

# Organizational Learning in Agricultural Cooperatives: Experience from Canada

- **Through Cooperative Action from Competitor to Partner**
- **Estonian University of Life Sciences, Tartu, Estonia**
- **22 November, 2018**



# Roadmap

A conceptual illustration of a winding road with a flag at the end, symbolizing a roadmap or journey. The road is grey with white dashed lines and curves from the bottom left towards the top right. A flag is planted at the end of the road. Three grey circles are placed along the road's path.

Background on Canadian Agriculture

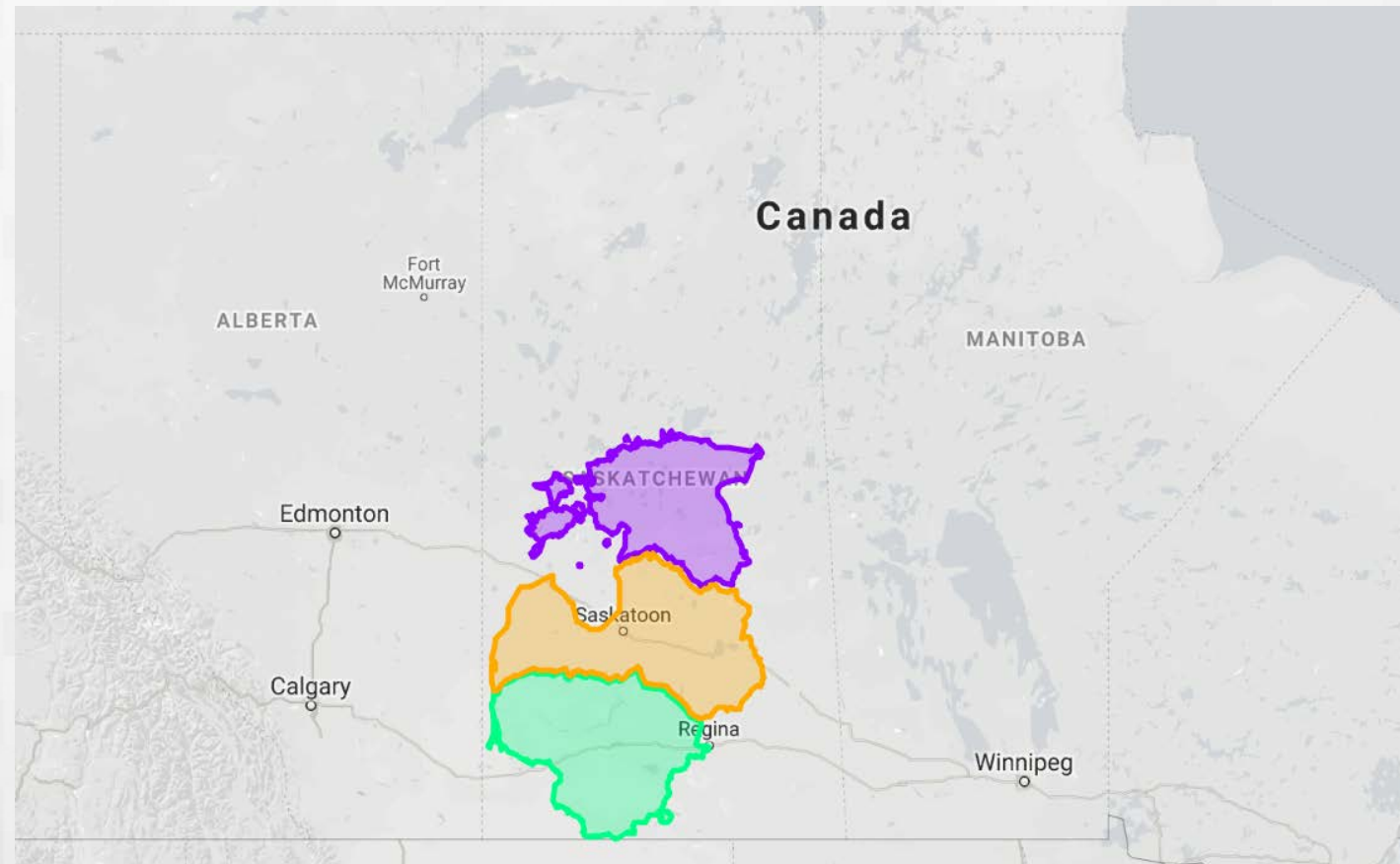
Knowledge and Knowledge Transfer

Knowledge Transfer in Cooperative Organizations in Canada

Saskatchewan Pulse Growers

# Canada is a big place

Location	Size (in Square KM)
Estonia	45,000
Saskatchewan	450,000
Farmland in Canada	626,000

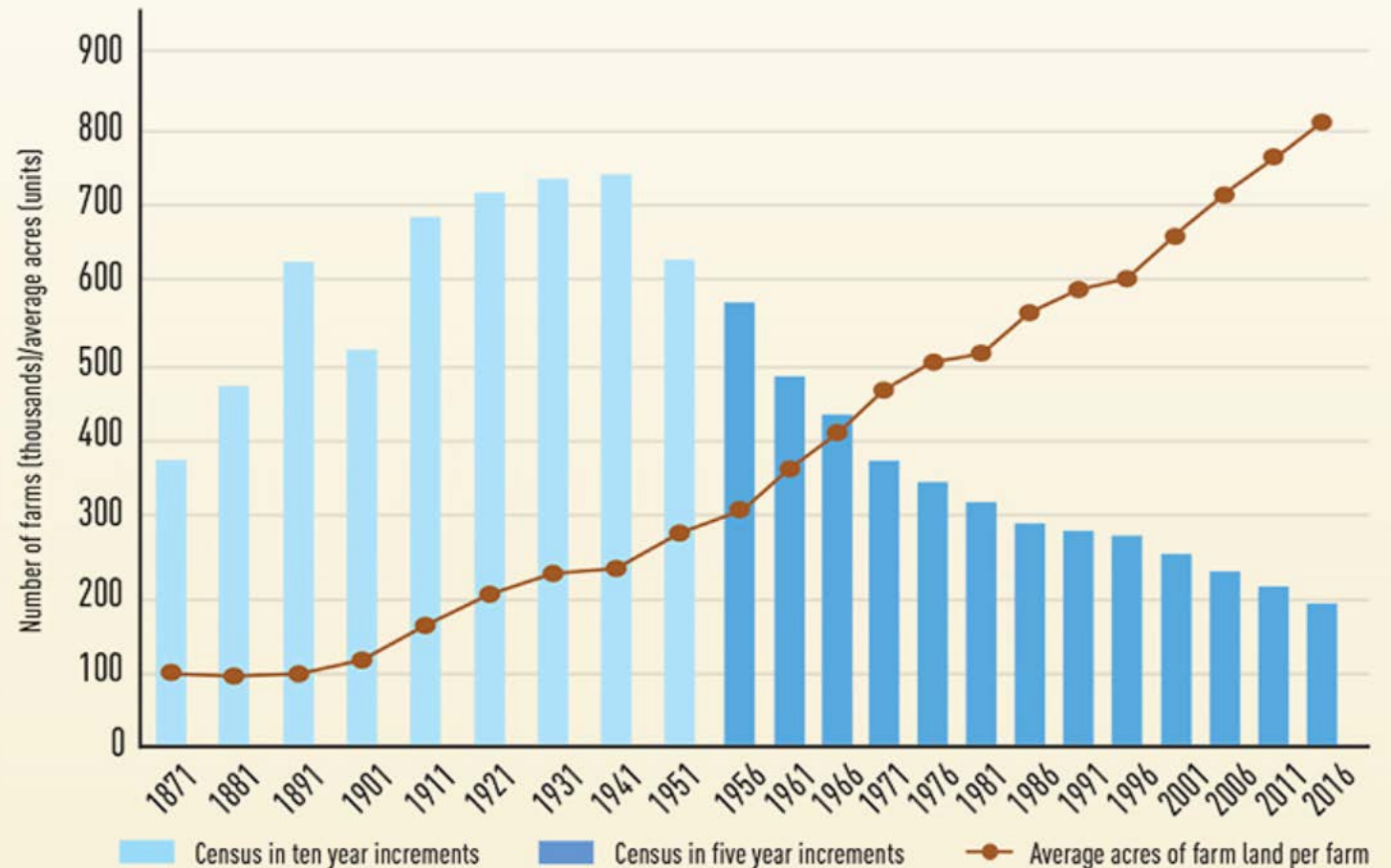


# Background of Agriculture in Canada

Continuing trend of fewer and larger farms

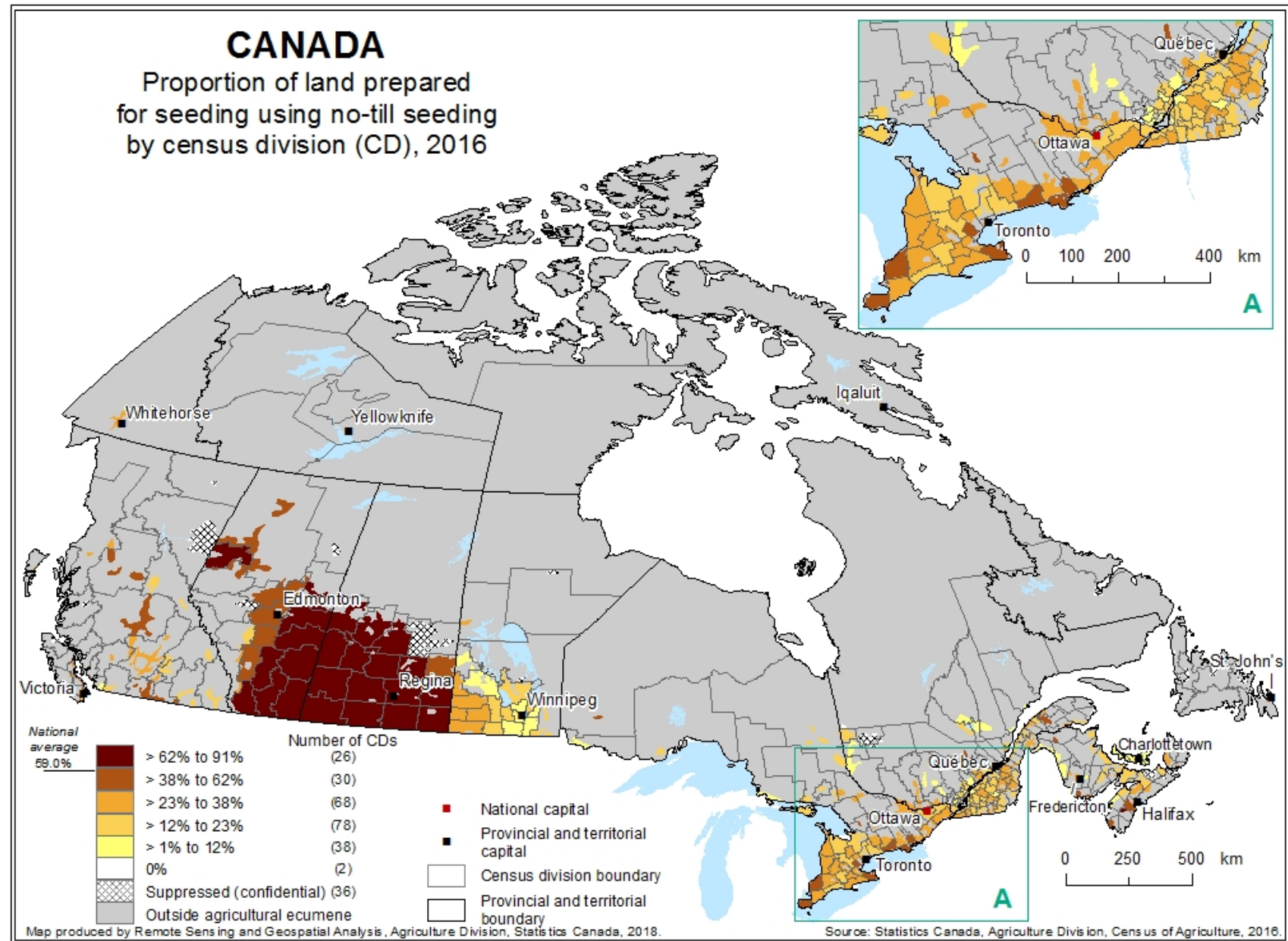
Average size of farm has gone from 100 acres in 1871 to over 800 acres in 2016

**Total number of farms and average acres per farm, 1871 to 2016 census years**





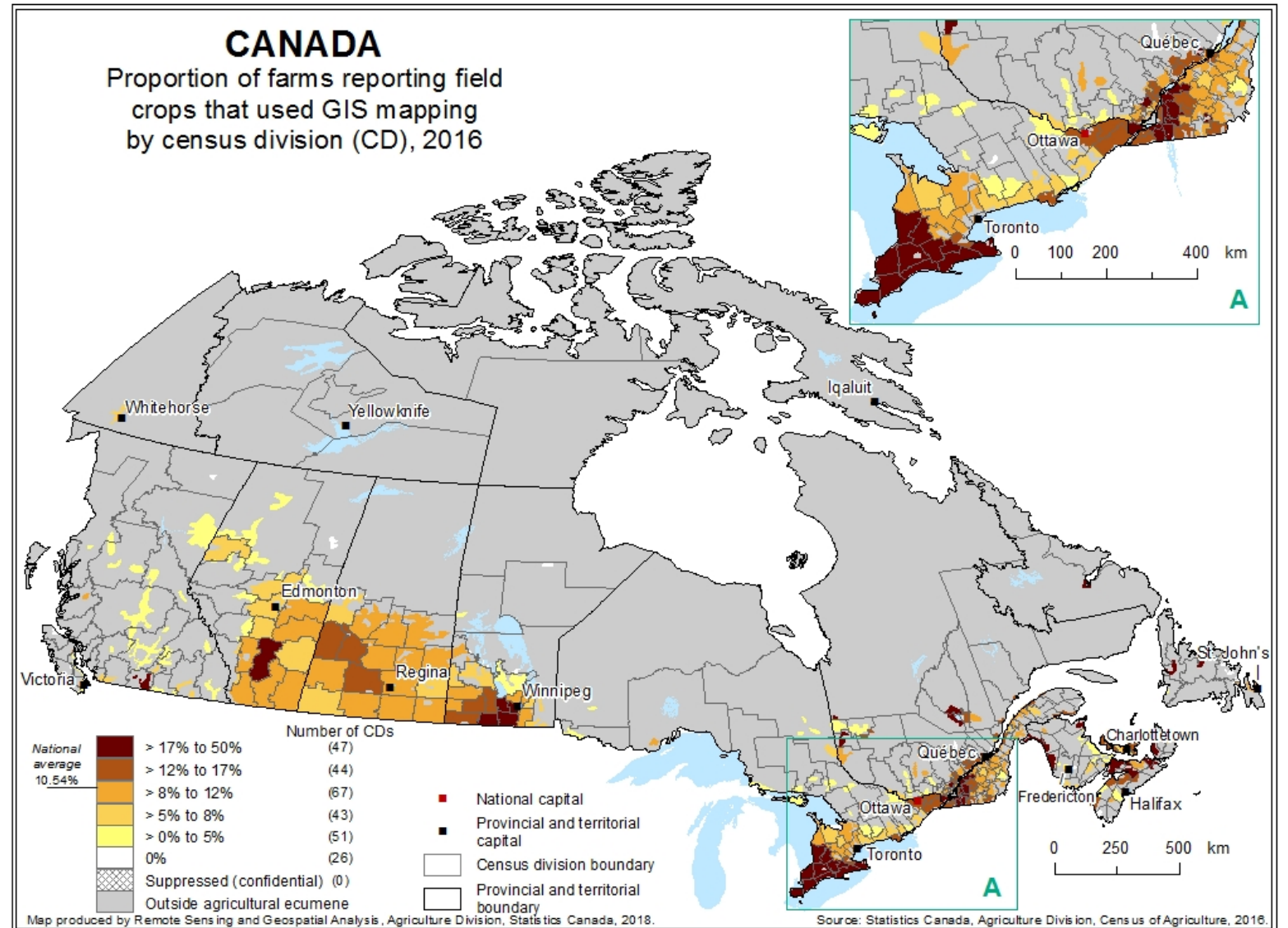
# Adoption of no-till farming



# Adoption of other technologies

Many use computers (old technology) in their operation

Fewer use GIS mapping on their farms (new technology)

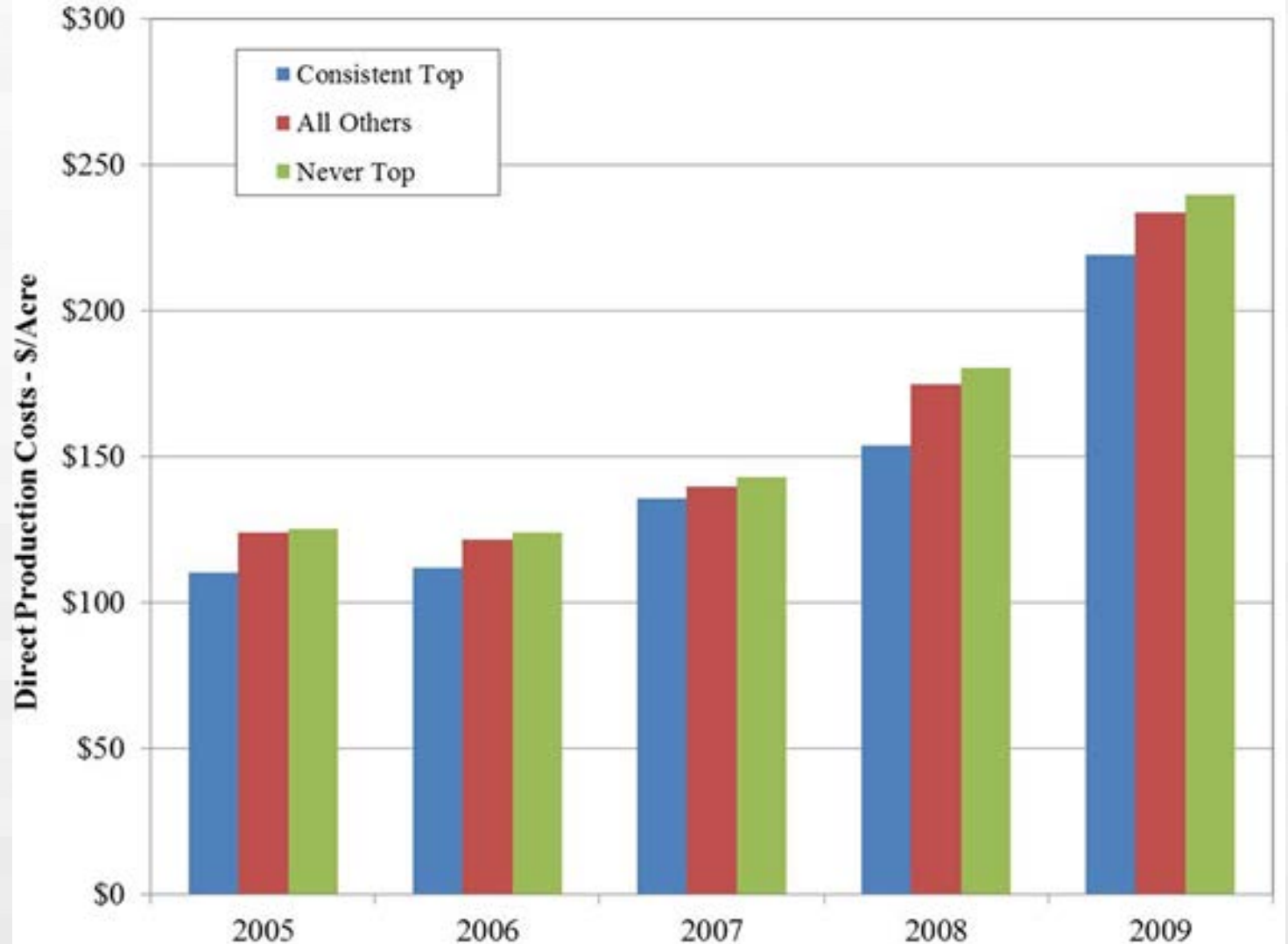


# Farmer innovation

Aspiration drives search

Winners are those who  
find and exploit new  
ideas faster

Figure 3. Direct Input Costs Across Farm Performance Groups, 2005-2009





“...competitiveness is a function of the firm’s pace, efficiency, and extent of knowledge accumulation.”

Gary Hamel, 1991



# Competing on Knowledge

Competitive advantage now based on speed of learning

Awareness and exploitation of new ideas

Art and science of analytics

Questions are as important as answers

# Factor market of ideas



New ideas sourced from many places

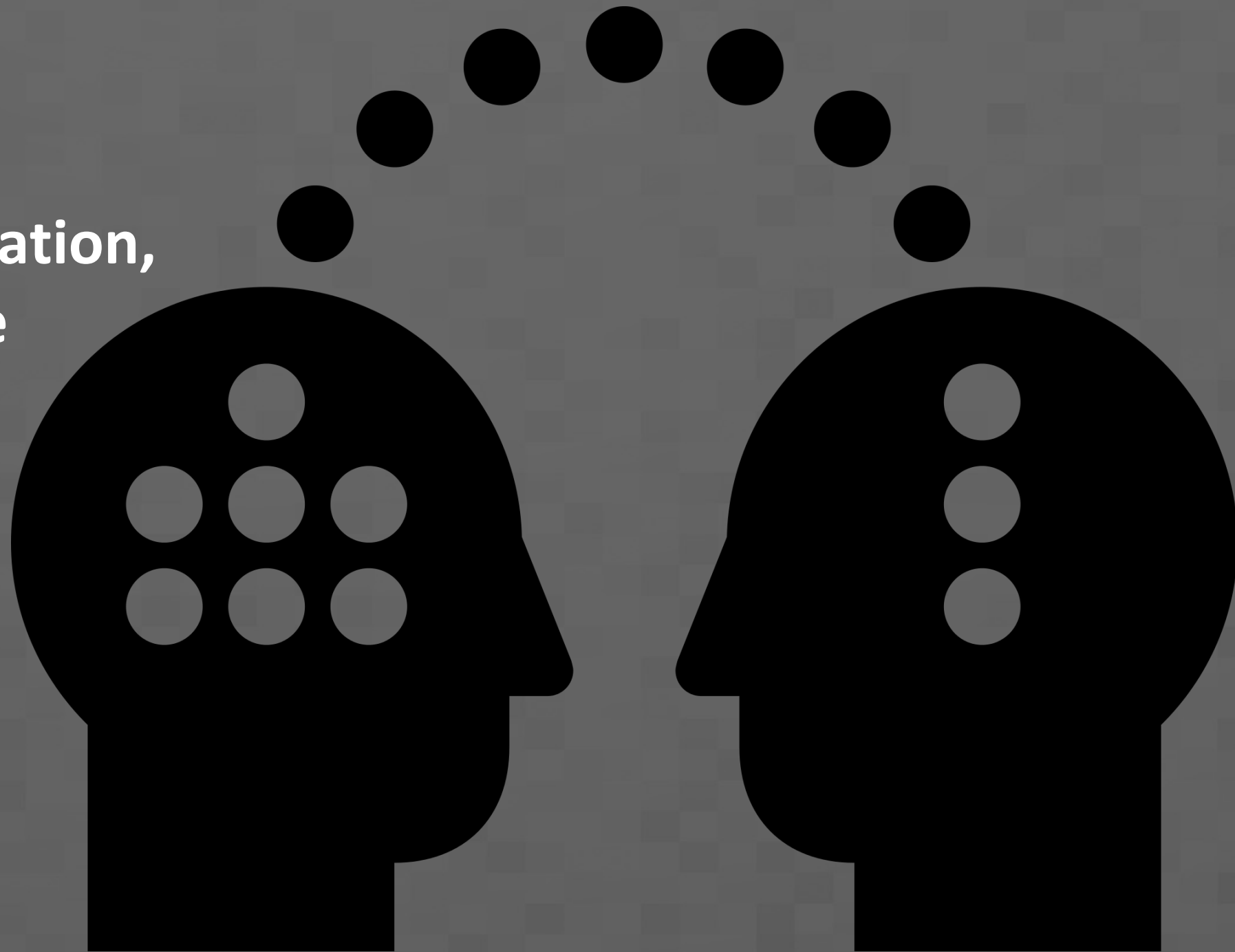
Competitors – Other farmers, other industries

Suppliers – Consultants, Industry

Institutions – Universities, Cooperatives

Function of Social Capital – connectedness within the community

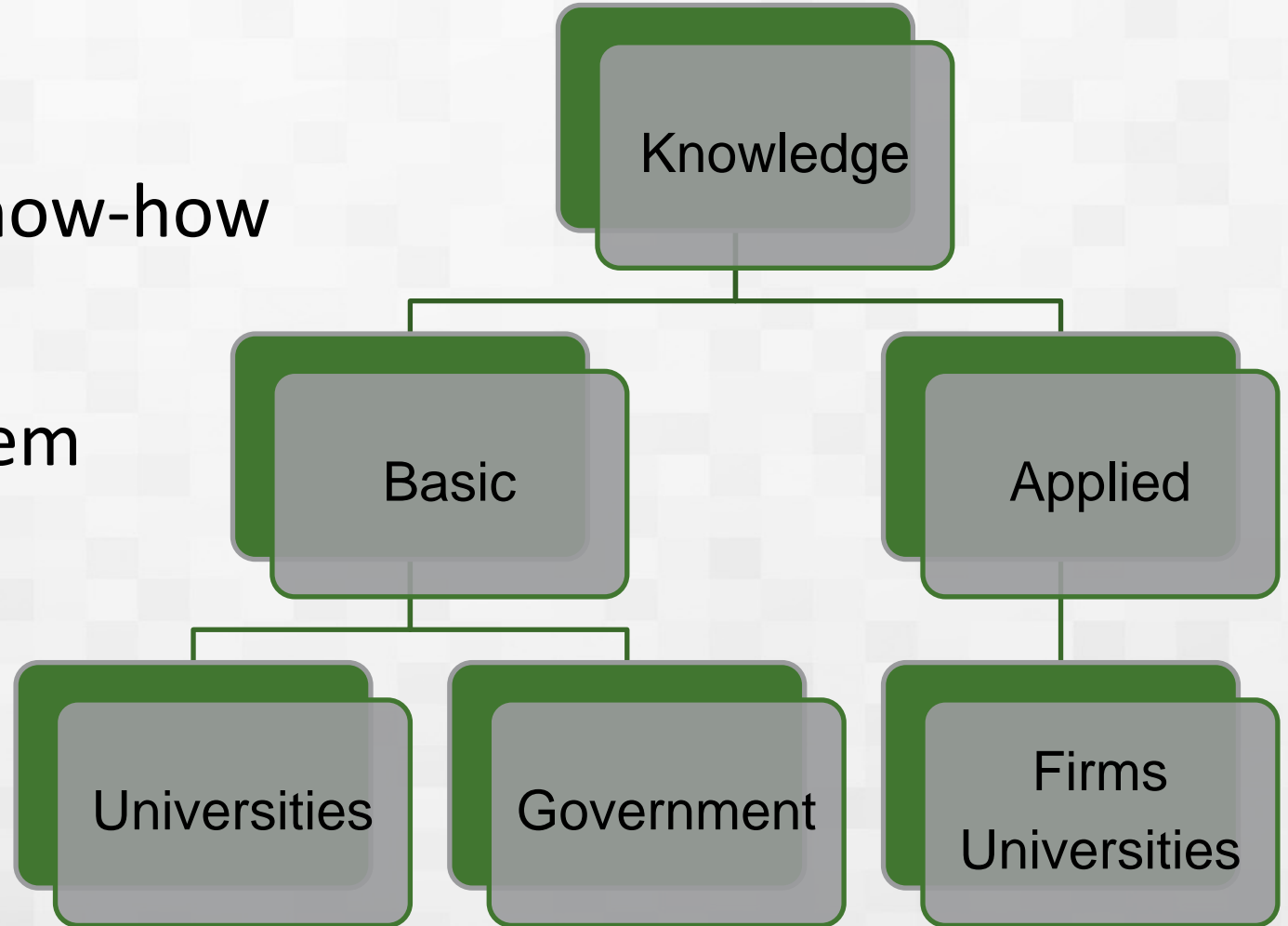
# Knowledge, Knowledge Creation, and Knowledge Transfer



# Knowledge

Basic – Filling gaps in know-how

Applied – Solve a problem





# Knowledge creation in agriculture

Gene sequencing and pre-breeding

Variety Development

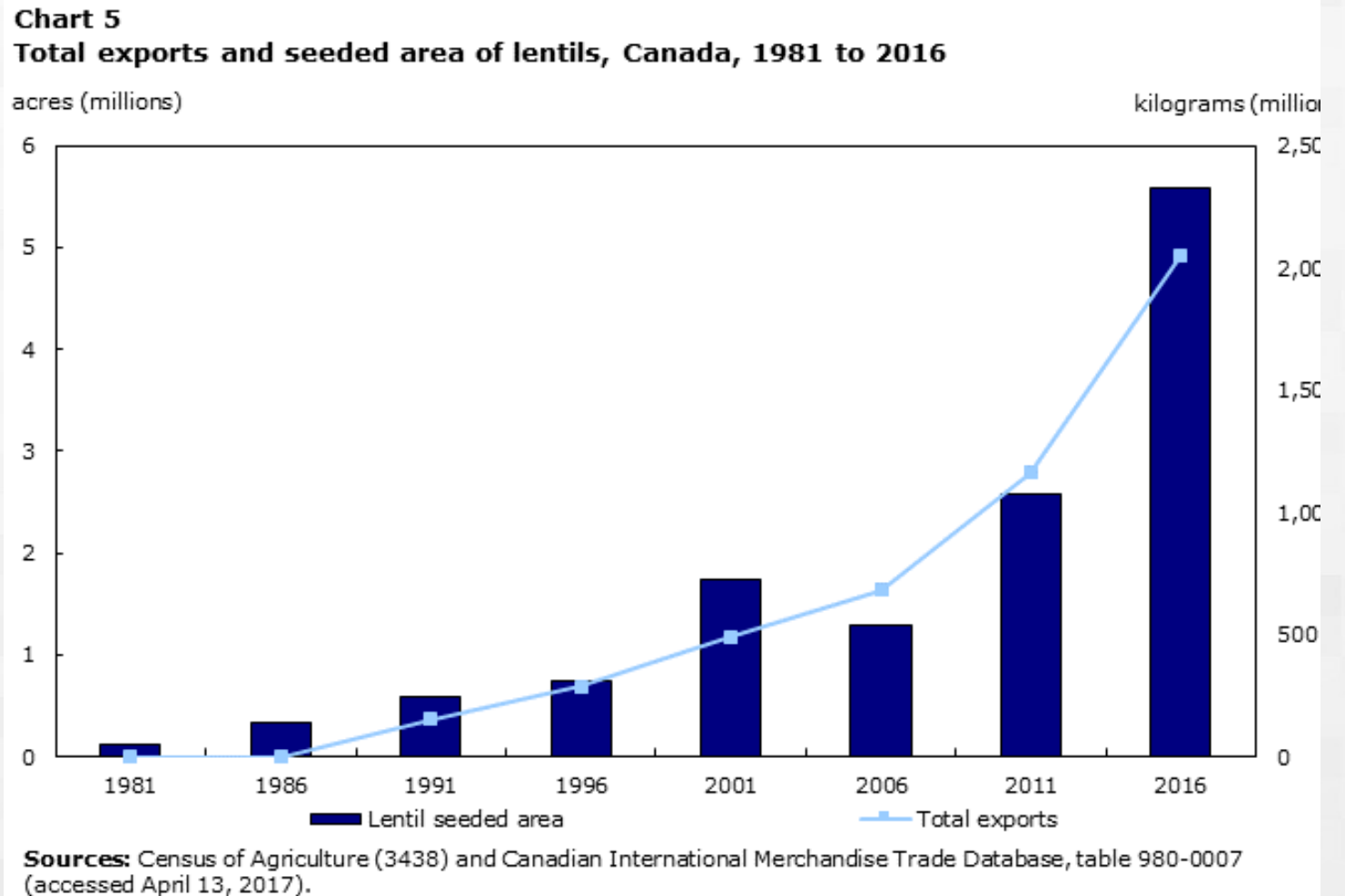
Identification and validation of best management practices



# Growth in Lentil Acres and Exports

Funded by growers, for growers

Over 4000% growth in acres since 1981



# Why has acreage increased?

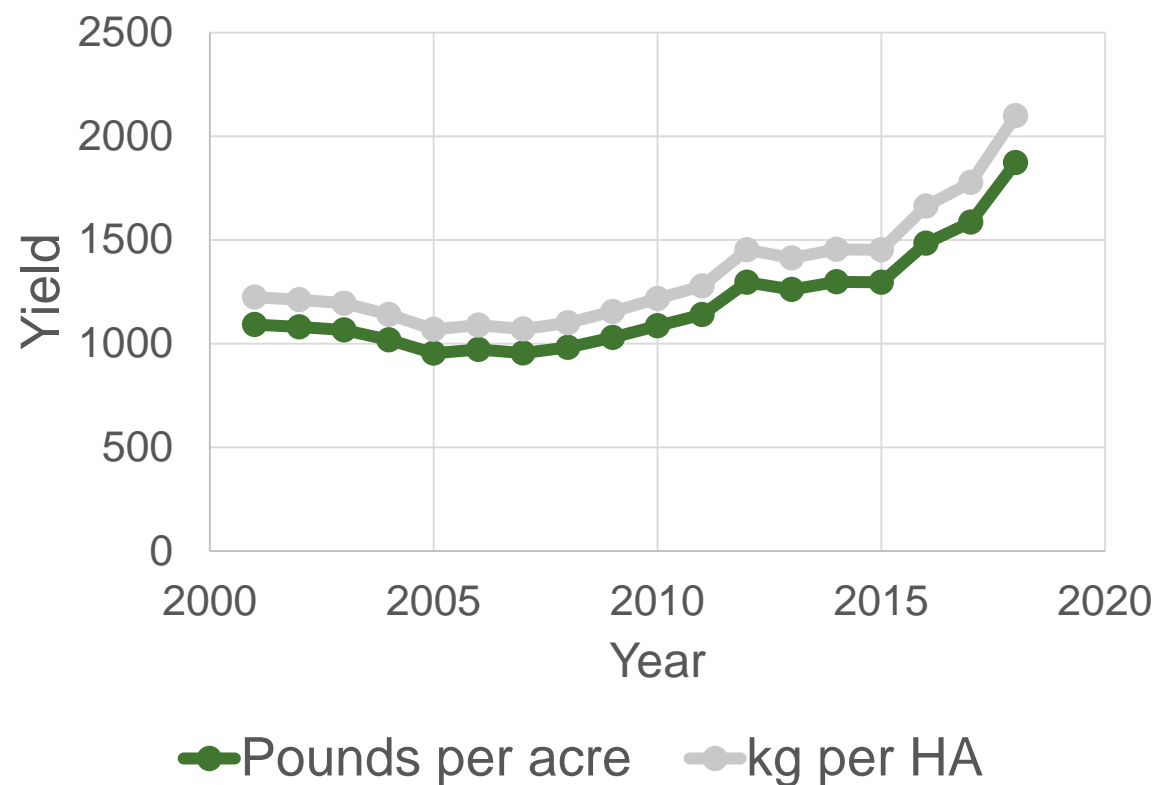
Continued investments in institutional knowledge

Better agronomic practices

Better yielding varieties

Much of this funded through levies

## Expected Yield of Lentils in Saskatchewan 2001-2018





# Knowledge Transfer in Cooperative Organizations in Canada



# Knowledge Transfer

The transmission of pertinent information from one area of the organization to another

From managers to employees

From buyers to suppliers

Bi-directional transfer

# Why form cooperative organizations?

Differences in resource endowments may give rise to strategic alliances

Joint Ventures

Alliances

Cooperatives

Enable firms to *internalize a partner's skills* (Hamel, 1991)

# Fieldmen of Saskatchewan Wheat Pool

Role was education of public on benefits of cooperatives

Shared goals and shared culture key factors in knowledge transfer



## Suggested time schedule (days):

One week coop schools	9
Coop rallies, picnics, farm days	11
Committee meetings	50
Annual meetings	20
Picture shows, etc.	60
Records, correspondence	26
Annual meeting of delegates	12
District meeting of delegates	12

# Knowledge Transfer at Agropur



Solidarity Committee –supervises and coordinates associational life, member services and member training.

Supported by a network of over 700 facilitators across the country.

- provide members with information
- gather their opinions and comments

Very similar to Fieldmen model of SWP



# Capabilities in Exploration and Exploitation

Most on farm innovations are incremental, and off-the-shelf

Have built resources and capabilities in models of efficiency

Many would lack strategic resources explorative search

- Where is the new business model?

# innofabrik

**AGROPUR**

Inno Fabrik is Agropur's annual in-house idea-generation program. It brings employees from different departments, backgrounds and points of view together for brainstorming sessions. The concepts selected at these sessions are then submitted to consumers to test their relevance, uniqueness and the level of interest. The most promising ideas are then prioritized.

# Cooperative Organizations & Knowledge Transfer

Alliances and cooperatives enable creation of re-deployable knowledge

- Non-rival
- May be excludable (if outside cooperative)

In cooperative organizations, creation of re-deployable knowledge is important aspect of growth and improvement

# Knowledge Transfer in Producer Controlled Organizations



# While not a cooperative, per se ...

Producer Controlled Organizations look and act like a cooperative

Voluntary membership – Levy refundable (except Sask Pulse Growers)

**Member control – Farmer elected board of directors**

**Economic participation – 1% of returns kept by SPG (non-refundable)**

Autonomy and independence – Partnerships adhere to democratic control

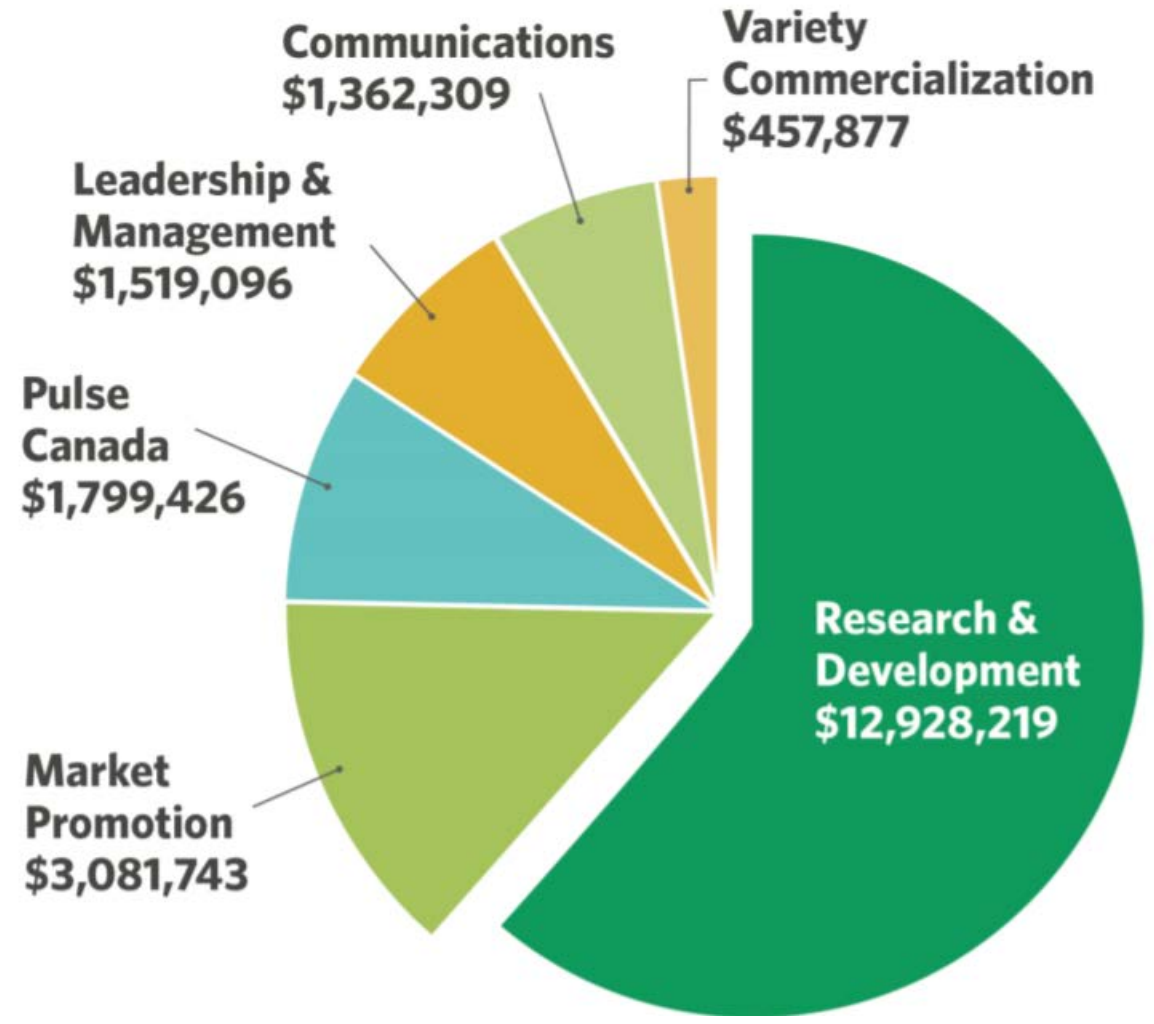
**Education, Training, Information – Workshops, Webinars, Fact Sheets**

**Cooperative of Cooperatives – Work with broader Canadian pulse industry**

**Concern for Community – Research funding goes to improve economic, environmental sustainability of farmers in Saskatchewan**



**SPG  
Budgeted  
Outflows  
2017**



# Education, Training, Information

PCOs invest in  
education of  
producer members

Go to [KeepingItClean.ca](http://KeepingItClean.ca) for more information.



## MARKET CONSIDERATIONS FOR USE OF PULSE CROP PROTECTION PRODUCTS

CROP PROTECTION PRODUCTS	PEAS	LENTILS	CHICKPEAS	DRY BEANS	FABA BEANS	COMMENTS
<b>A. Desiccant/Harvest Management Tools</b>						
Glyphosate* (e.g. Roundup)	✓	✓	!	!	!	Consult with your exporter/processor before using this product for certain crops/destinations. Maximum residue limits are established in key markets, however, MRLs are set at low levels for dry beans in the EU, and all pulse crops in South Korea except for lentils.
Diquat (e.g. Reglone)	!	!	!	!	!	Consult with your exporter/processor on pulse crops destined for the US. Maximum residue limits are established in key markets but are set at low levels in the US.
Saflufenacil (e.g. Heat)	✓	✓**	✓	✓	NR	Maximum residue limits have been established for all major export markets. This product is not registered for pre-harvest use on green lentils.



# Information & training is aligned to member needs

Crops with over \$1 Billion CAD in exports

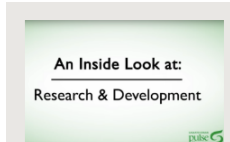







- Canola seed
- Lentils
- Non-Durum Wheat
- Canola Oil
- Peas
- Durum







Keep it Clean! - Fall Pesticide Application

*Cereals Canada, March 2018*



 <p><a href="#">An Inside Look at Research &amp; Development - Video</a></p>	 <p><a href="#">An Inside Look at: Market Development and Promotion - Video</a></p>	 <p><a href="#">Saskatchewan Pulse Growers 2015 Strategic Plan</a></p>	 <p><a href="#">Pulse Agronomy Webinar: Insects and Scouting in Pulse Crops</a></p>
 <p><a href="#">Pulse Agronomy Webinar: Maximum Residue Limits</a></p>	 <p><a href="#">Pulse Agronomy Webinar: Nutrient Requirements and Contribution of Pulse Crops</a></p>	 <p><a href="#">Pulse Agronomy Webinar: Soybean Agronomy</a></p>	 <p><a href="#">Pulse Agronomy Webinar: Weeds in Pulse Crops</a></p>

 <p><a href="#">Harvest Tips for Dry Beans</a></p> <p>PDF (685 KB)</p>	 <p><a href="#">Harvest Tips for Soybeans</a></p> <p>PDF (505 KB)</p>	 <p><a href="#">Post Harvest Weed Control Strategy for Pulses</a></p> <p>PDF (311 KB)</p>	 <p><a href="#">Testing for Aphanomyces Root Rot</a></p> <p>PDF (493 KB)</p>
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Transferring complex knowledge

# Co-operative Test?

Acts like a cooperative

Governance structure like a cooperative

Education/Training/Information like a cooperative





# Wrapping up

1

PCOs and  
Cooperatives:  
Knowledge creation  
and transfer

2

Investments aligned  
with farmer needs

3

Bi-directional and  
multiple points of  
interaction

# Thank you!

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