

Addressing the Root of the Problem: Suggested Amendments to the Plant Variety Rights Framework in New Zealand

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With new developments in technology, the release of the Wai 262 decision by the Waitangi Tribunal and the widespread ratification of the International Convention for the Protection of New Varieties of Plants, the Plant Variety Rights Act 1987 is now outdated and in need of amendment. This article evaluates the current intellectual property protection available for plant varieties in New Zealand under the Act. The Plant Variety Rights Act suffers from major issues such as insufficient protection for breeders, a failure to incorporate Māori concerns as expressed in the Wai 262 claim, a lack of clarity as to the scope of the farm saved seed exception and inconsistency with the Convention. The Act further produces undesirable incentives for the plant breeding industry by reducing biodiversity and discouraging innovation in plant variety development. The current review of the Plant Variety Rights Act must address the interests of all major stakeholders, namely breeders, farmers, Māori and environmental groups. This article argues that New Zealand should amend the Plant Variety Rights Act to extend breeders' rights by protecting essentially derived varieties, while also protecting the farm saved seed exception and Māori customary interests over taonga species. While this will preclude ratification of the Convention, its rigid framework is wholly unsuitable for New Zealand's unique environmental, agricultural and cultural context anyway. Instead, New Zealand should prioritise flexibility to create a plant variety rights scheme that addresses its particular needs over accession to incompatible international instruments.

I INTRODUCTION

In February 2017, the New Zealand Government began a review of the Plant Variety Rights Act 1987 to modernise the plant variety rights regime, ensure consistency with international obligations and address the interests of key

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stakeholders in the agricultural industry.¹ The review is currently in the submission stage. The Plant Variety Rights Act has been largely unchanged since its creation, yet the context surrounding it has changed significantly. The international agreement on which the Act is based, the 1978 revision of the International Convention for the Protection of New Varieties of Plants (UPOV 1978),² was revised considerably in 1991, thereby changing the state of global agriculture. New technologies within the genetic field have made plant breeding an entirely different process than it was at the Act's conception. Accordingly, the Plant Variety Rights Act, as it currently stands, is no longer fit for purpose.

The Plant Variety Rights Act grants an intellectual property right over a distinct variety of a plant to any person who discovered or bred that variety.³ Its purpose is to stimulate invention of varieties through granting the right-holder a monopoly over that variety, so that they can enjoy exclusive economic benefit from their efforts.⁴ Being able to monopolise a species and be fairly compensated for efforts in creating it encourages breeders to develop and discover new species, and to genetically improve important existing species. The Act is significant because New Zealand's economy is heavily reliant on the primary industries. As such, biotechnological development and the creation of new and more advanced plant varieties are essential to economic growth and must be incentivised.⁵ Therefore, the efficacy of the Plant Variety Rights Act affects the efficiency and overall competitiveness of the agricultural industry.⁶

Plant variety rights are also crucial on a global scale. Estimates suggest that the global commercial seed market is worth around NZD 95,000,000,000 and will continue to increase in value every year.⁷ Furthermore, as the global population grows, improved plant varieties will be crucial in meeting the growing global food insecurity.⁸ Corporations constantly seek to gain competitive advantage through technological advancement, so it is important that they can protect the exclusivity of their breeding investments. A lack of comprehensive plant variety rights and patents can therefore stunt

1 Ministry of Business, Innovation & Employment [MBIE] "Current review of the Plant Variety Rights Act 1987" (press release, 23 August 2017); and "Plant Variety Rights review" (18 September 2018) MBIE <www.mbie.govt.nz>.

2 International Convention for the Protection of New Varieties of Plants 1861 UNTS 281 (adopted 23 October 1978, entered into force 8 November 1981) [UPOV 1978]. For the original Convention, see International Convention for the Protection of New Varieties of Plants 815 UNTS 89 (opened for signature 2 December 1961, entered into force 10 August 1968) [UPOV 1961].

3 Plant Variety Rights Act 1987, s 10(2).

4 Rebecca L Margulies "Protecting Biodiversity: Recognizing International Intellectual Property Rights in Plant Genetic Resources" (1992) 14 Mich J Intl L 322 at 344.

5 Andrew J Allen "Biotechnology, Research, and Intellectual Property Law" (2003) 8 *Canta LR* 365 at 365.

6 Natalie M Derzko "Plant Breeders' Rights in Canada and Abroad: What are These Rights and How Much Must Society Pay for Them?" 29 *McGill LJ* 144 at 147.

7 IMARC Group *Seeds Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2018–2023* (April 2017).

8 Derzko, above n 6, at 146.

technological advancement in the breeding industry.⁹ This has been evident in several jurisdictions — including the Netherlands, the United Kingdom and the United States — which, after implementing plant variety rights legislation, have noted an increased number of firms engaging in plant breeding and variety creation, as well as the total number of plant varieties available.¹⁰

However, not all have welcomed the creation and proliferation of plant variety rights. Some scholars have criticised the concentration of ownership of vegetation in corporations and other commercial entities, as well as the possibility of the variety rights incentivising unsustainable development and agricultural practices.¹¹ Furthermore, from the perspective of rights owners, a plant variety right affords less protection than a patent or other intellectual property right.¹² Breeders can still freely use protected varieties to breed or create new varieties, farmers may retain seeds of a protected crop for continuous planting without needing to repurchase or pay a royalty (the farm saved seed exception), and anyone may use the species for non-commercial purposes.¹³ However, these limitations reflect the fact that applications for plant variety rights have a lower threshold compared to other intellectual property rights.¹⁴ Additionally, the very nature of plant species creates problems for ongoing intellectual property protection. Once in the public domain, breeders can easily replicate a plant variety through asexual reproduction, reducing the ability of a variety right-holder to generate a return on their investment.¹⁵

This article argues that New Zealand should amend the Plant Variety Rights Act to better align its protection of plant variety rights with its international trading partners, to better protect the rights of Māori over their traditional knowledge and indigenous plant species, and to address other issues with the current regime. Part II of this article sets out the protection offered by the current plant variety rights regime and how far that protection extends. It will examine the Plant Variety Rights Act as it currently stands, the history and context from which it emerged, and the developments that have led up to the current review. Then, Part III canvasses the issues created by the Act. Part IV suggests amendments to best address each of these issues. In particular, this article recommends that the amendments prioritise Māori interests and the domestic concerns of breeders rather than conform to the standards of the 1991 revision of the International Convention for the Protection of New Varieties of Plants (UPOV 1991).¹⁶ Finally, Part V

9 Jean Donnenwirth, John Grace and Stephen Smith “Intellectual Property Rights, Patents, Plant Variety Protection and Contracts: A Perspective from the Private Sector” (2004) 9 *IP Strategy Today* 19 at 19.

10 Derzko, above n 6, at 165.

11 See, for example, Derzko, above n 6, at 171–172 and 175–176.

12 Margulies, above n 4, at 344.

13 At 344. See Plant Variety Rights Act, s 18.

14 Derzko, above n 6, at 158.

15 Jay Sanderson “Back to the Future: Possible Mechanisms for the Management of Plant Varieties in Australia” (2007) 30 *UNSWLJ* 686 at 687.

16 The text of the Convention can be found at “Act of 1991: International Convention for the Protection of New Varieties of Plants” (19 March 1991) International Union for the Protection of New Varieties of Plants <www.upov.int> [UPOV 1991].

concludes that, rather than ratifying the prevailing international agreement, New Zealand should set out to create an intellectual property regime that best caters for its unique environmental, agricultural and cultural context.

II THE CURRENT PLANT VARIETY RIGHTS REGIME

The plant variety rights regime in New Zealand currently consists of a single piece of domestic legislation, which is informed by the international agreement UPOV (and to some degree TRIPS). Each of these is discussed in further detail below.

The Plant Variety Rights Act

Humans have been breeding plants for improvement for centuries, with indigenous peoples contributing significantly to the domestication of many important plant species, such as corn.¹⁷ However, until recently, the law has regarded these plant species as a common resource for all and not subject to property rights.¹⁸ This changed with the Plant Variety Rights Act, which aimed to give effect to New Zealand's obligations under the original International Convention for the Protection of New Varieties of Plants (UPOV 1961).¹⁹ The Act was partially motivated by a desire to avoid the situation in Australia, where the lack of such legislation saw many overseas breeders decline to participate in the Australian market and make their species publicly available there until such legislation was passed.²⁰ Introducing the Plant Variety Rights Act in New Zealand aimed to attract new and improved varieties of significant crops, by rewarding plant breeders with the exclusive right of sale in return for their efforts in producing a new variety. The Act is the only method of protecting new plant varieties in New Zealand,²¹ unlike in other jurisdictions where breeders can obtain parallel or complementary protection under the relevant patent legislation.²² Furthermore, the Act allows New Zealanders access to overseas-bred plant varieties that have obtained protection.

Under s 10(2), the applicant must demonstrate that they have an approved "denomination" for the variety, that they are the "owner" of the variety and that the variety is "new, distinct, homogeneous, and stable". A variety is "distinct" if it is distinguishable by any characteristic, so long as it is capable of precise description and recognition, from any other commonly known variety at the time the application was made.²³ It is "homogeneous"

17 Derzko, above n 6, at 148.

18 Margulies, above n 4, at 323.

19 UPOV 1961.

20 Catherine Brown "Protecting Plant Varieties: Developments in New Zealand" (1988) 18 VUWLR 83 at 90–91 as cited in Margulies, above n 4, at 343–344.

21 Patents Act 2013, s 16(4).

22 Richard B Jarvis "Plant Patent, Plant Variety Right, or Both?" (1993) 4 AIPJ 211 at 211.

23 Section 10(4)(b).

and “stable” if the Commissioner of Plant Variety Rights is satisfied that, considering its method of sexual reproduction or vegetative propagation, the variety will remain “true to its description” in its “essential characteristics” after repeated reproduction cycles.²⁴ Finally, the proposed denomination for a variety must also “conform with international usage relating to the names of cultivated plants”.²⁵ Importantly, the Plant Variety Rights Act defines an “owner” as a person who has bred or discovered that variety.²⁶ This means that the Act protects more than just traditional plant breeders. These requirements ensure that the breeder has indeed developed a new variety, separate biologically from already extant varieties.

Upon receiving a compliant application for a plant variety right, the Commissioner will notify the public of the application in the New Zealand Plant Variety Rights Journal.²⁷ Objections can then be made to the application at any time before it is granted, with a shorter objection period for contesting denominations.²⁸ The Commissioner will not grant an application where someone has objected until both the applicant and the objector have been given a reasonable opportunity to be heard.²⁹ Objections can also be made after grant, if the objector considers that the grant was made incorrectly.³⁰ This can lead the Commissioner to cancel the grant if there is good reason for doing so.³¹ The variety will receive provisional protection from the day that the application is made, but if the application is withdrawn or declined, the Commissioner will deem the protection to have never been conferred.³² The timing of the application is important for priority rights between competing applications because if there are multiple applications for the same variety, the earlier application will obtain the plant variety right.³³ This also applies to overseas applications due to the reciprocal treatment guaranteed under UPOV 1978.³⁴

Prima facie, the grantee of a plant variety right has the exclusive right to produce and sell reproductive material of the variety, to propagate the variety for commercial production and to authorise others to do the same.³⁵ There are, however, several exceptions to this rule. Any person may propagate, grow or use a protected variety for non-commercial purposes,³⁶ use it to hybridise or produce a new variety for sale,³⁷ or use its reproductive material for human consumption or other non-reproductive purposes.³⁸ The

24 Section 10(4)(c).

25 Plant Variety Rights Regulations 1988, reg 7(1).

26 Plant Variety Rights Act 1987, s 2.

27 Section 5(6)(a).

28 Section 6.

29 Section 6(4).

30 Section 15.

31 Section 16.

32 Section 9.

33 Section 11.

34 Section 12. See UPOV 1978, art 3; and UPOV 1991, art 4.

35 Section 17(1).

36 Section 18(a).

37 Section 18(b).

38 Section 18(c).

Commissioner can also order a compulsory sale or licensing of the protected variety under certain circumstances.³⁹ Indeed, after a three-year exclusivity period, any person may request that the Commissioner consider whether reasonable quantities of the variety's reproductive material are available to the public at a reasonable price.⁴⁰ If not, the Commissioner shall issue a compulsory license for sale of that variety to the public and the person who made the request.⁴¹ Furthermore, in addition to these exceptions, the Minister responsible for the Plant Variety Rights Act may also impose restrictions on the right during a state of national emergency if it is in the public interest to do so.⁴² Thus, the grantee does not have full autonomy over their protected variety.

Any breach of a plant variety right is actionable by the grantee, as the plant variety right is essentially a proprietary right.⁴³ When assessing and awarding damages, including exemplary damages, the court will consider any loss suffered or likely to be suffered by the grantee due to the infringement, any profits or benefits derived from the infringement, and the flagrancy of the infringement.⁴⁴

UPOV 1978

The Plant Variety Rights Act is based on the text of UPOV 1978, which entered into force in New Zealand in 1981.⁴⁵ However, in 1991, UPOV 1978 was revised to enhance the rights afforded to plant breeders and to address issues that had arisen under UPOV 1978.⁴⁶ New Zealand has not updated the Plant Variety Rights Act to reflect the 1991 revisions. Although UPOV 1978 allows states to enact a more extensive protection regime than that set out in the Convention, New Zealand has chosen not to do this.⁴⁷ Therefore, the Act currently only provides the basic level of protection for plant variety rights. However, New Zealand has recently signed the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTTP).⁴⁸ If ratified,⁴⁹ the Agreement will require New Zealand to give effect to UPOV 1991 within three years, subject to the adoption of any measures New Zealand "deems

39 Section 21.

40 Section 21(1).

41 Section 21(2).

42 Section 17(2).

43 Section 17(4).

44 Section 17(4).

45 UPOV 1978; and International Convention for the Protection of New Varieties of Plants [1980] NZTS 5 (signed 25 July 1979, entered into force 8 November 1981).

46 Ministry of Economic Development *Review of the Plant Variety Rights Act 1987: A Discussion Paper* (March 2002) [*Discussion Paper*] at 11. See UPOV 1991.

47 UPOV 1978, art 5(4). See also Plant Variety Rights Act.

48 Comprehensive and Progressive Agreement for Trans-Pacific Partnership (opened for signature 8 March 2018, not yet in force) [CPTTP]. The text of the Agreement can be found at "Comprehensive and Progressive Agreement for Trans-Pacific Partnership" (21 February 2018) New Zealand Foreign Affairs & Trade <www.mfat.govt.nz>.

49 The current indication from the Government is that this agreement could be ratified in late 2018 or early 2019. "Comprehensive and Progressive Agreement for Trans-Pacific Partnership: Common Questions" New Zealand Foreign Affairs & Trade <www.mfat.govt.nz>.

necessary to protect indigenous plant species in fulfilment of its obligations under the Treaty of Waitangi”.⁵⁰ This is provided that “such measures are not used as a means of arbitrary or unjustified discrimination against a person of another Party”.⁵¹ It is unclear yet how much flexibility this will provide New Zealand, but if the Crown's Treaty of Waitangi obligations prove inconsistent with UPOV 1991, New Zealand may only need to give effect to those parts of UPOV 1991 which are *not* inconsistent.

UPOV 1978 allows state parties to recognise the rights of breeders through either a *sui generis* right or a patent.⁵² However, breeders cannot claim double protection for the same genus or species under both a patent and a plant variety right.⁵³ In New Zealand, under the Patents Act 2013, plant varieties are excluded from patentability, leaving the plant variety right as the only source of protection.⁵⁴ While the protection regime under the Plant Variety Rights Act does not extend to related concepts such as production method, breeding method and reproductive materials of the plant, these concepts may instead be protected under the Patents Act, if they meet the requirements for a patent.⁵⁵ Thus, despite the prohibition against double protection under UPOV 1978, the same genus or species could, in theory, be protected under both a patent and a plant variety right, although the variety itself cannot.

Review of the Plant Variety Rights Act

The Ministry of Business, Innovation & Employment (MBIE) began the current review of the Plant Variety Rights Act in February 2017 with a series of workshops with Māori and industry technical experts to identify the key issues and interests.⁵⁶ However, no amendments are likely to be made before 2019.⁵⁷ This review follows the earlier 2002 review of the Act that resulted in an amendment Bill.⁵⁸ However, the Bill was placed on hold pending the release of *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity (Wai 262 Report)* from the Waitangi Tribunal.⁵⁹ The Bill was then further delayed by the Trans-Pacific Partnership Agreement negotiations.⁶⁰ Consequently, Parliament never implemented the recommended changes. One of the key concerns driving the current review is that the rights provided for under the Plant Variety Rights Act are relatively limited and restrict the grantee's ability to earn revenue from the varieties they have invested time into developing.⁶¹

50 CPTPP, Annex 18-A.

51 Annex 18-A.

52 Article 2(1).

53 Article 2(1).

54 Patents Act, s 16(4).

55 Jarvis, above n 22, at 215.

56 MBIE “Current review”, above n 1.

57 MBIE “Current review”, above n 1.

58 MBIE “Early 2000s review of the Plant Variety Rights Act 1987” (press release, 17 March 2017).

59 See Waitangi Tribunal *Ko Aotearoa Tēnei: A Report into Claims Concerning New Zealand Law and Policy Affecting Māori Culture and Identity - Te Taumata Tuarua* (Wai 262, 2011) [*Wai 262 Report*].

60 MBIE “Early 2000s review”, above n 58.

61 *Discussion Paper*, above n 46, at 5.

These continuing limitations mean that New Zealand cannot ratify UPOV 1991, as the Plant Variety Rights Act would not comply with the minimum requirements of the Convention.⁶²

III PROBLEMS WITH THE PLANT VARIETY RIGHTS ACT

The main problem with the Plant Variety Rights Act is that the current level of variety protection does not adequately reflect the amount of effort a breeder undertakes to produce a new variety. However, increased protection, while supported by New Zealand's international obligations, may be incompatible with the domestic circumstances and obligations unique to New Zealand. In particular, the *Wai 262 Report* has changed the legal landscape for Māori claims to their traditional intellectual property. The report considers the different conceptions of property under Tikanga Māori as compared with the Western understanding.⁶³ These different conceptions of property are difficult to reconcile within one plant variety rights scheme. It is generally agreed that the intellectual property system, which is currently based on the Western conception of property, fails to adequately protect Māori rights over their traditional knowledge.⁶⁴ But Māori interests are not the only relevant considerations in constructing a suitable plant variety rights scheme: the Act affects several other important stakeholders, including farmers, variety rights owners and plant breeders. Furthermore, there are environmental concerns about the extent that right owners can control their protected varieties. Many stakeholders are concerned that an overly restrictive rights scheme could reduce biodiversity or cause food security issues.⁶⁵ The wide variety of issues and stakeholders has significantly complicated the amendment process and stagnated updates to the plant variety framework.

The 2002 review of the Plant Variety Rights Act identified several issues with the Act. First, there have been significant international developments and advances in plant breeding techniques, making the Act outdated in its level of protection.⁶⁶ Secondly, the Act does not adequately address Māori concerns nor sufficiently protect indigenous species.⁶⁷ And finally, the Act in its current form prevents New Zealand from ratifying UPOV 1991 and may thereby reduce New Zealand's ability to access varieties that are bred or protected overseas.⁶⁸ Decades of inaction have exacerbated these same problems, which still stand today.

62 At 11.

63 *Wai 262 Report*, above n 59, at 33.

64 Brian Garrity "Conflict between Māori and Western Concepts of Intellectual Property" (1999) Auckland U L Rev 1193 at 1193.

65 *Discussion Paper*, above n 46, at 23.

66 At 1.

67 At 1.

68 At 5.

Scope of the Plant Variety Right

Currently, the scope of rights provided for under the Plant Variety Rights Act is too limited to provide adequate protection for breeders and plant varieties. This article will analyse three main aspects of the plant variety right: the extent of the monopoly over the protected variety, the right over varieties that are essentially derived from the protected variety, and the right to control the export and import of the protected variety. Any review of the plants variety rights scheme will face the challenge of achieving a balance between these rights, as an inefficient scheme would be costly. Infringement of plant variety rights is estimated to cost the Australian seed industry around AUD 300,000,000 per year — over a quarter of the value of the whole industry.⁶⁹ Therefore, the stakes are high.

1 Right to Have a Monopoly Over the Protected Variety

Currently, the owner of a plant variety right has a limited monopoly over their protected variety. While the Plant Variety Rights Act generally prohibits others from selling or using the variety without paying a fee to the owner, the Act stipulates several exceptions that limit the scope of this monopoly.⁷⁰ These exceptions are a significant source of frustration for many breeders, and were the subject of many submissions during the 2002 review.⁷¹ The main exceptions are the farm saved seed exception, the non-commercial use exception and the compulsory license provisions.

First, the farm saved seed exception allows farmers to plant a new crop of the protected variety without paying the usual royalty for this privilege. The farm saved seed exception will be discussed later in this Part. This is an issue that ultimately affects the monopoly of variety rights owners. Those who hold plant variety rights understandably protest the farmers' exception, as it denies breeders the revenue that they would otherwise be entitled to receive, reducing the returns on their investments in developing the variety. Indeed, many consider the exception to be an unauthorised use of protected material and an example of how the Act does not go far enough to protect breeders' interests.⁷²

Secondly, granting a plant variety right does not prevent others from selling reproductive material for non-reproductive purposes, such as human consumption, or using the protected variety for “non-commercial purposes”.⁷³ Arguably, excluding “non-commercial” use as a whole is too broad. Most international jurisdictions have narrowed this exception. UPOV 1991 includes a similar exception under art 15(1). However, it requires the use to be both

69 Sanderson, above n 15, at 688–689.

70 Plant Variety Rights Act, ss 17 and 18.

71 Regulatory and Competition Policy Branch *Summary of Submissions Received on the Plant Variety Rights Act Review Discussion Paper* (Ministry of Economic Development, November 2002) [*Summary of Submissions*] at 3.

72 Sanderson, above n 15, at 687; and *Discussion Paper*, above n 46, at 12.

73 Plant Variety Rights Act, s 18.

non-commercial *and* private.⁷⁴ Thus individuals may use the protected plant variety in non-commercial gardens without a royalty, but non-commercial organisations may not. Whether this is a significant change remains to be seen, but commentary on UPOV 1991 notes that this has excluded community uses of protected varieties by local bodies and councils, who are not considered private entities.⁷⁵

Finally, the compulsory license provisions allow any person to request that a variety right owner make a protected variety available at a more reasonable price that it is currently on the market for.⁷⁶ If the variety right has been in force for more than three years, and the Commissioner determines that there is not a reasonable quantity of the variety on the market, of a reasonable quality and for a reasonable price, he or she can order that the Intellectual Property Office (IPONZ) grant a compulsory licence with appropriate compensation for the variety right owner. These compulsory licences can be granted to any person and enable the licensee to use the variety for any purpose. Section 21(3) of the Plant Variety Rights Act allows a competitor or other person to access the variety at a level price no matter their investment or interest in the species. Plant breeders have expressed concern that these provisions may reduce the incentive for companies to invest in plant breeding to produce species for a competitive advantage,⁷⁷ as one of the reasons why a breeder may seek a plant variety right is to prevent a competitor from accessing the same improved variety.

2 *Rights Over Essentially Derived Varieties*

The scope of the plant variety right does not currently prevent the development, marketing and sale of an “essentially derived” variety.⁷⁸ Essentially derived varieties are defined in art 14(5)(b) of UPOV 1991 as those which are “predominantly derived from the initial variety” and express the “essential characteristics ... of the initial variety”, except for the differences resulting from derivation. For protected varieties whose value lies in a single identifiable characteristic, such as colour in floral species, an essentially derived variety can capture all the value of the original protected species but still escape intellectual property protection.⁷⁹ For example, when an essentially derived version of the Royal Gala apple was created in New Zealand, the owners of the Royal Gala apple could not prevent other breeders from marketing this new species as an original Royal Gala under the Plant Variety Rights Act.⁸⁰ Therefore, essentially derived varieties can be detrimental to breeders’ interests.

74 UPOV 1991, art 15(1).

75 *Discussion Paper*, above n 46, at 25.

76 Plant Variety Rights Act, s 21.

77 *Discussion Paper*, above n 46, at 13.

78 At 25.

79 Mark D Janis and Stephen Smith “Technological Change and the Design of Plant Variety Protection Regimes” (2007) 82 Chi-Kent L Rev 1557 at 1593.

80 *Discussion Paper*, above n 46, at 11–12.

UPOV 1991 protects breeders from essentially derived varieties. There must be a minimum level of difference between the newly produced variety and the protected variety for IPONZ to grant a plant variety right.⁸¹ This should not affect the balance of rights between the public and the breeder to any large degree, but would instead ensure that the person who has made the greatest investment in the variety creation is awarded the profit and protection.⁸² However, other jurisdictions that have implemented this scheme have found it very difficult to determine when exactly a variety is so similar as to be considered essentially derived.⁸³ Accordingly, the provision under UPOV 1991 has been consistently problematic for judges and authorities to interpret because of this.⁸⁴

3 *Rights over Export and Import*

Plant variety right owners currently cannot prevent the export of reproductive material of their protected variety, meaning that other breeders can mass-produce the protected variety in territories where reciprocal protection does not exist.⁸⁵ Overseas growers would not have to pay royalties for this variety, making them more competitive than New Zealand growers who do.⁸⁶ Uncontrolled export of protected varieties can already be seen with the Pacific Rose apple, which was initially bred and protected in New Zealand, but is now also grown extensively in Chile.⁸⁷ This would be prevented under UPOV 1991, which gives the breeder control over the export of reproductive material. Under art 14(1), the breeder can authorise or deny the export and import of the propagating material of a protected variety. Breeders may also control the sale and the marketing of the variety, and this control extends to everything produced from the reproductive material if it was obtained without authorisation.⁸⁸ Closing this vulnerability in the Plant Variety Rights Act would not significantly affect the ability of other stakeholders to access the variety, but may make it more difficult for foreign growers to “pirate” New Zealand-bred species like the Pacific Rose apple.⁸⁹

81 Derzko, above n 6, at 168; and UPOV 1991, art 14(5).

82 Derzko, above n 6, at 168.

83 See, for example, *Danziger ‘Dan’ Flower Farm v Astée Flowers BV* CA Hague 105.003.932/01, 29 December 2009 at [20] as cited in Jay Sanderson *Plants, People and Practices: The Nature and History of the UPOV Convention* (Cambridge University Press, New York, 2017) at 224–225; and *Danziger v Azolay & Astée Flowers* DC Tel-Aviv-Jaffa 001228/03, 5 March 2009 as cited in Jay Sanderson *Plants, People and Practices: The Nature and History of the UPOV Convention* (Cambridge University Press, New York, 2017) at 225. These litigation produced different interpretations of the UPOV rule in the Hague and Israel.

84 Carlos M Correa “Plant Variety Protection in Developing Countries: A Tool for Designing a Sui Generis Plant Variety Protection System: An Alternative to UPOV 1991” (Working Paper for Association for Plant Breeding for the Benefit of Society, October 2015) at 31.

85 Plant Variety Rights Act, s 18(c).

86 *Discussion Paper*, above n 46, at 12.

87 At 12.

88 UPOV 1991, arts 14(1) and 14(2).

89 *Discussion Paper*, above n 46, at 20–21.

4 Effect of Expanding the Plant Variety Right

Expansion of the right has the potential to provide many benefits to New Zealand.⁹⁰ Some estimate that expansion will increase the amount of both domestic and foreign investments in research and development of new varieties in New Zealand, as well as increase the competitiveness of New Zealand growers generally.⁹¹ While increased investments is certainly likely, we cannot be sure by how much. The introduction of the plant variety right in 1973 saw investments in plant breeding increase rapidly, before peaking in 1984 and then declining.⁹² The most assured advantage of right expansion comes with ratifying UPOV 1991, which would give New Zealand foreign protection of domestically protected varieties in exchange for reciprocal protection of foreign varieties to be sold here, without fear of exploitation from breeders.

On the other hand, the disadvantages of expanding the plant variety right are perhaps more certain. A greater scope of protection is likely to increase the price that growers and farmers pay for protected varieties, particularly if the farmers' right to use farm saved seed is removed.⁹³ Furthermore, relying on a few protected varieties, rather than a broad range of species, could reduce biodiversity and increase the vulnerability of crops to disease or insect pests.⁹⁴ Increasing plant variety rights is also more likely to harm Māori traditional knowledge and their relationship with indigenous flora, as discussed below.

The Farm Saved Seed Exception and the Interests of Farmers

A key exception to the general protection under the Plant Variety Rights Act is the farm saved seed exception (or farmers' privilege).⁹⁵ This exception exists in most plant variety protection legislation as well as both versions of the UPOV Convention, and originates from the earliest days of agriculture.⁹⁶ It has since disappeared in some developed countries such as the United States, but is still widespread in others.⁹⁷ Today, commentators have questioned its legitimacy, but the tensions surrounding the farmers' exception have been evident long before the UPOV Conventions.⁹⁸ The farmers' privilege allows farmers to retain seed after harvesting the original purchased crop. Farmers are permitted to grow crop, and sometimes sell it, from this retained seed rather than

90 At 6.

91 At 6.

92 At 8.

93 At 6.

94 At 6.

95 See *Discussion Paper*, above n 46, at 20.

96 Sanderson, above n 15, at 687.

97 Mercedes Campi and Alessandro Nuvolari "Intellectual property protection in plant varieties: A worldwide index (1961–2011)" (2015) 44 *Research Policy* 951 at 955.

98 Sanderson, above n 15, at 690.

paying a royalty for a new batch of a protected variety.⁹⁹ This exception exists to recognise that it is farmers who, through years of selective breeding, have produced the desirable characteristics of many plant varieties available today.¹⁰⁰ In particular, much of New Zealand's initial variation in plant species has come from traditional Māori farming practices.¹⁰¹ These significant and continuous investments have contributed to creating and maintaining biodiversity, and form the basis of the belief within the industry that the farmers' exception should continue.¹⁰² Furthermore, many in the agricultural sector resist the idea of subjecting important crops to intellectual property rights, as they have historically not had to deal with them.¹⁰³ This has created a "culture of resistance" amongst farmers against the formal intellectual property scheme.¹⁰⁴ Even where farmers acknowledge that payments to breeders are necessary to contribute towards research for better crops, farmers argue that they already do so by way of levies, and resent doing more.¹⁰⁵

The farmers' privilege has slowly receded over time as the benefits of paying breeders fairly for their work have become clear.¹⁰⁶ It has been qualified under UPOV 1991, which extended the basic protection provided by a plant variety right to all replications of the original seed sold, no matter its purpose.¹⁰⁷ However, a state party may still include the farmers' exception in its domestic legislation, as long as the legitimate interests of the breeder are safeguarded, and any use of farm saved seed is within reasonable limits.¹⁰⁸

1 Should New Zealand Remove the Farm Saved Seed Exception?

Farm saved seed is estimated to cost breeders in Australia between AUD 200,000,000 and 300,000,000 per year — up to 30 per cent of the annual value of the entire seed industry.¹⁰⁹ Thus, allowing this exception denies breeders a sizeable return on their investment. In recognition of this, during the 2002 review of the Plant Variety Rights Act, the New Zealand Plant Breeding and Research Association and the Grains Council of Federated Farmers proposed a scheme where farmers pay a royalty for using saved seed for protected varieties.¹¹⁰ Requiring a royalty payment for using saved seed would not

99 Jarvis, above n 22, at 218.

100 Correa, above n 84, at 1.

101 Chidi Oguamanam "Intellectual property rights in plant genetic resources: Farmers' rights and food security of indigenous and local communities" (2006) 11 Drake J Agric L 273 at 274.

102 *Discussion Paper*, above n 46, at 23.

103 Sanderson, above n 15, at 687.

104 At 687.

105 At 699.

106 At 686.

107 UPOV 1991, art 14(1). See also arts 14(2) and 15(2).

108 Article 14(5).

109 Sanderson, above n 15, at 689.

110 *Summary of Submissions*, above n 71, at 5.

significantly increase the cost to farmers. However, this payment would go a long way towards supporting breeders and encouraging further investment in the production of new and improved crop varieties. It would address the perhaps unfair advantage that farmers have as compared to other users of protected varieties.

On the other hand, there are numerous benefits of both the formal farm saved seed exception and informal seed systems, which see farmers “develop new varieties adapted to local conditions and distribute them through informal social and economic networks”.¹¹¹ It provides farmers with ready access to locally adapted seed and an important source of income, as well as encourage genetic diversity on farms and maintain local food cultures. Indeed, smallhold farmers in particular depend on farm saved seed and other informal sources of plant varieties to ensure continued affordability and availability of traditional crops.¹¹² In the New Zealand context, the farm saved seed exception indirectly legitimises the continuing use of traditional plant species by Māori groups, and consequently conserves those species.¹¹³ Thus, requiring a royalty for such crops could disproportionately affect small, private and traditional farms.

On balance, this article argues that the farm saved seed exception should be retained. While breeders would lose revenue, this would be offset by extending the plant variety right to cover essentially derived varieties. Breeders would continue to enjoy increased rights without affecting the current rights of farmers.

Māori Concerns

The main issue for Māori stakeholders is that granting exclusive rights to plant varieties would conflict with traditional ownership and *kaitiakitanga* over native species. These concerns were highlighted in the *Wai 262 Report*.¹¹⁴ The report addressed objections to exploitation of Māori intellectual property by non-Māori and the barriers that exist to prevent Māori themselves from using their cultural interests “as a positive vehicle for Maori development”.¹¹⁵ A key aspect of the claim was the fact that the ownership that Māori have over their native vegetation and inventions cannot fit within the traditional Western system of intellectual property laws.¹¹⁶

111 Chelsea Smith and Susan H Bragdon “The relationship between intellectual property rights and small-scale farmer innovation” (Report for Quaker United Nations Office, April 2016) at 5–6.

112 Peter Munyi and Bram De Jonge “Farmers’ and Breeders’ Rights: Bridging Access to, and IP Protection of, Plant Varieties in Africa” (2015) 16 AJIC 16 at 19.

113 Seamus Woods “Patents, PVRs and Pragmatism: Giving Effect to Wai 262” (2014) 19 *Canta LR* 97 at 111.

114 *Wai 262 Report*, above n 59, at 33.

115 At 191.

116 Graeme W Austin “Re-Treating Intellectual Property – The Wai 262 Proceeding and the Heuristics of Intellectual Property Law” (2003) 11 *Cardozo J Intl Comp L* 333 at 341.

1 *The Wai 262 Claims*

Central to all six statements of claim is that art 2 of Te Tiriti o Waitangi guarantees Māori the right and obligation to fulfil its kaitiaki role over flora and fauna within their iwi territories.¹¹⁷ The Crown breached this guarantee by failing to actively protect the iwi's exercise of rangatiratanga and kaitiaki over these flora and fauna, and to protect the flora and fauna themselves.¹¹⁸ The claimants listed a number of international intellectual property instruments, including UPOV 1961 and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which were adopted “without the permission of [Māori iwi]”.¹¹⁹ This was another central allegation: that the Crown's failure to consult with iwi before entering into these international treaties was a breach of the guarantee of tino rangatiratanga.¹²⁰ The passing of domestic intellectual property statutes and policies similarly infringed this guarantee by interfering with the iwi's domain over indigenous flora and fauna.¹²¹ One of the remedies sought by the claimants is phrased particularly strongly by Ngāti Porou: “a complete review of all existing laws and policies” to create a “framework that actively protects ... tino rangatiratanga”, both generally and, more specifically, “in relation to all taonga the subject of this Wai 262 claim”.¹²² Indeed, the claim as a whole illustrates a key problem in the current plant variety rights framework and in intellectual property law as a whole: a lack of consultation with Māori.¹²³

2 *Inconsistency with the Plant Variety Rights Act*

The Plant Variety Rights Act particularly struggles with protecting traditional plant breeding knowledge, due to the Māori information ownership structure being incompatible with the Western intellectual property scheme. Since mātauranga Māori is held communally and available to all, the Act considers it to be in the public domain and thus lacking the novelty required for protection.¹²⁴ Furthermore, plant variety rights require an individual owner — a requirement that cannot be satisfied by the iwi and hapū structure of communal ownership.¹²⁵ Māori also tend not to conceptualise plants in terms of their specific scientific characteristics, but rather as a whole species generally.¹²⁶ The Plant Variety Rights Act considers that relatively minor genetic differences, such as flower colour, can amount to sufficient difference

117 See, for example, “Second Amended Statement of Claim (for Ngati Porou)” (Wai 262, 1.1(e), 19 October 2001) at [52].

118 At [54].

119 At [56.9].

120 “Fourth Amended Statement of Claim on Behalf of Ngati Kahungunu” (Wai 262, 1.1(d), 21 September 2001) at [6.6].

121 At [6.1].

122 “Second Amended Statement of Claim (for Ngati Porou)”, above n 117, at [63].

123 Austin, above n 116, at 363.

124 *Wai 262 Report*, above n 59, at 171.

125 Woods, above n 113, at 101.

126 At 119.

as to warrant the grant of a plant variety right.¹²⁷ The problem occurs when plant variety rights are granted over these specific, individual subsets of a species that Māori view as a taonga as a whole.¹²⁸ If New Zealand ratifies UPOV 1991, it will limit the Government's ability to protect Māori interests in plants.

3 *Discovered Species*

The definition of “owner” in the Plant Variety Rights Act currently includes someone who has discovered a species.¹²⁹ This theoretically enables IPONZ to grant a plant variety right over indigenous varieties where no effort has been involved in developing the variety.¹³⁰ At the same time, the requirement that the plant variety be “new” and “distinct” prevents Māori from obtaining protection for their known indigenous species.¹³¹ Thus, the basic requirements of obtaining a plant variety right present problems for Māori. UPOV 1991 prescribes rights for those who have discovered species, but this is not universally agreed upon.¹³² Further, the Waitangi Tribunal has advised against discoverers' rights.¹³³

4 *Offensive Denominations*

Currently, the Commissioner has no ability to refuse a denomination on grounds that it is offensive to any part of the population, such as Māori. In 2002, two to three per cent of all denominations contained Māori words. For particular varieties, the number was as high as 20 per cent.¹³⁴ Given the risk of these denominations causing offence to Māori, the plant variety rights field should look to adopt a similar system to trade marks. Under the Trade Marks Act 2002, trademarks that may be offensive to Māori cannot be registered,¹³⁵ and Māori imagery and words are to be first screened by a Māori Advisory Committee to determine whether they are offensive.¹³⁶ This would reduce the mismatch between these two areas of intellectual property.

127 At 119.

128 *Wai 262 Report*, above n 59, at 175.

129 Plant Variety Rights Act, s 2.

130 Hon Judith Tizard *Associate Minister of Commerce Review of the Plant Variety Rights Act 1987* (Cabinet Economic Development Committee, August 2003) at 2. However, the definition of “variety” and other requirements for protection under the Plant Variety Rights Act require a level of human intervention to have occurred.

131 *Discussion Paper*, above n 46, at 29.

132 Margulies, above n 4, at 345.

133 See at 343–344.

134 Tizard, above n 130, at 17.

135 Trade Marks Act 2002, s 17(1)(c).

136 Section 178.

5 Recommendations of the Wai 262 Report

The *Wai 262 Report*, released in July 2011, recommended several changes to the existing plant variety rights framework.¹³⁷ The major recommendations include:¹³⁸

1. establishing a proactive Māori Advisory Committee within IPONZ to advise the examiners on Māori-specific issues when granting plant variety rights;
2. removing protection for discovered or created varieties that were already known to Māori; and
3. granting the Māori Advisory Committee the ability to refuse plant variety rights either on grounds that they could affect kaitiaki relationships with taonga species or because the denomination would be offensive to Māori.

Notably, the Tribunal did not endorse the creation of Māori-specific property rights over species, choosing instead to work within the existing rights framework.¹³⁹ This has been criticised by academics who argue that shoehorning Māori intellectual property into Western systems could cause a rapid deterioration of taonga and mātauranga Māori.¹⁴⁰

Installing the Māori Advisory Committee is unlikely to pose any significant burden on IPONZ or the Government, as parallel committees already exist for trademarks¹⁴¹ and patents.¹⁴² The Crown has already considered amendments to the Act that ensure that Māori are consulted during the application process where the variety may be related to traditional knowledge or indigenous genetic material.¹⁴³ It is clear that the Māori Advisory Committee has the potential to reach much further than recommended by the Waitangi Tribunal. However, the Tribunal seeks a Committee that gives non-binding recommendations, much like themselves. Thus, such a Committee is unlikely to address all the concerns that Māori have over loss of rights over their intellectual property.¹⁴⁴

6 Other Forms of Protection

While implementing the Tribunal's recommendations would exclude taonga species discovered by Māori from protection, this may not be the best method of protecting both the plant variety and Māori rights. One option is to implement a standalone system to protect traditional knowledge.¹⁴⁵ For example, the World Intellectual Property Organization has established an intergovernmental committee on the relationship between intellectual

137 Woods, above n 113, at 101.

138 At 101–103.

139 *Wai 262 Report*, above n 59, at 373.

140 Woods, above n 113, at 126.

141 Trade Marks Act, s 177.

142 Patents Act, s 225.

143 Austin, above n 116, at 360–361.

144 Woods, above n 113, at 113.

145 *Discussion Paper*, above n 46, at 29.

property and traditional knowledge.¹⁴⁶ The Philippines and India have also implemented systems that better recognise indigenous rights.¹⁴⁷ In the Philippines, the sui generis plant variety right legislation seeks to strike a more even balance between small farmers, indigenous people and breeders' rights by providing less protection for breeders. Exchanging seeds between small farms is explicitly protected, and indigenous farmers' contribution to conservation and creation of varieties is recognised and rewarded with a share in the rights over those varieties.¹⁴⁸ Under the draft Bill of the Community Intellectual Rights Protection Act, the owner of traditional knowledge — which can be an entire community — can collect a reasonable percentage of all profits derived from the commercial use of their knowledge.¹⁴⁹ Similarly, India has implemented a more equal regime, incorporating many UPOV-type requirements but excluding several key indigenous categories of plant species from protection altogether.¹⁵⁰ New Zealand could apply similar species-wide exclusions to taonga species or, like in the Philippines, allocate an appropriate share of profits to Māori.¹⁵¹

Environmental Concerns

Globally, the diversity of plant species continues to decline at an alarming rate.¹⁵² This can be exacerbated by the granting of plant variety rights over discovered species, particularly in developing countries. However, some have argued that, rather than threatening biodiversity or sustainable development, plant variety rights legislation may in fact go some way to address the concerns of developing countries.¹⁵³ For example, proposals to use plant variety rights to induce conservation have included taxing the sale of plant materials by corporations and allocating this fund to preserving diversity.¹⁵⁴

Some argue that granting plant variety rights — or other property rights — over flora and fauna creates an agricultural system that is incompatible with sustainable development.¹⁵⁵ Proliferating plant variety rights encourages genetic uniformity and could easily lead to genetic erosion through the narrowing of crop gene pools.¹⁵⁶ The Plant Variety Rights Act grants rights for genetically uniform and stable varieties, which encourages breeders to eliminate genetic variation in order to obtain protection.¹⁵⁷

146 At 30.

147 At 30.

148 Smith and Bragdon, above n 111, at 23.

149 Anshu Pratap Singh and Padmavati Manchikanti “*Sui Generis* IPR Laws *vis-à-vis* Farmers’ Rights in Some Asian Countries: Implications under the WTO” (2011) 16 *J Intellec Prop Rights* 107 at 113. See Community Intellectual Rights Protection Act (Philippines) SBN-35. The Bill was introduced on 30 June 2004 and has been pending in the Committee since 27 July 2004.

150 Correa, above n 84, at 42.

151 *Discussion Paper*, above n 46, at 8–9.

152 Margulies, above n 4, at 323.

153 Derzko, above n 6, at 144.

154 Margulies, above n 4, at 353.

155 Derzko, above n 6, at 172.

156 Smith and Bragdon, above n 111, at 18–19.

157 At 19.

Similarly, by allowing easy access to protected international varieties, UPOV 1991 does nothing to encourage the use of locally adapted crops.¹⁵⁸ However, this problem of reduced variety within a species has existed long before plant variety rights. The risk of genetic uniformity has always been a product of breeding, whether through biotechnological innovation or simply historic selective breeding.¹⁵⁹ Some studies suggest that plant variety rights legislation could even increase genetic diversity in crops, as more distinct varieties are created.¹⁶⁰

Indeed, including discovered species in the plant variety rights scheme may actually benefit the environment. For example, Australia does not currently protect discovered species. This exclusion has meant that, in terms of conservation, discovered species exist in a jurisprudential void with no individual or group specifically interested in their protection.¹⁶¹ The economic incentive, therefore, would favour overexploitation, rather than preservation, of plant species.¹⁶² These consequences would be mitigated if discovered species are included in the plant variety rights scheme.

The connection between the environment and plant variety rights may seem tenuous, but several environmental groups were key submitters during the 2002 Plant Variety Rights Act review. One third of all submissions focussed on the environmental effects of incorrectly balancing plant variety rights.¹⁶³ In particular, Greenpeace and the Action, Research & Education Network of Aotearoa submitted that New Zealand should avoid ratifying UPOV 1991 at all costs, as this would prevent New Zealand from developing and implementing its own regime to protect biodiversity.¹⁶⁴ Farm saved seed was also a key concern, as forcing farmers to pay additional royalties for using protected seeds creates an incentive to focus on fewer crops at a time, which could dramatically inhibit biodiversity.¹⁶⁵

Ratification of UPOV 1991

The major international agreement governing intellectual property, TRIPS, requires states to enact a plant variety rights scheme, whether through sui generis legislation or within patent law.¹⁶⁶ Accordingly, the existing international agreement on plant variety rights, UPOV 1991, has received more attention in the 21st century.¹⁶⁷ New Zealand not having amended the Plant Variety Rights Act to reflect the changes between UPOV 1978 and UPOV 1991 will be increasingly problematic, as more of New Zealand's

158 At 19.

159 Derzko, above n 6, at 176.

160 At 176.

161 Margulies, above n 4, at 323.

162 At 331.

163 *Summary of Submissions*, above n 71, at 2.

164 At 4.

165 At 6.

166 Agreement on Trade-Related Aspects of Intellectual Property Rights 1869 UNTS 299 (opened for signature 15 April 1994, entered into force 1 January 1995) [TRIPS], art 27(3)(b).

167 Susy Frankel "Towards a Sound New Zealand Intellectual Property Law" (2001) 32 VUWLR 47 at 62.

trading partners update their plant variety right legislation to align with international developments. Thus, an important decision to be made during the current review of the Plant Variety Rights Act is whether to implement amendments that allow New Zealand to ratify UPOV 1991. The decision of whether or not to ratify UPOV 1991 remains open until the CPTPP is ratified. Once it is, New Zealand will have to either ratify UPOV 1991, enact *sui generis* legislation that gives effect to UPOV 1991, or make use of the Treaty of Waitangi exception to opt out of certain UPOV 1991 requirements.

1 What has Changed in UPOV 1991?

In general, UPOV 1991 offers breeders far more protection than its predecessor. It sets minimum standards for plant variety rights in the signatory states and requires states to reciprocate foreign protections for plant variety rights.¹⁶⁸ The Convention overwhelmingly favours commercial stakeholders over smaller breeders and farmers, and breeders' interests over farmers'.¹⁶⁹ The breeders' rights may also now extend to harvested material and products made directly from this harvested material.¹⁷⁰ Importantly, UPOV 1991 extends protection of breeders' rights to cover essentially derived varieties.¹⁷¹ The minimum duration of a plant variety right has also increased from 18 years to 25 years for trees and vines, and 15 years to 25 years for all other species.¹⁷² Overall, UPOV 1991 is a far more rigid commitment than UPOV 1978, with little flexibility in how its requirements can be implemented.¹⁷³

2 The Problem

Currently, New Zealand cannot ratify UPOV 1991 because its domestic legislation does not comply with the minimum requirements. This leaves New Zealand vulnerable to breeders who refuse to allow access to varieties because they cannot be sure they will be adequately protected. These consequences can be seen in jurisdictions with similarly low levels of protection for breeders, including Australia (before the enactment of their plant breeders' legislation), Colombia and Chile.¹⁷⁴ Many local breeders believe that ratifying UPOV is the only way to ensure that breeders receive fair compensation for developing new varieties.¹⁷⁵ However, not ratifying UPOV 1991 would continue to allow New Zealand the flexibility to address other issues with the plant variety rights scheme. This article will now outline the various consequences of ratifying UPOV 1991.

168 Margulies, above n 4, at 344.

169 Correa, above n 84, at 2.

170 UPOV 1991, art 14.

171 Article 14.

172 Derzko, above n 6, at 167; and UPOV 1991, art 19.

173 Correa, above n 84, at 29.

174 Walter Jaffé and Jeroen van Wijk "The Impact of Plant Breeders' Rights in Developing Countries: Debate and experience in Argentina, Chile, Colombia, Mexico and Uruguay" (Technical Paper, Inter-American Institute for Cooperation on Agriculture, July 1995) at 61.

175 *Discussion Paper*, above n 46, at 11.

3 *Benefits of Ratification*

Bringing the Plant Variety Rights Act in line with UPOV 1991 could address many of the concerns highlighted in the Wai 262 claim — for example, changing the definition of a breeder to clarify that this is someone who has not only discovered a variety, but has developed it.¹⁷⁶ This would go some way to alleviate the concern that the Act may protect discovered varieties already known to Māori. However, this could equally be done without ratifying UPOV 1991: New Zealand could simply give effect to the specific relevant provisions of UPOV 1991 in domestic law. The main advantage of ratification is the reciprocal protection principle, which would encourage the continued investment of domestic breeders in creating new species and the release of foreign protected varieties in New Zealand. If UPOV 1991 is not ratified, there is a risk that local plant breeders will move to other countries for greater protection.¹⁷⁷

It is important to note that even if New Zealand does not ratify UPOV 1991, any sui generis legislation must still comply with the level of variety protection set out in UPOV 1978, which New Zealand has already ratified.¹⁷⁸ However, the Convention is relatively flexible. Whatever legislation we enact, the reciprocal principle will not apply, so any rights created in the new plant variety right legislation would only be effective in New Zealand, and any international registrations would not have to comply with domestic sui generis legislation.¹⁷⁹

4 *Problems with Ratification*

On the other hand, the requirements of UPOV 1991 may conflict with certain recommendations of the Waitangi Tribunal. The recommendation that the Māori Advisory Committee, in conjunction with IPONZ, be granted the ability to decline a rights application on grounds of offence to Māori may conflict with UPOV 1991 where the plant variety is otherwise compatible.¹⁸⁰ Not ratifying UPOV 1991 would allow New Zealand much more flexibility to create a plant variety right framework that better protects Māori interests in flora. However, UPOV 1991 does permit declining a right for reasons of public interest,¹⁸¹ which could encompass rights that infringe Māori interests. The CPTPP, if ratified, provides exception that New Zealand only must enforce UPOV 1991 subject to its Treaty of Waitangi obligations, which will also allow flexibility to decline applications on grounds of offence. Therefore, ratification of UPOV 1991 may not be wholly incompatible with protection of Māori interests,

176 Woods, above n 113, at 110.

177 *Discussion Paper*, above n 46, at 11.

178 At 19.

179 At 19.

180 Woods, above n 113, at 101–102.

181 UPOV 1991, art 17(1); and Woods, above n 113, at 110–111.

A further concern is that the traditional UPOV-based plant variety right system may not be suitable for contexts outside of Europe. The UPOV Conventions, and legislation based on them, have certainly emerged as the de facto system for plant protection across the globe, even though TRIPS provides signatories total freedom as to how to protect plant species.¹⁸² The UPOV Conventions were developed in the context of a well-developed and highly commercial plant variety industry in Europe, and may not therefore be well suited for countries with vastly different economic, social and cultural conditions.¹⁸³ Yet developing nations have overwhelmingly implemented the UPOV Conventions, often due to political and trade pressures.¹⁸⁴ A study of the African continent found that the UPOV Conventions do not appear to be incentivising investments in plant breeding as intended.¹⁸⁵ Since the system was introduced in 2006, only 12 new plant variety rights have been granted across 17 countries.¹⁸⁶ Notably, across Africa, over 82 per cent of farms are smaller than two hectares, meaning that there are far fewer large commercial farms compared to other states. Further, the plant breeding industry is overwhelmingly led by the public sector as opposed to the privatised breeding industry in Europe and other developed nations.¹⁸⁷ This same analysis can extend to New Zealand. The UPOV Conventions were developed in a context wholly different to the New Zealand circumstances and thus do not consider many New Zealand-specific issues, such as Māori intellectual property rights and the relative importance of the agricultural sector. Ultimately, in considering whether or not to ratify UPOV 1991, New Zealand must choose between ensuring that the plant breeding industry maintains parity with overseas trading partners, and maintaining the flexibility to create a framework more suited for the New Zealand context, even if it does not comply with UPOV 1991.

IV SUGGESTED AMENDMENTS

To address the issues identified in this article, New Zealand has several options when amending the Plant Variety Rights Act. Amendments could be made within the current framework of the Act, or some areas of concern may be better protected outside of the Act — perhaps under separate legislation or removed from the plant variety rights scheme entirely. This latter option may best address concerns from Māori and environmental stakeholders. After balancing the interests of all stakeholders and determining the most appropriate changes be made, New Zealand will then need to consider whether these amendments would allow UPOV 1991 to be ratified and, if so, whether

182 TRIPS, above n 166, art 27(3)(b).

183 Smith and Bragdon, above n 111, at 19.

184 Correa, above n 84, at 2.

185 Munyi and De Jonge, above n 112, at 18.

186 At 19.

187 At 18.

ratification is actually desirable when considering New Zealand's other interests.

Considering the issues with the current legislation, the best option for the Plant Variety Rights Act moving forward is to adopt most of the UPOV 1991 provisions but introduce the ability for the Commissioner or a Māori Advisory Committee to object to the granting of a right over culturally significant varieties. The definition of "owner" should be updated to match that in UPOV 1991; that is, removing the ability for a discoverer to register a plant variety right. New Zealand should also maintain the farmers' exception to protect the primary sector. The revenue that breeders would lose in maintaining the farmers' exception would be offset by allowing the plant variety right to cover essentially derived varieties. On balance, breeders would still enjoy increased rights without affecting the current rights of farmers. There would still be the risk that protecting essentially derived varieties may infringe upon Māori rights over their indigenous species, but this would be counterbalanced by giving the Commissioner the power to decline a variety right that is potentially culturally offensive.

Specifically, to address the problems outlined in Part III of this article, New Zealand should make the following amendments:

1. Extending breeders' rights over reproductive material, harvested material and products made from harvested material to match art 14 of UPOV 1991;
2. Extending plant variety rights to cover essentially derived varieties;
3. Removing compulsory license provisions;
4. Removing the word "discovered" from the definition of owner;
5. Creating a Māori Advisory Committee to bring a Māori voice to variety right applications affecting Māori; and
6. Clarifying the extent of the farm saved seed exception.

These changes will involve amending most of the main provisions of the Plant Variety Rights Act, as well as adding new sections to provide for the farmers' exception and clarifying the objections that can be made by those with Māori cultural interests.

How Will These Amendments Address Breeders' Concerns?

The proposed amendments mean that plant breeders will receive most of the protections provided under UPOV 1991. Specifically, breeders will benefit from removing the compulsory license provisions; obtaining control over import, export and marketing of plant variety material; and extending protection to cover essentially derived species. However, to offset this, New Zealand would retain the farm saved seed exception, and the granting of variety rights would require approval from the Māori Advisory Committee. This balances out the increase in rights to breeders, so that the plant variety rights scheme is not so overwhelmingly in favour of a monopoly. Breeders may begrudge having fewer rights than those in countries that have ratified UPOV 1991, but overall, their rights would still increase significantly.

How Will These Amendments Address Farmers' Concerns?

By retaining the farm saved seed exception, farmers will not have to pay additional royalties to use protected varieties. This will address concerns that the increased costs from paying these royalties will be passed on to consumers and weaken New Zealand's competitive advantage internationally in the primary sector.¹⁸⁸ However, as discussed above, breeders and other major users of protected seed may consider it unfair to maintain the farm saved seed exception in its entirety. Accordingly, the 2002 review of the Plant Variety Rights Act recommended that only some species be covered under the farm saved seed exception, with farmers needing to pay a royalty to use the rest.¹⁸⁹ This approach is a fair compromise of rights, but is also more complicated to implement than a blanket exception. Thus, this article does not recommend setting out specific species to which the exception will apply, as it could lead to disagreement about which species should qualify and which should not, heightening the dispute between farmers and breeders. While some farmers have, in principle, agreed to pay more,¹⁹⁰ any financial contribution should be kept to the payment of levies for research and development.

How Will These Amendments Address Māori Concerns?

Granting the Commissioner the ability to decline a plant variety right based on cultural offence and competing kaitiaki interests would be in line with the recommendations of the *Wai 262 Report* and wider Māori interests. However, to adequately address Māori concerns in practice, the Commissioner must understand Māori concepts of ownership over plant varieties and give adequate opportunity for Māori to present objections to potential variety right grants, meaning that the existence of the Māori Advisory Committee to assist is potentially necessary. The possibility of a variety right application being declined due to Māori objection would encourage breeders to consult with Māori when creating a variety based on indigenous species or culturally significant plants. This would, in turn, reduce the number of potentially offensive varieties before they even reach the rights application stage. This ability to decline intellectual property protection already exists in the field of trademarks, where a Māori Advisory Committee can determine whether an invention is derived from Māori traditional knowledge or indigenous flora or fauna, and whether the use of the knowledge in this way would be culturally offensive.¹⁹¹ Since a similar mechanism is already in place, it would be fairly simple to install a Māori Advisory Committee to oversee plant variety rights in the same way.

The Commissioner should also be granted the power to refuse a denomination on the basis that it is offensive to Māori or others. Similar rights

188 Tizard, above n 130, at 2.

189 At 2.

190 *Summary of Submissions*, above n 71, at 5; and *Discussion Paper*, above n 46, at [58].

191 Patents Act, s 226.

already exist under the Trade Marks Act,¹⁹² and the Māori Advisory Committee could consult on this also. This same recommendation was made during the 2002 review of the Plant Variety Rights Act, but New Zealand never implemented this power due to the impending decision of the Waitangi Tribunal in the Wai 262 claim.¹⁹³

Changing the definition of “owner” to no longer include the word “discovered” would prevent indigenous flora from being misappropriated and protected against the wishes of Māori. However, under UPOV 1991, the corresponding term “breeder” is defined as “the person who bred, or discovered and developed, a variety”.¹⁹⁴ To comply with UPOV 1991, New Zealand would need to define “owner” to include “discovered and developed”, instead of merely removing the word “discovered” altogether, which would still leave Māori vulnerable to a plant variety right over a variety essentially derived from an indigenous species. Having a Māori Advisory Committee oversee the granting of rights would address this concern, but would also prevent New Zealand from ratifying UPOV 1991. Thus, Māori groups are likely to strongly oppose the ratification of UPOV 1991.

A more general problem for Māori with the current variety rights framework is that there are insufficient opportunities for Māori to protect their own cultural knowledge under the current requirements. If New Zealand ratifies UPOV 1991, this will limit future opportunities to create a framework that affords Māori the rights over indigenous species that have been cultivated over centuries. The reality of the situation is that New Zealand does not currently have a perfect method of protecting Māori interests, making it unlikely that the upcoming review will change this. The best way forward would be to fit the recommendations of the *Wai 262 Report* within the existing framework as far as possible and invest in developing a standalone Māori plant variety rights framework in the future.

Ultimately, the major priority of the current Plants Variety Act review should be to create a Māori Advisory Committee to assist the Commissioner in determining whether a plant variety right would affect Māori traditional knowledge or indigenous flora, and whether a denomination would be offensive to Māori. While this would not address all the concerns of Māori, it would at least be a big step forward from the current system.

How Will These Amendments Address Environmental Concerns?

The main environmental concern is how the Plant Variety Rights Act will directly or indirectly affect biodiversity. The Government can increase biodiversity by ensuring that the Act as a whole protects existing species and incentivises the production and usage of diverse species. A properly configured system of plant variety rights for breeders and farmers would provide the best balance of incentives to conserve vegetation. As no one *owns*

192 Trade Marks Act, s 178.

193 Tizard, above n 130, at 6.

194 UPOV 1991, art 1(iv).

discovered species, they exist in a jurisdictional void and can be vulnerable to biopiracy and exploitation, whereas species covered under the Act are protected by the monetary interest over them. In effect, a system of ownership rights over both existing and derived plant species may help to reduce the decline of global plant diversity. Removing the “discovered” limb of ownership in the Act by this logic could therefore be harmful to biodiversity. However, the environmental groups that made submissions to the 2002 review considered that it was more important to address Māori concerns.¹⁹⁵ Over the years that “discovered” has operated as part of the Plant Variety Rights Act, there is also no evidence of it contributing to conservation, as Māori in particular could not protect their discovered indigenous species due to other barriers. Overall, removing the word “discovered” is unlikely to be of major concern to environmental stakeholders.

Retaining the farmers’ exception was also a key concern of many environmental groups in the 2002 review, as it was thought that increasing the cost to the primary sector would encourage less diversity in crop selection and, therefore, reduce biodiversity over time.¹⁹⁶ Thus, retaining this exception in full would address this concern.

Can, and Should, New Zealand Ratify UPOV 1991?

If these suggested amendments are adopted, New Zealand would not be able to ratify UPOV 1991. It would not be possible to comply with UPOV 1991 while allowing the Commissioner to refuse to grant a plant variety right on cultural grounds, or if no consent had been obtained from the relevant iwi or hapū to use the indigenous variety.¹⁹⁷ As many stakeholders consider it important to ratify UPOV 1991 — and indeed, New Zealand may have to accede to it if the CPTTP is ratified — it may be unlikely that New Zealand will implement these changes. Many key international players in the plant breeding industry, such as the United States, the European Union and Switzerland, have firmly stated that UPOV 1991 provides the most effective protection for plant varieties, and that UPOV 1978 — the current level of protection to which New Zealand has agreed — is insufficient.¹⁹⁸ Thus, failing to ratify UPOV 1991 could prove disadvantageous to New Zealand should other states no longer wish to make their protected varieties available here.

While there may be methods of protecting Māori interests that comply with UPOV 1991 — and would therefore allow ratification — those methods would compromise the principles of the *Wai 262 Report*. For example, ss 6(2) and 15(2) of the Plant Variety Rights Act could provide Māori with an avenue to object to the grant of a plant variety right if the variety was discovered on

195 *Summary of Submissions*, above n 71, at 7.

196 At 6.

197 *Discussion Paper*, above n 46, at 32.

198 Tizard, above n 130, at 7.

Māori-owned land.¹⁹⁹ However, that avenue is limited: where a new variety is produced from a known indigenous variety, no objection can be made.²⁰⁰

Ultimately, there are many parts of UPOV 1991 that would be an improvement on the current plant variety rights scheme in New Zealand. However, this article has demonstrated that the Convention as a whole is unsuitable for New Zealand, due to the importance of accommodating Māori concerns within its legal framework. Of course, a UPOV-based system is not the only option available to New Zealand. By choosing not to ratify UPOV 1991, New Zealand can develop its own plant variety protection regime that is more consistent with its cultural and agricultural needs. It remains to be seen whether the Government will decide that ensuring New Zealand's competitiveness in plant breeding internationally is more important than ensuring fair and responsible treatment of Māori intellectual property and giving effect to the *Wai 262 Report* recommendations. The 2002 review of the Plant Variety Rights Act suggested that UPOV 1991 should not be ratified.²⁰¹ Although much has changed internationally since then, this article recommends that New Zealand does not ratify UPOV 1991.

Effect of the Recommended Amendments

New Zealand relies heavily on its agricultural sector to support the domestic economy and remain competitive internationally. Thus, increasing the rights of plant variety breeders is necessary to encourage further innovation and keep up with international developments. That said, while the Plant Variety Rights Act aims to protect breeders, New Zealand cannot disregard the interests of other stakeholders. Thus, New Zealand should maintain the farmers' exception, introduce the Māori Advisory Committee and decline to ratify UPOV 1991 to best produce a variety rights framework that works for all New Zealanders. It is critical that Māori rights over their traditional knowledge and indigenous plants not be forgotten, as much of the variation used to create plant varieties worthy of protection today was produced by Māori through centuries of cultivation using traditional Māori methods. Conserving this variation will in turn conserve biodiversity. Should New Zealand choose to award breeders more extensive rights than recommended in this article, and ratify UPOV 1991, the decision could ultimately discourage the use of these improved varieties. This will have the harshest impact on Māori and the agricultural sector. Therefore, this article proposes the recommended amendments with an eye to achieving the most efficient balance of rights and incentives between the stakeholders.

199 *Discussion Paper*, above n 46, at 32.

200 At 32.

201 Tizard, above n 130, at 7.

V CONCLUSION

The Plant Variety Rights Act is long outdated and fails to adequately protect the rights of breeders over their plant varieties. The current review must prioritise this issue. But it must also address other important concerns from Māori, environmental groups and the agricultural sector. Balancing the interests of these stakeholders would be difficult in any amendment, but the context surrounding the Act makes the task of the current review particularly challenging. Developments such as the *Wai 262 Report*, UPOV 1991, and the revisions of the Patents Act and Trade Marks Act highlight just how far behind the Plant Variety Rights Act has fallen when compared to New Zealand's international partners and even other fields within the intellectual property realm.

This article has recommended amendments that best balance the competing interests of all those affected by the Plant Variety Rights Act. It is impossible to grant breeders the protection over their varieties under UPOV 1991 without disregarding the recommendations of the Waitangi Tribunal in the *Wai 262 Report*. It is Māori who cultivated and introduced much of New Zealand's indigenous flora; it would be a mistake if legislation fails to reflect neither this history nor the principles of the Treaty of Waitangi. As such, New Zealand should not ratify UPOV 1991, despite it leaving international breeders open to refuse New Zealanders access to their protected varieties for fear of lack of reciprocal protection. New Zealand has operated without ratifying UPOV 1991 for over 20 years. Even if this failure to ratify the Convention results in serious consequences for the plant breeding industry, another amendment can always change this in the future. For now, it is apparent that the requirements of UPOV 1991 are not suitable for the unique cultural, social and agricultural conditions of New Zealand. Working towards a solution that accommodates the needs of Maori and New Zealand's agricultural sector, as well as its environmental balance, is more important for New Zealand than accession to international standards.