

An aerial photograph of a lush green landscape. In the foreground, there are several large, rectangular plots of land, some of which appear to be planted with crops like corn or soybeans. The plots are separated by rows of trees and hedges. In the middle ground, there are more green fields and a small cluster of buildings. In the background, a blue body of water (the sea) stretches across the horizon under a clear blue sky. The overall scene is vibrant and healthy.

‘Toitū Te Whenua, Toitū Te Moana,  
Toitū Te Tangata

If the land is well, and the sea is well,  
the people will thrive

Si la tierra está sana y el mar está sano,  
la gente prosperará



**Better avocados for a  
better world.**

# SUSTAINABILITY

Meeting the needs of current and future generations



## ECONOMIC

Optimising grower profitability  
and long term resilience



## SOCIAL

Supporting safe and healthy  
communities with workplaces  
and practices that promote  
wellbeing



## ENVIRONMENTAL

Protecting our natural  
resources, ecosystems  
and cultural values

# Supporting and enhancing communities

- Supporting a **diverse and inclusive workforce**
- Creating workplaces and work practices that **promote wellbeing**
- Creating jobs and **career opportunities** across the sector
- Generating income to **support local businesses**
- Promoting **safe workplaces** with strict health and safety practices



# Drivers for change



scientific knowledge



innovation



social norms and values



Consumer

- limited knowledge of environmental impacts of food production
- niche group is willing to pay a premium for sustainability claims



Sector and business leaders

- cost of entry vs point of difference
- demand for ethical food production on the rise



Governments (and investors)

- increasing demand for transparency - License to operate
- reporting on greenhouse gas emissions
- Labeling in trade



Growers and supply chain partners

- increased compliance driven by sustainability-related accountability
- Assurance programmes extending to environment and social

# Environmental performance of New Zealand avocados

- The New Zealand avocado industry has completed a Life Cycle Assessment (LCA)
- An evidence based account of a product's environmental footprint
- A first of its kind study for our local industry and an example of using science-based research to guide our work





# LCA focus areas

Stakeholder engagement revealed the most important environmental sustainability topics for our industry...



## Carbon footprint

Measure: **Climate change**  
– the impact of greenhouse gases emitted



## Nutrient losses to waterways

Measure: **Eutrophication**  
– the impact of plant and algae growth in waterways



## Water footprint

Measure: **Water use**  
– the impact of the water we use



## Toxic losses to the environment

Measure: **Ecotoxicity (freshwater, land)**  
– pollution of waterways and land when gases, liquids, and particles are emitted

# LCA results

**National results:** The national score is a weighted average of regional results (based on production volumes) for 1 kg of avocados.

- Production (mature orchards)
- Packaging and processing
- Distribution



**Carbon footprint**

0.7 kg CO<sub>2</sub> equivalent



**Nutrient losses to waterways**

0.004 kg phosphate equivalent



**Water footprint**

0.54 m<sup>3</sup> world equivalent



**Toxic losses to the environment freshwater**

7,837.8 CTUe



**Toxic losses to the environment land**

6.02 kg 1,4-DB equivalent



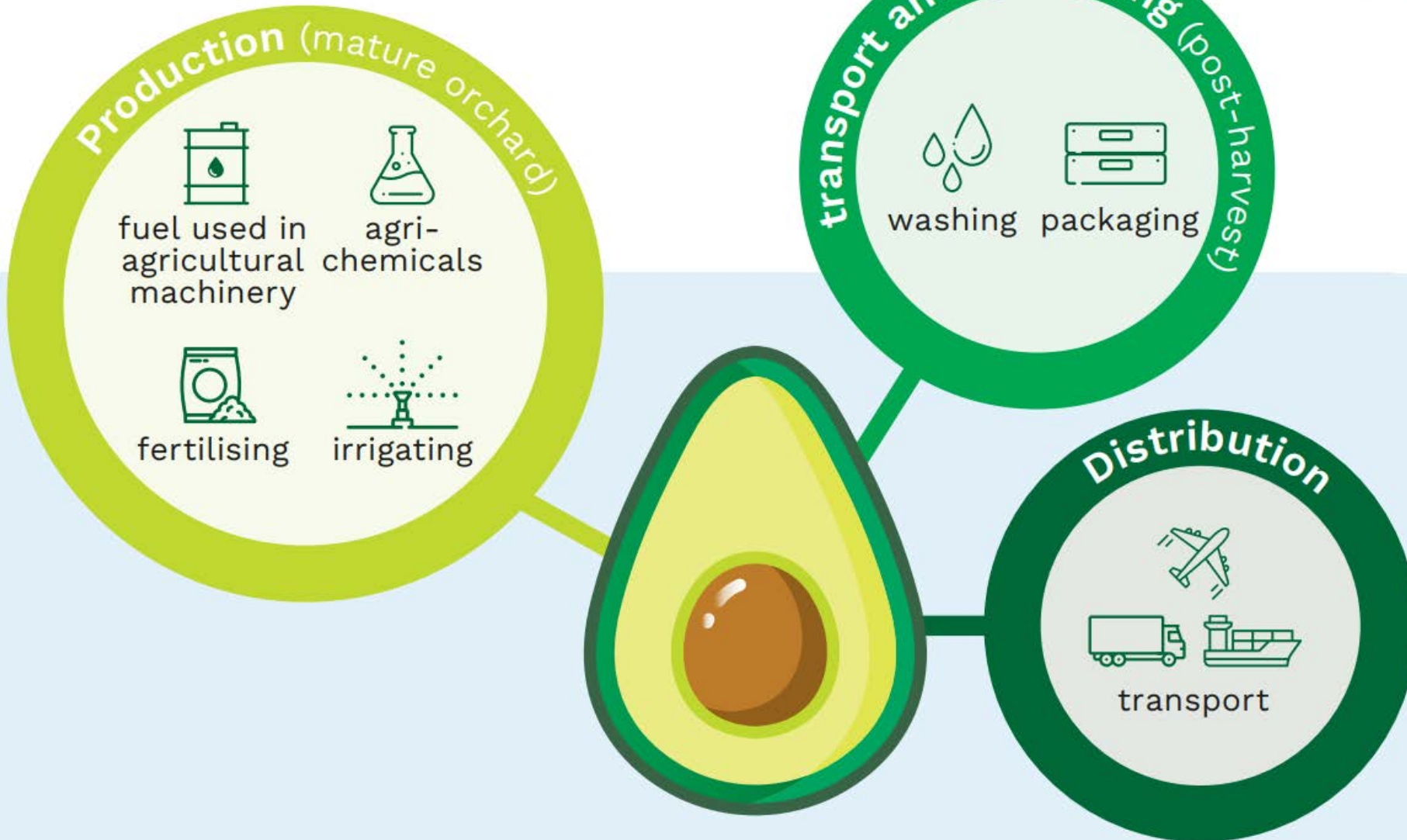


# Key learnings



New Zealand  
**Avocado**

NZ Avocado Growers' Association Inc.  
NZ Avocado Industry Ltd



**Productivity and sustainability go hand in hand**

The higher the yield per hectare, the lower the climate change effect



Improved environmental performance

A world map with a light green tint, overlaid with a network of thin, light blue lines representing shipping routes. The lines are most dense in the North Atlantic, Indian Ocean, and around the Mediterranean and Red Sea.

Shipping is responsible  
for 3% of global emissions

The International Maritime Organisation has adopted two important emission-reducing measures effective from 2023

**Energy Efficiency Existing Ship Index (EEXI)** requiring existing ships to attain a minimum energy efficiency standard

**Carbon Intensity Indicator (CII)** a rating system to determine the operational energy efficiency performance of vessels

*\* According to the International Maritime Organisation (IMO)*

# Looking ahead



## We will use these insights to improve our industry's environmental and business performance

- Guide the industry to use water as efficiently and responsibly as possible
- Better understand fertiliser loss from our orchards to optimise it's use
- Explore alternative production systems to reduce resource use and operate as efficiently as possible
- Research alternative options to manage pests and diseases
- Collect further environmental data and report on sustainability progress
- Advocate with regulators for science-based policy

Work alongside our supply chain partners to educate consumers

