

# ADAPTING TO *Thrive*

## CLIMATE CHANGE ADAPTATION PLAN

### FOR ZESPRI AND THE KIWIFRUIT INDUSTRY

**Climate change is already affecting the kiwifruit industry. Our Climate Change Adaptation Plan will support the industry to thrive in a rapidly changing climate. This is a summary of that plan.**

Adaptation refers to the actions taken to address the physical and transitional risks that climate change may cause.

The Climate Change Adaptation Plan was developed in consultation with growers and industry. By working together on a coordinated industry response, we can target the actions that matter most — allowing us all to thrive as the climate continues to change.

## *Why* IT MATTERS

**New Zealand's weather patterns** are changing. Growers are adjusting to warmer autumn and winter conditions, more frequent extreme weather events and changes to rainfall patterns. For example, in the Bay of Plenty, growers are experiencing longer periods without rain, which can later be followed by significant rainfall events.

In addition, the kiwifruit industry has experienced severe weather events in recent years. In 2020, a hail event in the Tasman region cost the industry \$45 million, including losses to Orchard Gate Returns, fruit sales and insurance costs. In 2022, a flooding event in the North Island cost the New Zealand economy \$80 million, and caused significant flooding, damage and delay to harvest in kiwifruit orchards in Tairāwhiti, Gisborne. The social cost of these events can be significant for growers and their wider communities, and the effects are often felt long after the initial weather event.

#### **What does this mean for kiwifruit growing?**

Climate change will bring both challenges and opportunities for growers, depending on their location. A recent assessment was conducted to assess the land and climate suitability of different regions in New Zealand for growing kiwifruit and

other crops under different climate change scenarios<sup>1</sup>. These assessments suggest the following outcomes may occur, if average temperature increases are limited to 2°C:

- The central and lower North Island and the South Island could see improvements in suitability.
- Reductions in suitability could arise for many parts of the upper North Island and around the East Cape. A small reduction in the Bay of Plenty is also possible.

**Market and regulatory risks** are expected to increase, as governments and consumers take action to reduce emissions. It's important for the kiwifruit industry to keep pace with these so that it can meet market access requirements, stay relevant for its customers and hold value. Acting on climate change for customers isn't just about managing risk — it's also an opportunity. Research conducted by Kantar for Zespri in 2021 estimated a market opportunity of ~US\$1.9 billion if we are able to respond to the consumers that care about climate performance.

A full assessment of climate change impacts on the kiwifruit industry is provided in Zespri's Climate Change Risks and Opportunities report, available on the Zespri website.<sup>2</sup>

<sup>1</sup> Fact Sheet – Climate Change impacts on kiwifruit (2021), MOTU and Plant & Food Research <https://www.plantandfood.com/en-nz/article/climate-change-impacts-on-kiwifruit>

<sup>2</sup> [www.zespri.com/en-NZ/Sustainability-Our-Environment](http://www.zespri.com/en-NZ/Sustainability-Our-Environment)

# Actions WE'LL TAKE

The Climate Change Adaptation Plan sets three goals and also recognises that strong foundations are needed to support its delivery. The plan commits to 41 key actions the industry will take in the next three years to continue to respond to climate change.



## GOAL 1: FUTURE-PROOF GROWING AND BREEDING

This goal is about making sure the way we grow, and types of kiwifruit we grow, will be productive in future growing climates. Much of this work is already being done across the industry, but we want to be deliberate about preparing for future climates.

Actions	Timeframe
1. Review grower resources through a climate change lens.	2023
2. Summarise relevant research on Mātauranga Māori (traditional knowledge).	2023
3. Support Māori growers to learn from each other in a te ao Māori context.	Ongoing
4. In the context of Mātauranga Māori, identify what Māori growers want to know, and develop projects to support learning in these areas.	Ongoing
5. Continue to invest in extension services to support growers to adapt to the changing climate.	Ongoing
6. Continue to invest in systems and technologies to help growers manage risks of new pests and diseases.	Ongoing
7. Share learnings between New Zealand and offshore growing regions.	Ongoing
8. Review the criteria for new fruiting and rootstock cultivars to reflect updated climate risks (every three years).	2023 onwards
9. Ensure innovations in growing systems enable mitigation of climate change risks.	Ongoing
10. Develop a three-year climate change research and innovation plan.	2023
11. Assess climate change risks and validate solutions to increase industry resilience.	Ongoing
12. Invest in understanding the climate-related benefits of future production systems.	Ongoing



## GOAL 2: MAINTAIN FRUIT QUALITY AND MANAGE SUPPLY

Kiwifruit crops develop and mature in response to distinct climatic conditions that happen throughout a season, affecting the timing of on-orchard tasks. Some of these conditions may change over time as a result of climate change. This goal is about investing in research, technology and systems to better understand the impact of the changing climate on fruit production, maturity, quality, storage and supply, and translating that so that the industry can prepare and respond.

Actions	Timeframe
13. Consider the contribution of climate variables in fruit quality issues, as part of the industry's Quality Review.	2023
14. Consider the contribution of climate variables to fruit quality as part of annual season reviews.	2023 onwards
15. Investigate how changes to key climate variables could impact the timing of the season.	2024
16. Review the climate-related assessment criteria for offshore partner/grower selection process.	2023
17. Review the climate-related site selection criteria for the assessment of new offshore growing regions.	2023
18. Include climate considerations as part of Zespri's five-year planning process.	2023 onwards



## GOAL 3: PROTECT INDUSTRY PROFITABILITY

Over time, we may see more challenging growing conditions and increased market and regulatory costs, which could affect the industry's overall productivity and profitability. Our goal is to better understand what these changes might look like, which is the first step to being able to prepare and respond to them.

Actions	Timeframe
19. Model climate impacts and adaptation in New Zealand and overseas growing regions.	2023 onwards
20. Update new cultivar investment guides and grower guidance for New Zealand licence releases.	2023 onwards
21. At least every five years, ask growers whether there is interest in arranging insurance for natural disaster risks to risks other than hail.	2025
22. Develop options for industry pathways to net-zero emissions.	April 2023
23. Agree industry pathway to net-zero and actions to achieve this.	March 2024
24. Update the emissions footprint for the full supply chain.	2024
25. Undertake desktop analysis of potential for on-orchard carbon sequestration.	2023
26. Incorporate carbon costs into Zespri financial planning.	2023 onwards
27. Assess the value environmental sustainability contributes to the Zespri brand.	2023 onwards
28. Develop market insights about environmental sustainability trends.	2023 onwards
29. Deliver a certified carbon neutral product.	2024



## STRONG FOUNDATIONS

Underpinning all our work on climate change is a commitment to reliable, high-quality data and evidence that the industry can rely on to make informed decisions. These are also critical in contributing to local and national policy discussions and shaping international rules and standards. Our strong governance arrangements will ensure we keep on track and identify and respond appropriately to risks and opportunities as they arise.

Actions	Timeframe
30. Improve climate reporting process and models to enable timely data insights.	Ongoing
31. Develop weather risk monitoring platforms and climate change impact models.	2023 onwards
32. Encourage supply chain partners to assess, monitor and respond to climate risks.	Ongoing
33. Fund research on climate risks to the supply chain where there is an industry-wide benefit.	Ongoing
34. Continue to invest in advocacy on water issues and climate policies at national and regional levels.	Ongoing
35. Engage with New Zealand regional and district councils in relation to effective consenting processes.	Ongoing
36. Establish an environmental engagement group for New Zealand post-harvest operators.	April 2023
37. Advocate for recognition of New Zealand and industry-specific practices in global reporting standards.	Ongoing
38. Leverage collaboration platforms to represent the industry's interests and contribute to national strategies.	Ongoing
39. Report annually to the industry on progress implementing the Climate Change Adaptation Plan.	Annual
40. Report annually to the Zespri Audit & Risk Management Committee on emerging climate risks and opportunities, and industry responses.	Annual
41. Review Zespri's Climate Change Risks and Opportunities Report every three years.	2024 onwards





# Measuring

## OUR PROGRESS

Progress in implementing the Climate Change Adaptation Plan will be reported annually to Zespri's Audit and Risk Management Committee and New Zealand's Industry Advisory Council. We will review this plan by 2025, following an update

of the Climate Change Risks and Opportunities Report (due in 2024). This will allow the planning for the second stage of our Climate Change Adaptation Plan to be developed and implemented from 2026-2030.



## WANT TO KNOW *more?*

**The following resources provide more information on how the kiwifruit industry is responding to climate change:**

- [The full Climate Change Adaptation Plan](#)
- [Zespri Climate Change Strategy](#)
- [Zespri Climate Change Risks and Opportunities Report](#)

- [NZKGI Environmental Policy webpage](#)
- [NIWA climate change webpage](#)

Growers can also access specific information and guidance through the Canopy website, including regional summaries showing the expected impacts of climate change in New Zealand's growing regions.