

# A Business School Perspective on Agriculture

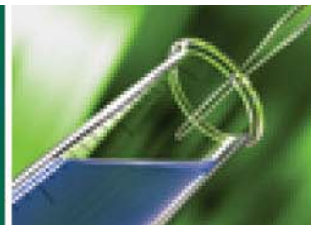
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Enhancing Data for Complex Agricultural  
Establishments  
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The University of Western Ontario

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# Why does a business school care?

- Researchers bumping into agriculture in several areas
  - Sustainability
  - Energy
  - Economic driver – particularly food processing as other manufacturing declined
  - Public/private partnerships – intersection of policy and management to address major local or global challenges

# Business school approach

- ***Profitability*** – *although triple bottom line getting traction*
  - ***First person vs third person***
  - ***Decision oriented*** – *It's your problem – own it, solve it and move on.*
  - Information is important but incomplete
  - Consistent with farmer's approach
- Craig Yunkers – “A farm is a collection of economic activities”*

# From data to decisions

Objectives

***What goals? What is success?***



Data &  
Measures

***What do we know? How  
can we measure success?***



Strategies

***What strategies help  
achieve the objectives?***



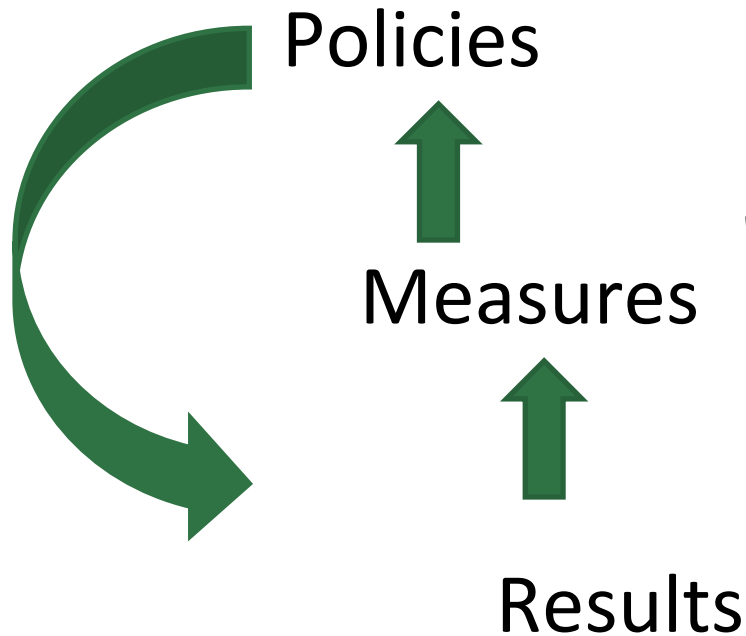
Implementation  
& Results

***What was achieved?***

# The farm income approach

Objectives beyond  
direct support?

***Success? – enough income for  
every farmer?***



***What policies can help  
support incomes?***

***What measures best represent  
the politically appropriate  
view of farm income?***

***Actual farm incomes?***

# The Public Goals – far from obvious

- Economic
  - Competitiveness?
  - Profitability?
  - Increasing output and value
- Social – Who are the targets? What are the criteria for needing help?
- Environmental – Only for focused organizations

# Complex agriculture systems

## - success only partly determined on farms

- Global market trends and consumer response
- Retail stores and distribution chains
- Biotechnology and input supply companies
- Equipment and technology firms
- Universities and government labs
- Food processing companies
- Bioproduct and manufacturing companies
- Policy, trade negotiations and public partners
- Linkages to health and health sector

# We need information on farms but also beyond

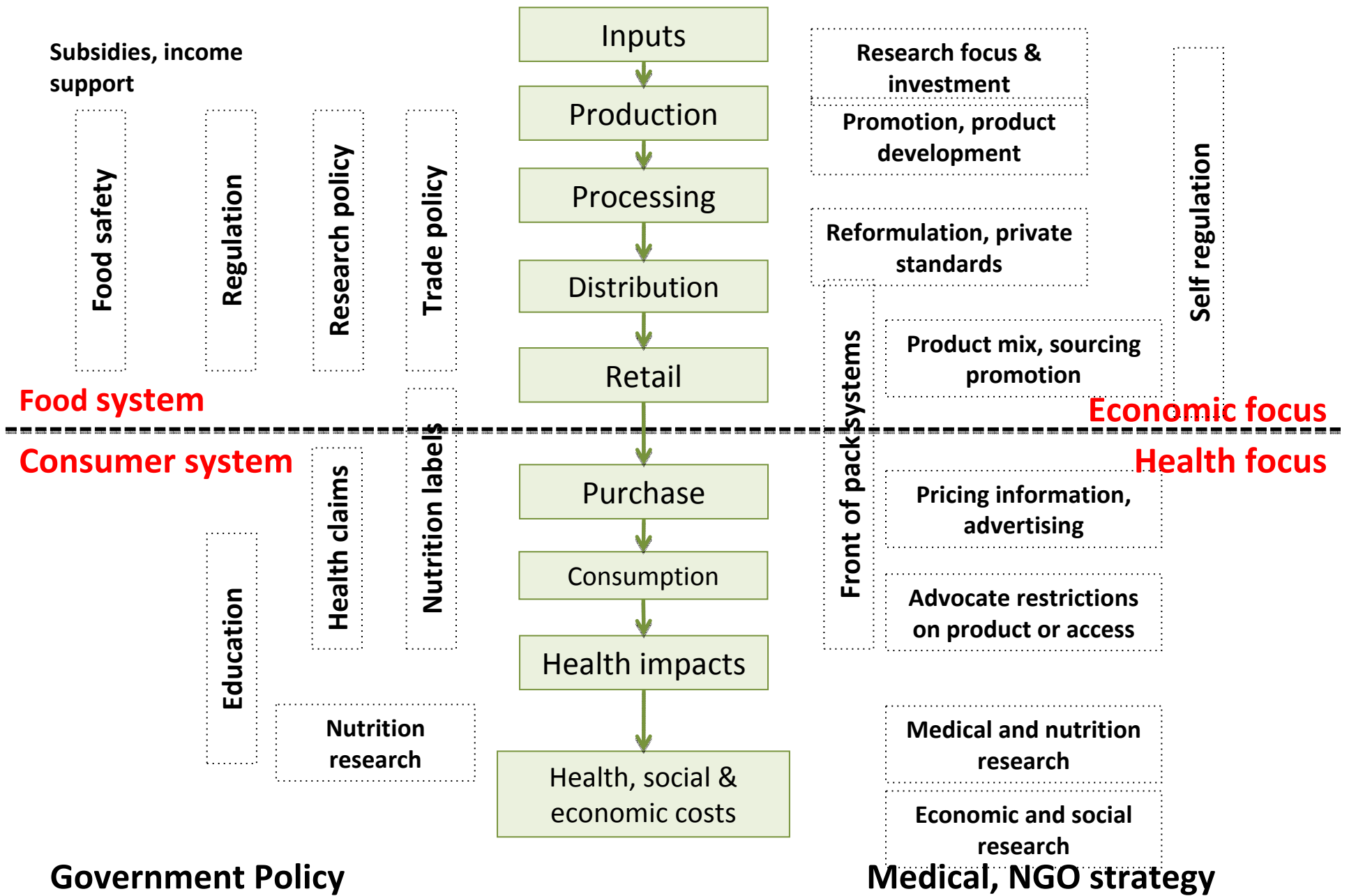
- Thinking beyond farms to build an industry that supports farmers
- How do we create more competitive value chains?
- How do we improve agri-food innovation systems?
- How do we link to other areas like energy and health?



Problems are complex  
– ie. food and health

Government Policy

Industry Strategy



Government Policy

Medical, NGO strategy

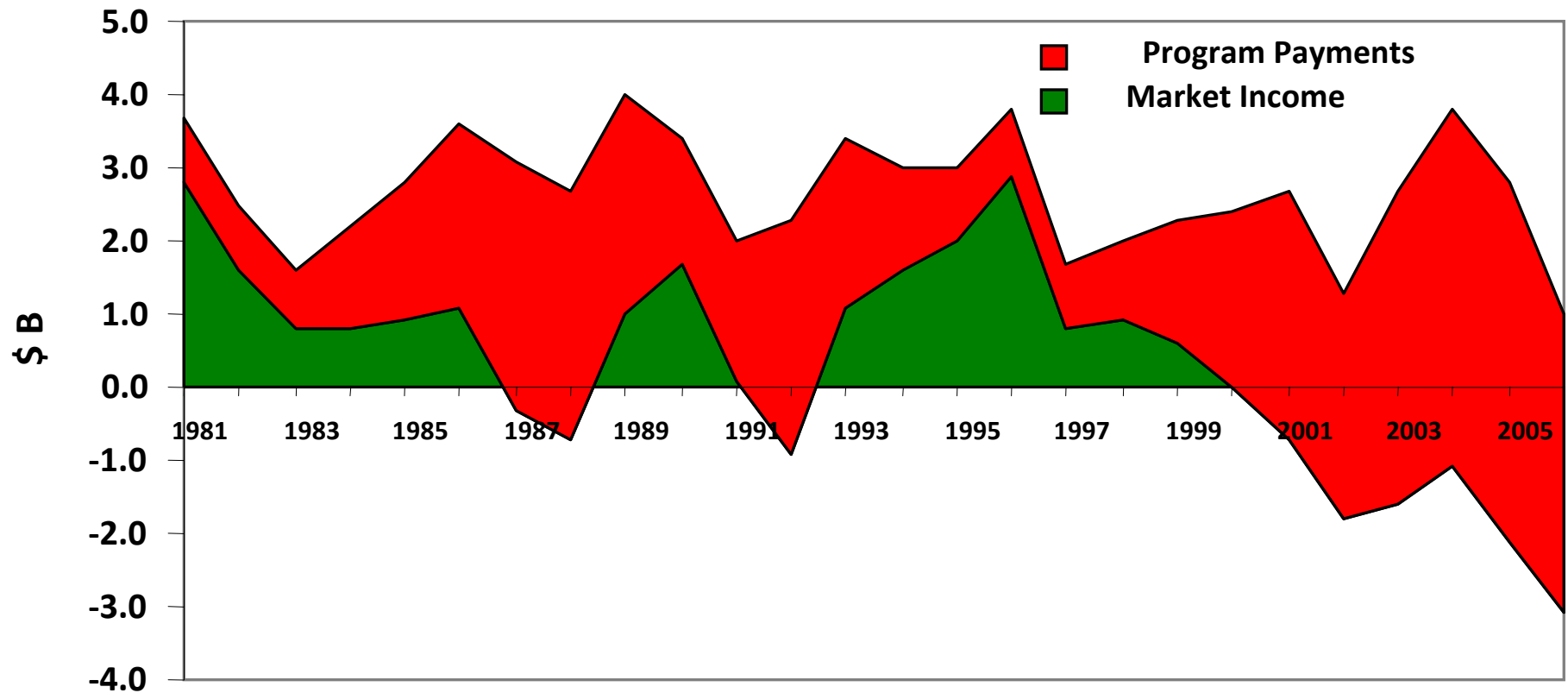
# Survival is not a right

- Business is tough and sustaining a business requires constant management and innovation.
- Businesses do not have a right to a decent return
- Government can help in many ways but if you need government to step in every year to supplement income find another business

# Comparative results matter - We don't teach students to aggregate results

- If you want to know how successful your business is look at the measures that matter to owners and shareholders
  - Net income for the business or the business units
  - Capital appreciation is be important
- If you are trailing your competitors you can become a target – for management change, for takeover.

# Limited value in this kind of image



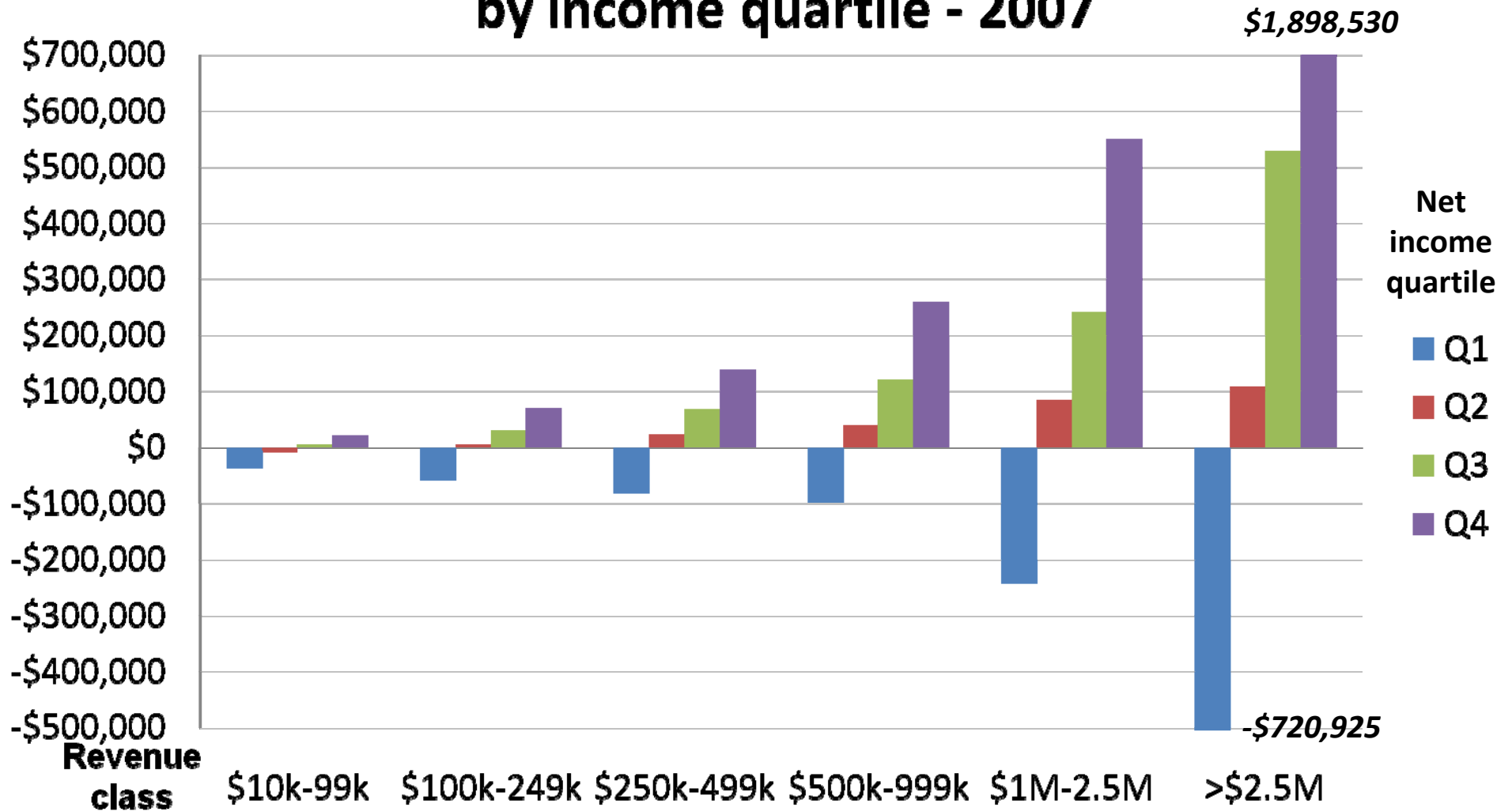
# What kind of data do we use?

- Statistics Canada/Agriculture and Agri-Food Canada
  - Multiple divisions
  - Big picture - trends
  - but also questions on what's behind the trends
- Industry Canada datasets
- USDA/ERS/NAS data

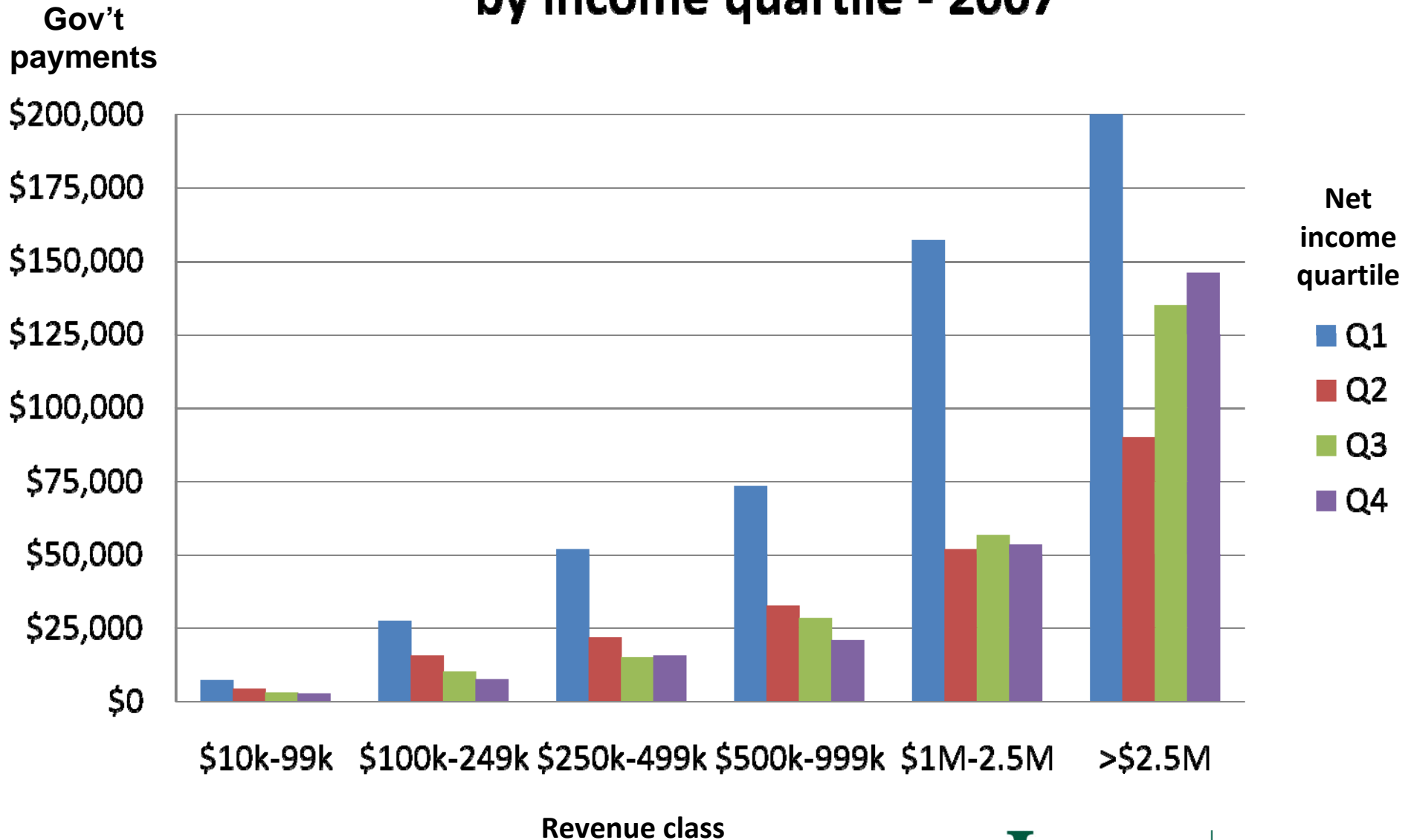
# We're interested in how farms are doing?

Net  
income

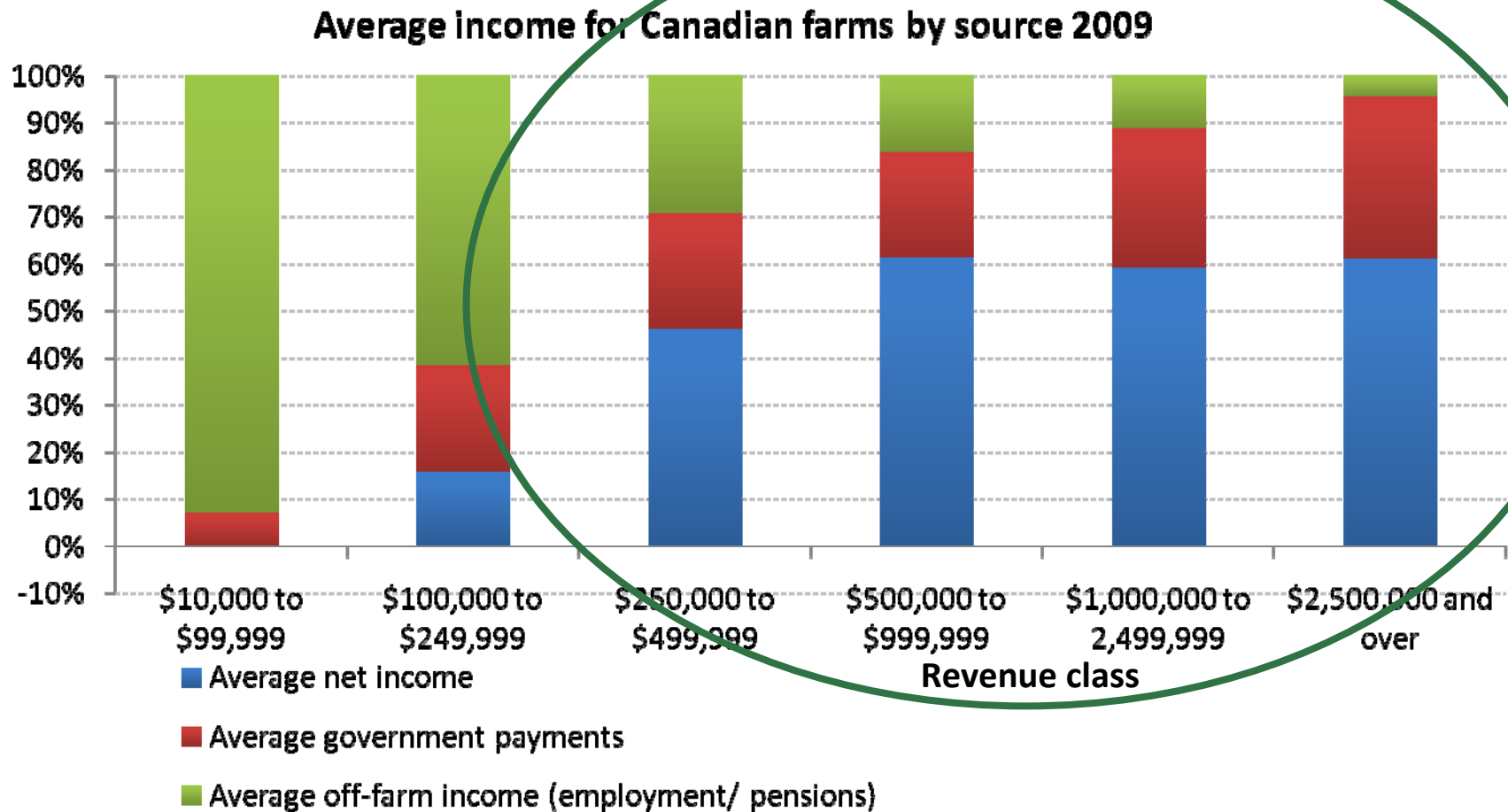
## Average Canadian Farm Net Income by income quartile - 2007



# Average Canada Farm Government Payments by income quartile - 2007



# Where are the businesses?





# Does scale matter?

	2009			2005		
Sales Class	Sales	Total Assets	Sales/ Assets	Sales	Total Assets	Sales/ Assets
\$10,000- \$249,999	\$73,539	\$928,326	7.9%	\$71,132	\$752,827	9.4%
\$250,000- \$499,999	\$331,303	\$1,989,088	16.7%	\$310,619	\$1,896,899	16.4%
\$500,000+	\$1,313,579	\$4,850,959	27.1%	\$1,192,085	\$4,347,027	27.4%

# Capital appreciation has value

	2009	2005		
Sales Class	Net Worth	Net Worth	Change in net worth	% change
\$10,000- \$249,999	\$829,070	\$655,767	\$173,303	26.4%
\$250,000- \$499,999	\$1,582,205	\$1,502,902	\$79,303	5.3%
\$500,000+	\$3,604,676	\$3,193,741	\$410,935	12.9%

# One company's shareholders if we portrayed them as we portray farmers

Another dismal year for stricken company shareholders

- **Dividend \$0**
- **Yield \$0**

*"We can't take another year of this. We need government assistance says one devastated shareholder."*

[www.ivey.ca/agri-food](http://www.ivey.ca/agri-food)

## APPLE



But shares were up about 30%

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# What questions would help?

- Expanding activities – getting at the complexity of agriculture and agri-business
- Farm strategies
  - Optimal organizational structure
  - Relationships - within their value chains but also with other organizations
  - Knowledge management strategies
- We can't get all of the answers that we need from statistical databases

# Collecting data & using information

**Information use** – for policy & business strategy

**Data availability and data access** – can policy makers and researchers get access to the data they need to advise policy and business strategies?

**Turning Data into Information** – for policy and business strategy

**Data collection** – for policy and business strategies

# Datasets are not enough so we use case studies

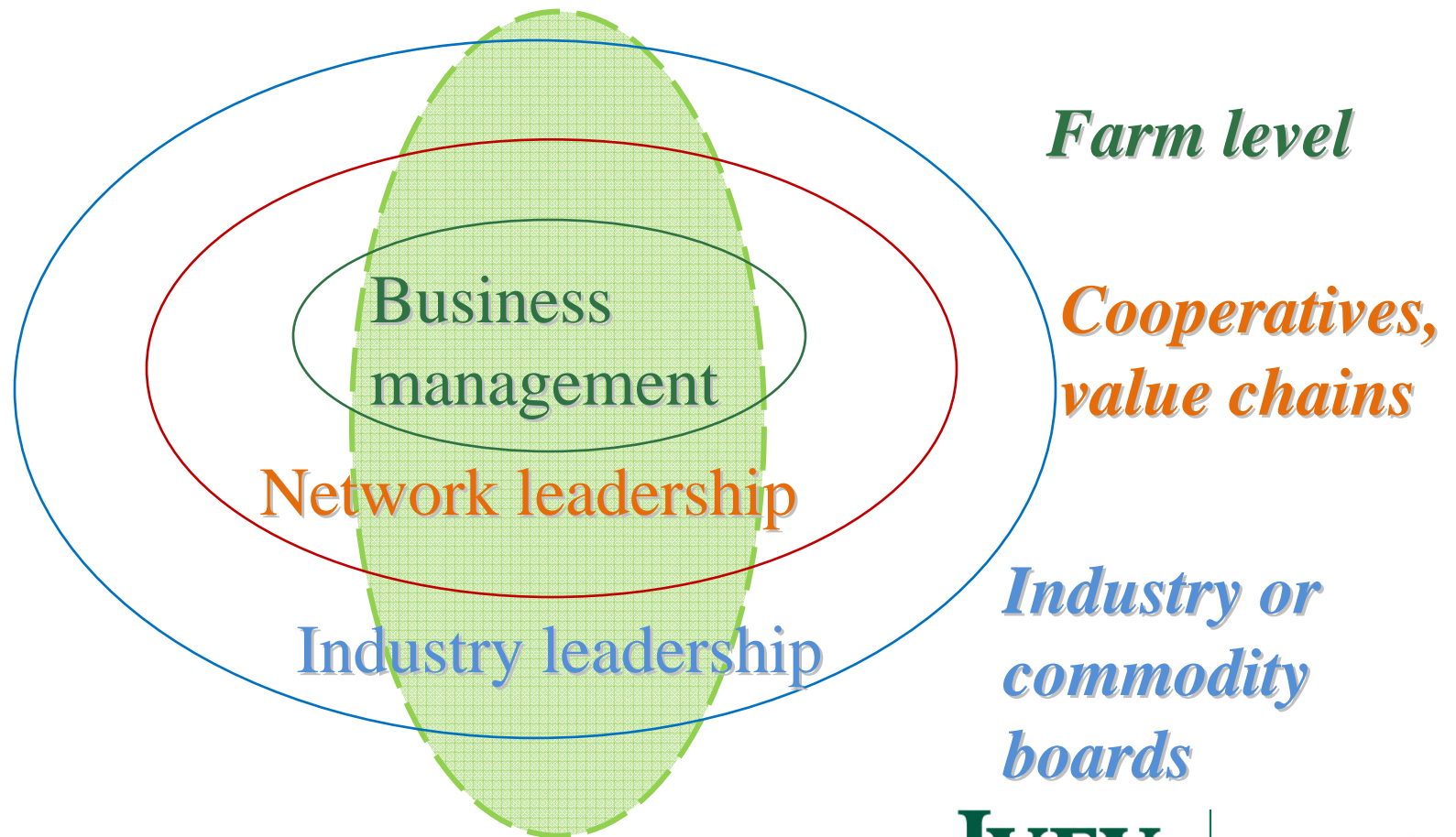
- Farms are too complex to capture in a survey
- It's impossible to get at strategies from farm level survey
- Relationship between strategies, policies and results
- If you want to understand role of intellectual property, technology, risk management strategies, etc you need to talk to people

# It's not just about policy – We use data to help create industry strategies

- Some data on markets
- Statistical data on strategies
- Conversations and facilitated sessions with industry leaders
- Iterative development of strategies and specific tactics as well as the recommendation for policy development to support the strategy
- Development of measures that can assess impact of the strategies

# Cross-enterprise leadership

The future for agriculture depends on leadership at different levels, from individual farms to entire industries





## We need data on new opportunities – for example Canadian Bioproducts Survey

	2003	2005	2006	2008	2009
	\$ thousands				
Canada					
Total firm revenues (all sources)	11,914,662	7,081,904	7,486,339	19,685,698	14,898,795
Revenues from bioproducts	<b>3,129,455</b>	<b>1,697,799</b>	<b>1,758,309</b>	<b>1,047,418</b>	<b>1,333,503</b>
Revenues from bioproducts - exported	<b>1,491,626</b>	<b>828,455</b>	<b>632,606</b>	<b>187,976</b>	<b>438,667</b>
Total cost of biomass input	-	319,886	343,373	1,731,080	1,852,135
Revenue from bioproducts minus cost of biomass input	-	1,377,913	1,414,936	(683,662)	(518,632)
Total R&D spending	242,371	241,227	242,299	305,924	127,389
R&D spending on bioproduct development	<b>96,327</b>	<b>88,091</b>	<b>81,329</b>	<b>49,934</b>	<b>50,152</b>
R&D spending on biomass development	-	5,236	3,000	14,540	14,428

Source: Statistics Canada Bioproduct Development Survey 2003, 2006 and 2009

# Case based research when survey data isn't enough

- A research strategy focusing on understanding the **dynamics** within **single** settings
- Cases can answer the question “how?”, rather than “how many?”
- Can be used for various purposes: motivate a research question, provide description, test theory, or create theory

# Methodology

- Can involve single or multiples cases and numerous levels of analysis
- Typically combine data collection methods – e.g. archives, interviews, questionnaires, observations..
- Single cases allow an in-depth study of a single situation or entity.
- Multiple case studies provide understanding of broader phenomena - Cross-case analysis
- Evidence may be qualitative, quantitative, or both

## Helps answer questions like why do companies enter bio-chemical markets?

- Varies depending on the level of the chain
- ***Bio-focused firms*** enter to build a **new** bio-based idea into a successful **business**
- ***Chemical firms*** – oil replacement – for **cost**, assurance of **supply** and **environmental** impact
- ***Chemical consumers*** – responding to customer/**consumer demand** for sustainable products. Same product with **new properties**

# How can we use cases?

- **Illustration** - To tell stories and highlight examples of phenomena that we already understand
- **Application** – To examine specific situations and to understand how specific factors, policies or strategies are affecting agribusiness performance building on existing theory or knowledge
- **Theory** – To develop and test new theories about how agribusinesses compete and the role of different public and non-public stakeholders

# Requirements for policy

- Flexible approach to data collection – give me what I need not what you have
- Understandable information – as an external research group we can analyze quickly, say what we really think and report quickly
- Stories to explain the reasons for the policy and/or the benefits – Cases help build the data and the stories.

Thank you  
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*The Chair of Agri-Food Innovation and Regulation is supported  
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