



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

The role of plant variety protection in supporting public breeding institutions: Partnerships with producers and industry

UPOV Seminar – 2021/10/20



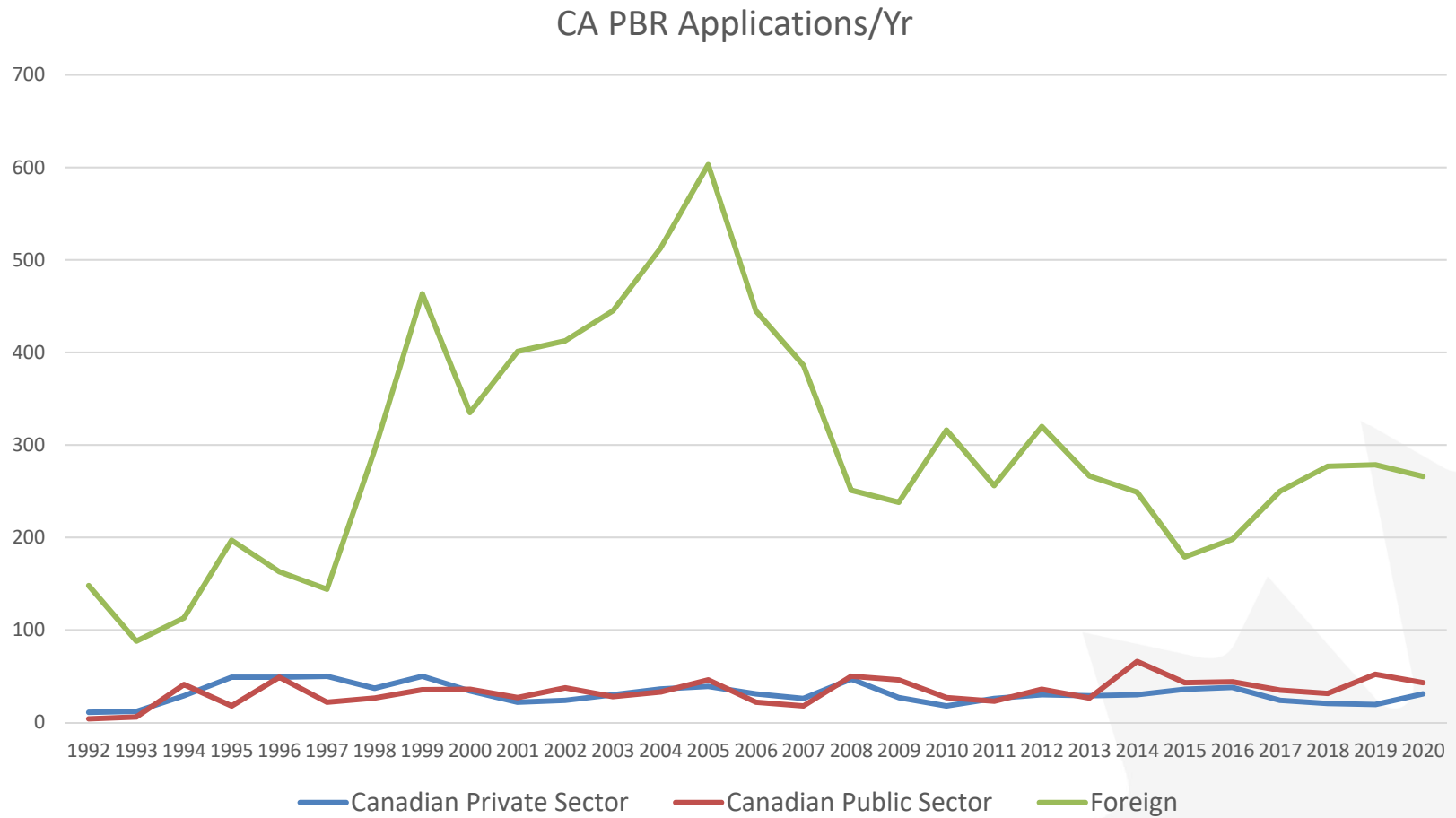
Canada 

Overview

- Canada has a strong tradition of supporting public breeding programs:
 - Federal – Agriculture Agri-Food Canada
 - Universities – University of Saskatchewan, University of Guelph, University of Alberta, McGill University, etc.
- Adoption of UPOV'78 in 1991, and strengthening our *Plant Breeders' Rights* (PBR) law with ratification of UPOV'91 in 2015, created opportunities for public/producer partnerships.
- Case Studies:
 - Haskap (Blue Honeysuckle) – University of Saskatchewan
 - Asparagus – University of Guelph
 - Sweet Cherry - Agriculture Agri-Food Canada

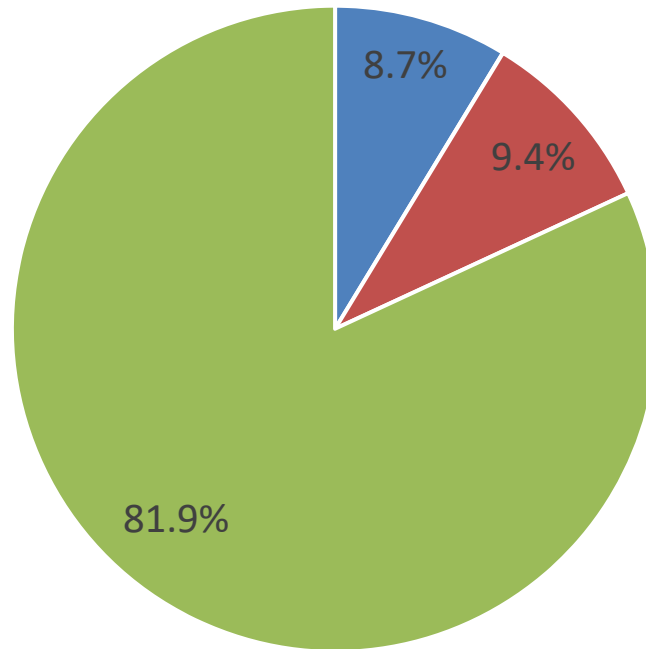


CA PBR Applications



CA PBR Applications

CA PBR Applications/Source



■ Canadian Private Sector

■ Canadian Public Sector

■ Foreign

Case Study - Haskap

- Native to Northern Boreal forest regions (Asia, Europe, and North America).
- Haskap can be used in processed products: pastries, jams, juice, wine, ice cream, yogurt, sauces, and candies



Case Study - Haskap

- University of Saskatchewan started breeding efforts in 1990's – assessing material originating from Japan and Russia
- Funded initially through University investments and provincial government grants, but now supported by PBR based royalties (self-funded).
- 65% of revenue directed to the haskap breeding program (graduate students, technicians, labourers), and 35% directed to capital investments common to all horticulture programs (equipment and services).
- Supports domestic growers, while obtaining revenue from off shore licensing (Europe)
- 'Aurora' (2018 - CA PBR # 5750) is the #1 variety globally
- Program is healthy and self-sustaining, releasing improved new varieties every few years.



Case Study - Asparagus

- 1980's: University of Guelph, Ontario Ministry of Agriculture, and producers began investing in the breeding program
- After twenty years, 'Guelph Millennium' (2003 – CA PBR # 1427) was released and transformed the domestic industry. Cool season, late maturity, winter hardy variety
- 95% of Ontario's asparagus production is 'Guelph Millennium', popular in Northern US and UK.
- Newer releases ('Guelph Eclipse' and 'Guelph Equinox') improved yield by 20% with tighter spear tips
- 2016 - UK-based Global Plant Genetics, exclusive licensing agreement to distribute seeds in Europe



Case Study - Asparagus



- **Fox Seeds** - a “for profit” seed business, created and owned by the Asparagus Farmer’s of Ontario, has exclusive license to produce and sell hybrid asparagus seeds
- University of Guelph asparagus breeding program is now being transitioned to Fox Seeds over a 2 year period (2021-2023)

Case Study – Sweet Cherry

- Summerland Varieties Corp. (formerly Okanagan Plant Improvement Company), created (1993) and owned by the British Columbia Fruit Growers Association
- Original mandate - to license new cherry varieties bred by the federal government breeding program; Agriculture and Agri-Food Canada (AAFC) in Summerland
- 80% of the global sweet cherry varieties originate from AAFC Summerland
- SVC expanded mandate to handle licensing and royalty collection for public and private bred tree fruit varieties, from domestic and foreign sources



Case Study – Sweet Cherry

- Staccato ® cherry '13S2009' (2003 – CA PBR # 1346) transformed the Canadian cherry sector, increased domestic production five-fold in 15 years
- SVC licenses AAFC cherry varieties globally, in a way that maintains advantage for Canadian growers (first release)
- SVC collected royalties supports the AAFC breeding program with sustainable long term funding



Observations

- Taxpayer and producer investment in plant breeding yields public interest benefits; improved and adapted varieties, creation of new market opportunities, value chain growth through technology transfer (licensing), imitation, competition, etc.
- However, difficult to sustain long-term funding of public institutions and risks the creation of an exclusionary public monopoly
- PBR protection helps protect taxpayer and producer investments.
- Licensing and royalties provides the means for producer ownership or self-financing of public programs
- PBR creates a level playing field where private, public, and/or private/public partnerships can operate in the marketplace

Thank You!

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