

A five-year plan to reach our Kiwifruit Industry's water goals

He Wai mō Āpōpō
Water for the Future



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FOR ALL NEW ZEALANDERS, WATER IS AN INTEGRAL PART OF OUR LIVES, OUR COMMUNITIES, AND OUR ENVIRONMENT.

INTRODUCTION

In Te Ao Māori (the Māori world view), the principle of kaitiakitanga (guardianship) instills in us the responsibility that all people work together as guardians of land and water.

This practice means the sharing of mātauranga Māori (Māori knowledge) and all people gaining a better understanding of land and water science.

Water is a key component of our living environment, which encompasses wetlands, drainage systems, waterways, lakes and estuaries. It is critical we consider the factors that impact on good water quality and thriving aquatic life, as key indicators of healthy water and ecosystems.

The New Zealand kiwifruit industry is committed to protecting and enhancing water resources for our people, our environment and our communities while enabling the industry to grow.

In 2019, New Zealand Kiwifruit Growers Incorporated (NZKGI), Māori Kiwifruit Growers Incorporated (MKGI), Zespri, industry partners and growers, launched the kiwifruit industry's strategy on water. The aim of the strategy is to provide strong leadership and a clear vision

and governance to the kiwifruit industry. It focuses on the sustainable management of water resources that protects our environment and enables industry growth objectives, while ensuring the industry can grow and thrive.

PURPOSE OF THIS DOCUMENT

This document provides an update on our progress. It outlines the key projects we have underway and how we plan to deliver the goals set in the 2019 Water Strategy.

In doing so, it provides growers, stakeholders and regulators an idea of what to expect in the coming years.

By working together across the industry, and in collaboration with other industries and local communities, we will continue to make progress in managing and protecting our water resources for today, and for future generations.

Our plan will help ensure we meet the expectations of our communities, build the trust of our consumers, strengthen our brand, enable the continued growth of our industry, and build the resilience of our orchards.

OUR PRINCIPLES

At the heart of our work are five key principles. These provide a framework for our decision-making as partners, as we work towards doing what we say we will do.



He taonga te wai ***Water is a treasure***

- Water is precious and valuable
- Water has spiritual, environmental, physical and economic value
- Water is a resource to use, preserve and replenish
- Water is life.



Oranga nuku, Oranga rangi ***Prosperity from the earth and sky***

- We gain prosperity, well-being and health from the earth and sky
- Water is a resource to grow food and for all people to benefit from
- We are stakeholders, investors and beneficiaries of the kiwifruit industry for today and in the future.



Ko tātou katoa ngā kaitiaki ***We are all guardians and caretakers***

- We take collective and personal responsibility to care for water resources
- We are accountable to future generations so they benefit from water resources like we do
- We will lift our knowledge of caring for and using water better.



Te amokura rangatira ***The mark of leadership***

- We are taking a leadership position together
- We will act proactively with our people and groups we interact with
- We are calling people to take a lead in their communities.



Titiro ki te paetawhiti ***Look to the horizon and beyond***

- We seek solutions for now and into the future
- We look beyond our own backyard to find solutions and problems that may impact on our water usage
- We will find solutions based on evidence and research for better water quality and efficiency.

OUR GOALS

The 2019 Water Strategy outlined our objectives under five areas: Leadership, Policy, Growing our People (extension), Research and Information, and Communications.

As an industry, we have agreed on the outcomes we want to achieve for our growers by 2025:

1. *Demonstrate alignment of nutrient inputs and losses to **good practice limits***
2. *Use monitoring technology to actively manage and demonstrate **efficient use of water***
3. *Access tools and knowledge to protect and foster **healthy, fertile soils**.*

To be successful, there are a wide range of actions we could take, and a need to do some before others.

We have worked with grower representatives, stakeholders, scientists, grower advisors and others in the industry, to agree on the impact we want to have. We have developed **10 indicators of success** so our growers and stakeholders can track our progress over time.



OUR WORK PROGRAMME

Our work programme has been developed based on the success indicators set out in this document. It is a five-year programme

of interlinked objectives which represent a significant investment of time and resources for, and by, the industry.

OUR KEY DELIVERABLES

For each indicator of success, we have a number of actions. The most important priorities are outlined overleaf.

In the **first two years**, these projects focus on improving the scientific knowledge about managing water quality and use, transferring this knowledge to the industry through extension, and ensuring our growers are equipped to meet policy requirements arising from the government's freshwater reforms announced in September 2020.

Together, we are taking care to streamline processes for growers as we move forward with this work.

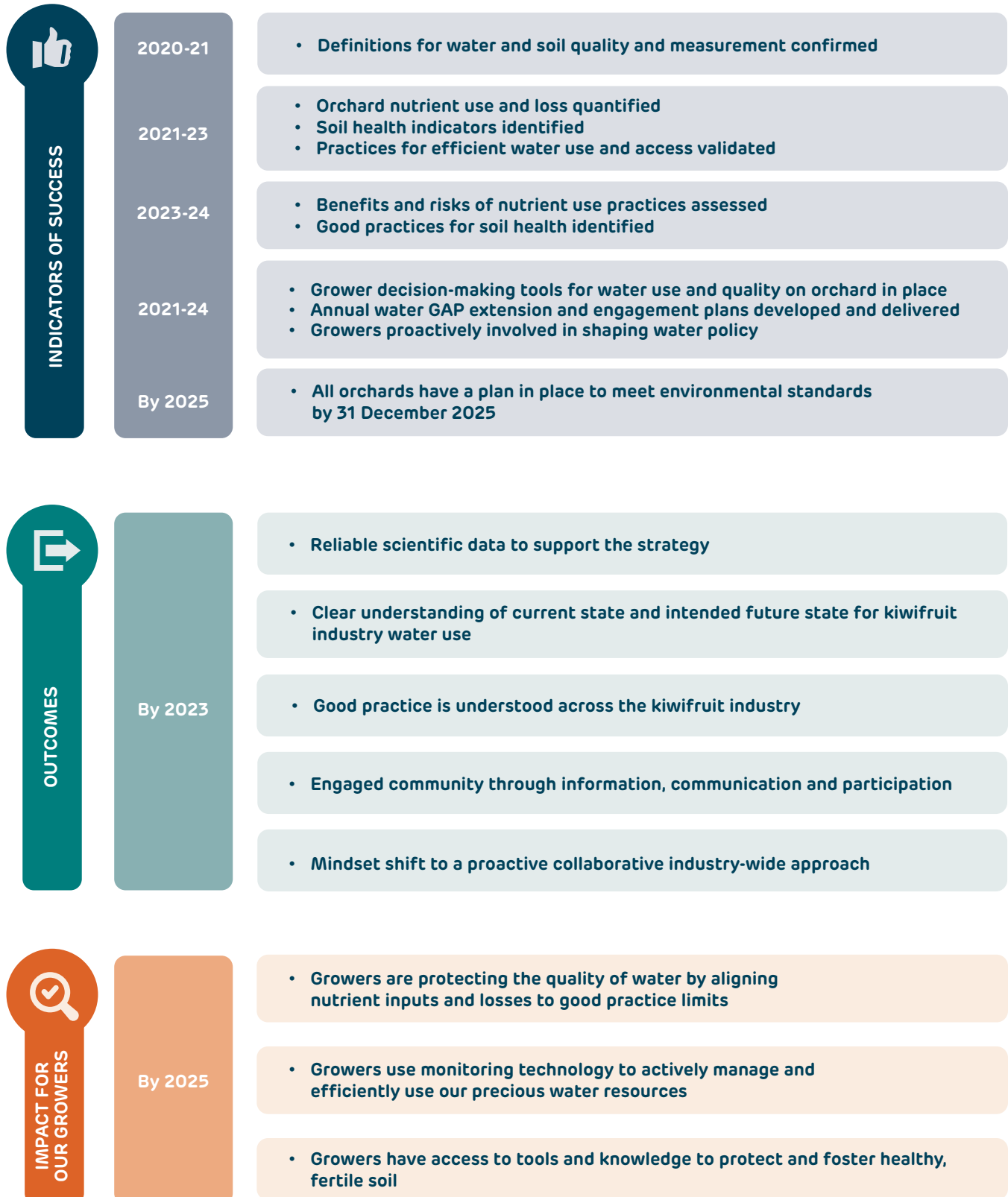
We already have a good foundation to build upon with Zespri GAP to manage, measure and demonstrate improvements – not all requirements will be new to growers.

As these projects progress, details of on-orchard requirements and options for implementing them will be provided to growers. We will communicate with, and support growers, throughout this journey.



PRIORITIES: 2020-2025

VISION: To collectively protect and enhance our water resources for our people, our environment, and our communities, while enabling kiwifruit industry growth.



HIGH-LEVEL 5-YEAR PLAN

INDICATORS OF SUCCESS			2020	2021	2022	2023	2024	2025
1	Definitions for water and soil quality and measurement confirmed		Definitions agreed					
2	Orchard nutrient use and loss quantified	Baseline nutrient modeling complete			Ongoing research			
3	Soil health indicators identified		Soil quality measured	GIS storage system for soil health				
4	Practices for efficient water use and access validated		Water needs measured					
				Drought impacts understood				
5	Benefits and risks nutrient use practices assessed		Advice on optimising fertiliser application					
			Complete assessment and provide advice to growers on benefits and risk of different practices					
6	Good practices for soil health indentified			Guide for measuring soil health developed			Tools available to support practices that protect and foster healthy, fertile soils	
			Guidance on measuring soil health developed and shared with growers					
7	Grower decision-making tool for water use and quality on orchard in place		Develop and deliver interim tool					
				Develop, pilot and roll-out decision-making tool				
8	Annual Water GAP extension and engagement plans developed and delivered	Establish connections and understand current practice, motivators and barriers to inform extension plans						
			Build and deliver annual extension plan					
9	Growers proactively involved in shaping water policy				Use research, experts and grower advice to develop our positions on water policy			
10	All orchards have a plan in place to meet environmental standards by Dec 31 2025		Develop system and roll out training that meets requirements		Supporting growers to meet requirements			

Timeframes will be refined as projects progress.

HOW WE WILL DELIVER OUR WORK PROGRAMME



LEADERSHIP

We have adopted an industry-wide **leadership** approach to managing water and nutrients. We have engaged experts and stakeholders from all areas of the industry to help develop our priorities and support the implementation of our programme.

This collaboration will position us to deliver a cohesive water programme

for the kiwifruit industry. It includes providing opportunities for Māori growers to engage on these issues via Māori Kiwifruit Growers Incorporated, as members in the working groups and Leadership team, as well as kanohi ki te kanohi (face-to-face) with our team on the ground.



RESEARCH AND INFORMATION

Our investment in **research and information** will provide insights that will help our industry focus on the actions that will make the biggest difference in protecting water.

We have engaged independent experts across this work, and together the insights learnt are helping us measure baselines so growers can understand their nutrient use and risks. It will also inform our understanding of policy implications for our growers

(environmental and financial), and gives us the opportunity to in turn, inform policy makers of the impact of growing kiwifruit on water resources. We have developed a multi-year, multi-million dollar research programme focused on three key areas: nutrient-use and loss; efficient water use; and soil health.

It is the outputs of this research which will provide knowledge and content for extension.



GROWING OUR PEOPLE (EXTENSION)

Extension is at the heart of our water strategy. Making meaningful changes to on-orchard practice over time is vital for protecting our environment and the ongoing prosperity of the industry.

We will provide New Zealand growers and industry partners with information, decision support tools and develop extension services to aid and inspire continuous improvements. Zespri GAP also has a role to play here as we

build on existing processes to identify risks, demonstrate progress, measure improvements and improve reporting. Growers will be able to take action confidently, knowing the changes they make will protect our precious water resources, while remaining productive and profitable. We are committed to developing efficient systems and tools to support change — so growers can focus on their orchard, not their paper trail.



POLICY

Sensible **policy** is critical to the ongoing environmental and financial sustainability of the kiwifruit industry.

We will give growers a voice as we develop our positions on water and

ensure they have the tools and knowledge to meet the water rules. We will advocate for policies that make sense for New Zealand growers, and which integrate with our own industry systems, such as ZespriGAP.



COMMUNICATIONS

Our **communications** to growers and the wider kiwifruit community will ensure they know what they need to do and why.

We will be proactive, open and clear as we engage with our key stakeholders,

such as those in-market, government and environmental organisations. We will share our challenges and our successes.



MAHI TAHI — WORKING TOGETHER FOR OUR GROWERS

To achieve our goals, the Water Strategy partners are focused on working in partnership with each

other, with growers, and the wider kiwifruit industry, both at a leadership level and grass roots level.





Our goal is to provide leadership and encourage active engagement from growers and stakeholders across the industry to develop, promote and implement the kiwifruit industry Water Strategy.



LEADERSHIP

Our Leadership Group includes diverse representation from NZKGI, Māori Kiwifruit Growers Inc and Zespri.

Together, we have already achieved many of the leadership-focused objectives from the 2019 Water Strategy. These continue to be a focus as we deliver the Strategy:

- We have identified and addressed the resource needs to deliver the Water Strategy.
- We have identified industry roles and responsibilities in relation to the Water Strategy.
- We have developed governance and oversight to the working groups to ensure continuous progress and accountability.
- Industry leaders are taking shared ownership of the Water Strategy.
- We have strong grower representation and Māori partnership on the leadership group.
- We are actively engaged with local and central government to ensure the industry is represented on matters relating to freshwater.

What we will do:

- Shift the mindset so we have a proactive, collaborative, industry-wide approach to water. This means engaging with stakeholders across our industry, including contractors and orchard managers; researchers, and subject matter experts, as we move forward on this journey together.
- Provide opportunities for all our growers to contribute to the Water Strategy.
- Understand the values and perspectives of other water users and community groups.
- Work together with local and national government and environmental stakeholders.
- Influence water users to comply with the use and protection of freshwater.



Our goal is to quantify the relationship between kiwifruit vines and their need for water and nutrients to minimise impacts on water resources, while ensuring productivity.



RESEARCH AND INFORMATION

We've invested in a multi-year research programme which is informed by focus areas outlined in our Water Strategy in 2019. It focuses on nutrient use and loss, efficient water use, and soil health.

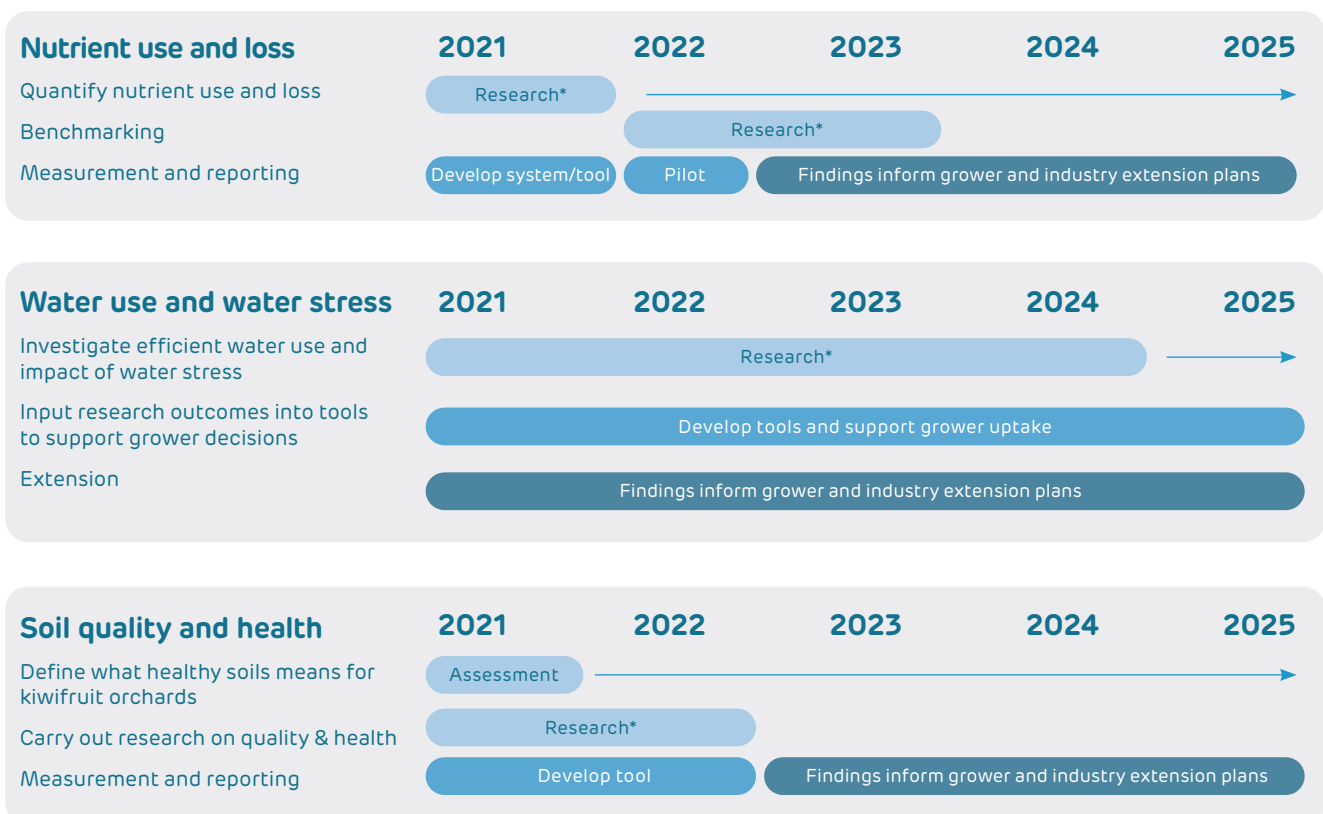
What we will do

- Develop reliable scientific data to support the water strategy and enable tool development to support on orchard decision making
- Encourage effective practice across the kiwifruit industry
- Establish a common benchmark to compare orchard management practices and outcomes and track continuous improvement
- provide valuable insights for grower tools and extension.

The timeframes for these differ, as the evidence base is more developed for some areas (e.g., nutrient use and loss) than others (e.g., soil health). Research in some areas takes longer than others — water use in particular, is a multi-year discipline.

Ultimately, the tools and extension programmes, informed by science and data, we develop will enable all orchards to have effective farm environment practices in place.

The tables below illustrate the timeframes for the areas of research and development Zespri is investing in and demonstrate how our research will flow through to providing practical, on-the-ground support for our growers so they can optimise the way they grow kiwifruit. The research findings will also be useful for policy makers in understanding the impacts of growing kiwifruit, and the opportunities for improvement.



* These timeframes are approximate and indicate the research underway to develop our data and insights. The arrows demonstrate our commitment to ongoing research in these areas.



Our goal is to support and encourage growers in the sustainable management of water and nutrients on-orchard. We will build knowledge and capability so growers can make continuous improvements to their on-orchard practices, with confidence.



GROWING OUR PEOPLE (EXTENSION)

As in other areas, we have already made progress towards meeting the objectives from the Water Strategy set in 2019:

- We developed and delivered the annual extension plan for growers with an approach we can roll out over time.
- We are building a foundation of knowledge for on-orchard practices related to water and nutrient use.
- We are influencing growers on efficient water use and irrigation.

Our growers will need to learn new skills to implement new practices, monitor and report on their management of water and nutrients on orchard. Our aim is to introduce these learnings, data gathering, record-keeping and decision support tools, and on-orchard changes over time, while supporting growers every step of the way.

At the same time, we can build on what growers are already doing through existing risk assessment tools and soil and water management plans.

What we will do:

- Develop a culture of continuous improvement in orchard management practices
- Implement annual extension programmes that incorporate new knowledge as it becomes available and support continuous improvement
- Provide a grower-friendly data reporting and management decision system to enable informed decision-making for each unique orchard, and track progress, to be built with knowledge and understanding of what the requirements are within Zespri GAP
- Influence grower behaviours through targeted information and extension services
- Work together with community catchment groups, prioritising at-risk catchments
- Support growers to implement Farm Plans
- Develop industry extension capability in sustainable orchard management.

DEVELOPMENT OF OUR ANNUAL EXTENSION PLAN FOR GROWERS

Resource development

- Research reports, consumer and market requirements, government regulations, input from growers, expertise from industry and consultants
- Publications, content creation, apps, websites.

Extension delivery

Events, targeted programmes, industry event support, measurement and evaluation.

Trials and data analysis

- Trials to demonstrate on orchard impacts.
- Interpreting industry data in a way that resonates with growers.



Influencing policy that has implications for growers is vital to get the best outcomes for growers, which protects their right to grow.



POLICY

What we will do:

- Develop a consistent approach to responding to regional and national policies
- Enable growers and the wider kiwifruit community to contribute to our policy processes
- Understand the role of Zespri GAP in supporting the water strategy, including linking with Farm Plans and setting industry standards.

The government is continuing to develop its approach to farm planning through the Freshwater Module of Farm Environment Plans. At the same time, GLOBALG.A.P, which sets our market expectations across a range of areas, including environmental standards, is being updated.

Zespri GAP is benchmarked to GLOBALG.A.P and combines market access requirements with our customers' requirements. We are working with the government to confirm Zespri GAP as the reporting and monitoring tool for the delivery of Farm Plans.

Aligning these reporting and quality assurance systems would provide efficiencies for growers and the industry (time, energy and cost). It would also help growers prioritise their actions, supported by advice from industry representatives and orchard advisors.

Growers will be represented in these developments and can contribute to policy positions in the following ways:

- The Policy Working Group (which has grower representation) leads the development of the industry's response to water policies
- Through NZKGI and NZKGI Forum representatives.



Our goal is to have an engaged community through information, communication and participation.



COMMUNICATIONS

To date, we have developed a comprehensive set of key messages and a stakeholder management plan to make sure we talk with the right people at the right time.

What we will do:

- Deliver the information and tools that mean growers can protect the environment, remain profitable, and meet customer and government expectations
- Engage with environmental stakeholders, to bring them on our journey
- Develop clear external messaging on the opportunities and implications of policies on growers and the industry.

Grower communications

We know there are a lot of changes happening for our growers. Increasing expectations for reporting and compliance affecting the way orchards operate on many fronts.

We want to bring those changes together for our industry. We will keep growers updated with changes to requirements. We will work across water and nutrient-related issues, bringing together systems and evolving decision support tools for water, climate change, and soil quality from within Zespri GAP to meet requirements and demonstrate improvements.

At a practical level, NZKGI and Māori Kiwifruit Growers Inc. will continue to provide information to growers about changes to local and national policies as they relate to the kiwifruit industry.

We will continue to test our communications approach with **environmental stakeholders** as our thinking develops and our work takes shape.

The **government** also has significant policy work underway which will have implications for our growers and the industry. We'll make sure we connect with the right people at the right time across this complex and interconnected work.





BY WORKING TOGETHER, WE CAN CREATE A LEGACY FOR NEW ZEALAND AND OUR FUTURE GENERATIONS.

MEASURING OUR PROGRESS: WHERE TO FROM HERE?

It is important that we hold ourselves to account and remain committed to our five-year plan. The Water Leadership Group receives updates on progress from each working group every time they meet.

As we improve our scientific knowledge and get the tools in place to measure our impacts, we will start to report on these in more detail to our stakeholders.

Mahi Tahī / Working Together

Our actions are guided by our values and the principles we set out.

We know how to work together, proactively, and through shared leadership and commitment.

We will adopt insight from science, along with the learned experiences of growers, to continuously improve our management of water and nutrients.

We know we need to be agile with our actions as we learn from our research and as the environment changes around us.

We are committed to achieving this **together**, so that our future generations can benefit from water resources like we do.

