

# SMP: Sustainable Citrus Import

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EU import of citrus endangered by the false codling moth

Strict new EU regulations cause major **chilling injury** (2022)

## The EU's new regulations for citrus exports from South Africa

South Africa has initiated a dispute at the WTO describing new EU citrus export regulations as "not based on science", lacking "technical justification" and "discriminatory".

October 7, 2022  ADAMA

SMP project to tackle these issues

Improved transport protocols / Fortifying fruits against chilling injury

Partners:

GroentenFruit Huis / (Dole (formerly) Total Produce)

Citrus Research International / WFBR



# Approach/Results

- Monthly meetings with citrus traders and importers discussing citrus transport and citrus quality experiences during the season
  - Expectations: dramatic increase in **chilling injury**, especially for organic fruit
  - Start of season not much data was available
  - During the season: **chilling injury was less of a problem** (but Citrus Black Spot was)
- Setting up transport with CRI of citrus with different types of coatings for shelf-life testing at WUR
  - **Organic Without Wax** (remarkably this was found to have less issues in a trial)
  - **Conventional with wax**
  - **Organic With wax**



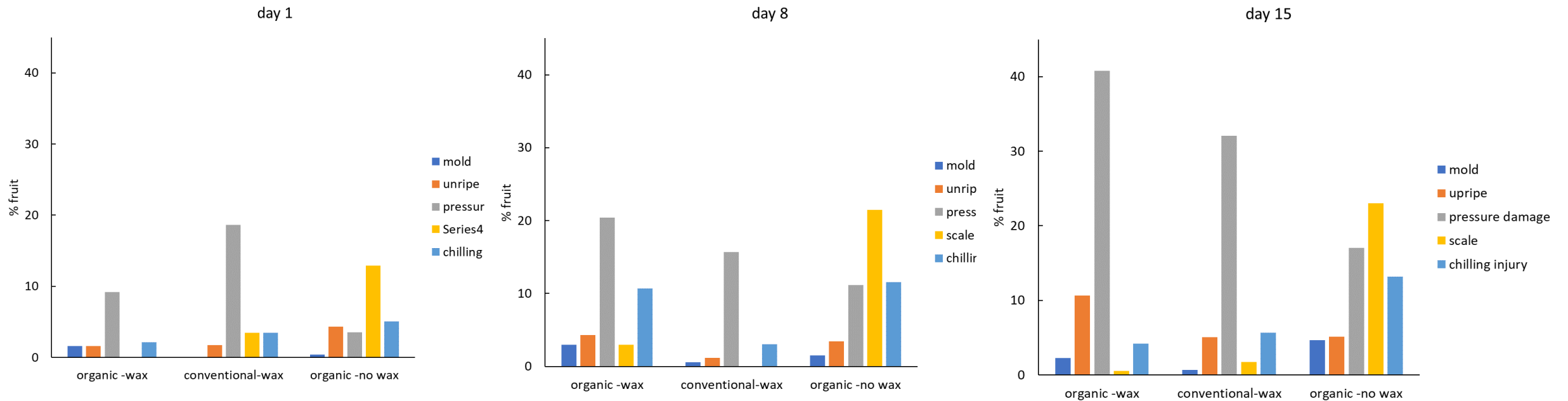
rot/mechanical chill damage

unripe

wind

scale

# Results



- Most frequent issue (& increasing over time) is pressure damage
- Scale was a major issue for organic –no wax
- Chilling injury is slowly increasing, up to 15% of the fruit

# Approach

- Round table meeting at GroentenFruit Huis
  - Good attendance, good atmosphere, open discussions
  - Discussions on trends in citrus quality
    - This year was **exceptional** (low citrus volumes, high rotation, hardly chilling injury)
    - **Many factors** might play a role (cooling rate, cooling duration RH, origin, weather) and, in fact, is a mystery to be solved
  - Research options were discussed, there is **support** for further monitoring / shelf-life testing. Also, **calls** for a research project longer than 1 year were voiced

## Deelnemers Citrus overleg 21.11.2023

Organisatie	Naam
Aartsen	Marc de Bondt
Anaco & Greeve International B.V.	Tom Kuijpers
Bakker Barendrecht	Arie van der Linden
Biotropic BV	Bren Grootenhuijs
De Groot International	Joep van Lierop
De Groot International	Thom van Erp
Dole Europe B.V.	Henk Nelisse
Eosta B.V.	
Eosta B.V.	
Eosta BV	
Jaguar the fresh company	
Karsten Eijndhoven	
OGL Quality	
Origin Fruit	
Origin Fruit	
OTC Organics	
Roveg Fruit	
Roveg Fruit	
Schrijvers	
Schrijvers	
Timerfruit	
Trofi BV	
Vrugteboer	
Zoutewell	
CRI	
CRI	Tarl Berry (online)
Wageningen Universiteit & Research	Leo Lukasse (online)
Wageningen Universiteit & Research	Andre Vink (online)
Wageningen Universiteit & Research	Rob Schouten
GroentenFruit Huis	Thijs Janssen
GroentenFruit Huis	Inge Ribbens
<b>Afmelding:</b>	
Goesten	Angelique Goesten
Jaguar the fresh company	Sven Thomas

### Agenda

- Welcome & introduction
- Export SA to EU
- Summary legislation
- Seed Money project
- Chilling injury
- Organic: specif problems
- Challenges sector
- **Research 2024?**
- 15h00 closure

# Conclusions

- SMP proposal centered around expected increase in chilling injury due to increased cold load requirements
  - Expectations were not met as (surprisingly) **less** chilling injury was found by traders
  - Shelf-life testing with citrus fruits **confirmed** that chilling injury was not a big problem
  - Round table was attended by a large group of citrus traders/importers
  - The 'round table' group is **interested** in follow up research as it was recognized this was an exceptional chilling injury year
  - (see next slide): monitoring will be continued and upgraded next year


# Research 2024-


- **Kennisvouchers** project (overwhelming support)
  - Traders provide citrus samples regularly
  - Shelf-life testing under standardized conditions @WUR
  - Also support for a **3-year chilling injury focused project**
    - large scale temperature/ RH monitoring in the chain for two South-African regions
- This could 'bridge' the time for gaining new data, and observe chilling issues in the coming year
- Follow up project (after the kennisvouchers project) could be a **PPS project**
  - Focus on finding the chilling injury **culprits**
    - packing/pre-cooling capacity/cold duration/region sensitivity/reefer transport/rind properties
- South African partners (CRI) and GroentenFruit Huis will be key and are enthusiastically onboard

## MIT: Kennisvouchers

Gepubliceerd op: 13 maart 2014 Laatst gecontroleerd op: 20 juli 2023

Bent u een mkb'er en heeft u een kennisvraag over de vernieuwing van uw producten, productieprocessen of diensten? Als een kennisinstelling de vraag gaat beantwoorden, kunt u gebruik maken van een voucher. Met deze 'waardebon' kunt u maximaal 70% van de rekening van de kennisinstelling betalen. Zo stimuleert de overheid innovatie.

 Startdatum:  
dinsdag 4 april 2023  
09:00 (CEST)

 Einddatum:  
dinsdag 31 oktober 2023  
17:00 (CET)

 Totaal budget:  
€ 2.000.000

# Feedback from applicant

Henk Nelisse (applicant from Dole Europe):

The topic “Sustainable Citrus Import” is technically a complex topic with many issues that require a search for workable solutions. The SMP has made it possible to carry out a first exploratory research to identify possible causes in the prevention of Chilling Injury, a disorder that is caused by exposure to low temperatures. The results from this initial research and the exchange of knowledge between the various partners have led to an initial insight into the nature, extent and development of the deviation that can make a major contribution to the share of food waste. The SMP has also ensured that the subject has broad support throughout the entire sectoral chain.