

24 February 2022

Hon Dr Megan Woods
Minister of Research, Science and Innovation
Private Bag 18041
Molesworth St
WELLINGTON 6160

Dear Minister

Annual Letter of Expectations for 2022/23 – The New Zealand Institute for Plant & Food Research Ltd

I am writing in response to your Annual Letter of Expectations for The New Zealand Institute for Plant & Food Research Limited (PFR). You asked PFR to outline how we propose to respond to the expectations you have specified. A summary of our intended approach is provided below. These areas will be further expanded on in our draft Statement of Corporate Intent (SCI). We will continue to engage actively with officials in MBIE over our science and business strategy and targets for 2022/23 and beyond when preparing our draft SCI for your consideration.

1. Te Ara Paerangi – Future Pathways

1.1 Open engagement from all levels of PFR during the consultation process

PFR will continue to encourage staff across all levels and functions of the organisation to engage with the consultation process, including:

- Encouraging all staff to participate in MBIE's Te Ara Paerangi workshops
- Creating opportunities for all staff to contribute their thinking to an organisation-wide submission on the questions and proposals explored in the Green Paper, including through five interactive workshops open to all staff; a hui on aspects of the Green Paper that relate to mātauranga Māori; and via a 'personal touch' through research and general staff representatives gathering views from the 'grass roots' workforce individually kanohi ki te kanohi, subject to COVID-19 restrictions
- Staff have also been encouraged to consider providing their own submission as well as through multi-organisation special interest groups, such as the Early Career Researcher and Marsden groups coordinated by Te Apārangi Royal Society.

1.2 Continue to engage with officials on ongoing initiatives and not necessarily pause in anticipation of any Future Pathways reforms

PFR notes the expected multi-year timeframe of the Te Ara Paerangi process and lack of any pre-commitment to solutions. Our focus on ongoing initiatives will continue. As well, we remain mindful of the issues raised through the Te Ara Paerangi Green Paper and will seek opportunities for positive actions for improvement where we can.

1.3 Contribute to the work being undertaken by MBIE to inform Te Ara Paerangi

We are committed to working with officials towards the best outcome for New Zealand through Te Ara Paerangi. We will continue to seek opportunities to engage with MBIE to inform Te Ara Paerangi, including by supporting the Kitmap and workforce surveys currently underway as well as participating in workshops and supporting other opportunities as they arise. We will also seek an open conversation directly with officials on specific topics to help inform Te Ara Paerangi.

2. RSI Property Portfolio

2.1 Work with officials on research system improvements from co-location of research facilities with other Crown Research Institutes and with Universities; and consider co-location options for any significant capital investments

PFR considers capital investments in the context of our role in the broader science system. Our focus is on areas of specialisation that we are responsible for contributing to New Zealand as well as the synergies and supporting roles we can develop with other research organisations and Government departments. We update and discuss co-location options and capital investments intentions regularly with officials through our quarterly reporting process and at other times as the need and opportunity arises. More details are set out below in Sections 8.1 and 8.2.

3. Deliver on Government priorities

3.1 Contribute and engage with relevant Government and industry strategies

PFR has a strong track record of working collaboratively with industry, Government and other participants in the science system. We are actively working to develop stronger and more strategic links with Māori. While we are proud of the progress that has been made, we believe there are significant opportunities to create even greater impact. We believe that this is best achieved by taking a 'quadruple helix' approach, that is, by the co-development of strategy by Government, industry, science and Māori. We have worked with MPI to develop this concept for the Food and Fibre Industries over the past year. We supported MPI's Fit for a Better World Roadmap by providing the science leadership for three of the eight Fit for a Better World science accelerators that MPI identified in a Government-industry-science workshop in October 2020. These are Open Ocean Aquaculture, New Horticulture and Diversifying Protein. This work will continue in the coming year and we are engaging industry in conversations with MPI to scope opportunities and plan the science. As well, PFR is providing the science voice alongside Government, Māori, and industry to develop a National Action Plan for Horticulture, seeking to identify the small number of common, high priority goals that will require collective action. This is a great example of a NZ Inc. approach to big national research priorities.

We will continue to assess our Future Science strategy to ensure key areas of emerging importance are addressed while responding to Tiriti partner commitments. In the coming year we will seek to include a new Growing Futures Ngā Pou Rangahau Direction focused on research on Taonga Foods in partnership with Māori (see Section 6).

We are also involved in a number of activities aligned with the Conservation and Environmental Science Roadmap, e.g. He Waka Eke Noa, Integrated Farm Planning and MPI's Regenerative Agriculture strategy, and will continue to seek opportunities to support outcomes where our science may contribute.

PFR will continue to keep engaged with officials and department strategies, when appropriate, during the 2022/23 financial year.

3.2 Contribute to work undertaken in relation to climate change, including the climate change programme and in relation to the Carbon Neutral Government Programme

Our research develops the knowledge and technologies to underpin mitigation or adaptation responses to climate change through:

- identifying alternative uses of productive land and sea that offer greater productivity, profitability and lower impact on the climate and environment now. We also work with the Climate Change Commission to advise on land-use change, and have provided detailed submissions to inform their policy work
- understanding and providing resilience to a changed future environment, including our Hot Climate Apple and New Zealand (Northland) Dragon Fruit programmes
- providing future options for New Zealand in a global market that has changed in response to climate change through our Growing Futures Directions.

Our organisational aspirations towards carbon neutrality and a more sustainable future are exemplified in using integrated reporting is a key part of our sustainability agenda. Our 2020/21 Annual Report won the 2021 CPA New Zealand Integrated Reporting Award for public sector organisations. The report describes the way PFR is creating lasting, positive impact for our people, our customers and our planet. It was the first time we had used integrated reporting principles in our Annual Report, although our intentions were signalled in our 2020/21 Statement of Corporate Intent. We will continue our journey towards carbon neutrality through contracting Toitū Envirocare to assist with PFR environmental certification and greenhouse gas emission management and reduction. We have now expanded our Chief Sustainability Officer responsibilities and commitment to a full-time appointment.

4. Well-being and workforce inclusion

4.1 Act as a good employer and in accordance with corporate social responsibility practices, and have a positive culture; and have employer policies and procedures that support diversity and inclusion (gender, age, ethnicity, disability and sexual orientation), and maintain a diverse workforce at all levels; and align with work in relation to the *Public Service Pay Gaps Action Plan* to ensure a fair and equitable workplace, especially for women, Māori Pacific and ethnic employees

PFR is committed to creating a more equitable, diverse, and inclusive workplace and positive culture that supports staff and community well-being. We are a member of Diversity Works who have been helping us update our current policies, including an initial EDI audit to help inform our development work. We actively analyse and monitor remuneration from a gender and ethnicity perspective. Our Board, senior and wider leadership teams have excellent gender balance, and we continue to strive for greater diversity in senior roles across PFR. We welcome the recent appointment of Justine Daw to the Board.

During the coming year we will continue our programme of work to enhance staff well-being and inclusion. The programme has been developed across various aspects of staff experience and organisational culture. The key elements of the programme are based on feedback from staff through regular engagement surveys, face-to-face staff discussions, staff-initiated conversations on our internal social media platform, and two one-day conferences with science and professional staff leaders across the organisation in October and November 2021.

Key components of the programme include:

Connecting with strategy – a process that will give science staff opportunities to co-create the 'what' of our Smart Green Future Together strategy. It is anticipated this will strengthen staff engagement by providing clear line-of-sight and linkages from their day-to-day science and technology activities to organisational strategy.

Discovering our shared values – The current PFR values were developed a decade ago and much has changed in that time. This piece of work will be an iterative process with various ways for staff to contribute to the development of new values that reflect the more collaborative, team approach to doing science and our commitment to the Tono strategy and partnerships with Māori.

Preventing and responding to sexual harassment – Phase One of this programme will review relevant policies and processes, survey staff and include two educational components to increase staff awareness of what sexual harassment is and how to respond to disclosures of harassment. Phase Two will be designed following a report and recommendations from Phase One, working with external specialists.

Unconscious bias – We will use a series of online learning modules to raise awareness and educate all staff on what unconscious bias is, the impact it has and how to recognise it in ourselves and others. A tool kit of activities for leaders will enable the learnings to be used in a practical way with teams and in our mahi.

Leadership development – We are planning new approaches to developing leadership confidence and competence with a focus on coaching for individuals and teams over the next year or two. This practical, situational-based development will have a greater and lasting impact than more traditional workshop-based learning.

Our workforce capability planning aims to increase the diversity of our staff as well as help to address the current and future needs of New Zealand's science system. We are also collaborating with the CRIs to develop an approach to engaging more effectively with rangatahi Māori to increase their involvement in science.

4.2 Align with MBIE's *Diversity in Science Statement*, including in relation to advisory panels, boards and committees

Our desire to improve diversity in the science system guides our appointments and nominations for various advisory panels, boards and committees. For example, we have recently increased the diversity in our external Science Advisory Panel, achieving gender balance and increased ethnic diversity.

5. Financial resilience

5.1 Continue to improve financial resilience through financial performance, working within budget and diversifying revenue while continuing to work with officials in this area

Our three business models embed mechanisms for diversification and ensure the resilience of our sectors and our business in both the short and long term:

- Through investment in our Growing Futures Directions we are creating bold and transformative responses for our sectors to a range of future scenarios, ensuring their long-term sustainability
- Through our Technology Development business model we have created a mechanism for our sectors to co-invest with us in the creation of new products and technologies,

which in turn will create economic, environmental and social impact in the medium term. As well, there is the potential to share in the value created and diversify sources of revenue for reinvestment in the research that New Zealand needs.

- Through our Science Services business model we provide a mechanism to find answers to some of the complex problems our sectors are facing today.

In the coming year we will refresh our pipeline of new ventures, which will deliver greater benefit and diversity for New Zealand as well as diversify our revenue base over time. We will also refresh our international business strategy, adding further diversity and resilience to our business. Our royalties continue to increase year-on-year, both in absolute terms and as a percentage of our revenue.

6. Te Ao Māori

6.1 Continue to develop capability, skills and networks between Māori and the RSI system, implement a co-development approach and strengthen Tiriti based relationships, and keep officials updated on this work

Our Tono strategy and associated Taonga and mātauranga Māori principles are guiding our interactions with Māori and supporting the development of huatahi partnerships. In the coming year we expect to consult on a Kaupapa Māori Policy, appoint a Māori co-lead role for Digital Horticulture Systems, establish a Taonga Foods Growing Futures Direction and appoint a Māori leader/co-leader.

We have increased our He Kakano Whakatipu fund using internal revenue sources to support the establishment and strengthening of relationships with Māori.

This year we will expand our capacity and capability to engage and co-develop with Māori, beginning with the establishment of three new positions: Manager – Māori Strategy, Partnerships & Enterprise; Senior Advisor – Māori Co-Innovation & Development; and Senior Analyst – Māori Enterprise & Development.

We recently expanded our Summer Student Programme, which attracts rangatahi into STEM subjects. In collaboration with other CRIs and through our joint graduate schools, which include universities, we are improving our visibility and access to emerging Māori researchers. This year 38 students joined PFR for the summer, including 17 through a Te Rito cohort. Students are assigned a mentor in their time with PFR (often an ex-summer student), given support to develop their leadership strengths and have the opportunity to present their work in science poster format. Field trips are a new feature of the programme to help students build connections and increase learning experiences with local industry and Māori partner organisations. The programme has continued during the COVID-19 pandemic, with virtual options where face-to-face engagement has not been possible.

7. eResearch and use of technologies

7.1 Support and contribute to the eResearch process, and work with MBIE and other stakeholders to consider new approaches to investment in eResearch infrastructure and services

The Heads of IT functions across the CRIs meet on a monthly basis to collaborate on a range of initiatives, which includes providing input to MBIE's eResearch Workstream report.

Other collective actions include sharing relevant experience and forming collective input to essential eResearch providers, such as NeSi and REANNZ; pooling resources for NZRIS

development; brief exchanges of User Support staff to broaden experience; benchmarking information systems; supporting collaboration workshops with internal software developers (now run by NeSi), and pooling resources for the National Environmental Data Service. Library Resource Managers collaborate closely to maintain essential library subscriptions through consortia that deliver significant cost savings.

A priority for PFR is the digital transformation of research to enhance the efficiency of our science, speed innovation and enable impact pathways. A number of initiatives are underway to bring diverse data sets and research approaches together, giving us greater insights into complex systems, including our ability to predict outcomes. The KiwiCloud app, developed in partnership with Zespri, is already transforming the way we manage kiwifruit trial data, genetic relationships, and tracking and inventory management. In the year ahead, investment in PFR eResearch initiatives will continue to advance us from descriptive, to predictive to prescriptive modes.

7.2 Engage with MBIE officials on our approach to identify and manage risk of sensitive technologies

At PFR we follow the guidance on Trusted Research developed in collaboration between New Zealand's research communities and the Government, through Protective Security Requirements. The protection of intellectual property and sensitive technologies is central to our ability to retain the trust of our partners and collaborators and, therefore, is embedded in our policies, procedures and the way we work. We have worked with officials to manage the risk of sensitive technologies developed through Endeavour-funded research, and welcome future opportunities to work with officials to further strengthen our approach.

7.3 Support technology adoption and transfer for public research and use in the country

Our technology transfer into the hands of end users is a core activity in our commercially funded Science Services and Technology Development business models. Our publically funded, future-focused, Growing Futures Directions are also heavily technology-dependent. For example, our Digital Horticulture Systems Direction is aimed squarely at creating digital technology that ultimately allows New Zealand producers to run autonomous perennial horticultural food systems across the value chain. Horticulture Goes Urban will rely on a battery of detectors and information integration to control the growing environment. Open Ocean Aquaculture will rely on an array of communications, sensing and control technologies to manage autonomous modular aquaculture. Our Seafood Technologies portfolio is already developing digital phenomics technology for aquaculture and fisheries management.

7.4 Implement up-to-date cyber security measures, procedures and policies and engage with staff on cyber security where appropriate

In 2020 the Heads of IT functions across the CRI sector initiated a RFP to select a shared cyber security service, recognising the increasing complexity in this specialist area and the shortage of appropriately skilled resources. The service includes identify critical digital assets, security vulnerabilities, security policy development and a virtual CISO function to each participating CRI. New services are being added to provide Security Monitoring and Security Incident Management.

Over the last 12 months there have been a number of high-profile cyber and ransomware attacks against entities in New Zealand and globally. We continue to maintain a watching brief in this area with ongoing improvements being made to our cyber security arrangements, including educating staff on how to identify and respond to risks and updating the Board on changes made, current work-in-progress and future priorities in cyber security.

8. Specific priorities for Plant & Food Research

8.1 Proactively engage with Manaaki Whenua, Ministry for Primary Industries and other relevant organisations on the proposed developments at Mt Albert

Discussions with MPI continue on opportunities to co-locate with our science and business teams at our Mt Albert Head office in Auckland, driven by synergies in effectiveness and efficiency. The ground lease to MPI for construction of their Interim Post Entry Quarantine (IPEQ) facility has been signed by both parties. MPI has now obtained resource consent and works will be underway shortly. In addition, we are continuing to make positive progress in discussions with MPI regarding the possibility of them co-locating at Mt Albert (under a ground lease) for their primary Auckland site. The PFR Board has provided their approval to proceed, and we are hoping to have key commercial and operational terms formalised by way of a Memorandum of Understanding in late February 2022.

We will continue to engage with Manaaki Whenua about their infrastructure requirements in Auckland and the possibility of them also coming to our Mt Albert site in the future.

We remain excited about the prospect of other aligned parties co-locating and are confident in the opportunities this will create for further collaboration, asset-sharing and science impact.

8.2 Continue to engage with officials on the Long Term Capital Plan

Our current Long Term Capital Plan (LTCP) provides a 10-year view of our investment requirements in land, buildings, specialist science equipment and the like. It will see us continue to invest in upgrades at a number of our regional sites.

Our LTCP ensures our investments deliver the current and future infrastructure needs of New Zealand within the context of our role in the RSI system and cognisant of complementarity and opportunities for synergies with other actors in the system. We will continually review and revise our plans in response to changes in this context and update officials regularly through our quarterly reporting process and at other times, as the need and opportunity arises, including those for our recent revision of our Te Puke redevelopment plans to support the Kiwifruit Breeding Centre, jointly owned with Zespri.

Our Science Services and Technology Development business models ensure that our forecast cash and overall balance sheet position remains strong, and we are comfortable that we can deliver our LTCP as well as provide resources and job security to support our staff.

8.3 Continue to contribute to relevant industry strategies as appropriate, and develop and strengthen relationships within our sectors.

We recently restructured our customer-facing team to better develop and strengthen relationships with our sectors.

We are regularly invited by our industry partners to contribute to their strategies. For example, we have been invited to respond to the BCG report on Zespri's innovation strategy, deliver an integrated R&D plan targeting an alternative to HiCane for 'Hayward' kiwifruit growers, and have recently mapped our kiwifruit research portfolio and capability against Zespri's new strategic objectives. This follows 20 years of collaboration under an R&D operating agreement that has delivered a multi billion dollar new cultivar (SunGold) and a rapid integrated response to the threat of Psa.

Similarly, in the Apple sector PFR has a long-standing strategic collaboration with NZAPI that has delivered world-leading points of differentiation in market access and new cultivars.

Following the recent conclusion of Apple Futures II, PFR is currently the lead research provider for MPI SFF Futures projects on packhouse food safety and biosecurity readiness, and will play a lead role in 'Smart & Sustainable', a 7-year \$14 M SFF Futures programme commencing in Q2 2022. PFR continues to be the exclusive breeding partner for Prevar, with an enduring pipeline of new apple and pear cultivars at various stages of development and commercialisation.

We continue our Forage Innovations Limited (FIL) joint venture with PGG Wrightson Seeds. FIL formerly encompassed breeding of forage brassica, which cover the largest area grown of any cultivated annual crop in New Zealand. This year FIL added forage cereal breeding to offer a package to New Zealand farmers, not only including the appropriate brassica and forage cereals cultivars per region, but also best practice management to sustain crop productivity and minimise environmental impacts. Our science has been critical for incorporating water and nitrogen use efficiency strategies for varietal selection and evaluation, supporting Government policies implemented recently (National Policy Statement for freshwater management).

Yours sincerely

A handwritten signature in black ink, reading "N. M. Shadbolt". The signature is written in a cursive, flowing style.

Nicola Shadbolt
Chair