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VISIONARY REBEL PIONEER CREATOR EXPLORER TRAILBLAZER INNOVATOR CHALLENGER VISIONARY REBEL PIONEER CREATOR EXPLORER TRAILBLAZER  
REBEL PIONEER CREATOR EXPLORER TRAILBLAZER INNOVATOR CHALLENGER VISIONARY  
INNOVATOR CHALLENGER VISIONARY REBEL PIONEER CREATOR EXPLORER TRAILBLAZER INNOVATOR CHALLENGER VISIONARY REBEL PIONEER CREATOR EXPLORER TRAILBLAZER

MANITOBA INSTITUTE FOR POLICY  
RESEARCH – CITIZEN SERIES

# POLICY | PIZZA & A PINT



## The Future of Agriculture in Manitoba

Wednesday, April 22, 2015 – 6:00 PM

**LOCATION:** Winnipeg Free Press News Café, 237 McDermot Ave.

**SPEAKERS:** Mr. Andrew Dickson (General Manager, Manitoba Pork Producers), Dr. Karin Wittenberg (Dean, Faculty of Agricultural & Food Sciences, University of Manitoba) and Dr. Ed Tyrchniewicz (Agricultural Economist, University of Manitoba). | **MODERATOR:** Dr. Shannon Sampert (Perspectives and Politics Editor, Winnipeg Free Press)

# **The Future of Agriculture in Manitoba**

**Presentation to Policy, Pizza and Pints**

**Winnipeg Free Press News Cafe**

**April 22 2015**

**Ed Tyrchniewicz**

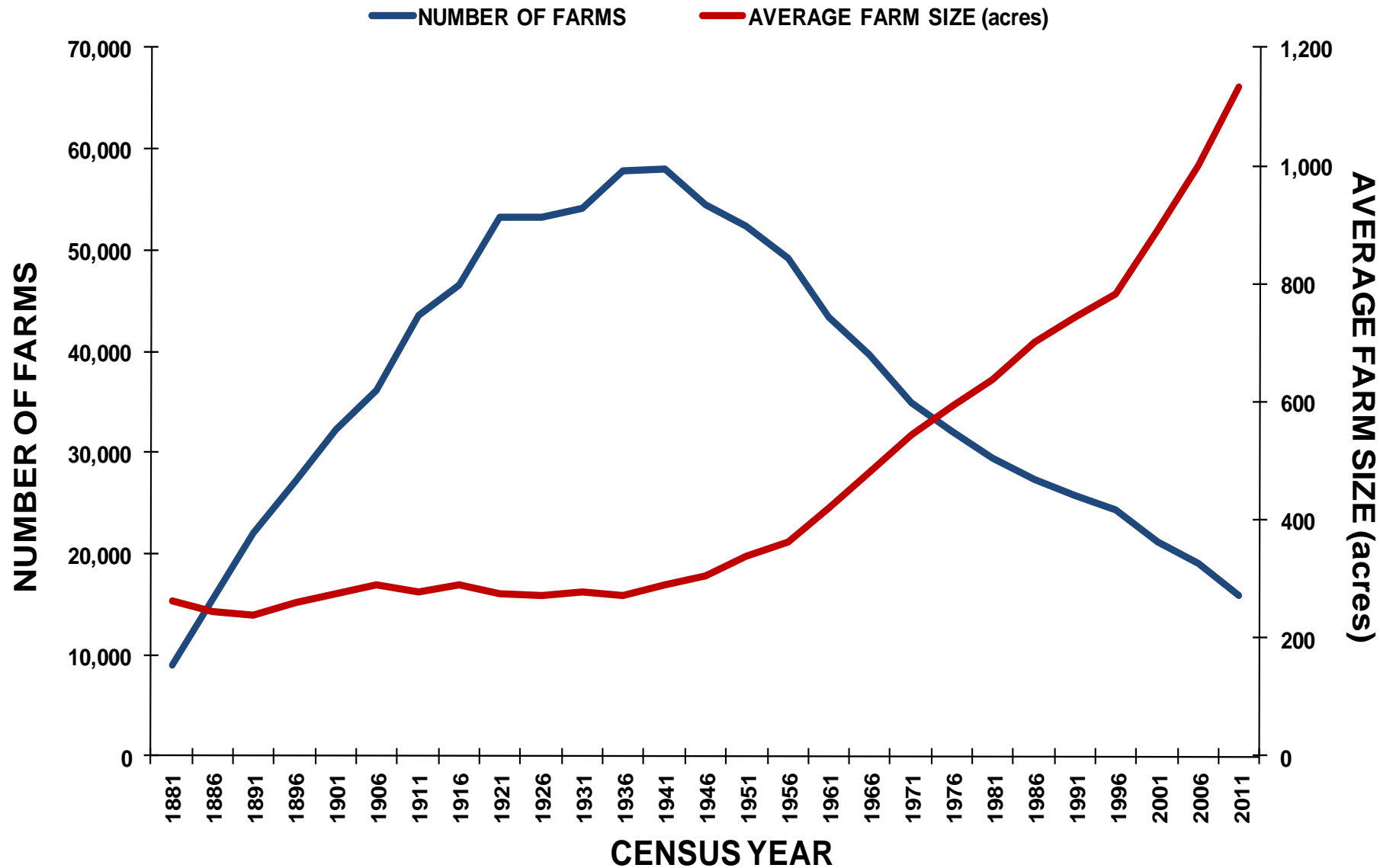
**Senior Scholar**

**University of Manitoba**

# **Agriculture in Manitoba**

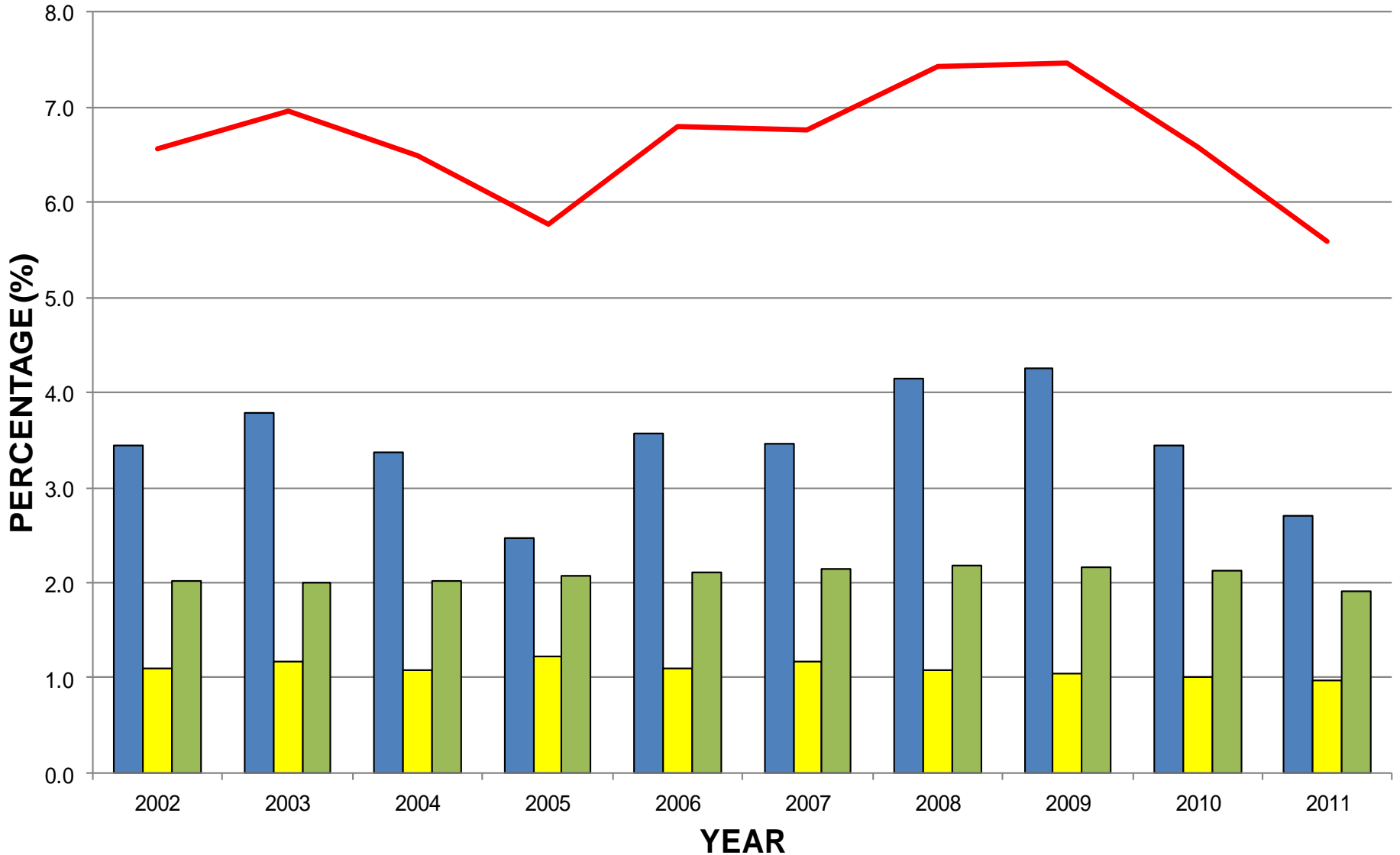
- **Agriculture is more than farming – it includes food processing and input supplies – and it is changing**
- **15,877 farms in MB in 2011 - 22,315 farm operators - 24 % were women – 47% did some off-farm work**
- **Food processing is a major contributor to Manitoba's economy, representing 28% of Manitoba's manufacturing output (2012) - meat processing accounts for 57% of manufacturing employment**
- **5.5 to 7.5% of Manitoba's GDP was attributed to agriculture in 2008 - 11**
- **1 in 10 jobs depend on agriculture**
- **2011 agri-food exports of more than \$4.3 billion**

# FARM NUMBERS AND SIZE IN MANITOBA 1881- 2011



# Percentage of Total GDP in Manitoba 2002 - 2011

Crops Animal Food Total Crops, Animal and Food



# Farmers' Share of Consumer's \$ in Manitoba

Year	Vegetables	Grain	Dairy	Meat	Total
2008	0.39	0.04	0.47	0.34	0.34
2009	0.35	0.04	0.54	0.33	0.35
2010	0.29	0.04	0.52	0.37	0.38
2011	0.28	0.05	0.55	0.41	0.39

Source: Alma Kennedy, The Farmer's Share: Update 2011, prepared for  
Keystone Agricultural Producers, July 2011

# **What does Society Want from Manitoba's Agri-food Sector?**

- **A significant and increasing proportion of our population has little knowledge of, or interest in, agricultural and rural issues**
- **We want cheap and safe food, and we really don't care where it comes from**
  - **But what does safe mean??**
  - **GMOs**
  - **Imported foods**
  - **Organic foods**
- **We want to protect our environment**

# Manitoba Agriculture 2050

Karin Wittenberg



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# Why 2050?

- Generation of young producers
- Within our conceptual grasp
- Climate change projections available: IPCC
- Adaptation vs. mitigation

The role of agrologists, food technologists, nutritionists, engineers and public



Photo: M. Gaudry

# Change influencing agriculture?

trade population  
weather politics climate  
technology transportation  
global policy

# Climate Change – We understand

- Decrease in heat limitations
- Increase in aridity
- Acceleration of the water cycle
- Opportunities vs. Challenges
- Bigger challenges elsewhere: global





# The Nature of Change

## Incremental Change

- Biological efficiency
  - ↑Crop yield, animal productivity
- Technology
  - Drones
- Social
  - Water use restrictions

## Big Shift

- Biological Efficiency
  - Perennial grains
- Technology
  - Fourth generation fake meats
- Social
  - No water rights



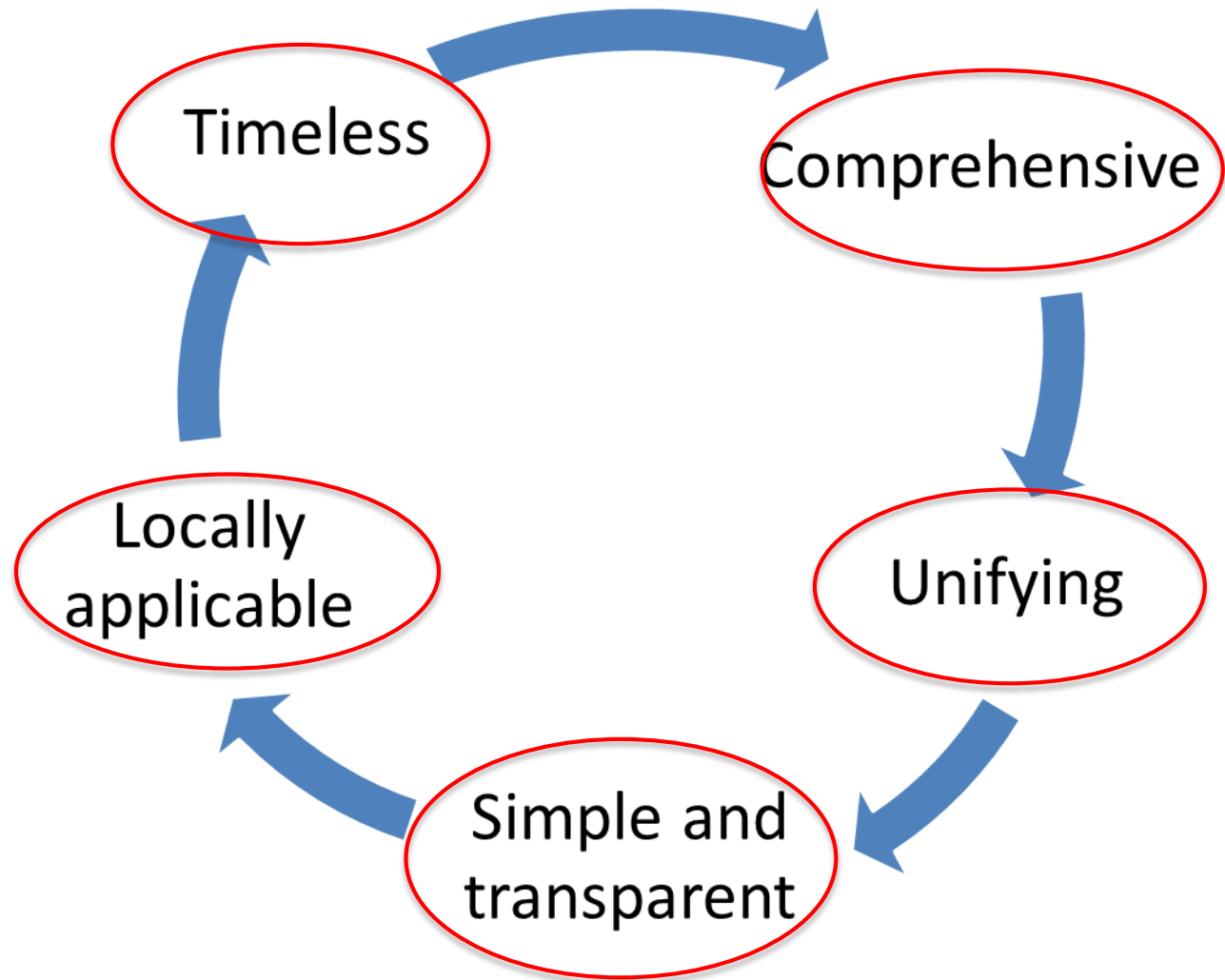
# Guiding Metrics for Adaptation

- More than merely conserving what once was
- Strive to manage our resources so that all the benefits we derive are sustained despite inevitable change



Photo: E. McGeough

# Guiding Metrics for Adaptation



# Tools of Successful Adaptation: Government Policy

- Secure common goods and services
- Balance long-term societal goals of enhanced resource use with immediate term goals
- Anticipate change and enhance resilience or 'adaptive capacity'



# Tools of Successful Adaptation: Innovation



## Red Queen Effect

“... Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!”

Lewis Carroll

Through The Looking-Glass





# Tools of Successful Adaptation: Education

- Knowledgeable, adaptable citizens
- Analytical and critical thinkers
- Educated, visionary and ethical leaders



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# Role of the Professionals

- Engage in dialogue (develop best metrics)
- Fill the tool box
- Use the tools



# MANITOBA PORK COUNCIL

WINNIPEG FREE PRESS NEWS CAFE

Andrew Dickson  
General Manager



**APRIL 2015**



## **AGRICULTURE**

SALES: \$5.6 BILLION

CROPS: \$2.9 B

LIVESTOCK: \$2.7 B

## **MANITOBA HYDRO**

SALES: \$2.3 BILLION

EXPORTS: \$ 430 MILLION

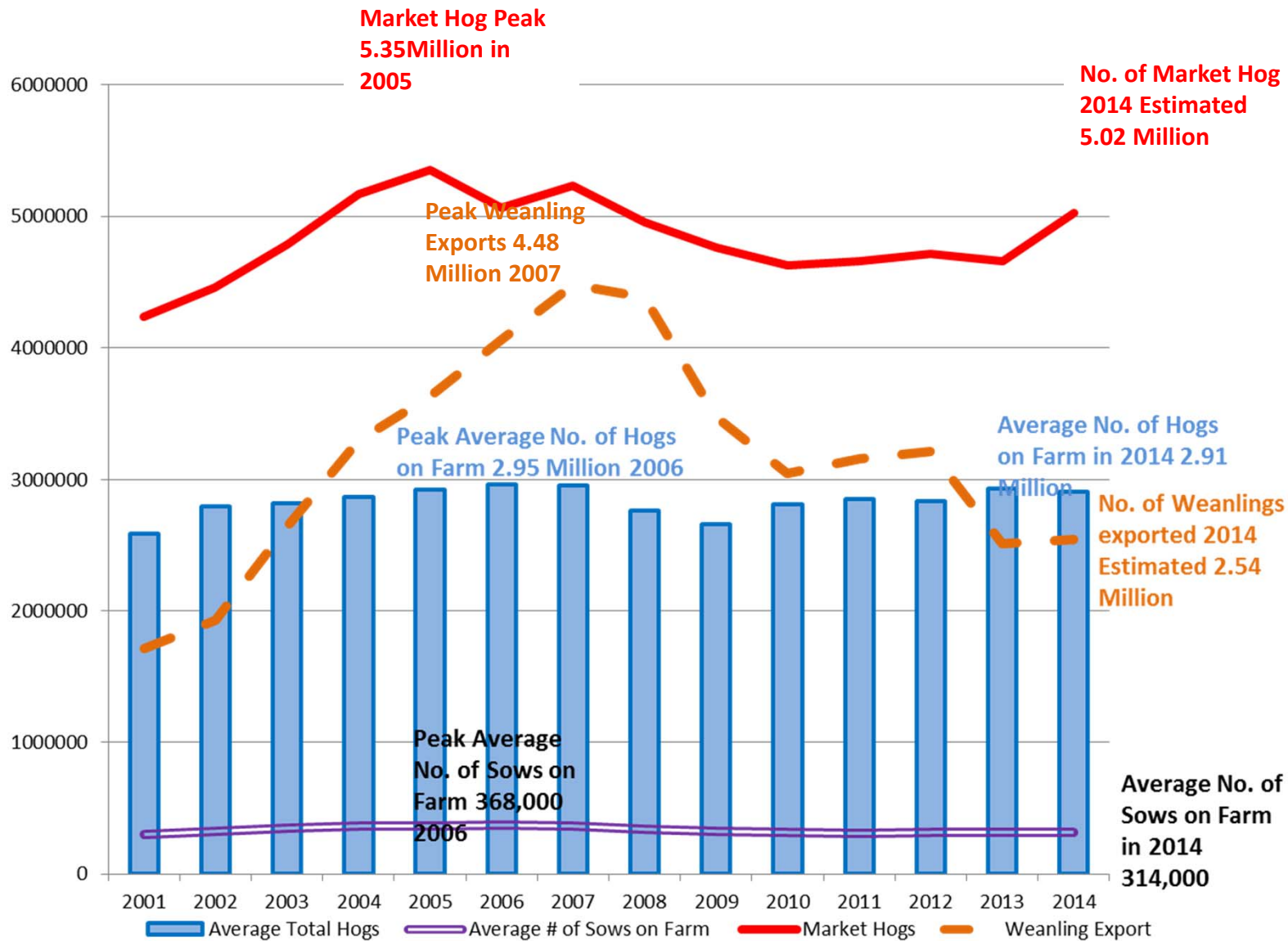
6500 EMPLOYEES

“FARMERS”: 20,000+

2500 “FARMERS” = 75% OF PRODUCTION

HOGS: 2 COMPANIES = 40% OF SALES





# MANITOBA SWINE SEMINAR 2015



# Manitoba hog farm showing manure lagoons



  
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## Financial Picture on Farm

### Investment – Buildings / Equipment

• Sow Barns (540)	\$683 million
• Nursery Barns (170)	\$218 million
• <u>Finisher Barns (375)</u>	<u>\$754 million</u>
<b>Total</b>	<b>\$1.66 Billion<sup>1</sup></b>

**Commercial Pig Sales \$825 million**

### Operating Costs

• Feed Purchases	\$475 million <sup>2</sup>
• Other	\$185 million
• Fixed	\$130 million
• <u>Labour</u>	<u>\$105 million</u>
<b>Total</b>	<b>\$895 million</b>

<sup>1</sup> MAFRI estimate, based on replacement cost

<sup>2</sup> 1.5m tonnes of grain, 0.5 m tonnes of oilseed meal



## Impact on Manitoba Economy

### LABOUR

• Supplier jobs	1,800
• Indirect jobs	2,000
• On-farm (paid & family)	2,000
• Processing jobs	
- In-plant	3,800
- Indirect	2,300
<b>Total Jobs</b>	<b>11,900</b>

### Export Sales<sup>1</sup>

• Live pigs	\$225 million
• Pork Products	\$476 million <sup>2</sup>
• <u>Domestic (Cdn) Market</u>	<u>\$800 million</u>
<b>Total</b>	<b>\$1.51 Billion</b>

<sup>1</sup> Includes sale of pork from SK pigs processed in Manitoba

<sup>2</sup> 58% (\$264m) is sales to Japan

## **Manitoba's Hog Industry**

# **Pork Processing in Manitoba**

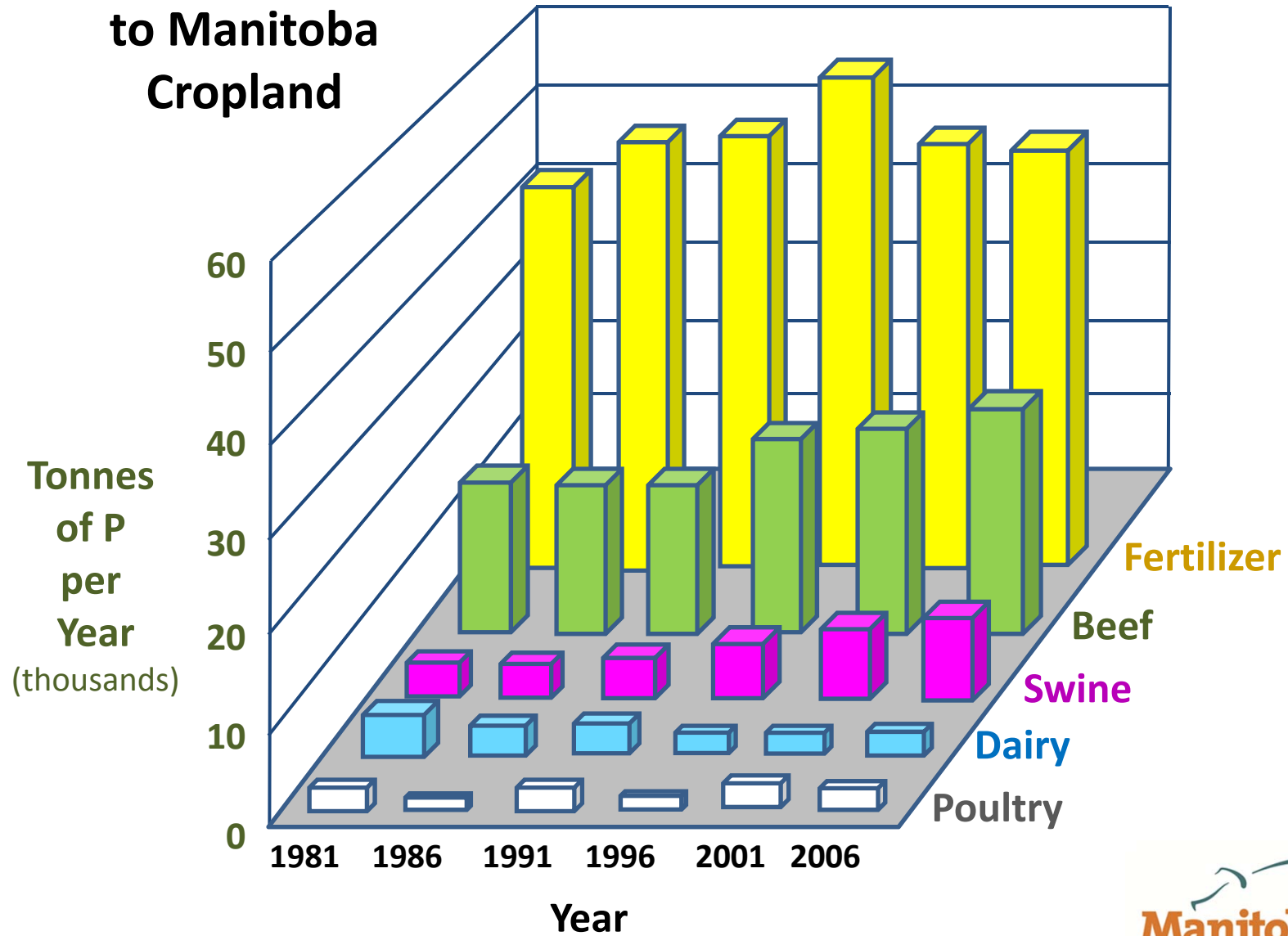
- The *Maple Leaf* processing plant in Brandon is the **largest single manufacturing plant in the province** (by number of workers), at its peak employing almost 2400 unionized workers (although that number is down now), and it is the **largest and most modern hog processing plant in Canada.**
- Hog production/processing is the only major new industry to hit Manitoba in decades. Pork processing accounts for about **10% of all manufacturing** (by revenue) in Manitoba and about **45% of all food processing in the province.**

## **Manitoba's Hog Industry - Processing**

- ❑ Manitoba processes over **one-quarter (26.1%) of the hogs** slaughtered in Canada.
  
- ❑ There are **3 major pork processing plants** in Manitoba:
  - **Maple Leaf** in Brandon (over 2000 employees),
  - **HyLife** in Neepawa (950 employees),
  - The **Maple Leaf** bacon & ham plant in Winnipeg which gets all of its pork from the Brandon plant (1100 employees).



# Sources of P applied to Manitoba Cropland



Source: Steve Sheppard, 2011



## Manure Injection Equipment



## Manure Injection Equipment





## In-cab manure injection equipment

**Manitoba's Hog Industry - Manure & Phosphorus**

- ❑ Most Manitoba soils are **naturally phosphorus-deficient**, this means **P must be added** in order to grow crops. Only 2 municipalities in Manitoba are considered to have too much P in their soils related to livestock – the rest are essentially P deficient.
- ❑ Phosphorus (P) & Nitrogen (N) are **critical to the growing of crops.**
- ❑ Manitoba's hog manure contains a **total** of about 5000-7000 tonnes of P.
- ❑ Manitoba annually **imports about 140,000 tonnes** of rock Phosphate (equal to about 40,000 tonnes of P).



## **Manitoba's Hog Industry**

# **Troubled Waters**

- ❑ While this industry has resulted in a HUGE economic gain to Manitoba in the last 15 years, as many of you know, there are some **serious challenges** facing us now.
- ❑ There is a significant shortage of pigs in Manitoba and it has resulted in the largest manufacturing plant in Manitoba (the *Maple Leaf* plant in Brandon) to run at **about 60-65% capacity, or about 1.2 million pigs a year short**. This is dangerously low production and means the **plant loses money every day it operates at such low rates**.

## MANITOBA SWINE SEMINAR 2015

### OUTCOMES

- \$400million in new private sector investment in pig finishing capacity
- Create 1500-1700 new jobs on-farm, in the service sector and in pork processing in Brandon, Winnipeg and Neepawa
- Provide balance and stability to a cyclical industry
- Processors would be at capacity, competitive with US plants
- Processors should be better able to match US prices paid to producers
- Create additional pork product sales for export of at least \$300m per year



*Thank You!*









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