

OUR VIEWS ON INTELLECTUAL PROPERTY

PRINCIPLES

Plant & Food Research's policy on intellectual asset management can be summarised by the following principles:

- Plant & Food Research aims to strategically manage its intellectual assets to achieve optimal impact for its partners and industries, and will strive to select the most appropriate method of technology transfer to achieve this on a case by case basis.
- Plant & Food Research aims to respect the Treaty of Waitangi and all relevant government policies and international protocols, including respecting the IP rights of others, in managing its intellectual assets.
- Plant & Food Research acknowledges the international movement towards publication in open access journals and will support the stance of our funding bodies in relation to this.
- Plant & Food Research supports the aims of NZGOAL and where appropriate will make copyright and non-copyright works available on open terms.
- Plant & Food Research supports a collaborative approach to research, development and commercialisation to create greater impact.
- When developing intellectual property in collaboration with others, Plant & Food Research will work with these partners to identify the party that is best placed to manage the IP and develop the full scope of the technology and its potential utilization.
- Plant & Food Research seeks to ensure that dealings and agreements with other parties appropriately preserve and protect IP, and provide a sound governance framework for IP decision-making.
- Where appropriate Plant & Food Research will retain sufficient IP access rights to enable the conduct of further research in accordance with our Core Purpose.
- Where intellectual assets are anticipated to generate commercial returns, an equitable return from the commercial exploitation of those assets should be expected.
- Plant & Food Research will enforce its IP and contractual rights in a manner consistent with our Core Purpose and roles within the innovation system.

POLICY

Our Mission and Obligations

Plant & Food Research's mission, defined in our Statement of Core Purpose, is for a high impact contribution to our nation's economic, social and environmental prosperity, achieved by engagement with the horticulture, arable, seafood, food and beverage industry sectors. Furthermore, as a Crown-owned company, it is expected that Plant & Food Research will operate as a sustainable business.

In order to achieve this mission Plant & Food Research must appropriately manage and transfer the intellectual assets it creates in ways that ensure optimal benefit and impact for these sectors as well as maintaining our global standing and leadership position in our research. We also have obligations to comply with the Treaty of Waitangi, government policies and international protocols¹ including respecting the IP rights of others.

Strategic Intellectual Asset Management to Achieve Impact

The types of intellectual assets are many and varied, and the most effective method of managing them to achieve maximum impact will necessarily vary on a case by case basis. In some instances the best impact may be through widespread public release, but in other instances this will not be the case. For example, new protocols for growing a particular crop may best be delivered through direct grower training programmes in conjunction with an industry body rather than via publication that would undermine any competitive advantage it might give our growers by informing their competitors. Similarly, the best way to make a new technology available for use by industry may be to patent and exclusively license a company to produce it so that it can be made available and widely used; whereas broad publication may mean that there is no incentive for any company to invest in the scale up and commercialization of the technology because their competitors could simply ride on their coat tails.

Plant & Food Research will consider each case on its merits and select the most appropriate method of technology transfer to achieve optimum impact. The intellectual assets may be packaged and protected as required (such as know-how, trade secret, copyright, patent, plant variety rights or defensive publication to prevent others from patenting) and delivered through a variety of methods which may include combinations of conference papers, publications, grower field days, forums, people exchanges and collaborations, media communications as well as through licensing, spin-outs, and the sale or exchange of rights.

Plant & Food Research seeks to manage its intellectual assets strategically and protecting them in the first instance preserves all future options including making them freely or widely available. Protection of these assets also supports the achievement of impact and benefit. This may include protecting intellectual property to facilitate follow-on investment in technology development and adoption, or

¹ Examples of relevant Government Policies and International Protocols:

- New Zealand Government Open Access and Licensing framework (NZGOAL)
- Trade-Related Aspects of Intellectual Property Rights (TRIPs)
- The International Treaty on Plant Genetic Resources
- Convention on International Trade in Endangered Species (CITES)
- The International Union for Protection of New Varieties of plants (UPOV) Convention

protecting intellectual property that may be used as a platform to encourage collaboration or to obtain access to other peoples' important intellectual property.

Strategic Intellectual Asset Management and Other Organisational Goals

While achieving impact through knowledge transfer is a key goal, where the knowledge and technology being transferred has a market application and is expected to generate commercial returns, an equitable return from the commercial exploitation of intellectual assets should be expected. This is important in enabling Plant & Food Research to operate as a sustainable business and to continue to provide capability and expertise in public good areas such as biosecurity that generally don't receive direct support unless there is a current biosecurity issue.

It is also important for Plant & Food Research to develop and maintain its global standing and leadership position in key research areas through publication of appropriate research through high quality science journals and conferences. This assists our ability to attract talent and to exchange knowledge with others within the global innovation system. This underpins the research collaborations and partnerships that are essential for us to deliver high impact outcomes for our sectors.

We acknowledge the global trend towards open access publication for publicly-funded research and will align our publication activities with the directions of NZ funding agencies. Similarly we support the aims of NZ Government Open Access and Licensing Framework (NZGOAL) and where appropriate will make copyright and non-copyright material available on open terms.

Strategic Intellectual Asset Management and Collaborative Relationships

In all relationships it is important to be principled, responsive, flexible and creative in our dealings with external parties and our collaborators, including dealing with IP ownership. When developing intellectual property in collaboration with others, we will work with such partners to identify the party that is best placed to manage and develop the IP. To promote technology transfer we will facilitate appropriate access to IP by external parties, consistent with a focus on delivering impact.

In structuring IP ownership and access arrangements as part of such collaborations and relationships, there is a need to be conscious that in some circumstances legal protection may be obtained for an invention that has potential applications in a wide range of fields and industries, often significantly beyond the scope of the particular field, problem or application area of the research itself. In structuring these arrangements we will generally seek to ensure that Plant & Food Research and our partners can harness the value of such broad or platform technologies in other application areas.

Plant & Food Research is a member of the Kiwi Innovation Network (KiwiNet), a consortium of Universities and Crown Research Institutes who are dedicated to taking a collaborative approach to research commercialisation. Through KiwiNet, we seek to increase the scale and impact of scientific and technology based innovation with the aim of providing greater economic benefits. By collaborating on projects, combining capability and sharing networks, we can better leverage the limited resources available for commercialisation, help achieve better commercial outcomes, and create new opportunities in other parts of the value chain that would otherwise be unlikely to occur.

EXAMPLES

The following examples illustrate Plant & Food Research's approach to managing intellectual assets in a range of different contexts. These span situations where research results, data or material are provided with as few restrictions as possible through to cases in which an exclusive license was considered essential to deliver the benefits of a particular research result.

Case 1: New Zealand Food Composition Database

Plant & Food Research staff manage and maintain The New Zealand Food Composition Database, in conjunction with the Ministry of Health, which contains information on the nutrient content of over 2600 foods commonly prepared and eaten in New Zealand. This is available to the public via <http://www.foodcomposition.co.nz/>.

Case 2: Genome Collaborations

We have collaborated internationally to assemble the genomes of a range of important crops and these are published and in some cases are hosted by Plant & Food Research for the benefit of the global science community e.g. <http://www.scinet.org.nz/>.

Case 3: Research Tools Shared

Many of our research tools and associated methods are published widely and shared with the research community. For example, we provide significant numbers of vectors and gene constructs each year. In some cases these vector constructs include material obtained under license from other organisations who stipulate that the material can be distributed widely but must only be used for research purposes. In these cases the Materials Transfer Agreement specify the research only use and that Plant & Food Research owns any improvements of the material to prevent the recipients from using it commercially so that we can ensure we don't breach our third party obligations.

Case 4: Patenting Genes to Access Collaborations

We also make genes that we have patented available for research use under similar agreements. These relationships could lead to ongoing collaborations and/or license arrangements. We have used this approach to successfully access significant funding from international sources that would otherwise be unavailable to us and establish a relationship with a potential commercial licensee.

Case 5: Direct Transfer of Protocols to Growers

Improved management practices and protocols will achieve the maximum impact for growers if they are maintained as trade secret knowhow and transferred directly to growers via industry seminars and field days or member-only publications or websites. This prevents growers in competing countries from also accessing the results and thus preserves maximum benefit for the industry.

Case 6: Exclusive License with Link to NZ Company

We develop a device for use in the post harvest management of fruit. There was no company in NZ that could manufacture and supply the whole commercialisation package. We partnered with a US company with the capability but negotiated the right for a NZ company to manufacture and supply to them a key component that is the core of our invention. The license with the US company is exclusive for defined territories and fields. Having a manufacturer for the technology means that it can now be

widely applied to enhance fruit quality for key fruit industry export players. Other fields and territories can still be licensed as appropriate. In such licenses we are able to ensure that defined performance targets are met and retain the ability to either revert to a non-exclusive license or withdraw the license if targets are not met.

Case 7: Exclusive License /Assignment

The gold kiwifruit variety 'Hort16a' was exclusively licensed and eventually assigned to Zespri. This exclusivity is a proven model to achieve the maximum impact from new kiwifruit varieties through Zespri's single desk marketing model. NZ growers are the primary beneficiaries from growing new varieties but Zespri also selectively licenses new varieties to growers in key countries to enable year round supply to key markets, thus maintaining premium prices for NZ growers. In comparison, the green 'Hayward' variety was not protected and was freely available but rapidly became a non-differentiated commodity product with no competitive advantage.