101.3 |
| Exports | 0.0 | 0.0 | 0.0 |
| Imports (total Brazil) | 0.6 | 0.2 | 0.2 |
| Domestic Consumption | 112.3 | 114.2 | 112.9 |
| Delivered to processors | 248.0 | 301.0 | 296.0 |
| Sao Paulo (FCOJ + NFC exports) | 224.0 | 278.0 | 272.0 |
| Others | 24.0 | 24.0 | 24.0 |

Note: There is a one-year lag between the BR MY and the U.S. MY. For example, BR MY 2023/24 is equivalent to U.S. MY 2022/23. To ensure data continuity, the current Brazilian MY 2023/24 will be referred to as U.S. MY 2022/23 throughout this report.

## General

Post forecasts the total Brazilian orange crop for MY 2022/23 (July/June) at 410.6 million $40.8-\mathrm{kg}$ boxes (MBx) or 16.75 million metric tons (MMT), a decrease of 1.1 percent compared to last crop (MY 2021/22). The commercial area of the state of Sao Paulo and the western part of Minas Gerais should produce 309 MBx ( 12.61 MMT ), a decrease of 1.55 percent vis-à-vis the last year's crop ( 314.1 MBx of oranges or 12.82 MMT). This projection is based on the Defense Fund for Citriculture's (Fundecitrus) first citrus crop forecast, released in May. The forecast considers the following varieties: Hamlim, Westin, Rubi, Valencia Americana, Seleta, Pineapple, BRS Alvorada, Pera Rio, Valencia, "Folha Murcha" Valencia, and Natal.


#### Abstract

AREA

As reported by Fundecitrus, the upcoming crop will likely represent a slight decline compared to the previous crop, but maintained around the same level as in previous seasons. Compared to the average volume produced over the last decade, the current crop shows a slight increase of one percent.

This variation is a result of a resumption of the biennial bearing cycle characterized by the yearly alternation of large and small crops. With this biennial cycle, there is a lower fruit load per tree in the off-year, such as this current crop year. The average number of fruits per tree increased about five percent in the previous crop, and consequently decreased at the same rate in the current crop. However, assuming there is also reduced early fruit drop rate, there should be increased average weight of oranges harvested. This could help to minimize the impact resulting from the lower quantity of fruit.

Following a dry period at the beginning of 2022, the first significant rains were recorded in August in the center region of Sao Paulo, the main orange producing state. Rains continued through September, encouraging the flowering of orange trees. In the remainder of the citrus belt, total rain volume ranged from 40 to 80 millimeters. Heavy rains spread throughout the citrus belt in October, resulting in flowering in rainfed trees and monthly rainfall has remained high since then. According to Fundecitrus, the average rainfall in the citrus belt from August 2022 to April 2023 was 1,391 millimeters, which is 45 percent higher than last year. There was a very high frequency of rains in practically all the citrus belt. These consecutive rainfalls during flowering, as well as prolonged periods of wet soil, led to favorable conditions for post-bloom fruit drop. This is a disease caused by a fungus that under continuous moisture at flowering, which affects flower petals and reduces fruit setting.


Due to forecasted rains above historical average in the citrus belt, Fundecitrus expects an increase in the average orange weight. Fruit is expected to continue to develop well until harvest is complete. The La Niña phenomenon should end, while El Niño is expected to start in the second half of 2023, according to Somar Meteorologia and Climatempo. The combination of these climate phenomena are expected to make heavy rains in the citrus belt continue throughout the crop season.

Orange weight at harvest is projected at 165 grams $/ 5.83$ ounces ( 247 fruits per box), which represents a 3.71 percent increase in relation to the average weight of 159 grams $/ 5.61$ ounces recorded in the previous crop ( 256 fruits per box) and is 1.23 percent above the average weight of the last 10 seasons ( 163 grams/ 5.75 ounces, resulting in 250 fruits per box).

Climate has also impacted the flowering of the crop, with earlier rains leading to increased production of fruit from the first bloom. This rainfed early bloom, in addition to the early bloom fruit in irrigated groves ( 39 percent of area), lead to the overall first bloom to increase from 27.5 percent in the last crop to 36.2 percent in the current one. The second bloom represents 46.1 percent of the crop, the third bloom 16.3 percent, and the fourth bloom 1.5 percent.

Due to a higher percentage of fruit to be ready from the first bloom, harvest is expected to start earlier, allowing faster processing than in the previous season. Advanced harvest may help prevent high rates of early fruit drop, like in the previous crop when harvests lasted until April 2023. Other factors that help reduce fruit loss include soil moisture reserve, which has remained high since spring 2022, and the decrease in production in the South and Southwest, where fruit drop rate is higher.

Post slightly revised the estimate for the Brazilian orange crop for MY 2022/23 to 410.6 MBx ( 16.75 MMT), a slight decrease from the previous season's estimate of 415 MBx (16.9 MMT), based on updated information from Fundecitrus and the Brazilian Institute for Geography and Statistics (IBGE). In May 2023, Fundecitrus released the final estimate for the 2023/24 orange crop (US MY 2022/23) for the Sao Paulo and West-Southwest Minas Gerais citrus belt at 309.34 MBx (12.62 MMT).

According to Fundecitrus, greening has caused an increase in the eradication of groves in the citrus belt. From April 2022 to March 2023, the average eradication rate was $6.68 \%$, significantly higher than the first mapping, but slightly lower still than the previous year.

Production from other states for MY 2022/23 is projected at 101.16 MBx (4.12 MMT), up roughly four MBx from the previous MY 2021/22 ( 96.7 MBx or 3.95 MMT), according to information provided by the Brazilian Geography and Statistics Institute (IBGE).

In February 2022, the Sao Paulo State Institute of Agricultural Economics (IEA) released its first survey for the 2022/23 orange crop (equivalent to US MY 2021/22), forecasting 303.21 MBx (12.37 MMT), an increase of two percent vis-à-vis the previous crop ( 296.11 MBx or 12.08 MMT). Figures include production from both commercial and non-commercial areas and are based on data collected in February 2021. Note that IEA considers the entire state of Sao Paulo and all varieties of oranges. At the same time, Post estimates follow the citrus industry's methodology, which takes into account the four major citrus varieties for juice processing and includes the commercial area of the state of Sao Paulo plus the western part of Minas Gerais. IEA reports that the orange tree inventory in Sao Paulo is estimated at 171.5 million trees ( 153.8 million bearing trees and 17.7 million non-bearing trees).

## Area, Tree Inventory, and Yields

The Brazilian agricultural yield for the MY 2022/23 crop is forecast to remain at around 1.82 boxes/tree. Meanwhile, the average fruit weight is expected to be 165 grams, up from last season's 159
grams, as a result of favorable weather conditions which supported blossoming and fruit setting in the Sao Paulo citrus belt. It is estimated that it will take 247 fruits to fill a 90 -pound box.

Total Brazilian tree inventory for MY 2022/23 is projected at 269.8 million trees, an increase from the previous season, mainly in the Sao Paulo commercial citrus belt. The area planted for oranges is projected at 617,600 hectares (ha), up 3,500 ha compared to the previous MY with slight increases in both Sao Paulo and other states. The figure below shows orange production regions in the Sao Paulo state and Western Minas Gerais citrus belt, as reported by Fundecitrus in the 2023 citrus tree inventory survey.

Figure 1
Orange Growing Regions in the Sao Paulo and Minas Gerais Citrus Belt


Source: Fundecitrus
Sao Paulo is the only state that compiles trees planted and tree inventory data. ATO/Sao Paulo estimates stable area and tree population for other states based on uniform production figures provided by the Brazilian Institute of Geography and Statistics (IBGE).

## Producers Prices

The orange index price series is published by the University of Sao Paulo's Luiz de Queiroz College of Agriculture (ESALQ) for both the domestic fresh market and products delivered to orange juice processing plants in the state of Sao Paulo. Prices for the fresh market are for fruit on the tree.
According to CEPEA, fruit delivery for orange juice production contract prices for the 2023 crop were set at approximately $\mathrm{R} \$ 42.00$ /box instead of $\mathrm{R} \$ 29.20$ for the 2022 crop. Note that some contracts may include a premium depending on the price of orange juice. Higher prices in 2023 are a result of lower fruit supply during the past couple of crops, thus limiting fruit availability for processing.

Figure 2
Orange Prices Paid by Sao Paulo Industry

| Orange Prices Paid by Sao Paulo Industry - Spot Market (Pera, Natal, Valencia <br> Varieties). Average Prices in Reais - R\$ 40.8 kg box (Fruits Delivered to Processing <br> Plant) |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Month | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Jan | 17.66 | 21.77 | 20.96 | 25.29 | 29.08 | 32.30 |
| Feb | 16.70 | 21.19 | 21.20 | 24.87 | 29.58 | 37.32 |
| Mar | 16.24 | 21.58 | 20.48 | 24.89 | 29.75 | 37.63 |
| Apr | 16.33 | 20.61 | 20.80 | 25.88 | 27.83 | 39.02 |
| May | 17.27 | 18.21 | 20.92 | 26.17 | 27.44 | 39.76 |
| Jun | 19.28 | 19.13 | 22.35 | 28.93 | 29.20 | 42.12 |
| Jul | 20.55 | 19.78 | 22.63 | 29.16 | 28.91 |  |
| Aug | 22.00 | 20.01 | 22.94 | 29.17 | 28.87 |  |
| Sep | 22.48 | 19.67 | 23.61 | 28.83 | 30.42 |  |
| Oct | 22.29 | 20.05 | 23.91 | 28.84 | 31.58 |  |
| Nov | 22.51 | 20.27 | 24.47 | 28.98 | 31.05 |  |
| Dec | 22.15 | 20.64 | 25.10 | 28.94 | 32.01 |  |
| Source: CEPEA/ESALQ |  |  |  |  |  |  |

Figure 3
Orange Prices Received by Producers in Domestic Fresh Market

| Orange Prices Received by Producers in Domestic Fresh Market (Pera, Natal, <br> Valencia Varieties). Average Prices in Reais - R\$ 40.8 kg box <br> (Fruits on Tree). |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Month | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Jan | 20.00 | 30.42 | 30.53 | 39.03 | 36.99 | 36.38 |
| Feb | 22.51 | 40.66 | 33.06 | 37.69 | 39.87 | 39.88 |
| Mar | 29.02 | 42.23 | 35.35 | 38.71 | 42.85 | 38.39 |
| Apr | 29.83 | 31.80 | 32.47 | 38.11 | 42.01 | 36.39 |
| May | 26.33 | 21.17 | 26.09 | 34.42 | 37.39 | 34.00 |
| Jun | 25.66 | 18.24 | 25.26 | 32.64 | 42.89 |  |
| Jul | 26.80 | 18.06 | 26.83 | 34.74 | 43.75 |  |
| Aug | 29.08 | 18.26 | 30.01 | 39.67 | 37.44 |  |
| Sep | 31.39 | 19.51 | 32.78 | 45.30 | 39.26 |  |
| Oct | 32.83 | 22.99 | 38.89 | 49.88 | 31.9 |  |
| Nov | 30.24 | 28.04 | 43.35 | 45.01 | 35.00 |  |
| Dec | 27.16 | 28.22 | 40.52 | 38.80 | 36.93 |  |
| Source: CEPEA/ESALQ |  |  |  |  |  |  |

Expected higher prices for 2023 should offer some relief to producer but may still be sufficient to cover elevated production costs. Fertilizer costs have decreased since the spike last year but remain above historical levels. Expenses such as chemicals and freight costs are also determinant factors in the high cost of production for oranges.

## Exchange Rate

The table below shows the official exchange rate as released by the Brazilian Central Bank from 2019 to 2023.

Figure 4
Exchange Rate from 2019 to 2023


## Consumption

Post maintains the forecast of total Brazilian orange consumption for MY 2022/23 at 113.2 MBx (4.62 MMT), relatively unchanged compared to the current season (114.2 MBx or 4.66 MMT). These figures include actual domestic consumption plus losses from the natural drop, harvesting, transportation, and packing.

Note that fruit delivered to processors for "not from concentrate" (NFC) orange juice production for the domestic market will not be included as fresh oranges consumption but as "Delivered to Processors for NFC Production."

Fresh domestic consumption estimates are calculated as the difference between production estimates and the volume of oranges delivered to processors for FCOJ and NFC produced for domestic consumption and export.

## Trade

## Exports

Total fresh orange exports for MY 2022/23 are projected at virtually zero, like the previous season, according to updated information. Virtually no fresh orange exports are estimated for MY 2021/22.
Brazil has limited market access to other countries, and most exports are shipped to European countries. Most exports occur during the harvest of the commercial crop, between June and December.

The tables below show fresh orange (NCM 0805.10.00) exports by destination and imports by country of origin, according to the Trade Data Monitor (TDM), based on data from SECEX.

Figure 5
Brazil's Fresh Orange Exports


Source: SECEX data, FAS Brazil chart

Figure 6
Brazilian Fresh Orange Exports

| Brazilian Fresh Orange Exports (MT and US\$ 1,000 FOB) |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Country | Jul 2019 - Apr 2020 |  | Jul 2020 - Apr 2021 |  | Jul 2021 - June 2022 |  |  |
|  | Value | Quantity | Value | Quantity | Value | Quantity |  |
| Russia | - | - | 89 | 186 | 70 | 145 |  |
| Marshall Islands | 40 | 49 | 41 | 52 | 53 | 60 |  |
| Panama | 33 | 42 | 39 | 47 | 43 | 52 |  |
| Liberia | 30 | 42 | 34 | 46 | 42 | 48 |  |
| Hong Kong | 29 | 39 | 26 | 37 | 29 | 33 |  |
| Malta | 16 | 21 | 16 | 22 | 18 | 22 |  |
| Greece | 16 | 20 | 13 | 18 | 13 | 17 |  |
| Singapore | 12 | 16 | 11 | 16 | 13 | 16 |  |
| Cyprus | 18 | 39 | 138 | 259 | 9 | 14 |  |
| Bahamas | 10 | 11 | 7 | 10 | 11 | 12 |  |
| Others | 1,726 | 3,357 | 3,922 | 8,243 | 76 | 71 |  |
| Total | 1,930 | 3,636 | 4,336 | 8,936 | 377 | 491 |  |

Source: Trade Data Monitor based on the Brazilian Secretariat of Foreign Trade (SECEX) NCM 0805.10.00. Numbers may not add due to rounding.

## Source: SECEX data, FAS Brazil chart

## Imports

Total fresh orange imports for MY 2022/23 are projected to increase slightly to 0.75 MBx ( $26,600 \mathrm{MT}$ ), according to updated information from the Brazilian Secretariat of Foreign Trade (Secex). Egypt, Uruguay, Spain, and Argentina are the major countries of origin for imported oranges from July 2022 to June 2023.

The table below shows fresh orange imports (NCM 0805.10.00) by country of origin, according to Trade Data Monitor (TDM), based on data from SECEX.

Figure 7
Brazil's Fresh Orange Imports


Source: SECEX data, FAS Brazil chart
Figure 8
Brazilian Fresh Orange Imports

| Brazilian Fresh Orange Imports (MT and US\$ 1,000 FOB) |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| Country | Jul 2020 - Jun 2021 | Jul 2021 - Jun 2022 |  | Jul 2022 - Jun 2023 |  |  |  |
|  | Value | Quantity | Value | Quantity | Value | Quantity |  |
| Egypt | 2,574 | 3,552 | 7,308 | 11,815 | 7,317 | 11,831 |  |
| Uruguay | 2,878 | 3,870 | 4,571 | 7,632 | 2,677 | 4.328 |  |
| Spain | 11,951 | 11,914 | 5,654 | 6,798 | 4,603 | 7,442 |  |
| Argentina | 1,190 | 1,652 | 1,142 | 1,700 | 1,451 | 2,347 |  |
| Chile | 351 | 324 | 78 | 91 | 384 | 621 |  |
| Total | 18,944 | 21,312 | 18,753 | 28,036 | 16,434 | 26,569 |  |

Source: Trade Data Monitor (LLC). NCM 0805.10.00. Numbers may not add due to rounding.
Source: SECEX data, FAS Brazil chart

Figure 9
Production, Supply, and Distribution of Fresh Oranges

| Oranges, Fresh | 2020/202 |  | 2021/202 |  | 2022/202 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Market Year Begins | Jul 2021 |  | Jul 2022 |  | Jul 2023 |  |
| Brazil | USDA Official | New Post | $\begin{aligned} & \text { USDA } \\ & \text { Official } \end{aligned}$ | New Post | USDA Official | New Post |
| Area Planted (HECTARES) | 604400 | 604400 | 614100 | 614100 | 614100 | 617600 |
| Area Harvested (HECTARES) | 546100 | 546100 | 546400 | 546400 | 546400 | 537100 |
| Bearing Trees (1000 TREES) | 221600 | 221600 | 228000 | 228000 | 22800 | 231000 |
| Non-Bearing Trees (1000 TREES) | 28000 | 28000 | 34300 | 34300 | 34300 | 38800 |
| Total No. Of Trees ( 1000 TREES) | 249600 | 249600 | 262300 | 262300 | 57100 | 269800 |
| Production (1000 MT) | 14676 | 14676 | 16932 | 16932 | 16524 | 16753 |
| Imports (1000 MT) | 28 | 24 | 25 | 28 | 25 | 27 |
| Total Supply (1000 MT) | 14704 | 14700 | 16957 | 16960 | 16549 | 16780 |
| Exports (1000 MT) | 0 | 0 | 0 | 0 | 0 | 0 |
| Fresh Dom. Consumption (1000 MT) | 4586 | 4582 | 4676 | 4669 | 4636 | 4690 |
| For Processing ( 1000 MT) | 10118 | 10118 | 12281 | 12291 | 11913 | 12090 |
| Total Distribution (1000 MT) | 14704 | 14700 | 16957 | 16960 | 16549 | 16780 |
|  |  |  |  |  |  |  |
| (HECTARES) ,(1000 TREES) , (1000 MT) |  |  |  |  |  |  |

## ORANGE JUICE

## Production

## PS\&D Tables

The following tables provide revised data for Sao Paulo and total Brazilian orange juice production, supply, and distribution (PS\&D) for Brazilian (BR) marketing years (MY, July-June) 2021/22 and 2022/23, and the initial forecast for MY 2023/24. The MY mentioned above are equivalent to U.S. MY 2020/21, 2021/22 and 2022/23, respectively.

The tables include NFC production for exports converted to Frozen Concentrated Orange Juice (FCOJ), 65 Brix equivalent. The following conversion factor: 1 metric ton of FCOJ 65 Brix equals 5.4 to 5.6 metric tons of NFC 11.6 Brix.

Figure 10
FCOJ Production, Supply and Distribution of Orange Juice

| Brazil: FCOJ PS\&D (Jul-Jun, Million 40.8 kg boxes, TMT, 65 degrees brix) |  |  |  |
| :--- | ---: | ---: | ---: |
| Item/U.S. Marketing Year | US 20/21 | US 21/22 | US 22/23 |
| Item/ Brazilian Marketing Year | $\mathbf{2 0 2 1 / 2 2}$ | $\mathbf{2 0 2 2 / 2 3}$ | $\mathbf{2 0 2 3 / 2 4}$ |
| Delivered to Processors | 248 | 301 | 296 |
| Sao Paulo (FCOJ + NFC exports) | 224 | 277 | 272 |
| Others | 24 | 24 | 24 |
| Beginning Stocks - Total | 15 | 9 | 9 |
| Total Production | 944 | 1135 | 1125 |
| Sao Paulo FCOJ | 536 | 695 | 684 |
| Sao Paulo NFC (FCOJ equiv) | 312 | 344 | 345 |
| Others | 96 | 96 | 96 |
| Total Supply | 1095 | 1144 | 1134 |
| Exports | 1010 | 1068 | 1050 |
| Sao Paulo FCOJ | 710 | 724 | 705 |
| Sao Paulo NFC (FCOJ equiv) | 270 | 314 | 315 |
| Others FCOJ | 30 | 30 | 30 |
| Domestic Consumption | 70 | 73 | 75 |
| Ending Stocks - Total | 15 | 9 | 9 |
| Total Distribution | 1095 | 1150 | 1134 |

* Note: There is a one-year lag between the BR MY and the U.S. MY. For example, BR MY 2022/23 is equivalent to U.S. MY 2021/22. To ensure data continuity, the current Brazilian MY 2022/23 will be referred to as U.S. MY 2021/22 throughout this report.


## General

FAS Brazil forecasts the total Brazilian FCOJ 65 Brix equivalent production for MY 2022/23 at 1.125 million metric tons (MMT), a decrease of nine percent vis-a-vis the estimated orange juice production for MY 2021/22, due to expected availability of fruit for processing. The Sao Paulo industry is expected to process 252 MBx of oranges for orange juice production ( 167 MBx for FCOJ and 85 MBx for NFC production), accounting for 1.03 million MT of juice ( $684,000 \mathrm{MT}$ and $345,000 \mathrm{MT}$ of FCOJ and NFC converted to FCOJ equivalent, respectively). Other producing states should deliver 24 MBx , accounting for $96,000 \mathrm{MT}$ of juice.

## Figure 11

Orange Juice Production in Brazil


Source: Citrus BR data, FAS Brazil chart
Note: denotes Brazilian MY

The total Brazilian FCOJ 65 Brix equivalent production estimate for MY 2021/22 has been revised slightly, up 10,000 MT to 1.135 MMT, representing an increase of nearly 200 thousand MT compared to the previous MY. The estimate assumes 269.3 as the number of boxes of oranges to produce one metric ton of FCOJ, 65 Brix.

Orange juice figures include NFC production for exports converted to FCOJ 65 Brix equivalent. There is no official estimate for NFC supply and demand in Brazil.

Figure 12
Industrial Orange Juice Yield
Industrial Orange Juice Yield


Source: Citrus BR data, FAS Brazil chart
Note: denotes Brazilian MY

## Consumption

Post reduced the outlook domestic FCOJ equivalent consumption for MY 2022/23 to 75,000 MT, 65 Brix, an increase of just 2,000 MT compared to MY 2021/22 (73,000 MT). Orange juice consumption, especially NFC, has steadily increased in Brazil. However, with increasing prices and high demand for orange juice in external markets, domestic consumption is expected to grow at a slower pace. Note that NFC consumption converted to FCOJ equivalent is included in the orange juice statistic.

## Trade

Post projects total Brazilian FCOJ 65 Brix equivalent exports for MY 2022/23 at 1.05 MMT, elevated from previous seasons but a moderate decline to the revised number for MY 2021/22 (1.068 MMT), given that fruit availability for processing will likely remain tight. The Sao Paulo industry should contribute 1 MT, 65 Brix equivalent. Total exports for MY 2021/22 were revised to 1.068 MMT, an increase of $8,000 \mathrm{MT}$ compared to the previous estimate, based on updated information from the industry. NFC exports for MY 2021/22 are estimated at 315,000 MT, 65 Brix equivalent, an increase of 15 percent compared to the previous season, mainly to supply the U.S. market due to limited juice availability from Florida due to hurricane Ian.

Brazil is the world's leading exporter of orange juice and accounts for nearly 80 percent of the orange juice marketed in the world. For every five cups of orange juice consumed, almost four are produced in Brazil, and exports are on the rise. According to the Institute of Agricultural Economics (IEA-APTA), in the first four months of the year the state of São Paulo exported US\$ 682 million in juice, of which 97.3 percent is orange juice. The largest market for exports is European Union (about 54 percent), followed by North America (36 percent).

Exports to the European Union have dipped slightly this season, about five percent compared to last year, though revenues rose ten percent over the same period. Meanwhile, exports to the United States are surging. According to SECEX data, 275 thousand tons of orange juice were shipped to the United States from January to March 2023, up 68 percent from that last season. Revenue more than doubled, totaling USD 559 million. With shipments to the EU declining and an increase to the United States, the share of Brazilian orange juice exported to the United States rose from 19 percent in 2021/22 to 36 percent in 2022/23.

Brazilian exports are supported by the lower U.S. production, which was severely damaged by Hurricane Ian at the end of 2022. U.S. orange production in 2022/23 is expected to be 60.7 percent smaller than the previous harvest, and one of the lowest since 1930, according to USDA estimates. Orange juice production in Mexico, another significant producer, has also been lower due to lack of rain.

The tables below show fresh orange juice exports (NCM 2009.11.00, 2009.12.00, and 2009.19.00) by country of destination, according to the Trade Data Monitor, LLC, based on data from the Secretariat of Foreign Trade (Secex) for BR MY 2020/21, 2021/22, and 2022/23 (July-June).

The "others" category includes both FCOJ and NFC exports. Post considers the average monthly price by the destination country for the "others" category as a criterion to distinguish between FCOJ and NFC exports. The source is Trade Data Monitor based on the Brazilian Secretariat of Foreign Trade (SECEX) NCM 2009.12.00. Numbers may not add due to rounding.

## Figure 13

Frozen/Unfermented Orange Juice Exports

| Frozen/Unfermented Orange Juice Exports (MT and US\$ 1,000 FOB) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Country | $\begin{array}{\|l} \hline \text { Jul } 2019-J u n ~ \\ 2020 \end{array}$ |  | $\begin{array}{\|l} \hline \begin{array}{l} \text { Jul 2020 } \\ 2021 \end{array} \\ \hline \end{array}$ |  | Jul 2021 - Jun 2022 |  | $\begin{array}{\|l\|l\|} \hline \text { Jul 2022 - Jun } \\ 2023 \end{array}$ |  |
|  | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity |
| Belgium | 271180 | 165417 | 163043 | 120876 | 178862 | 113584 | 189042 | 104192 |
| China | 62443 | 45218 | 68783 | 57237 | 86658 | 76504 | 100578 | 81292 |
| United States | 27946 | 19069 | 61411 | 45792 | 65720 | 39208 | 109830 | 58070 |
| Netherlands | 87820 | 62938 | 66174 | 48333 | 54399 | 36785 | 60910 | 34449 |
| Japan | 100694 | 58009 | 41598 | 28775 | 40412 | 23903 | 69081 | 33408 |
| Australia | 21948 | 12712 | 22999 | 16151 | 16374 | 9868 | 20235 | 10404 |
| Chile | 8822 | 5534 | 7434 | 4613 | 12032 | 7192 | 13429 | 6487 |
| Israel | 8863 | 7332 | 11170 | 9419 | 15444 | 10163 | 8894 | 5371 |
| Spain | 6099 | 4561 | 8082 | 5687 | 4292 | 2847 | 5678 | 3554 |
| Italy | 3394 | 2459 | 4379 | 3036 | 3982 | 2547 | 5054 | 2639 |
| Others | 83939 | 50288 | 65048 | 42113 | 78501 | 45868 | 68654 | 33378 |
| Total | 683149 | 433537 | 520121 | 382033 | 556675 | 368471 | 651386 | 373245 |

Figure 14
Brazilian Orange Juice Exports, Not Frozen and Brix Under 20

| Brazilian Orange Juice Exports, Not Frozen and Brix Under 20 (MT and US\$ 1,000 FOB) |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Country | Jul 2019 - Jun 2020 |  | Jul 2020 - Jun 2021 |  | Jul 2021 - Jun 2022 |  | Jul 2022 - Jun 2023 |  |
|  | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity |
| United <br> States | 140358 | 437326 | 159118 | 494789 | 228200 | 634590 | 413098 | 1063208 |
| Belgium | 178466 | 495518 | 176190 | 581006 | 152114 | 440969 | 181145 | 480396 |
| Netherlands | 124646 | 381418 | 124946 | 375435 | 131121 | 390551 | 118413 | 348706 |
| Spain | 2545 | 9288 | 7181 | 24838 | 1898 | 5582 | 3773 | 9156 |
| Chile | 994 | 955 | 1284 | 1324 | 1834 | 1964 | 1516 | 1437 |
| Mexico | - | - | - | - | - | - | 467 | 480 |
| Paraguay | 71 | 80 | 231 | 301 | 264 | 288 | 294 | 294 |
| Angola | 44 | 45 | 100 | 91 | 133 | 125 | 199 | 196 |
| Philippines | 91 | 80 | 107 | 98 | 93 | 104 | 177 | 178 |
| United <br> Kingdom | 0 | 0.24 | 0 | 0.30 | 1 | 0.22 | 71 | 158 |
| Others | 17720 | 46440 | 5500 | 7149 | 13074 | 28751 | 418 | 365 |
| Total | 464936 | 1371151 | 474657 | 1485030 | 528732 | 1502924 | 719572 | 1904575 |

Figure 15
Brazilian Orange Juice Exports, Others

| Brazilian Orange Juice Exports, Others (MT and US\$ 1,000 FOB) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Country | Jul 2019 - Jun 2020 |  | $\begin{array}{\|l\|l\|} \hline \text { Jul 2020 - Jun } \\ 2021 \end{array}$ |  | $\begin{array}{\|l} \hline \text { Jul } 2021-J u n ~ \\ 2022 \end{array}$ |  | Jul 2022 - Jun 2023 |  |
|  | Value | Quantity | Value | Quantity | Value | Quantity | Value | Quantity |
| Netherlands | 310418 | 214394 | 230937 | 166847 | 275325 | 163639 | 268610 | 142198 |
| Belgium | 210151 | 116868 | 193560 | 121318 | 211129 | 126980 | 288187 | 123228 |
| United States | 108629 | 76183 | 77006 | 62595 | 69798 | 46595 | 178970 | 89499 |
| United <br> Kingdom | 26058 | 17939 | 27346 | 19622 | 14381 | 8988 | 30355 | 15930 |
| Paraguay | 151 | 243 | 157 | 236 | 170 | 241 | 152 | 201 |
| Japan | 391 | 215 | 13388 | 10035 | 15887 | 9928 | 388 | 171 |
| Argentina | 187 | 187 | 101 | 117 | 99 | 117 | 100 | 117 |
| Spain | 142 | 118 | 2010 | 1221 | 1091 | 650 | 119 | 66 |
| Dominican Republic | - | - | 135 | 95 | - | - | 131 | 54 |
| New Zealand | - | - | - | - | - | - | 12 | 22 |
| Others | 3378 | 2047 | 1292 | 867 | 2085 | 1198 | 236 | 141 |
| Total | 659503 | 428193 | 545931 | 382953 | 589965 | 358335 | 767260 | 371627 |

## Stocks

Post maintained ending stock estimate for MY 2021/22 and forecast for 2022/23 at 15,000 MT and 14,000 MT, 65 Brix, respectively. Stock figures include only stocks in the storage tanks of orange juice facilities (processing plants, port terminals, etc.) in Brazil. They do not include stocks owned by Brazilian companies abroad, e.g., in transit and port terminals in the United States, Europe, and Japan.

According to the Brazilian Association of Citrus Exporters (CitrusBR), global Brazilian orange juice inventories are estimated at 140,000 MT ( 66 Brix) on June 30, 2022, a drop of 3,104 MT relative to stocks on June 30, 2022 (143,104 MT, 66 Brix). CitrusBR global inventories include orange juice in storage tanks at processing plants and port terminals in Brazil and stocks abroad (vessels and port facilities worldwide). This MY, Brazilian stocks are therefore estimated to reach the lowest level in history. Ten years ago, orange stocks were over one million tons. However, steady demand and challenges to global supplies, as mentioned above, have depleted reserves.

Figure 16
Global Stocks of Brazilian Orange Juice

Global Stocks of Brazilian Orange Juice


Source: Citrus BR data, FAS Brazil Chart

## Production, Supply, and Distribution Statistics

This table includes NFC production for exports converted to FCOJ 65 Brix equivalent using the following conversion factor: 1 metric ton of FCOJ 65 Brix equals 5.4-5.6 metric tons of NFC 11.6 Brix.

## Figure 17

Production, Supply and Distribution of Brazilian Orange Juice

| Orange Juice | 2020/2021 |  | 2021/2022 |  | 2022/2023 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Market Year Begins | Jul 2021 |  | Jul 2022 |  | Jul 2023 |  |
| Brazil | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Deliv. To Processors (MT) | 10118400 | 10118400 | 12280800 | 12291000 | 11913600 | 12090000 |
| Beginning Stocks (MT) | 151000 | 151000 | 15000 | 15000 | 14000 | 9000 |
| Production (MT) | 944000 | 944000 | 1134000 | 1135000 | 1119000 | 1125000 |
| Imports (MT) | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Supply (MT) | 1095000 | 1095000 | 1149000 | 1150000 | 1133000 | 1134000 |
| Exports (MT) | 1010000 | 1010000 | 1060000 | 1068000 | 1040000 | 1050000 |
| Domestic <br> Consumption (MT) | 70000 | 70000 | 75000 | 73000 | 80000 | 75000 |
| Ending Stocks (MT) | 15000 | 15000 | 14000 | 9000 | 13000 | 9000 |
| Total Distribution (MT) | 1095000 | 1095000 | 1149000 | 1150000 | 1133000 | 1134000 |
| (MT) |  |  |  |  |  |  |

## Attachments:

No Attachments

