Citrus Growers' Association
OF SOUTHERN AFRICA

Citrus Sustainability Forum

28 February 2025

09:00 – 10:30

Forum Outline

- Welcome
  - Apologies
  - Finalization of the agenda
  - Approval of the previous minutes (06 December 2024)
- Update on the local sectorial emissions targets – Albert Coetzee
- Carbon Border Adjustment Mechanism – Albert Coetzee
- The Carbon Footprint of the Citrus Industry – Chantelle Smit (Blue North)
- Fruit Logistica and EU Green Deal feedback – Albert Coetzee
- Other matters
  - Food Safety Update
    - Pest Control Operator (PCO) Requirement
    - Mancozeb and Benomyl MRLs
  - Industry Position Papers
- Date of next meeting
- Close

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Welcome

- Apologies
  - Paul Hardman
  - Steve Turner
  - Sean Moore
- Finalization of the agenda
- Approval of the previous minutes

Link for comments and questions

https://forms.gle/SpX5uEsPZrgUkA8y9

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Introduction: Carbon Space Overview

- Carbon Footprint becoming increasingly important
  - Sectoral Emission Targets
  - Carbon Border Adjustment Mechanism
  - Private requirements

  - What are the values, and why are they important?

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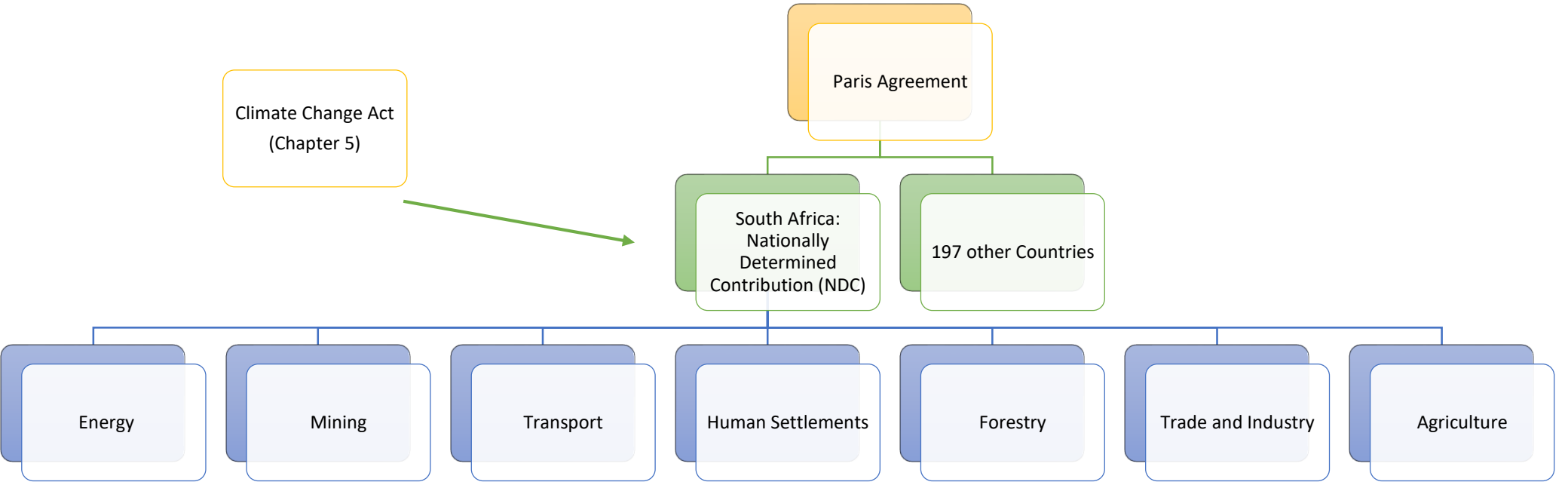
Update on Sectoral Emission Targets

What is Sectoral Emission Targets?



- Increasing Targets (declining allocations)
- Certain businesses may be subject to carbon budgets

What was proposed?

- Agriculture accounts for 11% of South African emissions
- Agriculture: 68% enteric fermentation from livestock

- IPCC 2006 Guidelines

Table S.0-2 Summary table of quantifiable SETs by policy sector

Policy Sector	Target type	Unit	2025	2030	Cumulative (2025-2030) - SET Allocation
DMRE - Electricity	Emission level	MtCO2eq	177.3	124.7	
DMRE - Other	Emission Reductions	MtCO2eq	3.7	11.5	47.9
DALRRD	Emission Reductions	MtCO2eq	0.7	0.6	3.4
DWS	Emission Reductions	MtCO2eq		0.1	0.1
DFFE	Emission Reductions	MtCO2eq	7.0	15.2	76.5
DoT	Emission Reductions	MtCO2eq	0.2	4.5	18.0

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The Process followed

- Agbiz coordinated an effort with DoA
- An extension was granted to evaluate the available information
  - Recognition of Stakeholder Collaboration for practical, science-based solutions
    - Closing data gaps
    - Enhancing research accuracy
  - Principles
  - Working Groups created to evaluate
    - Scientific aspects
    - Policies and Measures (how to change behaviour)
- Currently: Evaluation of available information

The way forward: Process and timelines

- Completing evaluation of available information
- Identify research gaps
- Implement research projects to bridge the data gaps
- Submit proposals to DoA

- Timeline: End of 2025: SETS to be allocated

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Carbon Border Adjustment Mechanism

Update on Carbon Border Adjustment Mechanism

- CBAM is not a Country-Country arrangement
  - EU imported goods regulation

Phase	Timeline	Industries Impacted	Expectation
Transitional	2023 – end of 2025	Cement, iron and steel, aluminium, fertilisers, electricity and hydrogen	Data collection/Reporting
Definitive: Free Allocations	2026 - 2034	Cement, iron and steel, aluminium, fertilisers, electricity and hydrogen	Financial Transaction, gradual phase-out of free allowances
Definitive: No allocations	2034 -	Cement, iron and steel, aluminium, fertilisers, electricity and hydrogen +	Financial transaction, no free allowances

- 50 tons per importer: Threshold exemption

Update on Carbon Border Adjustment Mechanism - Agriculture

- Agriculture – possible inclusion is vague
  - Certain Member States have called for Agricultural inclusion
  - Cost of importing fertiliser will put EU farmers at disadvantage

  - EU Chamber of Commerce and Industry in Southern Africa
    - Head of Unit for CBAM, Energy and Green Taxation, European Union

“Will not include sectors that is not trading on the ETS”

    - Regulation allows for additional inclusions of intensive products

CBAM: What could the impact be?

- Assumptions
  - Carbon values based on CCC Footprint
  - Packed Fruit – **Produced and packed**, but not cooled
  - Only fruit to the **EU**
  - **15kg** equivalents
  - Emission Trading Scheme (ETS) value of **€82/ton***
  - South African value of **R236**

CBAM: What could the implications be?

Soft Citrus	
Carbon Emission per kg	**0,58**
Carbon emission per kg: Production	0,24
Carbon emissions per kg: Packing	0,13
Carbon emissions per kg: Cooling	0,21
Carbon Emissions (kg) per 15kg carton	**8,70**
Carbon Tax (Emission Trading Scheme)(Euro/ton)	82,0
Exchange Rate	19,3
Carbon Tax (Emission Trading Scheme)(Rand/ton)	1 578,5
Carbon Tax (South Africa)(R/ton)	236,0
Difference to be applied (R/ton)	1 342,5
Difference to be applied (R/kg)	1,34
Cost per carton	**11,68**
Cartons produced	**14 502 781**
Effect on Industry	**169 388 856**

Hard Citrus	
Carbon Emission per kg	**0,52**
Carbon emission per kg: Primary	0,19
Carbon emissions per kg: Secondary	0,11
Carbon emissions per kg: Cooling	0,22
Carbon Emissions(kg) per 15kg carton	**7,8**
Carbon Tax (Emission Trading Scheme)(Euro/ton)	82
Exchange Rate	19,25
Carbon Tax (Emission Trading Scheme)(Rand/ton)	1578,5
Carbon Tax (South Africa)(R/ton)	236
Difference to be applied (R/ton)	1342,5
Difference to be applied (R/kg)	1,34
Cost per carton	**10,47**
Cartons produced	**47 006 024**
Effect on Industry	**492 223 580**

R661 612 436

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THE CARBON JOURNEY OF SOUTH AFRICA'S CITRUS INDUSTRY

Delivered by Blue North

BLUE NORTH

THINKING. FUTURE

Agenda

Understanding the Carbon Emissions for Citrus in South Africa

CCC Benchmark Report 2024 results

What is next?

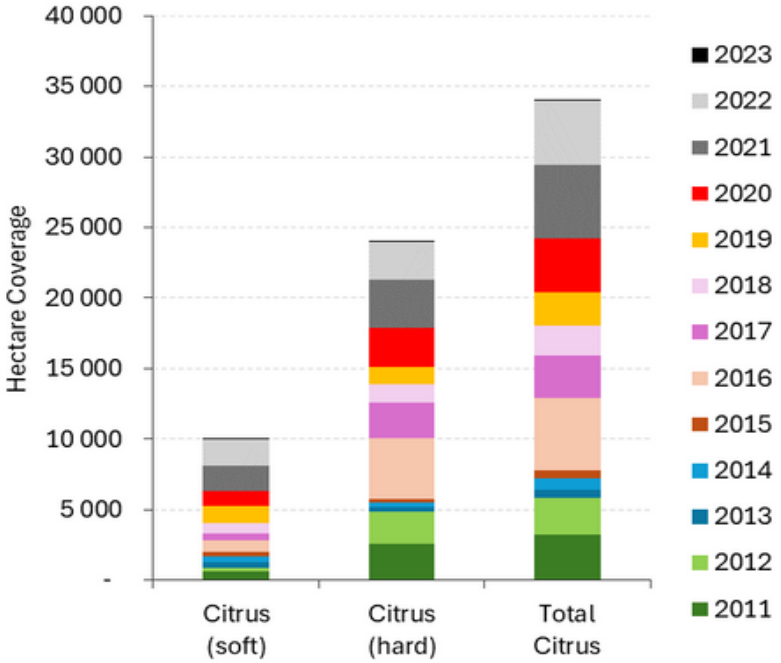
Carbon reductions

Hotspots

Understanding the Carbon Emissions for Citrus in South Africa

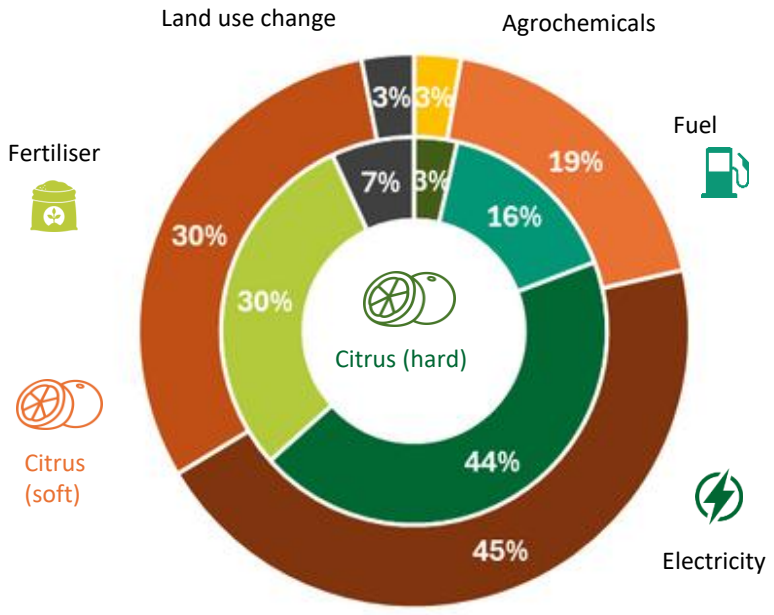
CCC Coverage

From 2011 to 2023 the CCC database (including graded + ungraded data) has grown to cover **33 909** unique hectares of citrus farms in South Africa. This represents 34% of the citrus industry in the country.



Farms - Hotspots

In farm emissions, **electricity** surpasses all other contributors, with **nitrogen (N) fertiliser** and diesel fuel following closely behind.



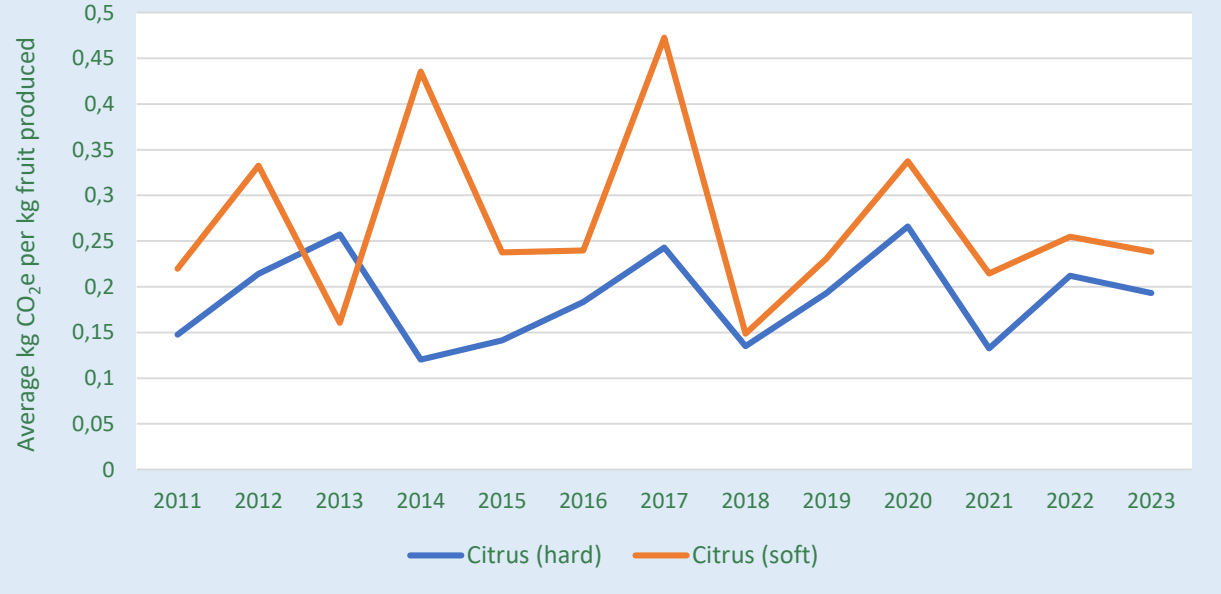
Farms – product carbon footprint (PCF)

Average from cumulative data over 12 years:

Citrus (hard): 0.19 kg CO_2e/kg fruit

Citrus (soft): 0.24 kg CO_2e/kg fruit

Average kg CO_2e per kg fruit over the years



Farms – consumption benchmarks

Average from cumulative data over 12 years:

Electricity: (kWh/bearing ha)

Citrus (hard): 2 807

Citrus (soft): 2 880

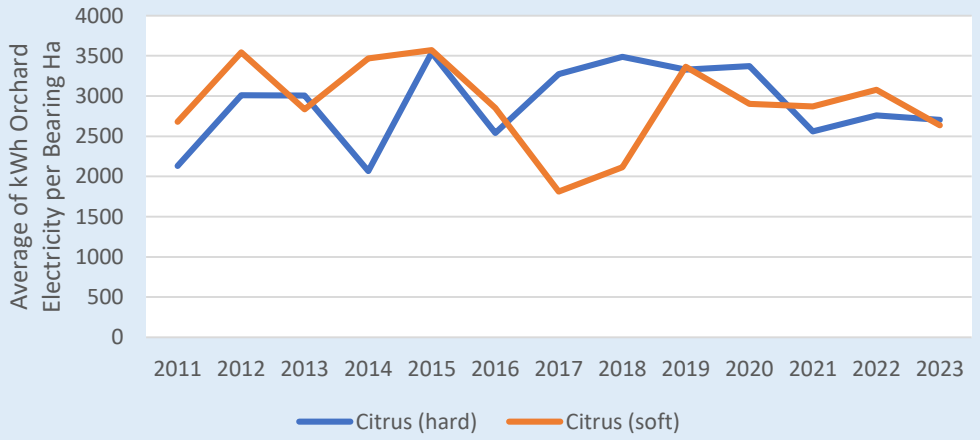
Average from cumulative data over 12 years:

N fertiliser: (kg/bearing ha)

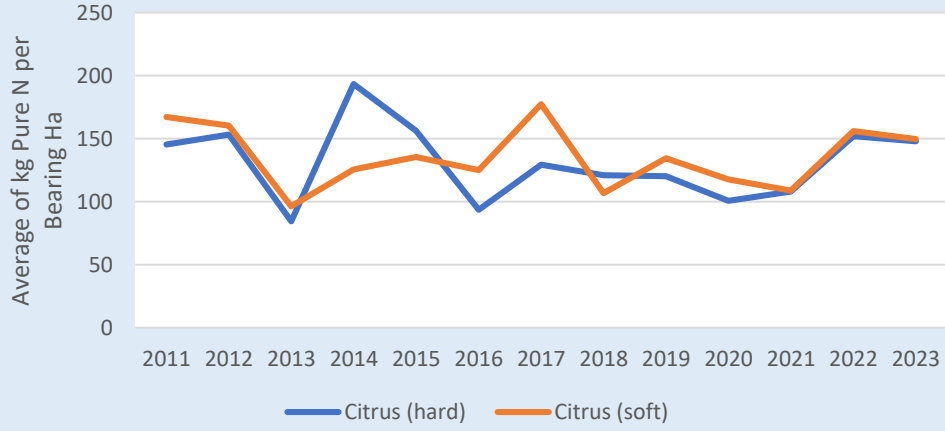
Citrus (hard): 130

Citrus (soft): 124

Average kWh Orchard electricity usage per bearing Ha over the years

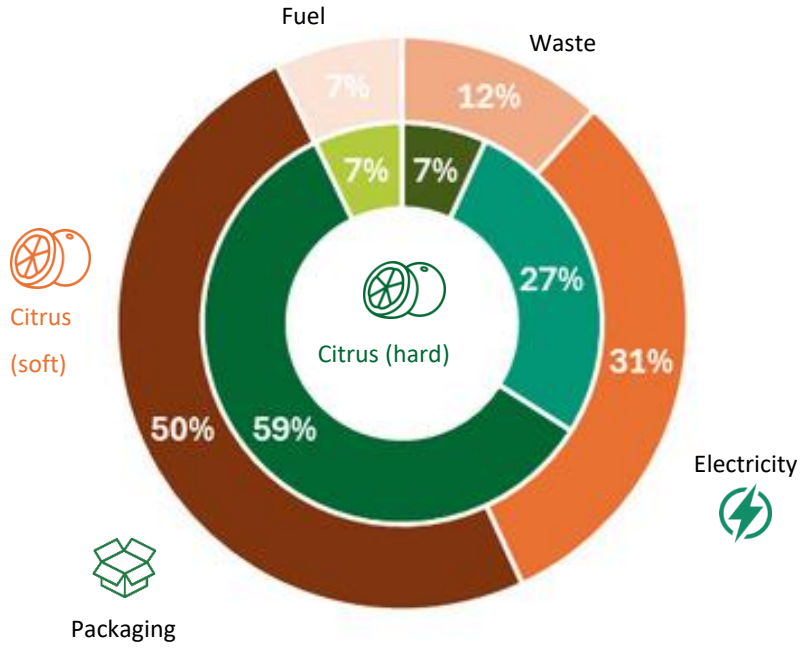


Average Synthetic N usage per bearing Ha over the years



Packhouses - Hotspots

Packaging is the largest contributor to packhouse CO_2e emissions.



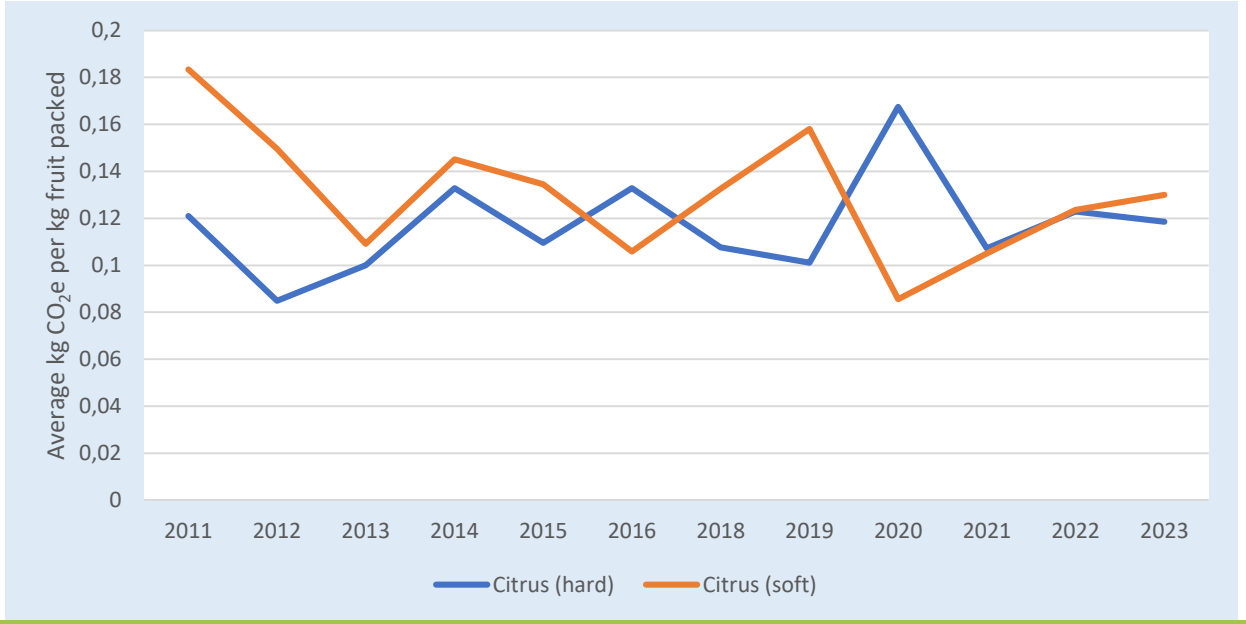
Packhouses – product carbon footprint (PCF)

Average from cumulative data over 12 years:

Citrus (hard): 0.11 kg CO_2e/kg fruit

Citrus (soft): 0.13 kg CO_2e/kg fruit

Average kg CO_2e per kg fruit over the years



Packhouses – consumption benchmarks

Average from cumulative data over 12 years:

Electricity:

Citrus (hard): 27 kWh/ton fruit

Citrus (soft): 34 kWh/ton fruit

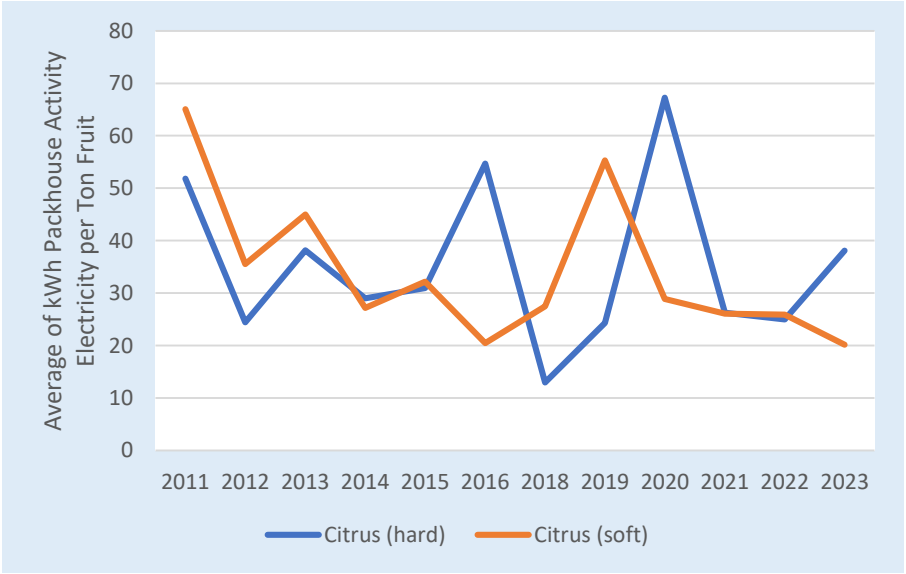
Average from cumulative data over 12 years:

Packaging:

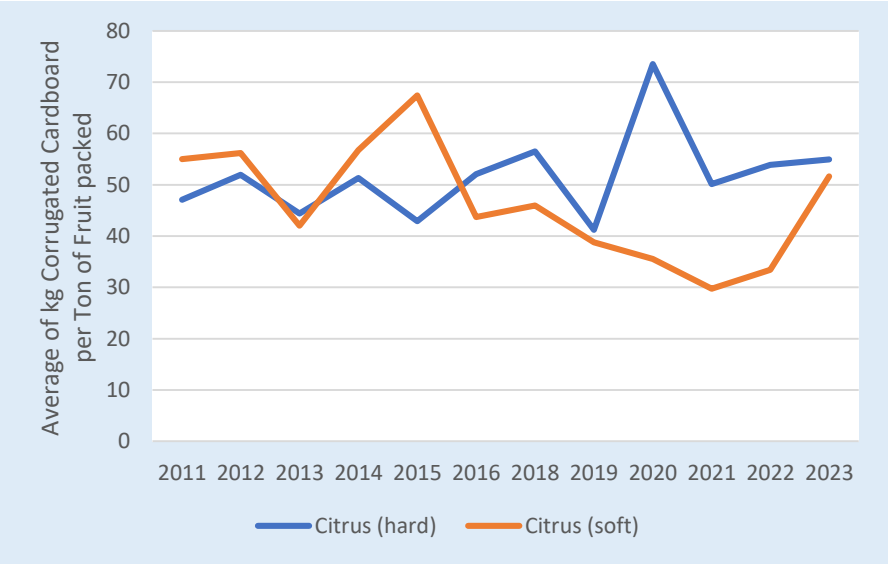
Citrus (hard): 53 kg corrugated cardboard/ton fruit

Citrus (soft): 43 kg corrugated cardboard/ton fruit

Average kWh packhouse activity electricity usage per ton fruit packed over the years

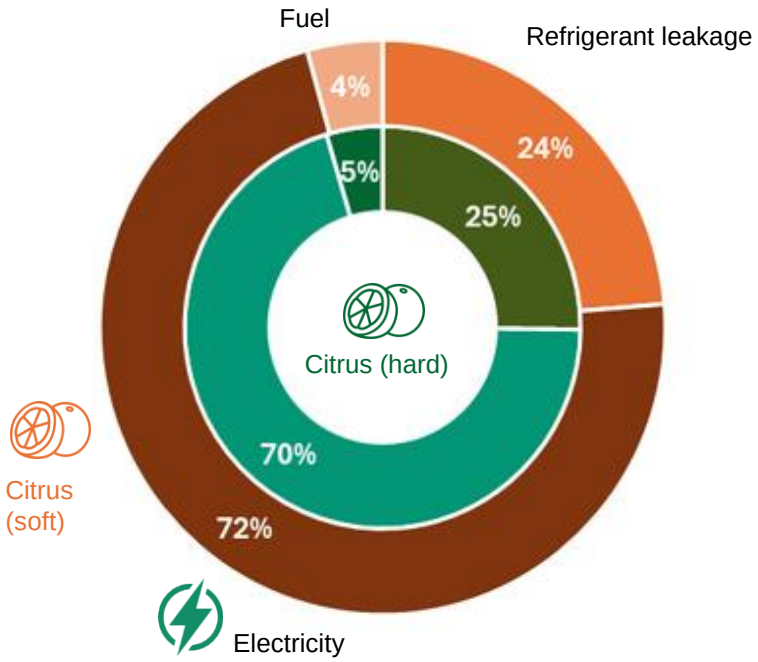


Average of kg corrugated cardboard per ton of fruit packed over the years



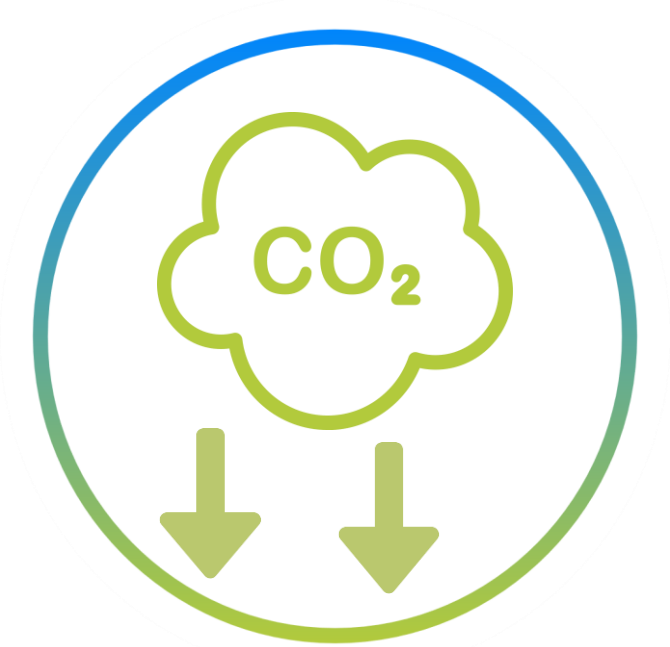
Cold stores

Electricity is the highest contributor to cold store CO_2e emissions, followed by refrigerant leakage.

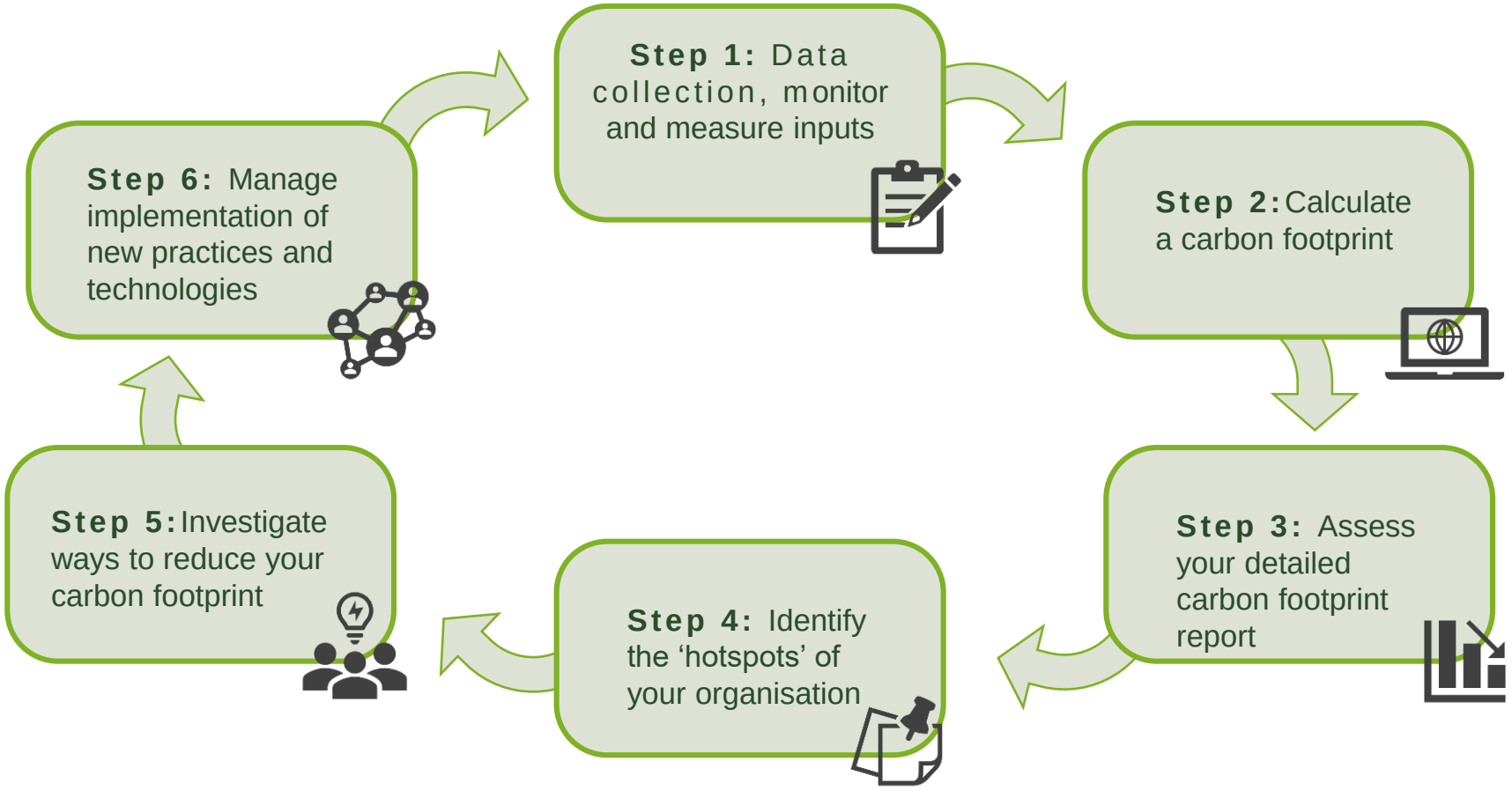


Each kg of refrigerant that leaks has the same global warming impact as thousands of kgs of CO_2. Frequent topping up of refrigerants could indicate the need for maintenance.

Carbon Reductions



Measuring and reducing carbon emissions



Reduction action options to consider

To address synthetic N emissions:

Tip: Substitute carbon-intensive forms of N like synthetic fertiliser with low emission sources such as compost, manure, and legume cash crops that fix nitrogen on-site.

To address electricity emissions:

Tip: Improving energy efficiency and/or switching to renewable energy has the biggest potential to reduce emissions.

To address packaging emissions:

Tip: Investigate packaging materials with a higher recycled content.

To address refrigerant emissions:

Tip: When a refill is needed, consider switching to refrigerants with a lower global warming impact like ammonia and be aware of refrigerants that will eventually be phased out, like HCFC - 22/R - 22.

Key Messages

- Hotspots are **electricity, fertiliser and packaging**
- Start with your **hotspots**, targeting these will result in the **biggest impact**
- Measurement step is **first** and **most important step**
- Use the information gathered from measuring to **inform reduction actions**
- Targeting **efficiencies** in resource use is a good start, as it usually leads to **cost savings**
- Carbon reduction is **a long-term strategy** that could require significant **structural changes**, **investment**, and **new technologies**
- Continue **monitoring** to test the success of any changes made

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Fruit Logistica Feedback

Update on the EU Green Deal

Evolution of EU Green Deal and Fruit Logistica Feedback

- Trade: Protecting farmers from unfair trading practices
- Active Substances and MRL's:
  - Strong views on Import Tolerances
  - Increasing temperatures leading to a shift in the life-cycles of pests
    - Fast tracking of biopesticides
- Compliance: Resistance to proliferation and multiplication of certifications
- Packaging: Labels compostability, recycled content, minimise packaging

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Other Matters: Industry Position Papers

- Aimed at retailer sustainability and food safety requirements, respectively.

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Other Matters: Pest Control Operator Regulations

- Pest Control Regulations of 2011
- Restricted remedies defined in 2023
- Grower Associations were given until end September 2023 to submit comments via Crop Life SA – grace period was not granted.
- Labels and SDSs amended October 2024
  - Communicated at CSF
- List of restricted remedies published December 2024
- Communicated at nationwide CRI post-harvest workshops
- Cutting Edge No 410
- New developments
  - Nation-wide dispensation application
  - Clarification of interpretation of the PCO regulations

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Other Matters: Mancozeb and Benomyl EU MRLs

- Benomyl (Carbendazim)
  - Will be phased out under Act 36 (end May 2025).
  - Current EU MRL: 0.2 ppm for oranges and grapefruit, 0.7 ppm for lemons, limes and mandarins
  - Newly proposed MRL (will likely apply in Europe by September/October 2025): 0.01 ppm for oranges, grapefruit and mandarins. NO PROPOSAL FOR LEMONS yet.
- Mancozeb
  - Reclassification is underway under Act 36.
  - Current EU MRL: 5.0 ppm for all citrus types will likely only change in Q1 of 2026.

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Date of next meeting and close

- 9 May 2025

Thank you!

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