

Summary of results:

April 11, 2016

**Total orange crop production forecast<sup>1</sup>: increase of 3.7%**  
**Hamlin, Westin and Rubi: increase of 0.72%**  
**Valencia Americana, Valencia Argentina, Seleta, Pineapple: increase of 0.41%**  
**Pera Rio: increase of 2.72%**  
**Valencia and Valencia Folha Murcha: increase of 6.12%**  
**Natal: increase of 5.31%**

The orange production forecast of the 2016-2017 season will be released at 10:00 a.m. on May 10, 2016.

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

Month	Forecast Components				Orange production forecast update 2015-2016					
	February / April (strike-through values were presented in December, to their left are their respective values updated in February)				February			April		
	Bearing Trees	Fruits per tree at stripping <sup>2</sup>	Fruits forecasted by box	Fruit loss from droppage forecast	By Tree	By Hectare	Total	By Tree	By Hectare	Total
Sector and Variety Group	(1,000 trees)	(number)	(number)	(percentage)	(boxes/tree)	(boxes/hectare)	(1,000,000 boxes)	(boxes/tree)	(boxes/hectare)	(1,000,000 boxes)
<b>TOTAL</b>										
Hamlin, Westin and Rubi.....	28,786	672	272 <del>275</del>	12.12	2.03	859	58.44	2.05	865	58.86
Other early season <sup>3</sup> .....	7,860	524	233 <del>235</del>	11.91	1.86	780	14.60	1.87	784	14.66
Pera Rio.....	58,495	398	225 <del>232</del>	15.51	1.37	623	80.13	1.41	640	82.31
Valencia and V.Folha Murcha <sup>4</sup>	60,006	485	200 <del>212</del>	22.62 <del>23.00</del>	1.66	706	99.81	1.76	749	105.92
Natal.....	18,979	572	211 <del>223</del>	19.71	1.95	789	36.94	2.05	831	38.90
<b>Average.....</b>	(X)	<b>498</b>	<b>226 <del>234</del></b>	<b>17.49</b>	<b>1.67</b>	<b>719</b>	(X)	<b>1.73</b>	<b>745</b>	(X)
<b>Total.....</b>	<b>174,126</b>	(X)	(X)	(X)	(X)	(X)	<b>289.92</b>	(X)	(X)	<b>300.65</b>
<b>NORTH SECTOR</b>										
Hamlin, Westin and Rubi.....	7,864	816	272 <del>275</del>	12.12	2.46	1,041	19.36	2.48	1,049	19.51
Other early season <sup>3</sup> .....	1,970	459	233 <del>235</del>	11.91	1.63	733	3.21	1.63	736	3.22
Pera Rio.....	10,567	408	225 <del>232</del>	15.51	1.40	690	14.84	1.44	709	15.24
Valencia and V.Folha Murcha <sup>4</sup>	13,713	481	200 <del>212</del>	22.62 <del>23.00</del>	1.65	718	22.64	1.75	762	24.02
Natal.....	3,849	424	211 <del>223</del>	19.71	1.44	574	5.56	1.52	604	5.85
<b>Average.....</b>	(X)	<b>523</b>	<b>226 <del>234</del></b>	<b>17.49</b>	<b>1.73</b>	<b>766</b>	(X)	<b>1.79</b>	<b>792</b>	(X)
<b>Subtotal.....</b>	<b>37,963</b>	(X)	(X)	(X)	(X)	(X)	<b>65.61</b>	(X)	(X)	<b>67.84</b>
<b>NORTHWEST SECTOR</b>										
Hamlin, Westin and Rubi.....	2,911	344	272 <del>275</del>	12.12	1.04	453	3.03	1.05	456	3.05
Other early season <sup>3</sup> .....	1,388	377	233 <del>235</del>	11.91	1.33	576	1.85	1.34	579	1.86
Pera Rio.....	9,535	286	225 <del>232</del>	15.51	0.98	406	9.39	1.01	417	9.64
Valencia and V.Folha Murcha <sup>4</sup>	3,737	209	200 <del>212</del>	22.62 <del>23.00</del>	0.72	324	2.68	0.76	344	2.84
Natal.....	1,483	587	211 <del>223</del>	19.71	2.00	690	2.96	2.10	727	3.12
<b>Average.....</b>	(X)	<b>310</b>	<b>226 <del>234</del></b>	<b>17.49</b>	<b>1.04</b>	<b>437</b>	(X)	<b>1.08</b>	<b>450</b>	(X)
<b>Subtotal.....</b>	<b>19,054</b>	(X)	(X)	(X)	(X)	(X)	<b>19.91</b>	(X)	(X)	<b>20.51</b>
<b>CENTRAL SECTOR</b>										
Hamlin, Westin and Rubi.....	7,858	469	272 <del>275</del>	12.12	1.42	566	11.13	1.43	570	11.21
Other early season <sup>3</sup> .....	2,877	597	233 <del>235</del>	11.91	2.12	811	6.09	2.13	815	6.12
Pera Rio.....	15,685	376	225 <del>232</del>	15.51	1.29	582	20.30	1.33	597	20.85
Valencia and V.Folha Murcha <sup>4</sup>	16,419	409	200 <del>212</del>	22.62 <del>23.00</del>	1.40	554	23.03	1.49	587	24.44
Natal.....	4,615	525	211 <del>223</del>	19.71	1.79	656	8.24	1.88	691	8.68
<b>Average.....</b>	(X)	<b>431</b>	<b>226 <del>234</del></b>	<b>17.49</b>	<b>1.45</b>	<b>592</b>	(X)	<b>1.50</b>	<b>613</b>	(X)
<b>Subtotal.....</b>	<b>47,454</b>	(X)	(X)	(X)	(X)	(X)	<b>68.79</b>	(X)	(X)	<b>71.30</b>
<b>SOUTH SECTOR</b>										
Hamlin, Westin and Rubi.....	4,925	675	272 <del>275</del>	12.12	2.04	862	10.03	2.05	869	10.11
Other early season <sup>3</sup> .....	607	525	233 <del>235</del>	11.91	1.86	803	1.13	1.86	803	1.13
Pera Rio.....	12,605	420	225 <del>232</del>	15.51	1.44	642	18.20	1.48	660	18.70
Valencia and V.Folha Murcha <sup>4</sup>	14,161	566	200 <del>212</del>	22.62 <del>23.00</del>	1.94	775	27.51	2.06	822	29.19
Natal.....	3,068	629	211 <del>223</del>	19.71	2.14	838	6.57	2.26	883	6.92
<b>Average.....</b>	(X)	<b>534</b>	<b>226 <del>234</del></b>	<b>17.49</b>	<b>1.79</b>	<b>749</b>	(X)	<b>1.87</b>	<b>779</b>	(X)
<b>Subtotal.....</b>	<b>35,366</b>	(X)	(X)	(X)	(X)	(X)	<b>63.44</b>	(X)	(X)	<b>66.05</b>
<b>SOUTHWEST SECTOR</b>										
Hamlin, Westin and Rubi.....	5,228	942	272 <del>275</del>	12.12	2.85	1,296	14.88	2.87	1,306	14.99
Other early season <sup>3</sup> .....	1,017	644	233 <del>235</del>	11.91	2.28	1,054	2.32	2.29	1,059	2.33
Pera Rio.....	10,103	501	225 <del>232</del>	15.51	1.72	841	17.41	1.77	863	17.88
Valencia and V.Folha Murcha <sup>4</sup>	11,978	583	200 <del>212</del>	22.62 <del>23.00</del>	2.00	981	23.95	2.12	1,041	25.42
Natal.....	5,964	671	211 <del>223</del>	19.71	2.28	1,092	13.61	2.40	1,150	14.33
<b>Average.....</b>	(X)	<b>630</b>	<b>226 <del>234</del></b>	<b>17.49</b>	<b>2.10</b>	<b>1,013</b>	(X)	<b>2.19</b>	<b>1,052</b>	(X)
<b>Subtotal.....</b>	<b>34,290</b>	(X)	(X)	(X)	(X)	(X)	<b>72.17</b>	(X)	(X)	<b>74.95</b>

(X) Not applicable.

<sup>1</sup> Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple, Pera Rio, Valencia, Valencia Folha Murcha and Natal.

<sup>2</sup> Weighted average per stratum area.

<sup>3</sup> Valencia Americana, Valencia Argentina, Seleta and Pineapple.

<sup>4</sup> V. Folha Murcha – Valencia Folha Murcha.

## The final orange<sup>1</sup> production estimate is of 300.65 million boxes

The final orange production estimate of the São Paulo and West-Southwest of Minas Gerais citrus belt for the 2015-2016 season, published by Fundecitrus on April 11, 2016 with the cooperation of Markestrat, FEA-RP/USP and FCAV/Unesp<sup>2</sup> – is of 300.65 million boxes (40.8 kg). This amount represents a 3.7% increase in comparison with the forecast update published in February 2016 and a 7.76% increase in comparison with the first forecast published in May/2015. The total includes:

- 58.86 million boxes of the Hamlin, Westin and Rubi varieties;
- 14.66 million boxes of the Valencia Americana, Valencia Argentina, Seleta and Pineapple varieties;
- 82.31 million boxes of the Pera Rio variety;
- 105.92 million boxes of the Valencia and Valencia Folha Murcha varieties;
- 38.90 million boxes of the Natal variety.

Approximately 17.48 million boxes of the forecasted production were produced in the West of Minas Gerais.

Data from the continuous crop monitoring confirm the compliance of the droppage rate estimated in May/2015 with the final estimate. The difference between them is of only 0.49% (17.49 in April/2016 compared to 17% in May/2015). The droppage rate used in May/2015 was the historical average verified on the crops from 2004/05 to 2014/05.

As regards fruit size, that is, the number of oranges required to reach the weight of 40.8kg (box) at harvest, presented a more significant variation compared to the May forecast. The data collected show that the fruits are heavier and, consequently, a box is composed of 19 fruits fewer than the initial projection (226 fruits/box in April/2016 versus 245 fruits/box in May/2015). In percentage terms, this variation corresponds to 7.76%.

Besides the smaller number of fruit/tree, the rains were a determining factor for fruit growth. Rain volume at the citrus belt in the period between May/2015 and March/2016 was 426 millimeters, or 36% above the average of the five previous years for this same interval (Source: Somar Meteorologia).

The production forecast and the forecast updates were made with the use of the objective method, based on quantitative data – measurements in the field, fruit count and weight – applied to the model of direct expansion, which formula is represented below. The four components of this model are: “bearing trees”, “fruit loss from droppage” and “fruit size (pieces of fruit projected to make a standard 40.8 kg box at harvest)” and “fruit per tree”. The first two have remained unchanged from May/2015 to April/2016 and were obtained, respectively, from the tree inventory and stripping of 2,500 trees. The “fruit size” and “fruit loss from droppage” components have changed, according to Fundecitrus’ field monitoring and the size of fruits processed as provided, individually and under confidentiality, by the orange juice companies associated to Fundecitrus – Citrosuco, Cutrale and Louis Dreyfus – to ascertain the average by independent consulting firm.

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

<sup>1</sup> Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple Pera Rio, Valencia, Valencia Folha Murcha and Natal.

<sup>2</sup> Exact Sciences Department.