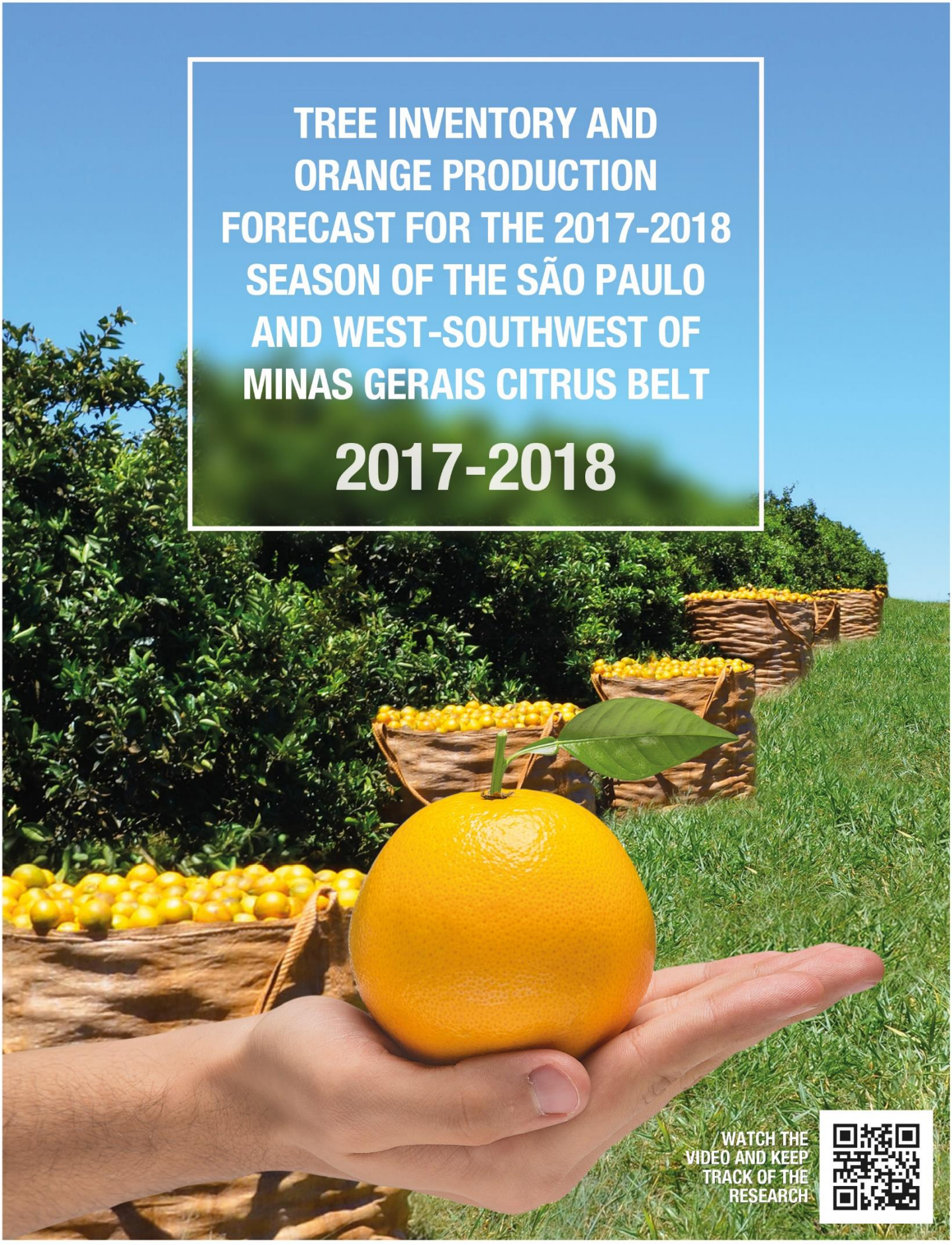
TREE INVENTORY AND ORANGE PRODUCTION FORECAST FOR THE 2017-2018 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

2017-2018



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TREE INVENTORY
AND ORANGE PRODUCTION FORECAST FOR THE 2017-2018 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

SECTION I

TREE INVENTORY

SECTION II

ORANGE PRODUCTION FORECAST

TREE INVENTORY OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

SNAPSHOT OF GROVES IN MARCH/2017

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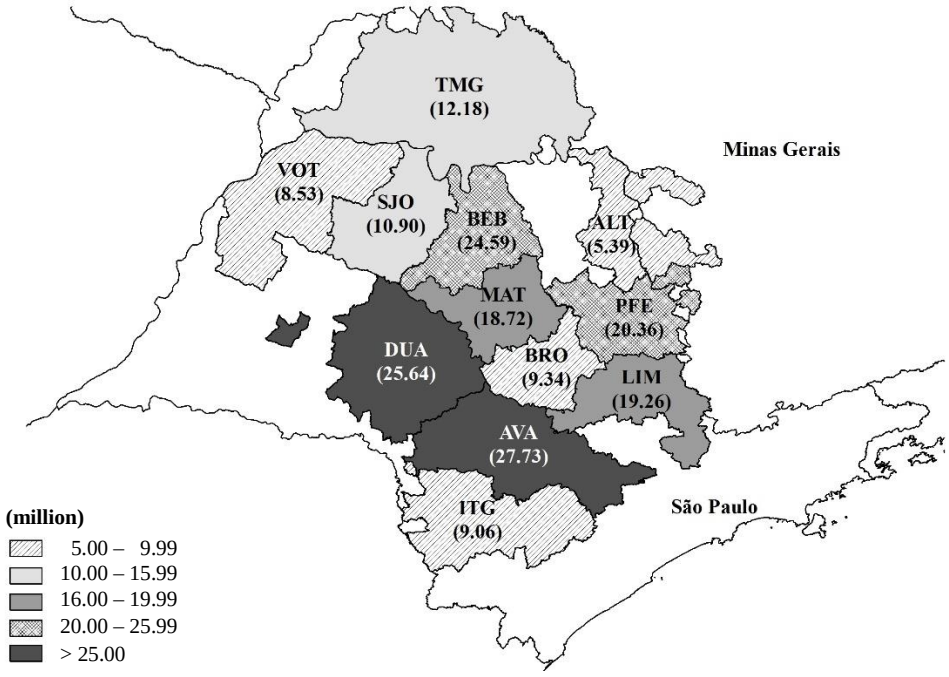
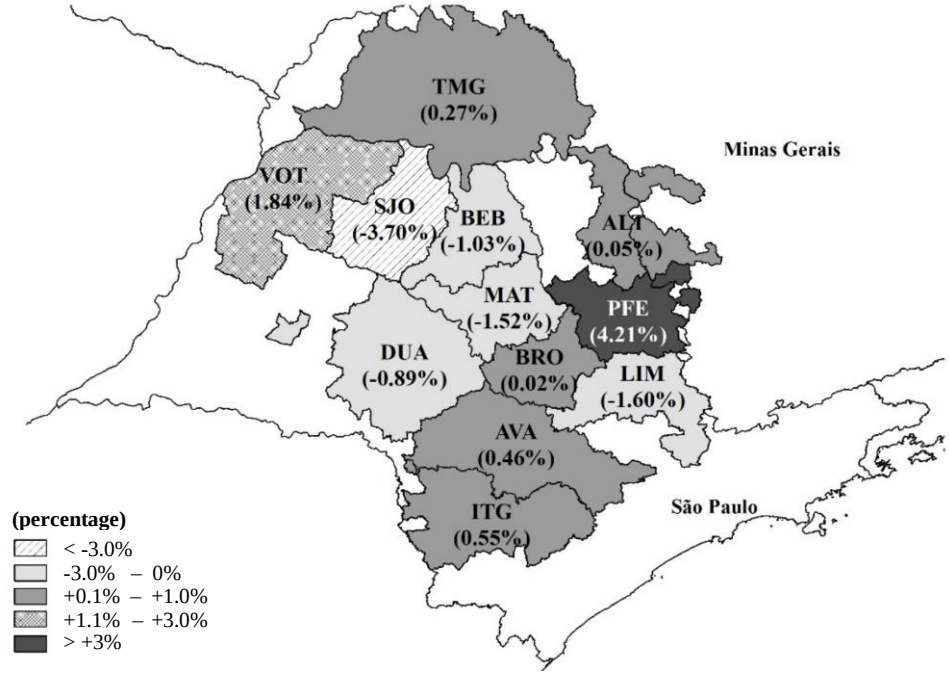
TOTAL ORANGE TREES[1] BY REGION
Total: 191.69 million trees



CHANGE OF TOTAL ORANGE TREES[1] BETWEEN THE 2016 AND 2017 INVENTORIES



Abbreviations	Region	Total orange trees[1]		
		2016 inventory[2]	2017 inventory[2]	Change
		(million)	(million)	(%)
TMG	Triâng. Mineiro	12.14	12.18	0.27
VOT	Votuporanga	8.38	8.53	1.84
SJO	S. J. do Rio Preto	11.32	10.9	-3.70
DUA	Duartina	25.87	25.64	-0.89
AVA	Avaré	27.6	27.73	0.46
ITG	Itapetininga	9.01	9.06	0.55

Abbreviations	Region	Total orange trees[1]		
		2016 inventory[2]	2017 inventory[2]	Change
		(million)	(million)	(%)
BEB	Bebedouro	24.85	24.59	-1.03
ALT	Altinópolis	5.39	5.39	0.05
MAT	Matão	19.01	18.72	-1.52
PFE	P.Ferreira	19.53	20.36	4.21
BRO	Brotas	9.33	9.33	0.02
LIM	Limeira	19.57	19.26	-1.60

[1] Sweeet orange varieties: Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple, Pera Rio, João Nunes, Valencia sweeet orange, Natal e Valencia Folha Murcha.

[2] Snapshot of groves in March.

TREE INVENTORY OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT – SNAPSHOT OF GROVES IN MARCH/2017

Published on May 12, 2017[1]

Forecast Dates

2017-2018 Season
Executive summary May forecast: May 10, 2017
March/2017 tree inventory: May 12, 2017
May forecast (orange production forecast): May 12, 2017
September forecast (1st orange production forecast update): September 11, 2017
December forecast (2nd orange production forecast update): December 11, 2017
February forecast (3rd orange production forecast update): February 15, 2018
April forecast (final orange production estimate): April 10, 2018

This is a living document, insofar as it serves to know and explore all the wealth of details of the citrus belt and provide support to agents in the sector. In this regard, seeking to meet the demands of the citrus segment and of the press, we reserve the right to enlarge, revise and expand on the information already published. Therefore, we recommend always using the most recent publication available on the site www.fundecitrus.com.br.

[1] Year 3 – Nº 1 – May 12, 2017 (Portuguese version only).

Expanded and revised versions:
Year 3 – Nº 2 – May 15, 2017 (Portuguese version only).
Year 3 – Nº 3 – May 17, 2017 (Portuguese version only).
Year 3 – Nº 4 – May 25, 2017 (Portuguese and English versions).
Year 3 – Nº 5 – May 26, 2017 (Portuguese and English versions).

Prepared by FUNDECITRUS with cooperation from MARKESTRAT, FEA-RP/USP and the Exact Sciences Department of FCAV/Unesp

TREE INVENTORY OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

SNAPSHOT OF GROVES IN MARCH/2017

Fundecitrus
Araraquara, São Paulo
2017

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PREFACES

Dr. Lourival Carmo Monaco
President of Fundecitrus and Citrus Grower

The knowledge of our citrus industry profile, within its diversity of climate and socio-economic condition, is essential for the exercise of good agricultural and commercial practices. With this understanding, Fundecitrus, on recommendation of the growers in its board, established the Production Forecast Research (PES) taking the responsability for carrying out the survey of the current orange production embedding details of each region´s reality respecting the information confidentiality and the chain links. Such guidance is crucial in face of its strategic vision in order to fully analyze the production chain to prioritize, with close cooperation with the agents of this important agribusiness, the chains to be improved.

Fundecitrus, by means of the technicians and its staff, is responsible for generating reliable information so that the citrus growers have essential elements, and we have a more a more competitive and growing citrus industry. In the two seasons (2015 and 2016), the results were within the regional reality and compatible with the processing and trading.

The reliability of the process caused Fundecitrus to make adjustments in the process without losing the sight of the confidentiality and responsibility in dealing with the data. For better knowledge of the potential of the production evolution, the study of the incidence of the quarentine diseases, citrus canker and greening, was added. The PES had continuity within the quality perspectives thanks to the dedication of those responsible for the gathering and processing of data who maintained the respect for the concepts defined in the original plan and who are continuously assessed by the Technical Committee preserving the reliability of the process. It is fair to also highlight the full approval of the citrus growers in taking part of the PES, facilitating the access to properties and to the necessary data so that the work reflected our citrus industry reality.

In the report regarding the 2017-2018 season, it is ascertained that the improvements reflect the accumulated experience. In this third year, once again, the decision made by the productive sector is reinforced, with information being incorporated in its own database, respecting the characteristics of the different producing regions, and which is of broad access to the interested ones. The reliability demonstrated by the PES, in distinct situations of production, market demand and inventory, equally disclosed, strengthens the tendency of having the citrus agribusiness expanded involving the other segments of the chain, which will allow the establisment of strategy to work the supply and demand of good quality products which are accepted by all the markets.

We are living a more positive chapter in the solidarity work of the chains of citrus agribusiness. The model adopted, doubtlessly, opens opportunity windows for the citrus growers, no matter their structure nor size.

Antonio Juliano Ayres
General Manager of Fundecitrus

The completion of the Production Forecast Research (PES) and the tree inventory in the São Paulo State and West-Southwest Minas Gerais, in the third consecutive year, awards the work of Fundecitrus which has been developed with profissionalism and impartiality in its 40 years of existence. The mission of the institution in this globalized and continuously challenging environment has been of generating and transfering knowledge to citrus growers in order to maintain the Brazilian citrus industry as the world´s most competitive one. The PES work fills an important gap, brings precise and trustworthy information to the citrus sector and not only provides the current portrait, but also traces future scenarios of the citrus industry to the chain.

Marcos Fava Neves
Political-institutional and methodology coordinator, FEA-RP/USP full professor and member of the administrative board of Markestrat

It is a great joy to take part in the third event of the disclosure of the citrus belt orange production forecast. In the two previous events, the level of concern was perceptibly greater, since we were just starting. There were greater chances of errors, scepticism, learning, concern. I am glad to see the maturity the production chain has gained over these three years reducing one of the main problems which have always been raised by the sector, which was the lack of information and transparency.

It is a groundbreaking effort joining the main citrus sector organization, Fundecitrus, which, in my opinion must earn more and more scale, the Markestrat, the FEARP/USP and the UNESP. All of which are united in the the same purpose of contributing to a trustworthy result. And the two years which have gone by showed that the effort of this PES team has been worth, a fact which has surprised even the most optimistic ones.

On our part, besides the political and institutional coordination, I would also like to mention the effort in drawing international attention to the PES, showing the seriousness of the Brazilian citrus industry and agribusiness. There have been more than 5 publications in European and North American Journals and our effort was presented in Agribusiness World Conferences held in Minneapolis (2015), Aarhus (Denmark 2016) and, in June, it will be shown in the 2017 Conference in Miami (USA). Other countries and production chains get inspired by the PES, a leadership and model in the citrus industry.

Everyone deserves to be congratulated and I hope that we have a good and profitable season, with safety and hard word as well as, and, as I like to say..."creating, adding and sharing value".

Vinícius Gustavo Trombin
PES Executive Coordinator and member of Markestrat

As important as disclosing updated information on the groves and orange production forecast, it is continuously improving the method and processes used to generate them. As from this issue, we implemented a methodological enhancement which ensures even greater accuracy in the production forecast. Such refinement enables a more detailed view of the tree distribution per age within the same block and its differences in productivity, thus the resets which have reached maturity are no longer included in the calculation of the estimate as if they were part of the original grove planting, but according to their own age and productivity. Moreover, the permanent search for process excellence has motivated us to create an online payment system to reimburse the citrus growers for the stripping of the trees. Such innovations demonstrate the maturity reached in the first two years of the research, a clear ascertainment of the progressive learning curve and the PES ability to reach even better results in the crops to come.

José Carlos Barbosa
Methodology analyst and full professor at the Exact Sciences Department of FCAV/Unesp

The continuity of the PES projects demonstrates the trust of the production sector in the work carried out by Fundecitrus. In this third year of participation in the team in charge of the methodology to be utilized to assess the tree inventory of the citrus belt and orange production forecast for the state of São Paulo, new methodologies were incorporated. Experiments aiming to improve the methodologies and allow greater reliability in the results were carried out. We attended meetings with citrus growers, representatives of the companies and technicians who work in the sector. Thus, our participation in the PES Project also represents the trust of the production sector in the University as knowledge generator.

AKNOWLEDGEMENTS

In the past two years, Fundecitrus has committed to generate and publish accurate data on the orange production forecast and the evolution of the groves in the citrus belt of São Paulo and West-southwest Minas Gerais. Nevertheless, this work´s accomplishment is just possible thanks to the cooperation of every chain of the sector. Therefore, we particularly thank the citrus growers and the orange juice processing companies – Citrosuco, Cutrale and Louis Dreyfus – which contributed to the research funding and allowing their groves to be included in the samplings.

We also thank those growers who opened their properties for the training of the field technicians, or for helping in the dissemination of the research through the TV broadcasters who dealt with the subject. We would also like to mention the fundamental support of the São Paulo State Agricultural and Livestock Defense Coordination (CDA-SP), reporting to the São Paulo State Agriculture and Supply Office by supplying information concerning the number of citrus seedlings traded with the plant transit permit in the São Paulo State in 2016. We also thank the nurserymen who provided data of seedling produced for their own use.

To the members of the Technical Committee, we recognize the importance of the support we have received, either by means of permanent exchange of field experience, the joint effort to ponder the challenges, or for having instigated us to seek continuous improvement.

To all Fundecitrus employees and the outsourced workers who were engaged and ensured the accomplishment of challenging goals in an ethical and efficient way.

Finally, our thanks to Fundecitrus Advisory Board for approving the course of this study, believing in the democratization power of information as a means to build more confidence for the citrus growers in guiding their businesses.

SUMMARY

LIST OF CHARTS

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1 – INTRODUCTION

This publication presents the results of the third study of the tree inventory conducted by Fundecitrus with the cooperation of Markestrat, FEA-RP/USP and the Exact Sciences Department of FCAV/Unesp, during the period from January/2017 to May/2017 to update the information concerning orange groves.

Fundecitrus was responsible for performing all the activities involving gathering field and laboratory data and processing this information. Professor José Carlos Barbosa, of the Exact Sciences Department of FCAV/Unesp, was responsible for the analysis of the methodologies. Markestrat, in the person of Vinícius Gustavo Trombin, was in charge of the project governance, and Professor Marcos Fava Neves, of FEA-RP/USP, contributed with the political, institutional and methodological coordination.

Created since the 2015-2016 season, the Technical Committee, consisting of citrus growers, representatives from orange juice processing companies, faculty members, Fundecitrus researchers and supervisors, continued with their commitment to follow up on the activities carried out by PES and propose operating enhancements.

The results compiled from the inventory, obtained throughout the research, were kept restricted, until the date of this publication, only to the professionals connected to Fundecitrus, such as Fundecitrus general manager, PES supervisors and service providers specifically hired for the project, all of whom subject to terms of confidentiality regarding PES information until its public disclosure, pursuant to the confidentiality agreement executed between each one of them and Fundecitrus. Regarding antitrust practices, all of them were compiled upon the adoption of the measures necessary to prevent any sharing of individual information with a competitive content, among the orange juice companies who cooperate in the project with Fundecitrus, as well as, between these and the citrus growers.

1.1 – BUDGET

On May 25, 2016, the Fundecitrus Advisory Board decided to conduct this study, having approved a budget of R$ 5.272 million, 64% of which refers to expenses for the technical and administrative staff, labor related charges, 14% of it regards expenses with trips, accommodations, meals, and maintenance and the remaining 22% for materials, stripping indemnities and others. This budget provides the financial support required for the activities scheduled up to May 31, 2017.

1.2 – OVERALL NUMBERS

- **120 professionals directly involved in the study:**
  Field personnel: 39 agents, 54 field assistants.
  Laboratory personnel: 23 assistants.
  Office personnel: 1 coordinator and 3 supervisors.
- **More than 502 thousand kilometers covered;**
  Accumulated distance when counting 5% of the citrus blocks to update the inventory: 181,287 km.
  Accumulated distance traveled for stripping: 321,362 km.

1.3 – DEFINITION OF TECHNICAL TERMS

Citrus belt: region in Brazil containing the highest concentration of groves dedicated to commercial orange production, including municipalities in the state of São Paulo as well as some municipalities of Minas Gerais located in the West and Southwest regions of this state.

Grove: rural property covering a continuous area (there may be physical interruptions such as roads or waterways) held by the same landowner, containing at least 200 citrus trees. There may be areas in the same grove used for another purpose, such as raising other crops or livestock.

Block: fraction or section of a grove separated by, highways, rows, turn-rows (endrows) or other means, generally with a width greater than the spacing between rows.

Bearing tree: tree planted in 2014 or in previous years.

Non-bearing tree: tree planted in 2015 or 2016 that has not yet begun to produce.

Dead tree: defoliated tree with at least 75% of dried branches, with no evidence of recovery.

Vacancy: empty space in the planting row which should be occupied by a citrus tree, according to the spacing between plants adopted when implementing the block.

Hole: central point of the space occupied by each tree (plant area), where the soil is dug and prepared to accommodate a seedling; point on the planting alignment where potentially there is a tree.

Young grove: grove implemented in 2015 or 2016. Groves implemented in 2017 were not included in this inventory since the data collection in the field ended in the first quarter of the year in question.

Mature grove: grove implemented in 2014 or in previous years.

Grove removed: area where citrus trees have been eliminated, possibly covering the whole block or just part of it.

Box: one orange box is equivalent to 40.8 kg or 90 lb.

Hectare: one hectare is equivalent to 2.4710439 US acres.

Kilometer: one kilometer is equivalent to 0.621371192 mile.

2 – METHODOLOGICAL PROCEDURES

2.1 – OBJECTIVE METHOD FOR MAPPING CITRUS GROVES

The first mapping of groves carried out by Fundecitrus used orthorectified – which enabled precise measures to be taken - georeferenced high-definition images collected by satellites Pleiades 1A and 1B from French operator Airbus Defence and Space from May to October, 2014. The georeferenced mapping was performed by research agents *in situ*, that is, in person at each of the citrus properties, located in the 349 municipalities contained in the 152,000 km^2 of images, from October 27, 2014 to March 6, 2015.

The data gathered from each block were: area occupied solely by the trees, spacing, variety, planting year and irrigation method. Only for a small portion of the properties, to which access was denied, the data were estimated from remote sensing and statistical inference. Such volume of data was encrypted and recorded in the Fundecitrus Geographic Information System, making up the primary base on March 6, 2015, which was preserved for use in future updates. At this registration stage, information which could identify the owner or the grove by name was not gathered in order to protect the privacy and guarantee the anonymity of the citrus grower.

2.2 – OBJECTIVE METHOD TO PREPARE THE TREE INVENTORY

In order to generate the tree inventory, 5% of the blocks of the primary base (2015) are randomly chosen to be visited and to have their holes classified and quantified. In the 2015 and 2016 inventories, the count of the holes was stratified in four categories: bearing, non-bearing, dead and vacancy trees. From the 2017 inventory on, the categorization method went through a refinement. Each existing tree in the block, but the dead ones, is classified in four age groups: up to two years, from three to five years, from six to ten years and more than ten years. Such reformulation provides a detailed portrait concerning the number of existing trees within a block in each age category, since each tree is classified and counted in its own age, no longer as if it was from the year the grove had been planted. In order to carry out the categorized count, the research agents ask the citrus grower whether replanting took place in the blocks and in which periods they were carried out. After that, they visit the blocks and define the visual pattern of the tree for each age category existing in the block by means of combination of the information given by the grower with the visual evidences, such as trunk circumference, tree height and canopy shape. The age visual pattern is unique to each block since the development of the plants varies according to the management, variety, canopy and rootstock genetics, edaphoclimatic aspects, among other factors. Therefore, the result of the count represents approximation of the tree age, and not really its chronological age, calculated from the exact year it was planted. The basis of block age is still its planting year.

However, if this random choice finds removed blocks, their areas are used to calculate the proportion of removal in the sample. Such proportion, called removal rate, is applied to the primary base. The same calculation is made if abandoned blocks are found. After applying those two rates to the primary base, one obtains the estimated area occupied by groves in the current season. That new area multiplied by the tree density of the primary base updates its amount of holes. These in turn are corrected using the index generated from the comparison between the amount of holes found in the sample and its respective amount in the primary base. To these holes one applies the indices of trees in each age category, dead trees and vacancies, aiming to determine the new tree inventory.

In all properties visited for the sample, one verifies the existence of groves implemented after the visit by the research agent as of the 2015 mapping which gave rise to the primary base. The index of new plantings is created by variety from the proportion between the added area and the respective total area of the variety on the property. Such indices by variety are extrapolated to their regions to estimate the planting which took place during the year. Data concerning the number of citrus seedlings marketed with Plant Transit Permit (PTV) in the State of São Paulo in 2016 and provided by the São Paulo State Agricultural and Livestock Defense Coordination (CDA-SP), reporting to the São Paulo State Agricultural and Supply Office were also used for the estimate of the groves implemented in 2016. In the strata in which the planting stratified by region and variety collected in the field research showed the existence of a number of trees greater than the one provided by the CDA-SP, the field research data were considered. Such difference is due to the seedling production in seedling nursey by the citrus growers in their own properties, and which are aimed to their own use without the need of the Plant Transit Permit (PTV). Therefore, the final number of seedlings planted in 2016 includes the seedlings produced either with or without the PTV. The survey of

the number of these seedlings was carried out by Fundecitrus from spontaneous research of the main citrus growers who have nurseries in their properties. To estimate these grove areas, the average density planting stratified by variety and region of the blocks implemented and mapped in 2016 was used. Of all the number of trees from the CDA and the research carried out with such growers, the seedlings used for replanting were subtracted, obtaining, thus, the estimate of the number of trees planted in the groves formed in 2016. For the calculation of the number of plants for replanting in 2016, the non-bearing trees existing in mature groves (resets) were divided in the same proportion as planting in 2015 and 2016. The density planting found in the sampling of 5% of the blocks was used for the calculation of the area occupied by the new groves.

The method further contemplates the survey of intended reoccupation of removed groves. In case of replanting, that is, replanting with citrus, the survey must go deeper in terms of type: orange, lemon/acid limes, or tangerine.

Finally, the entire field process is audited to evaluate the quality of the collected data.

Blocks are chosen randomly using the stratified proportional sampling technique. The stratification variables are: 12 regions, five orange variety groups and four age groups, totaling 240 strata.

2.3 – STRATIFICATION OF THE CITRUS BELT

Sectors and regions

The citrus belt is subdivided into 12 regions. Each of them covers several municipalities and was given one of their names for reference. The division took into consideration the edaphoclimatic characteristics and the historical aspects linked to the development of citrus growing, which, generally speaking, resulted in a similar technological standard of the groves in the region. To facilitate the composition of the data, the 12 regions were grouped into five sectors. Figure 1 presents the sectors and regions of the citrus belt; next, Chart 1 provides details on the municipalities and the abbreviations used to designate the regions.

Figure 1 – Division of the citrus belt in 5 sectors and 12 regions

Chart 1 – Division of municipalities with citrus groves into sectors and regions

Sector and number of municipalities	Region (abbreviation) and number of municipalities	Municipalities
North 73 municipalities	Triângulo Mineiro (TMG), the West region of Minas Gerais 16 municipalities	Campina Verde, Campo Florido, Canápolis, Comendador Gomes, Conceição das Alagoas, Frutal, Gurinhatã, Itapagipe, Ituiutaba, Iturama, Monte Alegre de Minas, Planura, Prata, São Francisco de Sales, Uberaba, Uberlândia
	Bebedouro (BEB) 35 municipalities	Ariranha, Barretos, Bebedouro, Cajobi, Catanduva, Catiguá, Colina, Colômbia, Elisiário, Embaúba, Guaraci, Ibirá, Irapuã, Itajobi, Marapoama, Monte Azul Paulista, Novais, Olímpia, Palmares Paulista, Paraíso, Pindorama, Pirangi, Pitangueiras, Sales, Santa Adélia, Severínia, Tabapuã, Taiaçu, Taiúva, Taquaral, Terra Roxa, Uchoa, Urupês, Viradouro, Vista Alegre do Alto
	Altinópolis (ALT) 22 municipalities, of which 13 are located in São Paulo and 9 in the Southwest region of Minas Gerais	Altinópolis, Batatais, Brodowski, Cajuru, Cássia dos Coqueiros, Cristais Paulista, Delfinópolis, Fortaleza de Minas, Franca, Ibiraci, Igarapava, Jacuí, Jeriquara, Monte Santo de Minas, Nova Resende, Patrocínio Paulista, Pedregulho, Restinga, Santo Antônio da Alegria, São Pedro da União, São Sebastião do Paraíso, São Tomás de Aquino
Northwest 91 municipalities	Votuporanga (VOT) 55 municipalities	Álvares Florence, Américo de Campos, Andradina, Aparecida d'Oeste, Aspásia, Auriflama, Cardoso, Dirce Reis, Dolcinópolis, Estrela d'Oeste, Fernandópolis, General Salgado, Guaraçaí, Guarani d'Oeste, Guzolândia, Indiaporã, Jales, Macedônia, Marinópolis, Meridiano, Mesópolis, Mira Estrela, Mirandópolis, Murutinga do South, Nova Canaã Paulista, Nova Castilho, Ouroeste, Palmeira d'Oeste, Paranapuã, Parisi, Pedranópolis, Pereira Barreto, Pontalinda, Pontes Gestal, Populina, Riolândia, Rubinéia, Santa Albertina, Santa Clara d'Oeste, Santa Fé do South, Santa Rita d'Oeste, Santa Salete, Santana da Ponte Pensa, Santo Antônio do Aracanguá, São Francisco, São João das Duas Pontes, São João de Iracema, Sud Mennucci, Suzanápolis, Três Fronteiras, Turmalina, Urânia, Valentim Gentil, Vitória Brazil, Votuporanga
	São José do Rio Preto (SJO) 36 municipalities	Adolfo, Altair, Bady Bassitt, Bálsamo, Cedral, Cosmorama, Floreal, Guapiaçu, Icém, Ipiguá, Jaci, José Bonifácio, Macaubal, Magda, Mendonça, Mirassol, Mirassolândia, Monções, Monte Aprazível, Neves Paulista, Nhandeara, Nipoã, Nova Aliança, Nova Granada, Onda Verde, Orindiúva, Palestina, Paulo de Faria, Planalto, Poloni, Potirendaba, São José do Rio Preto, Tanabi, Ubarana, União Paulista, Zacarias
Central 81 municipalities	Matão (MAT) 22 municipalities	Américo Braziliense, Araraquara, Bariri, Boa Esperança do South, Borborema, Cândido Rodrigues, Fernando Prestes, Gavião Peixoto, Ibitinga, Itajú, Itápolis, Jaboticabal, Matão, Monte Alto, Motuca, Nova Europa, Novo Horizonte, Rincão, Santa Ernestina, Santa Lúcia, Tabatinga, Taquaritinga
	Duartina (DUA) 44 municipalities	Agudos, Álvaro de Carvalho, Alvinlândia, Arealva, Avaí, Balbinos, Bastos, Bauru, Boracéia, Cabrália Paulista, Cafelândia, Campos Novos Paulista, Duartina, Echaporã, Espírito Santo do Turvo, Fernão, Gália, Garça, Getulina, Guaiçara, Guaimbê, Guarantã, Iacanga, Iacri, Júlio Mesquita, Lins, Lucianópolis, Lupércio, Marília, Ocauçu, Parapuã, Paulistânia, Pederneiras, Pirajuí, Piratininga, Pongaí, Presidente Alves, Promissão, Reginópolis, Sabino, Santa Cruz do Rio Pardo, São Pedro do Turvo, Ubirajara, Uru
	Brotas (BRO) 15 municipalities	Analândia, Bocaina, Brotas, Corumbataí, Dois Córregos, Dourado, Ibaté, Itirapina, Mineiros do Tietê, Ribeirão Bonito, Santa Maria da Serra, São Carlos, São Pedro, Torrinha, Trabiju
South 51 municipalities	Porto Ferreira (PFE) 19 municipalities	Aguaí, Caconde, Casa Branca, Cravinhos, Descalvado, Guatapará, Guaxupé, Luiz Antônio, Mococa, Pirassununga, Porto Ferreira, Santa Cruz da Conceição, Santa Cruz das Palmeiras, Santa Rita do Passa Quatro, Santa Rosa de Viterbo, São José do Rio Pardo, São Simão, Tambaú, Vargem Grande do South
	Limeira (LIM) 32 municipalities	Águas de Lindóia, Americana, Amparo, Araras, Artur Nogueira, Itatiba, Bragança Paulista, Charqueada, Conchal, Cordeirópolis, Cosmópolis, Engenheiro Coelho, Espírito Santo do Pinhal, Estiva Gerbi, Holambra, Ipeúna, Iracemápolis, Itapira, Jaguariúna, Jarinu, Leme, Limeira, Lindóia, Mogi Guaçu, Mogi Mirim, Paulínia, Piracicaba, Rio Claro, Santa Gertrudes, Santo Antônio de Posse, Serra Negra, Socorro
Southwest 53 municipalities	Avaré (AVA) 33 municipalities	Águas de Santa Bárbara, Angatuba, Anhembi, Araçoiaba da Serra, Arandu, Avaré, Bofete, Borebi, Botucatu, Cabreúva, Capela do Alto, Cerqueira César, Cesário Lange, Conchas, Guareí, Iaras, Iperó, Itatinga, Laranjal Paulista, Lençóis Paulista, Manduri, Óleo, Pardinho, Piraju, Porangaba, Porto Feliz, Pratânia, Quadra, Salto de Pirapora, São Manuel, Sorocaba, Tatuí, Tietê
	Itapetininga (ITG) 20 municipalities	Alambari, Buri, Campina do Monte Alegre, Capão Bonito, Coronel Macedo, Itaberá, Itaí, Itapetininga, Itapeva, Itaporanga, Itararé, Nova Campina, Paranapanema, Pilar do South, São Miguel Arcanjo, Sarapuí, Sarutaiá, Taquarituba, Taquarivaí, Tejupá
5 sectors	12 regions	349 municipalities with citrus groves

Group of varieties

Chart 2 – Division of oranges by group of varieties

Laranjas	Varietys
Oranges.....	Early season: Hamlin, Westin and Rubi Other early season: Valencia Americana, Valencia Argentina, Seleta and Pineapple Mid-season: Pera Rio and João Nunes Late season: Valencia and Valencia Folha Murcha Other late season: Natal
Other oranges.....	Washington Navel, Baianinha, Shamouti, Lima Verde, Lima Tardia, Piralima, Lima Sorocaba, Lima Roque, Palestine sweet lime and other sweet oranges/sweet limes

Group of ages

Chart 3 – Classification of tree and grove planting years by age groups

Age groups	Planting years
1 to 2 years.....	2016, 2015
3 to 5 years.....	2014, 2013, 2012
6 to 10 years.....	2011, 2010, 2009, 2008, 2007
Above 10 years.....	2006 e years anteriores

2.4 – PERIOD OF FIELD RESEARCH OF THE 2017 INVENTORY

In 2017, the period of visits to the 5-percent randomly chosen blocks was concentrated from January 30, 2017 to March 10, 2017. After being processed, the data collected during that period gave rise to the Tree Inventory of the São Paulo and West-Southwest Minas Gerais Citrus Belt – Snapshot of Groves in March/2017.

3 – RESULTS

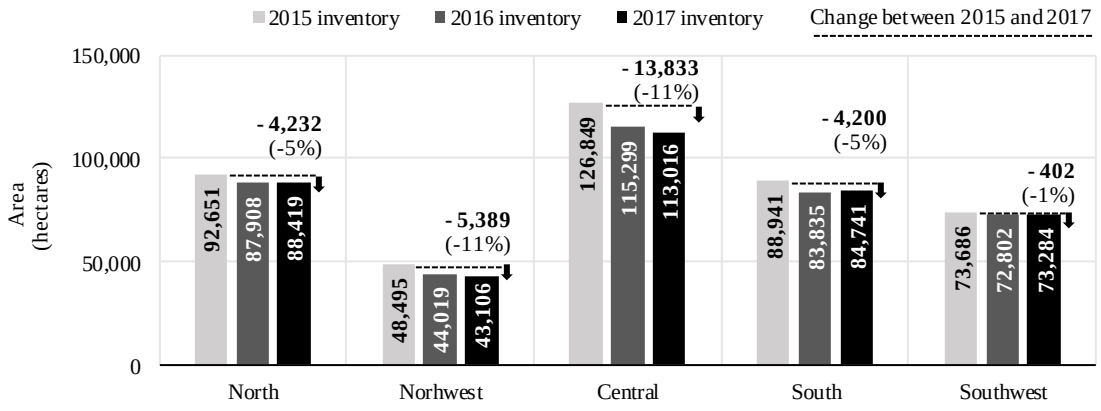
3.1 – MAIN RESULTS ABOUT THE TREE INVENTORY

This publication presents the third tree inventory carried out by Fundecitrus and it portrais the estimated condition of the orange groves updated in March/2017. The basis to determine the block ages is still the year in which they were implemented, however, the resets therein are classified in their own age category, which represents an innovation of this inventory comparing to the previous ones. Such improvement provides an even more accurate view of the number of trees per age category in each age range of the groves. The detailing of the criteria to estimate the age of the trees is presented in item 2.2 (Objective method to prepare the tree inventory).

The area with orange groves, including all the varieties, is 415,232 hectares, 0.4% smaller as compared to that of the 2016 inventory. The loss of groves ascertained in the 2016 inventory was of 37,465 hectares and it dropped to 10,577 hectares in 2017. The entry of 9,106 hectares of new planting remains the same as last year´s. Thus, the loss of groves, slightly higher than the entry, resulted in a negative net variation of 1,471 hectares.

From the total area, 402,566 hectares, which corresponds to 97%, are planted with the Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple, Pera Rio, João Nunes, Valencia, Valencia Folha Murcha and Natal varieties. As with the previous inventory, the information presented herein are related, mainly, to those varieties, which are simply called “oranges” in the tables which make up this report. The exceptions appear in Table 1 and Graph 4, which show the data of 3% of the remaining groves, which include the Washington Navel, Baianinha, Shamouti, acidless sweet oranges, sweet limes, among others. From this point on, the observations carried out are limited to the main orange varieties.

Of the five sectors of the citrus belt, the Central and Northwest have been losing area since the 2015 inventory, as presented in Graph 1, while the other sectors, which are on the edges of the park, reversed the losses of groves in slight increases, but these gains are still keeping a negative balance of 28,056 hectares in the accumulated, which is less 26,759 hectares in 2016 and less 1,297 hectares in 2017.

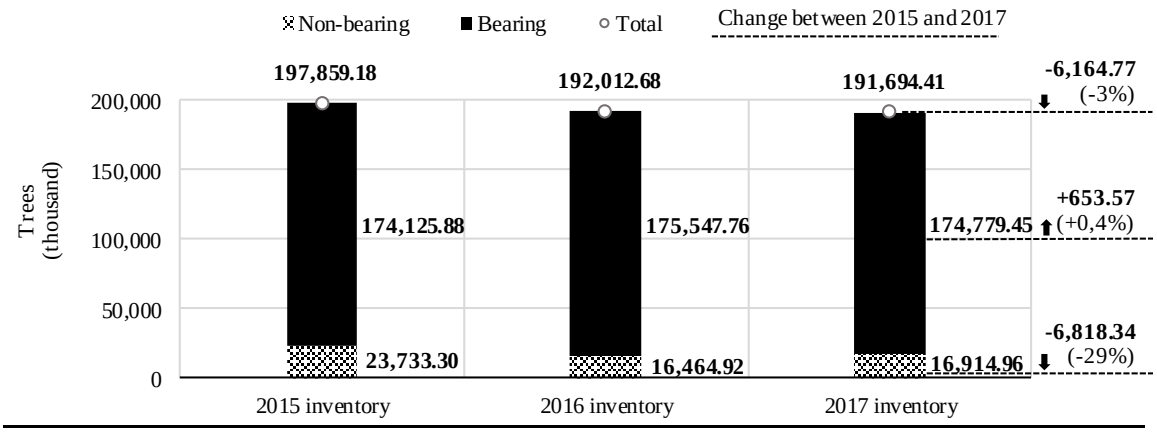


Graph 1 – Oranges: Grove area by sector [inventories from 2015 to 2017]

The abandoned groves added up to 6,511 hectares in the 2016 inventory, and 1,977 hectares in this one. The difference of 4,534 hectares between the inventories is explained by the reactivation of groves. Regarding the ones removed, was measured at 28,813 hectares in the previous inventory, and now, at 14,307 hectares. Out of this removed area, 2,344 hectares were replanted with citrus and, such replanting corresponds to 28% out of the 8,476 hectares of groves formed in 2016. Therefore, the loss of groves, that is, the removal (14,307 ha) subtracted from the reactivation of the groves (4,534 ha), is of 9,773 hectares. The difference between such loss and the formed area in 2016 (8,476 ha) is negative in 1,297 hectares, and, even though it is a shrinkage, it is lower than what was seen in the previous season.

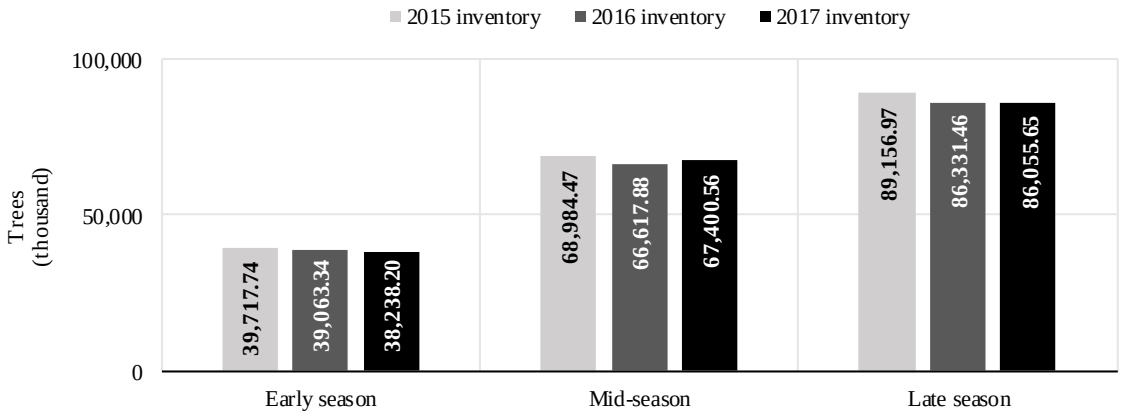
The average removal rate of the citrus belt is of 3.32% in this inventory, referring to the period from April/2016 to March/2017, a decrease if compared to the 6.69% of the 2016 inventory. The largest removal rate was observed in the range of the properties with up to 10,000 trees, which presented a rate of 31.51%.

The bearing trees add up to 174.78 million and the non-bearing ones 16.91 million, totaling 191.69 million trees. Compared to the 2016 inventory, the number of trees decreased in approximately 318 thousand plants. In the overall, since 2015, the reduction surpasses 6 million trees, resulting from the decline of new plantings observed in the last years, as shown in Graph 2.



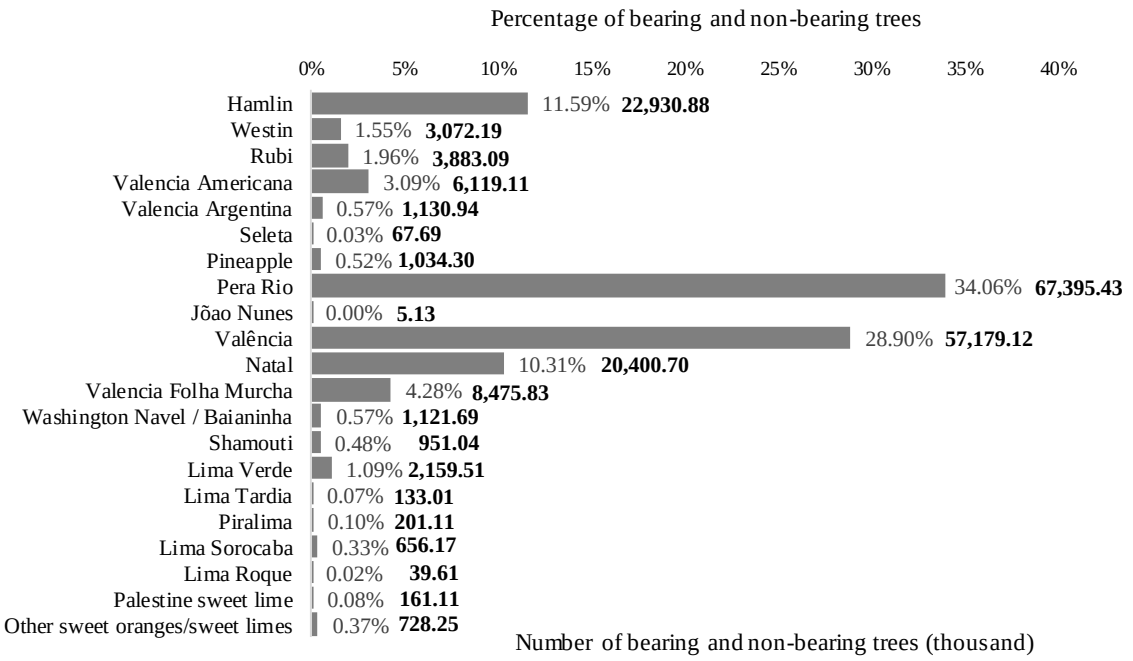
Graph 2 – Oranges: All trees, bearing and non-bearing trees [inventories from 2015 to 2017]

The distribution by maturation stage of the varieties shows that, concerning the 2015 inventory, the trees of early season varieties decreased 4%, the mid-season ones, 2%, and the late season ones, 3%. Nowadays, 38.24 million trees are early season varieties, usually harvested from May to August, 67.40 million are mid-season ones, usually harvested from July to October and, 86.06 million are late season varieties, harvested from October to January, as presented in Graph 3. Weather variations and other factors may anticipate or extend the harvesting period from a crop to another one.



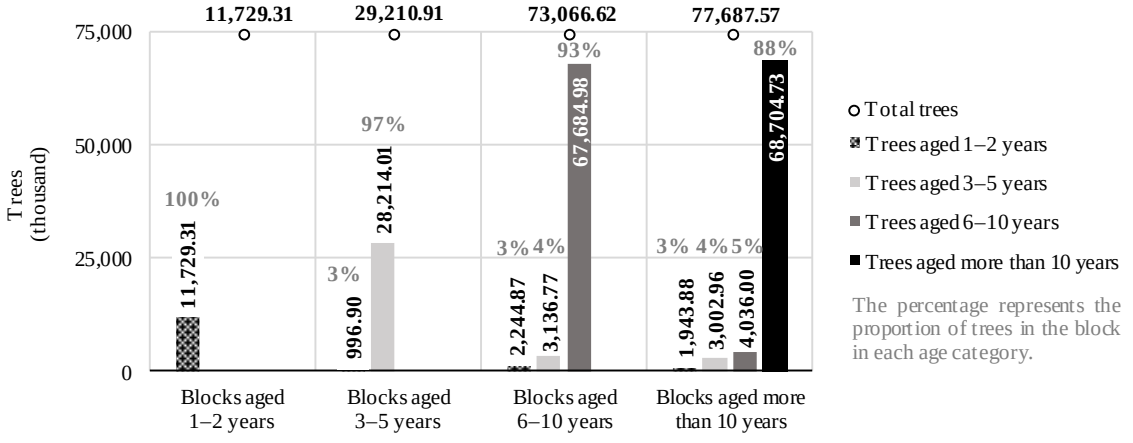
Graph 3 – Oranges: Trees by maturation period of the varieties [inventories from 2015 to 2017]

Nearly 90% of the citrus belt is formed by five orange varieties. Pera Rio, with 34% out of the total, has been in the lead since 2007 as the most planted variety, surpassing Valencia, with 29%, which has moved to the second position. Hamlin (12%), Natal (10%) and Valencia Folha Murcha (4%) still hold the third, fourth and fifth positions. Graph 4 presents the complete distribution of the volume of trees by variety.



Graph 4 – Oranges and others: Distribution of bearing and non-bearing trees by variety

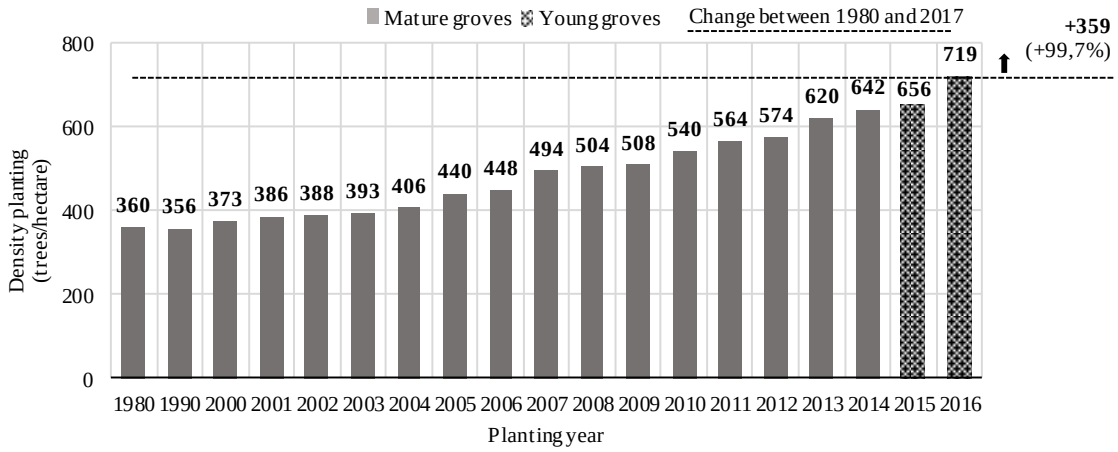
The enhancement of the method of tree quantification by age and block age range provides crucial information, specially, on the groves which are within the age range between 6 and 10 years, and the ones which are more than 10 years, due to the fact these groves have bearing trees with ages lower than the one of the block formation. In the first group, there are the groves implemented from 2007 to 2011 which have 73.07 million trees. The new method allowed the complete segregation of its trees by age and presented the following results: 93% of the trees keep the 6 to 10 years category (same block age range), 4% belong to the age range from 3 to 5 years and 3% to the 1 to 2 years age range. In the group of the groves which are more than 10 years old, that is, formed until 2006 and which total 77.69 million trees, 88% of the trees are older than 10 years; 5% are between 6 to 10 years; 4% between 3 to 5 years, and 3% between 1 and 2 years. Graph 5 presents the distribution of the trees by age category in all age range of the groves.



Graph 5 – Oranges: Trees by age groups and block age range

The density planting average of the groves implemented in 2016 is 719, there are in them twice as much plants in comparison to the groves formed thirty years ago, as highlighted in Graph 6. The young groves, with higher average density planting, are in the Altinópolis region with 833 trees/hectare, followed by Itapetininga and Matão, with 783 trees/hectare. On the opposite side, there is the Triângulo Mineiro with 568 trees/hectare and Limeira 616 trees/hectare. The average density planting of the groves in formation is

687 trees/hectare. The level of 600 trees/hectare is seen from the 2013 plantings on. The average density planting of mature groves is 467 trees/hectare, without alteration concerning the previous inventory.



Graph 6 – Oranges: Average density planting of groves by planting year

The average age of mature groves is 10.3 years, which shows a relatively new park, nevertheless, the majority of the trees is now in the older age category. The oldest add up 32,851 hectares or 8% of the total area. In this group, there are the groves with age above 20 years, which present average density planting of 351 trees/hectare, lagged in relation to the one adopted nowadays (687 trees/hectare).

The review of the number of properties depends on a new imaging for the scan of the whole citrus area which is scheduled to start in the second half of 2017, and the new data will be published in the next inventory, in May/2018. While it does not take place, the total of 7,588 orange properties remains unaltered, but their grove data are updated by means of sampling survey, which revaluates the area and the proportion of trees by age, dead and vacancy in these groves. Out of the total, 5,442 properties, that is 72%, have fewer than 10,000 trees and this number raises to 83% if the properties which have up to 20 thousand trees are considered. These 83% of the properties account for just 15% of the total trees of the park. Thus, the 1,295 remaining properties, having more than 20 thousand trees each, correspond to 17% of all properties, but they gather 85% of the trees. On average, the orange properties have 53 hectares with 9 blocks. The use of irrigation technology is present in almost 100 thousand hectares and half of them are in the north sector.

The percentage of dead trees in the citrus belt dropped from 1.5% to 0.8% and the vacancies increased from 3.3% to 4.0%, which indicates a concern with the grove health. The stratification of the 201.33 million of holes of the orange groves results in the following estimates: 174.78 million bearing trees (87% of the holes), 16.91 million non-bearing trees (8%), 1.57 million dead trees (0.8%) and 8.07 million vacancies (4%).

Acid limes, lemons and tangerines are not included in this publication, but they will be considered in the next imaging of the whole citrus belt, which will begin in the second half of 2017 and which will go on until March/2018.

3.2 – TABLES

The calculations were based on whole numbers, with all decimal places, as stored in the databases, and any discrepancies between the amounts in the tables are the result of rounding. In the title of the tables, the word "oranges" indicates that the values presented include the following varieties: Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple, Pera Rio, João Nunes, Valencia, Natal and Valencia Folha Murcha.

Table 1 – Oranges and others: Grove areas by sector [inventories 2015 through 2017 and changes observed]

Inventory and sector	Total[2]	Changes in relation to the previous inventory		
		New plantings	Loss of groves	Net change
	(hectares)	(hectares)	(hectares)	(hectares)
2015 inventory				
North	93,535	-	-	-
Northwest	48,760	-	-	-
Central	130,368	-	-	-
South	94,476	-	-	-
Southwest	77,446	-	-	-
Total	**444,585**	-	-	-
2016 inventory				
North	88,188	998	6,345	-5,347
Northwest	44,927	1,314	5,147	-3,833
Central	118,288	1,332	13,412	-12,080
South	89,037	4,702	10,141	-5,439
Southwest	76,263	1,237	2,420	-1,183
Total	**416,703**	**9,583**	**37,465**	**-27,882**
2017 inventory				
North	89,130	1,683	741	942
Northwest	43,283	1,225	2,869	-1,644
Central	115,924	2,605	4,969	-2,364
South	90,306	2,089	820	1,269
Southwest	76,589	1,504	1,178	326
Total	**415,232**	**9,106**	**10,577**	**-1,471**

- Not available.

[1] Oranges: Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple, Pera Rio, João Nunes, Valencia, Valencia Folha Murcha e Natal. Others: Washington Navel, Baianinha, Shamouti, Lima Verde, Lima Tardia, Piralima, Lima Sorocaba, Lima Roque, Palestine sweet lime and other sweet oranges/sweet limes.

[2] The removed areas were replanted with orange, besides being included in the removal, they are also counted in new groves. The reactivated areas of the groves which were abandoned are reintegrated in the inventory.

Table 2 – Oranges: Average age[1] of mature groves by sector and region [inventories 2015 through 2017]

Sector and region		2015 inventory[2]	2016 inventory[3]	2017 inventory[4]
		(years)	(years)	(years)
North	Triângulo Mineiro	11.1	7.8	8.6
	Bebedouro	9.2	9.5	10.1
	Altinópolis	9.5	10.3	11.0
	Average	**9.6**	**9.1**	**9.8**
Northwest	Votuporanga	7.9	8.3	8.9
	São José do Rio Preto	8.0	8.0	7.9
	Average	**7.9**	**8.2**	**8.3**
Central	Matão	9.3	8.9	9.4
	Duartina	9.6	9.3	9.8
	Brotas	7.6	10.9	11.5
	Average	**9.0**	**9.4**	**9.9**
South	Porto Ferreira	10.2	9.9	10.6
	Limeira	10.6	11.7	12.5
	Average	**10.3**	**10.8**	**11.6**
Southwest	Avaré	11.7	10.7	11.6
	Itapetininga	11.2	10.6	10.5
	Average	**11.5**	**10.7**	**11.3**
Average		**9.8**	**9.8**	**10.3**

[1] Average age weighted by sector trees.

[2] Groves implemented in 2012 or in previous years.

[3] Groves implemented in 2013 or in previous years.

[4] Groves implemented in 2014 or in previous years.

Table 3 – Oranges: Grove areas by sector [inventories 2015 through 2017 and changes observed]

Inventory and sector	Total[1]	Changes in relation to the previous inventory		
		New plantings	Loss of groves	Net change
	(hectares)	(hectares)	(hectares)	(hectares)
2015 inventory				
North	92,651	-	-	-
Northwest	48,495	-	-	-
Central	126,849	-	-	-
South	88,941	-	-	-
Southwest	73,686	-	-	-
Total	**430,622**	-	-	-
2016 inventory				
North	87,908	884	5,627	-4,743
Northwest	44,019	1,314	5,790	-4,476
Central	115,299	1,228	12,778	-11,550
South	83,835	4,429	9,535	-5,106
Southwest	72,802	710	1,594	-884
Total	**403,863**	**8,565**	**35,324**	**-26,759**
2017 inventory				
North	88,419	1,664	1,153	511
Northwest	43,106	1,208	2,121	-913
Central	113,016	2,517	4,800	-2,283
South	84,741	1,843	937	906
Southwest	73,284	1,244	762	482
Total	**402,566**	**8,476**	**9,773**	**-1,297**

- Not available.

[1] The removed areas were replanted with orange, besides being included in the removal, they are also counted in new groves. The reactivated areas of the groves which were abandoned are reintegrated in the inventory.

Table 4 – Oranges: Trees by sectors [inventories 2015 through 2017 and changes observed]

Inventory and sector	Total	Changes in relation to the previous inventory		Non-bearing trees			Bearing trees		
				Total	Changes in relation to the previous inventory		Total	Changes in relation to the previous inventory	
	(1,000 trees)	(1,000 trees)	(%)	(1,000 trees)	(1,000 trees)	(%)	(1,000 trees)	(1,000 trees)	(%)
2015 inventory									
North	43,728.08	-	-	5,764.71	-	-	37,963.37	-	-
Northwest	21,016.43	-	-	1,962.35	-	-	19,054.08	-	-
Central	56,283.87	-	-	8,830.19	-	-	47,453.68	-	-
South	39,890.92	-	-	4,525.15	-	-	35,365.77	-	-
Southwest	36,939.88	-	-	2,650.90	-	-	34,288.98	-	-
Total	**197,859.18**	-	-	**23,733.30**	-	-	**174,125.88**	-	-
2016 inventory									
North	42,378.37	-1,349.71	-3.09	2,774.19	-2,990.52	-51.88	39,604.18	1,640.81	4.32
Northwest	19,698.68	-1,317.75	-6.27	1,643.38	-318.97	-16.25	18,055.30	-998.78	-5.24
Central	54,217.33	-2,066.54	-3.67	4,729.55	-4,100.64	-46.44	49,487.78	2,034.10	4.29
South	39,104.18	-786.74	-1.97	5,370.65	845.50	18.68	33,733.53	-1,632.24	-4.62
Southwest	36,614.12	-325.76	-0.88	1,947.15	-703.75	-26.55	34,666.97	377.99	1.10
Total	**192,012.68**	**-5,846.50**	**-2.95**	**16,464.92**	**-7,268.38**	**-30.63**	**175,547.76**	**1,421.88**	**0.82**
2017 inventory									
North	42,156.67	-221.70	-0.52	2,866.66	92.47	3.33	39,290.01	-314.17	-0.79
Northwest	19,433.92	-264.76	-1.34	1,798.90	155.52	9.46	17,635.02	-420.28	-2.33
Central	53,700.33	-517.00	-0.95	4,566.86	-162.69	-3.44	49,133.47	-354.31	-0.72
South	39,612.83	508.65	1.30	5,396.91	26.26	0.49	34,215.92	482.39	1.43
Southwest	36,790.66	176.54	0.48	2,285.63	338.48	17.38	34,505.03	-161.94	-0.47
Total	**191,694.41**	**-318.27**	**-0.17**	**16,914.96**	**450.04**	**2.73**	**174,779.45**	**-768.31**	**-0.44**

- Not available.

Table 5 – Oranges: Area of groves by variety group [inventories 2015 through 2017 and changes observed]

Inventory and sector	Total[1]	Changes in relation to the previous inventory		
		New plantings	Loss of groves	Change
	(hectares)	(hectares)	(hectares)	(hectares)
2015 inventory				
Hamlin, Westin, Rubi.....	69,454	-	-	-
Other early season[2].....	19,784	-	-	-
Pera Rio.....	141,596	-	-	-
Valencia, V.Folha Murcha[3]..	149,903	-	-	-
Natal.....	49,885	-	-	-
Total.....	**430,622**	-	-	-
2016 inventory				
Hamlin, Westin, Rubi.....	66,430	1,226	4,250	-3,024
Other early season[2].....	18,519	80	1,345	-1,265
Pera Rio.....	132,413	3,984	13,167	-9,183
Valencia, V.Folha Murcha[3]..	138,985	1,450	12,368	-10,918
Natal.....	47,516	1,825	4,194	-2,369
Total.....	**403,863**	**8,565**	**35,324**	**-26,759**
2017 inventory				
Hamlin, Westin, Rubi.....	64,763	791	2,458	-1,667
Other early season[2].....	18,109	146	556	-410
Pera Rio.....	133,334	3,983	3,062	921
Valencia, V.Folha Murcha[3]..	141,533	2,667	119	2,548
Natal.....	44,827	889	3,578	-2,689
Total.....	**402,566**	**8,476**	**9,773**	**-1,297**

- Not available.

[1] The removed areas were replanted with orange, besides being included in the removal, they are also counted in new groves. The reactivated areas of the groves which were abandoned are reintegrated in the inventory.

[2] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[3] Valencia Folha Murcha.

Table 6 – Oranges: Trees by variety groups [inventories 2015 through 2017 and changes observed]

Inventory and sector	Total	Changes in relation to the previous inventory		Non-bearing trees			Bearing trees		
				Total	Changes in relation to the previous inventory		Total	Changes in relation to the previous inventory	
	(1,000 trees)	(1,000 trees)	(%)	(1,000 trees)	(1,000 trees)	(%)	(1,000 trees)	(1,000 trees)	(%)
2015 inventory									
Hamlin, Westin, Rubi.....	30,872.30	-	-	2,086.76	-	-	28,785.54	-	-
Other early season[1].....	8,850.71	-	-	991.11	-	-	7,859.60	-	-
Pera Rio.....	68,979.24	-	-	10,484.28	-	-	58,494.96	-	-
Valencia, V.Folha Murcha[2]	67,750.44	-	-	7,744.09	-	-	60,006.35	-	-
Natal.....	21,406.49	-	-	2,427.06	-	-	18,979.43	-	-
Total.....	**197,859.18**	-	-	**23,733.30**	-	-	**174,125.88**	-	-
2016 inventory									
Hamlin, Westin, Rubi.....	30,431.51	-440.79	-1.43	2,125.92	39.16	1.88	28,305.59	-479.95	-1.67
Other early season[1].....	8,637.36	-213.35	-2.41	377.20	-613.91	-61.94	8,260.16	400.56	5.10
Pera Rio.....	66,612.35	-2,366.89	-3.43	6,949.75	-3,534.53	-33.71	59,662.60	1,167.64	2.00
Valencia, V.Folha Murcha[2]	65,072.42	-2,678.02	-3.95	4,640.05	-3,104.04	-40.08	60,432.37	426.02	0.71
Natal.....	21,259.04	-147.45	-0.69	2,372.00	-55.06	-2.27	18,887.04	-92.39	-0.49
Total.....	**192,012.68**	**-5,846.50**	**-2.95**	**16,464.92**	**-7,268.38**	**-30.63**	**175,547.76**	**1,421.88**	**0.82**
2017 inventory									
Hamlin, Westin, Rubi.....	29,886.16	-545.35	-1.79	2,577.98	452.06	21.26	27,308.18	-997.41	-3.52
Other early season[1].....	8,352.04	-285.32	-3.30	402.63	25.43	6.74	7,949.41	-310.75	-3.76
Pera Rio.....	67,400.56	788.21	1.18	7,166.15	216.40	3.11	60,234.41	571.81	0.96
Valencia, V.Folha Murcha[2]	65,654.95	582.53	0.90	4,472.89	-167.16	-3.60	61,182.06	749.69	1.24
Natal.....	20,400.70	-858.34	-4.04	2,295.31	-76.69	-3.23	18,105.39	-781.65	-4.14
Total.....	**191,694.41**	**-318.27**	**-0.17**	**16,914.96**	**450.04**	**2.73**	**174,779.45**	**-768.31**	**-0.44**

- Not available.

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[2] Valencia Folha Murcha.

Table 7 – Oranges: Stratification of the entire holes of orange groves [2017 inventory] (continues on the next page)

Region and variety	Non-bearing trees	Bearing trees	Dead trees	Vacancies	Total
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 holes)	(1,000 trees or holes)
Triângulo Mineiro					
Hamlin, Westin e Rubi.....	24.03	2,089.80	6.02	24.31	2,144.16
Other early season[1]	0.43	117.32	0.41	1.51	119.67
Pera Rio	418.92	3,798.71	9.95	44.18	4,271.76
Valencia, V.Folha Murcha[2]	75.10	4,183.49	5.42	12.33	4,276.34
Natal	15.95	1,452.94	1.16	3.31	1,473.36
Subtotal.....	**534.43**	**11,642.26**	**22.96**	**85.64**	**12,285.29**
Bebedouro					
Hamlin, Westin e Rubi.....	226.17	4,604.70	17.99	208.02	5,056.88
Other early season[1]	55.93	1,665.45	7.73	89.03	1,818.14
Pera Rio	659.51	6,787.71	28.14	216.03	7,691.39
Valencia, V.Folha Murcha[2]	722.27	8,164.09	18.91	258.72	9,163.99
Natal	241.89	1,463.85	6.85	40.47	1,753.06
Subtotal.....	**1,905.77**	**22,685.80**	**79.62**	**812.27**	**25,483.46**
Altinópolis					
Hamlin, Westin e Rubi.....	102.44	799.52	12.24	40.61	954.81
Other early season[1]	6.77	127.01	0.20	1.42	135.40
Pera Rio	184.98	1,811.50	18.70	93.17	2,108.35
Valencia, V.Folha Murcha[2]	120.53	1,969.81	14.78	81.81	2,186.93
Natal	11.74	254.11	0.55	11.95	278.35
Subtotal.....	**426.46**	**4,961.95**	**46.47**	**228.96**	**5,663.84**
Votuporanga					
Hamlin, Westin e Rubi.....	9.63	522.13	1.31	5.53	538.60
Other early season[1]	7.47	188.85	0.31	3.36	199.99
Pera Rio	169.69	6,112.35	76.86	229.51	6,588.41
Valencia, V.Folha Murcha[2]	6.77	1,060.50	21.15	52.08	1,140.50
Natal	19.65	433.48	2.86	23.94	479.93
Subtotal.....	**213.21**	**8,317.31**	**102.49**	**314.42**	**8,947.43**
São José do Rio Preto					
Hamlin, Westin e Rubi.....	187.26	2,133.69	30.72	106.50	2,458.17
Other early season[1]	39.62	1,254.89	2.01	49.85	1,346.37
Pera Rio	512.09	2,207.63	37.20	96.49	2,853.41
Valencia, V.Folha Murcha[2]	410.13	2,748.65	8.23	73.04	3,240.05
Natal	436.59	972.85	3.78	35.38	1,448.60
Subtotal.....	**1,585.69**	**9,317.71**	**81.94**	**361.26**	**11,346.60**
Matão					
Hamlin, Westin e Rubi.....	84.13	2,851.36	59.90	155.13	3,150.52
Other early season[1]	49.68	1,656.06	40.96	233.89	1,980.59
Pera Rio	979.46	5,585.80	59.08	298.16	6,922.50
Valencia, V.Folha Murcha[2]	338.86	5,769.36	53.11	261.14	6,422.47
Natal	176.67	1,231.79	17.70	142.75	1,568.91
Subtotal.....	**1,628.80**	**17,094.37**	**230.75**	**1,091.07**	**20,044.99**
Duartina					
Hamlin, Westin e Rubi.....	327.78	3,246.00	39.80	146.60	3,760.18
Other early season[1]	91.84	951.79	2.64	56.77	1,103.04
Pera Rio	871.62	9,149.86	81.43	414.10	10,517.01
Valencia, V.Folha Murcha[2]	664.80	7,411.21	66.88	382.54	8,525.43
Natal	203.83	2,722.99	33.75	235.09	3,195.66
Subtotal.....	**2,159.87**	**23,481.85**	**224.50**	**1,235.10**	**27,101.32**
Brotas					
Hamlin, Westin e Rubi.....	81.73	1,230.80	29.14	74.62	1,416.29
Other early season[1]	14.78	261.96	2.93	6.55	286.22
Pera Rio	254.27	2,483.39	69.07	166.77	2,973.50
Valencia, V.Folha Murcha[2]	257.00	3,840.56	82.45	264.34	4,444.35
Natal	170.41	740.54	8.34	50.88	970.17
Subtotal.....	**778.19**	**8,557.25**	**191.93**	**563.16**	**10,090.53**

Table 7 – Oranges: Stratification of the entire holes of orange groves [2017 inventory] (continued)

Region and variety	Non-bearing trees	Bearing trees	Dead trees	Vacancies	Total
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 holes)	(1,000 trees or holes)
Porto Ferreira					
Hamlin, Westin e Rubi.....	825.56	2,392.52	38.05	175.67	3,431.80
Other early season[1].....	14.40	383.72	3.91	21.83	423.86
Pera Rio.....	1,811.24	5,433.84	27.61	255.55	7,528.24
Valencia, V.Folha Murcha[2]	666.34	6,775.34	75.49	424.35	7,941.52
Natal.....	507.70	1,546.29	10.70	77.03	2,141.72
Subtotal.....	**3,825.24**	**16,531.71**	**155.76**	**954.43**	**21,467.14**
Limeira					
Hamlin, Westin e Rubi.....	184.20	2,561.19	24.69	149.35	2,919.43
Other early season[1].....	2.79	172.45	0.88	23.15	199.27
Pera Rio.....	542.58	6,474.70	86.27	312.05	7,415.60
Valencia, V.Folha Murcha[2]	509.67	7,150.97	67.26	414.71	8,142.61
Natal.....	332.43	1,324.90	7.79	41.62	1,706.74
Subtotal.....	**1,571.67**	**17,684.21**	**186.89**	**940.88**	**20,383.65**
Avaré					
Hamlin, Westin e Rubi.....	366.11	4,077.39	27.19	294.90	4,765.59
Other early season[1].....	23.73	772.70	0.36	34.06	830.85
Pera Rio.....	472.59	7,840.87	78.60	315.18	8,707.24
Valencia, V.Folha Murcha[2]	380.54	9,339.12	29.84	439.85	10,189.35
Natal.....	161.79	4,295.15	29.30	169.32	4,655.56
Subtotal.....	**1,404.76**	**26,325.23**	**165.29**	**1,253.31**	**29,148.59**
Itapetininga					
Hamlin, Westin e Rubi.....	158.94	799.08	18.67	62.19	1,038.88
Other early season[1].....	95.19	397.21	3.54	9.84	505.78
Pera Rio.....	289.20	2,548.05	42.27	56.67	2,936.19
Valencia, V.Folha Murcha[2]	320.88	2,768.96	12.26	65.70	3,167.80
Natal.....	16.66	1,666.50	3.25	36.28	1,722.69
Subtotal.....	**880.87**	**8,179.80**	**79.99**	**230.68**	**9,371.34**
Total.....	**16,914.96**	**174,779.45**	**1,568.59**	**8,071.18**	**201,334.18**
Percentage.....	**8.40**	**86.81**	**0.78**	**4.01**	**100.00**

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.
[2] V.Folha Murcha – Valencia Folha Murcha.

Table 8 – Oranges: Trees by age group and age range of the block – Citrus Belt [2017 inventory]

Block age[1]	Tree age[2]				Total	Percentage
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years		
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(%)
1 – 2 years.....	11,729.31	-	-	-	11,729.31	6.12
3 – 5 years.....	996.90	28,214.01	-	-	29,210.91	15.24
6 – 10 years.....	2,244.87	3,136.77	67,684.98	-	73,066.62	38.12
More than 10 years...	1,943.88	3,002.96	4,036.00	68,704.73	77,687.57	40.53
Total.....	**16,914.96**	**34,353.74**	**71,720.98**	**68,704.73**	**191,694.41**	**100.00**
Percentage.....	**8.82**	**17.92**	**37.41**	**35.84**	**100.00**	

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).
- Represents zero.
[1] Calculated based on the planting year of the block.
[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 9 – Oranges: Trees by age group, age range of the block and sector [2017 inventory]

Block age[1] and sector	Tree age[2]				Total	Percentage
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years		
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(%)
North						
1 – 2 years	1,614.47	-	-	-	1,614.47	3.83
3 – 5 years	168.91	7,573.63	-	-	7,742.54	18.37
6 – 10 years	489.60	548.31	15,654.84	-	16,692.75	39.60
More than 10 years	593.68	744.51	805.40	13,963.32	16,106.91	38.21
Subtotal	**2,866.66**	**8,866.45**	**16,460.24**	**13,963.32**	**42,156.67**	**22.00**
Northwest						
1 – 2 years	1,614.61	-	-	-	1,614.61	8.31
3 – 5 years	29.42	3,314.00	-	-	3,343.42	17.20
6 – 10 years	118.22	198.95	10,186.41	-	10,503.58	54.05
More than 10 years	36.65	78.79	154.70	3,702.17	3,972.31	20.44
Subtotal	**1,798.90**	**3,591.74**	**10,341.11**	**3,702.17**	**19,433.92**	**10.00**
Central						
1 – 2 years	2,791.46	-	-	-	2,791.46	5.20
3 – 5 years	383.39	9,715.40	-	-	10,098.79	18.81
6 – 10 years	922.04	1,406.45	17,632.99	-	19,961.48	37.17
More than 10 years	469.97	834.88	1,501.21	18,042.54	20,848.60	38.82
Subtotal	**4,566.86**	**11,956.73**	**19,134.20**	**18,042.54**	**53,700.33**	**28.00**
South						
1 – 2 years	4,281.52	-	-	-	4,281.52	10.81
3 – 5 years	299.00	4,567.89	-	-	4,866.89	12.29
6 – 10 years	340.90	608.62	10,740.72	-	11,690.24	29.51
More than 10 years	475.49	797.88	1,124.24	16,376.57	18,774.18	47.39
Subtotal	**5,396.91**	**5,974.39**	**11,864.96**	**16,376.57**	**39,612.83**	**21.00**
Southwest						
1 – 2 years	1,427.25	-	-	-	1,427.25	3.88
3 – 5 years	116.18	3,043.09	-	-	3,159.27	8.59
6 – 10 years	374.11	374.44	13,470.02	-	14,218.57	38.65
More than 10 years	368.09	546.90	450.45	16,620.13	17,985.57	48.89
Subtotal	**2,285.63**	**3,964.43**	**13,920.47**	**16,620.13**	**36,790.66**	**19.00**
Total	**16,914.96**	**34,353.74**	**71,720.98**	**68,704.73**	**191,694.41**	**100.00**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years). - Represents zero.

Table 10 – Oranges: Trees by age group, age range of the block and variety [2017 inventory]

Block age[1] and variety	Tree age[2]				Total	Percentage
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years		
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(%)
Hamlin, Westin e Rubi						
1 – 2 years	1,517.08	-	-	-	1,517.08	5.08
3 – 5 years	117.96	2,599.66	-	-	2,717.62	9.09
6 – 10 years	537.65	498.97	11,848.34	-	12,884.96	43.11
More than 10 years	405.29	711.63	643.10	11,006.48	12,766.50	42.72
Subtotal	**2,577.98**	**3,810.26**	**12,491.44**	**11,006.48**	**29,886.16**	**16.00**
Other early season						
1 – 2 years	195.12	-	-	-	195.12	2.34
3 – 5 years	26.46	1,375.07	-	-	1,401.53	16.78
6 – 10 years	155.01	192.43	3,971.94	-	4,319.38	51.72
More than 10 years	26.04	65.65	110.52	2,233.80	2,436.01	29.17
Subtotal	**402.63**	**1,633.15**	**4,082.46**	**2,233.80**	**8,352.04**	**4.00**
Pera Rio						
1 – 2 years	5,382.74	-	-	-	5,382.74	7.99
3 – 5 years	542.98	12,802.83	-	-	13,345.81	19.80
6 – 10 years	721.75	1,106.95	25,669.34	-	27,498.04	40.80
More than 10 years	518.68	644.91	1,150.51	18,859.87	21,173.97	31.42
Subtotal	**7,166.15**	**14,554.69**	**26,819.85**	**18,859.87**	**67,400.56**	**35.00**
Valencia e V. Folha Murcha						
1 – 2 years	2,898.41	-	-	-	2,898.41	4.41
3 – 5 years	237.46	8,669.72	-	-	8,907.18	13.57
6 – 10 years	600.58	1,041.12	20,798.84	-	22,440.54	34.18
More than 10 years	736.44	1,151.63	1,736.66	27,784.09	31,408.82	47.84
Subtotal	**4,472.89**	**10,862.47**	**22,535.50**	**27,784.09**	**65,654.95**	**34.00**
Natal						
1 – 2 years	1,735.96	-	-	-	1,735.96	8.51
3 – 5 years	72.04	2,766.73	-	-	2,838.77	13.92
6 – 10 years	229.88	297.30	5,396.52	-	5,923.70	29.04
More than 10 years	257.43	429.14	395.21	8,820.49	9,902.27	48.54
Subtotal	**2,295.31**	**3,493.17**	**5,791.73**	**8,820.49**	**20,400.70**	**11.00**
Total	**16,914.96**	**34,353.74**	**71,720.98**	**68,704.73**	**191,694.41**	**100.00**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years). - Represents zero.

Table 11 – Hamlin, Westin and Rubi: Trees by age group and age range of the block – North Sector [2017 inventory]

Block age[1] and North regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Triângulo Mineiro					
1 – 2 years.....	-	-	-	-	-
3 – 5 years.....	3.33	328.54	-	-	331.87
6 – 10 years.....	0.49	4.20	654.52	-	659.21
More than 10 years.....	20.21	28.06	15.53	1,058.95	1,122.75
Subtotal.....	**24.03**	**360.80**	**670.05**	**1,058.95**	**2,113.83**
Bebedouro					
1 – 2 years.....	60.47	-	-	-	60.47
3 – 5 years.....	7.14	396.12	-	-	403.26
6 – 10 years.....	87.79	48.36	1,882.72	-	2,018.87
More than 10 years.....	70.77	167.87	132.82	1,976.81	2,348.27
Subtotal.....	**226.17**	**612.35**	**2,015.54**	**1,976.81**	**4,830.87**
Altinópolis					
1 – 2 years.....	14.69	-	-	-	14.69
3 – 5 years.....	2.31	24.82	-	-	27.13
6 – 10 years.....	49.23	33.75	275.34	-	358.32
More than 10 years.....	36.21	34.51	28.72	402.38	501.82
Subtotal.....	**102.44**	**93.08**	**304.06**	**402.38**	**901.96**
North					
1 – 2 years.....	75.16	-	-	-	75.16
3 – 5 years.....	12.78	749.48	-	-	762.26
6 – 10 years.....	137.51	86.31	2,812.58	-	3,036.40
More than 10 years.....	127.19	230.44	177.07	3,438.14	3,972.84
Total.....	**352.64**	**1,066.23**	**2,989.65**	**3,438.14**	**7,846.66**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 12 – Hamlin, Westin and Rubi: Trees by age group and age range of the block – Northwest Sector [2017 inventory]

Block age[1] and Northwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Votuporanga					
1 – 2 years	3.20	-	-	-	3.20
3 – 5 years	-	81.55	-	-	81.55
6 – 10 years	2.47	4.68	273.05	-	280.20
More than 10 years	3.96	-	-	162.85	166.81
Subtotal	**9.63**	**86.23**	**273.05**	**162.85**	**531.76**
São José do Rio Preto					
1 – 2 years	161.22	-	-	-	161.22
3 – 5 years	4.77	307.91	-	-	312.68
6 – 10 years	1.78	13.72	1,290.10	-	1,305.60
More than 10 years	19.49	16.08	8.85	497.03	541.45
Subtotal	**187.26**	**337.71**	**1,298.95**	**497.03**	**2,320.95**
Northwest					
1 – 2 years	164.42	-	-	-	164.42
3 – 5 years	4.77	389.46	-	-	394.23
6 – 10 years	4.25	18.40	1,563.15	-	1,585.80
More than 10 years	23.45	16.08	8.85	659.88	708.26
Total	**196.89**	**423.94**	**1,572.00**	**659.88**	**2,852.71**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 13 – Hamlin, Westin and Rubi: Trees by age group and age range of the block – Central Sector [2017 inventory]

Block age[1] and Central regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Matão					
1 – 2 years	13.70	-	-	-	13.70
3 – 5 years	0.69	274.66	-	-	275.35
6 – 10 years	38.90	36.67	1,465.18	-	1,540.75
More than 10 years	30.84	81.09	73.67	920.09	1,105.69
Subtotal	**84.13**	**392.42**	**1,538.85**	**920.09**	**2,935.49**
Duartina					
1 – 2 years	72.63	-	-	-	72.63
3 – 5 years	27.19	437.37	-	-	464.56
6 – 10 years	212.54	126.11	1,556.07	-	1,894.72
More than 10 years	15.42	41.32	32.65	1,052.48	1,141.87
Subtotal	**327.78**	**604.80**	**1,588.72**	**1,052.48**	**3,573.78**
Brotas					
1 – 2 years	41.11	-	-	-	41.11
3 – 5 years	16.04	124.03	-	-	140.07
6 – 10 years	7.37	98.75	380.60	-	486.72
More than 10 years	17.21	49.37	110.46	467.59	644.63
Subtotal	**81.73**	**272.15**	**491.06**	**467.59**	**1,312.53**
Central					
1 – 2 years	127.44	-	-	-	127.44
3 – 5 years	43.92	836.06	-	-	879.98
6 – 10 years	258.81	261.53	3,401.85	-	3,922.19
More than 10 years	63.47	171.78	216.78	2,440.16	2,892.19
Total	**493.64**	**1,269.37**	**3,618.63**	**2,440.16**	**7,821.80**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 14 – Hamlin, Westin and Rubi: Trees by age group and age range of the block – South Sector [2017 inventory]

Block age[1] and South regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Porto Ferreira					
1 – 2 years	730.92	-	-	-	730.92
3 – 5 years	38.17	249.75	-	-	287.92
6 – 10 years	34.83	45.87	1,089.20	-	1,169.90
More than 10 years	21.64	108.37	59.41	839.92	1,029.34
Subtotal	**825.56**	**403.99**	**1,148.61**	**839.92**	**3,218.08**
Limeira					
1 – 2 years	103.14	-	-	-	103.14
3 – 5 years	6.07	164.46	-	-	170.53
6 – 10 years	9.82	28.53	1,064.19	-	1,102.54
More than 10 years	65.17	39.27	84.29	1,180.45	1,369.18
Subtotal	**184.20**	**232.26**	**1,148.48**	**1,180.45**	**2,745.39**
South					
1 – 2 years	834.06	-	-	-	834.06
3 – 5 years	44.24	414.21	-	-	458.45
6 – 10 years	44.65	74.40	2,153.39	-	2,272.44
More than 10 years	86.81	147.64	143.70	2,020.37	2,398.52
Total	**1,009.76**	**636.25**	**2,297.09**	**2,020.37**	**5,963.47**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 15 – Hamlin, Westin and Rubi: Trees by age group and age range of the block – Southwest Sector [2017 inventory]

Block age[1] and Southwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Avaré					
1 – 2 years	160.45	-	-	-	160.45
3 – 5 years	10.48	92.98	-	-	103.46
6 – 10 years	90.81	45.32	1,646.29	-	1,782.42
More than 10 years	104.37	145.10	91.00	2,056.70	2,397.17
Subtotal	**366.11**	**283.40**	**1,737.29**	**2,056.70**	**4,443.50**
Itapetininga					
1 – 2 years	155.55	-	-	-	155.55
3 – 5 years	1.77	117.47	-	-	119.24
6 – 10 years	1.62	13.01	271.08	-	285.71
More than 10 years	-	0.59	5.70	391.23	397.52
Subtotal	**158.94**	**131.07**	**276.78**	**391.23**	**958.02**
Southwest					
1 – 2 years	316.00	-	-	-	316.00
3 – 5 years	12.25	210.45	-	-	222.70
6 – 10 years	92.43	58.33	1,917.37	-	2,068.13
More than 10 years	104.37	145.69	96.70	2,447.93	2,794.69
Total	**525.05**	**414.47**	**2,014.07**	**2,447.93**	**5,401.52**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 16 – Other early season varieties[1]: Trees by age group and age range of the block – North Sector [2017 inventory]

Block age[2] and North regions	Tree age[3]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Triângulo Mineiro					
1 – 2 years	-	-	-	-	-
3 – 5 years	0.09	20.98	-	-	21.07
6 – 10 years	0.32	1.38	83.93	-	85.63
More than 10 years	0.02	0.01	0.15	10.87	11.05
Subtotal	**0.43**	**22.37**	**84.08**	**10.87**	**117.75**
Bebedouro					
1 – 2 years	5.24	-	-	-	5.24
3 – 5 years	3.49	206.53	-	-	210.02
6 – 10 years	42.63	67.29	986.95	-	1,096.87
More than 10 years	4.57	21.18	21.03	362.47	409.25
Subtotal	**55.93**	**295.00**	**1,007.98**	**362.47**	**1,721.38**
Altinópolis					
1 – 2 years	0.47	-	-	-	0.47
3 – 5 years	0.88	25.42	-	-	26.30
6 – 10 years	5.34	2.40	88.73	-	96.47
More than 10 years	0.08	0.96	0.49	9.01	10.54
Subtotal	**6.77**	**28.78**	**89.22**	**9.01**	**133.78**
North					
1 – 2 years	5.71	-	-	-	5.71
3 – 5 years	4.46	252.93	-	-	257.39
6 – 10 years	48.29	71.07	1,159.61	-	1,278.97
More than 10 years	4.67	22.15	21.67	382.35	430.84
Total	**63.13**	**346.15**	**1,181.28**	**382.35**	**1,972.91**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[2] Calculated based on the planting year of the block.

[3] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 17 – Other early season varieties[1]: Trees by age group and age range of the block – Northwest Sector [2017 inventory]

Block age[2] and Northwest regions	Tree age[3]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Votuporanga					
1 – 2 years	-	-	-	-	-
3 – 5 years	3.07	22.48	-	-	25.55
6 – 10 years	4.40	3.89	140.83	-	149.12
More than 10 years	-	0.02	1.70	19.93	21.65
Subtotal	**7.47**	**26.39**	**142.53**	**19.93**	**196.32**
São José do Rio Preto					
1 – 2 years	12.91	-	-	-	12.91
3 – 5 years	0.73	197.62	-	-	198.35
6 – 10 years	25.98	43.08	735.59	-	804.65
More than 10 years	-	0.17	11.88	266.55	278.60
Subtotal	**39.62**	**240.87**	**747.47**	**266.55**	**1,294.51**
Northwest					
1 – 2 years	12.91	-	-	-	12.91
3 – 5 years	3.80	220.10	-	-	223.90
6 – 10 years	30.38	46.97	876.42	-	953.77
More than 10 years	-	0.19	13.58	286.48	300.25
Total	**47.09**	**267.26**	**890.00**	**286.48**	**1,490.83**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[2] Calculated based on the planting year of the block.

[3] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 18 – Other early season varieties[1]: Trees by age group and age range of the block – Central Sector [2017 inventory]

Block age[2] and Central regions	Tree age[3]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Matão					
1 – 2 years	26.49	-	-	-	26.49
3 – 5 years	2.38	346.82	-	-	349.20
6 – 10 years	20.08	18.13	708.76	-	746.97
More than 10 years	0.73	2.58	17.35	562.42	583.08
Subtotal	**49.68**	**367.53**	**726.11**	**562.42**	**1,705.74**
Duartina					
1 – 2 years	52.76	-	-	-	52.76
3 – 5 years	12.93	272.25	-	-	285.18
6 – 10 years	20.32	22.42	441.09	-	483.83
More than 10 years	5.83	13.88	10.21	191.94	221.86
Subtotal	**91.84**	**308.55**	**451.30**	**191.94**	**1,043.63**
Brotas					
1 – 2 years	0.27	-	-	-	0.27
3 – 5 years	0.80	97.54	-	-	98.34
6 – 10 years	13.24	21.71	31.29	-	66.24
More than 10 years	0.47	3.82	15.87	91.73	111.89
Subtotal	**14.78**	**123.07**	**47.16**	**91.73**	**276.74**
Central					
1 – 2 years	79.52	-	-	-	79.52
3 – 5 years	16.11	716.61	-	-	732.72
6 – 10 years	53.64	62.26	1,181.14	-	1,297.04
More than 10 years	7.03	20.28	43.43	846.09	916.83
Total	**156.30**	**799.15**	**1,224.57**	**846.09**	**3,026.11**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[2] Calculated based on the planting year of the block.

[3] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 19 – Other early season varieties[1]: Trees by age group and age range of the block – South Sector [2017 inventory]

Block age[2] and South regions	Tree age[3]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Porto Ferreira					
1 – 2 years	2.62	-	-	-	2.62
3 – 5 years	0.19	18.83	-	-	19.02
6 – 10 years	8.55	2.36	154.49	-	165.40
More than 10 years	3.04	4.36	19.87	183.81	211.08
Subtotal	**14.40**	**25.55**	**174.36**	**183.81**	**398.12**
Limeira					
1 – 2 years	0.19	-	-	-	0.19
3 – 5 years	0.02	2.31	-	-	2.33
6 – 10 years	0.76	0.42	65.78	-	66.96
More than 10 years	1.82	2.44	0.57	100.93	105.76
Subtotal	**2.79**	**5.17**	**66.35**	**100.93**	**175.24**
South					
1 – 2 years	2.81	-	-	-	2.81
3 – 5 years	0.21	21.14	-	-	21.35
6 – 10 years	9.31	2.78	220.27	-	232.36
More than 10 years	4.86	6.80	20.44	284.74	316.84
Total	**17.19**	**30.72**	**240.71**	**284.74**	**573.36**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[2] Calculated based on the planting year of the block.

[3] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 20 – Other early season varieties[1]: Trees by age group and age range of the block – Southwest Sector [2017 inventory]

Block age[2] and Southwest regions	Tree age[3]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Avaré					
1 – 2 years	2.86	-	-	-	2.86
3 – 5 years	1.40	39.35	-	-	40.75
6 – 10 years	10.82	4.38	286.95	-	302.15
More than 10 years	8.65	15.68	10.57	415.77	450.67
Subtotal	**23.73**	**59.41**	**297.52**	**415.77**	**796.43**
Itapetininga					
1 – 2 years	91.31	-	-	-	91.31
3 – 5 years	0.48	124.94	-	-	125.42
6 – 10 years	2.57	4.97	247.55	-	255.09
More than 10 years	0.83	0.55	0.83	18.37	20.58
Subtotal	**95.19**	**130.46**	**248.38**	**18.37**	**492.40**
Southwest					
1 – 2 years	94.17	-	-	-	94.17
3 – 5 years	1.88	164.29	-	-	166.17
6 – 10 years	13.39	9.35	534.50	-	557.24
More than 10 years	9.48	16.23	11.40	434.14	471.25
Total	**118.92**	**189.87**	**545.90**	**434.14**	**1,288.83**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Valencia Americana, Valencia Argentina, Seleta e Pineapple.

[2] Calculated based on the planting year of the block.

[3] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 21 – Pera Rio: Trees by age group and age range of the block – North Sector [2017 inventory]

Block age[1] and North regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Triângulo Mineiro					
1 – 2 years	374.66	-	-	-	374.66
3 – 5 years	19.03	1,419.50	-	-	1,438.53
6 – 10 years	23.09	45.69	1,697.97	-	1,766.75
More than 10 years	2.14	1.92	19.04	614.59	637.69
Subtotal	**418.92**	**1,467.11**	**1,717.01**	**614.59**	**4,217.63**
Bebedouro					
1 – 2 years	451.43	-	-	-	451.43
3 – 5 years	68.30	2,021.17	-	-	2,089.47
6 – 10 years	61.37	80.43	3,213.68	-	3,355.48
More than 10 years	78.41	108.46	207.99	1,155.98	1,550.84
Subtotal	**659.51**	**2,210.06**	**3,421.67**	**1,155.98**	**7,447.22**
Altinópolis					
1 – 2 years	111.53	-	-	-	111.53
3 – 5 years	2.72	66.31	-	-	69.03
6 – 10 years	44.19	37.61	890.78	-	972.58
More than 10 years	26.54	24.43	37.63	754.74	843.34
Subtotal	**184.98**	**128.35**	**928.41**	**754.74**	**1,996.48**
North					
1 – 2 years	937.62	-	-	-	937.62
3 – 5 years	90.05	3,506.98	-	-	3,597.03
6 – 10 years	128.65	163.73	5,802.43	-	6,094.81
More than 10 years	107.09	134.81	264.66	2,525.31	3,031.87
Total	**1,263.41**	**3,805.52**	**6,067.09**	**2,525.31**	**13,661.33**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 22 – Pera Rio: Trees by age group and age range of the block – Northwest Sector [2017 inventory]

Block age[1] and Northwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Votuporanga					
1 – 2 years	122.18	-	-	-	122.18
3 – 5 years	10.92	1,187.63	-	-	1,198.55
6 – 10 years	36.59	65.99	4,011.26	-	4,113.84
More than 10 years	-	2.45	36.52	808.50	847.47
Subtotal	**169.69**	**1,256.07**	**4,047.78**	**808.50**	**6,282.04**
São José do Rio Preto					
1 – 2 years	479.98	-	-	-	479.98
3 – 5 years	8.33	397.32	-	-	405.65
6 – 10 years	21.25	14.15	1,094.48	-	1,129.88
More than 10 years	2.53	14.25	41.17	646.26	704.21
Subtotal	**512.09**	**425.72**	**1,135.65**	**646.26**	**2,719.72**
Northwest					
1 – 2 years	602.16	-	-	-	602.16
3 – 5 years	19.25	1,584.95	-	-	1,604.20
6 – 10 years	57.84	80.14	5,105.74	-	5,243.72
More than 10 years	2.53	16.70	77.69	1,454.76	1,551.68
Total	**681.78**	**1,681.79**	**5,183.43**	**1,454.76**	**9,001.76**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 23 – Pera Rio: Trees by age group and age range of the block – Central Sector [2017 inventory]

Block age[1] and Central regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Matão					
1 – 2 years	797.30	-	-	-	797.30
3 – 5 years	69.07	1,897.63	-	-	1,966.70
6 – 10 years	79.32	210.69	2,085.25	-	2,375.26
More than 10 years	33.77	81.93	151.15	1,159.15	1,426.00
Subtotal	**979.46**	**2,190.25**	**2,236.40**	**1,159.15**	**6,565.26**
Duartina					
1 – 2 years	471.50	-	-	-	471.50
3 – 5 years	93.04	1,690.07	-	-	1,783.11
6 – 10 years	203.07	185.61	3,991.85	-	4,380.53
More than 10 years	104.01	57.44	57.66	3,167.23	3,386.34
Subtotal	**871.62**	**1,933.12**	**4,049.51**	**3,167.23**	**10,021.48**
Brotas					
1 – 2 years	184.20	-	-	-	184.20
3 – 5 years	31.75	751.90	-	-	783.65
6 – 10 years	26.57	96.89	454.18	-	577.64
More than 10 years	11.75	38.75	184.93	956.74	1,192.17
Subtotal	**254.27**	**887.54**	**639.11**	**956.74**	**2,737.66**
Central					
1 – 2 years	1,453.00	-	-	-	1,453.00
3 – 5 years	193.86	4,339.60	-	-	4,533.46
6 – 10 years	308.96	493.19	6,531.28	-	7,333.43
More than 10 years	149.53	178.12	393.74	5,283.12	6,004.51
Total	**2,105.35**	**5,010.91**	**6,925.02**	**5,283.12**	**19,324.40**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 24 – Pera Rio: Trees by age group and age range of the block – South Sector [2017 inventory]

Block age[1] and South regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Porto Ferreira					
1 – 2 years	1,569.84	-	-	-	1,569.84
3 – 5 years	75.84	1,317.71	-	-	1,393.55
6 – 10 years	55.54	140.59	1,662.19	-	1,858.32
More than 10 years	110.02	104.59	135.28	2,073.48	2,423.37
Subtotal	**1,811.24**	**1,562.89**	**1,797.47**	**2,073.48**	**7,245.08**
Limeira					
1 – 2 years	308.48	-	-	-	308.48
3 – 5 years	99.77	963.83	-	-	1,063.60
6 – 10 years	65.39	114.28	2,376.39	-	2,556.06
More than 10 years	68.94	80.80	136.40	2,803.00	3,089.14
Subtotal	**542.58**	**1,158.91**	**2,512.79**	**2,803.00**	**7,017.28**
South					
1 – 2 years	1,878.32	-	-	-	1,878.32
3 – 5 years	175.61	2,281.54	-	-	2,457.15
6 – 10 years	120.93	254.87	4,038.58	-	4,414.38
More than 10 years	178.96	185.39	271.68	4,876.48	5,512.51
Total	**2,353.82**	**2,721.80**	**4,310.26**	**4,876.48**	**14,262.36**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 25 – Pera Rio: Trees by age group and age range of the block – Southwest Sector [2017 inventory]

Block age[1] and Southwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Avaré					
1 – 2 years	248.12	-	-	-	248.12
3 – 5 years	41.22	579.16	-	-	620.38
6 – 10 years	104.02	103.20	3,233.23	-	3,440.45
More than 10 years	79.23	125.87	137.77	3,661.64	4,004.51
Subtotal	**472.59**	**808.23**	**3,371.00**	**3,661.64**	**8,313.46**
Itapetininga					
1 – 2 years	263.52	-	-	-	263.52
3 – 5 years	22.99	510.60	-	-	533.59
6 – 10 years	1.35	11.82	958.08	-	971.25
More than 10 years	1.34	4.02	4.97	1,058.56	1,068.89
Subtotal	**289.20**	**526.44**	**963.05**	**1,058.56**	**2,837.25**
Southwest					
1 – 2 years	511.64	-	-	-	511.64
3 – 5 years	64.21	1,089.76	-	-	1,153.97
6 – 10 years	105.37	115.02	4,191.31	-	4,411.70
More than 10 years	80.57	129.89	142.74	4,720.20	5,073.40
Total	**761.79**	**1,334.67**	**4,334.05**	**4,720.20**	**11,150.71**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 26 – Valencia and Folha Murcha: Trees by age group and age range of the block – North Sector [2017 inventory]

Block age[1] and North regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Triângulo Mineiro					
1 – 2 years	49.70	-	-	-	49.70
3 – 5 years	8.08	1,361.06	-	-	1,369.14
6 – 10 years	6.92	15.66	1,392.66	-	1,415.24
More than 10 years	10.40	14.12	18.93	1,381.06	1,424.51
Subtotal	**75.10**	**1,390.84**	**1,411.59**	**1,381.06**	**4,258.59**
Bebedouro					
1 – 2 years	412.11	-	-	-	412.11
3 – 5 years	45.22	1,051.08	-	-	1,096.30
6 – 10 years	109.55	154.83	2,855.94	-	3,120.32
More than 10 years	155.39	218.93	184.35	3,698.96	4,257.63
Subtotal	**722.27**	**1,424.84**	**3,040.29**	**3,698.96**	**8,886.36**
Altinópolis					
1 – 2 years	12.00	-	-	-	12.00
3 – 5 years	0.76	12.38	-	-	13.14
6 – 10 years	28.30	33.55	601.74	-	663.59
More than 10 years	79.47	57.88	75.84	1,188.42	1,401.61
Subtotal	**120.53**	**103.81**	**677.58**	**1,188.42**	**2,090.34**
North					
1 – 2 years	473.81	-	-	-	473.81
3 – 5 years	54.06	2,424.52	-	-	2,478.58
6 – 10 years	144.77	204.04	4,850.34	-	5,199.15
More than 10 years	245.26	290.93	279.12	6,268.44	7,083.75
Total	**917.90**	**2,919.49**	**5,129.46**	**6,268.44**	**15,235.29**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 27 – Valencia and Folha Murcha: Trees by age group and age range of the block – Northwest Sector [2017 inventory]

Block age[1] and Northwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Votuporanga					
1 – 2 years	4.09	-	-	-	4.09
3 – 5 years	0.22	43.93	-	-	44.15
6 – 10 years	2.42	9.63	767.06	-	779.11
More than 10 years	0.04	1.54	1.04	237.30	239.92
Subtotal	**6.77**	**55.10**	**768.10**	**237.30**	**1,067.27**
São José do Rio Preto					
1 – 2 years	383.55	-	-	-	383.55
3 – 5 years	1.25	821.97	-	-	823.22
6 – 10 years	20.52	41.50	1,320.48	-	1,382.50
More than 10 years	4.81	25.77	28.78	510.15	569.51
Subtotal	**410.13**	**889.24**	**1,349.26**	**510.15**	**3,158.78**
Northwest					
1 – 2 years	387.64	-	-	-	387.64
3 – 5 years	1.47	865.90	-	-	867.37
6 – 10 years	22.94	51.13	2,087.54	-	2,161.61
More than 10 years	4.85	27.31	29.82	747.45	809.43
Total	**416.90**	**944.34**	**2,117.36**	**747.45**	**4,226.05**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 28 – Valencia and Folha Murcha: Trees by age group and age range of the block – Central Sector [2017 inventory]

Block age[1] and Central regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Matão					
1 – 2 years	207.88	-	-	-	207.88
3 – 5 years	16.32	1,570.77	-	-	1,587.09
6 – 10 years	44.42	56.05	1,922.60	-	2,023.07
More than 10 years	70.24	92.14	216.05	1,911.75	2,290.18
Subtotal	**338.86**	**1,718.96**	**2,138.65**	**1,911.75**	**6,108.22**
Duartina					
1 – 2 years	374.58	-	-	-	374.58
3 – 5 years	75.50	1,139.55	-	-	1,215.05
6 – 10 years	133.11	202.66	2,642.23	-	2,978.00
More than 10 years	81.61	97.25	78.91	3,250.61	3,508.38
Subtotal	**664.80**	**1,439.46**	**2,721.14**	**3,250.61**	**8,076.01**
Brotas					
1 – 2 years	193.72	-	-	-	193.72
3 – 5 years	8.76	370.32	-	-	379.08
6 – 10 years	35.59	187.19	717.79	-	940.57
More than 10 years	18.93	131.94	419.34	2,013.98	2,584.19
Subtotal	**257.00**	**689.45**	**1,137.13**	**2,013.98**	**4,097.56**
Central					
1 – 2 years	776.18	-	-	-	776.18
3 – 5 years	100.58	3,080.64	-	-	3,181.22
6 – 10 years	213.12	445.90	5,282.62	-	5,941.64
More than 10 years	170.78	321.33	714.30	7,176.34	8,382.75
Total	**1,260.66**	**3,847.87**	**5,996.92**	**7,176.34**	**18,281.79**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 29 – Valencia and Folha Murcha: Trees by age group and age range of the block – South Sector [2017 inventory]

Block age[1] and South regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Porto Ferreira					
1 – 2 years	480.29	-	-	-	480.29
3 – 5 years	34.88	779.81	-	-	814.69
6 – 10 years	65.31	103.84	1,900.86	-	2,070.01
More than 10 years	85.86	214.21	385.84	3,390.78	4,076.69
Subtotal	**666.34**	**1,097.86**	**2,286.70**	**3,390.78**	**7,441.68**
Limeira					
1 – 2 years	326.90	-	-	-	326.90
3 – 5 years	17.68	490.74	-	-	508.42
6 – 10 years	80.26	138.56	1,885.31	-	2,104.13
More than 10 years	84.83	136.02	198.35	4,301.99	4,721.19
Subtotal	**509.67**	**765.32**	**2,083.66**	**4,301.99**	**7,660.64**
South					
1 – 2 years	807.19	-	-	-	807.19
3 – 5 years	52.56	1,270.55	-	-	1,323.11
6 – 10 years	145.57	242.40	3,786.17	-	4,174.14
More than 10 years	170.69	350.23	584.19	7,692.77	8,797.88
Total	**1,176.01**	**1,863.18**	**4,370.36**	**7,692.77**	**15,102.32**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 30 – Valencia and Folha Murcha: Trees by age group and age range of the block – Southwest Sector [2017 inventory]

Block age[1] and Southwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Avaré					
1 – 2 years	151.32	-	-	-	151.32
3 – 5 years	24.04	688.30	-	-	712.34
6 – 10 years	64.42	84.07	3,323.46	-	3,471.95
More than 10 years	140.76	152.89	113.98	4,976.42	5,384.05
Subtotal	**380.54**	**925.26**	**3,437.44**	**4,976.42**	**9,719.66**
Itapetininga					
1 – 2 years	302.27	-	-	-	302.27
3 – 5 years	4.75	339.81	-	-	344.56
6 – 10 years	9.76	13.58	1,468.71	-	1,492.05
More than 10 years	4.10	8.94	15.25	922.67	950.96
Subtotal	**320.88**	**362.33**	**1,483.96**	**922.67**	**3,089.84**
Southwest					
1 – 2 years	453.59	-	-	-	453.59
3 – 5 years	28.79	1,028.11	-	-	1,056.90
6 – 10 years	74.18	97.65	4,792.17	-	4,964.00
More than 10 years	144.86	161.83	129.23	5,899.09	6,335.01
Total	**701.42**	**1,287.59**	**4,921.40**	**5,899.09**	**12,809.50**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 31 – Natal: Trees by age group and age range of the block – North Sector [2017 inventory]

Block age[1] and North regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Triângulo Mineiro					
1 – 2 years	6.02	-	-	-	6.02
3 – 5 years	0.56	231.01	-	-	231.57
6 – 10 years	2.91	4.95	581.13	-	588.99
More than 10 years	6.46	12.01	10.47	613.37	642.31
Subtotal	**15.95**	**247.97**	**591.60**	**613.37**	**1,468.89**
Bebedouro					
1 – 2 years	112.39	-	-	-	112.39
3 – 5 years	6.57	381.71	-	-	388.28
6 – 10 years	20.57	16.38	312.99	-	349.94
More than 10 years	102.36	51.65	51.39	649.73	855.13
Subtotal	**241.89**	**449.74**	**364.38**	**649.73**	**1,705.74**
Altinópolis					
1 – 2 years	3.76	-	-	-	3.76
3 – 5 years	0.43	27.00	-	-	27.43
6 – 10 years	6.90	1.83	135.76	-	144.49
More than 10 years	0.65	2.52	1.02	85.98	90.17
Subtotal	**11.74**	**31.35**	**136.78**	**85.98**	**265.85**
North					
1 – 2 years	122.17	-	-	-	122.17
3 – 5 years	7.56	639.72	-	-	647.28
6 – 10 years	30.38	23.16	1,029.88	-	1,083.42
More than 10 years	109.47	66.18	62.88	1,349.08	1,587.61
Total	**269.58**	**729.06**	**1,092.76**	**1,349.08**	**3,440.48**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 32 – Natal: Trees by age group and age range of the block – Northwest Sector [2017 inventory]

Block age[1] and Northwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Votuporanga					
1 – 2 years.....	11.37	-	-	-	11.37
3 – 5 years.....	0.05	31.84	-	-	31.89
6 – 10 years.....	2.41	1.19	225.71	-	229.31
More than 10 years.....	5.82	14.46	18.65	141.63	180.56
Subtotal.....	**19.65**	**47.49**	**244.36**	**141.63**	**453.13**
São José do Rio Preto					
1 – 2 years.....	436.11	-	-	-	436.11
3 – 5 years.....	0.08	221.75	-	-	221.83
6 – 10 years.....	0.40	1.12	327.85	-	329.37
More than 10 years.....	-	4.05	6.11	411.97	422.13
Subtotal.....	**436.59**	**226.92**	**333.96**	**411.97**	**1,409.44**
Northwest					
1 – 2 years.....	447.48	-	-	-	447.48
3 – 5 years.....	0.13	253.59	-	-	253.72
6 – 10 years.....	2.81	2.31	553.56	-	558.68
More than 10 years.....	5.82	18.51	24.76	553.60	602.69
Total.....	**456.24**	**274.41**	**578.32**	**553.60**	**1,862.57**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 33 – Natal: Trees by age group and age range of the block – Central Sector [2017 inventory]

Block age[1] and Central regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Matão					
1 – 2 years.....	146.67	-	-	-	146.67
3 – 5 years.....	4.48	248.01	-	-	252.49
6 – 10 years.....	0.51	29.73	247.64	-	277.88
More than 10 years.....	25.01	55.44	43.84	607.13	731.42
Subtotal.....	**176.67**	**333.18**	**291.48**	**607.13**	**1,408.46**
Duartina					
1 – 2 years.....	83.84	-	-	-	83.84
3 – 5 years.....	21.23	446.45	-	-	467.68
6 – 10 years.....	54.86	76.68	806.68	-	938.22
More than 10 years.....	43.90	34.31	14.28	1,344.59	1,437.08
Subtotal.....	**203.83**	**557.44**	**820.96**	**1,344.59**	**2,926.82**
Brotas					
1 – 2 years.....	124.81	-	-	-	124.81
3 – 5 years.....	3.21	48.03	-	-	51.24
6 – 10 years.....	32.14	37.16	181.78	-	251.08
More than 10 years.....	10.25	53.62	74.84	345.11	483.82
Subtotal.....	**170.41**	**138.81**	**256.62**	**345.11**	**910.95**
Central					
1 – 2 years.....	355.32	-	-	-	355.32
3 – 5 years.....	28.92	742.49	-	-	771.41
6 – 10 years.....	87.51	143.57	1,236.10	-	1,467.18
More than 10 years.....	79.16	143.37	132.96	2,296.83	2,652.32
Total.....	**550.91**	**1,029.43**	**1,369.06**	**2,296.83**	**5,246.23**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 34 – Natal: Trees by age group and age range of the block – South Sector [2017 inventory]

Block age[1] and South regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Porto Ferreira					
1 – 2 years	448.72	-	-	-	448.72
3 – 5 years	12.90	369.58	-	-	382.48
6 – 10 years	15.86	5.47	139.72	-	161.05
More than 10 years	30.22	94.28	80.84	856.40	1,061.74
Subtotal	**507.70**	**469.33**	**220.56**	**856.40**	**2,053.99**
Limeira					
1 – 2 years	310.42	-	-	-	310.42
3 – 5 years	13.48	210.87	-	-	224.35
6 – 10 years	4.58	28.70	402.59	-	435.87
More than 10 years	3.95	13.54	23.39	645.81	686.69
Subtotal	**332.43**	**253.11**	**425.98**	**645.81**	**1,657.33**
South					
1 – 2 years	759.14	-	-	-	759.14
3 – 5 years	26.38	580.45	-	-	606.83
6 – 10 years	20.44	34.17	542.31	-	596.92
More than 10 years	34.17	107.82	104.23	1,502.21	1,748.43
Total	**840.13**	**722.44**	**646.54**	**1,502.21**	**3,711.32**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 35 – Natal: Trees by age group and age range of the block – Southwest Sector [2017 inventory]

Block age[1] and Southwest regions	Tree age[2]				Total
	1 – 2 years	3 – 5 years	6 – 10 years	More than 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
Avaré					
1 – 2 years	42.45	-	-	-	42.45
3 – 5 years	8.51	408.67	-	-	417.18
6 – 10 years	82.80	89.16	1,307.42	-	1,479.38
More than 10 years	28.03	93.05	61.33	2,335.52	2,517.93
Subtotal	**161.79**	**590.88**	**1,368.75**	**2,335.52**	**4,456.94**
Itapetininga					
1 – 2 years	9.40	-	-	-	9.40
3 – 5 years	0.54	141.81	-	-	142.35
6 – 10 years	5.94	4.93	727.25	-	738.12
More than 10 years	0.78	0.21	9.05	783.25	793.29
Subtotal	**16.66**	**146.95**	**736.30**	**783.25**	**1,683.16**
Southwest					
1 – 2 years	51.85	-	-	-	51.85
3 – 5 years	9.05	550.48	-	-	559.53
6 – 10 years	88.74	94.09	2,034.67	-	2,217.50
More than 10 years	28.81	93.26	70.38	3,118.77	3,311.22
Total	**178.45**	**737.83**	**2,105.05**	**3,118.77**	**6,140.10**

Ages and planting year: 1 – 2 years (2015 and 2016), 3 – 5 years (2012 to 2014), 6 – 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

- Represents zero.

[1] Calculated based on the planting year of the block.

[2] Estimated from the information provided by the citrus growers on the years when the block replanting and the visual aspects of the tree, such as trunk circumference, tree height and canopy shape, among other factors.

Table 36 – Oranges: Area of young and mature groves by sector and region [2017 inventory and changes observed in relation to the 2016 inventory]

Sector and region	2017 inventory			Change (△) in relation to the 2016 inventory in each category of grove age		
	Area of young groves[1]	Area of mature groves[2]	Total			
	(A)	(B)	(C)	(△ A)	(△ B)	(△ C)
	(hectares)	(hectares)	(hectares)	(%)	(%)	(%)
North						
Triângulo Mineiro	759	24,959	25,718	90.23	0.49	1.91
Bebedouro	1,617	50,142	51,759	-22.15	0.78	-0.14
Altinópolis	172	10,770	10,942	2,766.67	-0.58	0.95
Subtotal	**2,548**	**85,871**	**88,419**	**2.66**	**0.52**	**0.58**
Northwest						
Votuporanga	201	19,861	20,062	-1.95	0.62	0.60
São José do Rio Preto	2,321	20,723	23,044	16.22	-6.14	-4.29
Subtotal	**2,522**	**40,584**	**43,106**	**14.53**	**-2.95**	**-2.07**
Central						
Matão	1,519	38,867	40,386	-7.83	-1.83	-2.07
Duartina	1,389	51,043	52,432	-20.45	-2.31	-2.89
Brotas	837	19,361	20,198	-18.82	1.73	0.67
Subtotal	**3,745**	**109,271**	**113,016**	**-15.37**	**-1.45**	**-1.98**
South						
Porto Ferreira	4,576	37,287	41,863	1.49	3.35	3.14
Limeira	1,696	41,182	42,878	-5.73	-0.64	-0.86
Subtotal	**6,272**	**78,469**	**84,741**	**-0.57**	**1.22**	**1.08**
Southwest						
Avaré	904	54,999	55,903	-29.21	1.23	0.53
Itapetininga	1,050	16,331	17,381	123.40	-2.34	1.10
Subtotal	**1,954**	**71,330**	**73,284**	**11.85**	**0.39**	**0.66**
Total	**17,041**	**385,525**	**402,566**	**-0.72**	**-0.30**	**-0.32**
Percentage	**4.23**	**95.77**	**100.00**	**(X)**	**(X)**	**(X)**

(X) Not applicable.

[1] Groves implemented in 2015 and 2016.

[2] Groves implemented in 2014 or in previous years.

Table 37 – Oranges: Non-bearing and bearing trees by sector and region [2017 inventory and changes observed in relation to the 2016 inventory]

Sector and region	2017 inventory					Change (△) in relation to the 2016 inventory in each category of grove age				
	Non-bearing trees[1]			Bearing trees[4]	Total					
	In young groves[2]	In mature groves[3] (resets)	Total							
	(A)	(B)	(C)	(D)	(E)	(△A)	(△B)	(△C)	(△D)	(△E)
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(%)	(%)	(%)	(%)	(%)
North										
Triângulo Mineiro.....	430.38	104.05	534.43	11,642.26	12,176.69	82.89	-5.22	54.86	-1.33	0.27
Bebedouro.....	1,041.64	864.13	1,905.77	22,685.80	24,591.57	-19.73	10.03	-8.51	-0.35	-1.03
Altinópolis.....	142.45	284.01	426.46	4,961.95	5,388.41	3,189.84	-16.88	23.24	-1.54	0.05
Subtotal	**1,614.47**	**1,252.19**	**2,866.66**	**39,290.01**	**42,156.67**	**5.01**	**1.24**	**3.33**	**-0.79**	**-0.52**
Northwest										
Votuporanga.....	140.84	72.37	213.21	8,317.31	8,530.52	53.45	-11.74	22.69	1.40	1.84
S. J. do Rio Preto.....	1,473.77	111.92	1,585.69	9,317.71	10,903.40	15.15	-41.02	7.90	-5.43	-3.70
Subtotal.....	**1,614.61**	**184.29**	**1,798.90**	**17,635.02**	**19,433.92**	**17.72**	**-32.19**	**9.46**	**-2.33**	**-1.34**
Central										
Matão.....	1,192.04	436.76	1,628.80	17,094.37	18,723.17	3.00	-23.22	-5.64	-1.11	-1.52
Duartina.....	1,055.31	1104.56	2,159.87	23,481.85	25,641.72	-8.83	23.25	5.17	-1.41	-0.89
Brotas.....	544.11	234.08	778.19	8,557.25	9,335.44	-21.93	-7.36	-18.06	2.07	0.02
Subtotal.....	**2,791.46**	**1,775.40**	**4,566.86**	**49,133.47**	**53,700.33**	**-7.32**	**3.36**	**-3.44**	**-0.72**	**-0.95**
South										
Porto Ferreira.....	3,232.39	592.85	3,825.24	16,531.71	20,356.95	3.94	-17.34	-0.05	5.25	4.21
Limeira.....	1,049.13	522.54	1,571.67	17,684.21	19,255.88	4.72	-3.55	1.82	-1.90	-1.60
Subtotal.....	**4,281.52**	**1,115.39**	**5,396.91**	**34,215.92**	**39,612.83**	**4.13**	**-11.41**	**0.49**	**1.43**	**1.30**
Southwest										
Avaré.....	605.20	799.56	1,404.76	26,325.23	27,729.99	-32.26	18.73	-10.35	1.11	0.46
Itapetininga.....	822.05	58.82	880.87	8,179.80	9,060.67	145.81	28.40	131.67	-5.22	0.55
Subtotal.....	**1,427.25**	**858.38**	**2,285.63**	**34,505.03**	**36,790.66**	**16.24**	**19.34**	**17.38**	**-0.47**	**0.48**
Total.....	**11,729.31**	**5,185.65**	**16,914.96**	**174,779.45**	**191,694.41**	**4.16**	**-0.36**	**2.73**	**-0.44**	**-0.17**
Percentage.....	**5.90**	**2.70**	**8.60**	**91.40**	**100.00**	**(X)**	**(X)**	**(X)**	**(X)**	**(X)**

(X) Not applicable.
- Represents zero.
1 Trees planted in 2015 or 2016.
2 Groves implemented in 2015 and 2016.
3 Groves implemented in 2014 or in previous years.
4 Trees planted in 2014 or in previous years.

Table 38 – Oranges: Grove area by block age range, sector and region [2017 inventory]

Sector and region	Block age				Total
	1 – 2 years[1]	3 – 5 years	6 – 10 years	More than 10 years	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
North					
Triâng.Mineiro.....	759	5,873	8,817	10,269	25,718
Bebedouro.....	1,617	6,792	19,293	24,057	51,759
Altinópolis.....	172	264	4,113	6,393	10,942
Subtotal.....	**2,548**	**12,929**	**32,223**	**40,719**	**88,419**
Northwest					
Votuporanga.....	201	2,804	12,691	4,366	20,062
S. J. Rio Preto.....	2,321	3,607	10,273	6,843	23,044
Subtotal.....	**2,522**	**6,411**	**22,964**	**11,209**	**43,106**
Central					
Matão.....	1,519	7,216	13,755	17,896	40,386
Duartina.....	1,389	6,766	20,046	24,231	52,432
Brotas.....	837	2,412	4,793	12,156	20,198
Subtotal.....	**3,745**	**16,394**	**38,594**	**54,283**	**113,016**
South					
Porto Ferreira.....	4,576	4,471	9,944	22,872	41,863
Limeira.....	1,696	3,453	12,786	24,943	42,878
Subtotal.....	**6,272**	**7,924**	**22,730**	**47,815**	**84,741**
Southwest					
Avaré.....	904	2,820	18,589	33,590	55,903
Itapetininga.....	1,050	1,969	6,381	7,981	17,381
Subtotal.....	**1,954**	**4,789**	**24,970**	**41,571**	**73,284**
Total.....	**17,041**	**48,447**	**141,481**	**195,597**	**402,566**
Percentage.....	**4.23**	**12.03**	**35.14**	**48.59**	**100.00**

- Represents zero.
[1] Area of young groves.

Table 39 – Oranges: Trees by age group, block age range, sector and region [2017 inventory]

Sector and region	Block and tree ages										Total
	Blocks 1 – 2 years	Blocks 3 – 5 years		Blocks 6 – 10 years			Blocks more than 10 years				
	Trees 1 – 2 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees above 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
North											
Triâng. Mineiro	430.38	31.09	3,361.09	33.73	71.88	4,410.21	39.23	56.12	64.12	3,678.84	12,176.69
Bebedouro.....	1,041.64	130.72	4,056.61	321.91	367.29	9,252.28	411.50	568.09	597.58	7,843.95	24,591.57
Altinópolis.....	142.45	7.10	155.93	133.96	109.14	1,992.35	142.95	120.30	143.70	2,440.53	5,388.41
Subtotal.....	**1,614.47**	**168.91**	**7,573.63**	**489.60**	**548.31**	**15,654.84**	**593.68**	**744.51**	**805.40**	**13,963.32**	**42,156.67**
Northwest											
Votuporanga....	140.84	14.26	1,367.43	48.29	85.38	5,417.91	9.82	18.47	57.91	1,370.21	8,530.52
S J Rio Preto....	1,473.77	15.16	1,946.57	69.93	113.57	4,768.50	26.83	60.32	96.79	2,331.96	10,903.40
Subtotal.....	**1,614.61**	**29.42**	**3,314.00**	**118.22**	**198.95**	**10,186.41**	**36.65**	**78.79**	**154.70**	**3,702.17**	**19,433.92**
Central											
Matão.....	1,192.04	92.94	4,337.89	183.23	351.27	6,429.43	160.59	313.18	502.06	5,160.54	18,723.17
Duartina.....	1,055.31	229.89	3,985.69	623.90	613.48	9,437.92	250.77	244.20	193.71	9,006.85	25,641.72
Brotas.....	**544.11**	**60.56**	**1,391.82**	**114.91**	**441.70**	**1,765.64**	**58.61**	**277.50**	**805.44**	3,875.15	9,335.44
Subtotal.....	2,791.46	383.39	9,715.40	922.04	1,406.45	17,632.99	469.97	834.88	**1,501.21**	**18,042.54**	**53,700.33**
South											
Porto Ferreira...	3,232.39	161.98	2,735.68	180.09	298.13	4,946.46	250.78	525.81	681.24	7,344.39	20,356.95
Limeira.....	1,049.13	137.02	1,832.21	160.81	310.49	5,794.26	224.71	272.07	443.00	9,032.18	19,255.88
Subtotal.....	**4,281.52**	**299.00**	**4,567.89**	**340.90**	**608.62**	**10,740.72**	**475.49**	**797.88**	**1,124.24**	**16,376.57**	**39,612.83**
Southwest											
Avaré.....	605.20	85.65	1,808.46	352.87	326.13	9,797.35	361.04	532.59	414.65	13,446.05	27,729.99
Itapetininga.....	822.05	30.53	1,234.63	21.24	48.31	3,672.67	7.05	14.31	35.80	3,174.08	9,060.67
Subtotal.....	**1,427.25**	**116.18**	**3,043.09**	**374.11**	**374.44**	**13,470.02**	**368.09**	**546.90**	**450.45**	**16,620.13**	**36,790.66**
Total.....	**11,729.31**	**996.90**	**28,214.01**	**2,244.87**	**3,136.77**	**67,684.98**	**1,943.88**	**3,002.96**	**4,036.00**	**68,704.73**	**191,694.41**
Percentage.....	**100.00**	**3.41**	**96.59**	**3.07**	**4.29**	**92.63**	**2.50**	**3.87**	**5.20**	**88.44**	**100.00**

- Represents zero.

Table 40 – Oranges: Grove area of early season varieties by sector and region [2017 inventory]

Sector and region	Early varieties							
	Hamlin	Westin	Rubi	Valencia Americana	Valencia Argentina	Seleta	Pineapple	Total
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
North								
Triâng.Mineiro.....	4,395	202	248	205	12	-	4	5,066
Bebedouro.....	8,850	1,217	990	2,743	479	1	252	14,532
Altinópolis.....	1,627	43	153	212	2	-	23	2,060
Subtotal.....	**14,872**	**1,462**	**1,391**	**3,160**	**493**	**1**	**279**	**21,658**
Northwest								
Votuporanga.....	928	133	162	411	-	-	91	1,725
S. J. Rio Preto.....	3,821	417	854	2,122	481	-	179	7,874
Subtotal.....	**4,749**	**550**	**1,016**	**2,533**	**481**	**-**	**270**	**9,599**
Central								
Matão.....	5,485	258	738	2,060	1,986	-	513	11,040
Duartina.....	6,409	306	893	1,834	-	49	78	9,569
Brotas.....	2,658	207	91	345	52	-	152	3,505
Subtotal.....	**14,552**	**771**	**1,722**	**4,239**	**2,038**	**49**	**743**	**24,114**
South								
Porto Ferreira.....	4,033	1,412	790	709	210	12	9	7,175
Limeira.....	4,218	1,607	361	221	163	72	22	6,664
Subtotal.....	**8,251**	**3,019**	**1,151**	**930**	**373**	**84**	**31**	**13,839**
Southwest								
Avaré.....	6,755	884	1,670	832	677	23	112	10,953
Itapetininga.....	1,407	158	383	325	13	-	423	2,709
Subtotal.....	**8,162**	**1,042**	**2,053**	**1,157**	**690**	**23**	**535**	**13,662**
Total.....	**50,586**	**6,844**	**7,333**	**12,019**	**4,075**	**157**	**1,858**	**82,872**
Percentage.....	**61.04**	**8.26**	**8.85**	**14.50**	**4.92**	**0.19**	**2.24**	**100.00**

- Represents zero.

Table 41 – Oranges: Early variety trees by sector and region [2017 inventory]

Sector and region	Early varieties							
	Hamlin	Westin	Rubi	Valencia Americana	Valencia Argentina	Seleta	Pineapple	Total
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
North								
Triâng.Mineiro.....	1,884.75	94.80	134.28	111.82	4.65	-	1.28	2,231.58
Bebedouro.....	3,802.02	487.75	541.10	1,417.29	183.79	0.66	119.64	6,552.25
Altinópolis.....	789.14	20.65	92.17	114.57	1.14	-	18.07	1,035.74
Subtotal.....	**6,475.91**	**603.20**	**767.55**	**1,643.68**	**189.58**	**0.66**	**138.99**	**9,819.57**
Northwest								
Votuporanga.....	398.00	49.27	84.49	171.04	-	-	25.28	728.08
S. J. Rio Preto.....	1,764.49	137.74	418.72	1,078.84	120.61	-	95.06	3,615.46
Subtotal.....	**2,162.49**	**187.01**	**503.21**	**1,249.88**	**120.61**	-	**120.34**	**4,343.54**
Central								
Matão.....	2,447.15	108.48	379.86	974.16	438.31	-	293.27	4,641.23
Duartina.....	2,951.68	123.73	498.37	978.85	-	28.54	36.24	4,617.41
Brotas.....	1,171.80	97.13	43.60	152.00	26.40	-	98.34	1,589.27
Subtotal.....	**6,570.63**	**329.34**	**921.83**	**2,105.01**	**464.71**	**28.54**	**427.85**	**10,847.91**
South								
Porto Ferreira.....	1,986.12	776.16	455.80	328.15	58.84	6.30	4.83	3,616.20
Limeira.....	1,874.20	679.81	191.38	88.35	57.35	22.88	6.66	2,920.63
Subtotal.....	**3,860.32**	**1,455.97**	**647.18**	**416.50**	**116.19**	**29.18**	**11.49**	**6,536.83**
Southwest								
Avaré.....	3,199.55	421.47	822.48	504.52	232.88	9.30	49.73	5,239.93
Itapetininga.....	661.98	75.20	220.84	199.52	6.97	0.01	285.90	1,450.42
Subtotal.....	**3,861.53**	**496.67**	**1,043.32**	**704.04**	**239.85**	**9.31**	**335.63**	**6,690.35**
Total.....	**22,930.88**	**3,072.19**	**3,883.09**	**6,119.11**	**1,130.94**	**67.69**	**1,034.30**	**38,238.20**
Percentage.....	**59.97**	**8.03**	**10.16**	**16.00**	**2.96**	**0.18**	**2.70**	**100.00**

- Represents zero.

Table 42 – Oranges: Grove area of mid-season and late varieties by sector and region [2017 inventory]

Sector and region	Mid-season and late varieties				
	Pera Rio[1]	Valencia	Valencia Folha Murcha	Natal	Total
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
North					
Triâng.Mineiro....	8,035	9,003	3,276	338	20,652
Bebedouro.....	13,637	16,764	4,296	2,530	37,227
Altinópolis.....	3,753	4,207	567	355	8,882
Subtotal.....	**25,425**	**29,974**	**8,139**	**3,223**	**66,761**
Northwest					
Votuporanga.....	14,935	1,636	1,192	574	18,337
S. J. Rio Preto.....	5,793	5,306	2,977	1,094	15,170
Subtotal.....	**20,728**	**6,942**	**4,169**	**1,668**	**33,507**
Central					
Matão.....	12,439	11,738	3,542	1,627	29,346
Duartina.....	19,168	14,813	6,606	2,276	42,863
Brotas.....	5,551	8,298	2,008	836	16,693
Subtotal.....	**37,158**	**34,849**	**12,156**	**4,739**	**88,902**
South					
Porto Ferreira.....	13,643	14,674	4,426	1,945	34,688
Limeira.....	14,610	15,548	3,548	2,508	36,214
Subtotal.....	**28,253**	**30,222**	**7,974**	**4,453**	**70,902**
Southwest					
Avaré.....	16,002	18,486	8,893	1,569	44,950
Itapetininga.....	5,768	4,588	3,496	820	14,672
Subtotal.....	**21,770**	**23,074**	**12,389**	**2,389**	**59,622**
Total.....	**133,334**	**125,061**	**44,827**	**16,472**	**319,694**
Percentage.....	**41.71**	**39.12**	**14.02**	**5.15**	**100.00**

[1] The orange groves area of João Nunes variety was added to the area of the Pera Rio variety, because both varieties present the same maturation stage.

Table 43 – Oranges: Trees of mid-season and late variety by sector and region [2017 inventory]

Sector and region	Mid-season and late varieties				
	Pera Rio[1]	Valencia	Valencia Folha Murcha	Natal	Total
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
North					
Triâng.Mineiro....	4,217.63	4,076.49	1,468.89	182.10	9,945.11
Bebedouro.....	7,447.22	7,582.50	1,705.74	1,303.86	18,039.32
Altinópolis.....	1,996.48	1,919.91	265.85	170.43	4,352.67
Subtotal.....	**13,661.33**	**13,578.90**	**3,440.48**	**1,656.39**	**32,337.10**
Northwest					
Votuporanga.....	6,282.04	765.25	453.13	302.02	7,802.44
S. J. Rio Preto.....	2,719.72	2,577.87	1,409.44	580.91	7,287.94
Subtotal.....	**9,001.76**	**3,343.12**	**1,862.57**	**882.93**	**15,090.38**
Central					
Matão.....	6,565.26	5,209.97	1,408.46	898.25	14,081.94
Duartina.....	10,021.48	6,837.65	2,926.82	1,238.36	21,024.31
Brotas.....	2,737.66	3,693.94	910.95	403.62	7,746.17
Subtotal.....	**19,324.40**	**15,741.56**	**5,246.23**	**2,540.23**	**42,852.42**
South					
Porto Ferreira.....	7,245.08	6,478.80	2,053.99	962.88	16,740.75
Limeira.....	7,017.28	6,514.88	1,657.33	1,145.76	16,335.25
Subtotal.....	**14,262.36**	**12,993.68**	**3,711.32**	**2,108.64**	**33,076.00**
Southwest					
Avaré.....	8,313.46	8,876.06	4,456.94	843.60	22,490.06
Itapetininga.....	2,837.25	2,645.80	1,683.16	444.04	7,610.25
Subtotal.....	**11,150.71**	**11,521.86**	**6,140.10**	**1,287.64**	**30,100.31**
Total.....	**67,400.56**	**57,179.12**	**20,400.70**	**8,475.83**	**153,456.21**
Percentage.....	**43.92**	**37.26**	**13.29**	**5.52**	**100.00**

[1] The orange trees of the João Nunes variety were added to the area of the Pera Rio variety, because both varieties present the same maturation stage.

Table 44 – Oranges: Grove area by block age range, region and variety – North Sector [2017 inventory]

Region and variety	Block age				Total
	1 – 2 years[1]	3 – 5 years	6 – 10 years	More than 10 years	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
TMG[2]					
Hamlin.....	-	425	1,054	2,916	4,395
Westin.....	-	16	121	65	202
Rubi.....	-	133	115	-	248
V.Americana[3].....	-	34	158	13	205
V.Argentina[4].....	-	-	-	12	12
Seleta.....	-	-	-	-	-
Pineapple.....	-	4	-	-	4
Pera Rio	661	2,352	3,404	1,609	8,026
João Nunes.....	-	3	5	1	9
Valencia.....	83	2,445	2,619	3,856	9,003
V.Folha Murcha[5]	4	56	198	80	338
Natal.....	11	405	1,143	1,717	3,276
Subtotal.....	**759**	**5,873**	**8,817**	**10,269**	**25,718**
Percentage.....	**2.95**	**22.84**	**34.28**	**39.93**	**29.09**
BEB[6]					
Hamlin.....	52	357	3,282	5,159	8,850
Westin.....	8	32	341	836	1,217
Rubi.....	11	246	559	174	990
V.Americana[3].....	3	333	1,978	429	2,743
V.Argentina[4].....	-	-	-	479	479
Seleta.....	-	1	-	-	1
Pineapple.....	3	44	128	77	252
Pera Rio	715	3,213	6,069	3,640	13,637
João Nunes.....	-	-	-	-	-
Valencia.....	591	1,480	5,307	9,386	16,764
V.Folha Murcha[5]	21	483	943	1,083	2,530
Natal.....	213	603	686	2,794	4,296
Subtotal.....	**1,617**	**6,792**	**19,293**	**24,057**	**51,759**
Percentage.....	**3.12**	**13.12**	**37.27**	**46.48**	**58.54**
ALT[7]					
Hamlin.....	1	2	554	1,070	1,627
Westin.....	-	-	22	21	43
Rubi.....	16	36	81	20	153
V.Americana[3].....	1	43	147	21	212
V.Argentina[4].....	-	-	2	-	2
Seleta.....	-	-	-	-	-
Pineapple.....	-	-	23	-	23
Pera Rio	130	106	1,662	1,855	3,753
João Nunes.....	-	-	-	-	-
Valencia.....	15	1	1,183	3,008	4,207
V.Folha Murcha[5]	1	24	138	192	355
Natal.....	8	52	301	206	567
Subtotal.....	**172**	**264**	**4,113**	**6,393**	**10,942**
Percentage.....	**1.57**	**2.41**	**37.59**	**58.43**	**12.38**
Total.....	**2,548**	**12,929**	**32,223**	**40,719**	**88,419**

- Represents zero.
1 Area of young groves.
2 TMG – Triângulo Mineiro.
3 V.Americana – Valencia Americana.
4 V.Argentina – Valencia Argentina.
5 V.Folha Murcha – Valencia Folha Murcha.
6 BEB – Bebedouro.
7 ALT – Altinópolis.

Table 45 – Oranges: Trees by group of age, block age range, region and variety – North Sector [2017 inventory]

Region and variety	Block and tree ages										Total
	Blocks 1 – 2 years	Blocks 3 – 5 years		Blocks 6 – 10 years			Blocks more than 10 years				
	Trees 1 – 2 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees above 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
TMG[1]											
Hamlin.....	-	2.92	247.49	0.37	3.38	532.18	18.05	25.94	15.04	1,039.38	1,884.75
Westin.....	-	0.04	7.30	0.01	0.11	63.00	2.16	2.12	0.49	19.57	94.80
Rubi.....	-	0.37	73.75	0.11	0.71	59.34	-	-	-	-	134.28
V.Americana[2].....	-	0.07	19.72	0.32	1.38	83.93	-	0.01	0.09	6.30	111.82
V.Argentina[3].....	-	-	-	-	-	-	0.02	-	0.06	4.57	4.65
Seleta.....	-	-	-	-	-	-	-	-	-	-	-
Pineapple.....	-	0.02	1.26	-	-	-	-	-	-	-	1.28
Pera Rio	374.66	19.02	1,417.70	23.01	45.63	1,695.00	2.14	1.92	19.03	614.39	4,212.50
João Nunes.....	-	0.01	1.80	0.08	0.06	2.97	-	-	0.01	0.20	5.13
Valencia.....	47.01	7.30	1,326.91	6.42	13.48	1,284.71	10.25	13.95	18.37	1,348.09	4,076.49
V.Folha Murcha[4]	2.69	0.78	34.15	0.50	2.18	107.95	0.15	0.17	0.56	32.97	182.10
Natal.....	6.02	0.56	231.01	2.91	4.95	581.13	6.46	12.01	10.47	613.37	1,468.89
Subtotal.....	**430.38**	**31.09**	**3,361.09**	**33.73**	**71.88**	**4,410.21**	**39.23**	**56.12**	**64.12**	**3,678.84**	**12,176.69**
Percentage.....	**100.00**	**0.92**	**99.08**	**0.75**	**1.59**	**97.66**	**1.02**	**1.46**	**1.67**	**95.85**	**29.00**
BEB[5]											
Hamlin.....	44.94	3.56	206.43	65.02	35.63	1,453.35	57.78	149.02	115.41	1,670.88	3,802.02
Westin.....	6.22	0.35	18.43	5.88	3.33	153.76	10.43	16.25	14.87	258.23	487.75
Rubi.....	9.31	3.23	171.26	16.89	9.40	275.61	2.56	2.60	2.54	47.70	541.10
V.Americana[2].....	2.66	3.14	181.70	40.34	63.68	934.18	-	0.35	2.70	188.54	1,417.29
V.Argentina[3].....	-	-	-	-	-	-	4.10	17.79	17.46	144.44	183.79
Seleta.....	-	0.01	0.65	-	-	-	-	-	-	-	0.66
Pineapple.....	2.58	0.34	24.18	2.29	3.61	52.77	0.47	3.04	0.87	29.49	119.64
Pera Rio	451.43	68.30	2,021.17	61.37	80.43	3,213.68	78.41	108.46	207.99	1,155.98	7,447.22
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	396.49	38.15	775.81	88.64	129.52	2,417.39	128.35	201.19	169.40	3,237.56	7,582.50
V.Folha Murcha[4]	15.62	7.07	275.27	20.91	25.31	438.55	27.04	17.74	14.95	461.40	1,303.86
Natal.....	112.39	6.57	381.71	20.57	16.38	312.99	102.36	51.65	51.39	649.73	1,705.74
Subtotal.....	**1,041.64**	**130.72**	**4,056.61**	**321.91**	**367.29**	**9,252.28**	**411.50**	**568.09**	**597.58**	**7,843.95**	**24,591.57**
Percentage.....	**100.00**	**3.12**	**96.88**	**3.24**	**3.69**	**93.07**	**4.37**	**6.03**	**6.34**	**83.26**	**58.00**
ALT[6]											
Hamlin.....	0.96	1.92	1.43	37.66	28.39	235.65	34.52	34.37	28.20	386.04	789.14
Westin.....	-	-	-	2.25	1.04	7.71	0.63	0.11	0.09	8.82	20.65
Rubi.....	13.73	0.39	23.39	9.32	4.32	31.98	1.06	0.03	0.43	7.52	92.17
V.Americana[2].....	0.47	0.88	25.42	4.28	1.92	71.06	0.08	0.96	0.49	9.01	114.57
V.Argentina[3].....	-	-	-	0.06	0.03	1.05	-	-	-	-	1.14
Seleta.....	-	-	-	-	-	-	-	-	-	-	-
Pineapple.....	-	-	-	1.00	0.45	16.62	-	-	-	-	18.07
Pera Rio	111.53	2.72	66.31	44.19	37.61	890.78	26.54	24.43	37.63	754.74	1,996.48
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	11.55	0.02	0.27	24.78	31.28	544.43	72.94	54.23	68.18	1,112.23	1,919.91
V.Folha Murcha[4]	0.45	0.74	12.11	3.52	2.27	57.31	6.53	3.65	7.66	76.19	170.43
Natal.....	3.76	0.43	27.00	6.90	1.83	135.76	0.65	2.52	1.02	85.98	265.85
Subtotal.....	**142.45**	**7.10**	**155.93**	**133.96**	**109.14**	**1,992.35**	**142.95**	**120.30**	**143.70**	**2,440.53**	**5,388.41**
Percentage.....	**100.00**	**4.36**	**95.64**	**5.99**	**4.88**	**89.13**	**5.02**	**4.22**	**5.05**	**85.71**	**13.00**
Total.....	**1,614.47**	**168.91**	**7,573.63**	**489.60**	**548.31**	**15,654.84**	**593.68**	**744.51**	**805.40**	**13,963.32**	**42,156.67**

- Represents zero.
[1] TMG – Triângulo Mineiro.
[2] Valencia Americana.
[3] Valencia Argentina.
[4] Valencia Folha Murcha.
[5] BEB – Bebedouro.
[6] ALT – Altinópolis.

Table 46 – Oranges: Grove area by block age range, region and variety – Northwest Sector [2017 inventory]

Region and variety	Block age				Total
	1 – 2 years[1]	3 – 5 years	6 – 10 years	More than 10 years	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
VOT[2]					
Hamlin.....	3	107	405	413	928
Westin.....	-	18	59	56	133
Rubi.....	2	36	122	2	162
V.Americana[3].....	-	54	303	54	411
V.Argentina[4].....	-	-	-	-	-
Seleta.....	-	-	-	-	-
Pineapple.....	-	-	91	-	91
Pera Rio	167	2,426	9,735	2,607	14,935
João Nunes.....	-	-	-	-	-
Valencia.....	2	80	1,043	511	1,636
V.Folha Murcha[5]	7	9	431	127	574
Natal.....	20	74	502	596	1,192
Subtotal.....	**201**	**2,804**	**12,691**	**4,366**	**20,062**
Percentage.....	**1.00**	**13.98**	**63.26**	**21.76**	**46.54**
SJO[6]					
Hamlin.....	202	423	2,391	805	3,821
Westin.....	1	2	97	317	417
Rubi.....	-	192	288	374	854
V.Americana[3].....	27	371	1,438	286	2,122
V.Argentina[4].....	-	-	-	481	481
Seleta.....	-	-	-	-	-
Pineapple.....	-	27	101	51	179
Pera Rio	905	682	2,329	1,877	5,793
João Nunes.....	-	-	-	-	-
Valencia.....	533	1,442	2,349	982	5,306
V.Folha Murcha[5]	44	87	609	354	1,094
Natal.....	609	381	671	1,316	2,977
Subtotal.....	**2,321**	**3,607**	**10,273**	**6,843**	**23,044**
Percentage.....	**10.07**	**15.65**	**44.58**	**29.70**	**53.46**
Total.....	**2,522**	**6,411**	**22,964**	**11,209**	**43,106**

- Represents zero.
1 Area of young groves.
2 VOT – Votuporanga.
3 V.Americana – Valencia Americana.
4 V.Argentina – Valencia Argentina.
5 V.Folha Murcha – Valencia Folha Murcha.
6 SJO – São José do Rio Preto.

Table 47 – Oranges: Trees by group of age, block age range, region and variety – Northwest Sector [2017 inventory]

Region and variety	Block and tree ages										Total
	Blocks 1 – 2 years	Blocks 3 – 5 years		Blocks 6 – 10 years			Blocks more than 10 years				
	Trees 1 – 2 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees above 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
VOT[1]											
Hamlin.....	2.12	-	59.05	2.16	4.18	183.82	3.48	-	-	143.19	398.00
Westin.....	-	-	7.03	0.12	0.19	22.80	0.46	-	-	18.67	49.27
Rubi.....	1.08	-	15.47	0.19	0.31	66.43	0.02	-	-	0.99	84.49
V.Americana[2].....	-	3.07	22.48	4.37	3.89	115.58	-	0.02	1.70	19.93	171.04
V.Argentina[3].....	-	-	-	-	-	-	-	-	-	-	-
Seleta.....	-	-	-	-	-	-	-	-	-	-	-
Pineapple.....	-	-	-	0.03	-	25.25	-	-	-	-	25.28
Pera Rio	122.18	10.92	1,187.63	36.59	65.99	4,011.26	-	2.45	36.52	808.50	6,282.04
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	0.75	0.19	39.03	2.42	8.61	526.81	0.04	1.20	0.81	185.39	765.25
V.Folha Murcha[4]	3.34	0.03	4.90	-	1.02	240.25	-	0.34	0.23	51.91	302.02
Natal.....	11.37	0.05	31.84	2.41	1.19	225.71	5.82	14.46	18.65	141.63	453.13
Subtotal.....	**140.84**	**14.26**	**1,367.43**	**48.29**	**85.38**	**5,417.91**	**9.82**	**18.47**	**57.91**	**1,370.21**	**8,530.52**
Percentage.....	**100.00**	**1.03**	**98.97**	**0.87**	**1.54**	**97.59**	**0.67**	**1.27**	**3.98**	**94.08**	**44.00**
SJO[5]											
Hamlin.....	160.46	4.72	178.85	1.32	10.23	1,095.15	16.38	9.44	7.44	280.50	1,764.49
Westin.....	0.76	-	0.85	0.11	0.81	45.33	1.71	2.72	0.78	84.67	137.74
Rubi.....	-	0.05	128.21	0.35	2.68	149.62	1.40	3.92	0.63	131.86	418.72
V.Americana[2].....	12.91	0.66	184.83	23.61	40.41	684.24	-	0.08	9.86	122.24	1,078.84
V.Argentina[3].....	-	-	-	-	-	-	-	0.07	-	120.54	120.61
Seleta.....	-	-	-	-	-	-	-	-	-	-	-
Pineapple.....	-	0.07	12.79	2.37	2.67	51.35	-	0.02	2.02	23.77	95.06
Pera Rio	479.98	8.33	397.32	21.25	14.15	1,094.48	2.53	14.25	41.17	646.26	2,719.72
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	358.32	1.14	774.55	15.39	29.71	1,014.74	3.15	16.92	18.83	345.12	2,577.87
V.Folha Murcha[4]	25.23	0.11	47.42	5.13	11.79	305.74	1.66	8.85	9.95	165.03	580.91
Natal.....	436.11	0.08	221.75	0.40	1.12	327.85	-	4.05	6.11	411.97	1,409.44
Subtotal.....	**1,473.77**	**15.16**	**1,946.57**	**69.93**	**113.57**	**4,768.50**	**26.83**	**60.32**	**96.79**	**2,331.96**	**10,903.40**
Percentage.....	**100.00**	**0.77**	**99.23**	**1.41**	**2.29**	**96.29**	**1.07**	**2.40**	**3.85**	**92.69**	**56.00**
Total.....	**1,614.61**	**29.42**	**3,314.00**	**118.22**	**198.95**	**10,186.41**	**36.65**	**78.79**	**154.70**	**3,702.17**	**19,433.92**

- Represents zero.
1 VOT – Votuporanga.
2 V.Americana – Valencia Americana.
3 V.Argentina – Valencia Argentina.
4 V.Folha Murcha – Valencia Folha Murcha.
5 SJO – São José do Rio Preto.

Table 48 – Oranges: Grove area by block age range, region and variety – Central Sector [2017 inventory]

Region and variety	Block age				Total
	1 – 2 years[1]	3 – 5 years	6 – 10 years	More than 10 years	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
MAT[2]					
Hamlin.....	20	409	2,444	2,612	5,485
Westin.....	-	36	87	135	258
Rubi.....	1	46	671	20	738
V.Americana[3].....	21	83	1,271	685	2,060
V.Argentina[4].....	-	4	147	1,835	1,986
Seleta.....	-	-	-	-	-
Pineapple.....	-	513	-	-	513
Pera Rio	1,006	3,141	4,459	3,833	12,439
João Nunes.....	-	-	-	-	-
Valencia.....	292	1,845	3,559	6,042	11,738
V.Folha Murcha[5]	11	705	449	462	1,627
Natal.....	168	434	668	2,272	3,542
Subtotal.....	**1,519**	**7,216**	**13,755**	**17,896**	**40,386**
Percentage.....	**3.76**	**17.87**	**34.06**	**44.31**	**35.73**
DUA[6]					
Hamlin.....	91	553	2,877	2,888	6,409
Westin.....	-	19	106	181	306
Rubi.....	2	237	583	71	893
V.Americana[3].....	38	442	863	491	1,834
V.Argentina[4].....	-	-	-	-	-
Seleta.....	-	4	38	7	49
Pineapple.....	3	-	20	55	78
Pera Rio	637	2,845	8,050	7,636	19,168
João Nunes.....	-	-	-	-	-
Valencia.....	350	1,575	4,822	8,066	14,813
V.Folha Murcha[5]	132	307	839	998	2,276
Natal.....	136	784	1,848	3,838	6,606
Subtotal.....	**1,389**	**6,766**	**20,046**	**24,231**	**52,432**
Percentage.....	**2.65**	**12.90**	**38.23**	**46.21**	**46.39**
BRO[7]					
Hamlin.....	28	228	983	1,419	2,658
Westin.....	10	25	13	159	207
Rubi.....	24	-	22	45	91
V.Americana[3].....	-	-	115	230	345
V.Argentina[4].....	-	-	-	52	52
Seleta.....	-	-	-	-	-
Pineapple.....	-	152	-	-	152
Pera Rio	282	1,297	1,185	2,787	5,551
João Nunes.....	-	-	-	-	-
Valencia.....	263	588	1,598	5,849	8,298
V.Folha Murcha[5]	45	46	361	384	836
Natal.....	185	76	516	1,231	2,008
Subtotal.....	**837**	**2,412**	**4,793**	**12,156**	**20,198**
Percentage.....	**4.14**	**11.94**	**23.73**	**60.18**	**17.87**
Total.....	**3,745**	**16,394**	**38,594**	**54,283**	**113,016**

- Represents zero.
1 Area of young groves.
2 MAT – Matão.
3 V.Americana – Valencia Americana.
4 V.Argentina – Valencia Argentina.
5 V.Folha Murcha – Valencia Folha Murcha.
6 DUA – Duartina.
7 BRO – Brotas.

Table 49 – Oranges: Trees by group of age, block age range, region and variety – Central Sector [2017 inventory]

Region and variety	Block and tree ages										Total
	Blocks 1 – 2 years	Blocks 3 – 5 years		Blocks 6 – 10 years			Blocks more than 10 years				
	Trees 1 – 2 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees above 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
MAT[1]											
Hamlin.....	13.25	0.59	233.91	31.04	30.77	1,094.17	29.17	76.35	69.22	868.68	2,447.15
Westin.....	-	0.04	16.35	1.17	1.04	36.36	1.44	4.07	3.83	44.18	108.48
Rubi.....	0.45	0.06	24.40	6.69	4.86	334.65	0.23	0.67	0.62	7.23	379.86
V.Americana[2].....	26.49	-	53.96	19.67	17.63	634.62	-	0.51	16.63	204.65	974.16
V.Argentina[3].....	-	-	1.97	0.41	0.50	74.14	0.73	2.07	0.72	357.77	438.31
Seleta.....	-	-	-	-	-	-	-	-	-	-	-
Pineapple.....	-	2.38	290.89	-	-	-	-	-	-	-	293.27
Pera Rio	797.30	69.07	1,897.63	79.32	210.69	2,085.25	33.77	81.93	151.15	1,159.15	6,565.26
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	200.33	13.12	1,115.51	37.49	47.71	1,681.17	65.27	85.47	201.70	1,762.20	5,209.97
V.Folha Murcha[4]	7.55	3.20	455.26	6.93	8.34	241.43	4.97	6.67	14.35	149.55	898.25
Natal.....	146.67	4.48	248.01	0.51	29.73	247.64	25.01	55.44	43.84	607.13	1,408.46
Subtotal.....	**1,192.04**	**92.94**	**4,337.89**	**183.23**	**351.27**	**6,429.43**	**160.59**	**313.18**	**502.06**	**5,160.54**	**18,723.17**
Percentage.....	**100.00**	**2.10**	**97.90**	**2.63**	**5.04**	**92.32**	**2.62**	**5.10**	**8.18**	**84.10**	**35.00**
DUA[5]											
Hamlin.....	71.09	18.63	302.93	170.25	112.04	1,220.39	14.54	39.45	30.11	972.25	2,951.68
Westin.....	-	0.60	9.41	5.64	1.87	44.77	0.64	1.35	1.82	57.63	123.73
Rubi.....	1.54	7.96	125.03	36.65	12.20	290.91	0.24	0.52	0.72	22.60	498.37
V.Americana[2].....	48.38	12.92	269.53	18.93	20.95	409.93	5.21	12.40	9.13	171.47	978.85
V.Argentina[3].....	-	-	-	-	-	-	-	-	-	-	-
Seleta.....	-	0.01	2.72	0.95	1.00	21.22	0.07	0.17	0.12	2.28	28.54
Pineapple.....	4.38	-	-	0.44	0.47	9.94	0.55	1.31	0.96	18.19	36.24
Pera Rio	471.50	93.04	1,690.07	203.07	185.61	3,991.85	104.01	57.44	57.66	3,167.23	10,021.48
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	278.00	62.17	955.40	118.29	182.64	2,201.74	69.78	86.50	67.95	2,815.18	6,837.65
V.Folha Murcha[4]	96.58	13.33	184.15	14.82	20.02	440.49	11.83	10.75	10.96	435.43	1,238.36
Natal.....	83.84	21.23	446.45	54.86	76.68	806.68	43.90	34.31	14.28	1,344.59	2,926.82
Subtotal.....	**1,055.31**	**229.89**	**3,985.69**	**623.90**	**613.48**	**9,437.92**	**250.77**	**244.20**	**193.71**	**9,006.85**	**25,641.72**
Percentage.....	**100.00**	**5.45**	**94.55**	**5.84**	**5.75**	**88.41**	**2.59**	**2.52**	**2.00**	**92.90**	**48.00**
BRO[6]											
Hamlin.....	18.64	15.41	105.18	7.33	93.83	367.00	15.47	44.60	97.27	407.07	1,171.80
Westin.....	6.98	0.63	18.85	0.02	1.92	5.32	1.44	3.94	10.53	47.50	97.13
Rubi.....	15.49	-	-	0.02	3.00	8.28	0.30	0.83	2.66	13.02	43.60
V.Americana[2].....	0.27	-	-	13.24	21.71	31.29	0.47	0.99	12.09	71.94	152.00
V.Argentina[3].....	-	-	-	-	-	-	-	2.83	3.78	19.79	26.40
Seleta.....	-	-	-	-	-	-	-	-	-	-	-
Pineapple.....	-	0.80	97.54	-	-	-	-	-	-	-	98.34
Pera Rio	184.20	31.75	751.90	26.57	96.89	454.18	11.75	38.75	184.93	956.74	2,737.66
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	164.79	7.94	343.44	30.46	150.01	579.99	17.95	123.48	392.76	1,883.12	3,693.94
V.Folha Murcha[4]	28.93	0.82	26.88	5.13	37.18	137.80	0.98	8.46	26.58	130.86	403.62
Natal.....	124.81	3.21	48.03	32.14	37.16	181.78	10.25	53.62	74.84	345.11	910.95
Subtotal.....	**544.11**	**60.56**	**1,391.82**	**114.91**	**441.70**	**1,765.64**	**58.61**	**277.50**	**805.44**	**3,875.15**	**9,335.44**
Percentage.....	**100.00**	**4.17**	**95.83**	**4.95**	**19.02**	**76.03**	**1.17**	**5.53**	**16.06**	**77.25**	**17.00**
Total.....	**2,791.46**	**383.39**	**9,715.40**	**922.04**	**1,406.45**	**17,632.99**	**469.97**	**834.88**	**1,501.21**	**18,042.54**	**53,700.33**

- Represents zero.
[1] MAT – Matão.
[2] Valencia Americana.
[3] Valencia Argentina.
[4] Valencia Folha Murcha.
[5] DUA – Duartina.
[6] BRO – Brotas.

Table 50 – Oranges: Grove area by block age range, region and variety – South Sector [2017 inventory]

Region and variety	Block age				Total
	1 – 2 years[1]	3 – 5 years	6 – 10 years	More than 10 years	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
PFE[2]					
Hamlin.....	539	212	1,237	2,045	4,033
Westin.....	228	122	621	441	1,412
Rubi.....	187	123	303	177	790
V.Americana[3].....	4	29	280	396	709
V.Argentina[4].....	-	-	19	191	210
Seleta.....	-	-	12	-	12
Pineapple.....	-	-	9	-	9
Pera Rio	2,309	2,092	3,346	5,896	13,643
João Nunes.....	-	-	-	-	-
Valencia.....	556	913	3,292	9,913	14,674
V.Folha Murcha[5]	72	347	498	1,028	1,945
Natal.....	681	633	327	2,785	4,426
Subtotal.....	**4,576**	**4,471**	**9,944**	**22,872**	**41,863**
Percentage.....	**10.93**	**10.68**	**23.75**	**54.64**	**49.40**
LIM[6]					
Hamlin.....	112	114	1,360	2,632	4,218
Westin.....	13	107	960	527	1,607
Rubi.....	27	114	129	91	361
V.Americana[3].....	-	1	137	83	221
V.Argentina[4].....	-	-	-	163	163
Seleta.....	-	4	4	64	72
Pineapple.....	-	-	6	16	22
Pera Rio	449	1,781	4,986	7,394	14,610
João Nunes.....	-	-	-	-	-
Valencia.....	364	730	3,618	10,836	15,548
V.Folha Murcha[5]	124	251	759	1,374	2,508
Natal.....	607	351	827	1,763	3,548
Subtotal.....	**1,696**	**3,453**	**12,786**	**24,943**	**42,878**
Percentage.....	**3.96**	**8.05**	**29.82**	**58.17**	**50.60**
Total.....	**6,272**	**7,924**	**22,730**	**47,815**	**84,741**

- Represents zero.
1 Area of young groves.
2 PFE – Porto Ferreira.
3 V.Americana – Valencia Americana.
4 V.Argentina – Valencia Argentina.
5 V.Folha Murcha – Valencia Folha Murcha.
6 LIM – Limeira.

Table 51 – Oranges: Trees by group of age, block age range, region and variety – South Sector [2017 inventory]

Region and variety	Block and tree ages										Total
	Blocks 1 – 2 years	Blocks 3 – 5 years		Blocks 6 – 10 years			Blocks more than 10 years				
	Trees 1 – 2 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees above 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
PFE[1]											
Hamlin.....	422.13	16.28	106.50	19.70	27.61	596.78	16.32	70.12	46.93	663.75	1,986.12
Westin.....	179.78	11.50	75.28	10.66	12.86	314.11	3.19	7.85	8.00	152.93	776.16
Rubi.....	129.01	10.39	67.97	4.47	5.40	178.31	2.13	30.40	4.48	23.24	455.80
V.Americana[2].....	2.62	0.19	18.71	7.36	2.10	132.06	1.46	2.80	17.78	143.07	328.15
V.Argentina[3].....	-	-	-	0.67	0.19	12.01	1.58	1.56	2.09	40.74	58.84
Seleta.....	-	-	0.12	0.25	-	5.93	-	-	-	-	6.30
Pineapple.....	-	-	-	0.27	0.07	4.49	-	-	-	-	4.83
Pera Rio	1,569.84	75.84	1,317.71	55.54	140.59	1,662.19	110.02	104.59	135.28	2,073.48	7,245.08
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	427.36	24.73	552.55	55.88	87.76	1,638.16	77.26	196.25	346.19	3,072.66	6,478.80
V.Folha Murcha[4]	52.93	10.15	227.26	9.43	16.08	262.70	8.60	17.96	39.65	318.12	962.88
Natal.....	448.72	12.90	369.58	15.86	5.47	139.72	30.22	94.28	80.84	856.40	2,053.99
Subtotal.....	**3,232.39**	**161.98**	**2,735.68**	**180.09**	**298.13**	**4,946.46**	**250.78**	**525.81**	**681.24**	**7,344.39**	**20,356.95**
Percentage.....	**100.00**	**5.59**	**94.41**	**3.32**	**5.50**	**91.18**	**2.85**	**5.97**	**7.74**	**83.44**	**51.00**
LIM[5]											
Hamlin.....	74.77	1.91	51.85	5.46	15.87	606.15	55.73	36.18	71.22	955.06	1,874.20
Westin.....	9.34	1.80	48.80	3.76	10.91	394.44	7.79	2.32	11.02	189.63	679.81
Rubi.....	19.03	2.36	63.81	0.60	1.75	63.60	1.65	0.77	2.05	35.76	191.38
V.Americana[2].....	-	-	0.45	0.71	0.39	61.37	-	0.20	0.08	25.15	88.35
V.Argentina[3].....	-	-	-	-	-	-	1.82	0.81	0.35	54.37	57.35
Seleta.....	0.19	0.02	1.86	0.02	0.01	1.84	-	1.40	0.12	17.42	22.88
Pineapple.....	-	-	-	0.03	0.02	2.57	-	0.03	0.02	3.99	6.66
Pera Rio	308.48	99.77	963.83	65.39	114.28	2,376.39	68.94	80.80	136.40	2,803.00	7,017.28
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	239.09	12.87	362.86	65.91	112.76	1,554.74	76.62	124.96	180.93	3,784.14	6,514.88
V.Folha Murcha[4]	87.81	4.81	127.88	14.35	25.80	330.57	8.21	11.06	17.42	517.85	1,145.76
Natal.....	310.42	13.48	210.87	4.58	28.70	402.59	3.95	13.54	23.39	645.81	1,657.33
Subtotal.....	**1,049.13**	**137.02**	**1,832.21**	**160.81**	**310.49**	**5,794.26**	**224.71**	**272.07**	**443.00**	**9,032.18**	**19,255.88**
Percentage.....	**100.00**	**6.96**	**93.04**	**2.57**	**4.96**	**92.48**	**2.25**	**2.73**	**4.44**	**90.58**	**49.00**
Total.....	**4,281.52**	**299.00**	**4,567.89**	**340.90**	**608.62**	**10,740.72**	**475.49**	**797.88**	**1,124.24**	**16,376.57**	**39,612.83**

- Represents zero.
1 PFE – Porto Ferreira.
2 V.Americana – Valencia Americana.
3 V.Argentina – Valencia Argentina.
4 V.Folha Murcha – Valencia Folha Murcha.
5 LIM – Limeira.

Table 52 – Oranges: Grove area by block age range, region and variety – Southwest Sector [2017 inventory]

Region and variety	Block age				Total
	1 – 2 years[1]	3 – 5 years	6 – 10 years	More than 10 years	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
AVA[2]					
Hamlin.....	179	122	2,243	4,211	6,755
Westin.....	11	35	388	450	884
Rubi.....	50	29	616	975	1,670
V.Americana[3].....	4	41	472	315	832
V.Argentina[4].....	-	-	-	677	677
Seleta.....	-	-	-	23	23
Pineapple.....	-	-	-	112	112
Pera Rio	373	896	6,007	8,726	16,002
João Nunes.....	-	-	-	-	-
Valencia.....	205	725	5,667	11,889	18,486
V.Folha Murcha[5]	20	372	571	606	1,569
Natal.....	62	600	2,625	5,606	8,893
Subtotal.....	**904**	**2,820**	**18,589**	**33,590**	**55,903**
Percentage.....	**1.62**	**5.04**	**33.25**	**60.09**	**76.28**
ITG[6]					
Hamlin.....	81	109	373	844	1,407
Westin.....	9	-	74	75	158
Rubi.....	109	97	117	60	383
V.Americana[3].....	112	72	102	39	325
V.Argentina[4].....	-	-	13	-	13
Seleta.....	-	-	-	-	-
Pineapple.....	10	129	267	17	423
Pera Rio	333	786	1,650	2,999	5,768
João Nunes.....	-	-	-	-	-
Valencia.....	378	354	2,090	1,766	4,588
V.Folha Murcha[5]	4	199	429	188	820
Natal.....	14	223	1,266	1,993	3,496
Subtotal.....	**1,050**	**1,969**	**6,381**	**7,981**	**17,381**
Percentage.....	**6.04**	**11.33**	**36.71**	**45.92**	**23.72**
Total.....	**1,954**	**4,789**	**24,970**	**41,571**	**73,284**

- Represents zero.
1 Area of young groves.
2 AVA – Avaré.
3 V.Americana – Valencia Americana.
4 V.Argentina – Valencia Argentina.
5 V.Folha Murcha – Valencia Folha Murcha.
6 ITG – Itapetininga.

Table 53 – Oranges: Trees by group of age, block age range, region and variety – Southwest Sector [2017 inventory]

Region and variety	Block and tree ages										Total
	Blocks 1 – 2 years	Blocks 3 – 5 years		Blocks 6 – 10 years			Blocks more than 10 years				
	Trees 1 – 2 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees 1 – 2 years	Trees 3 – 5 years	Trees 6 – 10 years	Trees above 10 years	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
AVA[1]											
Hamlin.....	117.62	4.56	64.06	55.93	35.06	1,128.13	84.16	129.52	85.22	1,495.29	3,199.55
Westin.....	8.14	1.12	15.46	11.48	3.11	199.05	6.48	6.13	3.49	167.01	421.47
Rubi.....	34.69	4.80	13.46	23.40	7.15	319.11	13.73	9.45	2.29	394.40	822.48
V.Americana[2].....	2.63	1.40	39.35	10.82	4.38	286.95	7.37	6.71	8.24	136.67	504.52
V.Argentina[3].....	-	-	-	-	-	-	0.33	4.95	0.59	227.01	232.88
Seleta.....	0.23	-	-	-	-	-	0.47	0.31	0.47	7.82	9.30
Pineapple.....	-	-	-	-	-	-	0.48	3.71	1.27	44.27	49.73
Pera Rio	248.12	41.22	579.16	104.02	103.20	3,233.23	79.23	125.87	137.77	3,661.64	8,313.46
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	136.28	14.73	446.61	58.91	75.54	3,014.91	134.55	147.40	108.31	4,738.82	8,876.06
V.Folha Murcha[4]	15.04	9.31	241.69	5.51	8.53	308.55	6.21	5.49	5.67	237.60	843.60
Natal.....	42.45	8.51	408.67	82.80	89.16	1,307.42	28.03	93.05	61.33	2,335.52	4,456.94
Subtotal.....	**605.20**	**85.65**	**1,808.46**	**352.87**	**326.13**	**9,797.35**	**361.04**	**532.59**	**414.65**	**13,446.05**	**27,729.99**
Percentage.....	**100.00**	**4.52**	**95.48**	**3.37**	**3.11**	**93.52**	**2.45**	**3.61**	**2.81**	**91.13**	**75.00**
ITG[5]											
Hamlin.....	69.69	0.85	62.15	0.92	8.33	180.43	-	0.46	4.35	334.80	661.98
Westin.....	6.68	-	-	0.22	1.93	34.79	-	0.09	0.93	30.56	75.20
Rubi.....	79.18	0.92	55.32	0.48	2.75	55.86	-	0.04	0.42	25.87	220.84
V.Americana[2].....	83.78	0.41	44.09	1.47	1.66	51.96	0.83	0.55	0.83	13.94	199.52
V.Argentina[3].....	-	-	-	0.19	0.21	6.57	-	-	-	-	6.97
Seleta.....	0.01	-	-	-	-	-	-	-	-	-	0.01
Pineapple.....	7.52	0.07	80.85	0.91	3.10	189.02	-	-	-	4.43	285.90
Pera Rio	263.52	22.99	510.60	1.35	11.82	958.08	1.34	4.02	4.97	1,058.56	2,837.25
João Nunes.....	-	-	-	-	-	-	-	-	-	-	-
Valencia.....	299.34	2.15	223.86	7.76	11.45	1,224.99	3.63	7.92	13.50	851.20	2,645.80
V.Folha Murcha[4]	2.93	2.60	115.95	2.00	2.13	243.72	0.47	1.02	1.75	71.47	444.04
Natal.....	9.40	0.54	141.81	5.94	4.93	727.25	0.78	0.21	9.05	783.25	1,683.16
Subtotal.....	**822.05**	**30.53**	**1,234.63**	**21.24**	**48.31**	**3,672.67**	**7.05**	**14.31**	**35.80**	**3,174.08**	**9,060.67**
Percentage.....	**100.00**	**2.41**	**97.59**	**0.57**	**1.29**	**98.14**	**0.22**	**0.44**	**1.11**	**98.23**	**25.00**
Total.....	**1,427.25**	**116.18**	**3,043.09**	**374.11**	**374.44**	**13,470.02**	**368.09**	**546.90**	**450.45**	**16,620.13**	**36,790.66**

- Represents zero.
1 AVA – Avaré.
2 V.Americana – Valencia Americana.
3 V.Argentina – Valencia Argentina.
4 V.Folha Murcha – Valencia Folha Murcha.
5 ITG – Itapetininga.

Table 54 – Oranges: Grove area by sector and variety [2017 inventory]

Variety	Sector					Total	Group percentage	Total percentage
	North	Northwest	Central	South	Southwest			
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(%)	(%)
Early varieties								
Hamlin.....	14,872	4,749	14,552	8,251	8,162	50,586	61.04	12.57
Westin.....	1,462	550	771	3,019	1,042	6,844	8.26	1.70
Rubi.....	1,391	1,016	1,722	1,151	2,053	7,333	8.85	1.82
Valencia Americana.	3,160	2,533	4,239	930	1,157	12,019	14.50	2.99
Valencia Argentina...	493	481	2,038	373	690	4,075	4.92	1.01
Seleta.....	1	-	49	84	23	157	0.19	0.04
Pineapple.....	279	270	743	31	535	1,858	2.24	0.46
Subtotal.....	**21,658**	**9,599**	**24,114**	**13,839**	**13,662**	**82,872**	**100.00**	**20.59**
Mid-season								
Pera Rio	25,416	20,728	37,158	28,253	21,770	133,325	99.99	33.12
João Nunes.....	9	-	-	-	-	9	0.01	-
Subtotal.....	**25,425**	**20,728**	**37,158**	**28,253**	**21,770**	**133,334**	**100.00**	**33.12**
Late season								
Valencia.....	29,974	6,942	34,849	30,222	23,074	125,061	67.11	31.07
V.Folha Murcha[1].....	3,223	1,668	4,739	4,453	2,389	16,472	8.84	4.09
Natal.....	8,139	4,169	12,156	7,974	12,389	44,827	24.05	11.14
Subtotal.....	**41,336**	**12,779**	**51,744**	**42,649**	**37,852**	**186,360**	**100.00**	**46.29**
Total.....	**88,419**	**43,106**	**113,016**	**84,741**	**73,284**	**402,566**	**(X)**	**100.00**
Percentage.....	**21.96**	**10.71**	**28.07**	**21.05**	**18.20**	**100.00**	**(X)**	**(X)**

- Represents zero.
(X) Not applicable.
[1] V.Folha Murcha – Valencia Folha Murcha.

Table 55 – Oranges: Trees by sector and variety [2017 inventory]

Variety	Sector					Total	Group percentage	Total percentage
	North	Northwest	Central	South	Southwest			
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(%)	(%)
Early varieties								
Hamlin.....	6,475.91	2,162.49	6,570.63	3,860.32	3,861.53	22,930.88	59.97	11.96
Westin.....	603.20	187.01	329.34	1,455.97	496.67	3,072.19	8.03	1.60
Rubi.....	767.55	503.21	921.83	647.18	1,043.32	3,883.09	10.16	2.03
Valencia Americana.	1,643.68	1,249.88	2,105.01	416.50	704.04	6,119.11	16.00	3.19
Valencia Argentina...	189.58	120.61	464.71	116.19	239.85	1,130.94	2.96	0.59
Seleta.....	0.66	-	28.54	29.18	9.31	67.69	0.18	0.04
Pineapple.....	138.99	120.34	427.85	11.49	335.63	1,034.30	2.70	0.54
Subtotal.....	**9,819.57**	**4,343.54**	**10,847.91**	**6,536.83**	**6,690.35**	**38,238.20**	**100.00**	**19.95**
Mid-season								
Pera Rio	13,656.20	9,001.76	19,324.40	14,262.36	11,150.71	67,395.43	99.99	35.16
João Nunes.....	5.13	-	-	-	-	5.13	0.01	-
Subtotal.....	**13,661.33**	**9,001.76**	**19,324.40**	**14,262.36**	**11,150.71**	**67,400.56**	**100.00**	**35.16**
Late season								
Valencia.....	13,578.90	3,343.12	15,741.56	12,993.68	11,521.86	57,179.12	66.44	29.83
V.Folha Murcha[1].....	1,656.39	882.93	2,540.23	2,108.64	1,287.64	8,475.83	9.85	4.42
Natal.....	3,440.48	1,862.57	5,246.23	3,711.32	6,140.10	20,400.70	23.71	10.64
Subtotal.....	**18,675.77**	**6,088.62**	**23,528.02**	**18,813.64**	**18,949.60**	**86,055.65**	**100.00**	**44.89**
Total.....	**42,156.67**	**19,433.92**	**53,700.33**	**39,612.83**	**36,790.66**	**191,694.41**	**(X)**	**100.00**
Percentage.....	**21.99**	**10.14**	**28.01**	**20.66**	**19.19**	**100.00**	**(X)**	**(X)**

- Represents zero.
(X) Not applicable.
[1] V.Folha Murcha – Valencia Folha Murcha.

Table 56 – Oranges: Grove area by planting year [2016 and 2017 inventories and changes observed]

Planting year[1]	2016 Inventory[2]	2017 Inventory[2]	Loss of groves[3]: Changes between the 2016 and 2017 inventories observed in each planting year	
	(hectares)	(hectares)	(hectares)	(percentage)
1979 or previous years	1,525	1,493	-32	-2.10
1980	149	152	3	2.01
1981	117	123	6	5.13
1982	159	149	-10	-6.29
1983	494	485	-9	-1.82
1984	245	179	-66	-26.94
1985	2,075	1,538	-537	-25.88
1986	1,718	1,603	-115	-6.69
1987	1,422	1,333	-89	-6.26
1988	1,368	1,088	-280	-20.47
1989	2,381	2,106	-275	-11.55
1990	4,440	3,863	-577	-13.00
1991	4,038	3,616	-422	-10.45
1992	3,340	3,291	-49	-1.47
1993	4,308	4,233	-75	-1.74
1994	3,796	3,653	-143	-3.77
1995	3,991	3,946	-45	-1.13
1996	3,487	3,454	-33	-0.95
1997	5,328	5,187	-141	-2.65
1998	7,614	7,260	-354	-4.65
1999	8,289	7,897	-392	-4.73
2000	13,538	13,008	-530	-3.91
2001	10,833	10,693	-140	-1.29
2002	16,056	15,603	-453	-2.82
2003	20,447	19,990	-457	-2.24
2004	25,087	24,709	-378	-1.51
2005	27,136	26,512	-624	-2.30
2006	30,991	28,433	-2,558	-8.25
2007	34,870	34,830	-40	-0.11
2008	38,229	38,266	37	0.10
2009	26,570	26,529	-41	-0.15
2010	21,045	20,943	-102	-0.48
2011	21,783	20,913	-870	-3.99
2012	22,536	22,198	-338	-1.50
2013	17,294	16,678	-616	-3.56
2014[4]	(X)	9,571	972	11.30
Mature groves	**386,699**	**385,525**	**-1,174**	**-0.30**
2014[4]	8,599	(X)	(X)	(X)
2015	8,565	8,565	-	-
2016	(X)	8,476	(X)	(X)
Young groves	**17,164**	**17,041**	**-123**	**-0.72**
Total	**403,863**	**402,566**	**-1,297**	**-0.32**

(X) Not applicable.

1 The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

2 Snapshot of groves in March of the year mentioned.

3 Estimate of removed and abandoned groves from April/2016 to March/2017.

4 The groves implemented in 2014 belonged to the group of young groves in the 2016 inventory and began to be part of the mature groves in this 2017 inventory.

Table 57 – Oranges: Trees by planting year [2016 and 2017 inventories and changes observed]

Planting year[1]	2016 Inventory[2]	2017 Inventory[2]	Loss of groves[3]: Changes between the 2016 and 2017 inventories observed in each planting year	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(percentage)
1979 or previous years	452.70	287.14	-165.56	-36.57
1980	50.65	43.68	-6.97	-13.76
1981	40.23	40.39	0.16	0.40
1982	57.64	45.15	-12.49	-21.67
1983	152.58	118.40	-34.18	-22.40
1984	76.05	47.39	-28.66	-37.69
1985	536.10	358.31	-177.79	-33.16
1986	543.32	405.95	-137.37	-25.28
1987	460.84	370.01	-90.83	-19.71
1988	453.20	311.72	-141.48	-31.22
1989	811.41	633.56	-177.85	-21.92
1990	1,522.09	1,195.28	-326.81	-21.47
1991	1,301.13	1,068.53	-232.60	-17.88
1992	1,162.14	1,017.47	-144.67	-12.45
1993	1,442.68	1,221.02	-221.66	-15.36
1994	1,329.29	1,150.85	-178.44	-13.42
1995	1,540.81	1,384.31	-156.50	-10.16
1996	1,265.16	1,131.97	-133.19	-10.53
1997	1,962.11	1,718.94	-243.17	-12.39
1998	2,881.00	2,466.29	-414.71	-14.39
1999	3,069.42	2,598.71	-470.71	-15.34
2000	4,949.89	4,254.90	-694.99	-14.04
2001	4,132.59	3,701.81	-430.78	-10.42
2002	6,132.44	5,304.29	-828.15	-13.50
2003	7,922.77	7,041.47	-881.30	-11.12
2004	10,039.69	8,967.77	-1,071.92	-10.68
2005	11,690.86	10,455.77	-1,235.09	-10.56
2006	13,876.05	11,363.65	-2,512.40	-18.11
2007	16,666.29	15,795.30	-870.99	-5.23
2008	18,897.54	17,849.95	-1,047.59	-5.54
2009	13,171.86	12,517.27	-654.59	-4.97
2010	11,223.29	10,560.88	-662.41	-5.90
2011	12,240.70	10,961.58	-1,279.12	-10.45
2012	12,827.19	12,312.39	-514.80	-4.01
2013	10,666.05	9,991.84	-674.21	-6.32
2014[3]	(X)	5,909.78	269.49	4.78
Resets 2007 to 2011[4]	NA	4,036.00	(X)	(X)
Resets 2012 to 2014[4]	NA	6,139.73	(X)	(X)
Bearing trees	**175,547.76**	**174,779.45**	**-768.31**	**-0.44**
Resets 2015 and 2016[5]	5,204.49	5,185.65	-18.84	-0.36
2014[3]	5,640.29	(X)	(X)	(X)
2015	5,640.14	5,640.14	-	-
2016	(X)	6,089.17	(X)	(X)
Non-bearing trees	**16,464.92**	**16,914.96**	**450.04**	**2.73**
Total	**192,012.68**	**191,694.41**	**-318.27**	**-0.17**

- Represents zero.
(X) Not applicable.
NA Not available because the new method that allowed the complete segregation of bearing trees (resets) in mature groves was implemented in 2017 inventory.
1 The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.
2 Snapshot of groves in March of the year mentioned.
3 The groves implemented in 2014 belonged to the group of young groves in the 2016 inventory and began to be part of the mature groves in this 2017 inventory.
4 Trees (resets) planted in the mentioned period, therefore, after the formation of the block and already have reached the bearing age. These trees are distributed in mature groves.
5 Trees (resets) planted in the mentioned period, therefore, after the formation of the block and have not reached the bearing age. These trees are distributed in mature groves.

Table 58 – Oranges: Grove area by sector and planting year [2017 inventory]

Planting year[1]	Sector					Total
	North	Northwest	Central	South	Southwest	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
1979 or previous years.....	229	69	192	970	33	1,493
1980.....	29	6	-	117	-	152
1981.....	16	7	-	31	69	123
1982.....	13	6	5	110	15	149
1983.....	284	5	10	186	-	485
1984.....	56	8	10	69	36	179
1985.....	383	187	404	525	39	1,538
1986.....	175	327	91	968	42	1,603
1987.....	113	31	132	687	370	1,333
1988.....	67	122	497	293	109	1,088
1989.....	67	219	450	874	496	2,106
1990.....	435	163	1,117	1,465	683	3,863
1991.....	80	122	564	1,212	1,638	3,616
1992.....	420	43	271	1,038	1,519	3,291
1993.....	282	93	1,187	829	1,842	4,233
1994.....	210	277	637	1,370	1,159	3,653
1995.....	421	193	726	1,908	698	3,946
1996.....	300	71	1,290	1,187	606	3,454
1997.....	656	12	1,936	1,252	1,331	5,187
1998.....	1,180	186	2,685	2,417	792	7,260
1999.....	2,646	90	2,125	2,264	772	7,897
2000.....	3,641	525	3,572	3,830	1,440	13,008
2001.....	2,838	1,236	2,712	2,834	1,073	10,693
2002.....	2,386	559	6,331	3,566	2,761	15,603
2003.....	4,989	1,142	6,073	3,580	4,206	19,990
2004.....	5,938	1,996	6,111	4,751	5,913	24,709
2005.....	5,868	1,042	8,085	4,534	6,983	26,512
2006.....	6,997	2,472	7,070	4,948	6,946	28,433
2007.....	7,713	3,553	9,948	6,053	7,563	34,830
2008.....	7,245	6,786	10,899	4,906	8,430	38,266
2009.....	7,060	4,103	7,029	3,896	4,441	26,529
2010.....	5,362	4,280	4,855	4,180	2,266	20,943
2011.....	4,843	4,242	5,863	3,695	2,270	20,913
2012.....	6,007	3,520	6,171	4,150	2,350	22,198
2013.....	5,065	1,747	6,351	2,110	1,405	16,678
2014.....	1,857	1,144	3,872	1,664	1,034	9,571
Mature groves.....	**85,871**	**40,584**	**109,271**	**78,469**	**71,330**	**385,525**
2015.....	884	1,314	1,228	4,429	710	8,565
2016.....	1,664	1,208	2,517	1,843	1,244	8,476
Young groves.....	**2,548**	**2,522**	**3,745**	**6,272**	**1,954**	**17,041**
Total.....	**88,419**	**43,106**	**113,016**	**84,741**	**73,284**	**402,566**
Percentage.....	**21.96**	**10.71**	**28.07**	**21.05**	**18.20**	**100.00**

- Represents zero.

[1] The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

Table 59 – Oranges: Trees by sector and planting year [2017 inventory]

Planting year[1]	Sector					Total
	North	Northwest	Central	South	Southwest	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
1979 or previous years	51.90	14.35	34.69	176.83	9.37	287.14
1980	9.15	2.92	-	31.61	-	43.68
1981	4.52	1.73	-	3.83	30.31	40.39
1982	2.52	1.88	1.30	35.00	4.45	45.15
1983	56.79	1.30	3.54	56.77	-	118.40
1984	9.88	3.47	2.98	20.50	10.56	47.39
1985	71.74	51.49	103.60	114.61	16.87	358.31
1986	35.86	92.94	25.89	238.60	12.66	405.95
1987	14.08	10.22	35.32	158.55	151.84	370.01
1988	10.82	31.73	142.06	90.62	36.49	311.72
1989	11.71	61.16	135.90	272.42	152.37	633.56
1990	130.79	46.85	341.39	443.53	232.72	1,195.28
1991	22.48	31.01	160.88	369.04	485.12	1,068.53
1992	127.54	10.89	79.64	327.41	471.99	1,017.47
1993	79.01	28.45	265.38	276.05	572.13	1,221.02
1994	60.99	81.54	174.84	446.63	386.85	1,150.85
1995	149.48	58.74	249.91	633.73	292.45	1,384.31
1996	86.13	18.01	401.86	396.35	229.62	1,131.97
1997	228.06	3.42	551.02	426.62	509.82	1,718.94
1998	382.95	64.11	880.67	842.46	296.10	2,466.29
1999	834.93	28.46	710.98	732.79	291.55	2,598.71
2000	1,140.76	162.48	1,091.70	1,317.10	542.86	4,254.90
2001	999.25	339.04	861.29	1,007.92	494.31	3,701.81
2002	746.92	172.91	1,995.06	1,269.49	1,119.91	5,304.29
2003	1,853.09	378.51	1,898.94	1,292.40	1,618.53	7,041.47
2004	2,052.11	659.99	2,172.53	1,737.81	2,345.33	8,967.77
2005	2,099.93	391.31	3,077.00	1,726.46	3,161.07	10,455.77
2006	2,689.93	953.26	2,644.17	1,931.44	3,144.85	11,363.65
2007	3,563.96	1,407.65	4,249.94	2,620.04	3,953.71	15,795.30
2008	3,379.49	3,058.04	4,755.77	2,180.70	4,475.95	17,849.95
2009	3,451.77	1,809.08	3,126.59	1,813.91	2,315.92	12,517.27
2010	2,679.16	1,939.21	2,413.73	2,187.49	1,341.29	10,560.88
2011	2,580.46	1,972.43	3,086.96	1,938.58	1,383.15	10,961.58
2012	3,360.34	1,726.72	3,429.19	2,356.42	1,439.72	12,312.39
2013	3,074.44	936.59	3,858.86	1,222.61	899.34	9,991.84
2014	1,138.85	650.69	2,427.35	988.86	704.03	5,909.78
Resets 2007 to 2011[2]	805.40	154.70	1,501.21	1,124.24	450.45	4,036.00
Resets 2012 to 2014[2]	1,292.82	277.74	2,241.33	1,406.50	921.34	6,139.73
Bearing trees	**39,290.01**	**17,635.02**	**49,133.47**	**34,215.92**	**34,505.03**	**174,779.45**
Resets 2015 and 2016[3]	1,252.19	184.29	1,775.40	1,115.39	858.38	5,185.65
2015	500.27	837.21	887.01	2,935.97	479.68	5,640.14
2016	1,114.20	777.40	1,904.45	1,345.55	947.57	6,089.17
Non-bearing trees	**2,866.66**	**1,798.90**	**4,566.86**	**5,396.91**	**2,285.63**	**16,914.96**
Total	**42,156.67**	**19,433.92**	**53,700.33**	**39,612.83**	**36,790.66**	**191,694.41**
Percentage	**21.99**	**10.14**	**28.01**	**20.66**	**19.19**	**100.00**

- Represents zero.

1 The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

2 Trees (resets) planted in the mentioned period, therefore, after the formation of the block and already have reached the bearing age. These trees are distributed in mature groves.

3 Trees (resets) planted in the mentioned period, therefore, after the formation of the block and have not reached the bearing age. These trees are distributed in mature groves.

Table 60 – Oranges: Grove area of early season varieties by planting year [2017 inventory]

Planting year[1]	Early varieties							Total
	Hamlin	Westin	Rubi	Valencia Americana	Valencia Argentina	Seleta	Pineapple	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
1979 or previous years.....	322	-	-	-	-	26	-	348
1980.....	-	-	-	-	-	-	-	-
1981.....	16	-	-	-	-	-	-	16
1982.....	4	-	-	-	-	-	-	4
1983.....	24	-	-	-	-	-	-	24
1984.....	9	-	-	-	-	-	-	9
1985.....	242	7	95	-	-	-	-	344
1986.....	92	19	67	75	-	-	-	253
1987.....	137	-	-	-	27	-	-	164
1988.....	184	-	-	-	-	-	-	184
1989.....	46	35	-	-	-	-	-	81
1990.....	176	69	-	59	-	2	-	306
1991.....	275	59	-	52	-	-	-	386
1992.....	686	-	-	17	-	-	11	714
1993.....	805	-	-	68	769	-	61	1,703
1994.....	865	68	19	2	175	-	-	1,129
1995.....	312	72	-	26	-	4	-	414
1996.....	405	11	5	161	-	-	2	584
1997.....	334	162	6	7	465	-	33	1,007
1998.....	832	266	35	79	40	-	20	1,272
1999.....	1,353	314	39	21	232	-	-	1,959
2000.....	1,355	128	17	129	158	3	-	1,790
2001.....	639	39	47	29	473	7	24	1,258
2002.....	1,986	351	165	200	648	6	10	3,366
2003.....	3,092	286	222	232	524	23	12	4,391
2004.....	3,357	566	364	522	220	9	22	5,060
2005.....	4,308	256	180	555	159	13	53	5,524
2006.....	5,158	555	748	808	-	1	80	7,350
2007.....	6,231	740	337	1,612	120	4	35	9,079
2008.....	6,529	803	744	1,832	21	-	126	10,055
2009.....	2,905	714	823	1,401	-	22	134	5,999
2010.....	1,682	333	750	953	21	28	102	3,869
2011.....	1,856	299	952	1,466	19	-	248	4,840
2012.....	2,007	277	947	872	4	4	471	4,582
2013.....	927	99	251	582	-	-	216	2,075
2014.....	127	36	91	49	-	5	182	490
Mature groves.....	**49,278**	**6,564**	**6,904**	**11,809**	**4,075**	**157**	**1,842**	**80,629**
2015.....	776	235	215	80	-	-	-	1,306
2016.....	532	45	214	130	-	-	16	937
Young groves.....	**1,308**	**280**	**429**	**210**	**-**	**-**	**16**	**2,243**
Total.....	**50,586**	**6,844**	**7,333**	**12,019**	**4,075**	**157**	**1,858**	**82,872**
Percentage.....	**61.04**	**8.26**	**8.85**	**14.50**	**4.92**	**0.19**	**2.24**	**100.00**

- Represents zero.

[1] The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

Table 61 – Oranges: Trees of early season varieties by planting year [2017 inventory]

Planting year[1]	Early varieties							Total
	Hamlin	Westin	Rubi	Valencia Americana	Valencia Argentina	Seleta	Pineapple	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
1979 or previous years.....	64.00	-	-	-	-	6.67	-	70.67
1980.....	-	-	-	-	-	-	-	-
1981.....	4.52	-	-	-	-	-	-	4.52
1982.....	1.46	-	-	-	-	-	-	1.46
1983.....	7.67	-	-	-	-	-	-	7.67
1984.....	3.83	-	-	-	-	-	-	3.83
1985.....	53.91	2.05	11.27	-	-	-	-	67.23
1986.....	23.03	4.05	6.45	6.40	-	-	-	39.93
1987.....	27.52	-	-	-	4.06	-	-	31.58
1988.....	50.66	-	-	-	-	-	-	50.66
1989.....	16.55	9.97	-	-	-	-	-	26.52
1990.....	53.49	23.29	-	15.68	-	0.79	-	93.25
1991.....	60.33	15.04	-	23.23	-	-	-	98.60
1992.....	191.74	-	-	3.27	-	-	3.94	198.95
1993.....	227.63	-	-	19.26	126.19	-	19.22	392.30
1994.....	255.01	18.70	5.77	0.44	37.84	-	-	317.76
1995.....	103.09	24.15	-	7.37	-	0.83	-	135.44
1996.....	122.71	4.06	1.32	37.58	-	-	0.14	165.81
1997.....	107.18	47.94	1.77	2.66	78.46	-	10.42	248.43
1998.....	250.50	78.05	11.29	30.92	9.09	-	6.24	386.09
1999.....	424.33	99.75	10.51	6.12	64.70	-	-	605.41
2000.....	417.43	44.74	7.57	45.38	29.23	0.71	-	545.06
2001.....	221.11	14.00	21.41	10.72	103.64	2.28	7.75	380.91
2002.....	661.40	132.32	56.84	68.37	220.70	1.66	3.43	1,144.72
2003.....	1,134.42	95.28	64.78	79.88	173.98	7.82	3.14	1,559.30
2004.....	1,175.92	166.57	115.67	190.39	71.03	2.47	8.77	1,730.82
2005.....	1,585.20	96.27	71.89	209.21	50.31	4.06	26.47	2,043.41
2006.....	1,972.25	203.17	323.65	356.03	-	0.23	34.62	2,889.95
2007.....	2,751.83	318.29	148.17	730.62	60.94	1.64	15.05	4,026.54
2008.....	2,909.43	347.12	360.52	861.45	9.23	-	45.57	4,533.32
2009.....	1,286.02	325.94	399.71	677.54	-	10.96	64.44	2,764.61
2010.....	831.00	179.61	400.01	495.78	13.06	16.39	57.95	1,993.80
2011.....	914.92	150.48	525.29	731.78	10.54	-	169.00	2,502.01
2012.....	1,034.79	146.38	550.96	467.83	1.97	1.86	265.68	2,469.47
2013.....	511.00	50.98	153.31	357.71	-	0.12	125.71	1,198.83
2014.....	74.04	20.40	57.80	34.70	-	3.37	116.12	306.43
Resets 2007 to 2011[2].....	570.41	55.85	16.84	79.62	25.05	0.71	5.14	753.62
Resets 2012 to 2014[2].....	1,020.77	86.07	103.76	205.68	31.01	2.89	18.50	1,468.68
Bearing trees.....	**21,121.10**	**2,760.52**	**3,426.56**	**5,755.62**	**1,121.03**	**65.46**	**1,007.30**	**35,257.59**
Resets 2015 and 2016[3].....	814.11	93.77	153.02	183.28	9.91	1.80	12.52	1,268.41
2015.....	586.89	185.65	149.38	57.50	-	-	-	979.42
2016.....	408.78	32.25	154.13	122.71	-	0.43	14.48	732.78
Non-bearing trees.....	**1,809.78**	**311.67**	**456.53**	**363.49**	**9.91**	**2.23**	**27.00**	**2,980.61**
Total.....	**22,930.88**	**3,072.19**	**3,883.09**	**6,119.11**	**1,130.94**	**67.69**	**1,034.30**	**38,238.20**
Percentage.....	**59.97**	**8.03**	**10.16**	**16.00**	**2.96**	**0.18**	**2.70**	**100.00**

- Represents zero.

[1] The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

[2] Trees (resets) planted in the mentioned period, therefore, after the formation of the block and already have reached the bearing age. These trees are distributed in mature groves.

[3] Trees (resets) planted in the mentioned period, therefore, after the formation of the block and have not reached the bearing age. These trees are distributed in mature groves.

Table 62 – Oranges: Grove area of mid-season and late season varieties by planting year [2017 inventory]

Planting year[1]	Mid-season and late varieties				Total
	Pera Rio[2]	Valencia	Valencia Folha Murcha	Natal	
	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)
1979 or previous years.....	222	723	-	200	1,145
1980.....	39	56	9	48	152
1981.....	9	31	-	67	107
1982.....	68	50	-	27	145
1983.....	151	87	-	223	461
1984.....	59	30	-	81	170
1985.....	399	438	-	357	1,194
1986.....	476	436	33	405	1,350
1987.....	345	282	40	502	1,169
1988.....	369	240	27	268	904
1989.....	802	889	75	259	2,025
1990.....	1,054	1,730	231	542	3,557
1991.....	1,210	1,108	48	864	3,230
1992.....	1,230	820	76	451	2,577
1993.....	947	882	141	560	2,530
1994.....	1,079	897	158	390	2,524
1995.....	1,298	1,637	194	403	3,532
1996.....	1,029	1,111	259	471	2,870
1997.....	1,179	2,331	97	573	4,180
1998.....	1,874	3,255	479	380	5,988
1999.....	1,965	3,311	335	327	5,938
2000.....	3,331	5,699	857	1,331	11,218
2001.....	2,493	4,352	553	2,037	9,435
2002.....	2,870	6,726	405	2,236	12,237
2003.....	5,575	7,596	240	2,188	15,599
2004.....	6,523	8,924	681	3,521	19,649
2005.....	7,155	8,980	811	4,042	20,988
2006.....	7,109	9,483	1,127	3,364	21,083
2007.....	10,304	10,607	1,300	3,540	25,751
2008.....	12,572	9,651	1,997	3,991	28,211
2009.....	11,288	6,369	1,270	1,603	20,530
2010.....	10,196	5,032	839	1,007	17,074
2011.....	8,527	5,488	819	1,239	16,073
2012.....	9,133	6,038	762	1,683	17,616
2013.....	7,558	4,185	952	1,908	14,603
2014.....	4,929	1,955	1,172	1,025	9,081
Mature groves.....	**125,367**	**121,429**	**15,987**	**42,113**	**304,896**
2015.....	3,984	1,189	261	1,825	7,259
2016.....	3,983	2,443	224	889	7,539
Young groves.....	**7,967**	**3,632**	**485**	**2,714**	**14,798**
Total.....	**133,334**	**125,061**	**16,472**	**44,827**	**319,694**
Percentage.....	**41.71**	**39.12**	**5.15**	**14.02**	**100.00**

- Represents zero.

[1] The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

[2] The orange groves area of João Nunes variety was added to the area of the Pera Rio variety, because both varieties present the same maturation stage.

Table 63 – Oranges: Trees of mid-season and late season varieties by planting year [2017 inventory]

Planting year[1]	Mid-season and late varieties				Total
	Pera Rio[2]	Valencia	Valencia Folha Murcha	Natal	
	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)
1979 or previous years.....	50.47	130.10	-	35.90	216.47
1980.....	13.06	13.83	1.88	14.91	43.68
1981.....	2.34	3.83	-	29.70	35.87
1982.....	23.03	13.89	-	6.77	43.69
1983.....	49.02	22.60	-	39.11	110.73
1984.....	14.61	6.35	-	22.60	43.56
1985.....	92.70	119.60	-	78.78	291.08
1986.....	136.60	120.08	11.07	98.27	366.02
1987.....	139.09	79.12	7.44	112.78	338.43
1988.....	114.60	72.05	7.13	67.28	261.06
1989.....	248.56	269.23	20.77	68.48	607.04
1990.....	345.36	513.47	74.91	168.29	1,102.03
1991.....	376.35	328.39	16.46	248.73	969.93
1992.....	382.37	264.29	23.20	148.66	818.52
1993.....	322.64	288.41	47.67	170.00	828.72
1994.....	392.28	277.13	58.57	105.11	833.09
1995.....	513.02	533.34	74.20	128.31	1,248.87
1996.....	363.98	351.91	117.37	132.90	966.16
1997.....	474.58	797.09	40.51	158.33	1,470.51
1998.....	632.96	1,122.91	205.61	118.72	2,080.20
1999.....	690.40	1,077.18	116.78	108.94	1,993.30
2000.....	1,147.21	1,826.55	325.49	410.59	3,709.84
2001.....	899.81	1,609.97	206.73	604.39	3,320.90
2002.....	943.55	2,310.25	143.25	762.52	4,159.57
2003.....	2,021.21	2,621.70	86.03	753.23	5,482.17
2004.....	2,510.34	3,139.88	264.87	1,321.86	7,236.95
2005.....	2,992.34	3,465.68	328.14	1,626.20	8,412.36
2006.....	2,967.39	3,756.88	470.30	1,279.13	8,473.70
2007.....	4,756.91	4,776.90	629.61	1,605.34	11,768.76
2008.....	5,932.89	4,475.47	993.06	1,915.21	13,316.63
2009.....	5,349.54	3,014.53	642.40	746.19	9,752.66
2010.....	5,167.97	2,479.53	425.40	494.18	8,567.08
2011.....	4,462.03	2,937.35	424.59	635.60	8,459.57
2012.....	5,189.58	3,280.05	450.21	923.08	9,842.92
2013.....	4,591.26	2,470.85	565.26	1,165.64	8,793.01
2014.....	3,021.99	1,165.90	737.45	678.01	5,603.35
Resets 2007 to 2011[3].....	1,150.51	1,586.93	149.73	395.21	3,282.38
Resets 2012 to 2014[3].....	1,751.86	1,939.94	252.81	726.44	4,671.05
Bearing trees.....	**60,234.41**	**53,263.16**	**7,918.90**	**18,105.39**	**139,521.86**
Resets 2015 and 2016[4].....	1,783.41	1,356.65	217.83	559.35	3,917.24
2015.....	2,624.57	720.06	171.11	1,144.98	4,660.72
2016.....	2,758.17	1,839.25	167.99	590.98	5,356.39
Non-bearing trees.....	**7,166.15**	**3,915.96**	**556.93**	**2,295.31**	**13,934.35**
Total.....	**67,400.56**	**57,179.12**	**8,475.83**	**20,400.70**	**153,456.21**
Percentage.....	**43.92**	**37.26**	**5.52**	**13.29**	**100.00**

- Represents zero.

1 The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

2 The number of orange trees of João Nunes variety was added to the number of Pera Rio variety, because both varieties present the same maturation stage.

3 Trees (resets) planted in the mentioned period, therefore, after the formation of the block and already have reached the bearing age. These trees are distributed in mature groves.

4 Trees (resets) planted in the mentioned period, therefore, after the formation of the block and have not reached the bearing age. These trees are distributed in mature groves.

Table 64 – Oranges: Density planting[1] of young and mature groves by sector and region [inventories 2015 through 2017]

Sector and region	2015 inventory		2016 inventory		2017 inventory	
	Young groves[2]	Mature groves[3]	Young groves[2]	Mature groves[3]	Young groves[2]	Mature groves[3]
	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)
North						
Triângulo Mineiro	596	463	591	479	568	471
Bebedouro	655	450	623	473	642	470
Altinópolis	540	496	781	496	833	487
Average	**631**	**459**	**618**	**478**	**633**	**472**
Northwest						
Votuporanga	497	411	445	419	701	422
São José do Rio Preto	588	443	639	455	634	455
Average	**540**	**426**	**621**	**438**	**639**	**439**
Central						
Matão	648	414	700	451	783	451
Duartina	611	456	663	473	759	482
Brotas	639	380	670	454	645	454
Average	**631**	**427**	**679**	**462**	**743**	**466**
South						
Porto Ferreira	662	435	688	455	705	459
Limeira	658	441	555	448	616	442
Average	**661**	**438**	**650**	**451**	**681**	**450**
Southwest						
Avaré	711	492	698	491	668	493
Itapetininga	640	503	712	518	783	504
Average	**692**	**495**	**702**	**498**	**730**	**496**
Average	**631**	**448**	**654**	**467**	**687**	**467**

[1] Average density planting weighted per stratum area.
[2] Groves implemented in 2015 and 2016.
[3] Groves implemented in 2014 or in previous years. The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).

Table 65 – Oranges: Density planting[1] of young and mature groves by variety and maturation stage [inventories 2015 through 2017]

Variety	2015 inventory		2016 inventory		2017 inventory	
	Young groves[2]	Mature groves[3]	Young groves[2]	Mature groves[3]	Young groves[2]	Mature groves[3]
	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)
Early varieties						
Hamlin.....	624	432	742	443	760	445
Westin.....	649	431	741	441	773	435
Rubi.....	746	510	738	521	714	518
Valencia Americana.....	653	480	710	503	861	503
Valencia Argentina.....	(NA)	300	(NA)	304	(NA)	278
Seleta.....	725	447	695	464	710	432
Pineapple.....	545	523	664	565	855	553
Average.....	**637**	**440**	**735**	**454**	**763**	**453**
Mid-season						
Pera Rio.....	637	472	654	493	675	495
João Nunes.....	(NA)	544	(NA)	594	(NA)	532
Average.....	**637**	**472**	**654**	**493**	675	495
Late season						
Valencia.....	622	435	611	456	703	450
Valencia Folha Murcha.....	652	489	675	511	686	509
Natal.....	607	418	649	434	639	443
Average.....	**624**	**435**	**636**	**455**	**677**	**453**
Average.....	**631**	**448**	**654**	**467**	**687**	**467**

NA Not available.

1 Average density planting weighted per stratum area.

2 Groves implemented in 2015 and 2016.

3 Groves implemented in 2014 or in previous years. The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).

Table 66 – Oranges: Density planting[1] of young groves by variety and region [2017 inventory]

Variety	Region												Average
	TMG[2]	BEB[3]	ALT[4]	VOT[5]	SJO[6]	MAT[7]	DUA[8]	BRO[9]	PFE[10]	LIM[11]	AVA[12]	ITG[13]	
	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)
Early varieties													
Hamlin.....	(NA)	850	850	703	795	658	781	658	782	661	666	856	760
Westin.....	(NA)	850	(NA)	(NA)	703	(NA)	(NA)	727	786	674	664	735	773
Rubi.....	(NA)	850	862	703	(NA)	658	658	658	695	703	708	731	714
Valencia Americana..	(NA)	841	698	(NA)	477	1.290	1.264	1.290	669	(NA)	746	748	861
Valencia Argentina....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Seleta.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	669	746	746	710
Pineapple.....	(NA)	841	(NA)	(NA)	(NA)	(NA)	1.290	(NA)	(NA)	(NA)	(NA)	719	855
Average……..	**(NA)**	**850**	**855**	**703**	**757**	**972**	**929**	**671**	**766**	**670**	**675**	**768**	**763**
Mid-season													
Pera Rio.....	567	632	859	727	530	790	740	644	680	680	667	791	675
João Nunes.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Average……	**567**	**632**	**859**	**727**	**530**	**790**	**740**	**644**	**680**	**680**	**667**	**791**	**675**
Late season													
Valencia.....	571	669	770	486	670	686	795	626	766	655	657	793	703
V.Folha Murcha[14].....	762	705	770	486	551	675	732	615	711	710	664	667	686
Natal.....	567	520	478	572	717	875	616	673	658	513	686	676	639
Average……..	**577**	**631**	**672**	**546**	**690**	**753**	**742**	**642**	**707**	**582**	**663**	**787**	**677**
Average……...	**568**	**642**	**833**	**701**	**634**	**783**	**759**	**645**	**705**	**616**	**668**	**783**	**687**

NA Not available.
1 Average density planting weighted per stratum area.
2 TMG – Triângulo Mineiro.
3 BEB – Bebedouro.
4 ALT – Altinópolis.
5 VOT – Votuporanga.
6 SJO – São José do Rio Preto.
7 MAT – Matão.
8 DUA – Duartina.
9 BRO – Brotas.
10 PFE – Porto Ferreira.
11 LIM – Limeira.
12 AVA – Avaré.
13 ITG – Itapetininga.
14 V.Folha Murcha – Valencia Folha Murcha.

Table 67 – Oranges: Density planting[1] of mature groves by variety and region [2017 inventory]

Variety	Region												Average
	TMG[2]	BEB[3]	ALT[4]	VOT[5]	SJO[6]	MAT[7]	DUA[8]	BRO[9]	PFE[10]	LIM[11]	AVA[12]	ITG[13]	
	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)
Early varieties													
Hamlin.....	429	427	485	427	443	445	456	439	448	438	469	448	445
Westin.....	471	397	463	369	330	419	406	456	504	421	474	459	435
Rubi.....	543	543	578	522	489	515	557	417	541	514	486	514	518
Valencia Americana..	550	516	541	417	509	465	519	439	462	399	605	542	503
Valencia Argentina....	396	384	579	(NA)	251	221	(NA)	504	280	349	344	537	278
Seleta.....	(NA)	539	(NA)	(NA)	(NA)	(NA)	587	(NA)	519	324	386	(NA)	432
Pineapple.....	321	470	775	274	530	572	427	647	559	299	445	674	553
Average……	**441**	**449**	**500**	**421**	**450**	**418**	**476**	**449**	**464**	**433**	**474**	**504**	**453**
Mid-season													
Pera Rio.....	521	541	520	417	458	504	515	484	501	474	516	473	495
João Nunes.....	532	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	532
Average……	**521**	**541**	**520**	**417**	**458**	**504**	**515**	**484**	**501**	**474**	**516**	**473**	**495**
Late season													
Valencia.....	452	444	455	468	465	438	454	439	429	413	478	557	450
V.Folha Murcha[14].....	538	513	478	525	529	551	532	474	486	443	535	539	509
Natal.....	448	390	468	377	411	374	439	431	429	458	500	481	443
Average……	**453**	**442**	**458**	**446**	**457**	**436**	**457**	**441**	**434**	**423**	**488**	**524**	**453**
Average……..	**471**	**470**	**487**	**422**	**455**	**451**	**482**	**454**	**459**	**442**	**493**	**504**	**467**

NA Not available.

1 Average density planting weighted per stratum area. The calculation for groves older than 2 years considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).

2 TMG – Triângulo Mineiro.

3 BEB – Bebedouro.

4 ALT – Altinópolis.

5 VOT – Votuporanga.

6 SJO – São José do Rio Preto.

7 MAT – Matão.

8 DUA – Duartina.

9 BRO – Brotas.

10 PFE – Porto Ferreira.

11 LIM – Limeira.

12 AVA – Avaré.

13 ITG – Itapetininga.

14 V.Folha Murcha – Valencia Folha Murcha.

Table 68 – Oranges: Density planting[1] of groves younger than 11 years by variety and region [2017 inventory]

Variety	Region												Average
	TMG[2]	BEB[3]	ALT[4]	VOT[5]	SJO[6]	MAT[7]	DUA[8]	BRO[9]	PFE[10]	LIM[11]	AVA[12]	ITG[13]	
	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)
Early varieties													
Hamlin.....	532	490	550	486	481	489	538	491	598	477	553	574	517
Westin.....	516	493	473	391	481	446	498	705	621	435	548	522	517
Rubi.....	543	595	628	525	585	518	576	592	646	558	580	602	580
Valencia Americana..	553	529	546	420	516	548	582	580	522	455	670	640	545
Valencia Argentina....	(NA)	(NA)	579	(NA)	(NA)	510	(NA)	(NA)	688	(NA)	(NA)	537	531
Seleta.....	(NA)	539	(NA)	(NA)	(NA)	(NA)	621	(NA)	519	455	746	746	578
Pineapple.....	321	491	775	274	538	572	664	647	559	439	(NA)	693	585
Average……	**534**	**514**	**564**	**449**	**503**	**513**	**554**	**521**	**605**	**468**	**571**	**617**	**533**
Mid-season													
Pera Rio.....	557	590	607	441	514	597	575	558	622	544	592	638	560
João Nunes.....	554	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	554
Average……	**557**	**590**	**607**	**441**	**514**	**597**	**575**	**558**	**622**	**544**	**592**	**638**	**560**
Late season													
Valencia.....	522	521	511	514	507	543	563	521	585	498	568	627	543
V.Folha Murcha[14]…..	578	540	469	557	533	620	602	523	629	521	610	585	573
Natal.....	530	565	486	456	594	534	538	549	604	544	589	592	561
Average……..	**526**	**530**	**502**	**507**	**531**	**553**	**561**	**527**	**595**	**512**	**578**	**611**	**550**
Average…..	**540**	**547**	**558**	**451**	**518**	**560**	**565**	**537**	**608**	**517**	**581**	**620**	**551**

NA Not available.

1 Average density planting weighted per stratum area. The calculation for groves older than 2 years considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).

2 TMG – Triângulo Mineiro.

3 BEB – Bebedouro.

4 ALT – Altinópolis.

5 VOT – Votuporanga.

6 SJO – São José do Rio Preto.

7 MAT – Matão.

8 DUA – Duartina.

9 BRO – Brotas.

10 PFE – Porto Ferreira.

11 LIM – Limeira.

12 AVA – Avaré.

13 ITG – Itapetininga.

14 V.Folha Murcha – Valencia Folha Murcha.

Table 69 – Oranges: Density planting[1] of groves older than 10 years by variety and region [2017 inventory]

Variety	Region												Average
	TMG[2]	BEB[3]	ALT[4]	VOT[5]	SJO[6]	MAT[7]	DUA[8]	BRO[9]	PFE[10]	LIM[11]	AVA[12]	ITG[13]	
	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)	(trees/ hectare)
Early varieties													
Hamlin.....	377	387	452	355	389	400	365	398	390	425	426	403	398
Westin.....	376	357	452	339	284	394	341	398	390	400	406	422	373
Rubi.....	(NA)	319	467	435	367	429	338	368	339	440	431	432	397
Valencia Americana..	509	447	505	399	465	324	404	370	417	306	502	415	406
Valencia Argentina....	396	384	(NA)	(NA)	251	197	(NA)	504	241	349	344	(NA)	266
Seleta.....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	378	(NA)	(NA)	307	386	(NA)	333
Pineapple.....	(NA)	436	(NA)	(NA)	509	(NA)	382	(NA)	(NA)	248	445	258	423
Average……..	**377**	**386**	**453**	**358**	**354**	**319**	**369**	**397**	**381**	**412**	**421**	**404**	**383**
Mid-season													
Pera Rio.....	396	426	454	325	375	372	444	428	411	418	459	357	416
João Nunes.....	279	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	279
Average……	**396**	**426**	**454**	**325**	**375**	**372**	**444**	**428**	**411**	**418**	**459**	**357**	**416**
Late season													
Valencia.....	361	398	435	367	391	350	377	413	372	385	431	496	395
V.Folha Murcha[14]…..	421	480	486	412	523	380	470	434	374	404	420	390	431
Natal.....	374	306	437	303	321	321	374	393	381	389	449	398	379
Average……..	**365**	**385**	**438**	**341**	**374**	**344**	**383**	**411**	**374**	**387**	**437**	**442**	**393**
Average……..	**374**	**392**	**445**	**333**	**368**	**343**	**400**	**413**	**385**	**400**	**439**	**405**	**397**

NA Not available.

1 Average density planting weighted per stratum area. The calculation for groves older than 2 years considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).

2 TMG – Triângulo Mineiro.

3 BEB – Bebedouro.

4 ALT – Altinópolis.

5 VOT – Votuporanga.

6 SJO – São José do Rio Preto.

7 MAT – Matão.

8 DUA – Duartina.

9 BRO – Brotas.

10 PFE – Porto Ferreira.

11 LIM – Limeira.

12 AVA – Avaré.

13 ITG – Itapetininga.

14 V.Folha Murcha – Valencia Folha Murcha.

Table 70 – Oranges: Density planting[1] of groves by planting year [2017 inventory]

Planting year[2]	Density planting
	(trees/hectare)
1979 or previous years.....	329
1980.....	360
1981.....	388
1982.....	370
1983.....	316
1984.....	323
1985.....	303
1986.....	323
1987.....	342
1988.....	343
1989.....	350
1990.....	356
1991.....	330
1992.....	346
1993.....	331
1994.....	355
1995.....	394
1996.....	368
1997.....	369
1998.....	387
1999.....	381
2000.....	373
2001.....	386
2002.....	388
2003.....	393
2004.....	406
2005.....	440
2006.....	448
2007.....	494
2008.....	504
2009.....	508
2010.....	540
2011.....	564
2012.....	574
2013.....	620
2014.....	642
Mature groves.....	**467**
2015.....	656
2016.....	719
Young groves.....	**687**
Average.....	**476**

[1] Average density planting weighted per stratum area. The calculation for groves older than 2 years considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).

[2] The information on planting year refers to the groves remaining at the time of data collection for this publication; in other words, it does not portray all the groves formed in these years, as a result of removal and renewal over time.

Table 71 – Oranges: Area of irrigated, non-irrigated or without information groves by sector and region[1] [2017 inventory]

Sector and region	Irrigated groves	Non-irrigated groves or without irrigation information
	(hectares)	(hectares)
North		
Triângulo Mineiro	16,902	8,816
Bebedouro	29,015	22,744
Altinópolis	192	10,750
Subtotal	**46,109**	**42,310**
Northwest		
Votuporanga	5,285	14,777
São José do Rio Preto	8,522	14,522
Subtotal	**13,807**	**29,299**
Central		
Matão	13,329	27,057
Duartina	8,252	44,180
Brotas	644	19,554
Subtotal	**22,225**	**90,791**
South		
Porto Ferreira	7,432	34,431
Limeira	4,205	38,673
Subtotal	**11,637**	**73,104**
Southwest		
Avaré	4,984	50,919
Itapetininga	134	17,247
Subtotal	**5,118**	**68,166**
Total	**98,896**	**303,670**
Percentage	**24.57**	**75.43**

[1] The area of irrigated groves, non-irrigated groves and those with no information about irrigation – by sector, region, variety, age, and method – was updated by applying the proportion of groves in each category obtained from the 2015 assessment to the area of orange groves measured in the 2017 assessment.

Table 72 – Oranges: Area of irrigated, non-irrigated or without information groves by variety[1] [2017 inventory]

Variety	Irrigated groves	Non-irrigated groves or without irrigation information
	(hectares)	(hectares)
Early varieties:		
Hamlin	12,286	38,300
Westin	1,754	5,090
Rubi	1,656	5,677
Valencia Americana	2,639	9,380
Valencia Argentina	2,649	1,426
Seleta	30	127
Pineapple	217	1,641
Subtotal	**21,231**	**61,641**
Mid-season:		
Pera Rio	30,073	103,252
João Nunes	-	9
Subtotal	**30,073**	**103,261**
Late season:		
Valencia	29,925	95,136
Valencia Folha Murcha	15,043	1,429
Natal	2,624	42,203
Subtotal	**47,592**	**138,768**
Total	**98,896**	**303,670**

- Represents zero.

[1] The area of irrigated groves, non-irrigated groves and those with no information about irrigation – by sector, region, variety, age, and method – was updated by applying the proportion of groves in each category obtained from the 2015 assessment to the area of orange groves measured in the 2017 assessment.

Table 73 – Oranges: Area of irrigated, non-irrigated or without information groves by age group[1] [2017 inventory]

Groves age	Irrigated groves	Non-irrigated groves or without irrigation information
	(hectares)	(hectares)
1 – 2 years.....	5,526	20,964
3 – 5 years.....	10,404	36,574
6 – 10 years.....	25,396	112,423
More than 10 years.....	57,570	133,709
Total.....	**98,896**	**303,670**

[1] The area of irrigated groves, non-irrigated groves and those with no information about irrigation – by sector, region, variety, age, and method – was updated by applying the proportion of groves in each category obtained from the 2015 assessment to the area of orange groves measured in the 2017 assessment.

Table 74 – Oranges: Area of groves irrigated by irrigation method[1] [2017 inventory]

Irrigation method	Irrigated groves	Percentage
	(hectares)	(%)
Sprinkling.....	11,548	11.68
Localized.....	87,348	88.32
Total.....	**98,896**	**100.00**

[1] The area of irrigated groves, non-irrigated groves and those with no information about irrigation – by sector, region, variety, age, and method – was updated by applying the proportion of groves in each category obtained from the 2015 assessment to the area of orange groves measured in the 2017 assessment.

Table 75 – Oranges: Area of removed groves by sector and region [2016, 2017 inventories and total accumulated]

Sector and region	2016 inventory (removal assessed between: October/2014 and March/2016)		2017 inventory (removal assessed between: April/2016 and March/2017)		Accumulated removed area (from October/2014 to March/2017)	
	Area of groves removed	Removal rate	Area of groves removed	Removal rate	Area of groves removed	Removal rate
	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)
North						
Triângulo Mineiro....	342	1.33	449	1.74	791	3.07
Bebedouro.....	4,015	7.17	1,838	3.28	5,853	10.45
Altinópolis.....	80	0.73	3	0.03	83	0.76
Subtotal.....	**4,437**	**4.79**	**2,290**	**2.47**	**6,727**	**7.26**
Northwest						
Votuporanga.....	4,480	18.21	100	0.41	4,580	18.61
S. J. do Rio Preto.....	718	3.01	1,919	8.03	2,637	11.04
Subtotal	**5,198**	**10.72**	**2,019**	**4.16**	**7,217**	**14.88**
Central						
Matão.....	5,331	11.23	3,028	6.38	8,359	17.61
Duartina.....	2,332	4.11	2,984	5.25	5,316	9.36
Brotas.....	2,847	12.60	353	1.56	3,200	14.17
Subtotal.....	**10,510**	**8.28**	**6,365**	**5.02**	**16,875**	**13.30**
South						
Porto Ferreira.....	4,368	10.39	214	0.51	4,582	10.89
Limeira.....	3,126	6.67	2,270	4.84	5,396	11.51
Subtotal.....	**7,494**	**8.42**	**2,484**	**2.79**	**9,978**	**11.22**
Southwest						
Avaré.....	409	0.73	499	0.89	908	1.62
Itapetininga.....	765	4.31	650	3.66	1,415	7.98
Subtotal.....	**1,174**	**1.59**	**1,149**	**1.56**	**2,323**	**3.15**
Total.....	**28,813**	**6.69**	**14,307**	**3.32**	**43,120**	**10.01**

- Represents zero.

Table 76 – Oranges: Area of removed groves by variety [2016, 2017 inventories and total accumulated]

Variety	2016 inventory (removal assessed between: October/2014 and March/2016)		2017 inventory (removal assessed between: April/2016 and March/2017)		Accumulated removed area (from October/2014 to March/2017)	
	Area of groves removed	Removal rate	Area of groves removed	Removal rate	Area of groves removed	Removal rate
	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)
Early varieties						
Hamlin.....	3,266	5.96	1,998	3.65	5,264	9.61
Westin.....	362	4.96	345	4.73	707	9.69
Rubi.....	153	2.08	242	3.29	395	5.38
Valencia Americana...	672	5.16	548	4.21	1,220	9.36
Valencia Argentina....	307	6.55	296	6.32	603	12.87
Seleta.....	3	1.81	7	4.22	10	6.02
Pineapple.....	84	4.43	5	0.26	89	4.70
Subtotal.....	**4,847**	**5.43**	**3,441**	**3.86**	**8,288**	**9.29**
Mid-season						
Pera Rio.....	11,356	8.02	4,034	2.85	15,390	10.87
João Nunes.....	-	-	1	11.11	1	11.11
Subtotal.....	**11,356**	**8.02**	**4,035**	**2.85**	**15,391**	**10.87**
Late season						
Valencia.....	8,686	6.57	1,569	1.19	10,255	7.76
V.Folha Murcha[1].....	1,287	7.27	309	1.75	1,596	9.02
Natal.....	2,637	5.29	4,953	9.93	7,590	15.22
Subtotal.....	**12,610**	**6.31**	**6,831**	**3.42**	**19,441**	**9.73**
Total.....	**28,813**	**6.69**	**14,307**	**3.32**	**43,120**	**10.01**

- Represents zero.
[1] V.Folha Murcha – Valencia Folha Murcha.

Table 77 – Oranges: Area of removed groves by age group [2016, 2017 inventories and total accumulated]

Groves age	2016 inventory (removal assessed between: October/2014 and March/2016)		2017 inventory (removal assessed between: April/2016 and March/2017)		Accumulated removed area (from October/2014 to March/2017)	
	Area of groves removed	Removal rate	Area of groves removed	Removal rate	Area of groves removed	Removal rate
	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)
1 – 2 years.....	953	3.51	-	-	-	-
3 – 5 years	1,035	1.51	138	0.20	1,173	1.71
6 – 10 years	8,667	5.14	12	0.01	8,679	5.15
More than 10 years	18,158	10.91	15,110	9.09	33,268	20.00
Total.....	**28,813**	**6.69**	**14,307**	**3.32**	**43,120**	**10.01**

- Represents zero.

Table 78 – Oranges: Removal rate stratified by property size, considering the number of trees in the property [total accumulated]

Range of the number of orange trees in the property	Accumulated removed area (from October/2014 to March/2017)	Removal rate
(1,000 trees)	(hectares)	(%)
Below 10.....	15,501	31.51
10 – 19.....	4,669	15.02
20 – 29.....	2,033	9.01
30 – 49.....	3,650	12.64
50 – 99.....	4,499	9.55
100 – 200.....	4,072	7.75
Above 200.....	8,696	4.36
Total.....	**43,120**	**10.01**

Table 79 – Oranges: Reoccupation of removed grove area by property size [2017 inventory and total accumulated]

Range of the number of orange trees in the property	Area already replanted with orange	Area that may be occupied with citrus					Area that may be occupied with another crop	Area with not information about intention to reoccupy[1]	Total removed
		Intention to replant oranges	Intention to replant acid lime or lemon	Intention to replant tangerine	Total with intention to replant	Percentage with intention to replant in relation to removed total			
(1,000 trees)	(hectares)	(hectares)	(hectares)	(hectares)	(hectares)	(%)	(hectares)	(hectares)	(hectares)
Below 10.....	288	814	480	71	1,365	3.17	8,144	5,704	15,501
10 – 19.....	226	14	102	-	116	0.27	3,173	1,154	4,669
20 – 29.....	164	16	-	-	16	0.04	1,153	700	2,033
30 – 49.....	215	-	-	446	446	1.03	1,979	1,010	3,650
50 – 99.....	350	90	106	59	255	0.59	2,670	1,224	4,499
100 – 200.....	386	16	-	-	16	0.04	2,599	1,071	4,072
Above 200.....	715	2,241	-	-	2,241	5.20	-	5,740	8,696
Total.....	**2,344**	**3,191**	**688**	**576**	**4,455**	**10.33**	**19,718**	**16,603**	**43,120**

- Represents zero.

[1] Decision maker was not present at the time of assessment or did not know how to answer.

Table 80 – Oranges: Dead trees by sector and region [inventories 2015 through 2017]

Sector and region	2015 inventory		2016 inventory		2017 inventory	
	Dead trees	Tree mortality rate	Dead trees	Tree mortality rate	Dead trees	Tree mortality rate
	(1,000 trees)	(%)	(1,000 trees)	(%)	(1,000 trees)	(%)
North						
Triângulo Mineiro	89.88	0.70	60.98	0.50	22.96	0.19
Bebedouro	301.67	1.09	174.78	0.68	79.62	0.31
Altinópolis	25.44	0.44	78.60	1.41	46.47	0.82
Subtotal	**416.99**	**0.90**	**314.36**	**0.72**	**149.05**	**0.32**
Northwest						
Votuporanga	100.31	0.92	137.47	1.56	102.49	1.15
S. J. do Rio Preto	82.42	0.73	112.14	0.96	81.94	0.72
Subtotal	**182.73**	**0.83**	**249.61**	**1.21**	**184.43**	**0.91**
Central						
Matão	193.15	0.86	418.13	2.08	230.75	1.15
Duartina	192.29	0.68	579.67	2.12	224.50	0.83
Brotas	242.31	2.45	156.64	1.54	191.93	1.90
Subtotal	**627.75**	**1.03**	**1,154.44**	**2.00**	**647.18**	**1.13**
South						
Porto Ferreira	162.73	0.81	241.70	1.17	155.76	0.73
Limeira	261.88	1.16	271.73	1.31	186.89	0.92
Subtotal	**424.61**	**0.99**	**513.43**	**1.24**	**342.65**	**0.82**
Southwest						
Avaré	185.74	0.63	612.63	2.11	165.29	0.57
Itapetininga	155.81	1.61	147.77	1.59	79.99	0.85
Subtotal	**341.55**	**0.87**	**760.40**	**1.99**	**245.28**	**0.64**
Total	**1,993.63**	**0.94**	**2,992.24**	**1.48**	**1,568.59**	**0.78**

Table 81 – Oranges: Dead trees by variety [inventories 2015 through 2017]

Variety	2015 inventory		2016 inventory		2017 inventory	
	Dead trees	Tree mortality rate	Dead trees	Tree mortality rate	Dead trees	Tree mortality rate
	(1,000 trees)	(%)	(1,000 trees)	(%)	(1,000 trees)	(%)
Early varieties						
Hamlin	280.79	1.08	482.57	1.96	235.51	0.97
Westin	42.73	1.25	42.79	1.27	33.83	1.03
Rubi	26.21	0.64	58.43	1.41	36.38	0.88
Valencia Americana	43.06	0.64	71.39	1.09	26.56	0.41
Valencia Argentina	27.60	1.58	130.35	9.18	38.24	2.71
Seleta	0.78	0.91	0.88	1.09	0.08	0.11
Pineapple	39.92	3.33	11.47	1.08	1.00	0.10
Subtotal	**461.09**	**1.06**	**797.88**	**1.93**	**371.60**	**0.92**
Mid-season						
Pera Rio	621.30	0.85	941.49	1.35	615.16	0.87
João Nunes	0.03	0.56	-	-	0.02	0.38
Subtotal	**621.33**	**0.85**	**941.49**	**1.35**	**615.18**	**0.87**
Late season						
Valencia	487.26	0.78	792.46	1.34	399.10	0.67
V.Folha Murcha[1]	54.81	0.58	74.15	0.83	56.68	0.64
Natal	369.14	1.58	386.26	1.73	126.03	0.59
Subtotal	**911.21**	**0.96**	**1,252.87**	**1.38**	**581.81**	**0.64**
Total	**1,993.63**	**0.94**	**2,992.24**	**1.48**	**1,568.59**	**0.78**

- Represents zero.
[1] V.Folha Murcha – Valencia Folha Murcha.

Table 82 – Oranges: Dead trees by age group [inventories 2015 through 2017]

Groves age	2015 inventory		2016 inventory		2017 inventory	
	Dead trees	Tree mortality rate	Dead trees	Tree mortality rate	Dead trees	Tree mortality rate
	(1,000 trees)	(%)	(1,000 trees)	(%)	(1,000 trees)	(%)
1 – 2 years.....	87.57	0.49	49.56	0.44	36.13	0.31
3 – 5 years.....	97.96	0.24	182.44	0.49	51.58	0.17
6 – 10 years.....	628.40	0.73	881.85	1.11	486.49	0.64
More than 10 years.....	1,179.70	1.75	1,878.39	2.57	994.39	1.19
Total.....	**1,993.63**	**0.94**	**2,992.24**	**1.48**	**1,568.59**	**0.78**

Table 83 – Oranges: Vacancies by sector and region [inventories 2015 through 2017]

Sector and region	2015 inventory		2016 inventory		2017 inventory	
	Vacancies	Percentage of vacancies	Vacancies	Percentage of vacancies	Vacancies	Percentage of vacancies
	(1,000 holes)	(%)	(1,000 holes)	(%)	(1,000 holes)	(%)
North						
Triângulo Mineiro	527.73	4.10	55.79	0.46	85.64	0.70
Bebedouro	1,293.68	4.68	834.85	3.23	812.27	3.19
Altinópolis	375.85	6.46	108.43	1.95	228.96	4.04
Subtotal	**2,197.26**	**4.74**	**999.07**	**2.29**	**1,126.87**	**2.59**
Northwest						
Votuporanga	526.01	4.84	302.25	3.43	314.42	3.51
S. J. do Rio Preto	410.43	3.64	303.81	2.59	361.26	3.18
Subtotal	**936,44**	**4.23**	**606.06**	**2.95**	**675.68**	**3.33**
Central						
Matão	1,600.59	7.10	712.02	3.53	1,091.07	5.44
Duartina	1,606.00	5.66	874.20	3.20	1,235.10	4.56
Brotas	704.79	7.11	661.02	6.51	563.16	5.58
Subtotal	**3,911.38**	**6.43**	**2,247.24**	**3.90**	**2,889.33**	**5.05**
South						
Porto Ferreira	1,147.63	5.69	896.13	4.33	954.43	4.45
Limeira	1,258.64	5.58	966.71	51.89	940.88	4.62
Subtotal	**2,406.27**	**5.63**	**1,862.84**	**56.23**	**1,895.31**	**4.53**
Southwest						
Avaré	1,608.13	5.41	783.13	2.70	1,253.31	4.30
Itapetininga	484.49	5.02	110.41	1.19	230.68	2.46
Subtotal	**2,092.62**	**5.31**	**893.54**	**2.33**	**1,483.99**	**3.85**
Total	**11,543.97**	**5.46**	**6,608.75**	**3.28**	**8,071.18**	**4.01**

Table 84 – Oranges: Vacancies by variety [inventories 2015 through 2017]

Variety	2015 inventory		2016 inventory		2017 inventory	
	Vacancies	Percentage of vacancies	Vacancies	Percentage of vacancies	Vacancies	Percentage of vacancies
	(1,000 holes)	(%)	(1,000 holes)	(%)	(1,000 holes)	(%)
Early varieties						
Hamlin	1,896.91	7.29	870.24	3.53	1,073.55	4.43
Westin	198.25	5.79	156.22	4.62	163.17	4.99
Rubi	227.09	5.55	148.74	3.59	206.71	5.01
Valencia Americana	340.16	5.04	222.11	3.39	267.89	4.18
Valencia Argentina	316.41	18.09	25.56	1.80	241.41	17.11
Seleta	9.04	10.53	3.41	4.21	4.65	6.42
Pineapple	156.77	13.08	10.33	0.97	17.31	1.64
Subtotal	**3,144.63**	**7.26**	**1,436.61**	**3.48**	**1,974.69**	**4.87**
Mid-season						
Pera Rio	3,321.93	4.56	2,173.98	3.12	2,497.74	3.54
João Nunes	0.07	1.31	0.05	0.99	0.12	2.28
Subtotal	**3,322.00**	**4.56**	**2,174.03**	**3.12**	**2,497.86**	**3.54**
Late season						
Valencia	3,066.65	4.92	1,937.42	3.27	2,352.33	3.93
V.Folha Murcha[1]	363.77	3.85	344.09	3.86	378.28	4.25
Natal	1,646.92	7.03	716.60	3.20	868.02	4.06
Subtotal	**5,077.34**	**5.34**	**2,998.11**	**3.31**	**3,598.63**	**3.99**
Total	**11,543.97**	**5.46**	**6,608.75**	**3.28**	**8,071.18**	**4.01**

- Represents zero.
[1] V.Folha Murcha – Valencia Folha Murcha.

Table 85 – Oranges: Vacancies by age group [inventories 2015 through 2017]

Groves age	2015 inventory		2016 inventory		2017 inventory	
	Vacancies	Percentage of vacancies	Vacancies	Percentage of vacancies	Vacancies	Percentage of vacancies
	(1,000 holes)	(%)	(1,000 holes)	(%)	(1,000 holes)	(%)
1 – 2 years	501.44	2.83	43.68	0.38	21.13	0.18
3 – 5 years.....	1,202.30	2.99	787.85	2.10	674.25	2.25
6 – 10 years.....	4,267.23	4.95	2,534.90	3.18	2,819.76	3.69
More than 10 years.....	5,573.00	8.29	3,242.32	4.44	4,556.04	5.47
Total.....	**11,543.97**	**5.46**	**6,608.75**	**3.28**	**8,071.18**	**4.01**

Table 86 – Oranges: Properties[1] stratified by size, considering the nmber of trees in the property [2017 inventory]

Range of the number of orange trees in the property	Properties	Properties percentage	Non-bearing and bearing trees	Percentage of non-bearing and bearing trees
(1,000 trees)	(number)	(%)	(1,000 trees)	(%)
Below 10.....	5,442	71.72	16,407.34	8.56
10 – 19.....	851	11.22	12,338.35	6.44
20 – 29.....	378	4.98	9,380.24	4.89
30 – 49.....	314	4.14	12,689.64	6.62
50 – 99.....	289	3.81	24,484.03	12.77
100 – 200.....	156	2.06	22,644.76	11.81
Above 200.....	158	2.08	93,750.06	48.91
Total.....	**7,588**	**100.00**	**191,694.41**	**100.00**
	(hectares)			
Average.....	**53.05**			

[1] This inventory was generated by a sampling technique covering 5% of the blocks in the primary base finished on 2015. The number of properties will remain until a new sweep is conducted to scan the whole citrus areas using updated images, therefore, the reclassification of the properties in the seven ranges shown in the table is due to the updating of the holes at those properties, deducting the removed and abandoned groves, following the application of the indices obtained in the assessment (bearing trees, non-bearing trees, dead trees and vacancies). Since this is a new sampling, the reclassification of the number of properties in each range presents variations due to the assessment in each year.

Table 87 – Oranges: Orange blocks stratified by block area [inventories 2015 through 2017]

Block area	2015 inventory		2016 inventory		2017 inventory	
	Orange blocks	Percentage	Orange blocks	Percentage	Orange blocks	Percentage
(hectares)	(number)	(%)	(number)	(%)	(number)	(%)
Below 1.....	3,336	6.58	2,663	5.90	3,002	6.58
1.1 – 4.....	14,300	28.22	11,689	25.88	12,868	28.22
4.1 – 10.....	17,953	35.43	16,466	36.46	16,155	35.43
10.1 – 20.....	10,391	20.51	9,791	21.68	9,351	20.51
Above 20.....	4,688	9.25	4,555	10.09	4,219	9.25
Total.....	**50,668**	**100.00**	**45,164**	**100.00**	**45,595**	**100.00**
	(hectares)		(hectares)		(hectares)	
Average.....	**8.50**		**8.94**		**8.83**	

Table 88 – Oranges: Municipalities with groves by sector and region [2017 inventory]

Sector and number of municipalities	Region and number of municipalities	Municipalities
North 68 municipalities	Triângulo Mineiro (TMG) 15 municipalities	Campina Verde, Campo Florido, Canápolis, Comendador Gomes, Conceição das Alagoas, Frutal, Gurinhatã, Itapagipe, Ituiutaba, Monte Alegre de Minas, Planura, Prata, São Francisco de Sales, Uberaba, Uberlândia.
	Bebedouro (BEB) 34 municipalities	Ariranha, Barretos, Bebedouro, Cajobi, Catanduva, Catiguá, Colina, Colômbia, Elisiário, Embaúba, Guaraci, Ibirá, Irapuã, Itajobi, Marapoama, Monte Azul Paulista, Novais, Olímpia, Paraíso, Pindorama, Pirangi, Pitangueiras, Sales, Santa Adélia, Severínia, Tabapuã, Taiaçu, Taiúva, Taquaral, Terra Roxa, Uchoa, Urupês, Viradouro, Vista Alegre do Alto.
	Altinópolis (ALT) 19 municipalities	Altinópolis, Batatais, Brodowski, Cajuru, Cássia dos Coqueiros, Cristais Paulista, Fortaleza de Minas, Franca, Ibiraci, Igarapava, Jacuí, Monte Santo de Minas, Nova Resende, Patrocínio Paulista, Pedregulho, Restinga, Santo Antônio da Alegria, São Pedro da União, São Sebastião do Paraíso.
Northwest 90 municipalities	Votuporanga (VOT) 55 municipalities	Álvares Florence, Américo de Campos, Andradina, Aparecida d'Oeste, Aspásia, Auriflama, Cardoso, Dirce Reis, Dolcinópolis, Estrela d'Oeste, Fernandópolis, General Salgado, Guaraçaí, Guarani d'Oeste, Guzolândia, Indiaporã, Jales, Macedônia, Marinópolis, Meridiano, Mesópolis, Mira Estrela, Mirandópolis, Murutinga do South, Nova Canaã Paulista, Nova Castilho, Ouroeste, Palmeira d'Oeste, Paranapuã, Parisi, Pedranópolis, Pereira Barreto, Pontalinda, Pontes Gestal, Populina, Riolândia, Rubinéia, Santa Albertina, Santa Clara d'Oeste, Santa Fé do South, Santa Rita d'Oeste, Santa Salete, Santana da Ponte Pensa, Santo Antônio do Aracanguá, São Francisco, São João das Duas Pontes, São João de Iracema, Sud Mennucci, Suzanápolis, Três Fronteiras, Turmalina, Urânia, Valentim Gentil, Vitória Brazil, Votuporanga.
	São José do Rio Preto (SJO) 35 municipalities	Adolfo, Altair, Bady Bassitt, Bálsamo, Cedral, Cosmorama, Floreal, Guapiaçu, Icém, Ipiguá, Jaci, José Bonifácio, Magda, Mendonça, Mirassol, Mirassolândia, Monções, Monte Aprazível, Neves Paulista, Nhandeara, Nipoã, Nova Aliança, Nova Granada, Onda Verde, Orindiúva, Palestina, Paulo de Faria, Planalto, Poloni, Potirendaba, São José do Rio Preto, Tanabi, Ubarana, União Paulista, Zacarias.
Central 71 municipalities	Matão (MAT) 20 municipalities	Américo Braziliense, Araraquara, Bariri, Boa Esperança do South, Borborema, Cândido Rodrigues, Fernando Prestes, Gavião Peixoto, Ibitinga, Itajú, Itápolis, Matão, Monte Alto, Motuca, Nova Europa, Novo Horizonte, Rincão, SantaLúcia, Tabatinga, Taquaritinga.
	Duartina (DUA) 38 municipalities	Agudos, Alvinlândia, Arealva, Avaí, Balbinos, Bauru, Cabrália Paulista, Cafelândia, Campos Novos Paulista, Duartina, Echaporã, Espírito Santo do Turvo, Fernão, Gália, Garça, Getulina, Guaiçara, Guaimbê, Guarantã, Iacanga, Júlio Mesquita, Lins, Lucianópolis, Lupércio, Marília, Ocauçu, Paulistânia, Pederneiras, Pirajuí, Piratininga, Pongaí, Presidente Alves, Reginópolis, Sabino, Santa Cruz do Rio Pardo, São Pedro do Turvo, Ubirajara, Uru.
	Brotas (BRO) 13 municipalities	Analândia, Bocaina, Brotas, Corumbataí, Dourado, Ibaté, Itirapina, Ribeirão Bonito, Santa Maria da Serra, São Carlos, São Pedro, Torrinha, Trabiju.
South 45 municipalities	Porto Ferreira (PFE) 19 municipalities	Aguaí, Caconde, Casa Branca, Cravinhos, Descalvado, Guatapará, Guaxupé, Luiz Antônio, Mococa, Pirassununga, Porto Ferreira, Santa Cruz da Conceição, Santa Cruz das Palmeiras, Santa Rita do Passa Quatro, Santa Rosa de Viterbo, São José do Rio Pardo, São Simão, Tambaú, Vargem Grande do South.
	Limeira (LIM) 26 municipalities	Amparo, Araras, Artur Nogueira, Bragança Paulista, Conchal, Cordeirópolis, Cosmópolis, Engenheiro Coelho, Espírito Santo do Pinhal, Estiva Gerbi, Holambra, Iracemápolis, Itapira, Jaguariúna, Jarinu, Leme, Limeira, Mogi Guaçu, Mogi Mirim, Paulínia, Piracicaba, Rio Claro, Santa Gertrudes, Santo Antônio de Posse, Serra Negra, Socorro.
Southwest 47 municipalities	Avaré (AVA) 29 municipalities	Águas de Santa Bárbara, Angatuba, Anhembi, Araçoiaba da Serra, Arandu, Avaré, Bofete, Borebi, Botucatu, Capela do Alto, Cerqueira César, Cesário Lange, Conchas, Iaras, Iperó, Itatinga, Lençóis Paulista, Manduri, Óleo, Pardinho, Porangaba, Porto Feliz, Pratânia, Quadra, Salto de Pirapora, São Manuel, Sorocaba, Tatuí, Tietê.
	Itapetininga (ITG) 18 municipalities	Alambari, Buri, Capão Bonito, Coronel Macedo, Itaberá, Itaí, Itapetininga, Itapeva, Itaporanga, Itararé, Nova Campina, Paranapanema, São Miguel Arcanjo, Sarapuí, Sarutaiá, Taquarituba, Taquarivaí, Tejupá.
Total 5 Sectores	Total 12 regions	Total 321 municipalities

3.3 – ABANDONED ORANGE GROVES

Abandoned groves are blocks of orange trees in which no signs of handling are seen, such as pruning/cutting; they present unsatisfactory phytosanitary control, with a high degree of infestation with pests and diseases, frequently with rotten fruit on the ground and cattle on the block. The areas of these groves are accounted for separately and are not part of the bearing and non-bearing tree inventory.

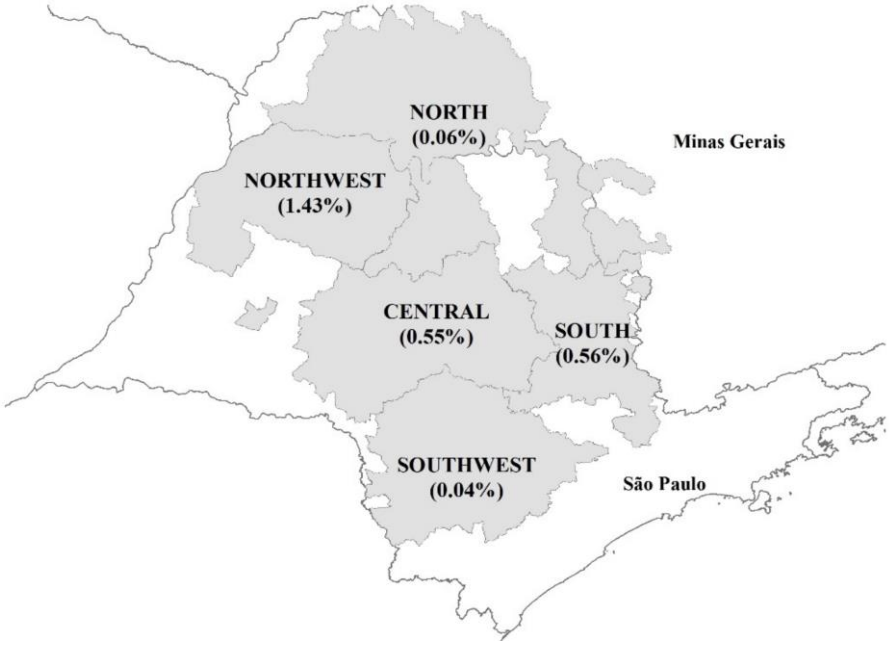
In the regions of Triângulo Mineiro, Bebedouro, and Itapetininga, abandoned blocks were not found in the sampling, which indicates that the incidence of abandoned groves in these regions must be minimal or close to zero.

Table 89 – Oranges: Area of abandoned groves by sector and region [2016 and 2017 inventories]

Sector and region	2016 inventory	2017 inventory	
	Abandoned groves	Abandoned groves	Percentage in relation to the total area of orange groves
	(hectares)	(hectares)	(%)
North			
Triângulo Mineiro (TMG)	586	-	-
Bebedouro (BEB)	805	-	-
Altinópolis (ALT)	-	53	0.49
Subtotal	**1,391**	**53**	**0.06**
Northwest			
Votuporanga (VOT)	190	172	0.70
São José do Rio Preto (SJO)	378	522	2.19
Subtotal	**568**	**694**	**1.43**
Central			
Matão (MAT)	1,098	233	0.49
Duartina (DUA)	722	449	0.79
Brotas (BRO)	17	21	0.09
Subtotal	**1,837**	**703**	**0.55**
South			
Porto Ferreira (PFE)	309	176	0.42
Limeira (LIM)	1,981	318	0.68
Subtotal	**2,290**	**494**	**0.56**
Southwest			
Avaré (AVA)	425	33	0.06
Itapetininga (ITG)	-	-	-
Subtotal	**425**	**33**	**0.04**
Total	**6,511**	**1,977**	**0.46**

- Represents zero.

Figure 2 – Percentage of abandoned groves by sector

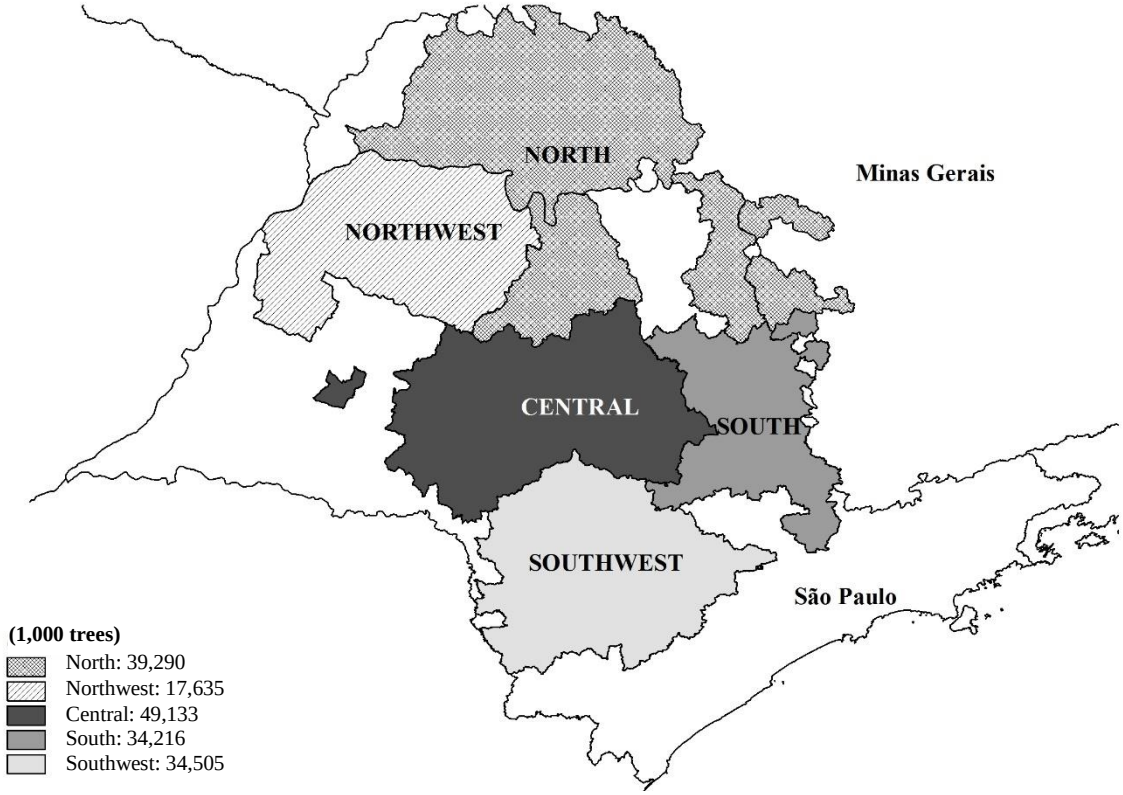


ORANGE PRODUCTION FORECAST FOR THE 2017-2018 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

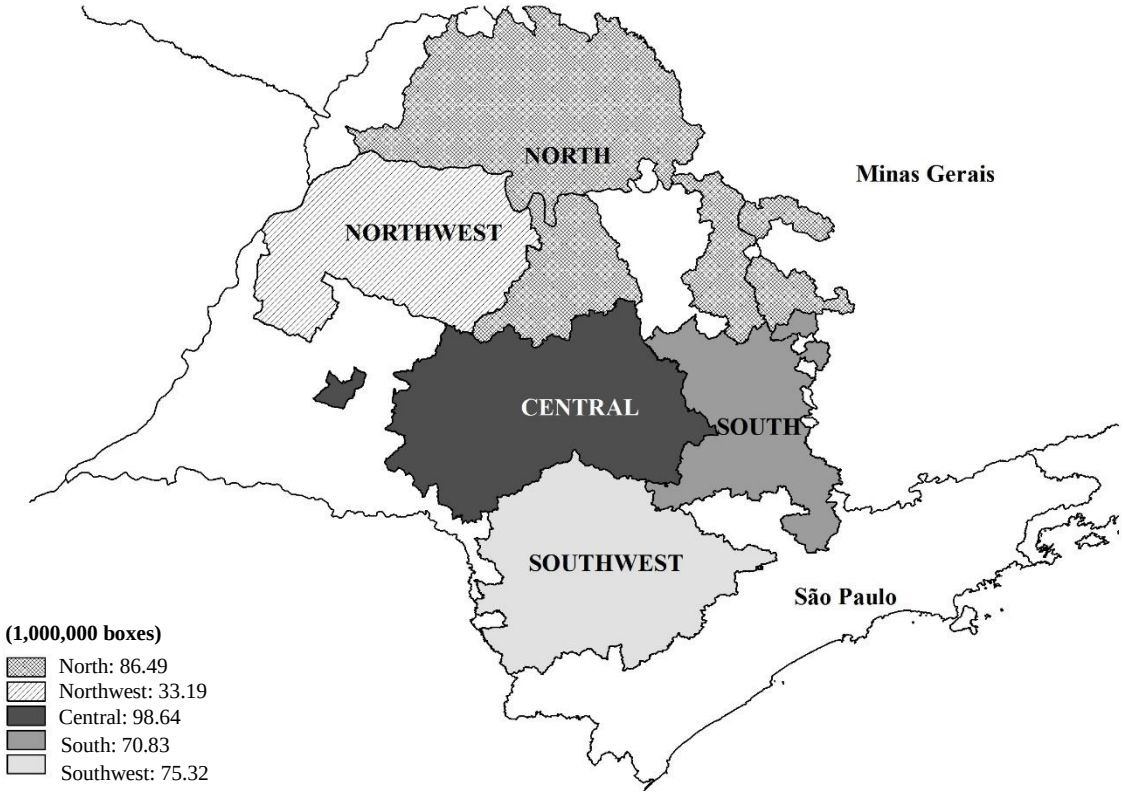
MAY/2017 FORECAST

FUNDECITRUS
FUNDO DE DEFESA DA CITRICULTURA
PES
Markestrat
value generation
fea-RP
Unesp
Jaboticabal

ORANGE BEARING TREES[1] BY SECTOR
Total: 174.78 million trees



2017-2018 ORANGE PRODUCTION FORECAST[2] BY SECTOR
Total: 364.47 million 40.8 kg box



[1] Snapshot of March/2017. Sweet orange varieties: Hamlin, Westin, Rubi, Valencia Americana, Valencia Argentina, Seleta, Pineapple, Pera Rio, João Nunes, Valencia, Natal and Valencia Folha Murcha.

[2] May/2017 forecast.

ORANGE PRODUCTION FORECAST FOR THE 2017-2018 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT – MAY/2017 FORECAST

Published on May 12, 2017[1]

Forecast Dates

2017-2018 Season
Executive summary May forecast: May 10, 2017
March/2017 tree inventory: May 12, 2017
May forecast (orange production forecast): May 12, 2017
September forecast (1st orange production forecast update): September 11, 2017
December forecast (2nd orange production forecast update): December 11, 2017
February forecast (3rd orange production forecast update): February 15, 2018
April forecast (final orange production estimate): April 10, 2018

During the course of the season, the crop will be updated in the months mentioned in the preceding schedule using the droppage and fruit size (fruits per box) data collected in the months prior to these forecasts. In order to meet the demands of the citrus sector and the press, we reserve the right to expand and deepen the information already published. Therefore, we recommend always the use of the most recent publication available at www.fundecitrus.com.br.

[1] Year 3 – Nº 1 – May 12, 2017 (Portuguese version only).

Expanded and revised versions:
Year 3 – Nº 2 – May 15, 2017 (Portuguese version only).
Year 3 – Nº 3 – May 17, 2017 (Portuguese version only).
Year 3 – Nº 4 – May 25, 2017 (Portuguese and English versions).
Year 3 – Nº 5 – May 26, 2017 (Portuguese and English versions).

Prepared by FUNDECITRUS with cooperation from MARKESTRAT, FEA-RP/USP and the Exact Sciences Department of FCAV/Unesp

ORANGE PRODUCTION FORECAST FOR THE 2017-2018 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

MAY/2017 FORECAST

Fundecitrus
Araraquara, São Paulo
2017

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www.fundecitrus.com.br

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SUMMARY

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1 – ORANGE PRODUCTION FORECAST FOR THE 2017-2018 SEASON

The 2017-2018 orange production forecast published on May 10, 2017 by Fundecitrus with the cooperation of Markestrat, FEA-RP/USP and FCAV/Unesp[1] is 364.47 million boxes (40.8 kg). This total includes:

- 68.49 million of the Hamlin, Westin and Rubi varieties;
- 17.42 million of the Valencia Americana, Valencia Argentina, Seleta and Pineapple varieties;
- 114.52 million of the Pera Rio variety;
- 123.04 million of the Valencia and Valencia Folha Murcha varieties;
- 41.00 million of the Natal variety.

The current season is 49% greater than that of the previous one, which ended in 245.31 million boxes, the smallest in the last 28 years[2], therefore an atypical season. Thus, the best comparison is to the average of the seasons of the last ten years, which reveals a production 14% above the average. Despite the fact it is considered a large season, the 2017-2018 season, with 364.47 million boxes is smaller when compared to two recent seasons: 2011-2012, with 416 million boxes, and 2012-2013 with 387 million boxes.

The Central, with 98.64 million boxes, and the North, with 86.49 million boxes, sectors account for more than half of the estimate production. In third place, there is the Southwest sector, with 75.32 million boxes followed by the South sector with 70.83 million boxes and finally, the Northwest sector with 33.19 million boxes.

The highest productivity per hectare is the Southwest sector with 1,056 boxes/hectare and, coming next is the North sector with 1,007 boxes/hectare. The average of the citrus belt is estimated in 2.09 boxes/tree. Only the Northwest sector was below this number, with 1.88 boxes/tree. The highest productivity per tree is in the North sector with 2.20 boxes/tree.

2 – OBJECTIVE SURVEY METHOD FOR ORANGE PRODUCTION FORECAST

In order to carry out this forecast, we maintained the objective method used in the last seasons, based on quantitative data – field measurements, counting and weighing of fruit – applied in the equation shown below.

$$\text{Production forecast} = \frac{\text{Bearing trees} \times \text{Fruit per tree} \times (1 - \text{Droppage rate \%}) \times (1 - \text{CF \%})}{\text{Fruit per box}}$$

in which, CF is the correction factor

For the purpose of bringing a critical mass and transparency, this survey has had, since its implementation, its activities followed up by a technical committee, which had been organized since the previous season aiming to propose operating improvements. The committee is formed by citrus growers, representatives from orange juice processing companies, faculty members, and Fundecitrus researchers and supervisors.

The results compiled from the inventory and stripping of the trees, obtained throughout the research, were kept restricted, until the date of this publication, only to the professionals connected to Fundecitrus, such as Fundecitrus general manager, PES supervisors and service providers specifically hired for the project, all of whom subject to terms of confidentiality regarding PES information until its public disclosure, pursuant to the confidentiality agreement executed between each one of them and Fundecitrus. Regarding antitrust practices, all of them were complied with throughout all the work phases, through the adoption of

[1] Exact Sciences Department.

[2] The 1988-1989 to 2014-2015 data series were provided by the orange juice processing companies affiliated to Fundecitrus – Citrosuco, Cutrale And Louis Dreyfus, which acting on their own, have been forecasting the production of the citrus belt since 1988, applying objective methodology. The data concerning the 2015-2016 and 2016-2017 seasons are a result of the forecasts carried out by Fundecitrus.

the measures necessary to prevent any sharing of individual information with a competitive content, among the orange juice companies members of Fundecitrus, and between these and the citrus growers.

This team completed the production forecast on May 10, 2017 at 9:50 a.m., in a closed meeting, devoid of any communication channel beyond Fundecitrus participants. Only then did Fundecitrus chairman, Lourival Carmo Monaco, became aware of the final information and then, at 10 a.m., the public disclosure was held at the Fundecitrus auditorium, in Araraquara-SP.

The presentation was shown live on the internet (www.fundecitrus.com.br), and afterwards, the Executive Summary containing the orange production information was made available at the Fundecitrus website.

The detailed forecast for the four equation components is shown below.

BEARING TREES

The estimated total of bearing trees is 174.78 million, a 0.4-percent decrease as compared to the 2016-2017 season. Trees planted in 2014 and in previous years are considered to be bearing in this season. The varieties contemplated in this forecast represent 97% of the trees and also 97% of the orange grove area which make up the current agricultural year´s inventory.

The information about bearing trees were extracted from the Tree Inventory of the São Paulo and West-Southwest Minas Gerais Citrus Belt: Snapshot of Groves in March/2017, which was updated by the field assessment carried out from January 30 to March 10, 2017.

FRUIT PER TREE

The average number of fruit per tree in April/2017, not considering the droppage to occur during the season, is measured at 753 fruit per tree. The emission and fruit set of the 2017-2018 season, which took place from August to December, 2016, were favored by the low production of the previous season, which provided a rest to the reproductive cycle and resulted in increase of the energy reserves of the trees in the citrus belt in general. The weather conditions observed during this period also contributed to the increase of the productivity. In July, the drought and thermal stresses caused by cold nights (average of 12 ºC in the citrus belt) followed by hot and dry days (average of 27.3 ºC) favored the floral induction with the arrival of the first rainfalls in August/2016, with the exception of the Triângulo Mineiro, Altinópolis and Matão regions in which the beginning of regular rainfall was in October.

In most of the citrus regions, there was little rain and cold nights (average 14 ºC) and hot and dry days (27.9 ºC) in September causing a decrease of the fruit set of the first bloom, which led to a second significant bloom in these regions with the regularization of the rainfall from October/2016 on.

Such weather conditions resulted in a production forecast concentrated, primarily, in the first (73%) and second (18%) blooms, corresponding to 91% of the total. The third bloom corresponds to 8% and the fourth to 1%. To calculate such forecast, the fruit of the first, second and third blooms were totally considered. Fruit from the fourth bloom received a 33-percent set rate. Upon separating fruit per bloom, off-season fruit were also identified, resulting from late and sporadic flowers of previous season. Nevertheless, they were not accounted for in the forecast of the current season.

The three-to-five-year-old blocks had, in this season, productivity of 400 fruit/tree. The six-to-ten-year-old blocks, are forecasted to have the average of 693 fruit/tree, in which 718 fruit/tree are for original planting and 150 fruit/tree for the resets ranging from 3 to 5 years. In the blocks which are more than 10 years old, the expected average is 941 fruit/tree, with productivity of 1,012 fruit/tree for the original planting and 328 fruit/tree for the 6 to 10-year-old resets and, 159 fruit/tree for three-to-five-year-old resets.

Even though the number of fruit per tree suffers the influence of other factors, such as plant age, it is strongly related to variety. In April/2017 – the time when the trees were stripped – for the early season variety group – Hamlin, Westin and Rubi – on average, 972 fruit/tree were counted. As already known, this group´s varieties are more productive than the others and, in this season, it is forecasted in 29% above

average. Next come: the late season Natal variety with 813 fruit per tree; the late season Valencia and Valencia Folha Murcha varieties with 729 fruit per tree, the other early season varieties with 714 fruits per tree and, finally, Pera Rio with 666 fruit per tree.

The method utilized to estimate the number of fruit per tree is the same one which has been employed since the 2015-2016 season. Basically, it consists of stripping, that is, early picking all the fruit on the tree, regardless of the blooming that originated them. The stripping in this season was carried out from March 17 to April 27, 2017. The harvested fruit were taken to a stripping laboratory in Araraquara, where they were separated, counted through an automatic process and weighed, according to the bloom.

Altogether, 2,560 stripped trees were randomly-chosen in two stages. The first drawing by the stratified random sampling included 2,200 trees proportionally distributed to the total of the citrus belt orange trees stratified by region, variety and age. The second drawing was carried out aiming to increase the accuracy of the forecast, and included 360 resets with ages below the age range of the groves they belonged to. These resets correspond to replacements to make up for, mainly, the tree losses caused by HLB (huanglongbing or greening), citrus canker and other diseases. The population of this second drawing includes the blocks which were completely counted for the update of the inventory and which meet the stratification criteria.

The "region" stratification factor is composed of 12 groups covering the 328 municipalities with properties containing mature orange groves. In addition to the subdivision of the 12 regions, the following charts present the five subdivisions of the variety factor and the six subdivisions of the age factor. The combinations of these factors lead to 360 strata.

Chart 1 – Composition by sector of the citrus belt regions covered in the drawing

Sector	Region	Abbreviation
North	Triângulo Mineiro	TMG
	Bebedouro	BEB
	Altinópolis	ALT
Northwest	Votuporanga	VOT
	São José do Rio Preto	SJO
Central	Matão	MAT
	Duartina	DUA
	Brotas	BRO
South	Porto Ferreira	PFE
	Limeira	LIM
Southwest	Avaré	AVA
	Itapetininga	ITG

Chart 2 – Composition by maturation stage of the groups of the varieties covered in the drawing

Maturation stage	Variety group
Early season	Hamlin Westin Rubi
Other early season	Valencia Americana Valencia Argentina Seleta
Mid-season	Pera Rio[1]
Late season	Valencia Valencia Folha Murcha
	Natal

[1] The orange trees of João Nunes variety were added to the Pera Rio variety trees because both present the same maturation stage.

Chart 3 – Composition of the age groups from the combination of block age range and tree age categories

Block age[1]	Tree age[2]
3 to 5 years	3 to 5 years
6 to 10 years	3 to 5 years
6 to 10 years	6 to 10 years
More than 10 years	3 to 5 years
More than 10 years	6 to 10 years
More than 10 years	More than 10 years

Ages and planting years: 1 to 2 years (2015 and 2016), 3 to 5 years (2012 to 2014), 6 to 10 years (2007 to 2011) and more than 10 years (2006 and previous years).

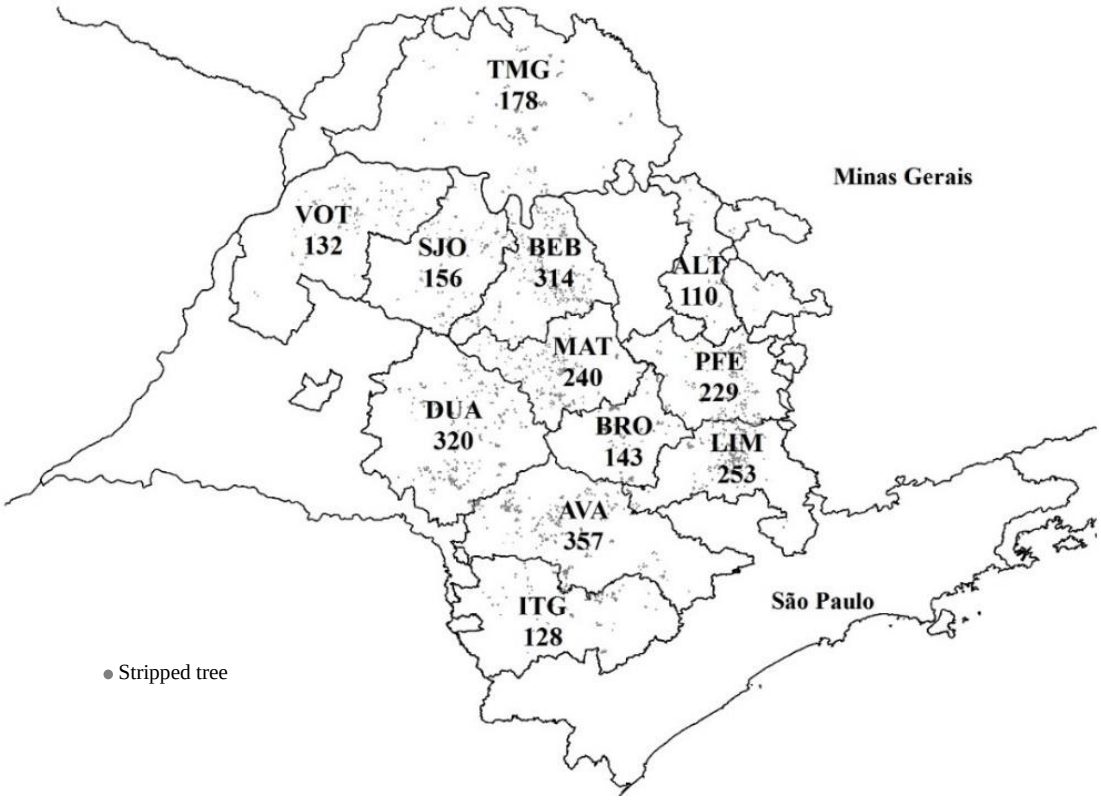
1 Calculated based on the planting year of the block.

2 Estimated from information provided by citrus growers on the years when replanting took place in the blocks and visual aspects of the tree, such as trunk circumference, height tree and canopy shape, among other factors.

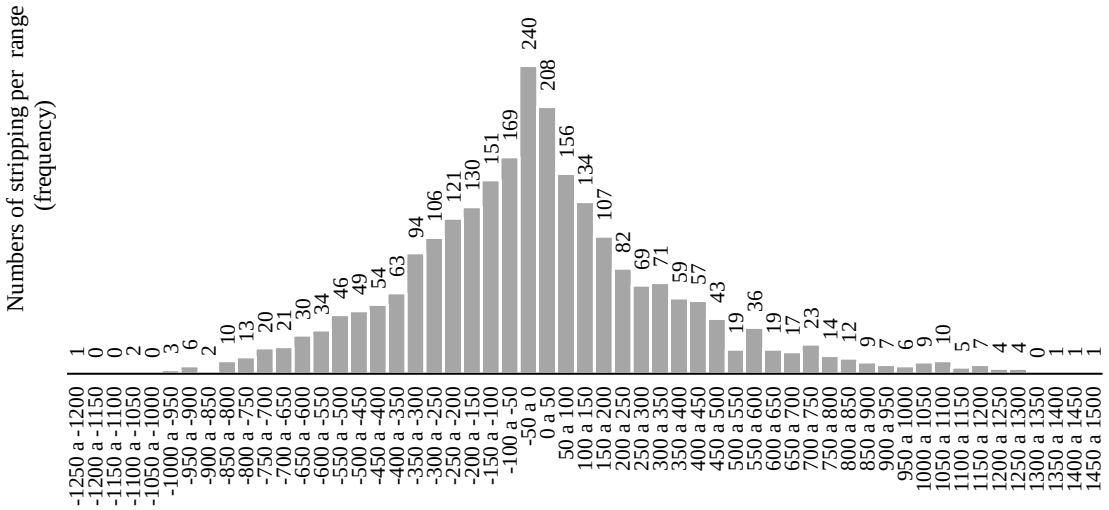
For the 2,200 trees of the first drawing, the position of the tree to be stripped in the chosen block is predetermined per season. This procedure causes trees to be selected in an impartial manner, that is, with no interference from the research agent. Otherwise, the choice could be biased, by opting for trees with fewer or more fruit. For the 2017-2018 season, the tree in the chosen block is that located in the 21st hole of the 12th row. If in that position there is a vacancy, dead tree or tree of a different age than the one originally planted in the block, researchers moved forward to the third tree. If the situation were the same, they moved to the next third tree until the researchers found a tree of the chosen age. If the block does not have 12 or more planting lines, the count will be re-started on the existing rows until number 12 is reached. For the second drawing of the 360 plants, the stripped tree was found in the block taking into account the visual aspects, such as trunk circumference, height tree and canopy shape.

The map in Figure 1 shows the location and the total number of stripped trees per region. The full names of the regions are shown in Chart 1.

Figure 1 – Location and total number of stripped trees per region

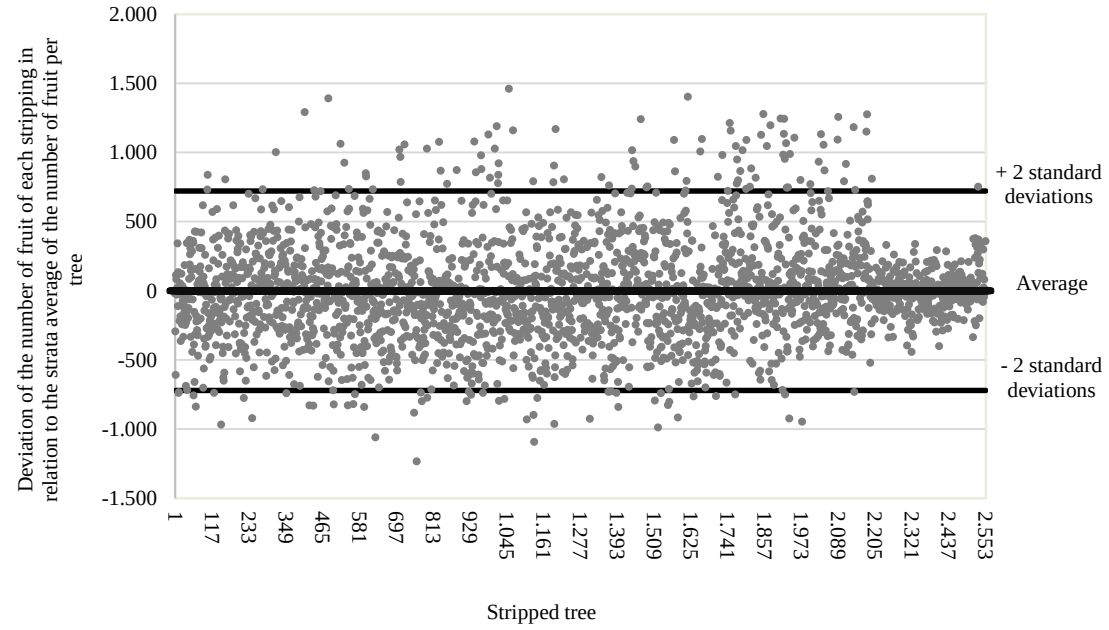


The average number of fruit per tree may vary in 14 fruits, for more or fewer, which represents 1.9% of the average number of fruit per tree obtained in the stripping. This number is in accordance to the expected error of 2% to 3% used in the sampling sizing. The analysis of the productivity deviation distribution of each stripped tree in relation to the strata average shows that the sampling data are randomly distributed according to a normal distribution, as presented in Graph 1.



Graph 1 – Histogram of the deviation of fruit per tree in stripping

Graph 2 shows the deviation dispersion of each of the stripped tree in relation to the strata average. It is seen that 95% of the samples are between the average $\pm$ 2 standard deviations, that is, 720.92 fruit.



Graph 2 – Deviation of the number of fruit of each stripping in relation to the strata average

The tree stripped with the permission of the grower is indemnified in R$ 36,00 by means of an online payment system which allows the grower to sign in and withdraw the value of the stripped tree.

FRUIT DROPPAGE RATE – rate of fruit droppage, from the time of stripping until the final harvest of the block, caused naturally or by other means

The estimated average droppage rate is 18.5%, with 11% for early season Hamlin, Westin, and Rubi varieties, 12.30% for the other early season varieties, 17.50% for the Pera Rio mid-season variety, 23.30% for the Valencia and Valencia Folha Murcha late-season varieties, and 22.55% for the late season Natal variety. This rate is applied to the number of fruit found on the tree in April/2017, when the stripping is carried out. The result of this calculation is the estimate of the number of fruit that will be available on the tree at harvesting, since part of the oranges that are present on the tree at the beginning of the season drop during the season due to natural droppage, mechanized activities, pests and diseases, adverse weather conditions.

The projected droppage rate higher to those of previous seasons is related to a greater volume of production expected in this season, which can cause harvesting stretching, increasing the exposure of the fruit to pests and diseases which can potentially lead to droppage. The continuous monitoring carried out by Fundecitrus from May/2017 in 900 orange blocks, which are visited until its harvest has been completed, will provide basis to correct the rate which is forecasted in this publication, and, consequently, correct the orange production forecast.

In addition to the information already mentioned to forecast the fruit droppage rate, consideration was also given to the data of the 2015-2016 and 2016-2017 seasons forecasted by Fundecitrus as well as the data of the historical series of the seasons from 2004-2005 to 2014-2015, provided by orange juice companies associated to Fundecitrus – Citrosuco, Cutrale, and Louis Dreyfus – which, in an isolated manner, have carried out this follow-up in the citrus belt since 1988. The supply was carried out, individually and under formal confidentiality agreement, to the independent consulting firm to ascertain the average, with the individual data supplied by each company remaining confidential.

FRUIT PER BOX – fruit size, that is, the number of oranges to reach the weight of 40.8Kg (box) at harvest

The estimated average size of the fruit is 265 fruit per 40.8 kg box, with 310 fruit/box for the Hamlin, Westin, and Rubi early season varieties, 257 fruit/box for the group of other early season varieties, 260 fruit/box for the Pera Rio mid-season variety, 250 fruit/box for the Valencia, Valencia Folha Murcha and Natal late-season varieties.

Smaller fruit are expected in this season due to the greater number of oranges in the trees which limit their potential growth. Along with it, according to the Somar Meteorologia, the expectation for the second half of 2017 is the setting of low intensity El Niño, different from what happened in 2015, when there was rainfall above the historical average provoking increase in the weight of the fruit.

The low intensity El Niño phenomenon in 2017 favors the weather´s evenness with dry winter (June to August), except in the regions of Itapetininga and Avaré which, according to the weather forecast data supplied by Somar Meteorologia when this estimate was being carried out and presented in Table 1, may reach 285 mm and 220 mm, respectively, in this period, different from the average of 121 mm for the other regions of the citrus belt. Spring and winter are forecasted as usual as wet, the first rainfalls start in September and, they are more intense from October on in the whole citrus belt. The late varieties may benefit from these rainfalls having increase in size and weight due to the good hydro and thermal availability during this period. The minimum temperatures projected for the period from May to November, 2017 are 1 and 2 degrees above the historical average, and the maximum temperatures of the same period are between 1 to 2 degrees lower than the historical average, that is the forecast is for a less cold winter and less hot summer.

Table 1 – Estimated average rainfall for the citrus belt from May/2017 to November/2017 and historical[1] average rainfall from December/2017 to March/2018 by month and region

Month/ year	TMG	BEB	ALT	VOT	SJO	MAT	DUA	BRO	PFE	LIM	AVA	ITG	Average/ month
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
May/2017.....	49	109	74	103	109	115	129	110	104	108	115	114	103
June/2017.....	20	30	25	29	30	35	48	35	33	39	48	54	35
July/2017.....	21	36	29	33	36	44	69	48	42	62	84	111	51
Aug./2017.....	24	43	35	45	44	46	70	50	45	62	88	120	56
Sept./2017.....	55	59	62	60	61	58	65	63	69	81	83	112	69
Oct./2017.....	111	132	139	103	128	128	149	131	142	156	170	213	142
Nov./2017.....	151	121	128	118	129	98	93	100	122	128	108	127	119
Dec./2017.....	248	227	274	221	223	224	159	239	239	213	170	160	210
Jan./2018.....	252	247	273	235	244	247	222	243	263	238	213	214	239
Feb./2018.....	208	215	221	186	213	205	209	201	209	212	197	159	204
Mar./2018.....	190	173	180	159	177	154	137	158	163	144	123	123	154
Total	1,329	1,391	1,441	1,291	1,392	1,355	1,351	1,378	1,431	1,444	1,400	1,507	1,383

Source: Somar Meteorologia.
[1] Interpolated data, period from 1960 to 1990.

The fruit size and droppage may vary during the harvest due to, mainly, the weather, phytosanitary and harvest pace conditions in the citrus park which change every season. Therefore, a continuous monitoring research is carried out in 900 groves until the harvest in order to re-estimate the projections started in May.

Finally, the result of the equation used to forecast the orange production is corrected by applying the correction factor. Such procedure is necessary because of the variables which were not considered in the estimate model, such as the several block density planting, which are not included in the grove stratification, or the tree loss throughout the season caused by removal, abandonments or death. The factor applied in this season is 10% and it represents the average of the 2015-2016 and 2016-2017 rates, which had been estimated by Fundecitrus.

3 – TABLES

The following tables present the 2017-2018 orange production forecast by sector, age, bloom and variety. In tables 13 to 17, the number of fruit per tree during stripping is shown separately for the 12 regions, but if the forecast were calculated at the region level, the number of stripped trees would be statistically insufficient. Thus, the maximum forecast detailing is at sector level. Nonetheless, the error margin of the production forecast by sector is greater than that of the citrus belt production forecast as a whole.

Variations that may occur in fruit size and droppage rates could alter the forecast, and these will be calculated throughout the season by constant monitoring in the field to carry out the production updates. The calculations made used whole numbers, with all the decimal places. Any discrepancies between the values in the tables are the result of rounding.

Table 2 – Orange production forecast for the 2017-2018 season by sector

Sector	Mature groves area	Average density planting[1] of mature groves	Bearing trees	Fruit per tree at stripping[2]	Orange production forecast 2017-2018		
					By tree	By area	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
North.....	85,871	472	39,290	801	2.20	1,007	86.49
Northwest.....	40,584	439	17,635	673	1.88	818	33.19
Central.....	109,271	466	49,133	723	2.01	903	98.64
South.....	78,469	450	34,216	748	2.07	903	70.83
Southwest.....	71,330	496	34,505	788	2.18	1,056	75.32
Total.....	**385,525**	**467**	**174,779**	**753**	**2.09**	**945**	**364.47**

[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.

Table 3 – Orange production forecast for the 2017-2018 season by tree age group (continues below)

Block age	Mature groves area	Average density planting[1] of mature groves	Tree age				Fruit per tree at stripping Tree age[2]			
			3 – 5 years	6 – 10 years	Above 10 years	Total	3 – 5 years	6 – 10 years	Above 10 years	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(1,000 trees)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)
3 – 5 years.....	48,447	603	28,214	-	-	28,214	**400**	-	-	400
6 – 10 years.....	141,481	516	3,137	67,685	-	70,822	150	**718**	-	693
Above 10 years.....	195,597	397	3,003	4,036	68,705	75,744	159	328	**1,012**	941
Total.....	**385,525**	**467**	**34,354**	**71,721**	**68,705**	**174,779**	**356**	**696**	**1,012**	**753**

- Represents zero.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.

Table 3 – Orange production forecast for the 2017-2018 season by tree age group (continued)

Block age	Orange production forecast 2017-2018 (by tree) Tree age				Orange production forecast 2017-2018 (total) Tree age			
	3 – 5 years	6 – 10 years	Above 10 years	Total	3 – 5 years	6 – 10 years	Above 10 years	Total
	(boxes/ tree)	(boxes/ tree)	(boxes/ tree)	(boxes/ tree)	(1,000,000 boxes)	(1,000,000 boxes)	(1,000,000 boxes)	(1,000,000 boxes)
3 – 5 years.....	1.12	-	-	1.12	**31.59**	-	-	31.59
6 – 10 years.....	0.42	1.99	-	1.92	1.31	**134.89**	-	136.20
Above 10 years....	0.43	0.91	2.79	2.60	1.30	3.66	**191.72**	196.68
Total.....	**1.00**	**1.93**	**2.79**	**2.09**	**34.20**	**138.55**	**191.72**	**364.47**

- Represents zero.

Table 4 – Orange production forecast for the 2017-2018 season by bloom

Bloom	Orange production forecast 2017-2018	Percentage of orange production forecast by bloom
	(1,000,000 boxes)	(percentage)
1st	265.24	72.77
2nd	65.77	18.05
3rd	29.55	8.11
4th	3.91	1.07
Total.....	**364.47**	**100.00**

Table 5 – Orange production forecast for 2017-2018 season as bloom percentage by region

Bloom	North[1]				Northwest[2]			Central[3]				South[4]			Southwest[5]			Total
	TMG	BEB	ALT	**AVE**[6]	VOT	SJO	**AVE**[6]	MAT	DUA	BRO	**AVE**[6]	PFE	LIM	**AVE**[6]	AVA	ITG	**AVE**[6]	
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
1st	74.1	73.5	68.1	**73.0**	66.3	74.1	**70.9**	68.0	71.7	59.3	**68.5**	71.0	76.5	**73.8**	77.4	80.2	**78.0**	**72.8**
2nd	16.5	18.2	24.2	**18.4**	20.4	19.0	**19.6**	24.3	15.3	26.6	**20.1**	18.4	15.5	**17.0**	15.6	14.3	**15.3**	**18.0**
3rd	8.4	7.9	6.9	**7.9**	12.3	5.9	**8.5**	6.7	12.6	9.7	**10.1**	8.6	6.2	**7.4**	6.4	5.2	**6.1**	**8.1**
4th	1.0	0.5	0.8	**0.7**	1.0	1.0	**1.0**	0.9	0.5	4.4	**1.2**	1.9	1.8	**1.9**	0.7	0.4	**0.6**	**1.1**

[1] North: TMG – Triângulo Mineiro, BEB – Bebedouro, ALT – Altinópolis.
[2] Northwest: VOT – Votuporanga, SJO – São José do Rio Preto.
[3] Central: MAT – Matão, DUA – Duartina, BRO – Brotas.
[4] South: PFE – Porto Ferreira, LIM – Limeira.
[5] Southwest: AVA – Avaré, ITG – Itapetininga.
[6] AVE – Weighted average per stratum fruits.

Table 6 – Orange production forecast for the 2017-2018 season and its components by variety group

Variety group	Mature groves area	Average density planting[1]	Components of May/2017 forecast				Orange production forecast 2017-2018		
			Bearing trees	Fruit per tree at stripping[2]	Fruit forecasted by box	Fruit loss from droppage forecast	By tree	By area	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(fruit/ box)	(%)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
Early varieties:									
Hamlin, Westin e Rubi.....	62,746	452	27,308	972	310	11.00	2.51	1,092	68.49
Other early season:									
Valencia Americana, Valencia Argentina, Seleta, Pineapple.....	17,883	456	7,950	714	257	12.30	2.19	974	17.42
Mid-season:									
Pera Rio.....	125,367	495	60,235	666	260	17.50	1.90	913	114.52
Late season:									
Valencia, V.Folha Murcha[3]	137,416	457	61,181	729	250	23.30	2.01	895	123.04
Natal.....	42,113	443	18,105	813	250	22.55	2.26	974	41.00
Average.....	(X)	**467**	(X)	**753**	**265**	**18.50**	**2.09**	**945**	(X)
Total.....	**385,525**	(X)	**174,779**	(X)	(X)	(X)	(X)	(X)	**364.47**

(X) Not applicable.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.
[3] V.Folha Murcha – Valencia Folha Murcha.

Table 7 – Orange production forecast for the 2017-2018 season by variety group and sector

Variety group	Orange production forecast 2017-2018					
	Sector					
	North	Northwest	Central	South	Southwest	Total
	(1,000,000 boxes)	(1,000,000 boxes)	(1,000,000 boxes)	(1,000,000 boxes)	(1,000,000 boxes)	(1,000,000 boxes)
Early varieties:						
Hamlin, Westin e Rubi.....	22.20	5.64	17.12	11.00	12.53	68.49
Other early season:						
Valencia Americana, Valencia Argentina, Seleta, Pineapple.....	4.16	3.35	6.05	1.01	2.85	17.42
Mid-season:						
Pera Rio.....	21.61	13.96	33.02	23.74	22.18	114.51
Late season:						
Valencia, V.Folha Murcha[1]	30.77	7.01	32.05	28.46	24.74	123.03
Natal.....	7.75	3.23	10.40	6.62	13.02	41.02
Total.....	**86.49**	**33.19**	**98.64**	**70.83**	**75.32**	**364.47**

(X) Not applicable.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.
[3] V.Folha Murcha – Valencia Folha Murcha.

Table 8 – Orange production forecast for the 2017-2018 season by variety group – North Sector

Variety group	Mature groves area	Average density planting[1]	Bearing trees	Fruit per tree at stripping[2]	Orange production forecast 2017-2018		
					By tree	By hectare	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
Early varieties:							
Hamlin, Westin e Rubi.....	17,637	441	7,494	1,147	2.96	1,259	22.20
Other early season:							
Valencia Americana, Valencia Argentina, Seleta, Pineapple.....	3,926	501	1,910	709	2.18	1,060	4.16
Mid-season:							
Pera Rio.....	23,919	532	12,398	611	1.74	903	21.61
Late season:							
Valencia, V.Folha Murcha[3].....	32,482	454	14,317	779	2.15	947	30.77
Natal.....	7,907	420	3,171	878	2.44	980	7.75
Average.....	(X)	**472**	(X)	**801**	**2.20**	**1,007**	(X)
Total.....	**85,871**	(X)	**39,290**	(X)	(X)	(X)	**86.49**

[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.

Table 9 – Orange production forecast for the 2017-2018 season by variety group – Northwest Sector

Variety group	Mature groves area	Average density planting[1]	Bearing trees	Fruit per tree at stripping[2]	Orange production forecast 2017-2018		
					By tree	By hectare	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
Early varieties:							
Hamlin, Westin e Rubi.....	6,107	440	2,656	823	2.12	924	5.64
Other early season:							
Valencia Americana, Valencia Argentina, Seleta, Pineapple.....	3,257	454	1,444	757	2.32	1,029	3.35
Mid-season:							
Pera Rio.....	19,656	427	8,320	588	1.68	710	13.96
Late season:							
Valencia, V.Folha Murcha[3].....	8,024	478	3,809	667	1.84	874	7.01
Natal.....	3,540	400	1,406	826	2.30	912	3.23
Average.....	(X)	**439**	(X)	**673**	**1.88**	**818**	(X)
Total.....	**40,584**	(X)	**17,635**	(X)	(X)	(X)	**33.19**

(X) Not applicable.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.
[3] V.Folha Murcha – Valencia Folha Murcha.

Table 10 – Orange production forecast for the 2017-2018 season by variety group – Central Sector

Variety group	Mature groves area	Average density planting[1]	Bearing trees	Fruit per tree at stripping[2]	Orange production forecast 2017-2018		
					By tree	By hectare	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
Early varieties:							
Hamlin, Westin e Rubi.....	16,869	456	7,328	905	2.34	1.015	17.12
Other early season:							
Valencia Americana, Valencia Argentina, Seleta, Pineapple....	7,007	421	2,870	687	2.11	863	6.05
Mid-season:							
Pera Rio.....	35,233	507	17,219	672	1.92	937	33.02
Late season:							
Valencia, V.Folha Murcha[3]...	38,495	455	17,021	683	1.88	833	32.05
Natal.....	11,667	419	4,695	795	2.22	891	10.40
Average.....	(X)	**466**	(X)	**723**	**2.01**	**903**	(X)
Total.....	**109,271**	(X)	**49,133**	(X)	(X)	(X)	**98.64**

(X) Not applicable.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.
[3] V.Folha Murcha – Valencia Folha Murcha.

Table 11 – Orange production forecast for the 2017-2018 season by variety group – South Sector

Variety group	Mature groves area	Average density planting[1]	Bearing trees	Fruit per tree at stripping[2]	Orange production forecast 2017-2018		
					By tree	By hectare	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
Early varieties:							
Hamlin, Westin e Rubi.....	11,315	453	4,954	860	2.22	972	11.00
Other early season:							
Valencia Americana, Valencia Argentina, Seleta, Pineapple.....	1,414	404	0,556	593	1.82	714	1.01
Mid-season:							
Pera Rio.....	25,495	486	11,909	699	1.99	931	23.74
Late season:							
Valencia, V.Folha Murcha[3].....	33,559	426	13,926	741	2.04	848	28.46
Natal.....	6,686	441	2,871	828	2.31	990	6.62
Average.....	(X)	**450**	(X)	**748**	**2.07**	**903**	(X)
Total.....	**78,469**	(X)	**34,216**	(X)	(X)	(X)	**70.83**

(X) Not applicable.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.
[3] V.Folha Murcha – Valencia Folha Murcha.

Table 12 – Orange production forecast for the 2017-2018 season by variety group – Southwest Sector

Variety group	Mature groves area	Average density planting[1]	Bearing trees	Fruit per tree at stripping[2]	Orange production forecast 2017-2018		
					By tree	By hectare	Total
	(hectares)	(trees/ hectare)	(1,000 trees)	(fruit/ tree)	(boxes/ tree)	(boxes/ hectare)	(1,000,000 boxes)
Early varieties:							
Hamlin, Westin e Rubi.....	10,818	470	4,876	996	2.57	1,158	12.53
Other early season:							
Valencia Americana, Valencia Argentina, Seleta, Pineapple.....	2,279	524	1,170	793	2.44	1,251	2.85
Mid-season:							
Pera Rio.....	21,064	505	10,389	749	2.13	1,053	22.18
Late season:							
Valencia, V.Folha Murcha[3].....	24,856	497	12,108	741	2.04	995	24.74
Natal.....	12,313	494	5,962	783	2.18	1,057	13.02
Average.....	(X)	**496**	(X)	**788**	**2.18**	**1,056**	(X)
Total.....	**71,330**	(X)	**34,505**	(X)	(X)	(X)	**75.32**

(X) Not applicable.
[1] The calculation considers the total number of trees of the block, that is, bearing and non-bearing trees (2015 or 2016 resets).
[2] Weighted average per stratum fruits.
[3] V.Folha Murcha – Valencia Folha Murcha.

Table 13 – Fruit per tree at stripping[1], by tree age, region and variety groups – North Sector [April/2017 stripping]

Region and variety group	Blocks 3 – 5 years Trees 3 – 5 years	Blocks 6 – 10 years Trees 3 – 5 years	Blocks 6 – 10 years Trees 6 – 10 years	Blocks 6 – 10 years Average	Blocks above 10 years Trees 3 – 5 years	Blocks above 10 years Trees 6 – 10 years	Blocks above 10 years Trees above 10 years	Blocks above 10 years Average	Average
	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)
TMG[2]									
Early varieties:									
Hamlin, Westin e Rubi.....	373	153	1,383	1,375	150	521	1,798	1,738	1,409
Other early season[3].....	312	102	758	748	351	388	752	747	670
Mid-season:									
Pera Rio.....	314	88	591	578	152	439	1,000	980	547
Late season:									
Valencia, V.Folha Murcha[4].....	551	415	751	748	5	488	1,240	1,217	842
Natal.....	684	523	713	712	286	547	1,461	1,424	1,019
Average[5].....	**441**	**193**	**779**	**769**	**143**	**491**	**1,396**	**1,362**	**868**
BEB[7]									
Early varieties:									
Hamlin, Westin e Rubi.....	240	100	966	944	388	501	1,411	1,282	1,051
Other early season[3].....	338	97	776	733	362	562	875	832	708
Mid-season:									
Pera Rio.....	334	178	663	651	47	373	939	793	587
Late season:									
Valencia, V.Folha Murcha[4].....	357	451	692	679	274	362	938	877	737
Natal.....	464	212	655	633	101	519	1,108	999	777
Average[6].....	**343**	**269**	**745**	**727**	**252**	**417**	**1,068**	**974**	**756**
ALT[8]									
Hamlin, Westin e Rubi.....	650	60	986	885	205	534	1,253	1,131	1,021
Other early season[3].....	360	189	870	852	110	307	1,067	943	761
Mid-season:									
Pera Rio.....	247	91	721	695	225	632	1,084	1,037	833
Late season:									
Valencia, V.Folha Murcha[4].....	231	29	528	501	52	454	1,056	977	819
Natal.....	192	139	584	578	38	645	932	904	652
Average[6].....	**319**	**65**	**697**	**664**	**131**	**517**	**1,093**	**1,019**	**847**
Average sector.....	**386**	**219**	**748**	**731**	**224**	**441**	**1,159**	**1,077**	**801**

1 Weighted average per stratum fruits.
2 TMG – Triângulo Mineiro.
3 Valencia Americana, Valencia Argentina, Seleta e Pineapple.
5 Weighted average per stratum fruits.
6 V.Folha Murcha – Valencia Folha Murcha.
7 BEB – Bebedouro.
8 ALT – Altinópolis.

Table 14 – Fruit per tree at stripping[1], by tree age, region and variety groups – Northwest Sector [April/2017 stripping]

Region and variety group	Blocks 3 – 5 years Trees 3 – 5 years	Blocks 6 – 10 years Trees 3 – 5 years	Blocks 6 – 10 years Trees 6 – 10 years	Blocks 6 – 10 years Average	Blocks above 10 years Trees 3 – 5 years	Blocks above 10 years Trees 6 – 10 years	Blocks above 10 years Trees above 10 years	Blocks above 10 years Average	Average
	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)	(fruit/ tree)
VOT[2]									
Early varieties:									
Hamlin, Westin e Rubi.....	238	81	179	178	-	-	1,021	1,021	450
Other early season[3].....	560	297	946	928	77	335	1,293	1,217	917
Mid-season:									
Pera Rio.....	261	57	565	557	143	297	837	811	535
Late season:									
Valencia, V.Folha Murcha[4].....	662	68	818	809	160	2	823	815	804
Natal.....	216	15	690	687	137	110	806	676	648
Average[5].....	**276**	**70**	**596**	**588**	**139**	**233**	**860**	**825**	**578**
SJO[6]									
Early varieties:									
Hamlin, Westin e Rubi.....	396	91	850	842	206	1,187	1,444	1,401	914
Other early season[3].....	522	162	725	693	84	383	1,022	994	733
Mid-season:									
Pera Rio.....	412	28	731	722	57	228	1,007	942	736
Late season:									
Valencia, V.Folha Murcha[4].....	564	201	597	585	169	226	821	761	615
Natal.....	469	120	825	823	81	794	1,215	1,198	905
Average[6].....	**491**	**150**	**731**	**718**	**146**	**370**	**1,098**	**1,047**	**758**
Average sector.....	**402**	**116**	**660**	**649**	**145**	**318**	**1,010**	**965**	**673**

[1] Weighted average per stratum fruits.
[2] TMG – Triângulo Mineiro.
[3] Valencia Americana, Valencia Argentina, Seleta e Pineapple.
[4] Weighted average per stratum fruits.
[5] V.Folha Murcha – Valencia Folha Murcha.
[5] São José do Rio Preto.

Table 15 – Fruit per tree at stripping[1], by tree age, region and variety groups – Central Sector [April/2017 stripping]

Region and variety group	Blocks 3 – 5 years Trees 3 – 5 years (fruit/ tree)	Blocks 6 – 10 years Trees 3 – 5 years (fruit/ tree)	Blocks 6 – 10 years Trees 6 – 10 years (fruit/ tree)	Blocks 6 – 10 years Average (fruit/ tree)	Blocks above 10 years Trees 3 – 5 years (fruit/ tree)	Blocks above 10 years Trees 6 – 10 years (fruit/ tree)	Blocks above 10 years Tree above 10 years (fruit/ tree)	Blocks above 10 years Average (fruit/ tree)	Average (fruit/ tree)
MAT[2]									
Early varieties:									
Hamlin, Westin e Rubi.....	762	92	833	815	224	340	1,356	1,201	955
Other early season[3].....	412	170	682	670	362	614	896	885	691
Mid-season:									
Pera Rio.....	438	71	713	654	243	269	916	806	618
Late season:									
Valencia, V.Folha Murcha[4].....	310	59	673	655	101	552	994	914	660
Natal.....	466	83	393	360	90	245	1,035	912	698
Average[5].....	**411**	**77**	**712**	**679**	**170**	**411**	**1,035**	**937**	**702**
DUA[6]									
Early varieties:									
Hamlin, Westin e Rubi.....	476	96	904	843	75	437	1,153	1,093	880
Other early season[3].....	414	175	936	899	239	368	930	859	752
Mid-season:									
Pera Rio.....	393	189	750	725	89	334	915	891	723
Late season:									
Valencia, V.Folha Murcha[4].....	356	63	731	683	55	322	951	911	738
Natal.....	298	158	817	760	91	247	1,192	1,155	886
Average[6].....	**382**	**124**	**785**	**744**	**82**	**341**	**998**	**961**	**770**
BRO[7]									
Early varieties:									
Hamlin, Westin e Rubi.....	670	301	791	690	34	116	1,331	1,015	854
Other early season[3].....	118	72	195	145	35	383	929	821	422
Mid-season:									
Pera Rio.....	300	17	581	482	47	186	1,020	857	605
Late season:									
Valencia, V.Folha Murcha[4].....	403	60	585	477	73	104	845	684	608
Natal.....	73	86	958	810	100	350	717	589	621
Average[6].....	**340**	**107**	**660**	**549**	**67**	**153**	**938**	**761**	**638**
Average sector.....	**389**	**107**	**746**	**699**	**110**	**263**	**995**	**905**	**723**

1 Weighted average per stratum fruits.
2 MAT – Matão.
3 V.Americana – Valencia Americana, Valencia Argentina, Seleta e Pineapple
5 V.Folha Murcha – Valencia Folha Murcha.
6 DUA – Duartina.
6 Weighted average per stratum fruits.
7 BRO – Brotas.

Table 16 – Fruit per tree at stripping[1], by tree age, region and variety groups – South Sector [April/2017 stripping]

Region and variety group	Blocks 3 – 5 years Trees 3 – 5 years (fruit/ tree)	Blocks 6 – 10 years Trees 3 – 5 years (fruit/ tree)	Blocks 6 – 10 years Trees 6 – 10 years (fruit/ tree)	Blocks 6 – 10 years Average (fruit/ tree)	Blocks above 10 years Trees 3 – 5 years (fruit/ tree)	Blocks above 10 years Trees 6 – 10 years (fruit/ tree)	Blocks above 10 years Trees above 10 years (fruit/ tree)	Blocks above 10 years Average (fruit/ tree)	Average (fruit/ tree)
PFE[2]									
Early varieties:									
Hamlin, Westin e Rubi.....	780	236	809	786	122	471	1,171	1,017	882
Other early season[3].....	396	395	396	396	188	353	820	762	594
Mid-season:									
Pera Rio.....	555	281	743	707	103	541	981	916	759
Late season:									
Valencia, V.Folha Murcha[4].....	405	182	619	596	168	201	989	869	735
Natal.....	494	96	848	819	333	485	1,193	1,059	901
Average[5].....	**523**	**237**	**702**	**675**	**175**	**330**	**1,027**	**919**	**776**
LIM[6]									
Early varieties:									
Hamlin, Westin e Rubi.....	234	297	606	598	203	570	1,187	1,118	839
Other early season[3].....	282	86	673	669	87	109	560	547	590
Mid-season:									
Pera Rio.....	342	162	532	515	218	301	901	856	648
Late season:									
Valencia, V.Folha Murcha[4].....	378	122	690	651	64	369	873	827	747
Natal.....	185	144	677	642	140	258	1,022	979	743
Average[6].....	**324**	**154**	**609**	**585**	**133**	**380**	**930**	**883**	**722**
Average sector.....	**443**	**195**	**651**	**627**	**161**	**350**	**974**	**900**	**748**

1 Weighted average per stratum fruits.
2 PFE – Porto Ferreira.
3 V.Americana – Valencia Americana, Valencia Argentina, Seleta e Pineapple
4 V.Folha Murcha – Valencia Folha Murcha.
5 Weighted average per stratum fruits.
6 LIM – Limeira.

Table 17 – Fruit per tree at stripping[1], by tree age, region and variety groups – Southwest Sector [April/2017 stripping]

Region and variety group	Blocks 3 – 5 years Trees 3 – 5 years (fruit/ tree)	Blocks 6 – 10 years Trees 3 – 5 years (fruit/ tree)	Blocks 6 – 10 years Trees 6 – 10 years (fruit/ tree)	Blocks 6 – 10 years Average (fruit/ tree)	Blocks above 10 years Trees 3 – 5 years (fruit/ tree)	Blocks above 10 years Trees 6 – 10 years (fruit/ tree)	Blocks above 10 years Trees Above 10 years (fruit/ tree)	Blocks above 10 years Average (fruit/ tree)	Average (fruit/ tree)
AVA[2]									
Early varieties:									
Hamlin, Westin e Rubi.....	447	377	913	898	202	390	1,204	1,108	1,006
Other early season[3].....	77	165	875	864	260	355	978	937	866
Mid-season:									
Pera Rio.....	484	147	770	751	103	247	898	850	781
Late season:									
Valencia, V.Folha Murcha[4].....	381	51	689	673	128	250	887	851	752
Natal.....	394	144	756	717	117	341	1,018	968	832
Average[5].....	**414**	**154**	**768**	**748**	**144**	**296**	**964**	**915**	**816**
ITG[6]									
Early varieties:									
Hamlin, Westin e Rubi.....	703	183	1,093	1,051	201	367	946	936	943
Other early season[3].....	493	315	685	678	251	329	1,376	1,301	651
Mid-season:									
Pera Rio.....	239	153	614	608	220	69	889	883	649
Late season:									
Valencia, V.Folha Murcha[4].....	476	136	704	699	120	168	814	797	705
Natal.....	379	178	562	559	117	187	807	799	658
Average[6].....	**390**	**175**	**680**	**673**	**157**	**194**	**857**	**846**	**699**
Average sector.....	**404**	**156**	**744**	**728**	**144**	**288**	**944**	**902**	**788**

[1] Weighted average per stratum fruits.
[2] AVA – Avaré.
[3] V.Americana – Valencia Americana, Valencia Argentina, Seleta e Pineapple.
[4] V.Folha Murcha – Valencia Folha Murcha.
[5] V.Folha Murcha – Valencia Folha Murcha.
[6] Weighted average per stratum fruits.
[7] ITG – Itapetininga.

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