

“ERODING THE CLIFF EDGE”: Breeder’s Views on Essentially Derived Varieties (EDVs)

UPOV SEMINAR ON INTERACTION BETWEEN PVP AND THE USE OF PLANT
BREEDING TECHNOLOGIES
GENEVA, 22 MAR 2023



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UPOV MISSION STATEMENT

To provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.



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UPOV'S MANDATE IN CANADA

- Agriculture and Agri-Food Canada (AAFC) with 100 years of investment in plant breeding
- Plant Breeders' Rights (PBR) introduced in Canada in 1990
- Summerland Varieties Corp. (SVC) was created to manage AAFC's varieties
- SVC is owned by the British Columbia Fruit Growers' Association and our mandate is to protect AAFC varieties for the benefit of tree fruit growers worldwide



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ONE OF MANY

- Representing thousands of companies and public entities who are active in research, breeding, production and marketing of agricultural, horticultural, ornamental and fruit plant varieties
- These stakeholders apply for and maintain almost all Plant Breeders' Rights under the UPOV system worldwide



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CROSSING AND SELECTION

- Remains the principal means of improving most plant traits and increasing genetic diversity in breeding populations
- Extremely long time horizons for new variety development with considerable investment
- PBR protection is a critical tool for ensuring continued support for breeding programs and for protecting the investments of licensees



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NEW BREEDING TECHNOLOGIES

- New breeding technologies (NBT) provide opportunities to create predominantly derived varieties from initial protected varieties
- This is possible because UPOV's Breeders' Exemption makes PBR an open source system
- New varieties can be created more rapidly and at a lower cost
- NBT traits can then be protected under a patent system which effectively blocks further breeding (no Breeders' Exemption) with the new variety



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OUR CONCERNS

- The Breeders' Exemption was meant to allow the use of protected germplasm for the development of new varieties by crossing and selection
- The Breeders' Exemption was *not* meant for the exploitation of a single protected variety without the consent of the original breeder
- The EDV principle is the necessary limitation of the Breeders' Exemption so that breeders and innovators are able to support their programs as originally envisioned by PBR



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OUR CONCERNS

- Current EXN-EDV (2017) has a very narrow scope; i.e., one modification of an essential characteristic may create a new variety beyond the scope of the EDV principle
- EXN 2017 is not consistent with the UPOV 1991 Act, which does not restrict the number of modifications for EDVs
- EXN 2017 does not reflect the breeders' understanding of EDVs
- Creates an opportunity for breeders using NBT to design around existing protections under the UPOV system



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OUR CONCERNS

- The current Explanatory Note allows for a situation where a new, independent variety can be created from a single modification to an “essential characteristic” of a PBR protected variety
- An “essential characteristic” is difficult to define, but does not necessarily include traits that confer commercial value
- The new variety now has the potential to undermine the value of the original variety in the marketplace because it was less costly to create



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EXPLANATORY NOTE: EDV DRAFT 3

- Draft 3 provides much needed clarification on EDVs
- Predominant derivation is the *key requirement* for an EDV and the result of:
 - Genetic modification or mutagenesis (random or targeted) of a single Initial Variety
 - Use of two or more parents followed by selective retention of the genome of a single Initial Variety through processes such as repeated backcrossing
- Differences between an EDV and its Initial Variety may include essential characteristics, and they are not limited to one or a few differences
- Draft 3 does not hamper innovation and provides a fair and balanced solution for breeders using crossing and selection as well as NBTs



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CONSEQUENCES OF STATUS QUO

UPOV's unwillingness to update the EXN EDV is a decision with predictable consequences

- ✓ Large breeders have the resources to rapidly adapt
- ✓ Innovative varieties will become increasingly less available to small- and medium-sized growers as breeders reduce exposure by consolidating their licenses with fewer, larger growers
- ✓ Small- and medium-sized breeders will have weak IP protection
- ✓ Private and public traditional breeding programs will close
- ✓ Crop biodiversity will gradually decline
- ✓ Societal benefits from plant breeding will erode



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CONSEQUENCES OF STATUS QUO

- Intellectual property rights are only as strong as your ability to enforce them
- The current EDV rules are unclear and contradictory and effectively weaken PBR
- Breeders need strong PBR laws that create a fair IP framework, encourage investment in plant breeding, and split benefits downstream
- Thus, the 2017 EXN for EDVs must be replaced by EXN EDV Draft 3 or be repealed



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THANK YOU!



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