Plant Variety Rights Act 1987 review: Issues Paper – Submission template

Name	
Email	
Organisation/iwi	Grasslands Innovation Limited
Interest	Grasslands Innovation Limited (GIL) is an incorporated joint venture between PGG Wrightson Seeds and AgResearch that aims to develop and commercialise proprietary forage technologies for pasture-based animal production systems. Over the first 10-years of this Joint Venture approximately 50 new cultivars were bred and released for commercialisation in New Zealand and internationally. Therefore, we are vitally interested in the proposed changes to the Plant Variety Rights Act. The ongoing breeding and development work is funded from the royalties received from sales of the forage cultivars that we breed. GIL is currently developing new varieties in New Zealand, Australia, USA, Uruguay, Argentina, Brazil and South Africa. GIL contracts plant breeding, product development, high grade seed production and IP protection services from AgResearch, Grasslanz Technology and PGG Wrightson Seeds. GIL also contracts plant breeding and evaluation from a range of 3rd party providers including several research institutes in USA (e.g. University of Georgia and University of Wisconsin-Madison), Australia and South America. These relationships are predominantly long-term which reflects the long development times involved in forage plant breeding.

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Responses to Issues Paper questions

Your submission may respond to any or all of the questions from the Issues Paper. There is an additional box at the end for any other comments you may wish to make.
Text boxes will expand as you complete them.

Objectives of the PVR Act	
1	Do you think the objectives correctly state what the purpose of the PVR regime should be? Why/why not?

We believe the objectives clearly outline the purpose of the PVR regime.

New Zealand is clearly lagging behind international PVR legislation that operates in most of our major trading partners. Most of these countries adopted UPOV91 many years ago. Updating the PVR legislation will bring us into line international treaty obligations.

A modern PVR legislation would allow companies and individuals to invest in plant breeding with greater certainty around protection of the IP that they develop and the potential to get a fair return for the risk they have taken and the investment they have made. This is particularly important as the New Zealand Government seeks greater investment into research and development from the Private sector. Grasslands Innovation invests ~NZD6 million per annum into plant breeding and related research activities.

2	Do you think the PVR regime is meeting these objectives? Why/why not?

The current PVR legislation is not meeting the objectives. Across all industries there needs to be a better way to enforce Plant Variety Right infringements particularly around EDV. Investors need greater certainty to be able to obtain a fair return on investment given the level of risk that they currently carry.

3	What are the costs and benefits of New Zealand's PVR regime not being consistent with UPOV 91 (e.g. in terms of access to commercially valuable new varieties, incentives to develop new varieties)? What is the size of these costs/benefits? What are the flow on effects of these costs/benefits? Please provide supporting evidence where possible.

We see no logical reason why New Zealand would not adopt UPOV91. UPOV91 has been in operation in many other countries for the last two decades and New Zealand is out of step with our international trading partners, with international treaties and with best practice. Legislation adopted internationally may also be helpful to New Zealand in assisting development of the new PVR Act.

Not implementing UPOV91 would be a signal internationally that New Zealand does not recognise the IP rights of other, and discourages overseas breeders from testing or commercialising their best material in New Zealand. Ultimately an unfavourable environment in New Zealand could act as a disincentive to investing in research and New Zealand. Conversely, the benefits are that a better PVR regime could encourage greater investment.

GIL and other industry partners are investing along with the New Zealand Government to more than double the rate of genetic gain in perennial ryegrass (currently 0.7%/year) and white clover (currently ~1%/year). Commercial companies need the New Zealand Government to address the current issues with the PVR system to ensure that these benefits are delivered for New Zealand farmers.

4	Do you think there would be a material difference between implementing a sui generis regime that gives effect to UPOV 1991 (as permitted under the CPTPP) and actually becoming a party to UPOV 91? If so, what would the costs/benefits be?

We think that New Zealand should become a party to UPOV91. The international credibility that this adopting UPOV91 would give us is important.

Developing our own national sui generis system makes less sense and could be both expensive, time consuming and create more confusion.

Farm-saved seed

5	Are there important features of the current situation regarding farm-saved seed that we have not mentioned?

These issues are well covered within the NZPBRA and PGG Wrightson Seeds submissions. Royalty returns are essential for companies to continue to invest in developing future innovations and farm-saved seed undermines this. Without sufficient returns from new varieties, investment in R&D will reduce or focus on more profitable overseas markets.

6	Can you provide any additional evidence/information that would assist us to understand this issue? For example, the nature and extent of royalties that are currently paid in different sectors, and the proportion of crops planted each year using farm-saved seed.

The PGW Seeds submission covers the lost revenue associated with farm-saved seed in the cereal industry.

7	Do you think there are problems with the current farm-saved seed arrangements? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

Yes, there are problems with the current farm-saved seed arrangements. As already discussed, breeders need to generate a fair royalty return to justify the significant investment in developing the new innovations that are required to meet the environmental, agronomic and societal challenges that face New Zealand Agriculture.

There is concern about the production of PVR varieties that are then sold “over the fence”, while this is illegal it is also hard to police. This practice reduces royalty returns to the breeder and tax return to the Government.

There is also potential for some corporate farming enterprises to transfer seed for their own use from arable operations to other farming enterprises. We believe this transfer of seed from one farm operation to another, even though they are under common ownership, should have to pay a royalty.

8	Do you think there are benefits of the farm-saved seed arrangements? What are they? What is the size of these benefits? What are the consequences of these benefits? Please provide evidence where possible.

Grasslands Innovation accepts the long-held ability of farmers to save seed for their own use so long as this does not breach a production contract that they signed.

We remain concerned about protected varieties being multiplied and sold to other farmers. This illegal activity has many consequences including the potential damage to the reputation or brand of these products. The loss of compensation to variety developers undermines long-term investment in the pastoral sector and the government also loses taxable income.

9	Do PVR owners use mechanisms outside the PVR regime to control farmers’ use or saving of the seeds of their protected varieties? What are these?

We attempt to control farm-saved seed through the seed production contracts that are entered into with arable seed producers.

10	Do you think farmers should have to get permission from the PVR owner before sowing the farm-saved seed of a protected variety? Why/why not?

It is probably impractical for farmers to have to seek permission and in reality who would administer this.

We would support establishment of stronger, more enforceable, penalties for infringement to encourage voluntary compliance. We would like to see a simple system that allows farmers to register and pay royalties on farm-saved seed.

11	What do you think the costs and benefits of a mandatory royalty scheme would be? What could such a scheme look like (e.g. should it cover all, or only some, varieties)?

A mandatory royalty scheme would ensure better and fairer returns to the breeder from PVR protected varieties.

The royalty mechanism needs to be sufficiently flexible to deal with the range of species and their different requirements. There is no need to prescribe a collection point for all crops and the current flexibility for different crop types works well and should be maintained.

The creation of 'The Royalty Collection Agency' as proposed by the NZPBRA is one possible structure that could be used to collect royalties only on PVR-protected varieties. However, other countries that have already adopted UPOV91 may have developed better mechanisms for this purpose.

Rights over harvested material

12	Are there important features of the current situation regarding rights over harvested material that we have not mentioned?

Yes

13	Do you agree with our definition of 'harvested material'? Why/why not?

The definition appears to be sufficiently broad.

14	Do you think there are problems with the current scope of PVR owners' rights over harvested material? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

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15	Do you think there are benefits to the current scope of PVR owners' rights over harvested material? What are they? What is the size of these benefits? What are the consequences of these benefits? Please provide evidence where possible.

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Rights over similar varieties

16	Are there other important features of the current situation regarding distinctness that we have not mentioned?

Grasslands Innovation supports the introduction of UPOV91 as part of New Zealand PVR legislation. This includes adoption of an Essentially Derived Variety (EDV) system. We need an EDV regime that protects innovation while maintaining the 'breeders privilege' to work with and use material for ongoing genetic improvement. Currently it is too easy for other breeders to pick up a new innovative variety and simply select within that variety for one or two cosmetic changes to circumvent DUS but without actually doing anything that actually adds value for the pastoral industry.

The introduction of molecular tools that can determine genetic distance and relatedness between varieties would be a major step forward. There also needs to be greater freedom to incorporate traits such as herbicide tolerance that are not currently part of the morphological descriptor used for DUS but that provide clear and unambiguous separation between varieties. Similarly the development of DNA fingerprinting is progressing rapidly and needs to be considered as a basis for differentiating varieties.

17	Are there other important features of the concept of EDVs that we have not mentioned?

The application of genetic distance based on molecular analysis should be considered as a means of assisting in determination of EDV. Furthermore introduction of new phenotyping tools should be explored to improve the accuracy of current DUS trials in New Zealand.

18	Do you think there are problems with the current approach for assessing distinctness? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

The current centralised trials are variable in quality from year to year which creates problems when trying to detect significant differences for morphological traits across multiple years. This will require more resources for the trialling system from the testing authority and/or wider industry.

19	Do you think there are benefits with the current approach for assessing distinctness? What are they? What is the size of these benefits? What are the consequences of these benefits? Please provide evidence where possible.

Having an independent centralised testing system is definitely an advantage and this should continue under UPOV91. However, this needs to be well run with well resourced, experienced personnel to measure morphological traits.

20	How might technological change affect the problems/benefits of the current approach for assessing distinctness that you have identified?

It is important that we utilise new technology wherever it has the ability to reduce experimental error and to get a more accurate picture of the true morphological differences between varieties. Current technologies available including soil mapping of trial sites, use of molecular tools and proximal sensing tools. This is far from an exhaustive list of technologies that may improve our tesing system.

Soil mapping of potential trial areas could be a normal part of the trial system to remove variation in soil fertility and moisture holding capacity that can then be accounted for in the trial design.

We affirm that the use of molecular tools will become a normal part of DUS testing, it is not a matter of if but rather when it is integrated. The technology is too powerful to not be used in the future. We believe that there are already discussions underway at an international level about where and how to start this process.

Other tools that can measure phenotypic traits with greater accuracy . There is a growing body of evidence demonstrating the potential of proximal sensing tools for such measurements.

Any of these could be improvements under the current PBR regime or a new UPOV91 regime.

21	Do you have any examples of a plant breeder ‘free-riding’ off a variety? How often does this happen? What commercial impact did this have? Please provide evidence where possible.

We believe there are cultivars being sold that are either a breach of PVR or are essentially derived from varieties with PVR. However, for open-pollinated varieties this is very difficult and expensive to prove and prosecute. The fact that UPOV 91 has not been ratified in New Zealand has made prosecution of these breaches more difficult.

22	Do you think there are problems with not having an EDV regime? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

We think that continuation of an non-EDV regime will be detrimental to New Zealand's economy and to New Zealand producers. It will continue to see the proliferation of inferior varieties and a reduction in the investment in R&D in New Zealand.

Maintaining the status quo will see increased pressure internationally as we will be misaligned with a number of treaties. This may impact on future access to new germplasm from overseas.

The absence of EDV also undermines the NZ Government drive for greater industry investment into research and development.

23	Do you think there are benefits of not having an EDV regime? What are they? What is the size of these benefits? What are the consequences of these benefits? Please provide evidence where possible.

The only benefits we can see in maintaining the status quo are that the system is well known to existing industry participants. However it will not serve the future needs of the industry or New Zealand as a whole. We need EDV to promote investment in innovation and protection for those who are willing to take the risks inherent in investing in research.

24	How might technological change affect the problems/benefits of not having an EDV regime that you have identified?

We do not see technology solving the problems of a non-EDV regime, rather they will add value to introduction of EDV. The recognition of molecular analysis to assist in determining the genetic relatedness would be a significant improvement but still requires case-law to ultimately be acceptable in a non-EDV regime.

The advances already available, and in development, with molecular markers, genome sequencing and also in phenotypic tools such as Lidar and hyperspectral sensing make this an essential platform for future PVR work.

Compulsory licences

25	Are there important features of the current situation regarding compulsory licences that we have not mentioned?

None that we are aware of.

26	Do you think there are problems with the current compulsory licence regime? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

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27	Do you think there are benefits with the current compulsory licence regime? What are they? What is the size of these benefits? What are the consequences of these benefits? Please provide evidence where possible.

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Enforcement: infringements and offences

28	Are there important features of the current situation regarding infringements and offences that we have not mentioned?

The fines for infringement should be consistent with other IP penalties in New Zealand. We believe the current situation regarding infringements and offences requires more focus on penalties for infringing and making it easier for companies to pursue infringement. The current fines do not fairly reflect the costs of developing of a new variety which can frequently exceed $1,000,000 per cultivar. Furthermore, the potential losses in revenue from these breaches are considerable.

29	Have you been involved in a dispute relating to the infringement of a PVR? How was it resolved? How was it resolved (e.g. was alternative dispute resolution used)? How effective was the process?

The threshold of proof in many circumstances has made it difficult to pursue suspected breaches, particularly as pursuing these through the courts is time consuming and costly.

30	How prevalent are PVR infringements and offences?

We believe that infringements are rare in New Zealand but that they do occur, especially in open pollinated species such as ryegrass and white clover where it is difficult to detect and prove infringements without molecular tests.

31	Do you think there are problems with the infringement provisions in the PVR Act? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

Yes, we believe that there are problems with the infringement provisions. The Act is not clear enough on what constitutes an infringement. On top of this it is difficult to get enough evidence to bring a legal case. In our opinion, the current provisions actually deter IP owners from pursing infringement more than they deter infringers from infringing. We believe that the PVR law does not provide a sufficiently strong deterrent and that the minimal fines are also a deterrent for IP owners from taking cases to court.

In Australia there is a current bill before parliament which is seeking to introduce a significant change to the quantum of damages that may be awarded by allowing additional damages – including the need to deter, the conduct of the infringement party, the benefit to the infringing party and other relevant matters. A review of this bill would be timely with looking at revising the NZ PVR Act.

32	Do you think there are problems with the offence provisions in the PVR Act? What are they? What is the size of these problems? What are the consequences of these problems? Please provide evidence where possible.

Yes, as outlined above we believe that the penalties are unacceptably low. Where individuals or companies are found to have intentionally provided misleading information about an unprotected variety then the infringement should be higher than the current $1,000.

Aligning penalties for PVR infringements to those imposed for other IP rights infringements such as copyright should be a better deterrent.

The kaitiaki relationship and the PVR Act

33	How does the current PVR regime assist, or fail to prevent, activity that is prejudicial to the kaitiaki relationship? What are the negative impacts of that activity on the kaitiaki relationship?

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34	What are the problems that arise from the PVR grant process, or the grant of PVR over taonga species-derived varieties more generally, for kaitiaki relationships? Please provide examples.

We are unaware of any examples in the New Zealand pastoral sector where PVR has been requested for taonga species. All of the species used and improved through plant breeding in the pastoral industry were introduced into New Zealand from the early 1800's.

35	What role could a Māori advisory committee play in supporting the Commissioner of PVRs?

Guidance over any future requests relating to taonga species and also over naming requests using cultural or iconic Maori language.

36	How does industry currently work with kaitiaki in the development of plant varieties? Do you have any examples where the kaitiaki relationship was been considered in the development of a variety?

It is not a feature of the current process for cultivar naming. There is a long history in New Zealand of cultivars such as Huia white clover, Nui perennial ryegrass, Rua potatoes, the list is a very long one. It would be sad if cultivars that are developed in New Zealand could not use Maori names, however, there should be some checks and balances in place to ensure that there is no abuse or offensive use of these names.

'Discovered' varieties

37	Are there examples of traditional varieties derived from taonga species that have been granted PVR protection? Do you consider there is a risk of this occurring?

There are no traditional forage varieties from taonga species that we are aware of. Nor do we see any potential of this happening anytime soon.

Offensive names

38	What characteristics might make a variety name offensive to a significant section of the community, including Māori?

As covered under question 36, we support guidelines when choosing names for varieties so as to avoid using offensive names.

Transparency and participation in the PVR regime

39	What information do you think should/should not be accessible on the PVR register? Why?

We support a summary of breeding methodology being made available as occurs currently in Australia.

40	As a plant breeder, do you gather information on the origin of genetic material used in plant breeding?

Yes we collect information and pedigrees of the material that we use in our breeding programmes. We frequently publish such information in articles about new cultivars that we release. We also publish papers on genetic relationships in scholarly journals and also in conference papers. This is an important part of continuing to make genetic progress. We also seek to protect the genetic material that we release but all plant breeders benefit from improved knowledge of the germplasm sources that contribute to long-term genetic improvement. For example, it is widely known that Mangere ecotypes and North-west Spain germplasm have made major contributions to ryegrass improvement in New Zealand. Similar knowledge has been reported for white clover, red clover and most other species of economic importance in New Zealand.

Other Treaty of Waitangi considerations	
41	What else should we be thinking about in considering the Crown's Treaty of Waitangi obligations to Māori in the PVR regime? Why?

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Additional issues	
42	Do you have any comments on these additional issues, or wish to raise any other issues not covered either in this section, or elsewhere in this paper?

It is important that the ACT extends to cover rights over seed Exports as is provided for in UPOV91.

Other comments

43	Are there any additional comments you wish to make about the PVR Act review Issues Paper?

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