

# Proposed amendments to the Plant Breeders' Rights Regulations

The following consultation on proposed amendments to the *Plant Breeders' Rights Regulations* are an extension of the 2015 amendments to the *Plant Breeders' Rights Act*, intended to:

- improve accessibility to the intellectual property framework
- facilitate the release of foreign bred plant varieties into the marketplace, and
- encourage even greater levels of investment and innovation in Canada's agriculture, horticulture, and ornamental sectors

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## Background

Plant Breeders' Rights (PBR) are a form of intellectual property (IP) by

which plant breeders can protect their new plant varieties. Like other forms of IP, such as patents, the public policy objective of PBR is to provide incentives and rewards, stimulating investment and innovation in plant breeding. If the PBR IP regime is fair and effective, it should encourage a healthy competition in plant breeding (private, public, or partnerships), and facilitate farmers' access to the newest and most improved plant varieties. Unlike patents, PBR is a form of IP solely reserved for new plant varieties and contains many benefit sharing provisions that strike a balance between plant breeders and farmers. Modernizing Canada's plant variety IP regime is a key element in growing and diversifying Canada's production and trade of agricultural and horticultural commodities, both domestically and internationally. It is also critical to securing investment in the breeding of new plant varieties to help farmers increase productivity while lowering inputs, and mitigating the impacts of climate change.

In February 2015, with the strong support of industry, including farmers, amendments were made to the *Plant Breeders' Rights Act* to include provisions which brought Canada in line with the *1991 Act of the International Convention for the Protection of New Varieties of Plants* (UPOV'91). Canada subsequently ratified this international convention in June 2015. These legislative amendments improved the IP environment in Canada by encouraging greater domestic investment in plant breeding and fostering more accessibility to foreign varieties for farmers. The positive effects of strengthening the PBR IP regime were examined in the study: [Assessing Impacts of the 2015 legislative amendments to Canada's \*Plant Breeders' Rights Act\* and UPOV'91 ratification.](#)

In 2018 and 2019, at the request of farm organizations and the seed industry, Agriculture and Agri-Food Canada (AAFC) and the Canadian

Food Inspection Agency (CFIA) held consultations on the possibility of introducing a royalty system on harvested grain (end-point royalty) or farm saved seed (trailing royalty) on cereals, otherwise known as Value Creation. The consultative process sought input from stakeholders concerning placing conditions on the farmers' privilege to pay fair compensation when seed was saved and re-sown on farm. The consultations were concluded with no clear consensus from stakeholders. The current online consultation on proposed amendments to the *PBR Regulations* **does not** include the Value Creation concept (e.g. conditions on the farmers' privilege to pay an end-point royalty or trailing royalty on farm saved seed).

## Themes for discussion

### Farmers' privilege: Horticulture and ornamental crop kinds

In the agriculture sector, the act of saving and reusing seeds, otherwise known as the farmers' privilege is a longstanding practice for farmers, especially for crop kinds such as cereals and pulses which are primarily self-pollinating crops and reproduce true to type. This provision is intended to strike a balance between plant breeders and farmers. However, in the horticulture and ornamental sectors, many varieties are often propagated asexually (e.g. cuttings, budding, grafting, etc.), and not from sexually reproduced seed. Furthermore, the current industry practice in these sectors is for breeders to license specialized propagators to multiply and increase quantity of new varieties for sale into the marketplace. Licensed propagators ensure that the breeders IP rights are respected, while ensuring the that quality plant material is scaled up for sale into the marketplace. The International Union for the

Protection of New Varieties of Plants (UPOV) recognizes that the application of the farmers' privilege (exception) requires a flexible approach to meet the various needs of different sectors and crop kinds. As such, UPOV provides insight and guidance on how the farmers' privilege may be interpreted and implemented by member countries:

"...the exception (farmers' privilege) may be considered to relate to selected crops where the product of the harvest is used for propagating purposes, for example small-grained cereals where the harvested grain can equally be used as seed i.e. propagating material" <sup>1</sup>

Therefore, UPOV framework acknowledges the importance of farmers saving and reusing seed for agricultural crops where it is a common and traditional cultural practice to do so. However, as this wording suggests, it may be inappropriate to have an unrestricted farmers' privilege for other crop kinds such as fruits, vegetables, and ornamentals. In the horticulture and ornamental sectors, it is now the normal practice for licensed propagators to maintain the supply and quality of new varieties entering the marketplace. It is not a common practice for nurseries or producers to propagate or reproduce a PBR protected variety unless they have been specifically authorized by the breeder/title holder. As such, the law needs to adequately support both the plant breeder and licensee in this relationship.

Canada has limited domestic breeding capacity in the horticulture and ornamental sectors and is highly dependent on access to new varieties from other jurisdictions, in particular the European Union. In Europe, the farmers' privilege only applies to agricultural crops, and is not extended

to horticultural and ornamental varieties. Moreover, in the European Union, the farmers' privilege is further limited, only applying to specified agricultural varieties. The United States *Plant Variety Protection Act* does offer IP protection to all plant species and genera. However, breeders of asexually propagated varieties generally seek IP protection in the United States under the *Plant Patent Act*. The *Plant Patent Act* provides strong IP protection for asexually propagated varieties of plants and does not include a specific farmers' privilege provision that would allow for the saving and reusing of propagating material by the farmer. Additionally, in the United States, plant breeders may also obtain a "utility patent" on a new plant variety, which similar to a plant patent, and restricts the ability to save and reuse propagating material of the protected variety. Plant breeders often seek "utility patents" in the United States on sexually propagated varieties.

In Canada, a plant breeder cannot obtain a patent on new plant variety, as it is considered a "higher life form" and excluded from patentability.<sup>2</sup> As such, Canada currently offers weaker IP protection for horticultural and ornamental plant varieties in comparison to the European Union and the United States. International breeders are reluctant, and sometimes even refuse, to introduce their new and improved varieties into jurisdictions that allow an unrestricted farmers' privilege for horticulture and ornamental crop kinds.

Should Canada better align with other similar jurisdictions, such as the United States of America and the European Union, by clarifying that the farmers' privilege does not extend to the saving and reusing of propagating material (e.g. cuttings, budding, grafting, seeds, etc.) of PBR protected fruit, vegetable, and ornamental varieties?

## Farmers' privilege: Hybrid varieties

The regulation making authority contained within Canada's *Plant Breeders' Rights Act* is flexible and can accommodate various scenarios regarding the saving and reusing of seed. One such example is hybrid varieties. Hybrid plants are the product of crosses between two (or more) parental lines, combining the characteristics of those parents. Examples of hybrid varieties can be single crosses, three-way crosses, double crosses, and seed of multiple crosses mixed together, otherwise known as synthetic varieties. Hybrids often provide a clear production advantage for farmers, exhibiting important characteristics such as enhanced vigour (heterosis), improved disease resistance, higher yields, and greater uniformity. Consequently, many farmers may opt for choosing hybrids because they provide a better value proposition. However, the production of hybrid seed is generally more costly, resource intensive, and requires extra steps in the breeding process, when compared to non-hybrid varieties.

The saving and reusing of hybrid seeds can be detrimental for farmers, breeders, and the sector as a whole. The advantages associated with hybrid vigour and performance diminish quickly with the first cycle of saving and reusing seed. Seed harvested from the original hybrid will no longer reproduce true to type, exhibiting a loss in uniformity, yield, and

other beneficial characteristics as it segregates with each generation. For example, traits associated with disease and pest resistance are often qualitative in nature and controlled by only a few genes. Consequently, when seed harvested from a hybrid is grown through the act of reusing seed, some of its progeny may start to exhibit susceptibility to various diseases or pests, even though that variety was bred and marketed to be resistant to them. Therefore, the saving and reusing of seed from hybrids can be damaging to the reputation of that variety, negatively impacting the breeder, but also harmful to the farmer and the whole sector. Finally, breeders often choose to protect the parental inbred lines that are used to create hybrid crosses. The PBR protected parental inbred varieties are only used to create the hybrid cross, and never sold directly to farmers in the marketplace.

Should the PBR Regulations be amended to clarify that the farmers' privilege does not apply to the saving and reusing of propagating material (e.g. cuttings and seed) of PBR protected hybrids, and protected parental inbred varieties used in hybrid combinations?

## **Extending the period of plant breeders' rights protection for potatoes, asparagus and woody plants**

At present, Canada's *PBR Act* provides a period of protection of 20 years for all plant species, except trees and vines which are protected for 25 years. These periods of protection are aligned with the minimum requirements as found in Article 19 (2) of UPOV'91. The difference in time frame between trees and vines, and other crop kinds not only reflects the extended period required to breed a new variety, but also the length of time to achieve market adoption. In many ways potatoes are unique and

similar to tree varieties, requiring a prolonged period for breeding, multiplication, and market adoption compared to other agricultural crop kinds. For example, a cereal variety such as wheat or barley can be bred, tested, and released into the marketplace within a 7-12 year timeframe. However, potatoes generally require a minimum of 10 years of breeding from the first selection until a finished variety is ready for release. This is typically the point in time at which PBR protection is sought. However, market introduction is not usually pursued until after another 4-5 years of grower evaluation. Furthermore, sufficient stock of seed potatoes must be propagated prior to release into the marketplace, which can also be a lengthy process. For example, the multiplication rate of potatoes is 1:4-5, which is very low compared to other crops kinds such as wheat, which ranges from 1:20-30. Consequently, it takes considerable time to multiply stock of a potato variety until there is enough available for release. The potato market is generally very conservative in its adoption of new varieties, often requiring several years of testing and evaluation to convince farmers and end users of the merits of a new variety. This is exemplified by the fact that many older varieties still dominate the market, decades and sometimes a century, after their release. Notable examples of varieties that still maintain a large portion of Canadian potato production, including their date of release, are: Russet Burbank (1902), Norland (1957), and Shepody (1980). Finally it can often take up to 10 years after initial commercialization for a new potato variety to reveal its true market value. Recognizing that potato breeding and market acceptance is a lengthy process, and to incentivize the development of new and improved varieties, a sufficiently long period of protection is required so that breeders may recuperate their initial investment. The European Union has recognized the need for a longer protection period and offers 30 years for potato varieties. Canada is



highly dependent on accessing new potato varieties from other jurisdictions internationally, particularly for high value specialty varieties. In fact, 85% of all PBR applications for new potato varieties entering the Canadian marketplace originate from other countries, including the Netherlands, United States of America, and Germany.

Asparagus is another crop kind that requires a longer duration to breed and evaluate prior to release into the marketplace. Rates of uptake can be slow, even with a promising new variety, because growers have existing stands that continue to remain productive for 10-20 years. Furthermore, once a farmer replaces an older variety with a newer one, it can take up to 4-6 years before the new stand becomes fully productive. A new variety of asparagus only reveals its commercial value at the later stage of its IP protection lifespan. Consequently, a longer period of protection is needed to fairly and equitably remunerate the up-front costs of breeding the asparagus variety.

Woody plants, such as ornamental shrubs and some berry fruits, also require longer breeding and market adoption periods. For instance, raspberries only begin to bear commercially viable amounts of fruit 2-3 years after planting. Similarly, it takes a highbush blueberry variety almost 10 years to reach full maturity, and can remain productive for 20-30 years. Ornamental shrubs can often take 7-12 years to breed and evaluate, and sometimes up to 10 years to garner adoption in the marketplace. Given that woody plants in general take longer to breed and evaluate and require longer timeframes to realize their commercial value in the marketplace, a longer period of IP protection is required to fairly remunerate the breeder. Recently, the European Union extended the period of plant variety protection for asparagus, woody small fruits, and woody ornamentals to 30 years. <sup>3</sup>

To attract elite potato varieties and woody ornamental plants into the Canadian marketplace, and possibly further encourage greater domestic breeding efforts in crops such as asparagus and woody berry fruits, it is important to afford a sufficiently long period of PBR protection which provides breeders a fair opportunity to recover their initial investment. Note that the maximum period of protection that can be afforded under the *Plant Breeders' Rights Act*, through possible regulatory amendments, is 25 years. Extending protection beyond 25 years would require amendments to the *Plant Breeders' Rights Act*.

Should the period of PBR protection for potatoes, asparagus, and woody plants, be extended from 20 to 25 years (or possibly longer) to encourage domestic breeding efforts and support greater access to new international varieties?

## **Narrowing the concept of sale for filing a plant breeders' rights application**

The current definition of "sale" in the *Plant Breeders' Rights Act* is very broad, encompassing the following concepts: "agree to sell, or offer, advertise, keep, expose, transmit, send, convey or deliver for sale, or agree to exchange or to dispose of to any person in any manner for a consideration". A broad definition of sale is very advantageous for enforcement purposes, ensuring that breeders/title holders have a means of recourse in the marketplace if their variety is misappropriated or misrepresented. However, a definition of "sale" that is too broad can prove problematic for the purposes of filing a PBR application.

The definition of "sale" is closely associated with one of the fundamental

conditions that a variety must meet to obtain PBR protection, specifically "novelty", or the newness of that variety. Under the *PBR Act*, a variety is still considered "new" and eligible for protection, for up to a maximum of one year if it is sold in Canada, and up to 4 years outside of Canada (except trees and vines which is 6 years). The inclusion of "advertise" in the concept of sale is problematic for the purpose of PBR filing due to the availability of promotional material globally through the internet. Advertisements may be promoted in Canada well before propagating material of the variety is commercially available in our domestic marketplace. Consequently, the variety may be considered ineligible for PBR protection in Canada because it is no longer considered "novel" or new. The breeding community generally views the inclusion of "advertise" in the definition of sale as too restrictive for the purpose of filing a PBR application. Guidance on the implementation of this provision can be found in [Article 6 \(2\) of UPOV'91 \(PDF\)](#):

The variety shall be deemed to be new if, at the date of filing of the application for a breeder's rights, **propagating or harvested material** of the variety has not been sold or otherwise disposed to others, by or with the consent of the breeder, for purposes of exploitation of the variety<sup>4</sup>

Inclusion of the terms "**propagating or harvested material**" implies that the variety must be physically available in the marketplace in order to be considered a sale, and that advertisement is not considered a sale for the purposes of filing a PBR application.

Should the concept of "sale" for the purposes of filing a PBR application be narrowed, by excluding advertisements?

## Adding a UPOV PRISMA filing fee

PBR fees for service are prescribed in Section 29, subsection 30 (1) and Schedule II of the Regulations. Due to the *Service Fees Act*, and annually inflationary increases applied since 2020, the cost of filing a new PBR application is \$268.93. In 2018 Canada adopted UPOV PRISMA, an international system of electronically filing PBR applications. Currently, UPOV PRISMA can be used to file applications in 74 members of the UPOV community, and translation services are provided in 17 different languages. UPOV PRISMA offers significant advantages over filing paper applications, and the system contains many features to help plant breeders manage their PBR applications. Applicants can copy data from one application to another, reducing the time and effort needed to file. Applicants can also set reminders for "priority claims", as well as "novelty", to ensure they maximize their benefits when filing. A dashboard feature allows plant breeders to manage their applications, including information about; filing dates, payment, agents/local representatives, and contact information for each national authority. UPOV PRISMA has the potential to significantly improve the efficiency of filing for applicants as well as the PBR Office. However, the price to use UPOV PRISMA is 90 Swiss francs (approx. \$138 CAD), and for applications filed in Canada this cost is in addition to the \$268.93 PBR application fee. Although UPOV PRISMA offers many advantages over paper filing, the increased combined costs may inhibit use of this important tool to file PBR applications in Canada.

Should a new application fee be introduced, offering a substantially reduced price when using UPOV PRISMA in comparison to the normal PBR fee, in order to encourage the filing of electronic applications?

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## References

- 1 Explanatory Notes on Exceptions to the Breeder's Rights Under the *1991 Act of the Convention*, October 22, 2009
  - 2 Harvard College v. Canada (Commissioner of Patents) [2002] S.C.C. 76; [(2002), 21 C.P.R. (4th), 417 (S.C.C)] at paragraphs 159 to 163
  - 3 Regulation 2021/1873 of the European Parliament and of the Council of 20 October 2021 on the extension of the term of the Community plant variety rights for varieties of the species *Asparagus officinalis* L. and of the species groups flower bulbs, woody small fruits and woody ornamentals
  - 4 [Explanatory Notes on Novelty Under the UPOV Convention, October 22, 2009 \(PDF\)](#)
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