

Brazilian citrus industry market outlook

JULIANO AYRES

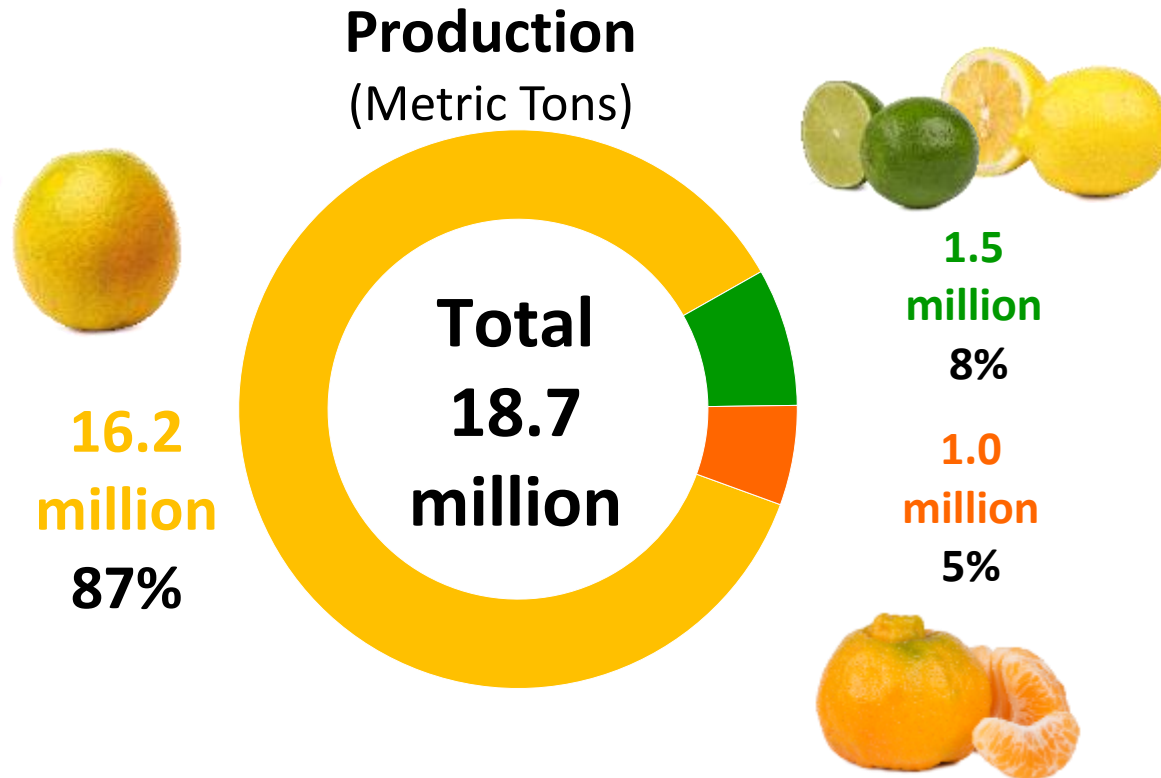
FRANKLIN BEHLAU

RESEARCH & DEVELOPMENT

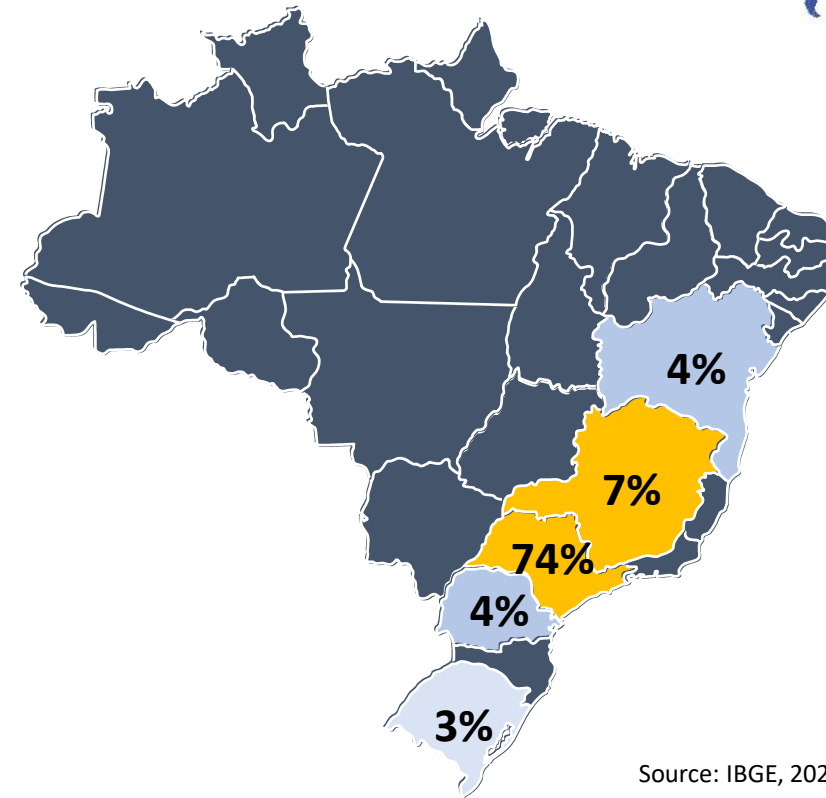
FUNDECITRUS, São Paulo state, Brazil



BRAZILIAN CITRUS PRODUCTION



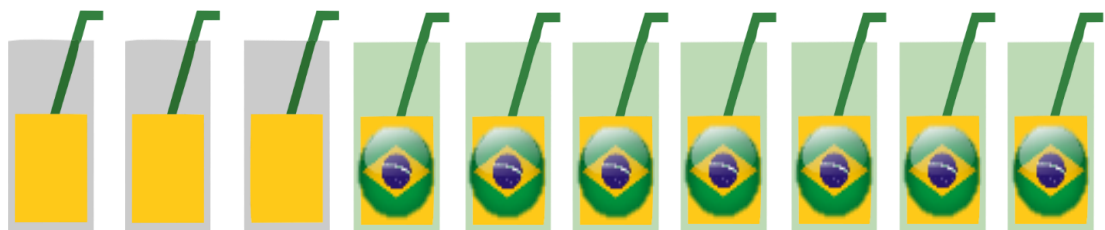
Main citrus-growing regions in Brazil:
94% of the production



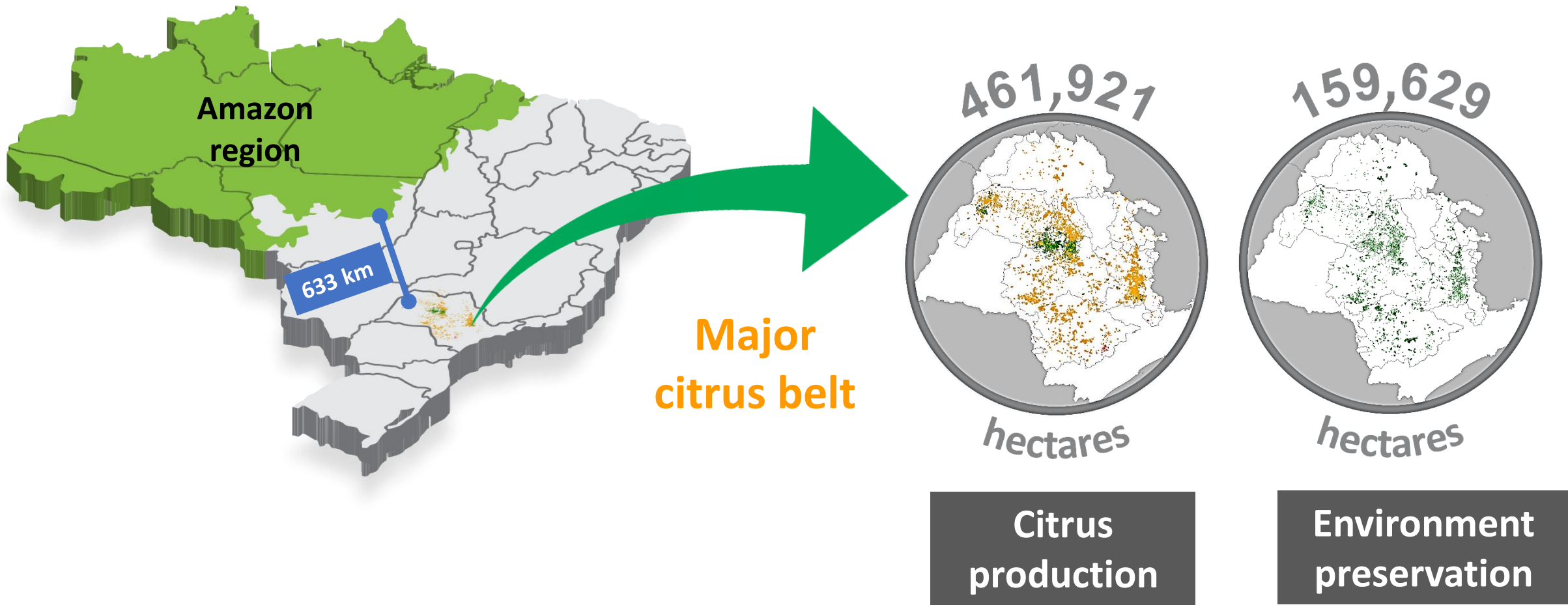
Source: IBGE, 2021.

MAJOR CITRUS BELT IN BRAZIL – SÃO PAULO STATE

World largest orange producer (~70%)



MAJOR CITRUS BELT IN BRAZIL – SÃO PAULO STATE



MAJOR CITRUS BELT IN BRAZIL – SÃO PAULO STATE

9,600 citrus farms
5,134 Oranges mainly
4,466 Other citrus



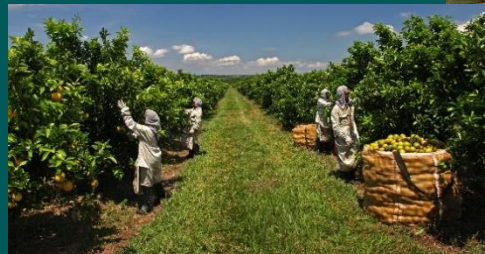
— 200,000
direct and indirect jobs

One job per 80 hectares



Orange creates 8 times more
jobs than sugarcane per
hectare

One job per 9 hectares



MAIN DISEASES AND PESTS



Greening (HLB)



Psyllid control



Leprosis



Citrus canker



Postbloom fruit drop



Fruit borer



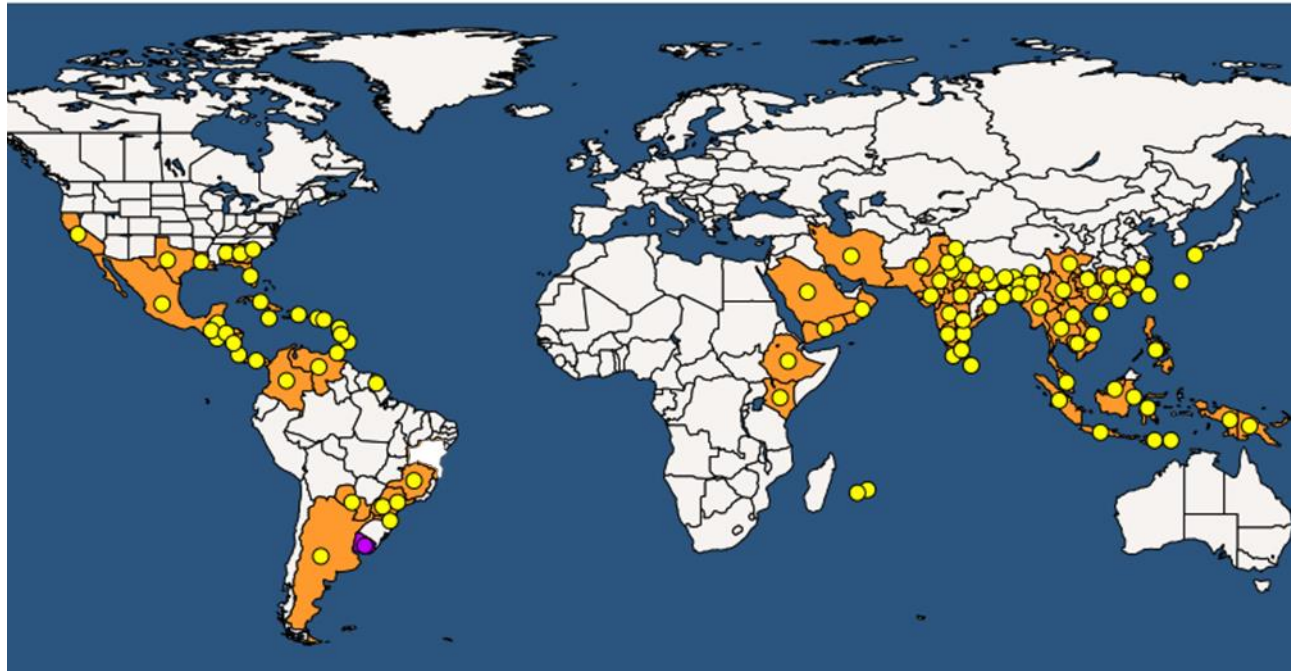
Fruit flies



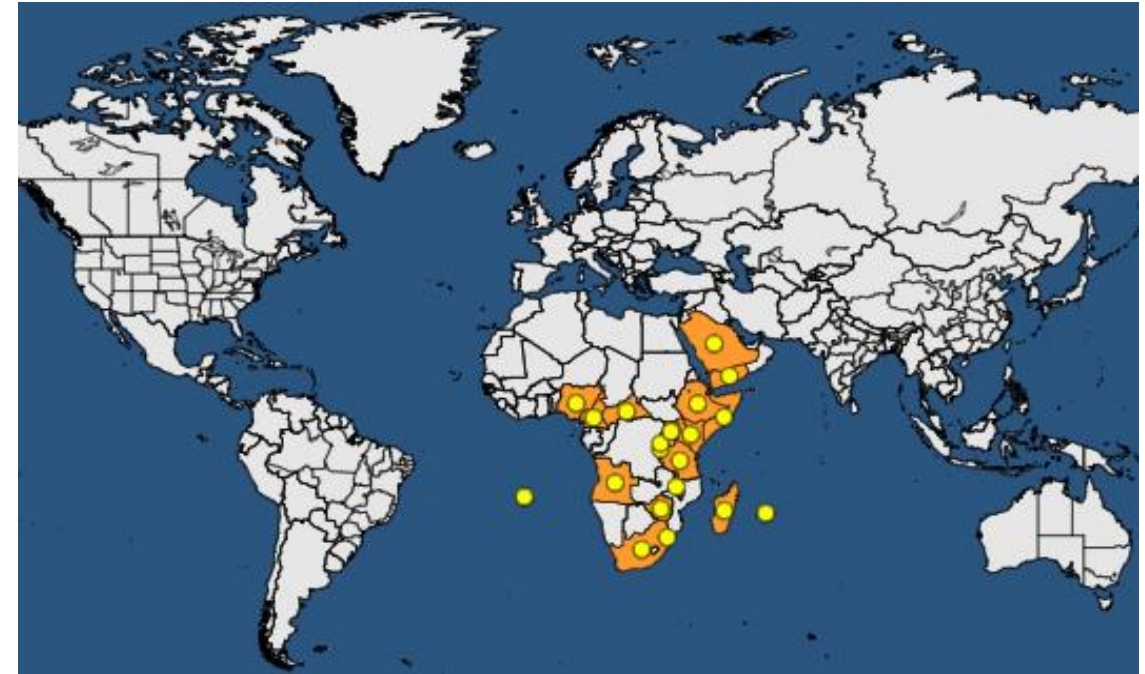
Black spot

HLB WORLD DISTRIBUTION

Candidatus Liberibacter asiaticus

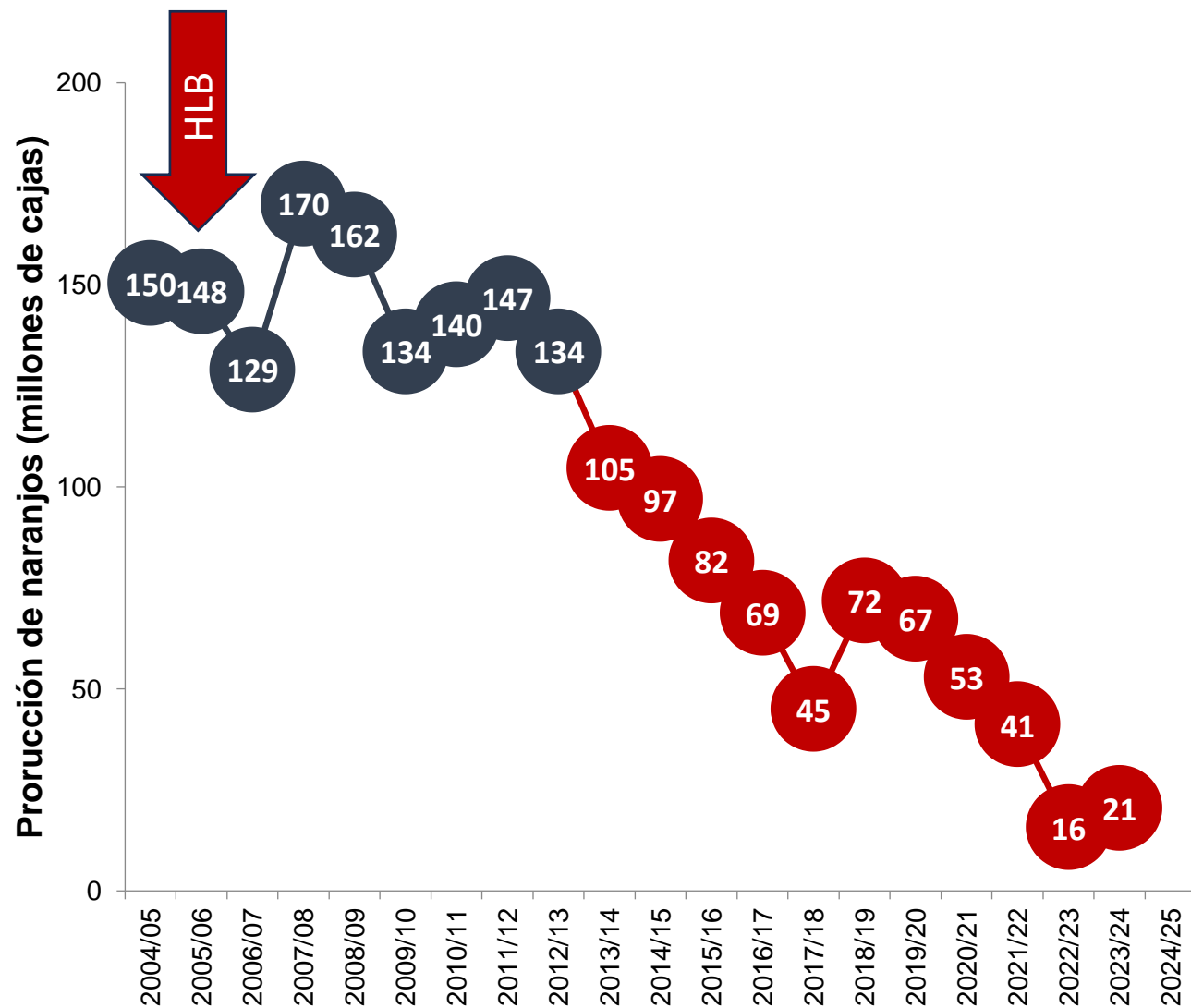


Candidatus Liberibacter africanus



Source: EPPO Global Database 2023

HLB IN FLORIDA – A DRAMATIC IMPACT

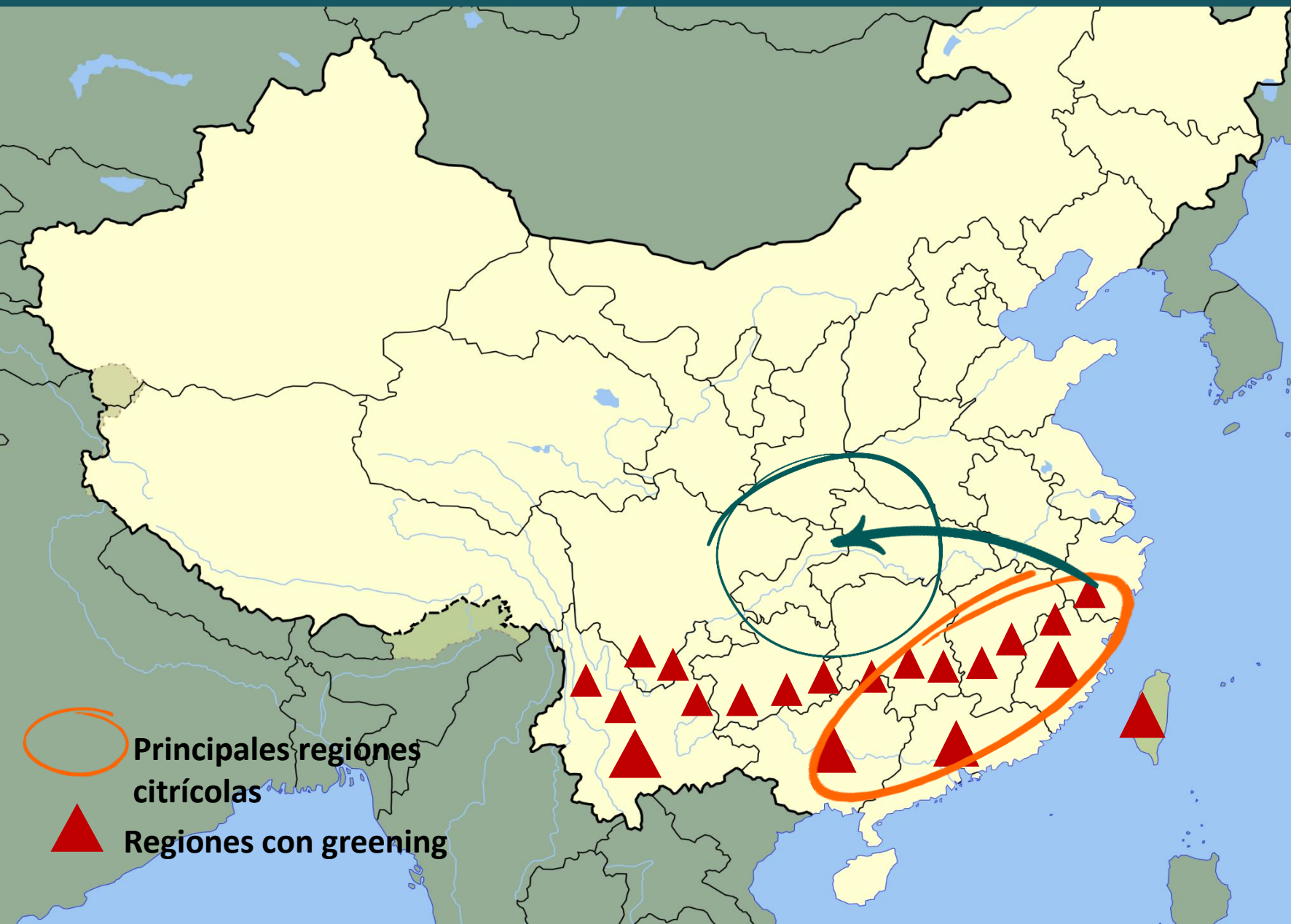


HLB IN CHINA



Suzhou, China

HLB IN CHINA



Migration to
HLB-free areas



SÃO PAULO

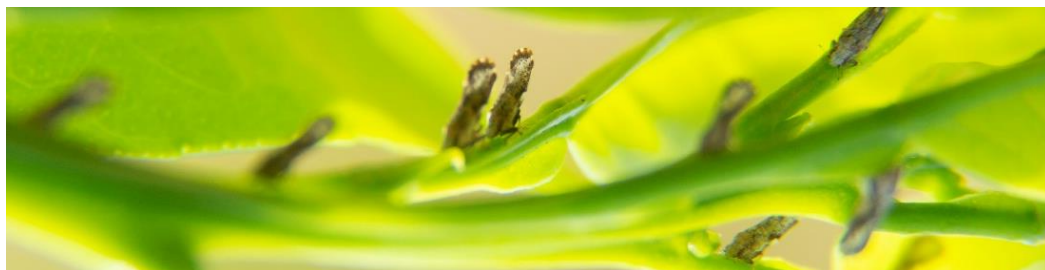
1942 - *Diaphorina citri*

2004 - *Ca. Liberibacter*
asiaticus and *Ca.*
Liberibacter americanus



HLB IN SÃO PAULO STATE - BRAZIL

77 million diseased trees

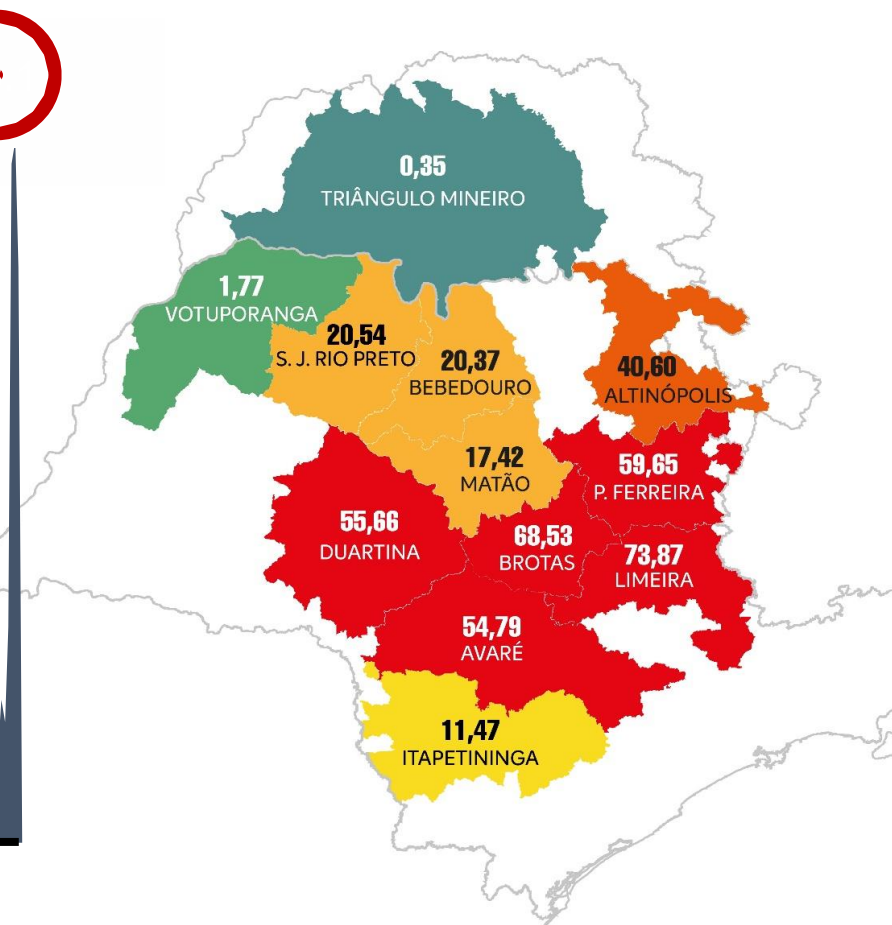


Greening first report

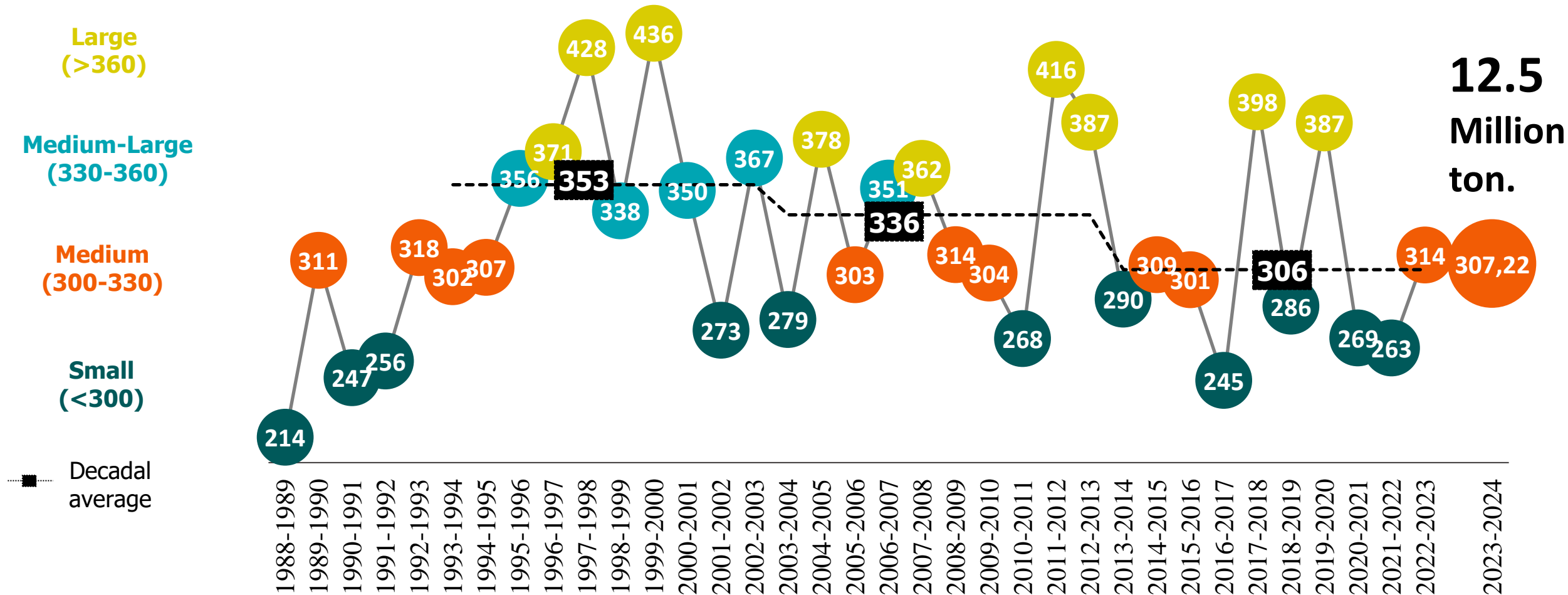
Greening
(% symptomatic trees)

Psyllid
(insects per trap)

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023



SÃO PAULO AND MINAS GERAIS CITRUS BELT ORANGE CROP PRODUCTION (40.8 kg million boxes)



COMPETITIVE ADVANTAGES OF BRAZIL

CLIMATE AND SOIL



EXPERTISE



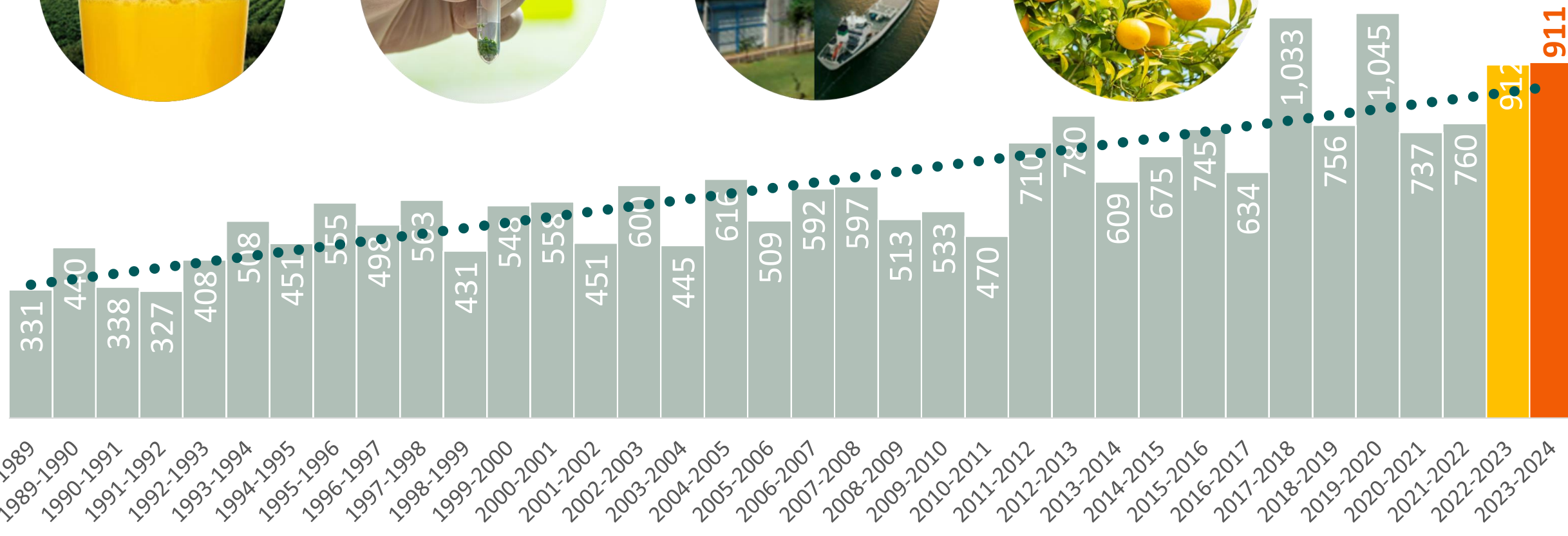
INFRASTRUCTURE



ENTREPRENEURS WITH ABILITY TO INVEST

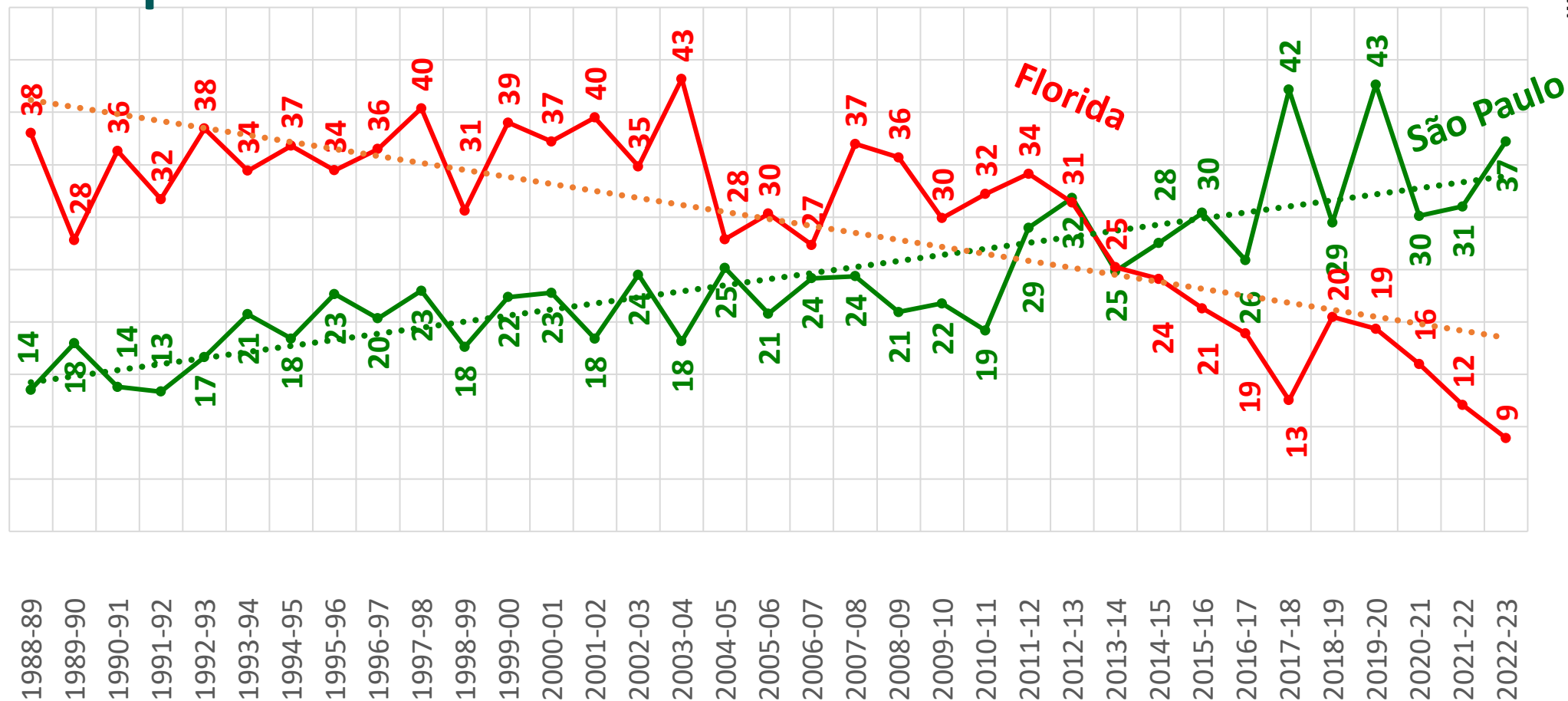


(boxes per hectare)



AVERAGE PRODUCTIVITY OF SÃO PAULO AND FLORIDA

Tons per hectare



SCREENED NURSERIES, DENSE AND IRRIGATED GROVES



SOIL AND NUTRITION



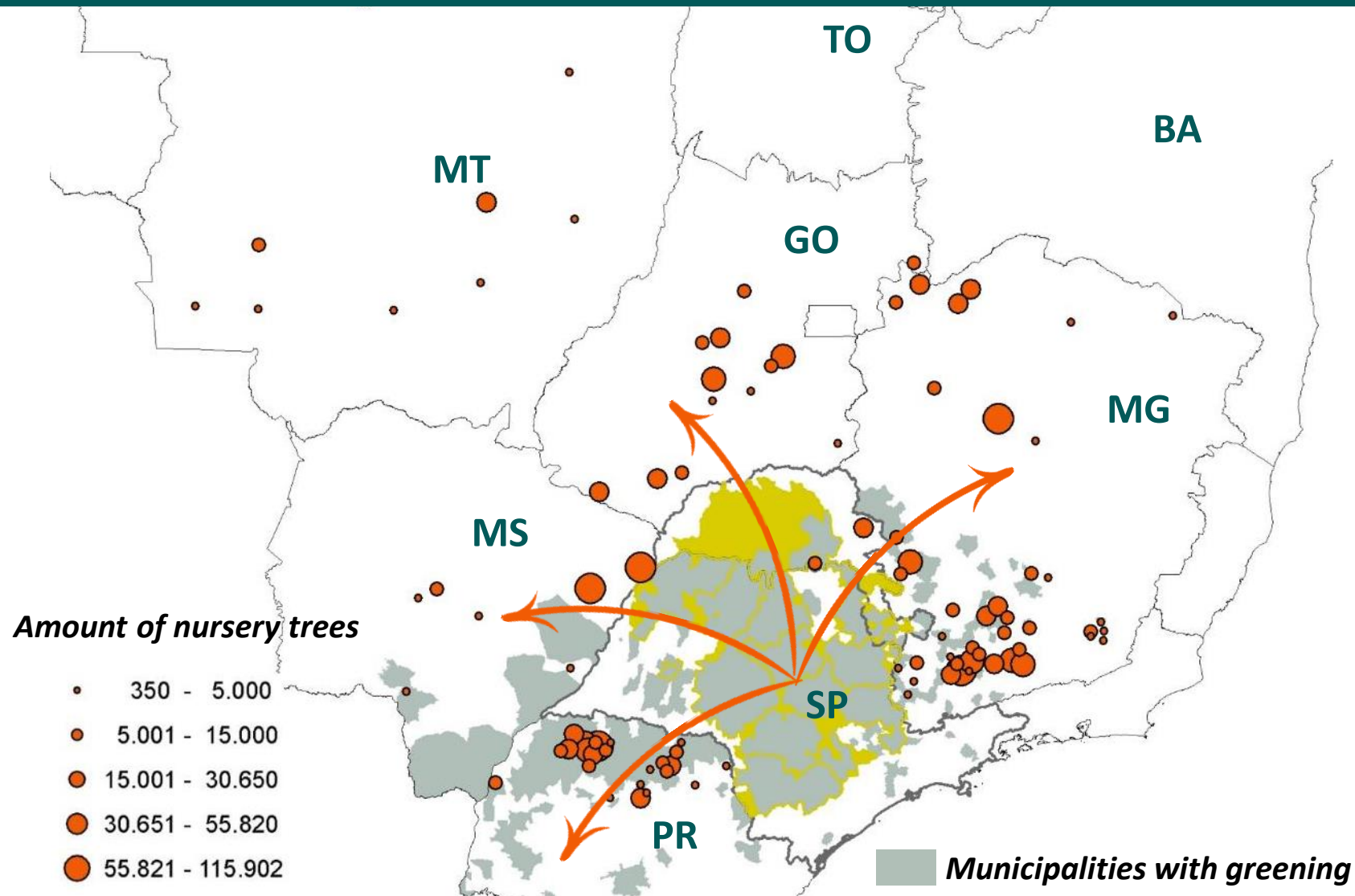
SCION-ROOTSTOCK VARIETIES, PRUNING AND PHYTOSANITARY TREATMENTS

Valencia/Cravo Rangpur lime

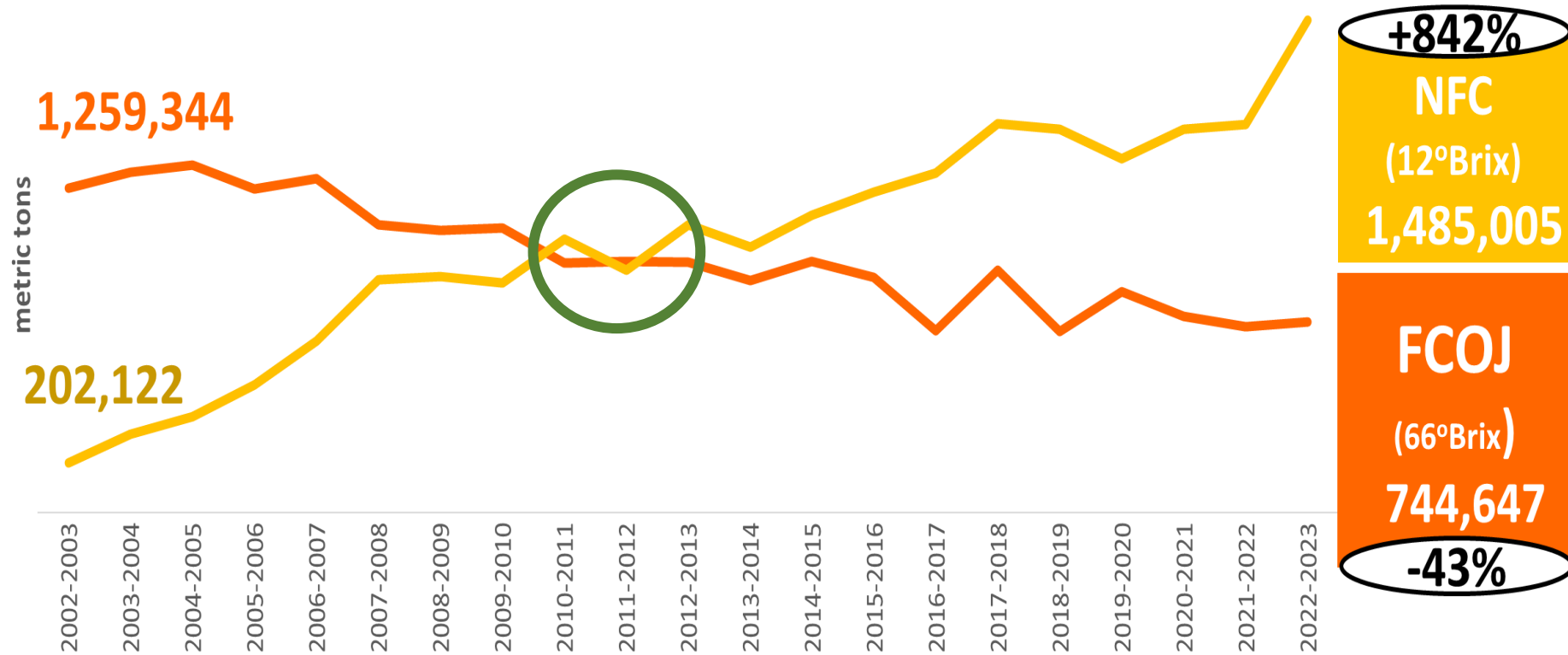
Valencia /Flying Dragon



CITRICULTURE MIGRATION



PRODUCTION OF FCOJ E NFC



CHALLENGES – LABOR FORCE

- » Limited availability of harvesters (50 a 70 thousand)
- » Costly (20 to 25% of production costs)



CHALLENGES – TREE SIZE AND MECHANIZATION



CHALLENGES – HLB RESISTANT TREE





Thank you!

JULIANO AYRES

juliano.ayres@fundecitrus.com.br

FRANKLIN BEHLAU

franklin.behlau@fundecitrus.com.br