Current forecast update (variation regarding the February update):

April 10, 2017

Total orange crop production forecast: 245.31 million boxes (increase of 0.45%)
Hamlin, Westin and Rubi: 48.31 million boxes (unchanged)
Other early season: 13.62 million boxes (unchanged)
Pera Rio: 74.17 million boxes (increase of 0.60%)
Valencia and Valencia Folha Murcha: 80.14 million boxes (increase of 0.62%)
Natal: 29.07 million boxes (increase of 0.62%)

The orange production forecast of the 2017-2018 season will be released at 10:00 a.m. on May 10, 2017.

Orange production forecast update by sector and variety group – citrus belt

<table>
<thead>
<tr>
<th>Month</th>
<th>Forecast components</th>
<th>Orange production forecast update 2016-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>February/April</td>
<td>(strike-through values were presented in February, to their left are their respective values updated in April)</td>
<td>February</td>
</tr>
<tr>
<td>Sector and Variety Group</td>
<td>Bearing trees</td>
<td>Fruits per tree at stripping</td>
</tr>
<tr>
<td></td>
<td>(1,000 trees)</td>
<td>(number)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>175,548</td>
<td>430</td>
</tr>
</tbody>
</table>

NORTH SECTOR
- Hamlin, Westin and Rubi: 7,995 | 440 | 243 | 9.4 | 1.44 | 620 | 11.49 | 1.44 | 620 | 11.49 |
- Other early season: 2,025 | 407 | 210 | 10.3 | 1.42 | 714 | 2.87 | 1.42 | 715 | 2.87 |
- Pera Rio: 11,824 | 235 | 222 | 12.0 | 0.77 | 399 | 9.08 | 0.77 | 402 | 9.17 |
- Valencia and V.Folha Murcha: 13,975 | 320 | 211 | 17.0 | 1.03 | 465 | 14.39 | 1.04 | 468 | 14.48 |
- Natal: 3,785 | 372 | 220 | 17.5 | 1.14 | 470 | 4.32 | 1.15 | 473 | 4.34 |
- Average: (X) | (X) | 222 | 1373 | 1.06 | 493 | (X) | 1.07 | 495 | (X) |
- Subtotal: 39,604 | 328 | (X) | (X) | (X) | 42.15 | (X) | (X) | 42.32 |

NORTHWEST SECTOR
- Hamlin, Westin and Rubi: 2,811 | 203 | 243 | 9.4 | 0.66 | 286 | 1.86 | 0.66 | 286 | 1.86 |
- Other early season: 1,384 | 257 | 210 | 10.3 | 0.89 | 387 | 1.23 | 0.89 | 387 | 1.23 |
- Pera Rio: 8,309 | 284 | 222 | 12.0 | 0.93 | 395 | 7.11 | 0.93 | 395 | 7.11 |
- Valencia and V.Folha Murcha: 3,862 | 219 | 211 | 17.0 | 0.71 | 333 | 2.73 | 0.71 | 335 | 2.74 |
- Natal: 1,690 | 414 | 220 | 17.5 | 1.27 | 491 | 2.14 | 1.28 | 494 | 2.16 |
- Average: (X) | (X) | 222 | 1373 | 0.87 | 375 | (X) | 0.87 | 377 | (X) |
- Subtotal: 18,056 | 268 | (X) | (X) | (X) | 15.67 | (X) | (X) | 15.74 |

CENTRAL SECTOR
- Hamlin, Westin and Rubi: 7,447 | 481 | 243 | 9.4 | 1.57 | 665 | 11.68 | 1.57 | 665 | 11.68 |
- Other early season: 3,215 | 576 | 210 | 10.3 | 2.00 | 850 | 21.43 | 2.00 | 850 | 21.43 |
- Pera Rio: 17,263 | 386 | 222 | 12.0 | 1.26 | 611 | 21.75 | 1.27 | 615 | 21.88 |
- Valencia and V.Folha Murcha: 16,915 | 388 | 211 | 17.0 | 1.25 | 554 | 21.12 | 1.26 | 557 | 21.25 |
- Natal: 4,647 | 494 | 220 | 17.5 | 1.51 | 584 | 7.02 | 1.52 | 588 | 7.06 |
- Average: (X) | (X) | 222 | 1373 | 1.37 | 613 | (X) | 1.38 | 616 | (X) |
- Subtotal: 49,407 | 423 | (X) | (X) | (X) | 68.00 | (X) | (X) | 68.30 |

SOUTH SECTOR
- Hamlin, Westin and Rubi: 5,009 | 579 | 243 | 9.4 | 1.89 | 844 | 9.46 | 1.89 | 844 | 9.46 |
- Other early season: 547 | 418 | 210 | 10.3 | 1.44 | 601 | 0.79 | 1.44 | 601 | 0.79 |
- Pera Rio: 12,073 | 423 | 222 | 12.0 | 1.38 | 644 | 16.68 | 1.39 | 648 | 16.78 |
- Valencia and V.Folha Murcha: 13,210 | 454 | 211 | 17.0 | 1.46 | 602 | 19.32 | 1.47 | 606 | 19.44 |
- Natal: 2,895 | 558 | 220 | 17.5 | 1.71 | 706 | 4.94 | 1.72 | 710 | 4.97 |
- Average: (X) | (X) | 222 | 1373 | 1.52 | 660 | (X) | 1.52 | 664 | (X) |
- Subtotal: 33,734 | 470 | (X) | (X) | (X) | 51.19 | (X) | (X) | 51.44 |

SOUTHWEST SECTOR
- Hamlin, Westin and Rubi: 5,042 | 840 | 243 | 9.4 | 2.74 | 1,240 | 13.82 | 2.74 | 1,240 | 13.82 |
- Other early season: 1,085 | 610 | 210 | 10.3 | 2.12 | 1,024 | 2.30 | 2.12 | 1,024 | 2.30 |
- Pera Rio: 10,199 | 556 | 222 | 12.0 | 1.81 | 901 | 18.51 | 1.83 | 906 | 18.62 |
- Valencia and V.Folha Murcha: 12,470 | 550 | 211 | 17.0 | 1.77 | 885 | 22.09 | 1.78 | 890 | 22.23 |
- Natal: 5,871 | 583 | 220 | 17.5 | 1.78 | 863 | 10.47 | 1.80 | 868 | 10.54 |
- Average: (X) | (X) | 222 | 1373 | 1.94 | 946 | (X) | 1.95 | 950 | (X) |
- Subtotal: 34,667 | 630 | (X) | (X) | (X) | 67.19 | (X) | (X) | 67.51 |

(X) Not applicable.
2 Valencia Americana, Valencia Argentina, Seleta and Pineapple.
3 Weighted average per stratum bearing trees.
4 V. Folha Murcha – Valencia Folha Murcha.
Final estimate of total orange production\(^1\) is 245.31 million boxes

The 2016/2017 orange production final estimate for the São Paulo and West-Southwest Minas Gerais Citrus Belt as published on Monday, April 10, 2017 by Fundecitrus – Fund for Citrus Protection, carried out in cooperation with Markestrat, FEA-RP/USP and FCAV/Unesp\(^2\), is estimated at 245.31 million boxes of 40.8 kg each, 18% lower than the previous crop (2015/2016), with a closing figure of 300.65 million boxes. Variations of the forecast updates along the season were virtually negligible. The final value represents an increase of 0.45% in relation to the update published in February/2017 and a reduction of 0.17% in relation to the initial May/2016 forecast. The closing figure for total production includes:

- 48.31 million boxes of the Hamlin, Westin, and Rubi varieties;
- 74.17 million boxes of the Pera Rio variety;
- 80.14 million boxes of the Valencia and Valencia Folha Murcha varieties;
- 29.07 million boxes of the Natal variety.

Approximately 9.56 million boxes of the forecasted production were produced in the West of Minas Gerais.

The fruit droppage rate was lower than expected, mainly as a consequence of the shorter harvesting period occurred in this season. The lower difference was 1.27 percentage points (13.73% in April/2017 against 15.00% in May/2016). The most significant variation was observed in the Pera Rio variety, which decreased by 4 percentage points. In November, the harvesting of that variety had already exceeded 90% of the total, whereas in the previous harvest such level was only reached by late January.

The fruit size, i.e., the required amount of oranges to achieve the weight of 40.8 kg (box) at the ideal harvesting period, was altered due to the higher growth of the fruit, triggered mainly by the low number of oranges on the tree. Due to this weight gain, a box was then made up of 26 oranges fewer than in the initial projection (222 fruits/box in April/2017 against 248 fruits/box in May/2016).

Rainfall during the season has reached 1,376 millimeters on average in producing regions, from May/2016 to March/2017, exceeding the expected 1,330 millimeters for the accumulated figure until April/2017. Although the volume variation was small, the rainfall distribution was different from the forecast one. The most significant deviation, which contributed to fruit growth, was observed in the months from May to August, when it rained nearly twice as much as the forecast for the period, specifically 279 mm.

The correction factor was altered due to the change in the configuration of the groves that has been observed in recent years, triggered primarily by the HLB (Huanglongbing or Greening) control management, with the elimination of diseased trees and their replacement with healthy seedlings, resulting in the formation of subsets of younger plants with lower productivity than the trees originally planted in the same block. The impact of these subsets was significant in this season because of more marked differences in yield deviations between trees of different ages, since younger trees had a greater loss in terms of fruit set.

The production forecast and the forecast updates were performed using the objective method, which is based on quantitative data - field measurements, counting and weighing of fruits - which have been applied in the direct expansion model, whose formula is represented below. The four major components of the model are: (1) bearing trees, (2) fruits per tree, (3) droppage rate and (4) fruits per box (size of fruits). The first two have remained unchanged from May/2016 to April/2017 and were obtained from the inventory of trees and the stripping of 2,200 trees. The “droppage rate” and “fruits per box” components have been updated, according to Fundecitrus’ continuous field monitoring. Another source included in this study is the size of fruits received throughout the season by the orange juice companies that are members of Fundecitrus – Citrosuco, Cutrale and Louis Dreyfus – for the purpose of industrial processing. Each processing company provides, under confidentiality, the individual data to an independent consulting firm to ascertain the average size of the fruits processed.

\[
\text{Production forecast} = \frac{\text{Bearing trees} \times \text{Fruit per tree} \times (1 - \text{Fruit loss from droppage})}{\text{Fruit size}}
\]


\(^2\) Exact Sciences Department.