

Building Innovation:
Collaboration on
Agri-Food Research and
Development

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Manitoba Agriculture



Research
Manitoba

Manitoba



Agriculture

Federal-Provincial-Territorial policy frameworks: Platforms for Agri-Food Innovation in Manitoba



- 1970's Agricultural and Rural Development Act (ARDA-FRED)
- 1990's Fed-Prov Agreement on ARDI, FFT, CNG
- 2003-2008 Agricultural Policy Framework
- 2008-2013 Growing Forward
- 2013-2018 Growing Forward 2

**Research, Development, Innovation
increasing in prominence.**

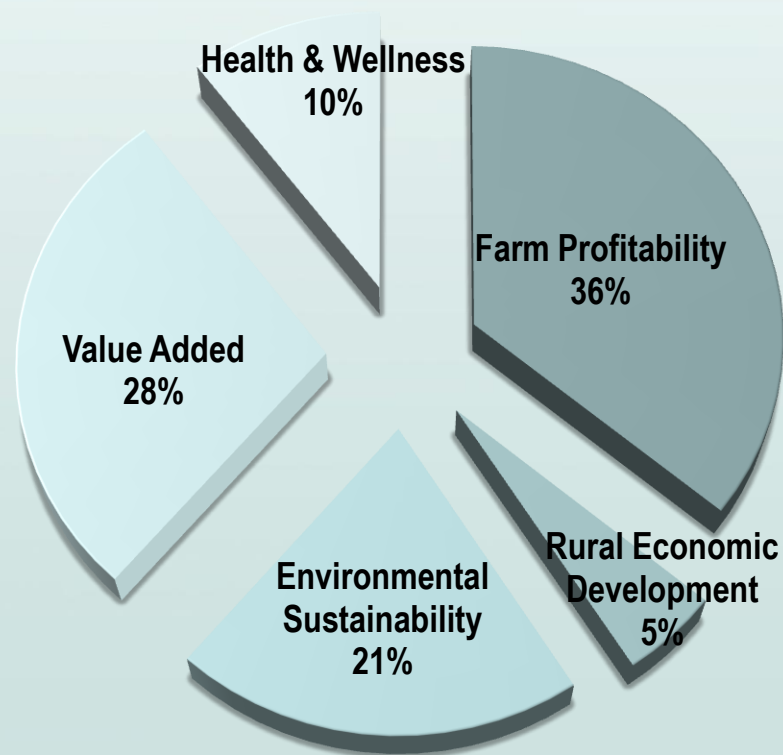
Federal-Provincial-Territorial policy frameworks: Platforms for Agri-Food Innovation in Manitoba

Prov Grant – UM FAFS	\$ 765
Prov Grant - PAMI	\$ 333
Prov Grant - FDC	\$ 2,000
Prov Grant – MBP-MBFI	\$ 100
Prov Program - Grain Innov Hub	\$ 3,000
Prov Program - Biomass Energy	\$ 500
Fed Vote 10 cash	\$ 5,300
Total	\$12,000
Total Available to Industry	\$ 8,800*

* Front loaded in first 3 years of 5-year program

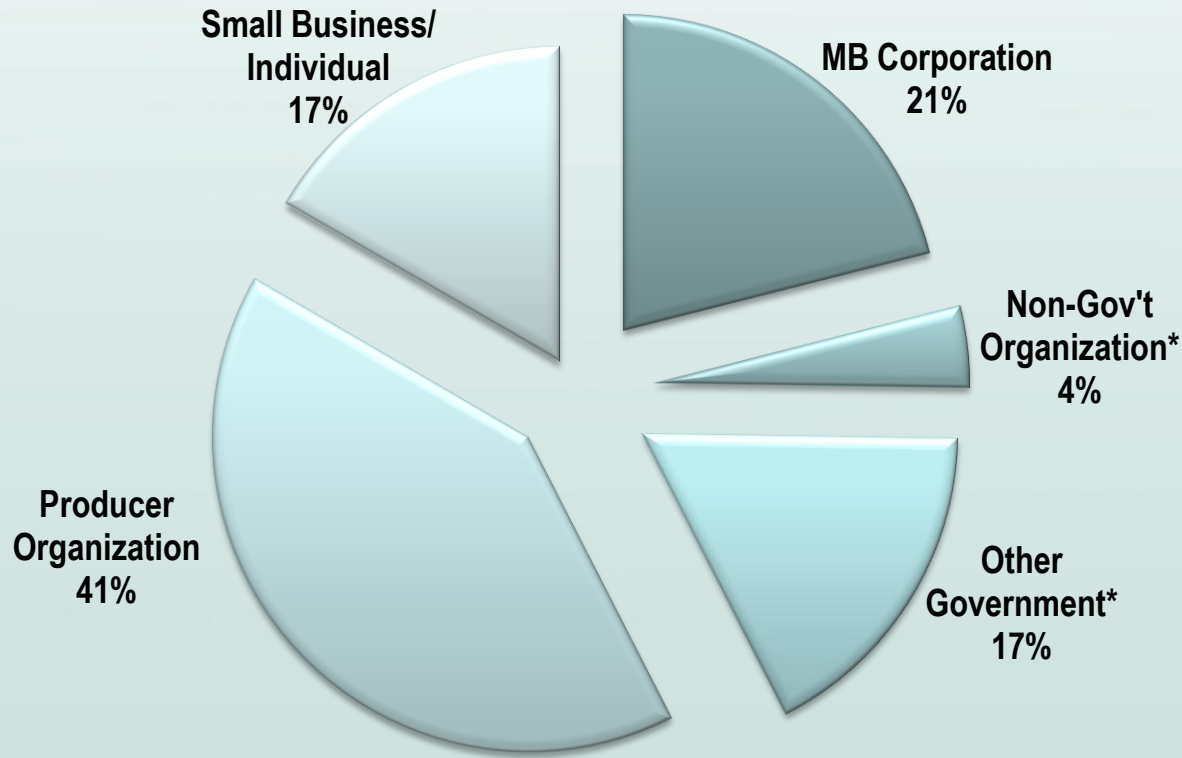
Agri-Food R&D has generated incremental progress across the board

Growing Forward (2009-2013) \$14.66 M approved



Agri-Food R&D has been highly collaborative

GF (2009-2012) \$12.4 M partner funds

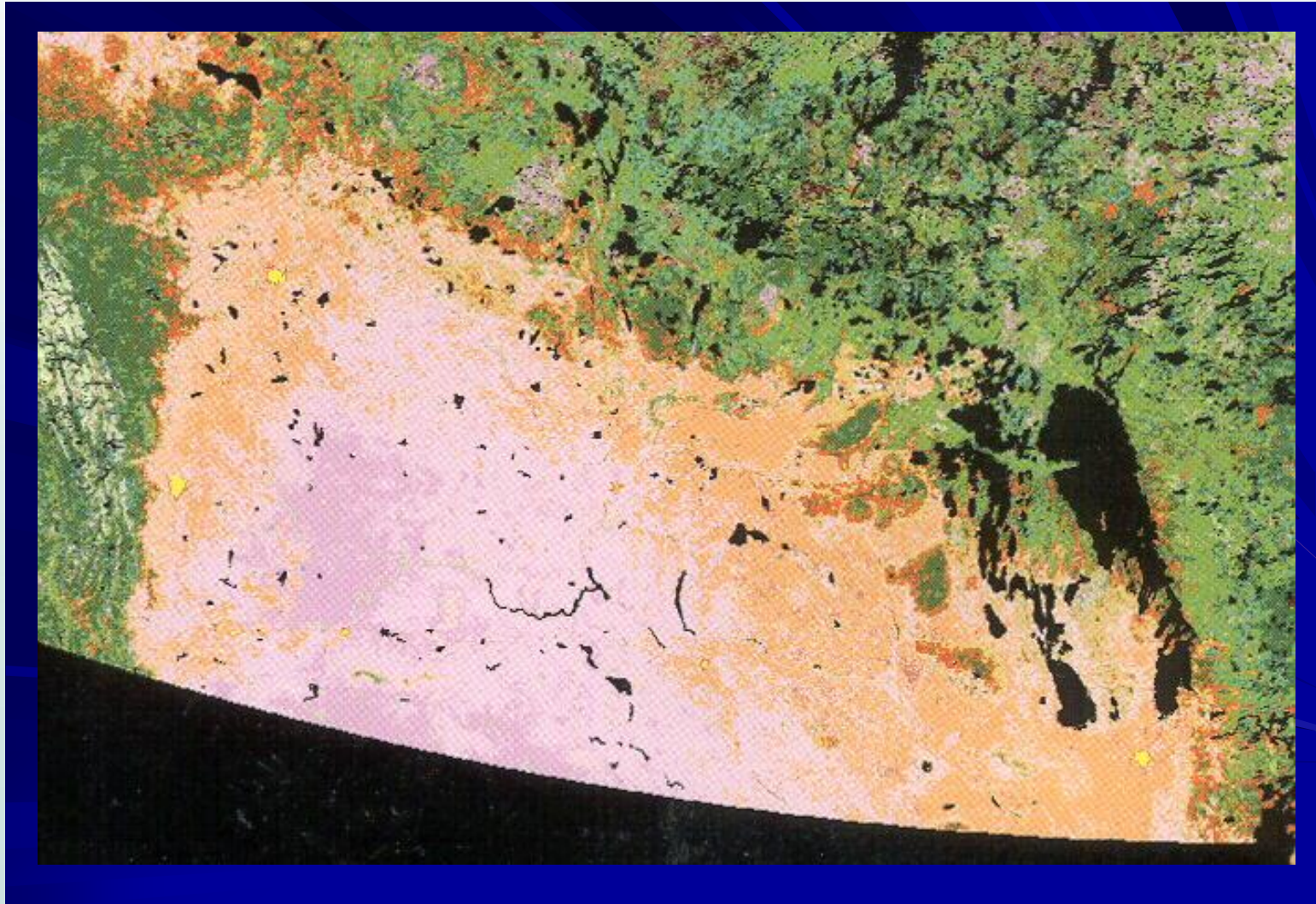


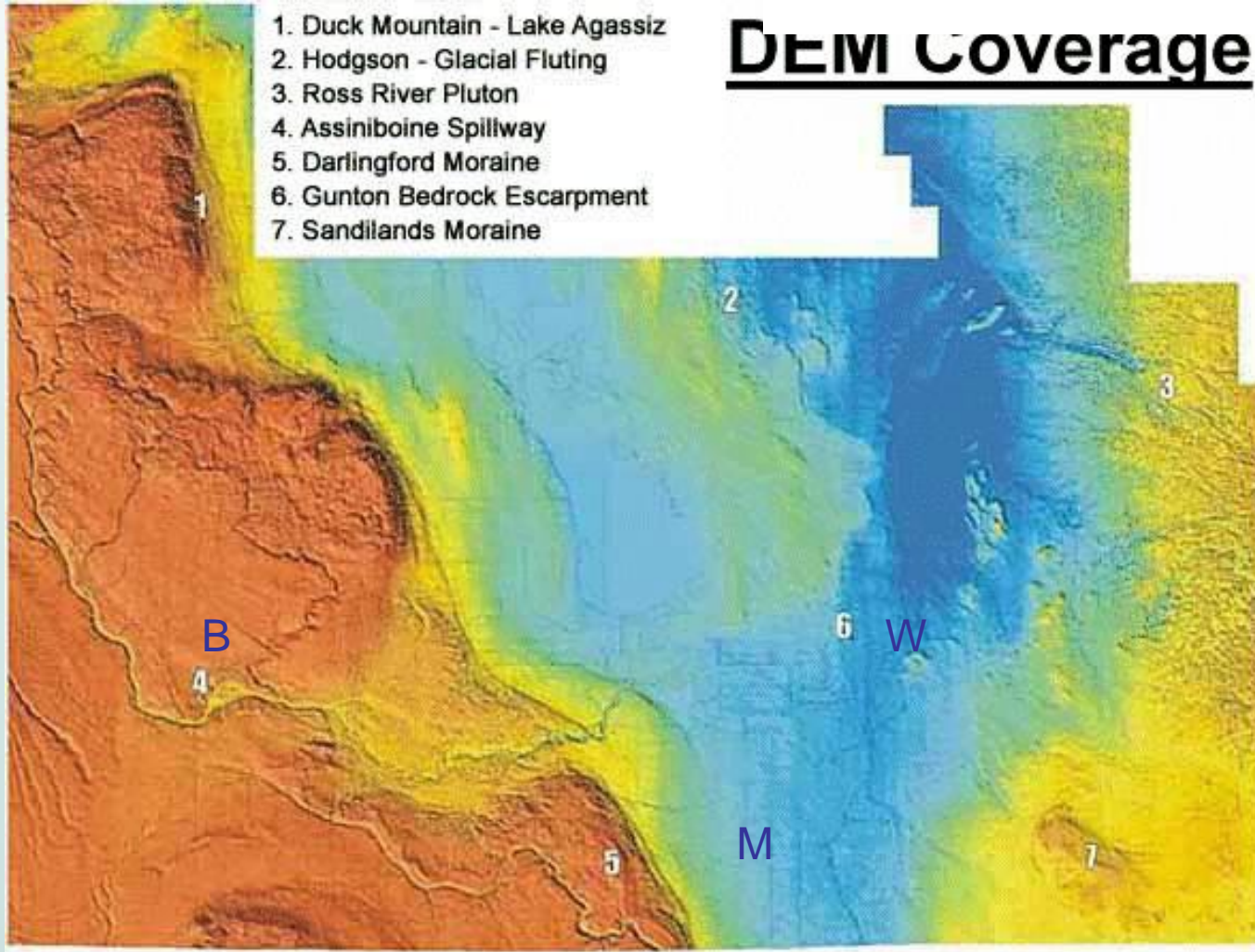
*Collaboration on Agri-Food Research and Development: **Perspectives***





- What distinguishes Manitoba - Economic & Physical Geography
- What are our priorities at the global, national and provincial scales?

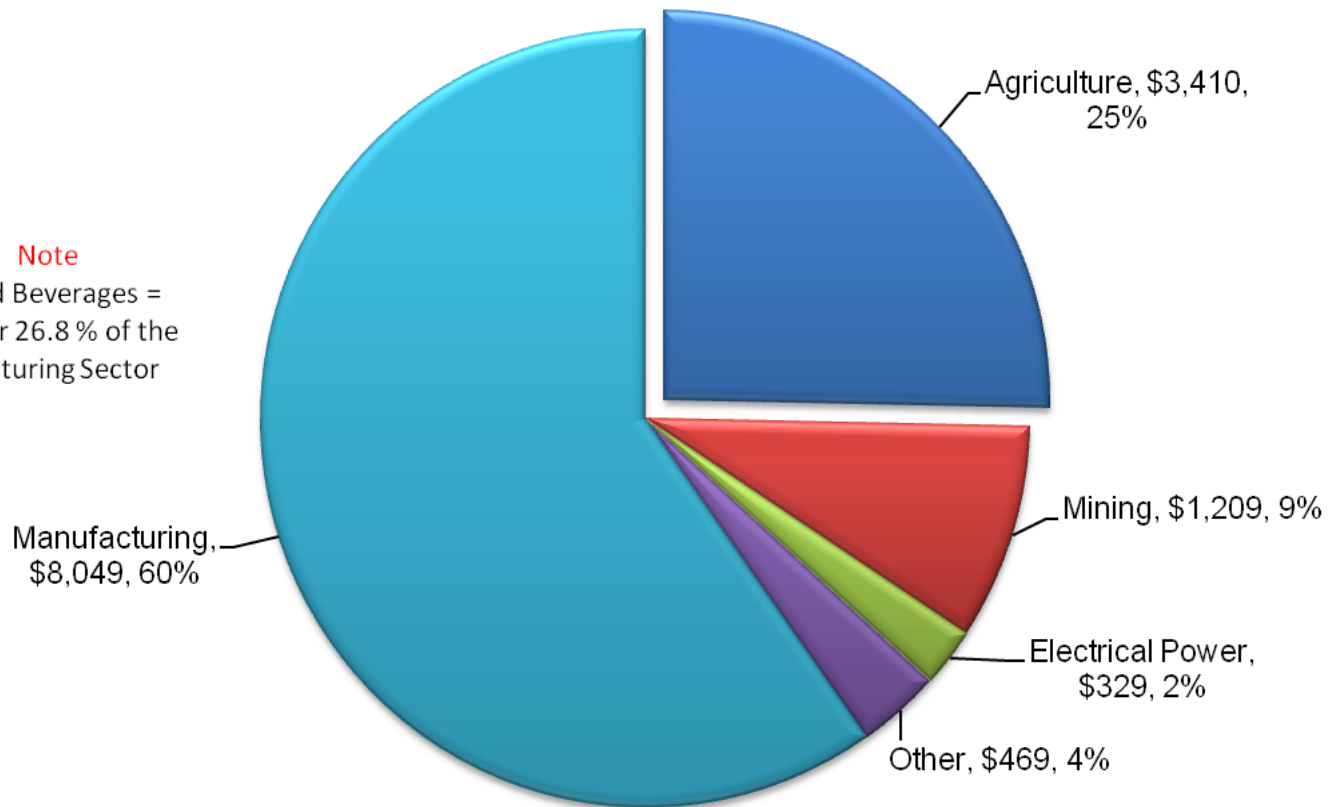




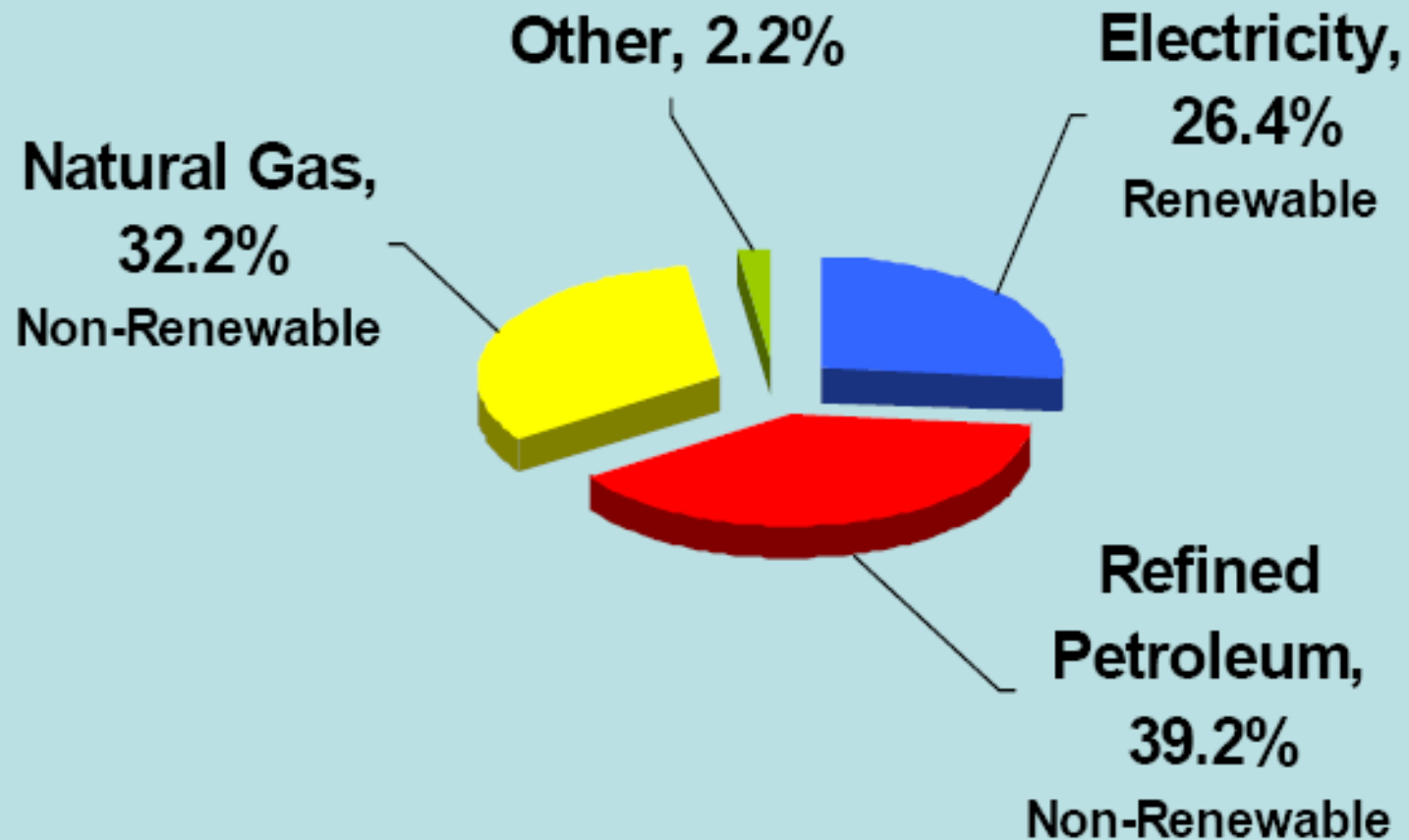
Collaboration on Agri-Food Research and Development: *Perspectives*

Manitoba's Exports by Industry 2014, Billion Dollars
Total \$13.4 Billion

Note
Food and Beverages =
\$2,156 or 26.8 % of the
Manufacturing Sector

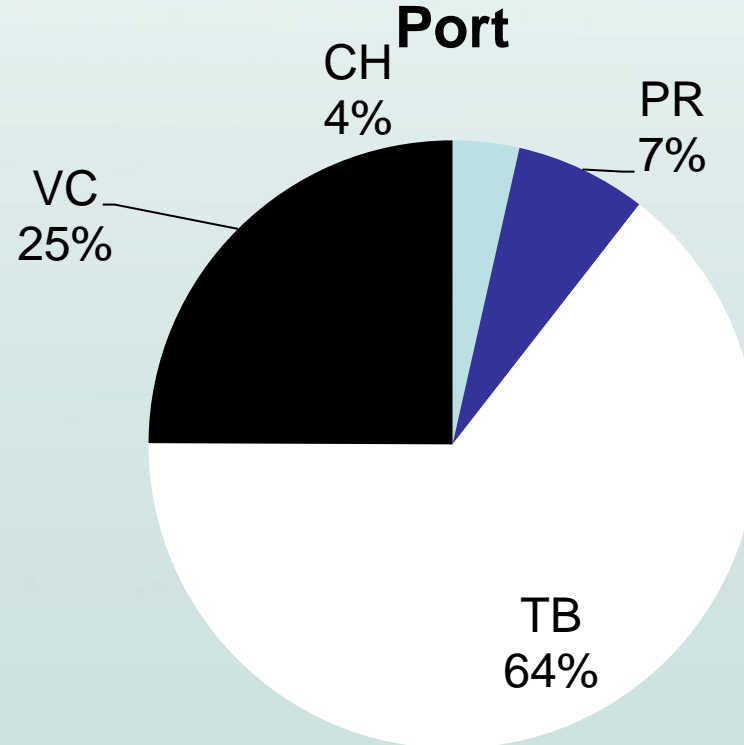


Collaboration on Agri-Food Research and Development: *Perspectives*

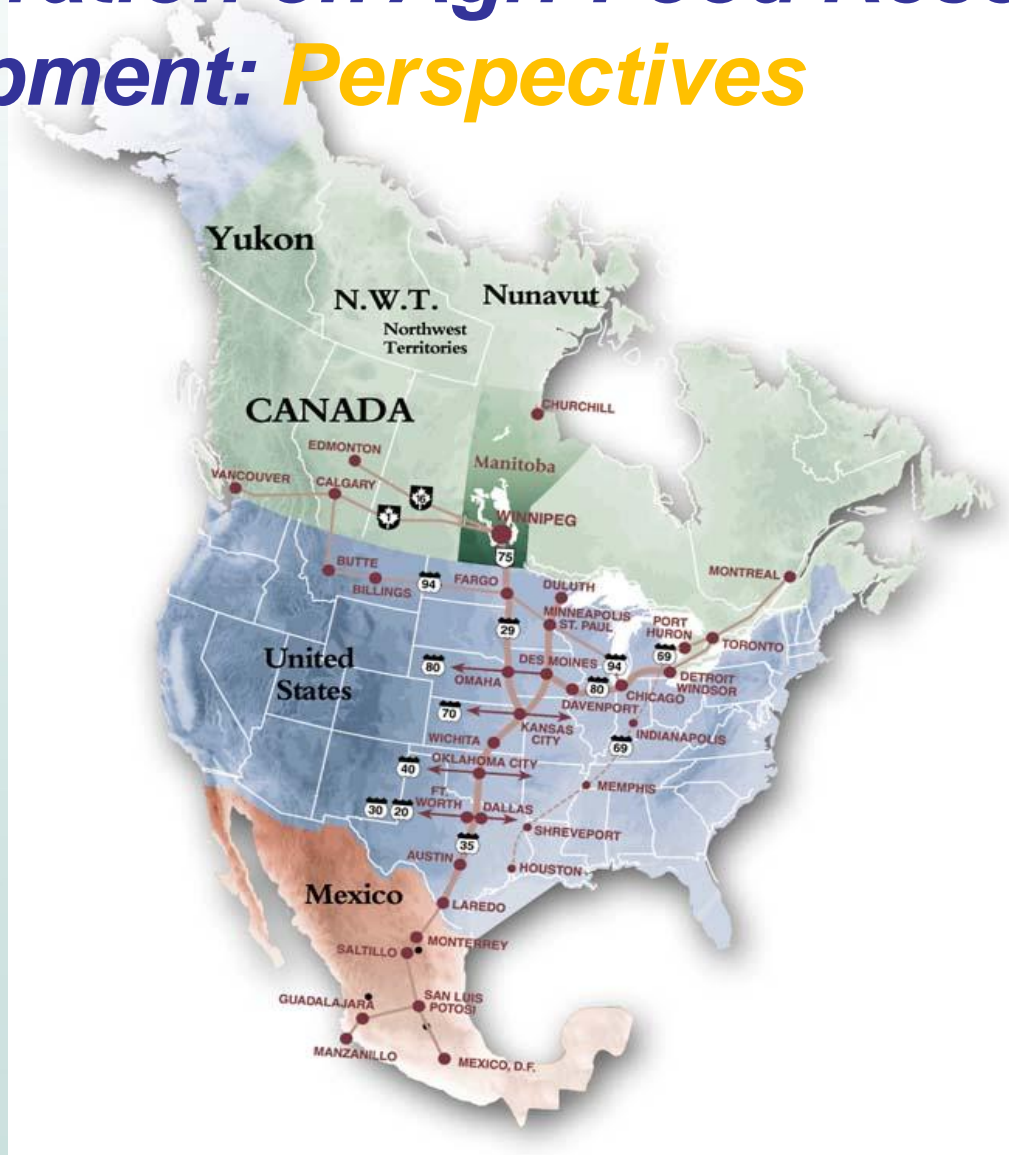


Collaboration on Agri-Food Research and Development: *Perspectives*

10-Year Average Manitoba Grain Shipments by Port

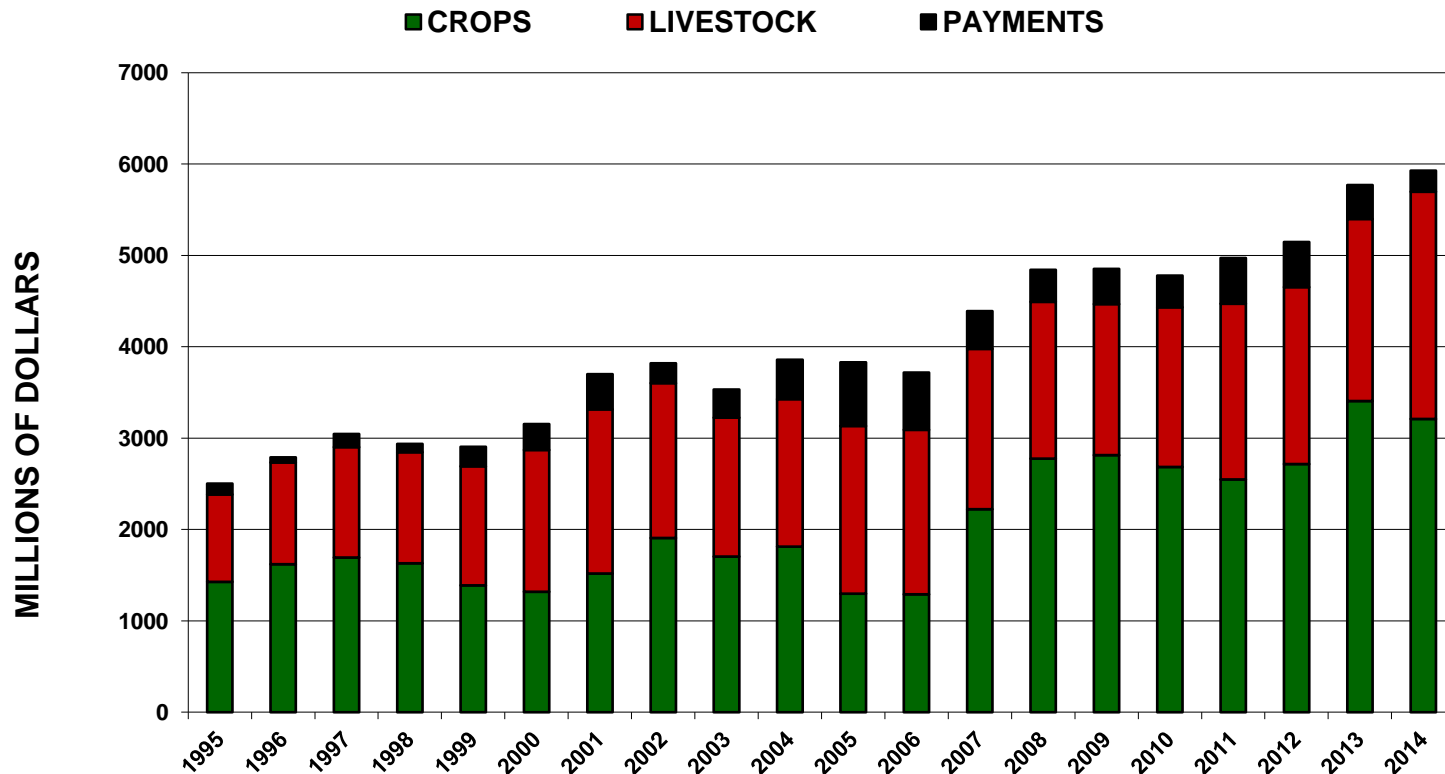


Collaboration on Agri-Food Research and Development: *Perspectives*



Collaboration on Agri-Food Research and Development: *Perspectives*

**FARM CASH RECEIPTS ESTIMATES
MANITOBA, JANUARY-DECEMBER, 1995-2014**



Source: Statistics Canada.

MAFRD, Market Intelligence

Collaboration on Agri-Food Research and Development: *Perspectives*

Manitoba Soybean Yield and Production



Source: MASC "Harvest Production Report"

Collaboration on Agri-Food Research and Development: *Perspectives*

ADAPTED AAFC INNOVATION CONTINUUM						
Discovery Phase		Pre-Commercialization/Pre-Adoption /Technology Transfer			Commercialization/Adoption Phase	
Research (Discovery)	Research (Proof of Concept)	Prototype Development “Applied Research”	Demonstration Full Scale Prototype Development “Applied Research”	Market Ready Product Development “Applied Research”	Market Entry	Market Development

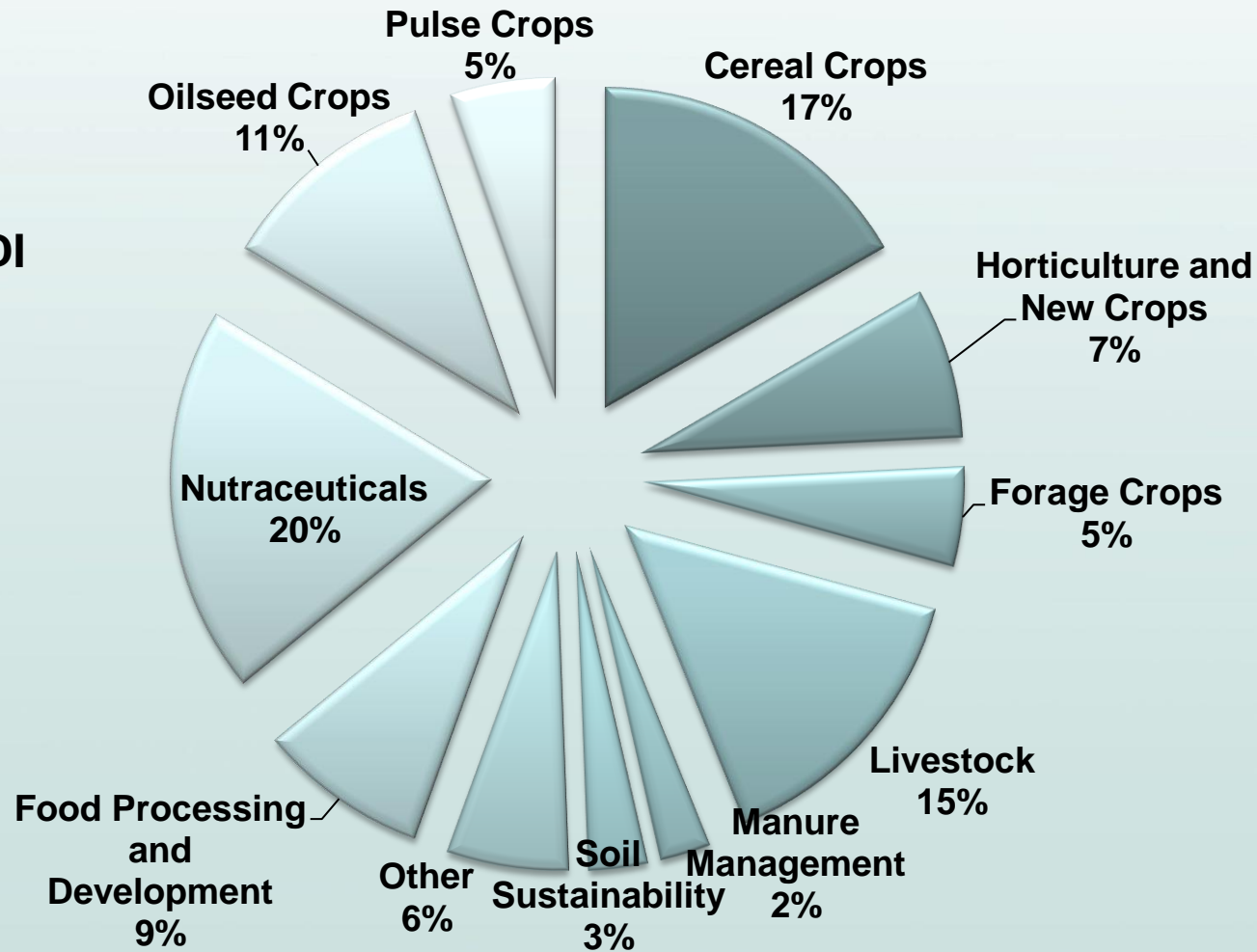
- What do we value: discovery?
applied research? adoption?
- What is our risk profile?

Collaboration on Agri-Food Research and Development: **Perspectives**

- How do we want to approach innovation? a) Incremental projects
 - Discrete single steps toward larger goal
 - Connects industry and govt RFP's
 - Competitive process
 - 1-3 years, 2 or 3 funders
 - Knowledge accumulates

Collaboration on Agri-Food Research and Development: *Perspectives*

Incremental projects ARDI 1997-2013
\$41.3 M



Collaboration on Agri-Food Research and Development: Perspectives

- How do we want to approach innovation? b) Strategic Initiatives
 - Strategic goals – longer term along entire innovation continuum
 - Govt-Industry agree on need to act
 - Build capacity
 - Multiple funders
 - Often establish a collaborative 3rd party to deliver and oversee

Strategic Initiatives: manure from among the largest populations of pigs and cows in Canada



Strategic Initiatives: Treatment/prevention of chronic disease with food

Canadian Centre for Agri-Food Research
in Health and Medicine

Advancing Medicine Through Agriculture

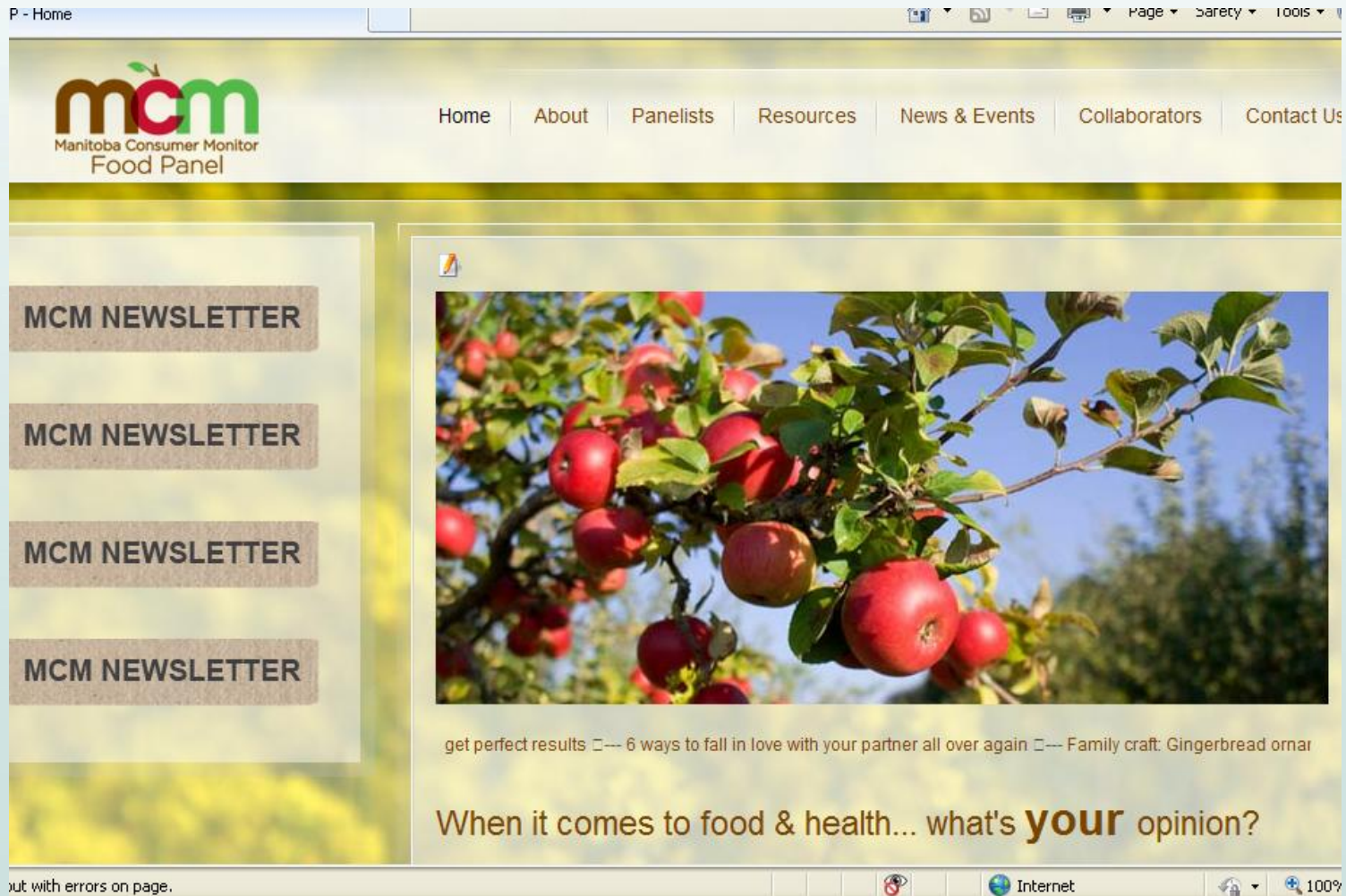


Richardson Centre
for Functional Foods
and Nutraceuticals

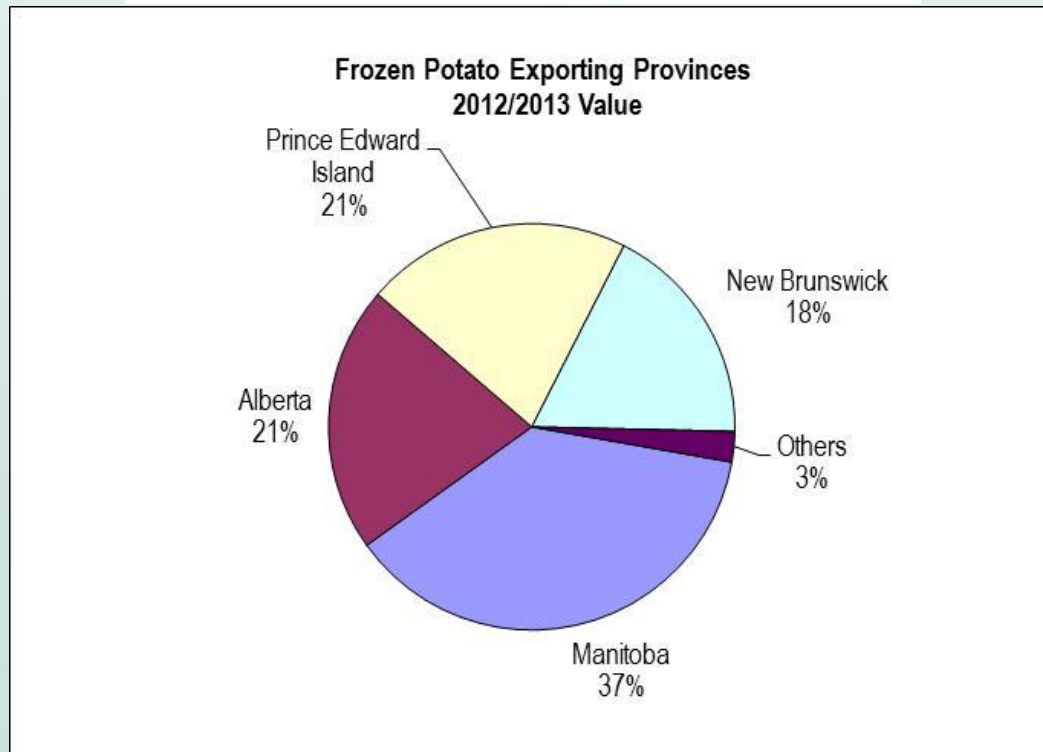


Manitoba Agri-Health Research Network

Strategic Initiatives: consumer data supporting public trust



Strategic Initiatives: Largest processing potato producer



Strategic Initiatives: 3rd largest cow herd

MANITOBA BEEF & FORAGE INITIATIVE Inc.



Strategic Initiatives: Frontier of expanded corn production in North America



Strategic Initiatives: Value-added green products for the bio-economy



Strategic Initiatives: Capturing opportunities through the “Omics” platforms.



GenomePrairie

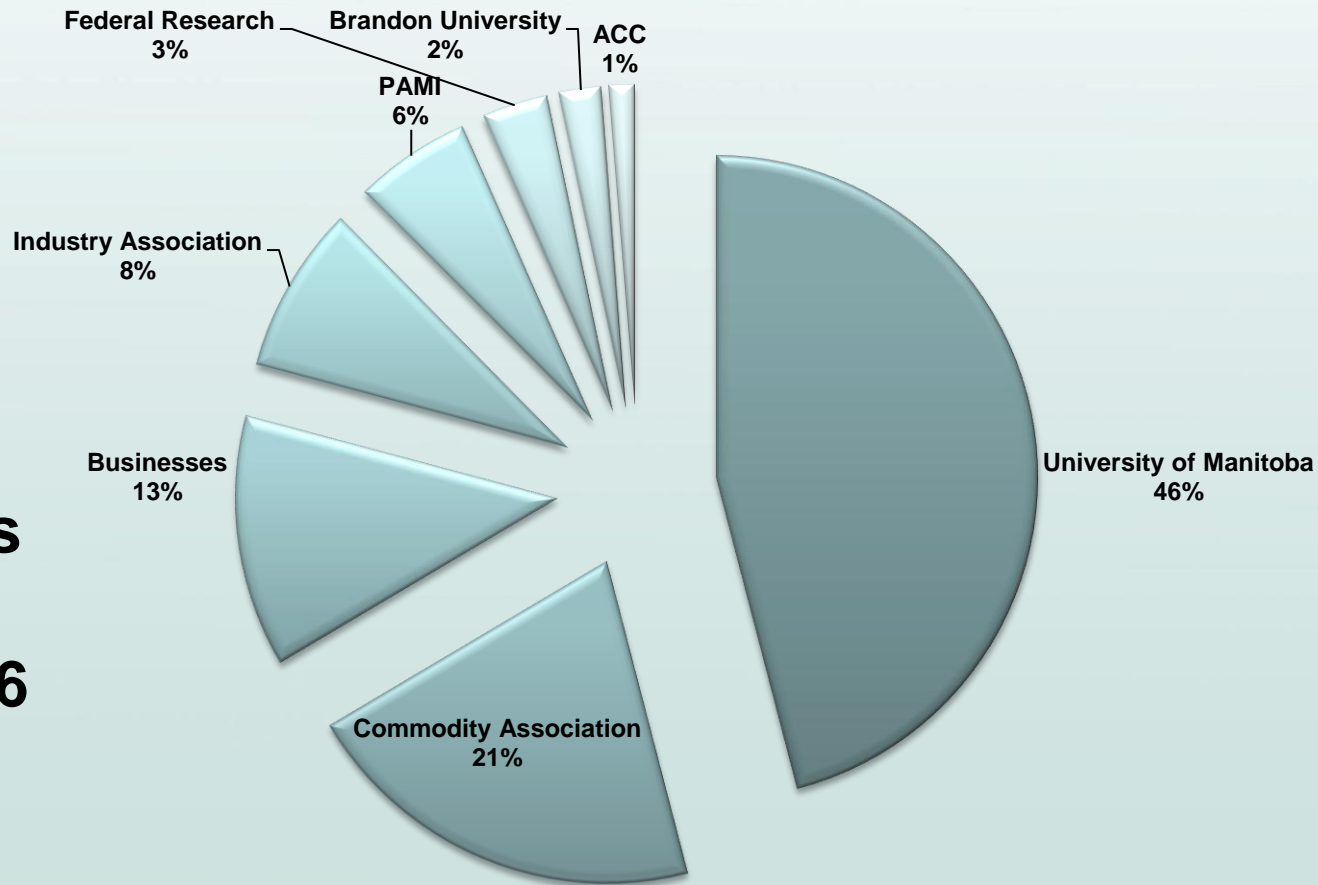


Opportunity to Improve Collaboration: Align public institutions and industry

- **We have:**
 - AAFC, UM, BU, ACC, RRC, UW, PAMI, Div Centres
- **We may consider to:**
 - Make it easier for existing players to collaborate – fewer hoops better timeliness for incremental projects
 - Build strategic investment around existing players
 - Fill gaps where to improve resource fit with province's industry profile

Opportunity to Improve Collaboration: *Align public institutions and industry*

**All R&D
Programs
\$120.3 M
1998-2016**



Opportunity to Improve Collaboration: Align public institutions and industry

- Build strategic investment around existing players e.g. **grain quality**.



Richardson Centre
for Functional Foods
and Nutraceuticals



UNIVERSITY
OF MANITOBA

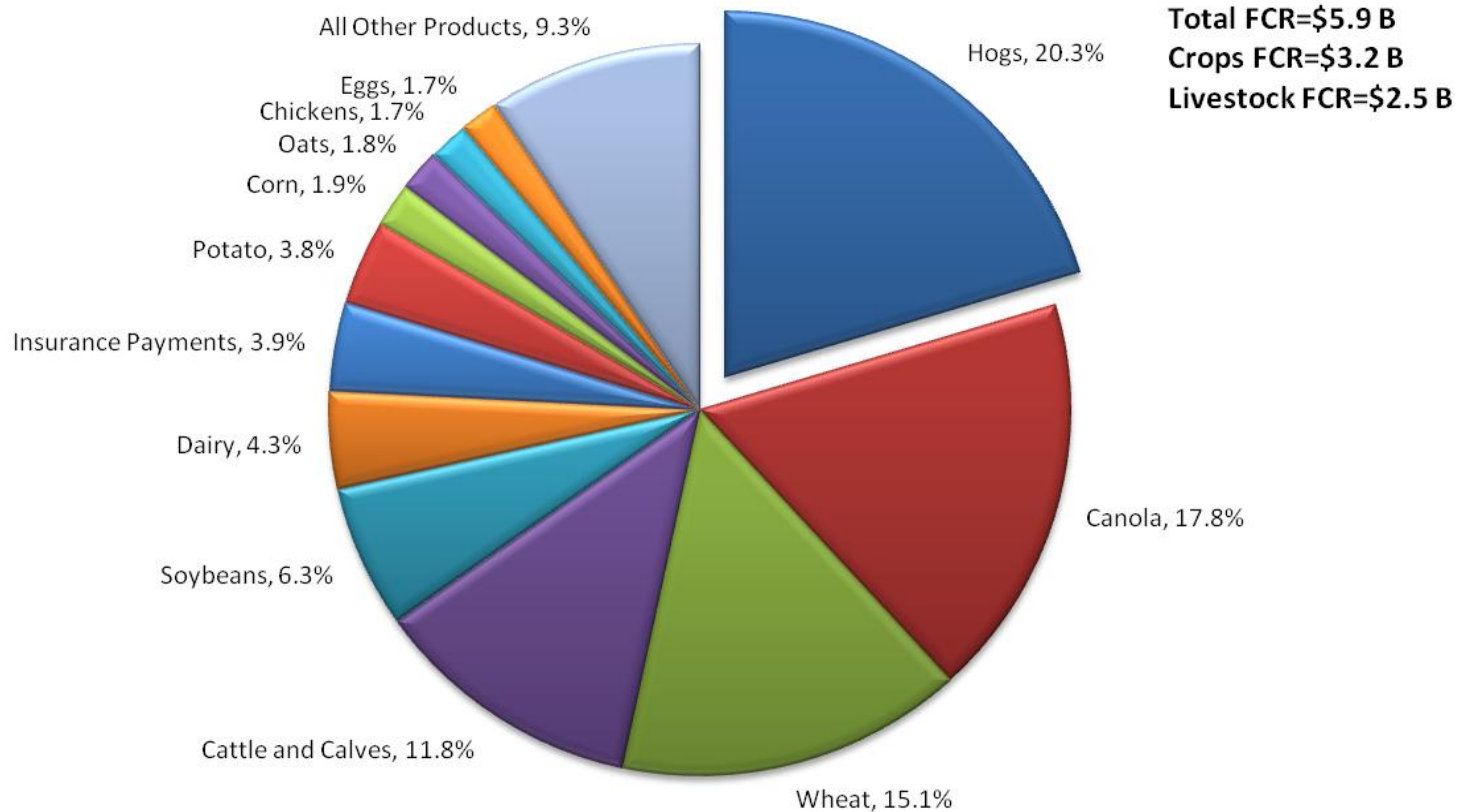
Faculty of Agricultural
and Food Sciences



Opportunity to Improve Collaboration: *Align public institutions and industry*

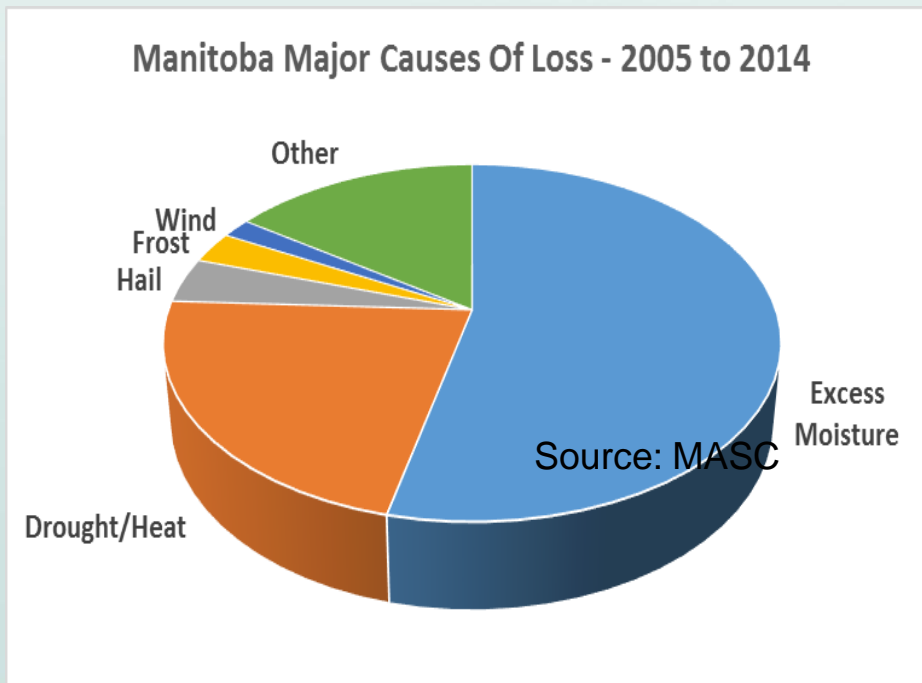
- Fill gaps to improve resource fit with province's industry profile

2014 Sector Contribution to Farm Cash Receipts in Manitoba



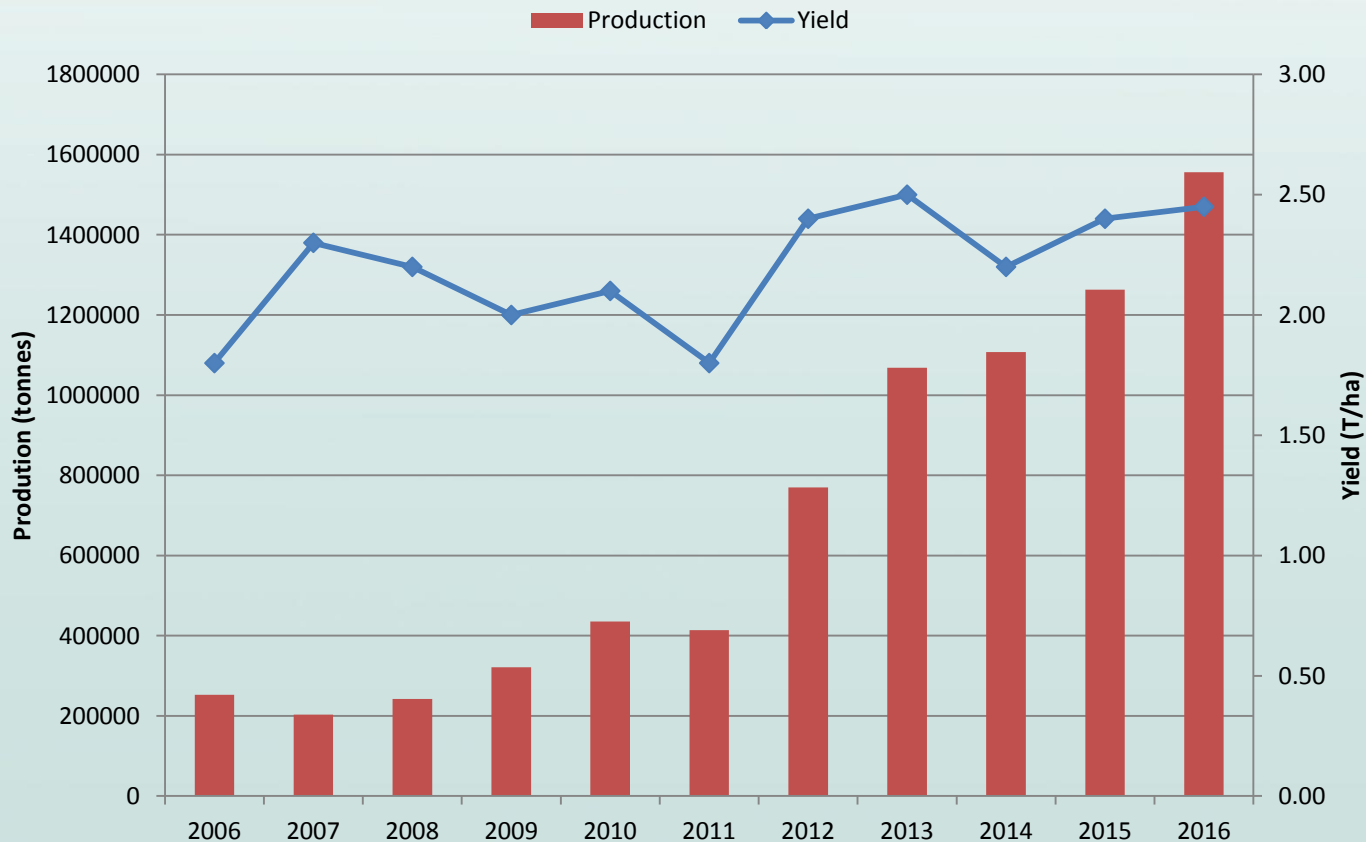
Opportunity to Improve Collaboration: Align public institutions and industry

- Fill gaps to improve resource fit with province's industry profile



Opportunity to Improve Collaboration: *Align public institutions and industry*

- Fill gaps to improve resource fit with province's industry profile
- ## Manitoba Soybean Yield and Production



*Opportunity to Improve Collaboration: **Align** public institutions and industry*

- Fill gaps to improve resource fit with province's industry profile



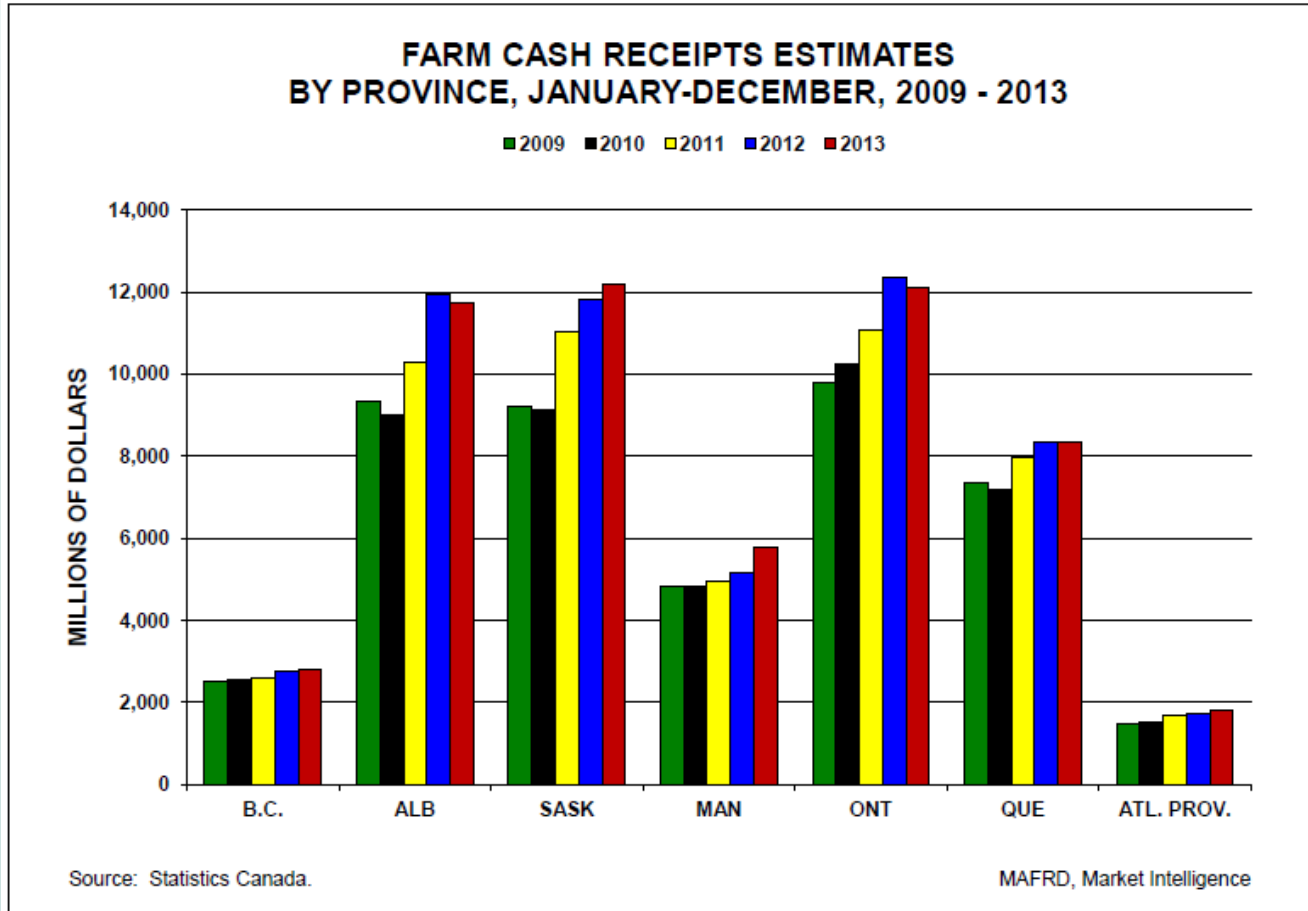
Opportunity to Improve Collaboration:

Build a Manitoba Model – Public, Private, Producer, Processor, People

- **We have challenges:**
 - Relative cost of R&D
 - Knowledge and innovation are portable
- **We may consider to:**
 - Develop “Made in Manitoba” model
 - Define public, public-private, private roles

Opportunity to Improve Collaboration:

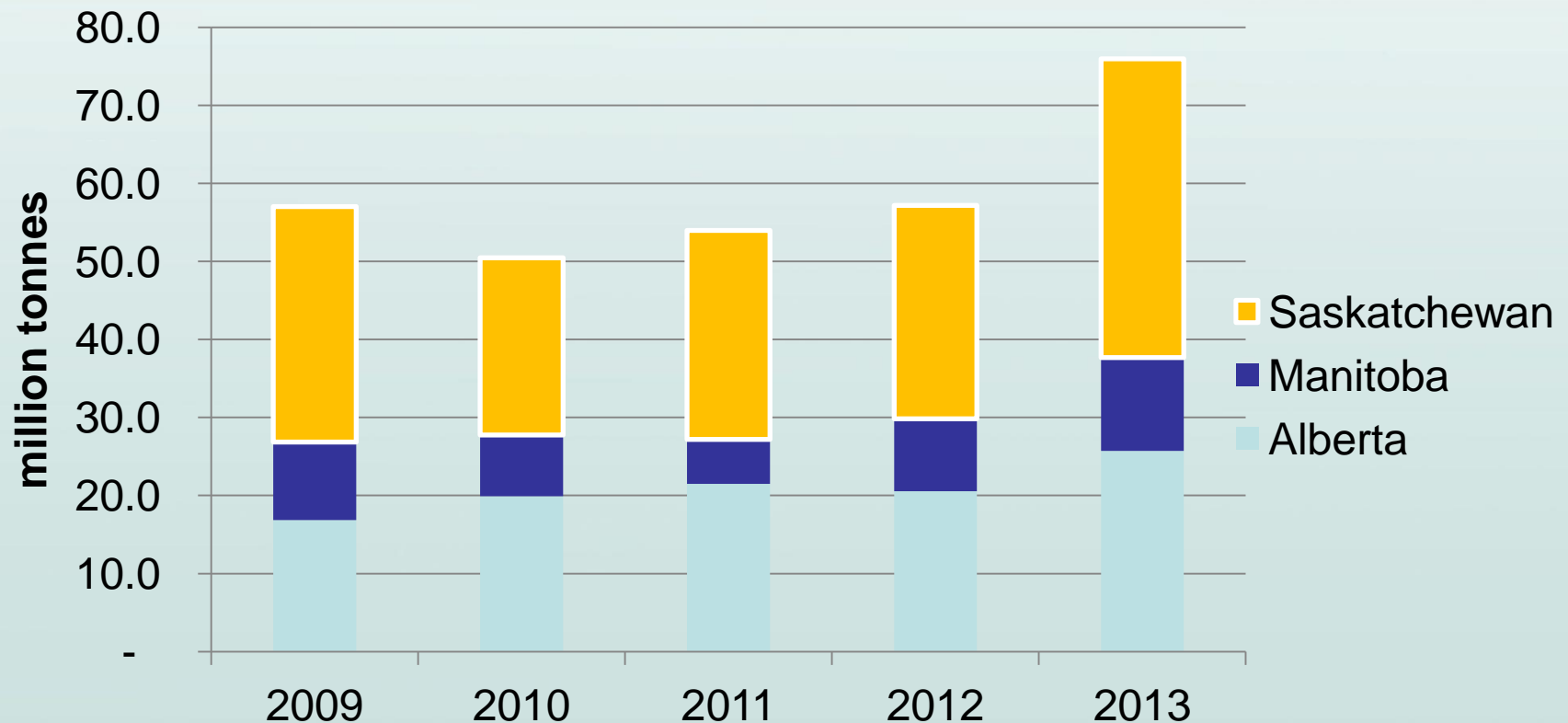
Build a Manitoba Model – Public, Private, Producer, Processor, People



Opportunity to Improve Collaboration:

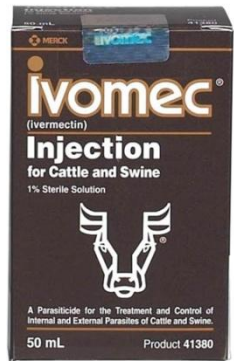
Build a Manitoba Model – Public, Private, Producer, Processor, People

Estimated Production of Principal Field Crops



Opportunity to Improve Collaboration:

Build a Manitoba Model – Public, Private, Producer, Processor, People



Opportunity to Improve Collaboration:

Build a Manitoba Model – Public, Private, Producer,
Processor, People



SPECTRUM
Scientific



HAPLOTECH
Inc.



MANCAN
Genetics



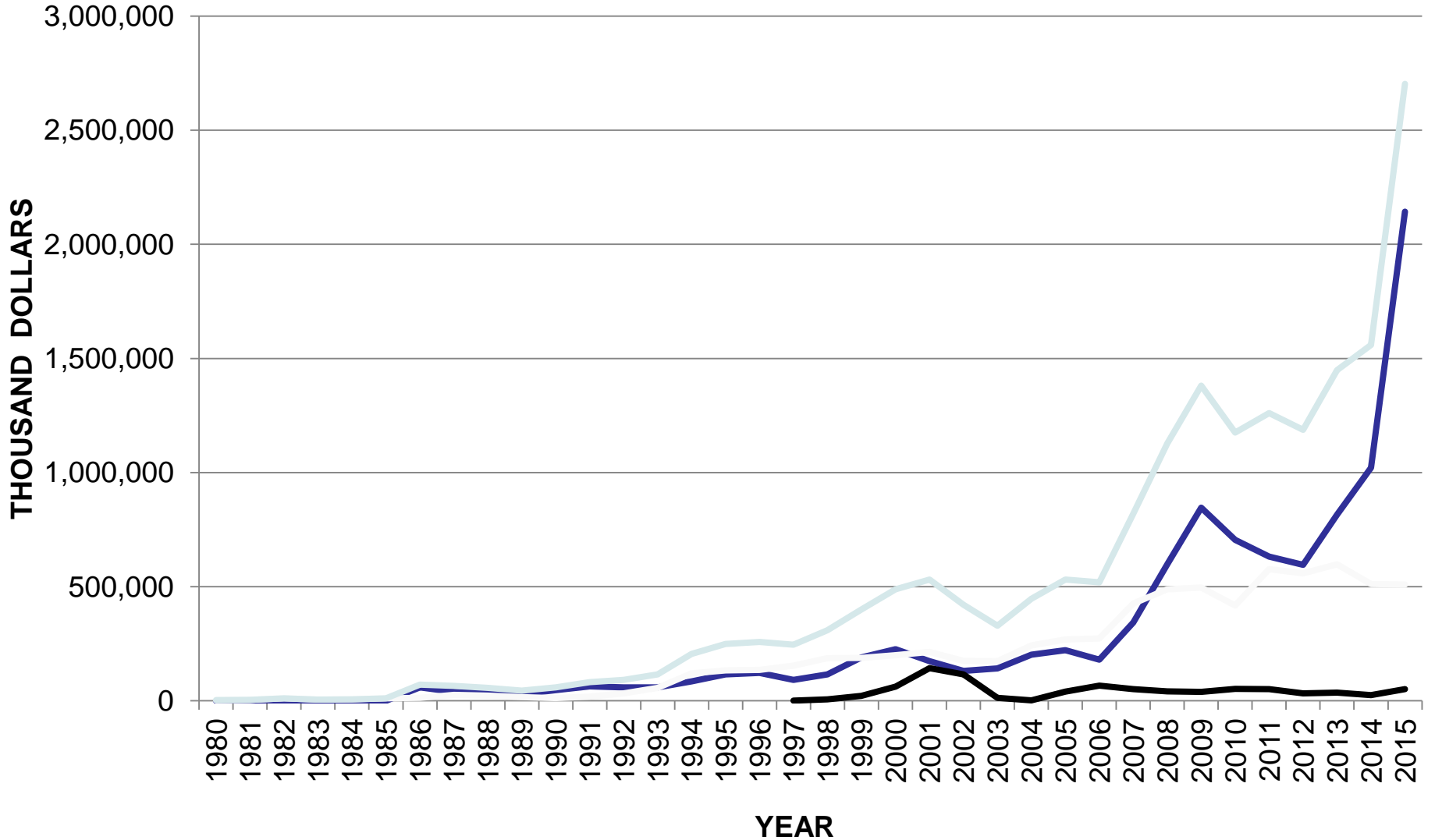
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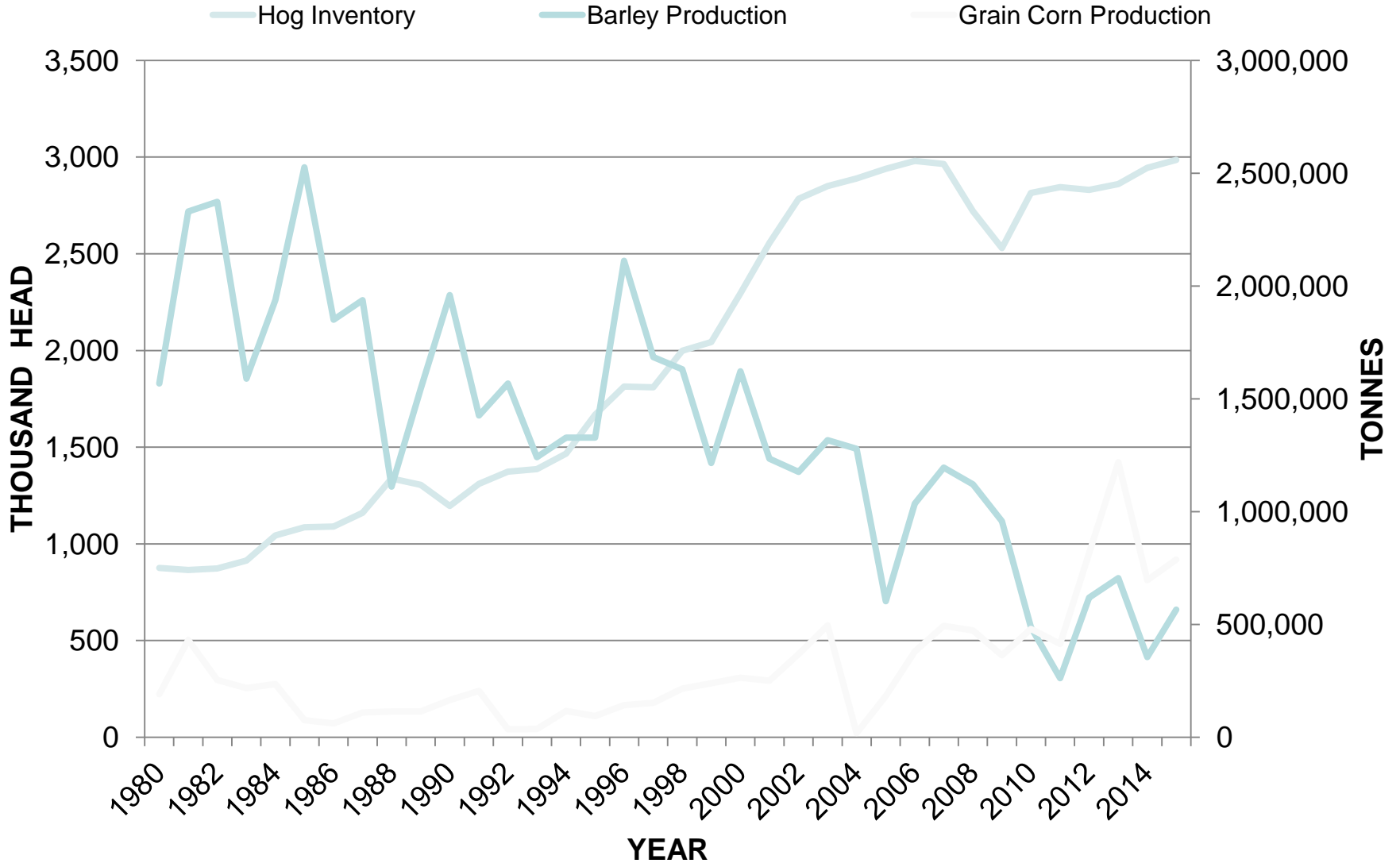


SASKATCHEWAN PULSE FARM CASH RECEIPTS, 1980-2015

— Lentils
 — Dry peas
 — Chick peas
 — Total Pulses



HOG INVENTORY AND FEED PRODUCTION, 1980-2015



MANITOBA **GRAIN**
INNOVATION **HUB**



