

## ESTIMATIVA DA SAFRA DE LARANJA 2016/2017

Árvores produtivas	Árvores não produtivas	Total	Estimativa
(milhões de árvores)	(milhões de árvores)	(milhões de árvores)	(milhões de caixas)
<b>175,55</b>	<b>16,47</b>	<b>192,01</b>	<b>245,74</b>

Da safra total estimada para o cinturão citrícola, cerca de 9,59 milhões de caixas deverão ser produzidas no Triângulo Mineiro.

## 2016-2017 ORANGE PRODUCTION FORECAST

Bearing trees	Non-bearing trees	Total	Forecast
(million trees)	(million trees)	(million trees)	(million boxes)
<b>175.55</b>	<b>16.47</b>	<b>192.01</b>	<b>245.74</b>

Out of the total production forecast for the citrus belt, some 9.59 million boxes should be produced in the West of Minas Gerais.



# CITRUS TREE INVENTORY AND ORANGE PRODUCTION FORECAST FOR THE 2016-2017 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

2016/17



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## PESQUISA DE ESTIMATIVA DE SAFRA (PES)

Data collection at the groves and disclosure on citrus production in São Paulo and West-Southwest of Minas Gerais Citrus Belt

- 2015-2016 final orange production estimate
- Tree inventory update
- Orange production forecast for the 2016-2017 season

# 02

## BENEFITS

- Scientific methodology
- Transparency
- Support for individual decision process
- Open knowledge for chain production
- Efficiency and cost reduction
- Public policy
- Reference to others productive chains



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## ORGANIZATIONAL STRUCTURE - PES

- Budget of R\$ 5,013 milhões
- 476 mil km covered in only 3 months
- 127 professionals direct involved in the study

1 coordinator  
3 supervisors



39 agents  
51 field assistants



33 laboratory assistants



## FINAL ORANGE PRODUCTION ESTIMATE FOR THE 2015-2016 SEASON

Final orange production 2015-2016

Variety group	Bearing trees	Fruits per tree at stripping	Fruits forecasted by box	Fruit loss from droppage forecast	Final orange production 2015-2016		Total
					By tree	By hectare	
	(1,000,000 trees)	(number)	(number)	(percent)	(boxes/tree)	(boxes/hectare)	(1,000,000 boxes)
Hamlin, Westin and Rubi....	28,786	672	272	12.12	2.05	865	58.86
Other early season.....	7,860	524	233	11.91	1.87	784	14.66
Pera Rio.....	58,495	398	225	15.51	1.41	640	82.31
Valencia and Folha Murcha	60,006	485	200	22.62	1.76	749	105.92
Natal.....	18,979	572	211	19.71	2.05	831	38.90
Average.....		<b>498</b>	<b>226</b>	<b>17.49</b>	<b>1.73</b>	<b>745</b>	
Total.....	<b>174,126</b>						<b>300.65</b>

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# BLOOM PROFILE FOR THE 2015-2016 SEASON

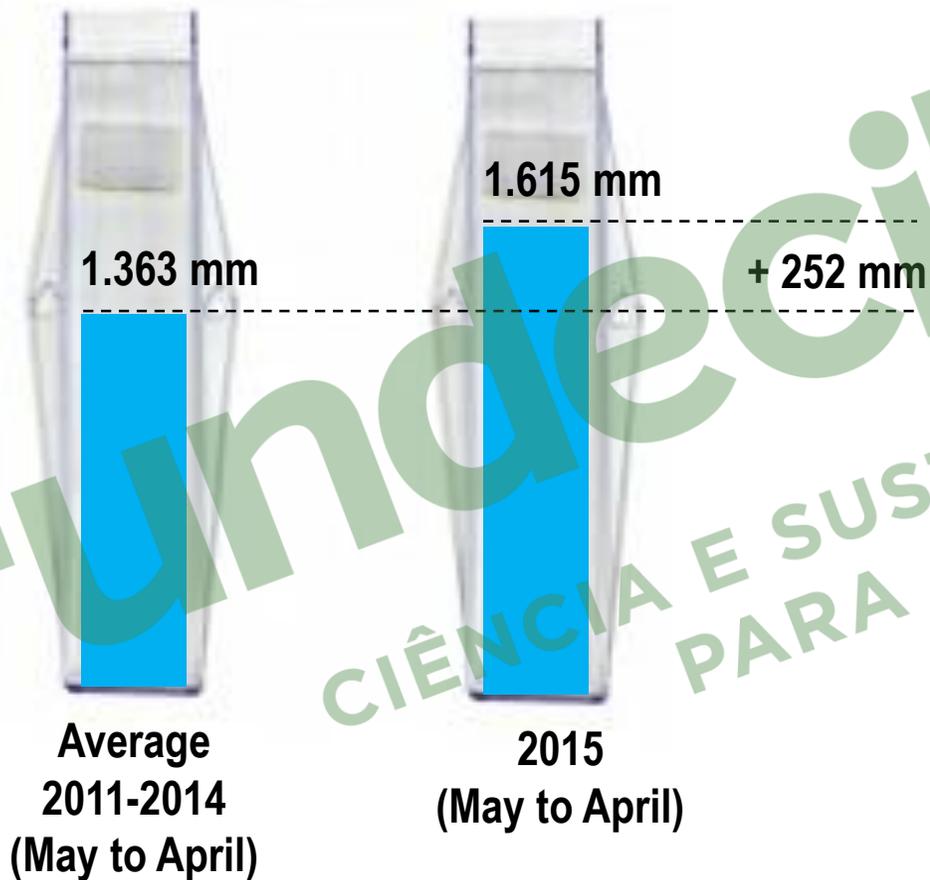
## 4 BLOOMS



# PLUVIOMETRIC PRECIPITATION IN THE CITRUS BELT

## El Niño effect

- High temperatures
- High rain volume



Heavier fruit size



## FINAL ORANGE PRODUCTION ESTIMATE FOR THE 2015-2016 SEASON

The final orange production estimate published on April 11, 2016 is of **300.65 million boxes (40.8 kg)**.

7.76% increase in comparison with the first forecast published in May/2015

The total includes:

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

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



INVENTÁRIO DE ÁRVORES E ESTIMATIVA  
DE SAFRA DE LARANJA 2016/17 DO  
CINTURÃO CITRÍCOLA DE SÃO PAULO  
E TRIÂNGULO/SUDOESTE MINEIRO

INVENTÁRIO  
2016



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# ORANGE TREES

(in million)

Bearing trees  
175.55 million



Non-bearing trees  
16.46 million

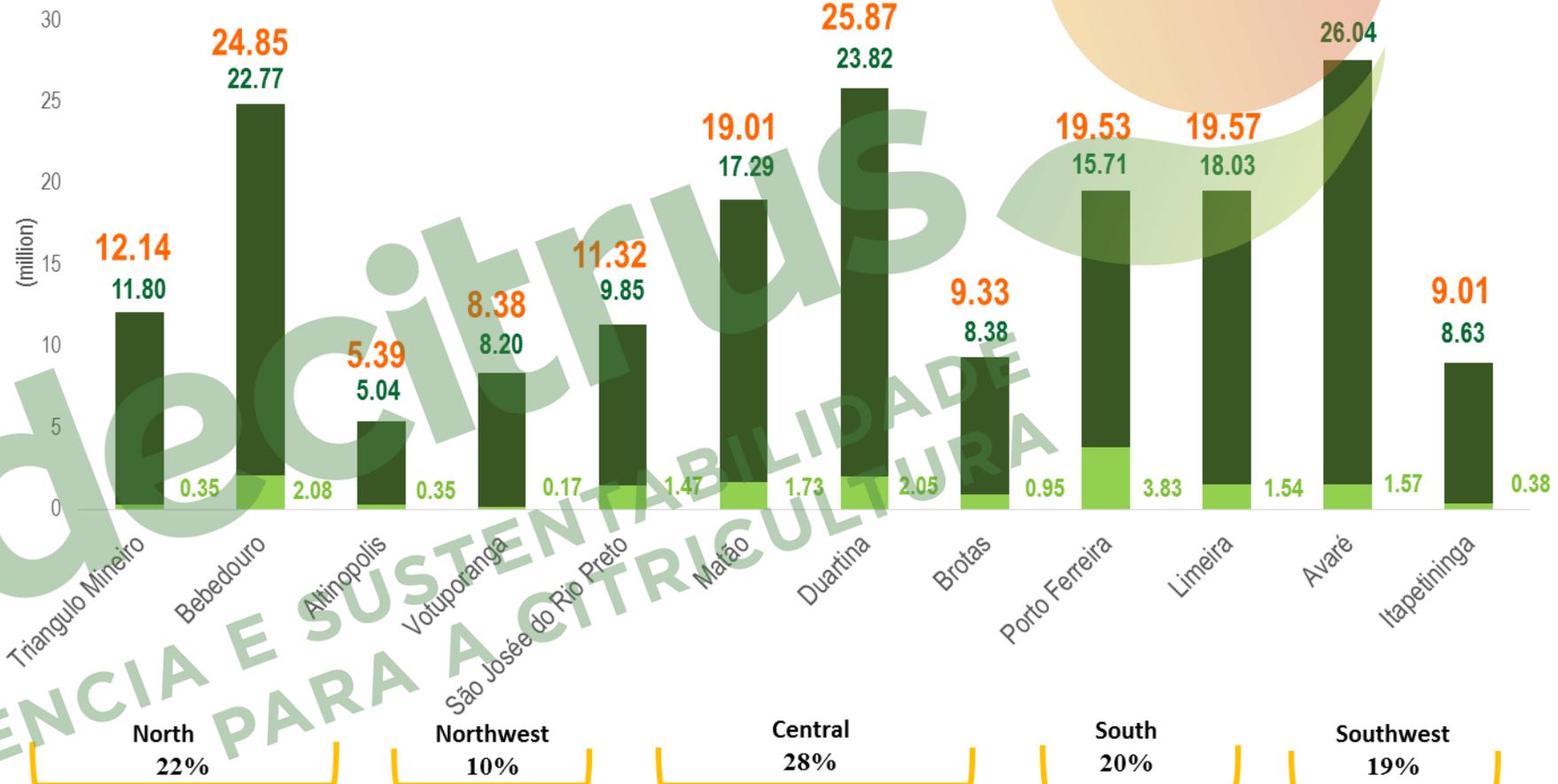
11.26  
million

Young groves

5.20  
million

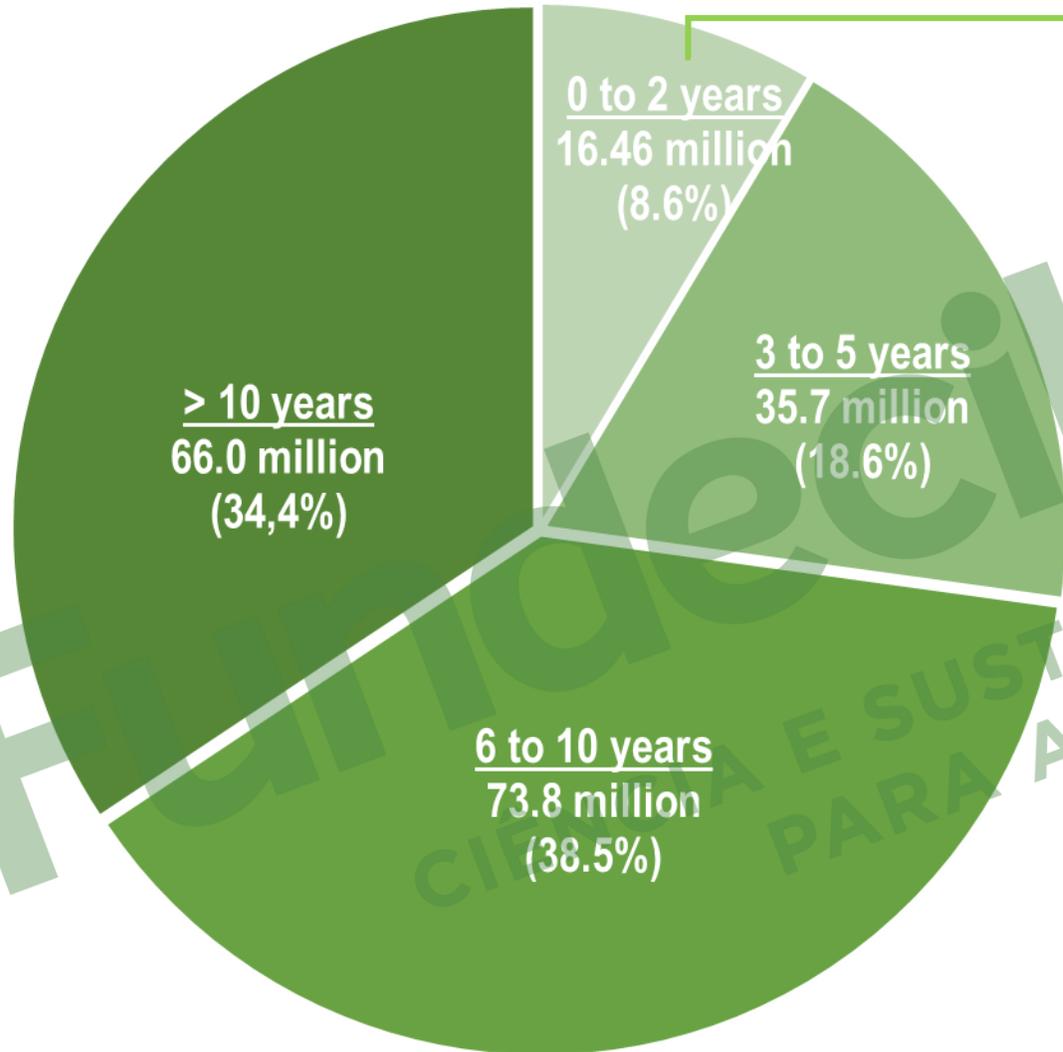
Resets in  
mature groves

Total ■ Non-bearing ■ Bearing



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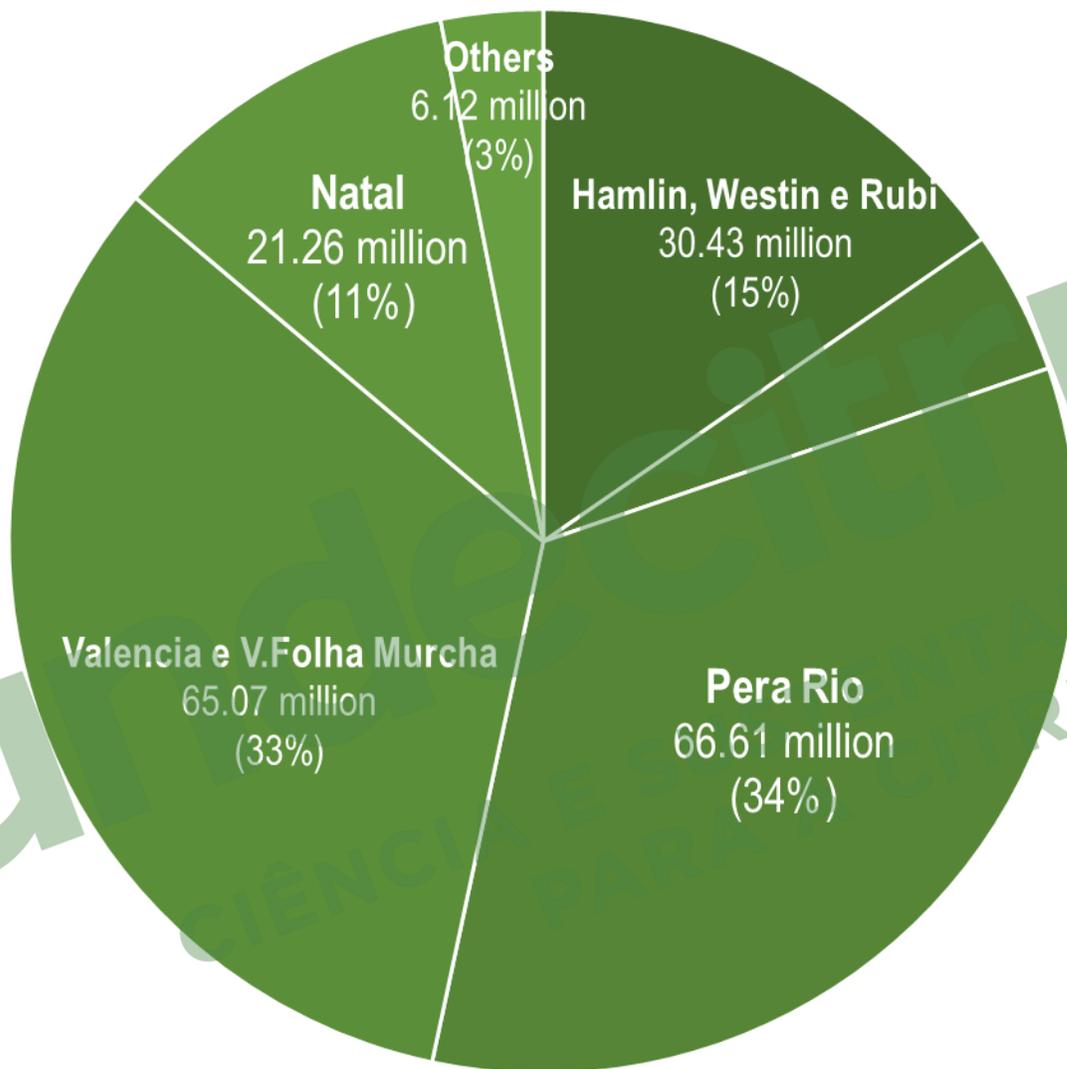
## TREES BY AGE GROUP



Young groves: 11.3 million (68.4%)  
Resets: 5.2 million (31.6%)

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# TREES BY VARIETY: ALL ORANGES



Valência Americana, Valência Argentiniana, Seleta e Pineapple  
8.63 million  
(4%)

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# TREES AND DIFFERENCE BETWEEN 2015 AND 2016

million

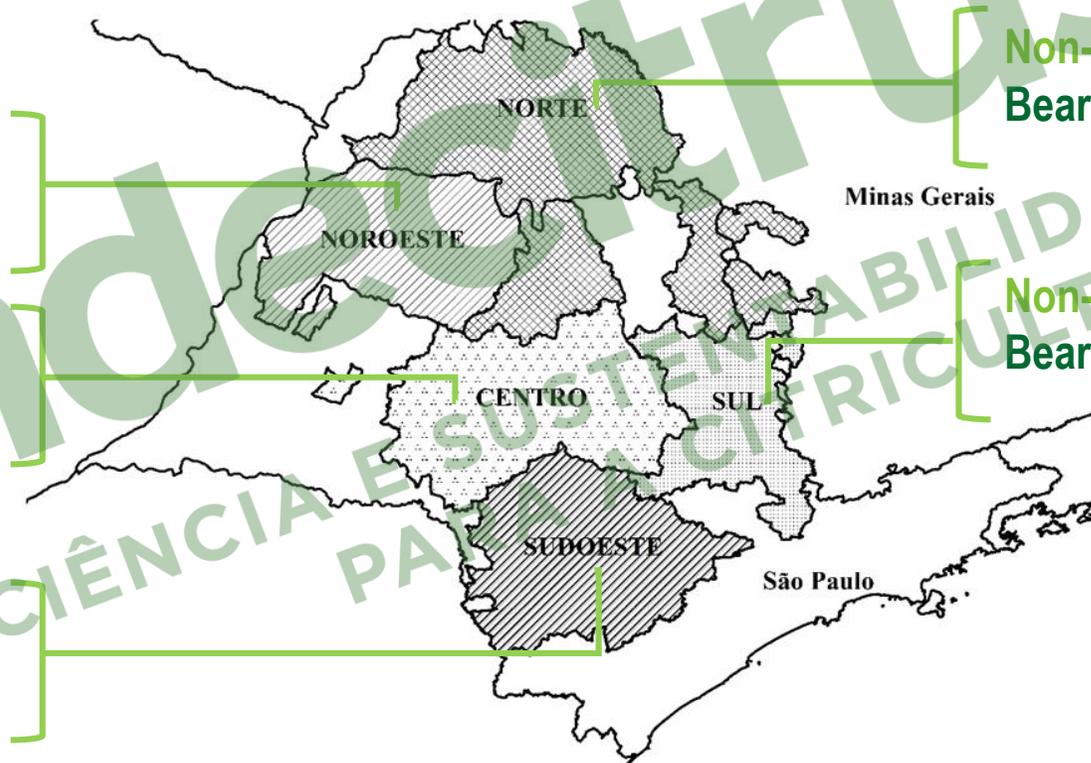
Non-bearing: 16.46 (-30.6% compared with 2015)

Bearing: 175.55 (+0.8% compared with 2015)

Non-bearing: 1.64 (-16.2%)  
Bearing: 18.06 (-5.2%)

Non-bearing: 4.73 (-46.4%)  
Bearing: 49.49 (+4.3%)

Non-bearing: 1.95 (-26.5%)  
Bearing: 34.67 (+1.1%)



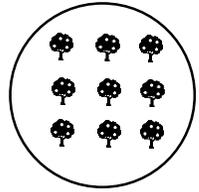
Non-bearing: 2.77 (-51.8%)  
Bearing: 39.60 (+4.3%)

Non-bearing: 5.37 (+18.7%)  
Bearing: 33.73 (-4.6%)

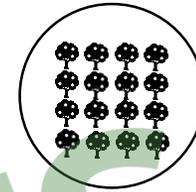
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# DENSITY BY PLANTING YEAR

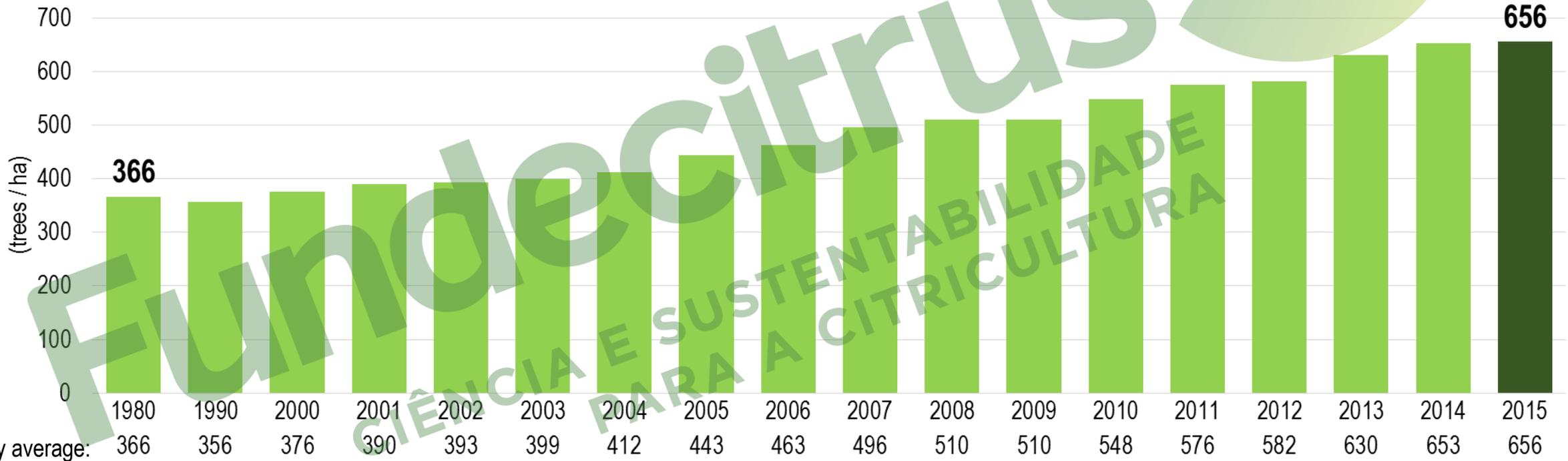
trees/hectare



467 trees/hectare  
Mature groves

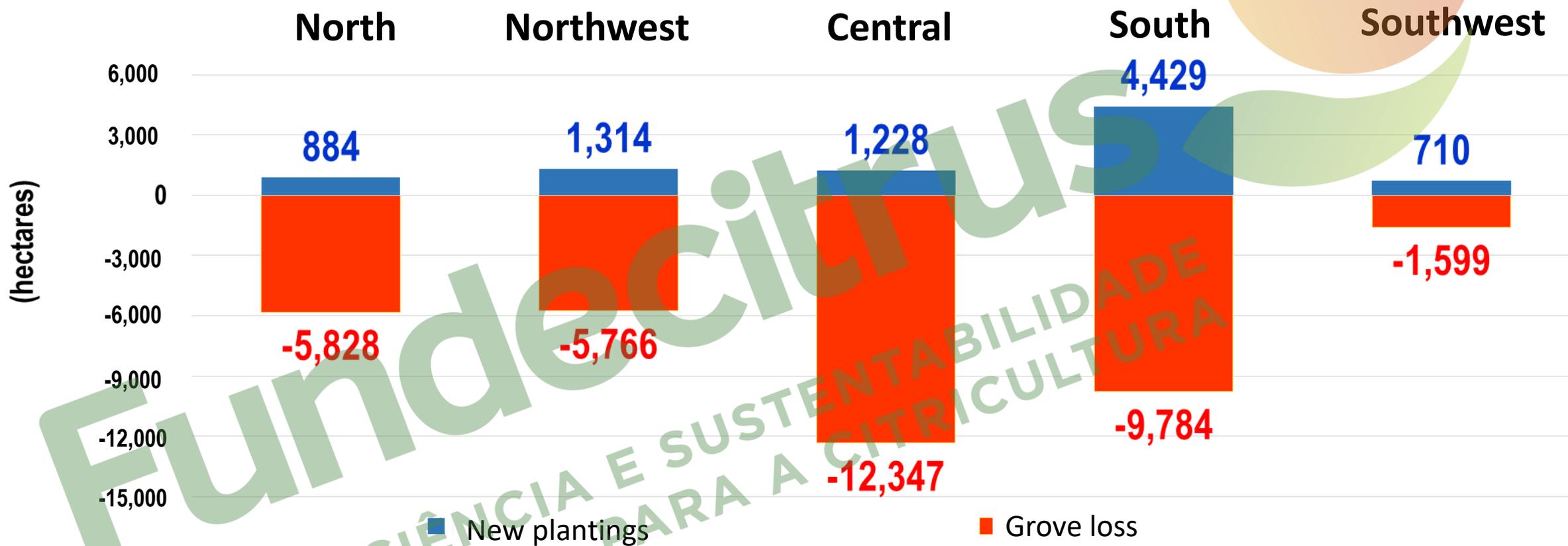


654 trees/hectare  
Young groves



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# NEW PLANTINGS (2015) AND GROVE LOSS (ERRADICATED AND ABANDONED)



Reduction of de 26,759 hectares from 2015 to 2016

## ORANGE GROVE AREAS IN 2016 COMPARED WITH 2015

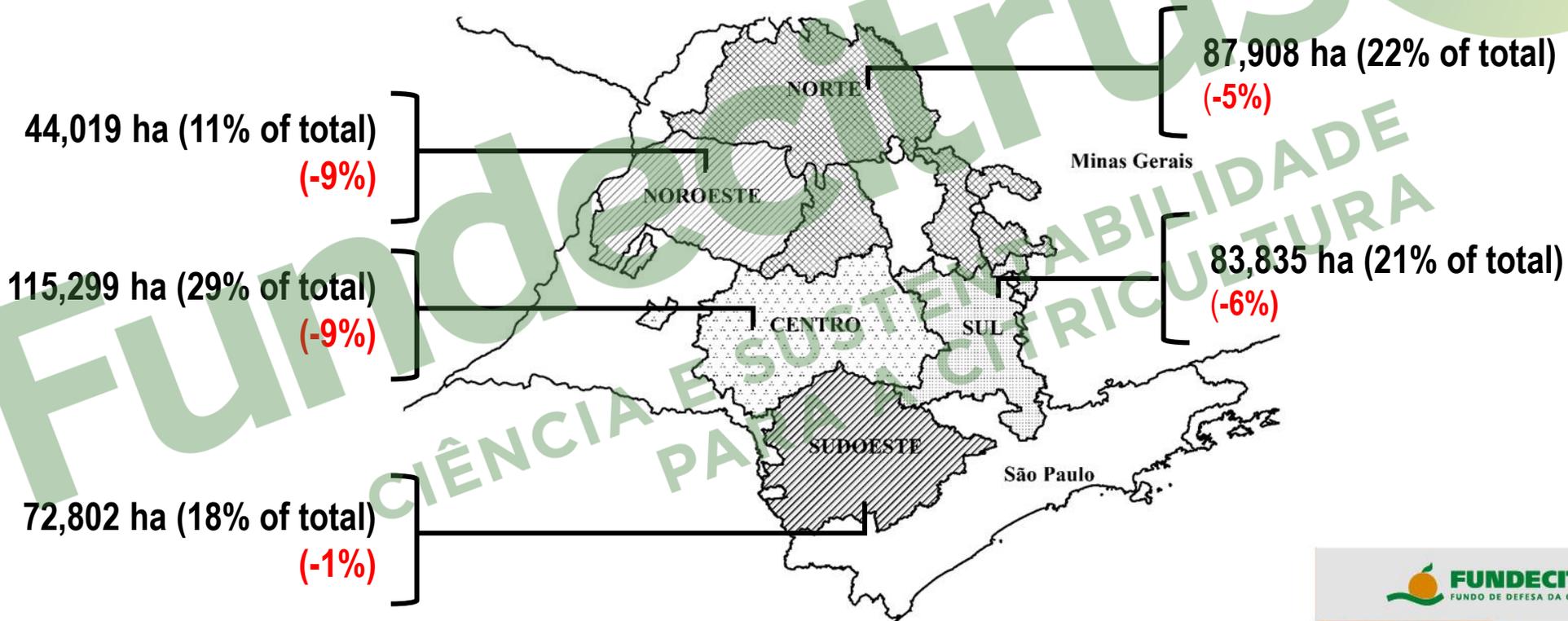
All oranges	Area in 2016 (hectares)	Compared with 2015
Major oranges	403,863	-6.2%
Washington Navel, Baianinha, Shamouti, acidless sweet oranges, sweet limes and others	12,840	-8.0%
Total	416,703	-6.3%
Abandoned	6.510	

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# AREA OF ORANGE GROVES IN 2016 COMPARED WITH 2015

hectares

Total: 403,863 ha (-6.2% compared with 2015)



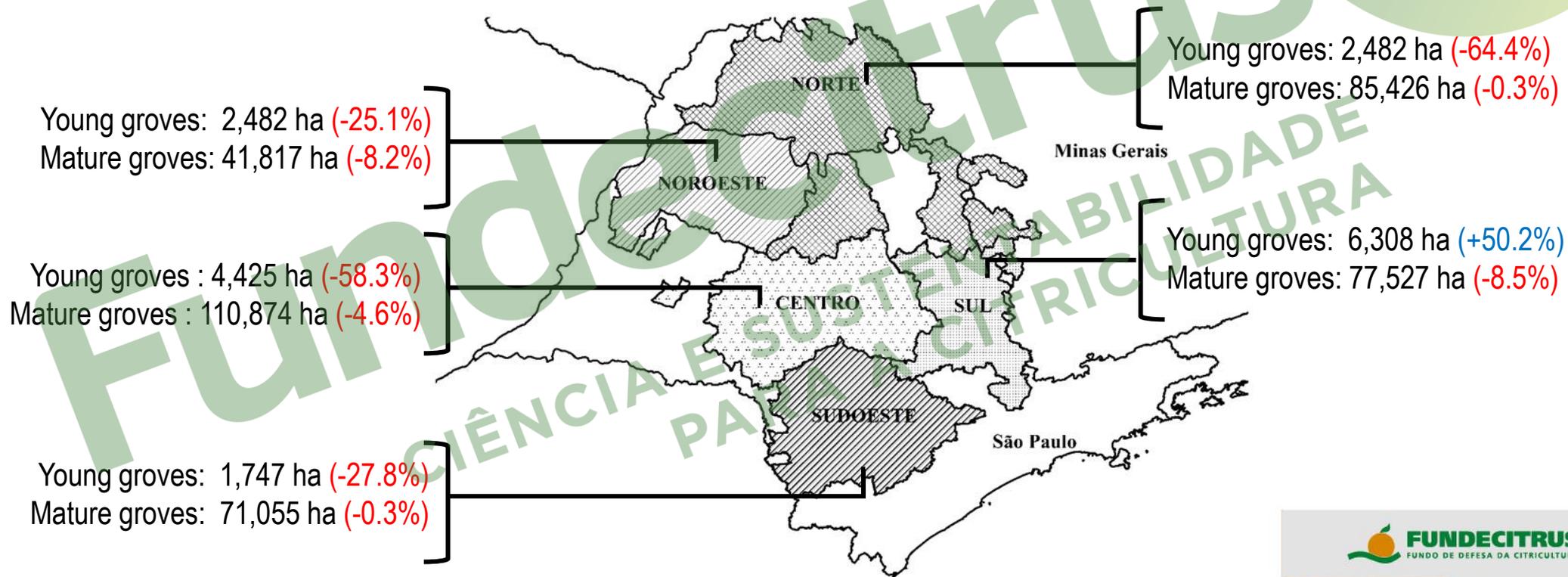
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# AREA OF MATURE AND YOUNG GROVES IN 2016 COMPARED WITH 2015

hectares

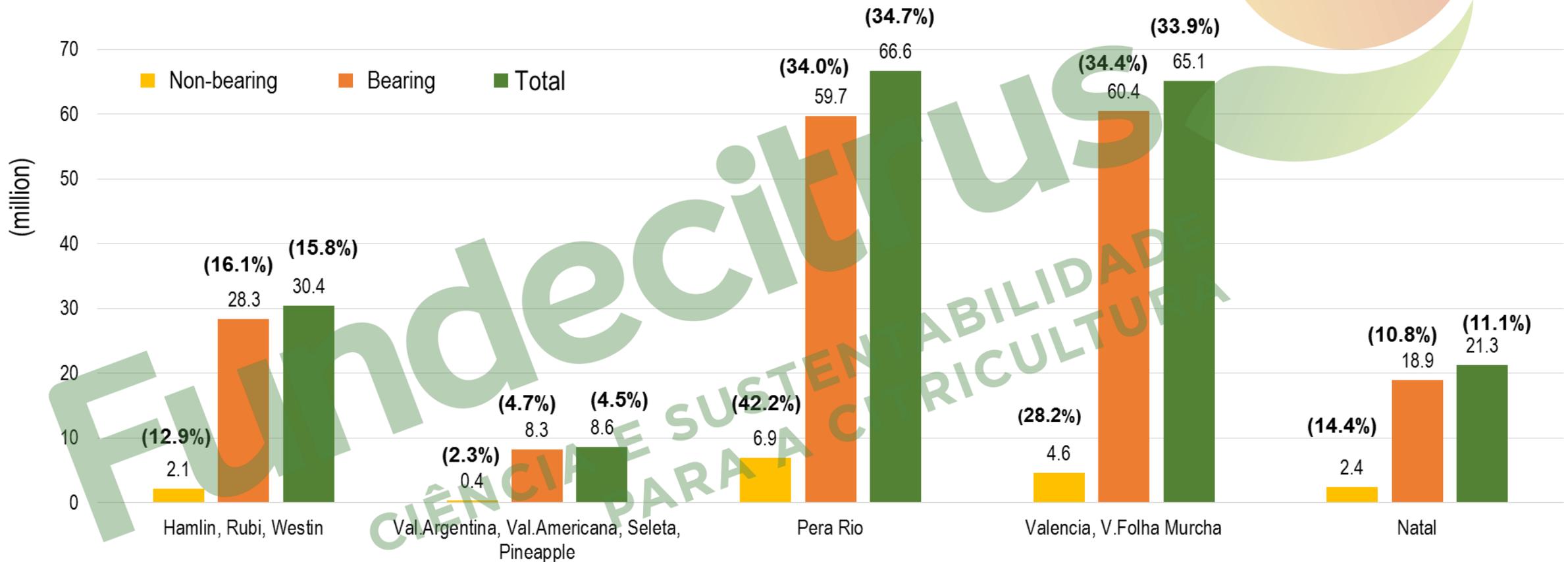
Young groves: 17,164 ha (-36.73% compared with 2015)

Mature groves: 386,699 ha (-4.16% compared with 2015)



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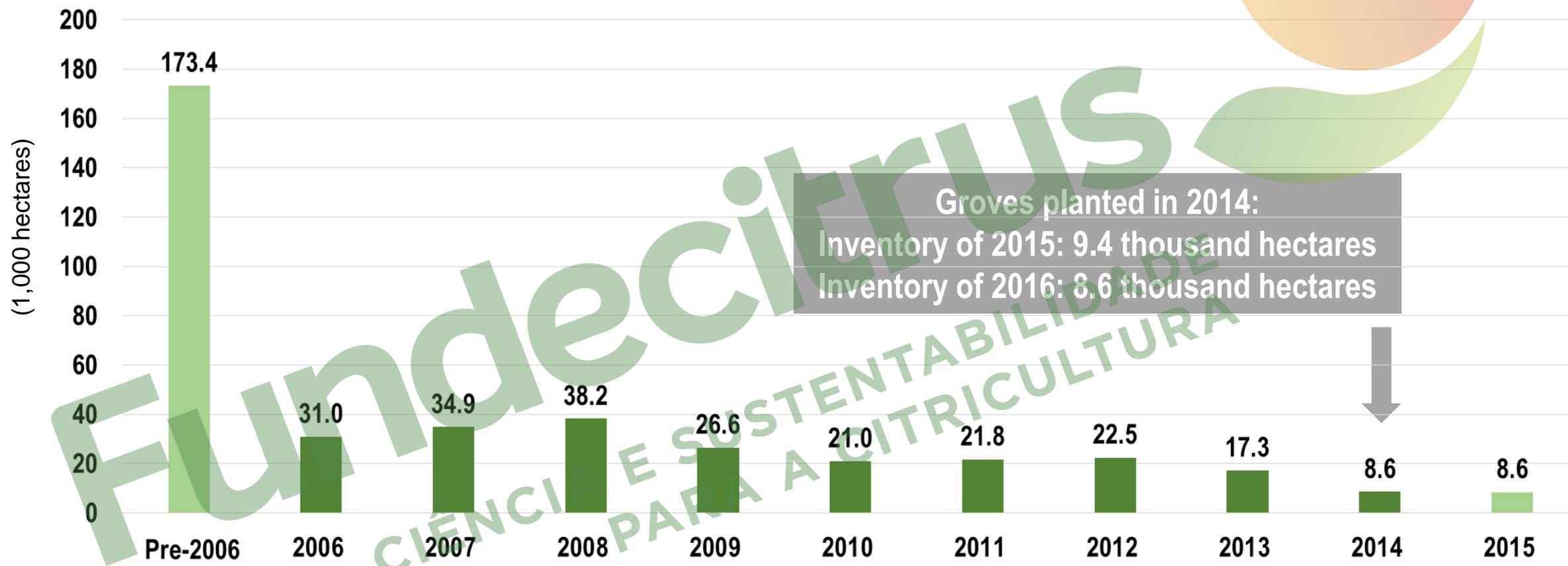
## TREES BY VARIETY



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# ORANGE GROVE AREA BY PLANTING YEAR

(1,000 hectares)



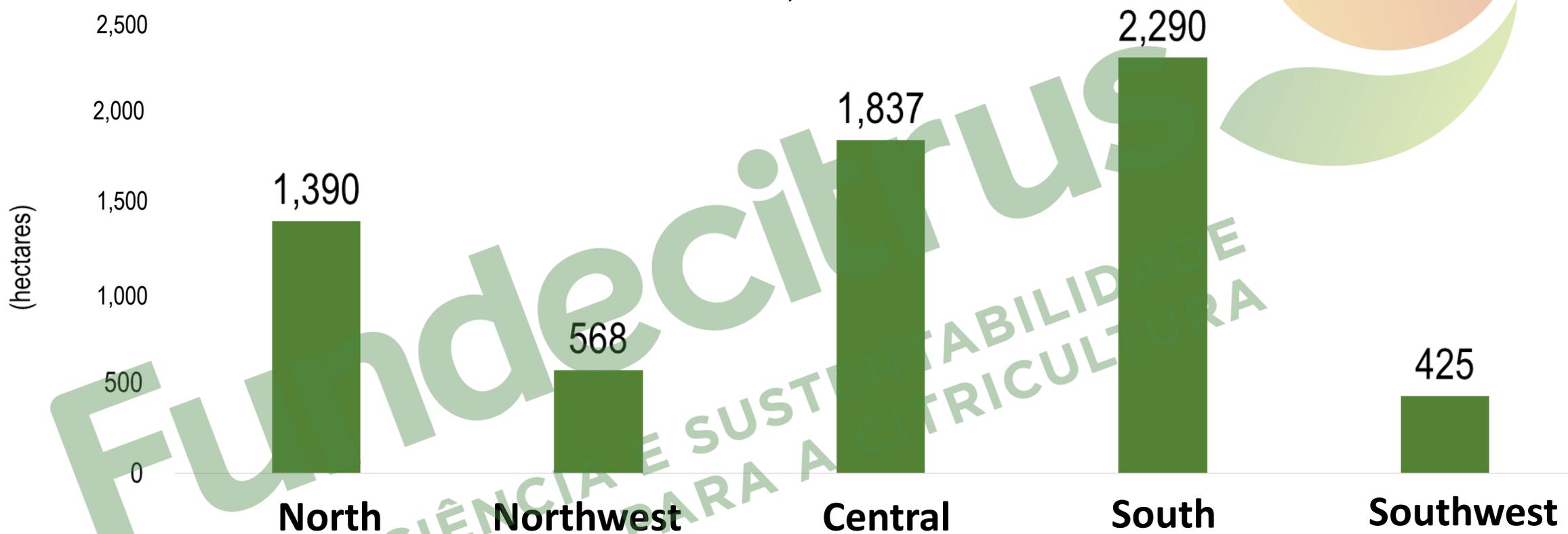
## GROVES STRATIFIED BY NUMBER OF ORANGE TREES [INVENTORY OF 2016]

Range of the number of orange trees in the grove	Groves	Groves percentage	Non-bearing and bearing trees	Percentage of non-bearing and bearing trees
(número)	(number)	(%)	(1,000 trees)	(%)
Below 10 thousand.....	5,442	71.72	18,525.31	9.65
10 – 19 thousand.....	851	11.22	12,527.11	6.52
20 – 29 thousand.....	378	4.98	9,634.88	5.02
30 – 49 thousand.....	314	4.14	12,532.08	6.53
50 – 99 thousand.....	289	3.81	21,172.69	11.03
100 – 199 thousand.....	156	2.06	23,924.55	12.46
Above 200 thousand .....	158	2.08	93,696.06	48.80
<b>Total.....</b>	<b>7,588</b>	<b>100.00</b>	<b>192,012.68</b>	<b>100.00</b>

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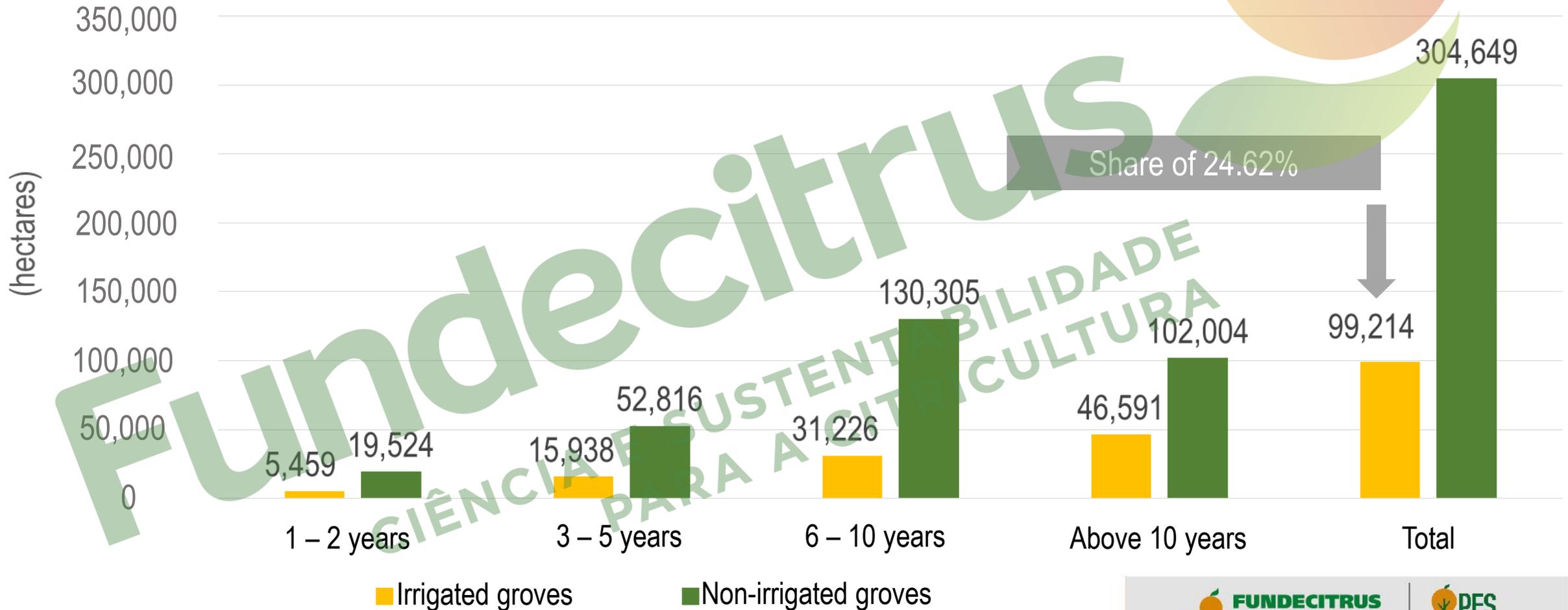
# ABANDONED ORANGE GROVES

Total 6,511 ha



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# AREA OF IRRIGATED AND NON-IRRIGATED GROVES BY AGE





# CITRUS TREE INVENTORY AND ORANGE PRODUCTION FORECAST FOR THE 2016-2017 SEASON OF THE SÃO PAULO AND WEST-SOUTHWEST OF MINAS GERAIS CITRUS BELT

## ORANGE PRODUCTION FORECAST



# ORANGE PRODUCTION FORECAST FOR THE 2016-2017 SEASON

Variety group	Components of May/2016 forecast				Orange production forecast 2016-2017		
	Bearing trees	Fruits per tree at stripping	Fruits forecasted by box	Fruit loss from droppage forecast	By tree	By hectare	Total
	(1,000,000 trees)	(number)	(number)	(percent)	(boxes/	(boxes/	(1,000,000 boxes)
Hamlin, Westin and Rubi.....	28,304	523	275	10	1.62	706	45.86
Other early season.....	8,256	475	245	11	1.63	736	13.48
Pera Rio.....	59,668	378	255	16	1.18	566	70.38
Valencia and Folha Murcha.....	60,432	409	230	17	1.40	629	84.48
Natal.....	18,888	500	235	17	1.67	705	31.54
Average.....	(X)	<b>430</b>	<b>248</b>	<b>15</b>	<b>1.40</b>	<b>635</b>	(X)
Total.....	<b>175,548</b>	(X)	(X)	(X)	(X)		<b>245.74</b>
Compared with 2015/16.....	↑ +0.8%	↓ -13.7%	↑ +22	↓ -2.49%	↓ -19.1%	↓ -14.8%	↓ -18.3%
Final orange estimate.....	174,126	498	226	17.49	1.73	745	300.65

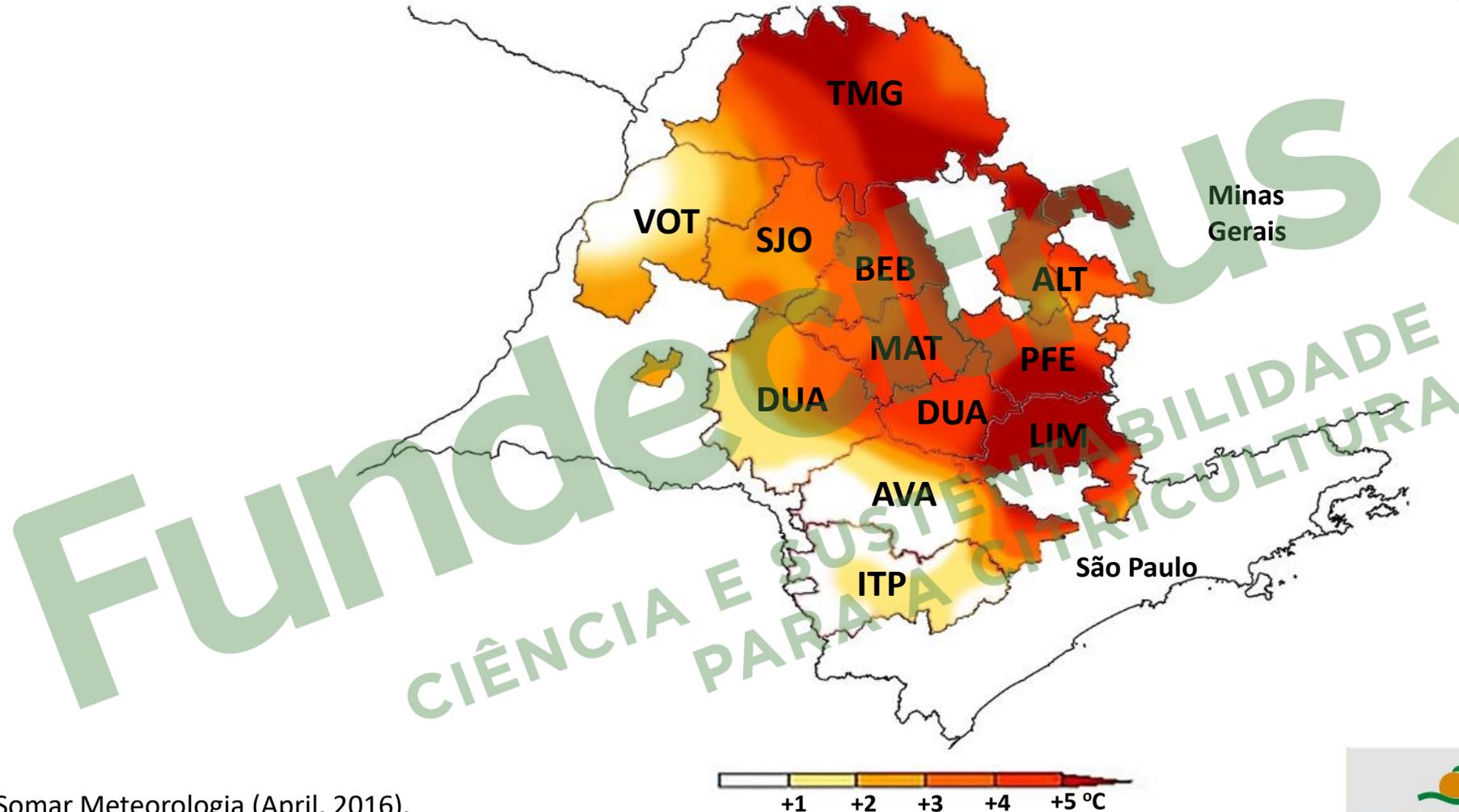
(X) Not applicable.

# BLOOM PROFILE FOR THE 2016-2017 AND 2015-2016 SEASONS



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# DIFFERENCE BETWEEN AVERAGE MAXIMUM TEMPERATURE AND AVERAGE HISTORICAL TEMPERATURE IN OCTOBER, 2016 (°C)



Source: Somar Meteorologia (April, 2016).

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# PHYSIOLOGIC DROP OF ORANGE FRUIT: SIZE BELOW 4 MM

## Susctible stages

More intensive when high temperatures  
and drought

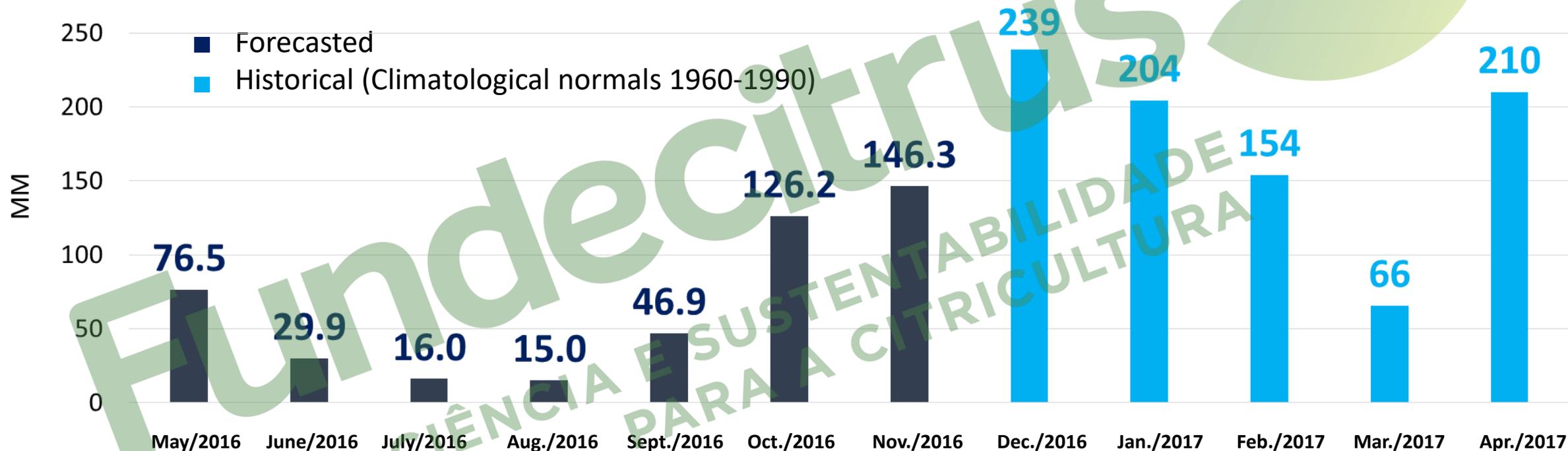


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# FORECAST PRECIPITATION: THROUGH MAY, 2016 TO APRIL, 2017

TOTAL: 1.330 MM

Climate conditions 2016:  
Winter and spring colder and drier compared with 2015



Source: Somar Meteorologia (April, 2016).

## FRUITS PER TREE AT STRIPPING

SECTOR	REGION	NUMBER OF FRUITS PER TREE
NORTH	TMG	250
	BEB	348
	ALT	424
	<b>MÉDIA</b>	<b>328</b>
NORTHWEST	VOT	273
	SJO	263
	<b>MÉDIA</b>	<b>268</b>
CENTRAL	MAT	410
	DUA	437
	BRO	411
	<b>MÉDIA</b>	<b>423</b>
SOUTH	PFE	499
	LIM	444
	<b>MÉDIA</b>	<b>470</b>
SOUTHWEST	AVA	575
	ITG	681
	<b>MÉDIA</b>	<b>601</b>
<b>TOTAL</b>		<b>430</b>

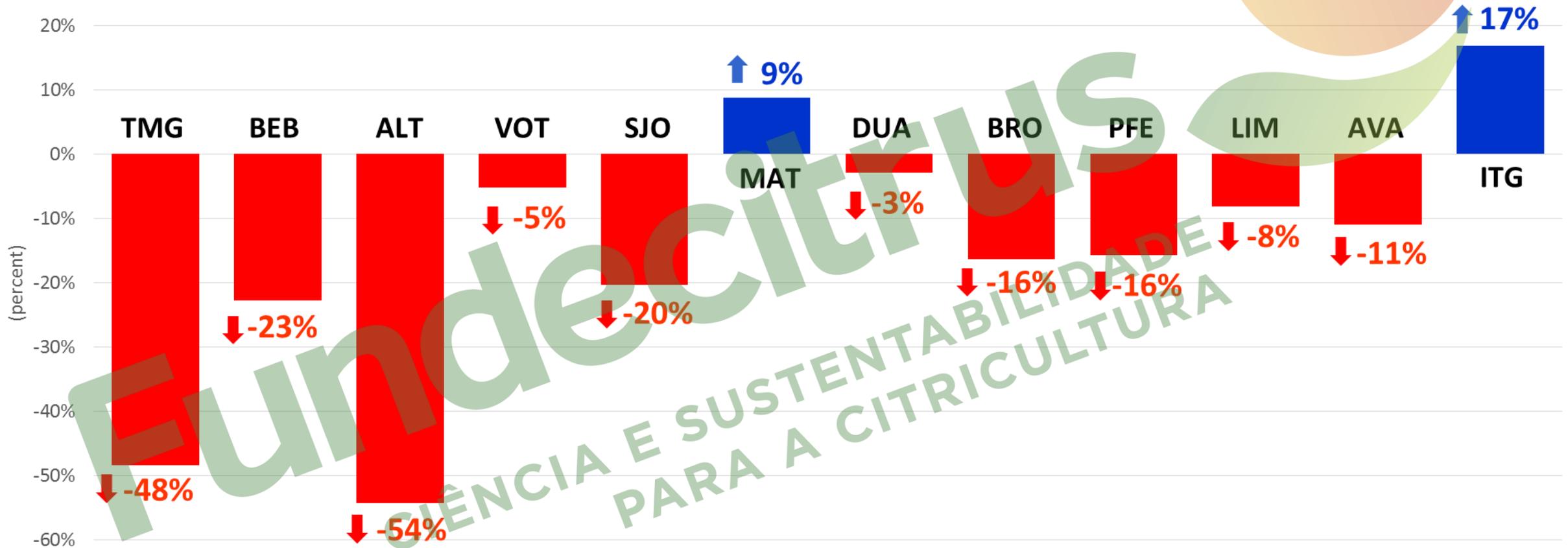


Fundecitrus  
CIÊNCIA E SUSTENTABILIDADE  
PARA A CITRICULTURA

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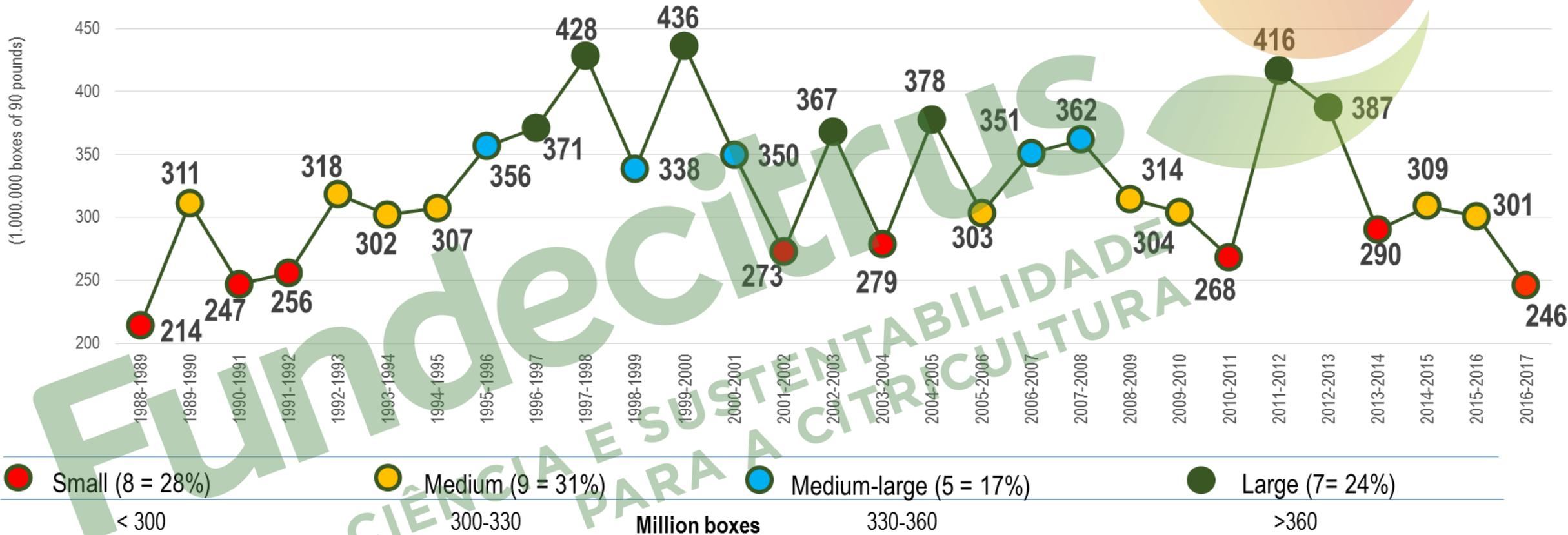
# DIFFERENCE OF FRUITS PER TREE AT STRIPPING BY REGION OF THE CITRUS BELT

Difference between the average in April 2015 (2015-2016 season) and April 2016 (2016-2017 season)



# 31

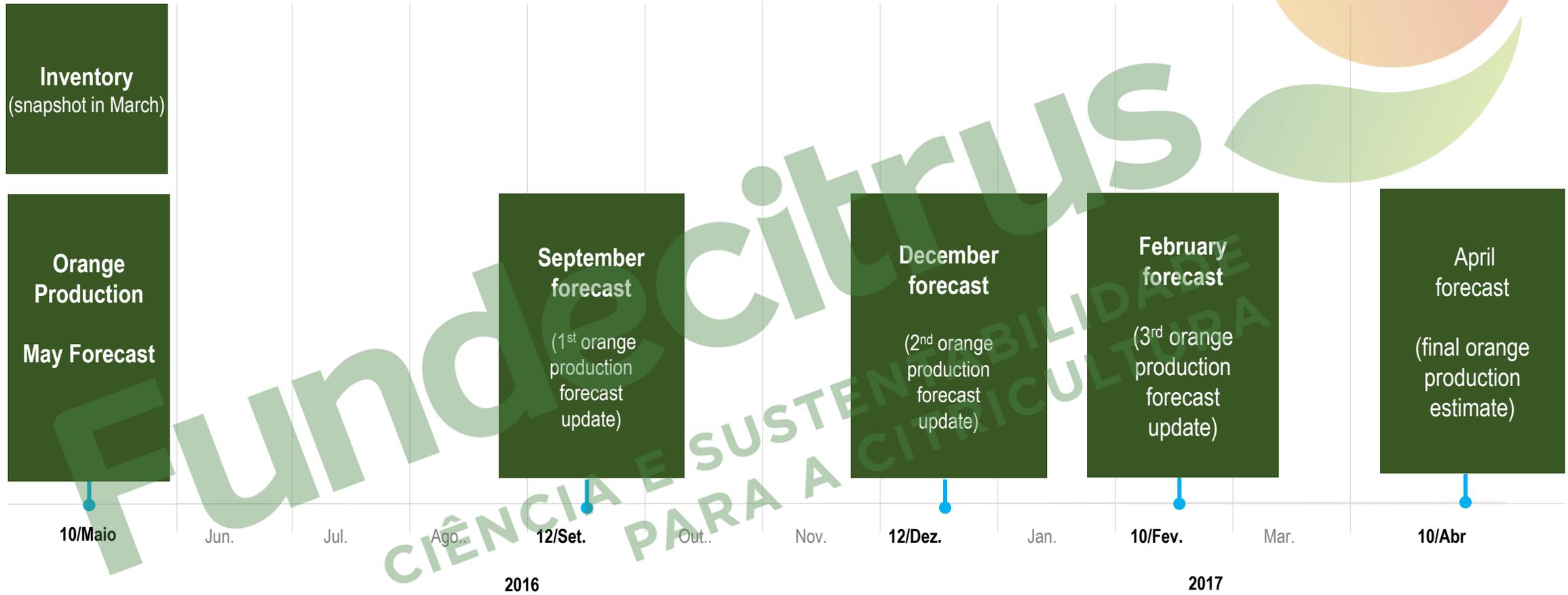
## FINAL ORANGE PRODUCTION OF THE CROP YEARS 1988-1989 THROUGH 2015-2016 AND FORECAST FOR THE 2016-2017 SEASON



Source: CitrusBR (1998-1989 to 2014-2015) and Fundecitrus (2015-2016 and 2016-2017).

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# FORECAST DATES





THANK YOU!

Fundocitrus  
CIÊNCIA E SUSTENTABILIDADE  
PARA A CITRICULTURA