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# Traceability and Food Quality: A Progress Report

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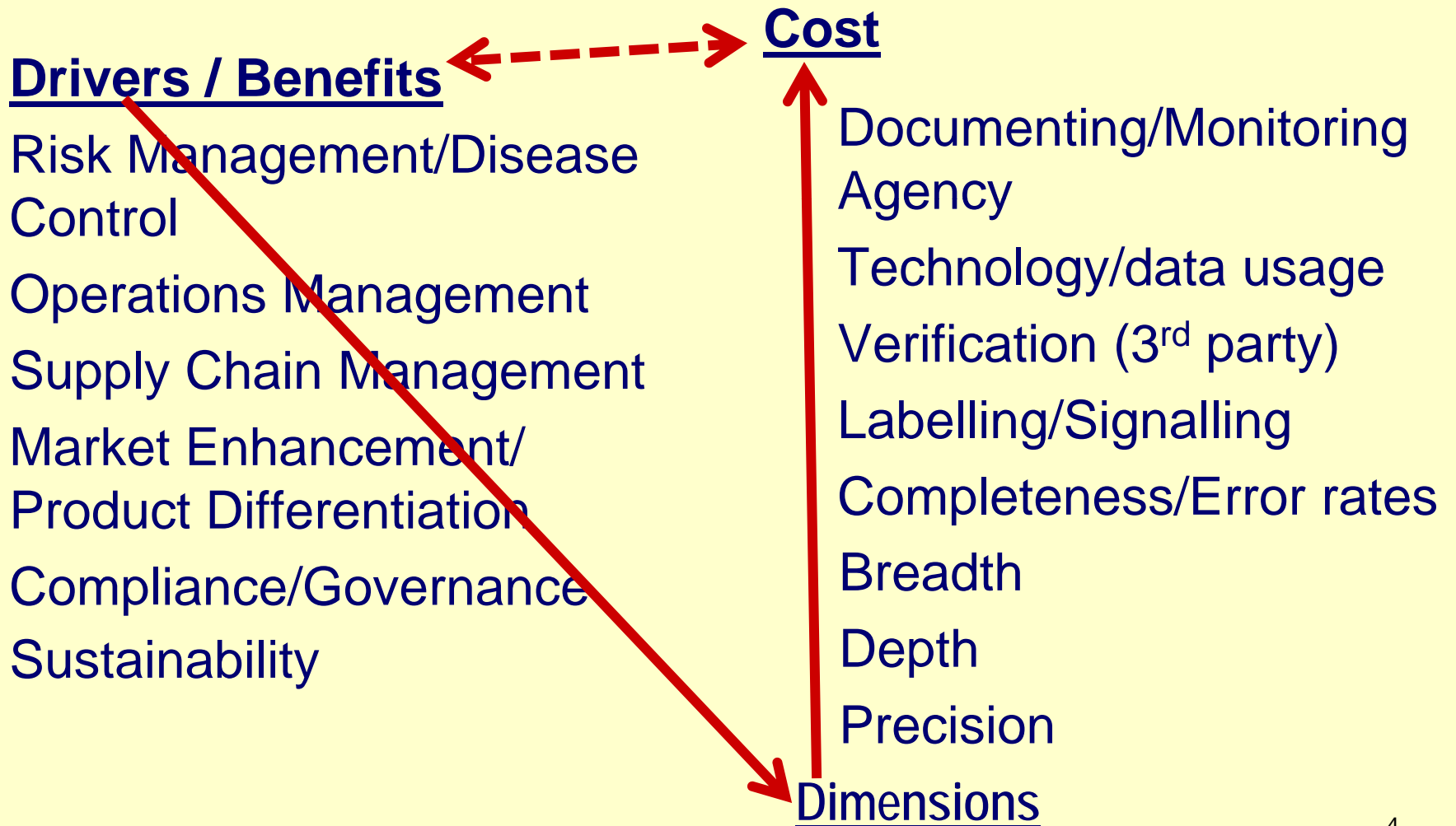
# Content

- 1) Objectives
- 2) Basic Considerations
- 3) Assessment of Canadian traceability regulation and initiatives
- 4) Outlook on future research

# Objectives

- 1) Canadian contribution to commissioned paper on “Evolving food quality and safety standards in livestock” for NAAMIC Workshop New Generation Of NAFTA Standards, May 21-23, 2008, Austin, Texas
  - ⇒ current state of traceability
  - ⇒ government/industry initiatives
  - ⇒ need for trilateral standards
  - ⇒ impact on market integration
- 2) For this presentation:
  - Thoughts on framework for assessment
  - Looking beyond to further research (information economics and signalling traceability and assurance)

# Basic considerations: Value proposition drives the cost model



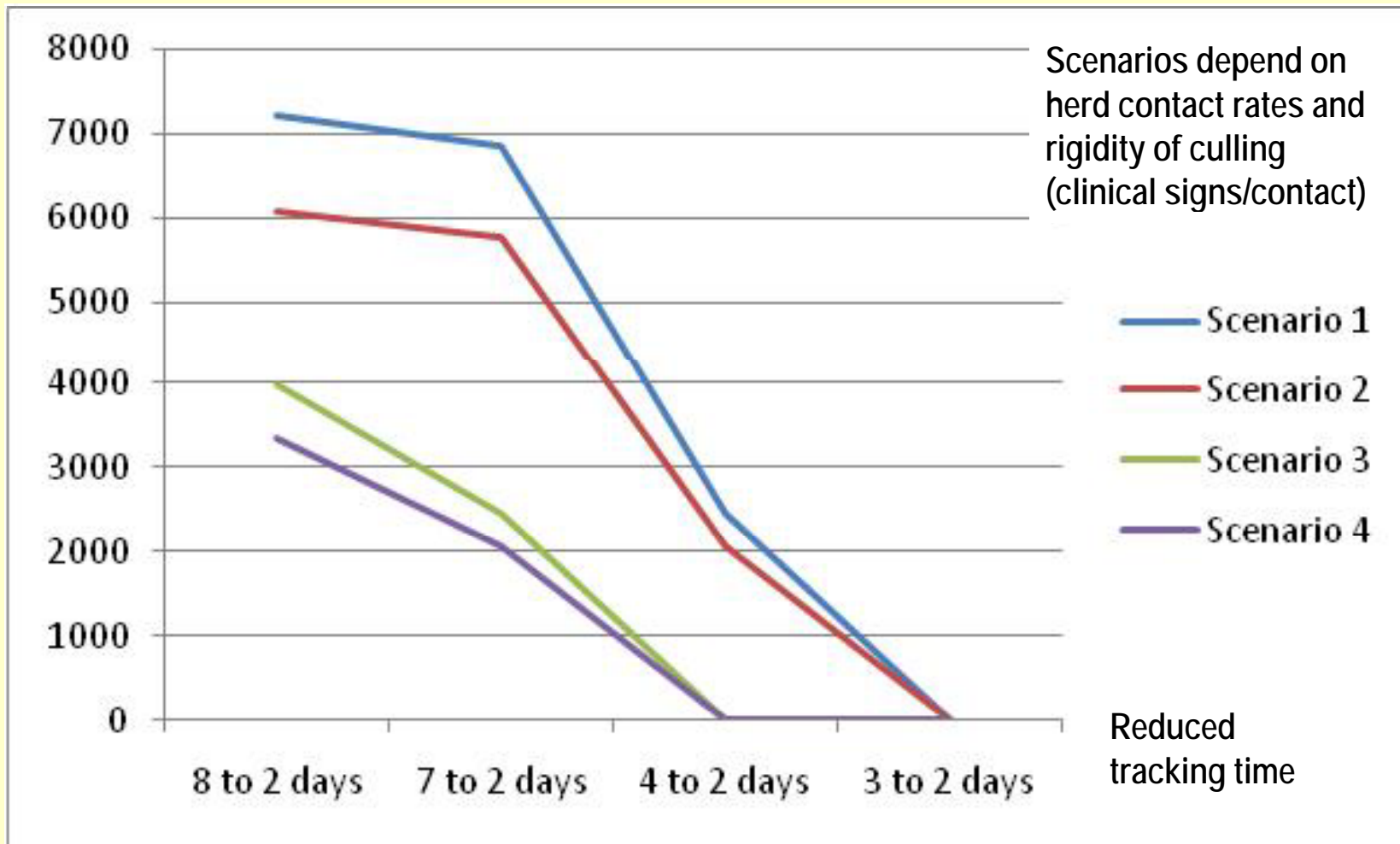
## Basic considerations: Complete registrations

Even with 100% participation, completeness of Dutch sheep and goat tracing database is not 100% (*Velthuis, A.G.J. 2007*).

Registration type	Sheep	Goat
Correct	5,384,829	1,622,241
Wrong location	6,526	1,274
More than one location	41,469	6,404
Without location	3,739	623
Not registered	39,597	6,836
Administrative/fictitious	15,669	3,414
Total wrong	107,000	18,551
<b>Percent wrong</b>	<b>1.95%</b>	<b>1.13%</b>

## Basic considerations: The Value of Speed

Avoided losses in mio. US\$ (reduced culling of herds) through improved animal tracing in Texas cattle sector (*Elbakidze, L. 2007*).



## **Basic considerations: Other Standards**

### **National/International standards/guidelines developed by:**

Can-Trace

Codex Alimentarius

World Organization for Animal Health (OIE)

ISO 22005

GS1 (significantly influenced by Can-Trace)

### **Regulation**

US: Golan et al. (2004) list 7 pieces of regulation (“select milestones”) that contain traceability requirements.

EU: 8 pieces of traceability legislation (not exhaustive)

### **Food Quality and Safety Assurance/Management**

HACCP; ISO 9001:2000; ISO 14000; BRC; GAP; GMP; EUREPGAP

# Assessment of Canadian traceability regulation and initiatives

## Previous Studies:

Liddell, S. Bailey, D. (2001): Score Cards on Traceability, Transparency and Food Quality and Assurance in Denmark, UK, Australia, South Africa, U.S.A. (2004): Comparison of Beef

Denmark

(16)

UK

Australia

South Africa, U.S.A. (2004): Comparison of Beef Industry standards to breadth, depth and precision amongst:

EU, Japan, Australia, Brazil, Canada, Argentina, US

**Highly aggregate measures of (potential) competitiveness.  
How accurately does it reflect signalling of traceability and quality assurance in export markets?  
What are adequate types/sources of information?  
One suggestion: Communication/advertising material.**

# Assessment of Canadian traceability initiatives

How to signal tracking, tracing and quality assurance?

Quality from those who are doing good.

...order our quality assurance manual.

*Danish* – As good as no other pork.

Qualität von denen, denen es gut geht!

Weil es den dänischen Schweinen so gut geht, haben die dänischen Landwirte gut lachen. Denn sie produzieren Qualität, die bestens ankommt. Erfahren Sie Näheres zur Qualitätssicherungs-Garantie und fordern Sie das umfangreiche DANISH-QSG-Handbuch an!

**DANISH – So gut wie sonst kein Schweinefleisch!**

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**DANISH**

# Assessment of Canadian traceability regulation and initiatives

## Inventory of Initiatives (OnTrace 2007)

10 livestock

- Mandatory: Beef Cattle, Bison, Dairy Cattle, Sheep
- Voluntary: Veal (Ontario)
- In development: Goats, Hogs, Equine

Plus overarching initiatives/programs

- National Agri-food Traceability System (NAFTS)
  - Accessibility to product-specific databases
  - National Livestock Traceability System (NLTS)
- OnTrace

Plus Government funded projects

# **Assessment of Canadian traceability regulation and initiatives**

## **Assessing the purpose and impact of traceability initiatives**

Country strategy for competitive advantage:

- Safe / highest standard ⇒ image
- Product differentiation
- Operation/Supply chain management efficiencies

## **Furthering Market Integration**

- Avoiding overlap or conflict between regulation
- Exchange of information/definition of access rights
- Collaboration between private and public systems
- Mutual recognition / Collaboration in times of crises (Zoning)

## **Outlook on further research**

**Measurement of traceability levels and identification of determinants at firm , industry, regulatory levels**

⇒ **Based on dimensions outlined above**

⇒ **Communication/advertising material as approximation**

**Industrial Organization: Vertical coordination and**

**Traceability and Innovation: IT, rapid analysis methods, (molecular) tagging, linking with GIS/GPS**

**Information economics: Traceability and (reversal of?) information asymmetry**