

TOWARDS A (LIMITED) CASCADING RIGHT: WHAT IS THE APPROPRIATE SCOPE OF PROTECTION FOR PLANT BREEDING?

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I INTRODUCTION

Traditionally, plant breeder's rights schemes have provided rights owners with the exclusive control of the propagating material (for example, cuttings, seeds or bulbs) of protected plant varieties. In 1991, the *International Convention for the Protection of New Varieties of Plants* ('UPOV Convention')¹ upon which the *Plant Breeder's Rights Act 1994* (Cth) ('*PBR Act*') is based introduced a 'cascading' right in which plant variety owners can, in certain circumstances, protect harvested material and products derived from harvested material.² To extend protection, authorisation from the plant breeder's rights owner is required in relation to harvested material (for example, fruit) or products derived from the protected variety (for example, fruit juice), unless the rights owner has had reasonable opportunity to exercise their right in relation to the propagating material. One of the challenges to understanding the operation of the scope of protection granted under the *PBR Act* is that there has been limited consideration, whether academic, judicial or policy based, of the scope of protection granted under plant breeder's rights schemes. One of the reasons why it is important to more thoroughly consider the scope of protection under plant breeder's rights schemes is because in January 2010, after a four year review, the Advisory Council on Intellectual Property ('ACIP') released its Final Report on the

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1 For a discussion of the history of the UPOV Convention see Graham Dutfield, 'Turning Plant Varieties into Intellectual Property: The UPOV Convention' in Geoff Tansey and Tasmin Rajotte (eds), *The Future Control of Food: A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security* (Earthscan, 2008) 27. For a discussion of some of the current concerns about the UPOV Convention see Graham Dutfield, 'Food, Biological Diversity and Intellectual Property: The Role of the International Union for the Protection of New Varieties of Plants (UPOV)', (Intellectual Property Issue Paper No 9, Quaker United Nations Office, February 2011) <http://www.quino.org/geneva/pdf/economic/Issues/UPOV%20study%20by%20QUNO_English.pdf>.

2 For an overview of the changes made to the UPOV Convention in 1991, see Barry Greengrass, 'The 1991 Act of the UPOV Convention' (1991) 12 *European Intellectual Property Review* 466.

enforcement of plant breeder's rights in Australia.³ After considering a range of issues including the nature and scope of plant breeder's rights, the farm saved seed exception and essential derivation, ACIP found that plant breeder's rights owners 'face significant obstacles to the effective enforcement of their rights'.⁴ Throughout the review process, one of the most common and contentious issues was the scope of protection granted to plant breeders. Indeed, ACIP concluded that a major problem was 'the uncertainty surrounding the operation of and the relationship between the exclusive rights granted to the [plant breeder's rights] owner, the extensions of these rights, their exemptions and their limitations'⁵ and that an expert panel be established that could analyse the legislation and case law, and provide more detailed advice on the scope of protection, particularly in relation to the requirement of reasonable opportunity.⁶

Another reason why it is important to consider the scope of protection under the *PBR Act* is because of questions about the role and significance of plant breeder's rights protection in encouraging and promoting innovative plant breeding and, more broadly, economic stability.⁷ Despite the generally held view that intellectual property regimes such as plant breeder's rights are necessary in order to provide an incentive for plant breeding programs, there are questions about whether such schemes provide the necessary incentive.⁸ While this article does not directly engage with questions about the justifications and rationales for plant breeder's rights, if the plant breeder's rights scheme's role in encouraging the development of new plant varieties in agricultural, horticultural and nursery industries is to be understood, then it is necessary to consider the scope of protection granted under the *PBR Act* from as many perspectives as possible.

Yet another reason why it is necessary to consider the scope of protection under the *PBR Act* is because of the relationship between patent law and plant

3 ACIP, *A Review of Enforcement of Plant Breeder's Rights*, Final Report (2010) <http://www.acip.gov.au/library/ACIP_PBR_Enforcement_Final_Report.pdf> ('*Review of Enforcement of PBR Report*'). In total, ACIP made 23 specific recommendations for the amendment of the *PBR Act* including proposed a number of substantive and procedural recommendations including adding a new 'purchase' right to the propagating material for specifically determined plant taxa, clarifying the farm saved seed provision and extending the declaration of essentially derived varieties to non-protected plant varieties. See also Australian Government, *Australian Government Response to the Advisory Council on Intellectual Property Report: A Review of Enforcement of Plant Breeder's Rights*, Advisory Council of Intellectual Property <http://www.acip.gov.au/library/pbr_enforcement_response.pdf>.

4 *Review of Enforcement of PBR Report*, above n 3, iii.

5 *Ibid* 30. More precisely a number of the submissions to ACIP's review lamented the lack of clarity surrounding the requirement of reasonable opportunity, and thus when and in what circumstances the plant breeder's right extends to harvested material (eg, fruit or soy beans) and products obtained from harvested material (eg, fruit juice or soy milk); pursuant to ss 14 and 15 of the *PBR Act* respectively.

6 The Australian Government did not support the formation of a separate body and noted that the Plant Breeder's Rights Advisory Committee ('PBRAC') can perform the functions of the Expert Panel as recommended by ACIP: see *Review of Enforcement of PBR Report*, above n 3, 8; Australian Government, above n 3.

7 *Review of Enforcement of PBR Report*, above n 3, 20–2.

8 For a general discussion see Dutfield, 'Food, Biological Diversity and Intellectual Property', above n 1. For a discussion of the justifications of intellectual property law see Robert P Merges, *Justifying Intellectual Property* (Harvard University Press, 2011).

breeder's rights. Due to the broader scope of protection granted under patent law, as well as the absence of broad ranging exceptions, there appears to be more interest in the use of the *Patents Act 1990* (Cth) to protect plant related innovations (including plant varieties).⁹ In Australia, the relationship between plant breeder's rights and patents may be explicitly or implicitly affected by ongoing reviews of patentable subject matter and the patenting of genes.¹⁰

This article aims to shed light on the scope of protection under the *PBR Act* by examining the historical context of the extension of plant breeder's rights beyond protected propagating material. It begins by outlining the relevant provisions of the *PBR Act* and by considering the broader context of the history and rationale of extended rights by describing the history of the discussions and arguments surrounding the scope of protection in the UPOV Convention. The article then considers the concept of reasonable opportunity and examines the limited jurisprudence that deals with the requirement of reasonable opportunity under the *PBR Act*. The article concludes by suggesting that in many respects the scope of protection, as well as the requirement of reasonable opportunity, is clear. Indeed, the history suggests that the 'cascading' rights were not intended to provide a general, discretionary alternative to overcome problems of enforcement and were only ever meant to operate in limited circumstances.

II THE SCOPE OF PROTECTION THAT IS 'APPROPRIATE' FOR PLANT BREEDING

Unlike the situation in patent law where the scope of protection is primarily limited by the claims of the granted patent, the *PBR Act* specifically defines the scope of protection that is appropriate for plant breeding. In general terms, the scope of protection granted by the *PBR Act* is characterised by an attempt to balance the two imperatives of protecting the work of plant breeders and not unreasonably restricting the use of plant varieties. In doing so, the *PBR Act* places limits on the plant material that is protected and the uses to which protection applies.

Plant breeder's rights schemes, including the *PBR Act*, generally limit protection to the propagating material (for example, cuttings, seeds or bulbs) of

9 For a discussion of the differences between plant variety rights and patent law, see Margaret Llewelyn and Mike Adcock, *European Plant Intellectual Property* (Hart Publishing, 2006) 8–37.

10 ACIP, *Patentable Subject Matter: Final Report*, Final Report (2010) <<http://www.acip.gov.au/library/ACIP%20PSM%20final%20report%204%20Feb%202011.pdf>>; Senate Community Affairs References Committee, Parliament of Australia, *Gene Patents* (2010). For a discussion of a recent Court of Justice decision in relation the patentability of genetic information in Europe, and its potential impact of plant breeder's rights see Vid Mohan-Ram, Richard Peet and Phillippe Vlaemminck, 'Biotech Patent Infringement in Europe: The "Functionality" Gatekeeper' (2011) 10 *The John Marshall Review of Intellectual Property Law* 539.

protected plant varieties.¹¹ Section 11 of the *PBR Act* provides the right to exclude others from doing certain specified acts (namely production, reproduction, conditioning, sale, import, export and stocking of the material for these purposes) in relation to the propagating material only of a variety.¹² Since the introduction of the *PBR Act* in 1994 it has also been possible, in certain circumstances, for plant breeder's rights owners to extend protection beyond the propagating material of protected plant varieties.¹³ Section 14 of the *PBR Act* extends the rights of plant breeder's rights owners to harvested material (for example, fruit) if protected propagating material is produced or reproduced without the authorisation of the rights owner, and the owner does not have a reasonable opportunity to exercise their rights in relation to the protected propagating material.¹⁴ Section 15 of the *PBR Act* provides a similar extension to products obtained from harvested material (for example, fruit juice) where the grantee does not have a reasonable opportunity to exercise their rights in relation to the propagating or harvested materials of the protected plant variety.¹⁵

In order to better understand the scope of protection granted under the *PBR Act*, it is necessary to consider the broader context and history of the scope of protection granted by the UPOV Convention; on which the *PBR Act* is based. In so doing the remainder of this Part examines why and how the scope of protection was extended in the UPOV Convention, as well as the discussions on the requirement of reasonable opportunity.

A Balancing the Needs of Breeders and Users (UPOV Convention (1961))

During the negotiations for the UPOV Convention in the 1950s a major concern for plant breeding organisations was that the proposed scope of protection granted to plant breeders, which was primarily over propagating material, was problematic. Of particular concern was whether protection should be limited to propagating material (such as seeds, bulbs and cuttings) of the protected plant varieties or whether it should extend to products obtained from the propagating material (such as flowers, fruit and perfume). Central to the arguments of those pushing for the protection of products was the idea that the destination of a plant variety was not always known at the time of production. This concern was encapsulated by professional groups such as the International

11 Section 3 of *PBR Act* defines 'propagating material' as 'any part or product from which, whether alone or in combination with other parts or products of that plant, another plant with the same essential characteristics can be produced'.

12 ACIP recommended that a new purchase' right be added to s 11 of the *PBR Act*, although this was rejected by the Australian Government which emphasised the use of contracts and that 'at this stage the balance between plant breeders and users, which is represented by the *PBR Act*, should be disturbed by conferring an additional right on plant breeders': Australian Government, above n 3, 4.

13 '[C]onforming to the 1991 UPOV Convention is expected to provide a greater stimulus than the *Plant Variety Rights Act 1987* to innovation by encouraging increased investment in plant breeding and technology transfer': Commonwealth, *Parliamentary Debates*, Senate, 24 March 1994 (John Faulkner).

14 *Plant Breeder's Rights Act 1994* (Cth) s 14.

15 *Plant Breeder's Rights Act 1994* (Cth) s 15.

Community of Breeders of Asexually Reproduced Ornamental and Fruit Plants ('CIOPORA'), who argued that limiting protection to propagating material was 'illusive' for vegetable production because plant breeding was a heterogeneous activity and the destination of the crop was not always known.¹⁶ On this basis, it was argued that the plant material that is protected should, therefore, be 'broadened to the commercialised finished product, and generally, to any part of the plant which can, whether on a major or minor basis, be used for propagation'.¹⁷

While it appears that there was in principle support for protecting products, any such extension had to be done 'without excessive difficulties'.¹⁸ Unsurprisingly, it was the agricultural and farmer groups who were opposed to extending protection. The number of countries invited to the Diplomatic Conference of 1957–61 was relatively small and the agricultural and farmer lobby groups were well represented with a strong united voice. As such, states were not willing to extend the scope of protection beyond propagating material because, in part at least, 'the harvested material is frequently an element of the food supply [and participating countries] were not willing to be required to extend the right of the breeder to the end product of the variety on a mandatory basis'.¹⁹ Furthermore, it was argued that extending protection to products was considered a question for individual countries by way of bilateral and multilateral arrangements. For instance, at the Diplomatic Conference of 1957–61, Spain proposed that protection should be extended to products in the following way:

Any member State of the Union can, within the framework of its national legislation or by way of agreements with one or several other states, establish for the authors and some kinds of species a much larger right than the one defined in the present article, a right which can extend all the way to the commercialized product.²⁰

The outcome of these discussions was that a balance was struck between the needs of plant breeders, researchers and growers. Instead of protecting the plant variety as a whole, it was decided that the best way to achieve control over plant varieties while at the same time, not hindering the use of protected varieties was to provide protection over the propagating material. The scope of protection was established by Article 5(1) of the UPOV Convention (1961) which stated that:

The effect of the right granted to the breeder of a new plant variety or his successor in title is that his prior authorization shall be required for the production, for purposes of commercial marketing, of the reproductive or vegetative propagating material, as such, of the new variety, and for the offering for sale or marketing of such material. Vegetative propagating

16 UPOV, *Actes des Conférences Internationales pour la Protection des Obtentions Végétales 1957-1961, 1972*, UPOV Publication No 316 (1972), 92. Parts of this publication were professionally translated into English; funded by the Australian Centre of Intellectual Property in Agriculture.

17 Ibid 92.

18 Ibid 85 (Switzerland).

19 Max Thiele-Wittig and Paul Claus, 'Plant Variety Protection A Fascinating Subject' (2003) 25 *World Patent Information* 243, 245.

20 UPOV, above n 16, 77.

material shall be deemed to include whole plants. The breeder's right shall extend to ornamental plants or parts thereof normally marketed for purposes other than propagation when they are used commercially as propagating material in the production of ornamental plants or cut flowers.

B Attracting Members (UPOV Convention (1978))

Further questions on the scope of protection under the UPOV were raised at the Diplomatic Conference of 1978. Again, it was the professional organisations such as the International Association of Plant Breeders for the Protection of Plant Varieties ('ASSINSEL'), the International Seed Trade Federation ('FIS') and CIOPORA that led the discussions on the scope of protection at the Diplomatic Conference of 1978. The professional organisations argued that Article 5(1) of the UPOV Convention (1961) was easily misunderstood and needed to be amended, or at the very least clarified. One argument was that because of the heterogeneous nature of plant breeding, restricting protection to propagating material was not appropriate for all plant breeding activities. CIOPORA argued that restricting protection to propagating material was 'illusory and that the problem arising is not only one of "extending" this right but also of ensuring that the minimum right may be normally exercised'.²¹ More specifically, CIOPORA argued that for numerous ornamental species (such as chrysanthemum, carnation and roses) the aim was to produce cut flowers, not propagating material. Furthermore, the trade in cut flowers often occurred across international borders and, because there were so few UPOV member states, this trade often involved countries that were not members of the UPOV Convention.²²

Plant breeding organisations also argued that the scope of protection provided by the UPOV Convention (1961) was deficient because the destination of a crop was not always known at the time of production.²³ While a plant variety may not have been originally produced for the purposes of commercial marketing, as the UPOV Convention (1961) required, the plant could end up being commercially marketed in a number of ways; not all of which were intentional or premeditated. As one commentator pointed out, the issue of knowing the destination of the crop was exacerbated because the product of the plant variety contained the 'means of production in a single fused form'.²⁴ At the Diplomatic Conference of 1978, FIS discussed the example of peas or beans that were being produced for canning.²⁵ FIS argued that when the production of peas or beans exceeded the canneries' handling capacity it was not unusual for the canneries to reserve the surplus

21 UPOV, *Records of the Geneva Diplomatic Conference of 1978*, UPOV Publication No 337(E) (1992) 120 (Report of the Working Group on Article 5, DC/82), 90.

22 CIOPORA proposed the extension of the plant variety right to 'vegetatively reproduced ornamental plants' to 'plants or parts thereof which are normally marketed for purposes other than propagation': *ibid* 91.

23 See, eg, *ibid* 112–13 (ASSINSEL); 117 (International Organization for Horticultural Produces).

24 Dwijen Rangnekar, 'GATT, Intellectual Property Rights, and the Seed Industry: Some Unsolved Problems' (Economics Discussion Paper No 96/5, Kingston University, 1996).

25 UPOV, *above n 21*, 144.

production for use as seed in the following year. The implication of this was that the destination of the peas and beans was not always known in advance: primarily because it was only after the cannery had ‘found that they could not use for canning all the peas or beans produced then they changed the destination of the samples into that of use as seed in the following year’.²⁶ In a strict sense, then, FIS argued that the canneries were not producing peas or beans ‘for the purposes of commercial marketing of the reproductive or vegetative propagating material’ as set out by the UPOV Convention (1961).

Despite the pleas of the breeder organisations at the Diplomatic Conference of 1978, the Secretary-General of UPOV stated that at least part of the agitation on Article 5 of the UPOV Convention (1961) was ‘based on misunderstandings’.²⁷ In addressing this issue, a Working Group on Article 5 was established to ‘examine questions with respect to the scope of protection as laid down in Article 5 of the Convention’.²⁸ However, an obstacle to the success of the argument for extending protection to other plant material was that, while consistent in message, the arguments were specifically related to the interests of particular plant breeders and industries, notably the ornamental and cut flower industries. Furthermore, any decision on extending the right was mediated by the overall aim of the Diplomatic Conference of 1978: that is, to make the UPOV Convention (1978) more attractive to potential member states.

As a consequence, it was generally felt that extending the scope of protection would make UPOV less attractive to potential members and that ‘an “extension” of the minimum protection provided for in Article 5(1) could compromise ratification of the revised text or accession to it’.²⁹ A key factor here was the fear that any extension of the plant variety owners’ right would impact on the protected uses, most notably the farmers’ privilege or farm saved seed exception which had been read into Article 5 of the UPOV Convention (1961). This meant that member states were not politically supportive of changing either the protected plant material or the protected uses set out by the UPOV Convention.³⁰

Presenting its report, the Working Group reiterated that Article 5 was the ‘cornerstone’ of the UPOV Convention,³¹ and argued that, in regard to the UPOV Convention (1978), there should not be substantive amendments to the wording of Article 5. The Working Group suggested that Article 5 should be rearranged to ‘make it more clear that all three activities requiring prior authorisation by the breeder: production for purposes of commercial marketing, offering for sale and/or marketing related equally to the reproductive and vegetative propagating material as such.’³²

26 Ibid.

27 Ibid 179.

28 Ibid 120 (Report of the Working Group on Article 5, DC/82).

29 Ibid 90 (CIOPORA).

30 Ibid 144-50.

31 Ibid 120 (Report of the Working Group on Article 5, DC/82).

32 Ibid 120.

The suggestions of the Working Group were accepted by member states and adopted in Article 5(1) of the UPOV Convention (1978). So, while there was some clarification of the protected uses under Article 5(1), there was no change to the plant material protected by the UPOV Convention.³³ Article 5(1) of the UPOV Convention (1978) provides that:

The effect of the right granted to the breeder is that his prior authorisation shall be required for

- the production for purposes of commercial marketing
- the offering for sale
- the marketing
- of the reproductive or vegetative propagating material, as such, of the variety.

Vegetative propagating material shall be deemed to include whole plants. The right of the breeder shall extend to ornamental plants or parts thereof normally marketed for purposes other than propagation when they are used commercially as propagating material in the production of ornamental plants or cut flowers.

C Cascading Rights, Reasonable Opportunity (UPOV Convention (1991))

While professional breeder organisations continued to argue for extending the scope of protection under plant breeder's rights schemes,³⁴ the Diplomatic Conference of 1991 was notable for the support of member states. Indeed, the proposed text outlined a number of alternatives for extending protection to the harvested material of the protected plant variety and to products made directly from harvested material of the protected variety.³⁵ This prompted heated discussion at the Diplomatic Conference of 1991 as the scope of protection was one of the main provisions designed to strengthen the position of the plant variety owner. There were a number of issues for consideration. First, it was again the nursery and ornamental industries that were pushing for extended rights. The

33 UPOV Convention (1978) retained the option to extend protection to 'plants or parts thereof' when they are used commercially as propagating material in the production of ornamental plants or cut flowers.

Although, few countries appeared to implement the extended version of the right: See Sandro Hassan, 'Ornamental Plant Variety Rights: A Recent Italian Judgement' (1987) 18 *International Review of Industrial Property and Copyright Law* 219.

34 For a discussion about this see Joseph Straus, 'Protection of Inventions in Plants' (1989) 20 *International Review of Industrial Property and Copyright Law*, 619; Joseph Straus, 'The Relationship Between Plant Variety Protection and Patent Protection for Biotechnological Inventions from an International Viewpoint' (1987) 18 *International Review of Industrial Property and Copyright Law* 723; Barry Greengrass, 'UPOV and the Protection of Plant Breeders Past Developments, Future Perspectives' (1989) 20 *International Review of Industrial Property and Copyright Law* 622; Bernhard Roth, 'Current Problems in the Protection of Inventions in the Field of Plant Biotechnology: A Position Paper' (1987) 18 *International Review of Industrial Property and Copyright Law* 41.

35 UPOV, *Records of the Geneva Diplomatic Conference of 1991*, UPOV Publication No 346(E) (1992), 28–31.

Working Group on Article 14(1)(a) and (b) questioned whether ‘a solution should be found only with respect to ornamental plants and fruits or whether a more general solution should be sought.’³⁶ However, despite the fact that the ‘present problems arose mainly in the field of ornamental plants and fruits’, the Working Group concluded that it was best to provide a more general extension.³⁷

A second issue of discussion, raised by the Spanish delegation, was whether the extension to harvested material should be optional. While it was argued that this would ‘permit the special circumstances of each country social and political to be taken into account’,³⁸ this proposal received widespread criticism and was quickly rejected. A second point of discussion concerned whether plant variety owners should be granted absolute discretion to exercise their right at any stage of production, namely either over the protected propagating material, the harvested material or products derived from the harvested material. To this end, the Japanese delegation suggested a so-called ‘cascade principle’ so that the relationship between plant variety owners and the users of plant varieties would not be unpredictable and inconsistent.³⁹

The cascading principle became central to the extension of the scope of protection under the UPOV Convention (1991), which was outlined in Article 14; and forms the basis of sections 14 and 15 of the *PBR Act*. Significantly, though, the plant variety owners’ right remains primarily over the propagating material of the protected plant variety, as set out by Article 14(1)(a) of the UPOV Convention (1991):

Subject to Articles 15 and 16, the following acts in respect of the propagating material of the protected variety shall require the authorization of the breeder:

- (i) production or reproduction (multiplication),
- (ii) conditioning for the purpose of propagation,
- (iii) offering for sale,
- (iv) selling or other marketing,
- (v) exporting,
- (vi) importing,
- (vii) stocking for any of the purposes mentioned in (i) to (vi), above.

Although Article 14(1)(a) grants protection to propagating material, it amends the scope of protection in a number of ways. One way in which Article 14(1)(a) differs from Article 5(1) of the UPOV Convention (1961) and the UPOV Convention (1978) is that it does not limit protection to ‘commercial marketing’. The aim of Article 14(1)(a) was to cover ‘all the acts we could

36 Ibid 145.

37 Ibid 145.

38 Ibid 311.

39 Ibid 314–15. The ‘cascading’ principle was supported by Spain, Canada and Australia; however, the United States was opposed to the ‘cascading’ principle.

imagine which could apply to plant varieties'.⁴⁰ In doing so it enumerates the exclusive activities over which owners are able to exercise control in relation to the propagating material of protected plant varieties. As a result, protection covers most uses of the plant variety.⁴¹ As well as outlining the uses to which protection is granted, the UPOV Convention (1991) extends protection in two ways. The first extension of the protected plant material is to harvested material obtained through the unauthorised use of protected propagating material. This is achieved by Article 14(2), which states:

Subject to Articles 15 and 16, the acts referred to in items (i) to (vii) of paragraph (1)(a) in respect of harvested material, including entire plants and parts of plants, obtained through the unauthorized use of propagating material of the protected variety shall require the authorization of the breeder, unless the breeder has had reasonable opportunity to exercise his right in relation to the said propagating material.

Article 14(2) potentially overcomes the problem of knowing the destination of crops at the time of production. As we have seen, in the case of ornamental plant varieties that are bred to produce cut flowers, limiting the right to propagating material was problematic as a plant variety can be taken to a country where no protection is available and then be propagated to produce the end product, in this case cut flowers. The cut flowers can then be exported to countries where the rights owner has legal rights. Whilst rights owners did not have recourse under the UPOV Convention (1961) or the UPOV Convention (1978) to protect the cut flowers, under the UPOV Convention (1991) the plant variety owner can exercise their rights over the cut flowers (as harvested material).

A further (optional) extension to the scope of protection under the UPOV Convention (1991) is to products derived directly from the harvested material. The extension of the scope of protection to products derived directly from harvested material generated a great deal of opposition. One concern was that exercising rights in relation to such products was 'impossible or at least extremely difficult' because the identification of the protected plant variety would be difficult.⁴² Despite such concerns, it was generally agreed that any problems associated with proof were not sufficient reason to refuse extending the right granted. As a result, member states were given the option of extending protection to products made directly from harvested material in Article 14(3) of the UPOV Convention (1991) which states:

Each Contracting Party may provide that, subject to Articles 15 and 16, the acts referred to in items (i) to (vii) of paragraph (1)(a) in respect of

40 John Ardley, 'The 1991 UPOV Convention, Ten Years On' in Margaret Llewelyn, Mike Adcock and Marie-Jo Goode (eds), *Proceedings of the Conference on Plant Intellectual Property within Europe and the Wider Global Community* (2002).

41 Although the right is subject to Article 15 ('Exceptions to the Breeder's Right') and Article 16 ('Exhaustion of the Breeder's Right').

42 UPOV, above n 35, 406.

products made directly from harvested material of the protected variety falling within the provisions of paragraph (2) through the unauthorized use of the said harvested material shall require the authorization of the breeder, unless the breeder has had reasonable opportunity to exercise his right in relation to the said harvested material.

By extending protection, Article 14(3) gives plant breeder's rights owners the ability to exercise their rights in relation to products derived directly from harvested material. Although this is only going to be relevant in a small number of cases, it is still important. This is the case, for example, when propagating material is exported without authorisation to a country where it is reproduced and used to produce products which are then imported into the country of origin. In addition, Llewelyn and Adcock suggest that Article 14(3) provides 'protection for such derivatives of plants as essential oils (used in the perfume and aromatherapy industries) and medicines (for example, herbal remedies and vaccines).'⁴³

Significantly, while the plant breeder's right was extended by Articles 14(2) and (3) of the UPOV Convention (1991), the intention was not to provide a right over the entire plant variety or the whole plant. In this way, the UPOV Convention (1991) does not extend unconditional protection to harvested material and products derived from harvested material. As we have seen, it was felt that granting unconditional protection would lead to uncertainty and be problematic for the users of protected plant varieties. To overcome this problem, the 'cascading principle' was introduced by Articles 14(2) and (3). This 'cascading principle' qualifies when the scope of protection will be extended beyond the propagating material of the protected plant variety. During the Diplomatic Conference of 1991, the Basic Proposal put forward was that the right would only be extended if there was 'no legal possibility' to exercise the rights at an earlier stage.⁴⁴ However, it was felt that stipulating that it was a requirement that the owner had no possibility of exercising their rights (either over the propagating material or harvested material) would be too narrow.

Instead, the UPOV Convention (1991) adopts the language of reasonable opportunity. More specifically, the plant variety right will only extend to the harvested material or products derived directly from the harvested material if the plant variety owner has not had a reasonable opportunity to exercise their right in relation to the propagating material or the harvested material.⁴⁵ Importantly, the requirement of reasonable opportunity has imbued the UPOV Convention with legal language.

During the Diplomatic Conference of 1991, there were two notable proposals made on the notion of reasonable opportunity. The Japanese delegation argued

43 Llewelyn and Adcock, above n 9, 224.

44 The Basic Proposal, presented at the Diplomatic Conference of 1991, is reproduced in UPOV, above n 35, 11-61. The Basic Proposal for Article 14 can be found at UPOV, above n 35, 30.

45 The harvested material or product must also be obtained through the unauthorised use of propagating material or the harvested material respectively.

that there should be a question of ‘due care’ when determining the cascading rights found in Articles 14(2) and (3).⁴⁶ While the Working Group accepted ‘in principle’ the requirement of due care, they stated that this was included in the concept of reasonableness and did not need to be explicitly stated.⁴⁷ Another suggestion, which was similar to the Basic Proposal, was to extend the right to harvested material and to products derived directly from the harvested material only if it had been ‘impossible’ to exercise the right in respect of the propagating material.⁴⁸ This would have seriously limited when the plant variety owner could exercise their rights over anything more than the propagating material, and was rejected by those present at the Diplomatic Conference of 1991. In adopting Article 14 into the UPOV Convention (1991) delegates noted that there would be ‘consequences arising from the extended scope of protection in the 1991 Act can be envisaged’.⁴⁹

III THE REASONABLE OPPORTUNITY REQUIREMENT

Central to the extension of plant breeder’s rights to harvested material and products obtained from harvested material is the requirement of reasonable opportunity. That is, for either sections 14 or 15 of the *PBR Act* to apply the rights owner must not have had a reasonable opportunity to exercise their rights earlier in the supply chain; either over the propagating material (if section 14 is to apply) or the propagating material or harvested material (if section 15 is to apply).

A number of the submissions made to the ACIP Final Report raised concerns about the requirement of reasonable opportunity. One reason for the concern is the belief that there was a lack of detail in the first *Cultivaust* judgment and that the comments of the Full Federal Court of Australia has created uncertainty as to what constitutes a reasonable opportunity. As a consequence a portion of the plant breeding industry believes that to be able to rely on extended rights they are required to engage in ‘a complex and costly series of contracts. Only if these failed would it be considered that the PBR owner did not have a reasonable opportunity over the propagating material’.⁵⁰

Other concerns about the requirement of reasonable opportunity relate to the relationship between the extended rights and the farm saved seed exception. More specifically there are questions about whether protected propagating material that is saved is subject to extended rights (that is, does any saved propagating material become harvested material) and whether, in such circumstances, royalties on harvested material that is also propagating material

46 UPOV, above n 35, 119–20.

47 Ibid 144–8.

48 Ibid 128 (Spain DC/91/82), 119 (Japan, DC/91/61).

49 Barry Greengrass, ‘The 1991 Act of the UPOV Convention’ (1991) 12 *European Intellectual Property Review* 466, 470.

50 *Review of Enforcement of PBR Report*, above n 3, 46.

can be sought under section 11 and so avoid sections 14 and 15.⁵¹ In this way, a number of submissions to the ACIP inquiry conflated the question of extended rights with their concerns over farm saved seed. For example, the Victorian Farmer's Federation said there was considerable confusion over how reasonable opportunity relates to farm saved seed because '[m]ost growers feel that once seed has been paid for it can be saved for following years as propagating material. In general, growers are not aware that their responsibilities may continue beyond that, however nor is the legislation clear if it does'.⁵²

Based on the concerns about the requirement of reasonable opportunity a number of proposals were submitted to ACIP including testing the meaning of sections 14 and 15 in court; amending the *PBR Act* in some way, such as by adding a definition of 'reasonable opportunity'; removing the requirement of reasonable opportunity (so that rights owners would still only have access to extended rights where there has been unauthorised reproduction of the material); or by seeking the opinion of an expert panel.⁵³ In ACIP's view, as most of the concerns about extended rights related to the grains industry, they can be addressed by clarifying that royalties can be obtained on the harvested grain under section 11; rather than section 14.⁵⁴ As a consequence ACIP recommended that the *PBR Act* 'be amended to clarify that harvested material that is also propagating material is to be considered as propagating material for the purposes of s 11, even if it is not being used for that purpose'.⁵⁵ Whilst ACIP did not recommend any change to the requirement of reasonable opportunity under section 14 or 15 of the *PBR Act*, they did recognise the uncertainty surrounding the concept, and acknowledged that is necessary to analyse the legislation and case law, and thus provide more detailed advice on the requirement of reasonable opportunity.⁵⁶

51 For a discussion of end point royalties see Jay Sanderson, 'Back to the Future: Possible Mechanisms for the Management of Plant Varieties in Australia' (2007) 30 *University of New South Wales Law Journal* 686.

52 *Review of Enforcement of PBR Report* above n 3, 46.

53 *Ibid.*

54 In its Final Report, ACIP details some examples of when extended rights might apply including where a cereal variety is propagated without the authorisation of the breeder's rights owner, but the owner can identify the resulting flour produced from the harvested grain; where a protected fruit tree is reproduced by grafting without the authorisation of the rights owner but the resulting fruit on the market can be identified; or where a protected ornamental variety is reproduced without the rights owner's knowledge but the resulting plants or cut flowers on the market can be identified: *Ibid* 43.

55 *Ibid* 7, 42.

56 *Ibid* 8. This was accepted by the Australian Government: Australian Government, above n 3.

In Australia the question of reasonable opportunity was considered in the 2004 Federal Court of Australia decision of *Cultivaust v Grain Pool Pty Ltd*.⁵⁷ In *Cultivaust*, Mansfield J examined the conditions under which the plant breeder's rights owners' right would extend to harvested material of the protected plant variety.⁵⁸ In his view, according to section 14 of the *PBR Act* saved seed would be categorised as 'harvested material' if two conditions are satisfied:⁵⁹ where the use of the second (or subsequent) generation crop has not been authorised by the plant breeder's rights owner;⁶⁰ and where the rights owner has not had a reasonable opportunity to exercise their rights in relation to the propagating material of the protected variety.⁶¹

Importantly, according to Mansfield J, *Cultivaust* had known that the farmers were saving the seed and harvesting second and subsequent generation crops without authority. It was also relevant that *Cultivaust* had not entered into a contract or agreement with the respondent (the Grain Pool of Western Australia) for the supply of the Franklin barley. More specifically Mansfield J found that *Cultivaust* provided Franklin barley seed to the Grain Pool of Western Australia without having secured 'any firm commitment to pay an end point royalty' and that '*Cultivaust* could have refrained from supplying seed until it had a clear written commitment in terms which were satisfactory to it'.⁶² Mansfield J concluded that:

Cultivaust acknowledged that it expected growers in the 1992 growing trial to retain some farm-saved seed. Mr Semmler expected to exercise plant variety rights to control future crops grown from farm-saved seed from the 1992 growing trials, but as I have found no steps to do so were taken against the growers.⁶³

It is generally assumed that the *Cultivaust* decision does little in the way of providing clear guidance on the nature of extended rights in Australia.⁶⁴ It has been suggested that one of the problems of the *Cultivaust* decision is that even though Mansfield J found that the rights' owner had known that the farmers were saving the seed and harvesting second and subsequent generation crops without authority, and thus had a reasonable

57 (2004) 62 IPR 11 ('*Cultivaust*'). Another case, albeit in a different jurisdiction, to deal with the question of reasonable opportunity was a 2006 German Supreme Court decision involving two *Calluna vulgaris* (commonly referred to as Ling or Scotch Heath) plant varieties. In the German Supreme Court's view, the rights owner did not have a reasonable opportunity to act on the propagating material because the plant varieties were not protected in France. Rather, the two *Calluna vulgaris* varieties were reproduced and grown in France, where there was no plant variety protection, and were then imported back to Germany to be sold as plants. As a consequence it was only when the plants were sent back to and traded in Germany (as harvested material) that the plant variety owner was able to exercise their rights. For a summary see UPOV, *Plant Variety Protection: Gazette and Newsletter*, No 100 (2006) 11–13 <http://www.upov.int/en/publications/gazette/pdf/gazette_100.pdf>.

58 *Plant Breeder's Rights Act 1994* (Cth) s 14.

59 *Cultivaust Pty Ltd v Grain Pool Pty Ltd* (2004) 62 IPR 11, 51.

60 *Plant Breeder's Rights Act 1994* (Cth) s 14(1)(a).

61 *Plant Breeder's Rights Act 1994* (Cth) s 14(1)(b); *Cultivaust Pty Ltd v Grain Pool Pty Ltd* (2004) 62 IPR 11, 57.

62 *Cultivaust Pty Ltd v Grain Pool Pty Ltd* (2004) 62 IPR 11, 57.

63 *Ibid.*

64 See, eg, *Review of Enforcement of PBR Report*, above n 3, 45.

opportunity to exercise their rights, Mansfield J did not go into any detail on how the plant variety owners would have exercised their rights over the saved seed, other than to say that they had a reasonable opportunity to do so.⁶⁵ Adding to the uncertainty over the requirement of reasonable opportunity in the *PBR Act*, Cultivaust appealed the decision to the Full Federal Court, based on the proper construction of section 18 of the *PBR Act* and the use of the harvested material (barley) as food.⁶⁶ In October 2005, Finn, Emmett and Bennett JJ dismissed the appeal and in the process expressed doubt about Justice Mansfield's construction of section 14. The Full Federal Court considered that Mansfield J confused the distinction between the primary rights under section 11 of the *PBR Act*, and the secondary rights that arise by way of infringement under section 53(1) of the *PBR Act*. In questioning aspects of Justice Mansfield's decision, the Full Federal Court stated that:

if s 14(1) be relevant, the primary judge may have misconstrued s 14(1)(b) in failing to distinguish between the grantee's rights under s 11 and the secondary rights that arise by reason of infringement of that right, as provided for in s 53(1). In light of the conclusion reached [above], it is unnecessary to resolve that question but it should not be thought that his Honour's view of ss 14(1)(b) and 15 (b) would necessarily be endorsed if the question arises in the future.⁶⁷

Despite these concerns over the *Cultivaust* decision, it was the knowledge that farmers were saving seed and the absence of a contract that led Mansfield J to conclude that Cultivaust did have a reasonable opportunity to exercise their rights over the propagating material as required by section 14 (1)(b) of the *PBR Act*. While Mansfield J did not go into any further detail on how the plant variety owners would have exercised their rights over the saved seed, other than to say that they had a reasonable opportunity to do so, Mansfield J identified possible *indicia* of what constitutes a reasonable opportunity. According to Mansfield J, the *indicia* of what constitutes a reasonable opportunity were knowing that such crops were being grown and harvested, understanding that the crops were themselves subject to the plant variety rights protection, and, if relying on another entity (for example, to obtain some form of payment or royalty), knowledge that there had been no agreement in relation to payments or royalties on the harvested material.

The question of whether a rights owner has had a reasonable opportunity to exercise their rights (over either the propagating material or the harvested

65 Though, on the facts, according to Mansfield J the *indicia* of what constitutes a 'reasonable opportunity' were knowing that such crops were being grown and harvested, understanding that the crops were themselves subject to the *Plant Breeder's Rights Act 1994* by reason of section 14, and if relying on another body (eg, to obtain end point royalties) knowledge that there had been no agreement: *Cultivaust Pty Ltd v Grain Pool Pty Ltd* (2004) 62 IPR 11, 50–1.

66 Section 18 was subsequently repealed so that the exemption applies to acts authorised under a law of the Commonwealth or of a State or Territory, not food, food ingredients or fuel.

67 *Cultivaust Pty Ltd v Grain Pool Pty Ltd* (2005) 147 FCR 265, 277.

material) has introduced a level of indeterminacy to the *PBR Act*.⁶⁸ However, this needs to be embraced as strength rather than lamented as a weakness. To suggest that a prescriptive list or a detailed definition of what constitutes a reasonable opportunity is necessary, or even possible, ignores the heterogeneity of plant breeding, the complexity of the issue and the differing practices of the users of plant varieties. Furthermore, expecting certainty as to what constitutes reasonable opportunity is not only unrealistic it ignores the juridical nature of plant breeder's rights scheme. On the issue of reasonableness, the Australian Plant Breeder's Rights Advisory Committee made the point that there will always be some element of uncertainty, but:

The concept of reasonableness is well known to the law. It concerns an objective assessment as to what is or what is not reasonable in all the circumstances. There has never been legislation codifying the meaning of 'reasonable' with good reason. For example the circumstances in any two cases are rarely the same.⁶⁹

In Australia, part of the difficulty of trying to establish the meaning of reasonable opportunity is that the introduction of extended rights to the *PBR Act* was seen as a way of limiting the impact of farm saved seed. Bodies such as the Grains Council of Australia and the National Farmers Federation were influential in the introduction of the *PBR Act*, and the benefit of extending protection to harvested material and products was enabling the imposition of 'breeder royalties on delivery of grains thereby providing incentive for investment in breeding Australia's principal grain crops'.⁷⁰ The concern over farm saved seed is explicitly acknowledged in section 14(2) of the *PBR Act* which stipulates that the extension to harvested material 'applies to so much of the material harvested by a farmer from propagating material conditioned and reproduced in the circumstances set out in subsection 17(1) as is not itself required by the farmer, for the farmer's own use, for reproductive purposes'.⁷¹

The reliance on sections 14 and 15 of the *PBR Act* to combat farm saved seed departs from the history and rationale of the provisions in the UPOV Convention. It was the nursery and ornamental industries who mobilised support for the extension of plant breeder's right to harvested material and products. During the Diplomatic Conference of 1978, a key factor in the rejection of extending protection was that any extension of the owners' right would adversely impact on the farm saved seed exception which had been read into Article 5 of the UPOV Convention (1961).⁷² Even at the Diplomatic Conference of 1991 the Working Group on Article 14(1)(a) and (b) questioned whether 'a solution should be found

68 The issue of indeterminacy in law has been the subject of discussion and debate for some time, with scholars such as Hart, Dworkin, legal realists and Critical Legal Studies: see Ken Kress, 'Legal Indeterminacy' (1989) 77 *California Law Review* 283; Brian Bix, *Law, Language and Legal Determinacy* (Clarendon Press, 1995).

69 PBRAC, *Submission on ACIP Review of Enforcement of PBR Options Paper*, Advisory Council on Intellectual Property, 4 <http://www.acip.gov.au/pbr_options_subs/Plant%20Breeder's%20Rights%20Advisory%20Committee.doc>.

70 Explanatory Memorandum, Plant Breeder's Rights Bill 1994 (Cth) 6. See also above n 3.

71 *Plant Breeder's Rights Act 1994* (Cth) s 14(2).

72 UPOV, above n 21, 144–50.

only with respect to ornamental plants and fruits or whether a more general solution should be sought.⁷³

Another important consideration in understanding the requirement of reasonable opportunity under the *PBR Act* is the proliferation of contracts and licences with plant varieties. Whilst the use of contracts is not necessarily new in the protection of plant varieties, the *PBR Act* places the use of contracts squarely within the protection of plant varieties. The result of this is that the requirement of a reasonable opportunity, and the indeterminacy contained therein, places an obligation on plant variety owners to enter into contracting or licensing agreements with the users of their protected plant variety; so that contracts are a part of modern thinking and practice in the distribution of plant varieties, as well as part of the normative assumptions that arise from that practice.

Taken together, the focus on farm saved seed and the proliferation of contracts means that it is arguable that, in Australia, a plant breeder's rights owner will not have a reasonable opportunity to exercise their rights on the propagating or harvested material in very limited circumstances. In *Cultivaust*, Mansfield J stated that '[a]t the time of the initial sale of certified Franklin barley, Tasmania and Cultivaust could have imposed conditions upon the disposition of second and subsequent generations of crop'.⁷⁴ As I have previously argued if extended rights under section 14 are relevant to the interpretation and application of farm saved seed 'based upon the "alleged" prevalence of seed saving by Australian farmers (and the awareness of this fact by plant breeders and seed sellers),' as well as the proliferation of seed licences and contracts means that 'it can be cogently argued that what is "reasonable" under section 14(1)(b) should be narrowly construed'.⁷⁵

IV CONCLUDING REMARKS

An examination of the broader historical context of the scope of protection under the UPOV Convention reinforces that the scope of protection attempts to balance the needs of breeders and users. Initially, the limited nature of protection over propagating material reflected the concerns of agricultural and farmers groups who did not want extended protection, and the desire to provide protection over the reproductive material of protected plant varieties. However, concern primarily from the ornamental plant and fruit industries over the difficulties of knowing the destination of crops, the convergence of professional interests and the desire of UPOV member states to strengthen plant breeder's rights resulted in the introduction of 'cascading' rights to the UPOV Convention (1991). Importantly, though, it was made clear at the Diplomatic Conference of 1991 that rights owners do not have discretion to exercise their right at any stage

73 UPOV, above n 35, 145.

74 *Cultivaust Pty Ltd v Grain Pool Pty Ltd* (2004) 62 IPR 11, 51.

75 Sanderson, above n 51, 695–6.

of production, but instead have a reasonable opportunity to exercise their rights at the earliest possible stage.

Despite the apparent confusion and uncertainty over the requirement of reasonable opportunity, in many respects the requirement is clear. It is clear that protection over the harvested material and products obtained from protected plant varieties applies in limited circumstances. The intention of the *PBR Act* is for rights owners to exercise their rights primarily over the propagating material of protected varieties. It is also clear that the question of reasonable opportunity can only be determined with reference to the particular facts of a dispute. Nevertheless, as can be seen from the *Cultivaust* decision, and is reflected in ACIP's Final Report, it is likely in the Australian context that plant breeder's rights owners will have some degree of opportunity to exercise their rights over the propagating material of their protected plant varieties. The question is whether the actions of the rights owner are reasonable in the circumstances, and just because the requirement of reasonable opportunity is not always advantageous to the interests of plant breeders does not mean that it is unclear or confusing. Indeed, if you know (or should know) the destination of the protected plant variety and it is common practice for a contract or licence to be entered into at the point of sale of the plant variety then it is likely that you have a reasonable opportunity to exercise your rights on the propagating material.

Whilst an examination of the UPOV Convention provides useful insights about contemporary issues, it also highlights the heterogeneity of plant breeding practice and industry. On a more practical level, therefore, further investigation is needed in relation to the needs and practices of different industries such as the agricultural, nursery or ornamental industries in Australia. Indeed, even within a particular industry such as agriculture the issues and needs for specific crops such as barley, wheat, canola, lentils and cottonseed will differ and it will be instructive to consider specific supply chains and management practices particular to these crops. From this it might be possible to develop guidelines or frameworks that could be used by different industries to indicate when plant breeder's right apply to propagating material, harvested material and products. These guidelines or frameworks could also outline indicia of when a rights owner has a reasonable opportunity to exercise their rights in each circumstance. That said, whatever discoveries and insights such investigations yield, the significance of the historical context of the scope of protection to contemporary issues such as 'cascading' rights and enforcement should not be ignored. Indeed, history suggests that the 'cascading' rights were not intended to provide a general, discretionary alternative to overcome problems of enforcement; they were only ever meant to operate in limited circumstances.