

 Agriculture and Agri-Food Canada    Agriculture et Agroalimentaire Canada

 Canada



Sharing Canada's Experience Implementing  
UPOV and ITPGRFA  
Joint UPOV/ITPGRFA Symposium  
Oct 26, 2016  
Geneva, Switzerland

**Our Vision**  
Driving innovation and ingenuity  
to build a world leading agricultural and food economy  
for the benefit of all Canadians.

**Our Mission**  
Agriculture and Agri-Food Canada provides leadership  
in the growth and development of a competitive, innovative  
and sustainable Canadian agriculture and agri-food sector.

## Treaty / Convention Objectives

- **ITPGRFA:** "Conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use..."
- **UPOV:** "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."
- Both ITPGRFA and UPOV play an important role in ensuring sustainable agricultural growth/productivity, genetic/crop diversity, and food security.

## UPOV Implementation

- Canada's *Plant Breeders' Rights (PBR) Act* was passed August, 1990
- Originally based on *1978 Act of the International Convention for the Protection of New Varieties of Plants (UPOV'78)*
- Canada ratified UPOV'78 on Feb 4<sup>th</sup>, 1991
- Amended on Feb 27<sup>th</sup>, 2015, to conform to UPOV'91
- Canada ratified UPOV'91 on Jun 19<sup>th</sup>, 2015
- Ten-year report (2002) demonstrated that the *PBR Act*:
  - Stimulated investment in Canadian plant breeding
  - Facilitated farmers access to foreign bred varieties
  - Facilitated protection of Canadian bred varieties in other countries

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## ITPGRFA Implementation

- All of Canada's major crops originated in other parts of the world – highly dependent on access to genetic resources
- Canada ratified the ITPGRFA on Jun 10, 2002.
- Canada's domestic laws are consistent with the ITPGRFA
- Multi-lateral System (MLS) gene bank collections:
  - Plant Gene Resources of Canada (Saskatoon, SK)
  - Canadian Clonal Genebank (Harrow, ON)
  - Potato Gene Resources Repository (Fredericton, NB)
- Over 110,000 seed and 3,000 clonal accessions
- Principal world base collections of barley and oat

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## ITPGRFA and UPOV Compatible?

### ***ITPGRFA Preamble:***

*Affirming that nothing in this Treaty shall be interpreted as implying in any way a change in the rights and obligations of the Contracting Parties under other international agreements*

- Recognizes the breeder's exemption, mandatory financial benefit-sharing not applicable when their products are "available without restriction to others for further research and breeding ..." (ITPGRFA 13(d)(ii))
- UPOV Breeder's exemption is an open ended mechanism to access and continuously improve genetic resources
- UPOV Researcher's exemption contributes to the body of scientific knowledge
- IP rights expired or surrendered, varieties "public domain"

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## Farmer Participation in Decision Making Re: Plant Genetic Resources

### ***Parliamentary:***

House of Commons Standing Committee on Agriculture and Agri-Food

Senate Standing Committee on Agriculture and Forestry

### ***Legislative:***

Plant Breeders' Rights Act - Advisory Committee

### ***Regulatory:***

Canada Gazette

### ***Agricultural Programming:***

Variety Registration Recommending Committees

Value Chain Round Tables (e.g. Seed, Grains, Pulses, etc.)

Agriculture Policy Framework (e.g. Growing Forward 3)

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## Case Study - Wheat:

- Canada's largest crop – 9,406,000 ha seeded (2016)
- Total production – 30,487,000 tonnes (2016)
- Annual Export – 21,000,000 tonnes (2016)
- Value of Exports – \$6.2 billion US (\$8.1 billion CAD)
- Investment in R&D - \$56 million (CAD) annually
- 72% of investment from taxpayers, 28% from producer and private sector investment

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## Case Study - Wheat:

### **Western Grains Research Foundation (WGRF)**



- Formed by 12 farmer organizations in 1981 to invest in field crop research to benefit farmers.
- Farmers fund research and variety development through voluntary "check offs" (levy)
- Since 1995 has invested \$90 million (CAD) in wheat and barley breeding
- Partners with the federal government and agriculture universities and receives a % of royalties
- \$1 dollar invested in wheat generates a \$20.40 (CAD) return for producers
- Over 200 wheat/barley varieties developed with WGRF sponsorship – PBR helps protect these investments

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## Case Study - Wheat:

**SeCan**

Canada's Seed Partner

### SeCan

- Canada's largest seller of certified seed
- Not-for-profit association of over 700 seed growers (includes farmers) and processors
- Mechanism of technology transfer from breeders to farmers via sale of certified seed.
- Access to both public and privately bred varieties
- Since its inception in 1976, has returned more than \$90 million dollars in royalties to plant breeding institutions
- Uses PBR to support plant breeding, and protect the investments of taxpayers, producers, and private companies.

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## Case Study - Wheat: Farmers Benefit from Yield and Quality Improvements

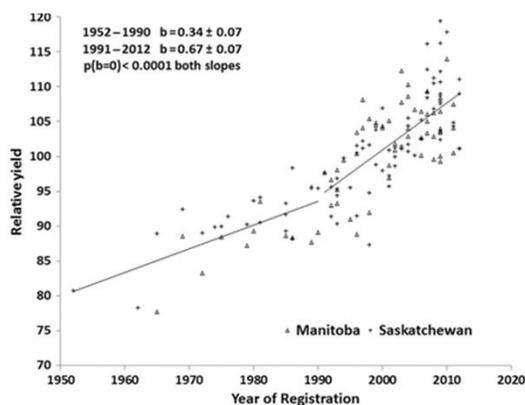


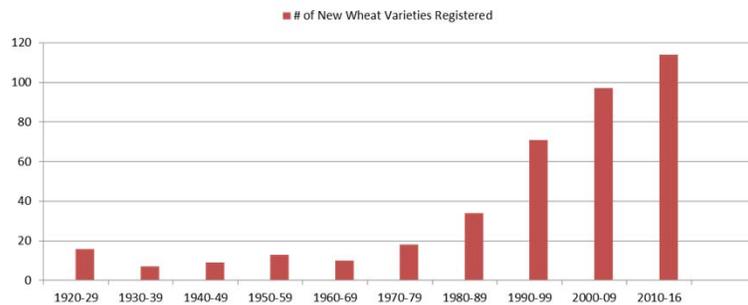
Fig. 1. CWRs cultivar least squares means calculated from data from the Manitoba and Saskatchewan Seed Guides and plotted against year of cultivar registration.

Thomas, J. B. and Graf, R. J. 2014. Rates of yield gain of hard red spring wheat in western Canada. *Can. J. Plant Sci.* 94: 1–13

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## Case Study - Wheat: Options/Choice Variety Registration

- 389 wheat varieties registered since 1923 (incl. spring, durum, winter)



- Only 117 (30%) of the registered wheat varieties currently hold PBR protection. Average duration of PBR is 7 years

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## Farmer Outreach and Education

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Progress Through Research  
Le progrès grâce à la recherche

### Plant Breeders' Rights

Know your opportunities and obligations

Home FAQ Communication Materials Resources News & Views ▾

[www.PBRfacts.ca](http://www.PBRfacts.ca)

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## Farmer Outreach and Education

Knowing the IP status of the variety you are using:



= PBR Act / UPOV'91



= PBR Act / UPOV'78

= Public Domain / No IP

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## Conclusions

- farmers participate in the benefits of using genetic resources (e.g. improved yield, adaptability, quality, disease resistance, choice/options, etc.) **ITPGRFA 9.2 b)**
- farmers fund plant breeding through levies and certified seed purchase - PBR is used to protect these investments
- farmers are involved in all decision making processes regarding plant genetic resources: legislative, regulatory, policy development, and program implementation **ITPGRFA 9.2 c)**
- farmers can save, exchange and sell farm-saved seed, subject to national law (e.g. *PBR Act* and *Seeds Act*) and as appropriate **ITPGRFA 9.3**
- UPOV and ITPGRFA support sustainable agricultural growth and crop/genetic diversity

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