



FUTURE FOOD TECHNOLOGIES AND MĀORI WELL-BEING

He peka kai, he peka taonga.

How can dialogue with diverse Māori communities support sustainable decision-making on future food technologies such as: biotechnology, nanotechnology, sustainable agriculture and functional foods?

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INTRODUCTION

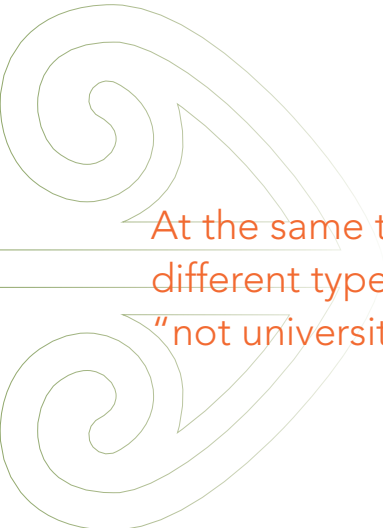
This was the question that the Institute of Environmental Science and Research Ltd (ESR) asked Te Wāhanga, the Māori unit at the New Zealand Council for Educational Research (NZCER), to explore.

Working with kaupapa Māori principles and ways of understanding the world, Te Wāhanga undertook 13 face-to-face interviews with Māori scientists, government workers and whānau. We also brought them together at a workshop to explore the diverse issues involved with:

- Future food technologies; and
- Sustainable decision-making for technology development and Māori well-being.

We were exploring these questions as part of an overall research project, *Coming to the Table, Sustainable Decision-making for future food technologies*, which aims to create a dialogue between scientists and society about the risks and benefits of future food technologies. The project is investigating social, cultural and consumer responses to a range of future food technologies in Aotearoa New Zealand and internationally.

Within the Māori case study applying kaupapa Māori principles, we wanted to find out how some Māori see the issues and risks for different types of food technologies. We are also interested in how sustainable decision-making regarding future technologies can support Māori well-being. The findings of the research will deepen understandings of Māori well-being and future technologies. Overall, they support sustainable decision-making for technology development in Aotearoa and internationally.



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KEY FINDINGS

The people we interviewed had low levels of acceptance of nanotechnology and biotechnology, but were more accepting of functional foods. We found the strongest levels of acceptance for sustainable agriculture, such as Hua Parakore (Māori organics). Generally, if the technology supported the natural process of Te Ao Tūroa (the natural world through a Māori worldview) and connected with mātauranga (Māori knowledges) and kaumātua (elder) knowledges, then the technology was more likely to be acceptable to Māori who participated in the study.



OTHER KEY THEMES WERE:

Value Te Tiriti o Waitangi: Māori as Te Tiriti o Waitangi partners should be decision-makers on future technology investments in Aotearoa New Zealand.

Build cultural capability. Scientists, policy makers and science investors need to build their capability to develop and sustain relationships with diverse Māori communities.

Acknowledge levels of distrust. There was general distrust of scientists from Māori who participated in the study: they were concerned about the future direction of new technologies especially when it came to food.

Establish tikanga-centred dialogue processes. Dialogue with Māori on future technologies needs to occur within kaupapa Māori ways of working that support kanohi kitea (face to face engagement), wānanga (Māori learning spaces), and hui (Māori gatherings). These settings allow for sufficient time to consider the issues. Western based dialogic methods do not support kaupapa Māori processes of engagement, such as whitiwhiti kōrero (exchanging ideas), wānanga or hui.



NEW TECHNOLOGIES AND MĀORI WELL-BEING

Māori participants identified a number of things that would make future kai technologies more acceptable. These included:

- **Increased scales of sustainable technologies.** They wanted to see the development of larger-scale sustainable agriculture, as well as horticulture that was not necessarily organic.
- **Connections to mātauranga Māori.** Technologies must connect with mātauranga Māori and kaumātua based knowledges. For example, how might nanotechnology address Māori values such as mauri (the life essence of objects) and whakapapa (genealogy)?
- **Stronger product authenticity.** There was support for community gardens, such as Hua Parakore: agricultural processes that use authentic Māori seed, product that is Māori grown, Māori verified, Māori marketed and Māori exported.

These approaches to food technology would be more acceptable to Māori

communities because they were perceived to be sustainable over time. Such approaches to kai technology allow for kaitiakitanga to be fulfilled -“tiaki te whenua, awa, moana, me te taiao” (care for the land/landscape, rivers, ocean and environment). Such a holistic way of developing food technologies would yield food that was closer to its natural state, and could support post peak-oil technology development.



CRITICAL ISSUES WHEN INVESTING IN FUTURE KAI TECHNOLOGIES

We asked participants what issues we in Aotearoa should think about when investing in future kai technologies. They argued we need to:

- **Address Te Tiriti o Waitangi and Waitangi Tribunal Claims (e.g. WAI 262).** This includes thinking about the impacts on the environment physically, and in terms of mātauranga Māori.

- **Ensure investment is driven by whānau, hapū and iwi.** This relates to addressing issues that are relevant to Māori at the local level, as opposed to addressing international questions. However, this should not exclude Māori advocating and staying informed of global food issues in relation to other indigenous peoples.
- **Retain food chain diversity.** This is vital in supporting Māori food security and avoiding collapse due to agriculture-based monocultures.
- **Develop ‘critical’ Māori scientists.** These are Māori who are connected with and are known by their communities. At the same time, value must be placed on different types of knowledge; those that are “not university trained or validated”
- **Invest more in social and cultural aspects of research.** This includes developing people who are “the trusted face of science.”





FACILITATING SCIENCE DISCUSSIONS IN AOTEAROA

The Māori participants had two major insights into how science issues are discussed and understood in Aotearoa.

Views are polarised. Often science issues were perceived to be “media fuelled”, which resulted in not enough being known about the issues at stake. As a result people found it hard to find the middle ground.

There is a lack of respect for Māori points of view. Participants see largely Western based processes, often organised by non-Māori institutions, being used to discuss science issues. When this happens, kaupapa Māori approaches become sidelined. This often results in Western processes becoming privileged over Māori approaches. As a result people felt scientists did not engage with Māori and wider society very well. Their experience was that discussions were often constrained, and

they wondered how to make the process more democratic.

Based on these findings, we wondered how “dialogue” can help contribute to future decision-making about Aotearoa investment in food technologies. Again, two themes emerged:

Listen to the views of Māori.

Participants were clear that face-to-face dialogue between scientists and Māori communities is needed. This form of dialogue could only happen if the science community built its skills at working within Māori settings.

Māori must be at the centre of decision-making. Successful dialogue with Māori communities will be built on Māori informed processes that validate the connections between kaupapa, tikanga and mātauranga Māori.

CONCLUSION: WHAT NEXT?

In the closing stages of our work with Māori scientists, government workers and whānau, we encouraged them to think about what they would like to see happen next in relation to future food technologies and sustainable decision-making for technology development. At the heart of these two issues was a concern for Māori well-being. For them, *investment and capacity building* were top priorities.

Firstly, people were clear that there needs to be more investment in Māori research. This includes supporting scientists to build active relationships with whānau, hapū and consumer groups, while also developing their cultural competencies in the sciences field.

Linked to this, participants noted that there needed to be more professional development and training for scientists. They believe there is positive potential in developing “opportunities for social scientists to work along scientists in research.” Training and cross-disciplinary work would help to advance science capacity.

Te Wāhanga would like to thank the research participants for contributing to this research, nga mihi mahana ki a koutou.



For further information on this research project, please contact Jessica Hutchings

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