Value Creation System for Canadian Field Crop Producers

Proposed Concept Overview

December 2018
Introduction

• Agriculture and Agri-Food Canada and the Canadian Food Inspection Agency are conducting engagement sessions to discuss two value creation models for cereals variety development in Canada.

• The Seed Synergy partners support this process and recommend that the contract royalty option be implemented as a Seed Variety Use Agreement (SVUA).
Seed Variety Use Agreement

The SVUA concept was developed using three guiding principles:

• **Value:** Canadian producers will benefit from improved seed genetics that are essential to remain competitive globally.

• **Transparency:** The seed industry is committed to transparency around how the system will work to fund critical public and private plant breeding research.

• **Choice:** Canadian producers must have choice – in the seed varieties they use and in their participation in new system.
Increased Plant Breeding Investment is Critical

Variety development research for several crops in Canada is under-resourced.

- In cereals, we are missing out on the potential to generate $170M in annual benefits for producers that could result from a value creation model that increases research investment.
  - This could also have a positive impact of $340M for the economy at large.
Research Investment in Some Crops is Lagging the Competition

• Research investment in cereals in Canada is lagging behind several global competitors.
• Wheat variety development research in Canada is approximately $2.13/acre.
• This compares to:
  o ~$3.00/acre in Australia
  o ~$3.00/acre in France
  o $7.31/acre in the United Kingdom

Sources: JRG Wheat breeding report 2015
Which Crops Receive Investment

<table>
<thead>
<tr>
<th>Crop</th>
<th>Farm Saved Seed Use %</th>
<th>Private Sector Investment in Plant Breeding (M$)</th>
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</thead>
<tbody>
<tr>
<td>Oats</td>
<td>95%</td>
<td>10</td>
</tr>
<tr>
<td>Wheat (including durum)</td>
<td>85%</td>
<td>20</td>
</tr>
<tr>
<td>Barley</td>
<td>75%</td>
<td>30</td>
</tr>
<tr>
<td>Soybeans</td>
<td>60%</td>
<td>40</td>
</tr>
<tr>
<td>Canola</td>
<td>100%</td>
<td>60</td>
</tr>
<tr>
<td>Corn</td>
<td>10%</td>
<td>50</td>
</tr>
</tbody>
</table>
Global wheat exports increased by 47% in past 10 years.

- From 2007 to 2016, global wheat exports has increased by 47%.
- Meanwhile, Canadian seeded area of wheat increased by only 9%.
- Long term trend for wheat in Canada is down 28% in the past 28 years to 25 Million total acres* despite market growth globally.

Wheat acres in Canada dropped from 35M in 1990 to 28M in 2018.

Cereals, Pulses & Specialty Crops Need More Focus

- Research investment in cereals, pulses and specialty crops is lagging significantly behind some other Canadian crops.
- Producers who grow canola, soybeans and corn benefit from more new varieties.
  - 85 new varieties of corn and of soybeans annually compared to 24 varieties of wheat.

Source: Canadian Seed Trade Association industry survey 2017; Acreage based on 2018 seed acres
Speed of Change in Seed Innovation

• Plant breeding and seed innovation is accelerating globally and Canada must act now to remain competitive.
• Currently, it takes 8 to 12 years to bring a new wheat variety to market in Canada at a cost of $1M*.
• Looking ahead 10 years and beyond, we see...
  o Increasing pace of change in plant breeding technology.
  o Increased competition from other grain exporting countries.
  o Canada risks falling behind unless we increase investment and competition.

Source: Seed industry estimate 2018
Accelerated Access to Better Crop Varieties

- Plant breeding is a good investment for producers.
- Producers benefit by $7-11M for every $1M invested in plant breeding in cereals, pulses and special crops.
- Increasing plant breeding research will also help ensure diverse crop choices to support healthy crop rotations.

Source: Groenewegen JR and SJ Thompson, “Economic Impact of Plant Breeding at the Crop Development Centre,” November 2016
Stable, Long-term Variety Development

- A new value creation model will increase the level of stable, long-term funding for seed variety development.
- Many countries are successfully using a value creation system to encourage plant breeding investment, such as:
  - Australia
  - France
  - Netherlands
  - United Kingdom
‘Made in Canada’ Solution Provides Value & Choice
• Under the proposed Seed Variety Use Agreements (SVUA) producers will pay the plant breeder a Seed Variety Use Fee (SVUF) every year on any grain they divert for seed use of that variety.

• Producers will have a choice on seed varieties they use.
  o This proposed new system will only apply to varieties protected by Plant Breeders’ Rights (PBR ’91).

• Producers will still have a choice (Farmer’s Privilege) to use farm saved seed.*

* Unless prohibited by another contract, patent or stewardship agreement that may be in place for that variety.
‘Made in Canada’ Solution Provides Value & Choice

• Plant breeders will have a choice on whether to use this proposed system.

• Participating plant breeders (or seed distributors who represent a plant breeder) will set the SVUF for each variety they release.

• The SVUF will be based on variety performance (the value it creates) but it will be completely up to each plant breeder or seed distributor to determine what (if any) fee their variety will have.
How will the SVUA work?
Producer Benefits

- Accelerated future access to better varieties through increased plant breeding efforts.
- More competition among more players
  - Especially small- and medium-sized seed research programs.
- Bringing new seed varieties to market in Canada means more choice for producers.
- More competitive in international markets.
Plant Breeder Benefits

• Fair return on research investment.
• Incentive for more investment and breeding work in Canada.
• Plant breeders will have another choice on how to sell their varieties in Canada.
• The system can work for both public research institutions and private companies through an efficient centralized system.
Overall Benefits

• Increased plant breeding investment will have a ripple effect throughout the agricultural value chain by meeting the demands of export markets.

• Canada would be viewed as a global investment destination of choice, which would drive further investments and progress.
VALUE: Producers will see value in participating in the SVUA system – a made in Canada solution that will deliver accelerated future access to better varieties and a competitive advantage.

TRANSPARENCY: The seed industry is committed to transparency in how the SVUA system works. There will be no surprises for producers or anyone else in the seed value chain.

CHOICE: Bringing new seed varieties to market in Canada means more choice for producers. Producers can also choose not to participate in the SVUA system by purchasing varieties not protected by PBR ’91.