

# **Assessing the Competitiveness of Ontario and California's Processing Tomato Clusters**

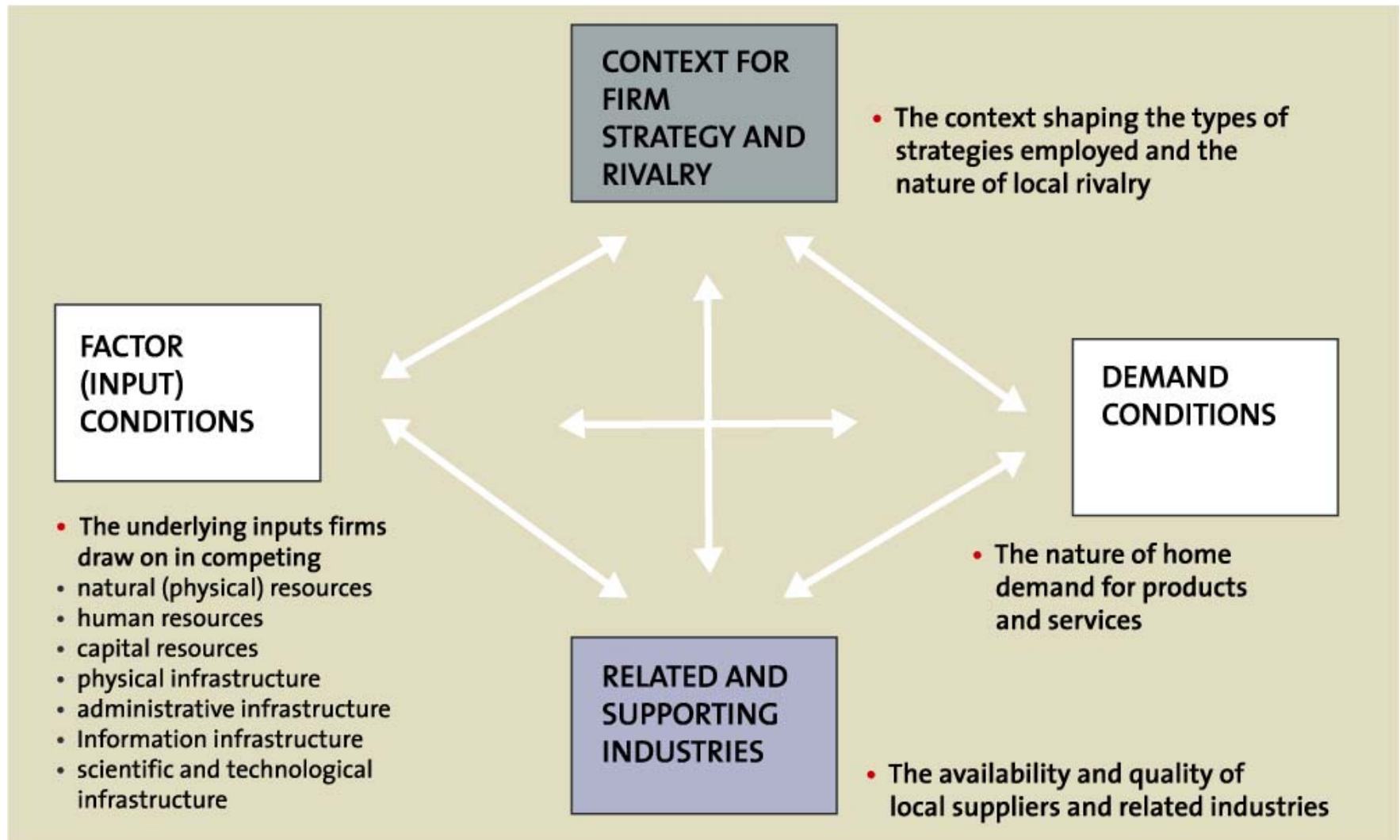
**Presentation to  
Ontario Processing Tomato Advisory Committee**

**by**

**James Milway, Executive Director  
Institute for Competitiveness & Prosperity**

**November 2003**

# The Porter Diamond and Clusters



Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

# Assessing Ontario's & California's Tomato Processing Clusters

- **Clusters were analyzed by the Institute for Competitiveness and Prosperity and Professor B.J. Rickard, CalPoly drawing on information and expertise from:**
  - **John Mumford, OPVG**
  - **Jane Graham, Trish Wales, OFPA**
  - **Art Zantinge and Eugene Jaworski, OMAF**
  - **Brad J. Rickard, CalPoly**
- **Clusters profiled and assessed using cluster template developed by Michael Porter's Institute for Strategy and Competitiveness**
  - **Used 120 variables to measure the four elements of the Porter Diamond**
  - **This allows for comparison of competitiveness between clusters**

# Processing Tomato Growing Regions in Ontario and California

Greater dispersion gives California more diverse micro-climates



# Ontario's Tomato Cluster Study Overview

## Industry Overview

- **Ontario's cluster has increased its competitiveness significantly over the past 10 years**

## Cluster Analysis

- **Less demanding consumers means less pressure for innovation**
- **Smaller market and less attractive factor conditions reduce cluster robustness**

## Opportunities for Development in Ontario's Cluster

- **Set a world-class quality standard and build a brand around it**
- **Develop niche markets and products to drive global competitive advantage for Ontario**
- **Gain volume in US Northeast and Midwest markets, by overcoming barriers**

# Output Trends Among Largest Regions Worldwide

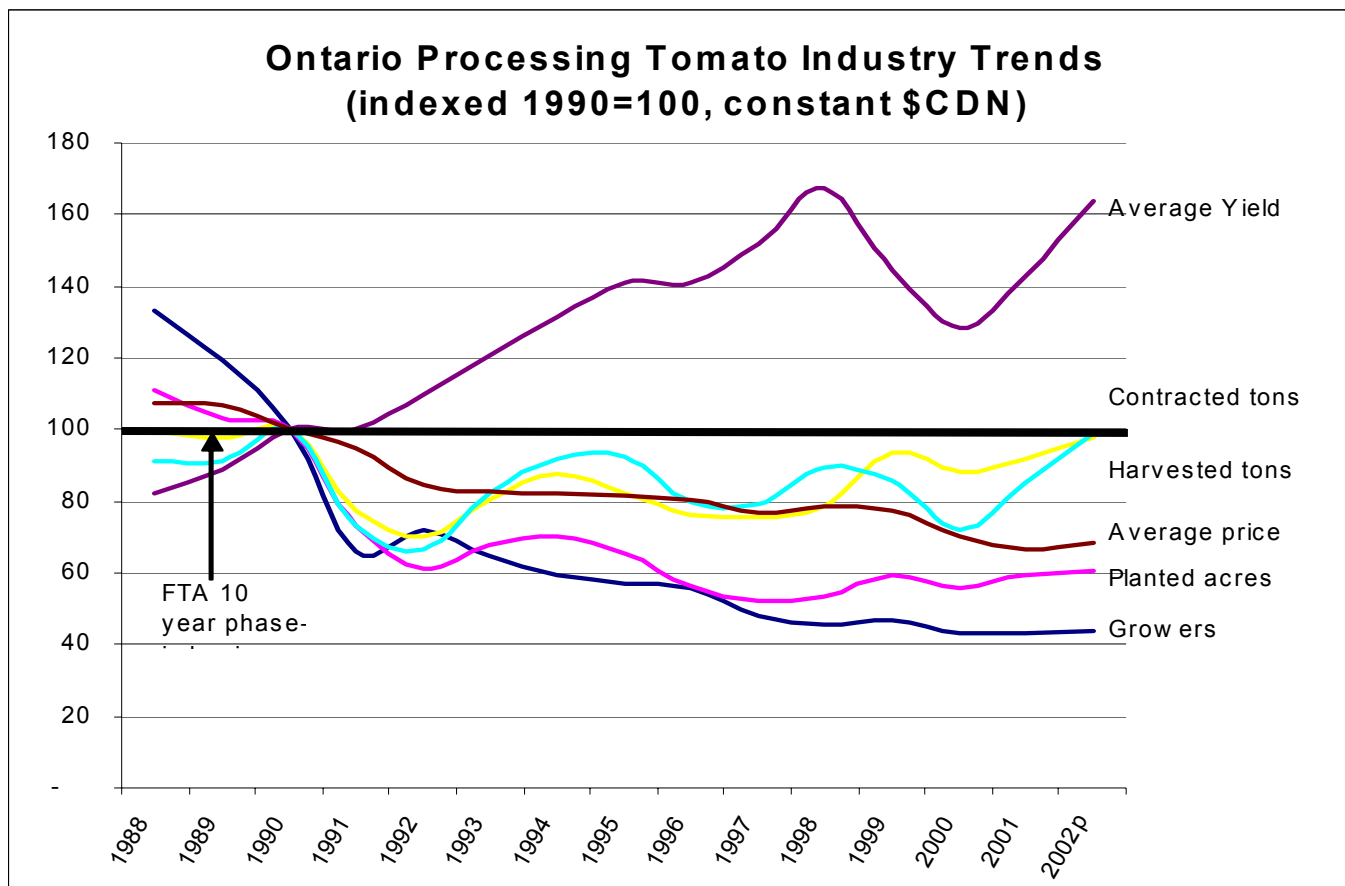
Ontario is a regional player competing against the largest, California

Top 11 Processing Tomato Producing Regions (Thousands of tons of tomato production per year)							
	1999	2000	2001	2002	2003 f	Growth Rate	Rank
<b>California</b>	12,254	10,298	8,651	11,069	10,989	-2%	1
<b>Italy</b>	5,522	5,369	5,293	4,740	5,176	-1%	2
<b>China</b>	881	1,982	1,101	2,533	3,634	33%	3
<b>Spain</b>	1,656	1,452	1,611	1,725	1,982	4%	4
<b>Turkey</b>	1,927	1,432	1,046	1,432	1,652	-3%	5
<b>Greece</b>	1,371	1,171	1,034	948	1,101	-4%	6
<b>Brazil</b>	1,421	1,322	1,101	1,101	1,101	-5%	7
<b>Portugal</b>	1,097	942	1,010	920	1,046	-1%	8
<b>Chile</b>	1,030	1,019	798	606	694	-8%	9
<b>Tunisia</b>	804	806	474	661	661	-4%	10
<b>Ontario</b>	537	455	531	620	600	2%	11
<b>Total</b>	28,501	26,247	22,651	26,355	28,638	0.1%	

Source: World Processing Tomato Council

# Ontario's Industry has Become More Productive Since the FTA

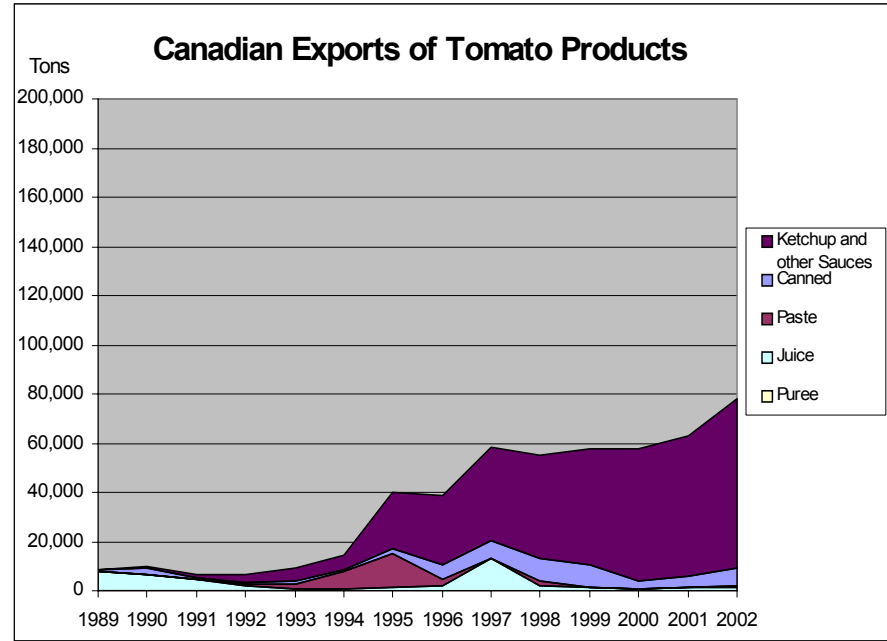
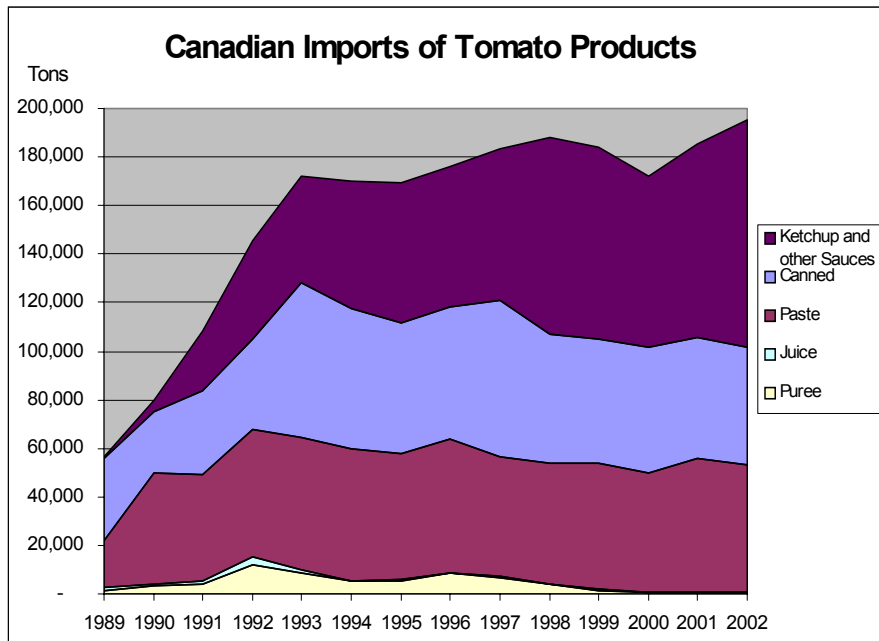
Harvested tons have held flat, while prices have fallen



Source: Ontario Vegetable Growers Association

Note: Statistics Canada's CPI deflator for each year was used to convert to constant dollars

# Canada's Processed Tomato Trade Deficit is Growing



## Top Imports, 2002

- Sauces 85,804 tons
- Paste 52,368 tons
- Canned 48,347 tons

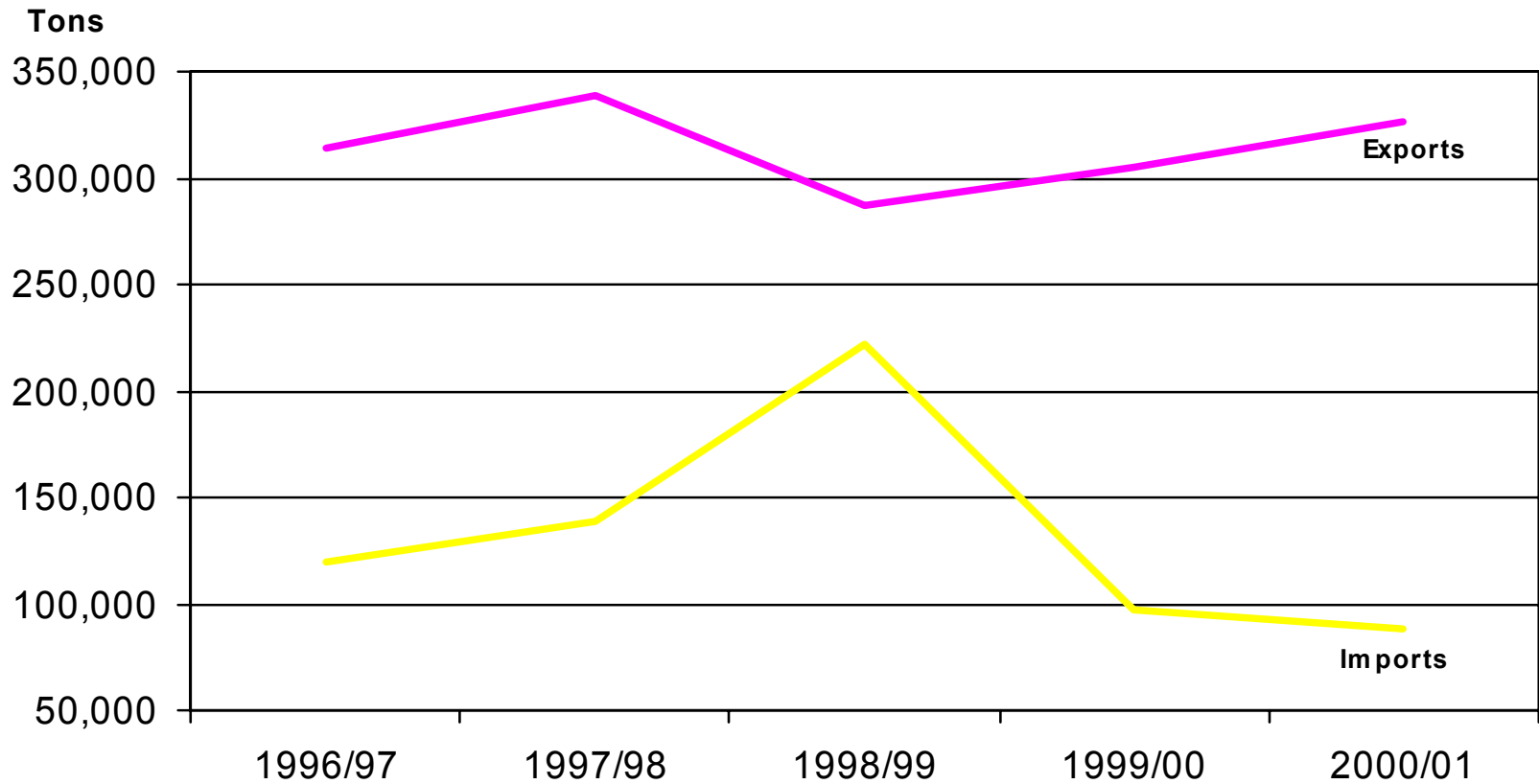
## Top Exports, 2002

- Ketchup 60,259 tons
- Sauces 8,506 tons
- Canned 7,164 tons

Source: Strategis Website, Industry Canada

Note: Figures given are units of finished product shipped

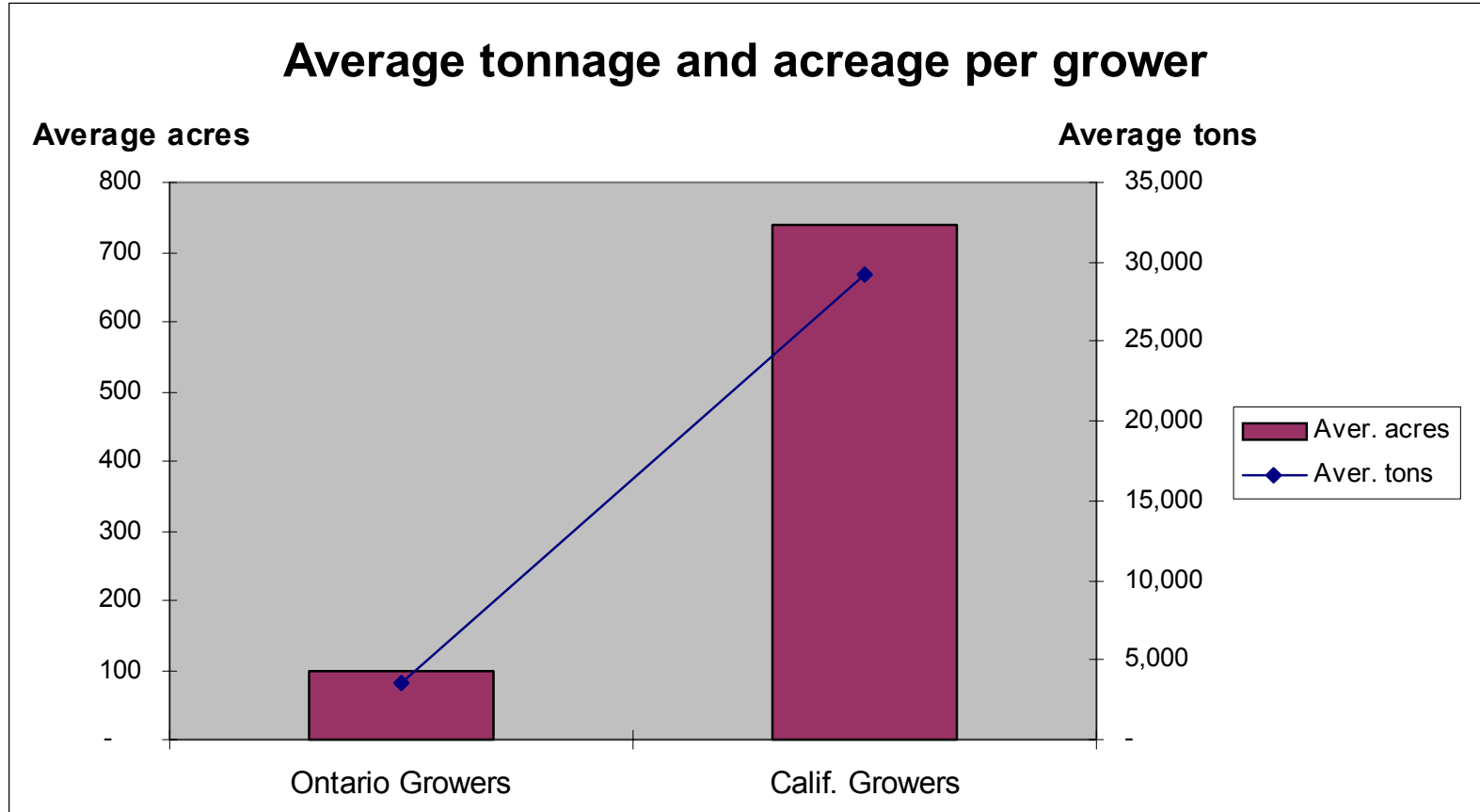
## U.S. Imports and Exports of Processed Tomato Products



Source: U.S. Census Bureau

Note: Figures given are units of finished product shipped

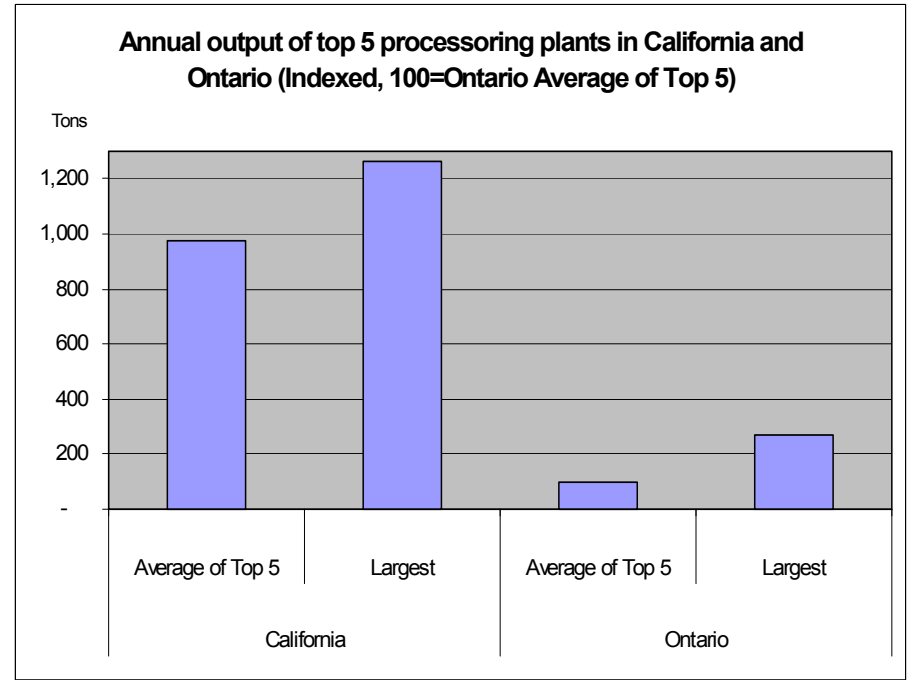
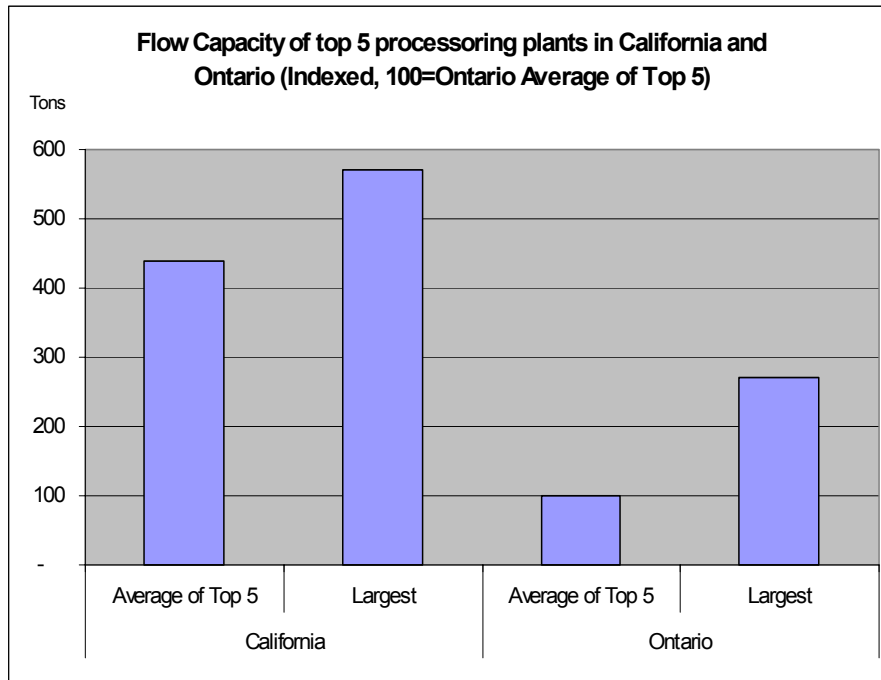
# California's Growers are Significantly Larger



Source: National Agricultural Statistics Service, USDA (California), OPVG (Ontario)

# Californian Processors Enjoy Scale Advantages

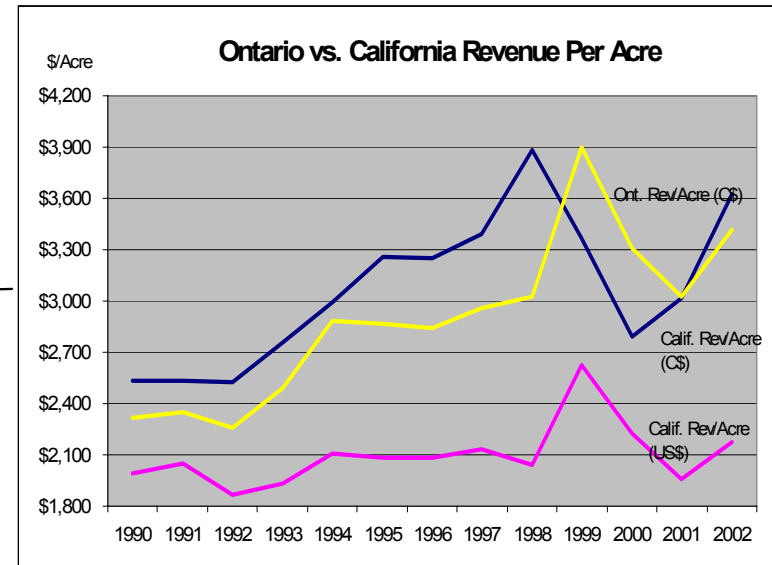
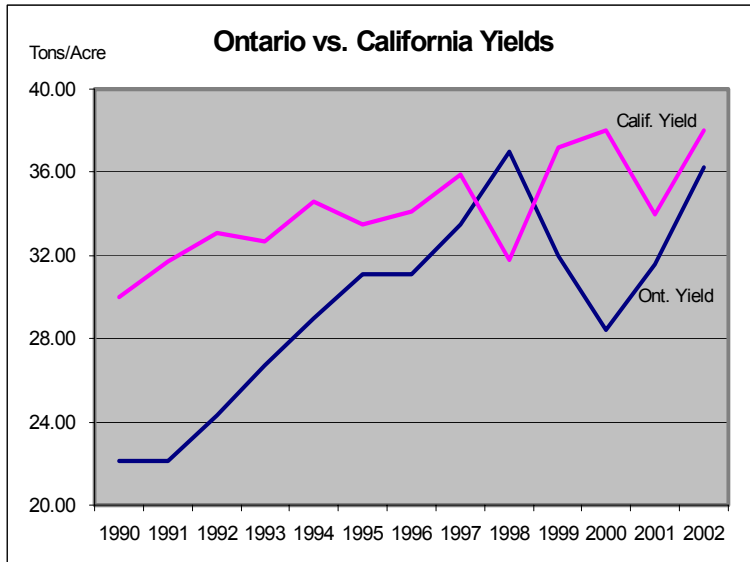
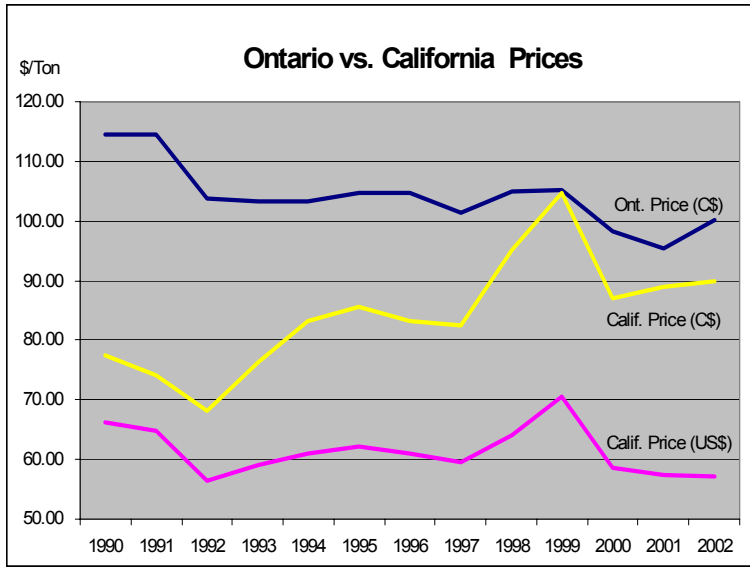
Shorter season for processing tomatoes and smaller capacity reduces Ontario's potential efficiency



Source: Morningstar (California), OPVG (Ontario)  
Note: Units used are tons of fresh tomatoes processed

# Ontario Has Been Closing the Yield Gap With California While Prices have Converged

The Canada/US exchange rate has affected Ontario's price competitiveness

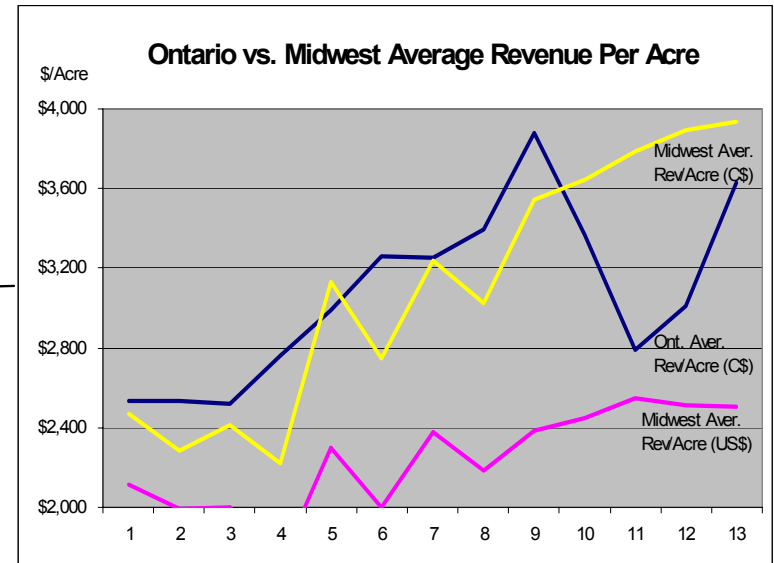
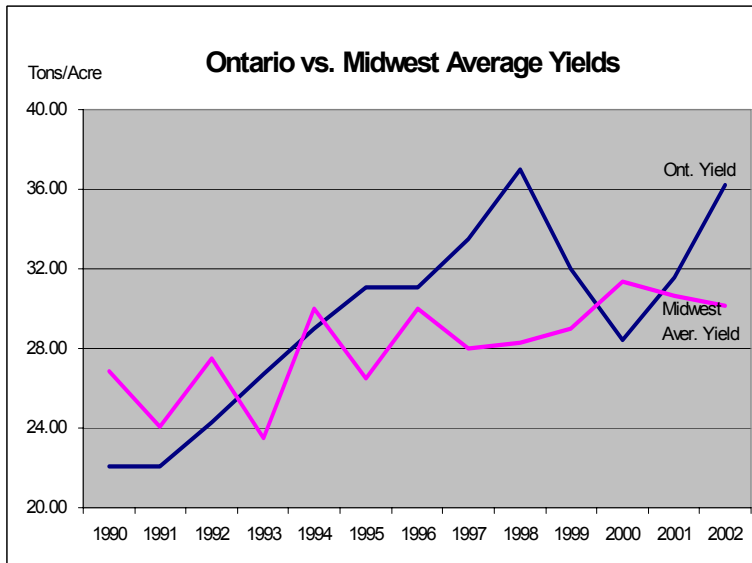
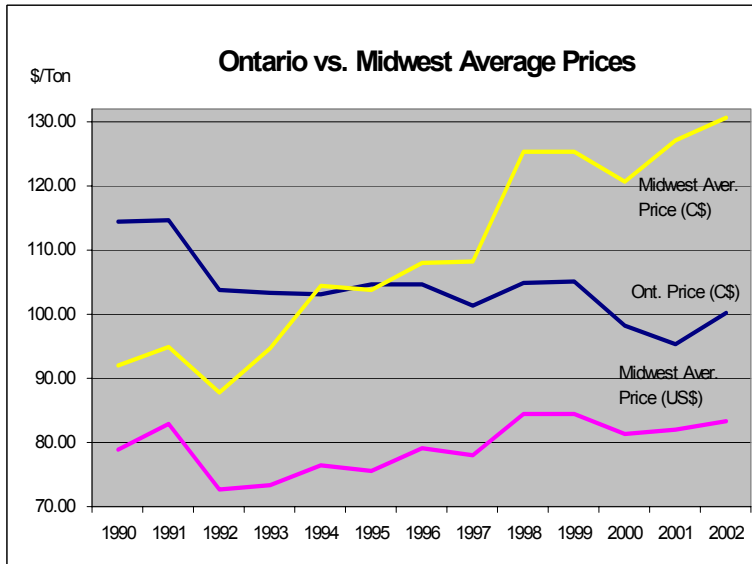


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Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture, OPVG  
 Note: Prices are FOB factory, California prices were converted to CDN\$ using average annual exchange rate for each year as reported by Statistics Canada.

# Ontario Has Surpassed the Midwest States in Yield and Lowered Prices

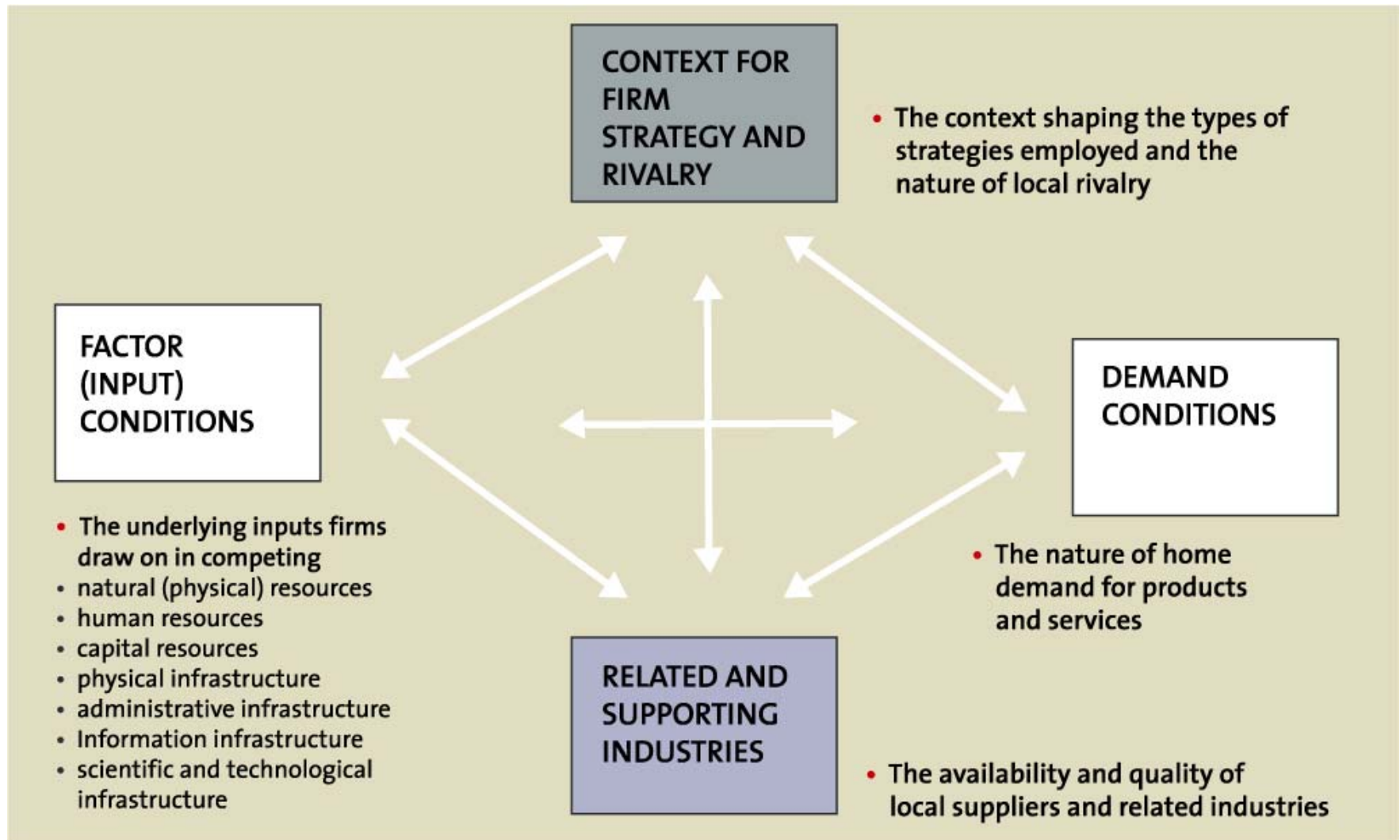
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Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture, OPVG  
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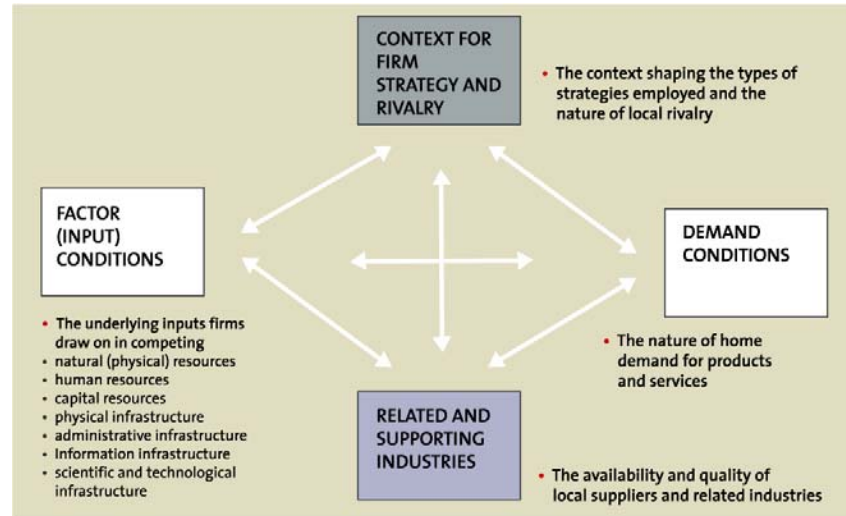
# The Porter Diamond and Clusters



Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

## Strength for California vs. Ontario

Significant Strength for California



Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Significant Strength for California

## Strength for Ontario

Turning to each factor...

# Southern Ontario has Impressive Factors Conditions

- **High quality land is in good supply**
- **Water is adequate to support growth if used efficiently and managed as a critical resource**
  - **Less than 50% of land is irrigated**
  - **Increasing irrigation will have beneficial effects on yields**
  - **Water management will continue to be important for the strength of the industry**
- **Geographic proximity**
  - **The sub-cluster lies between southern Ontario and the US Northeast and Midwest markets**
  - **Ontario growers tend to be closer to processing plants**
- **General Physical infrastructure is excellent**
  - **Tomato-specific knowledge and physical infrastructure is limited**
- **Shorter season in which tomatoes can be processing limits capital utilization**

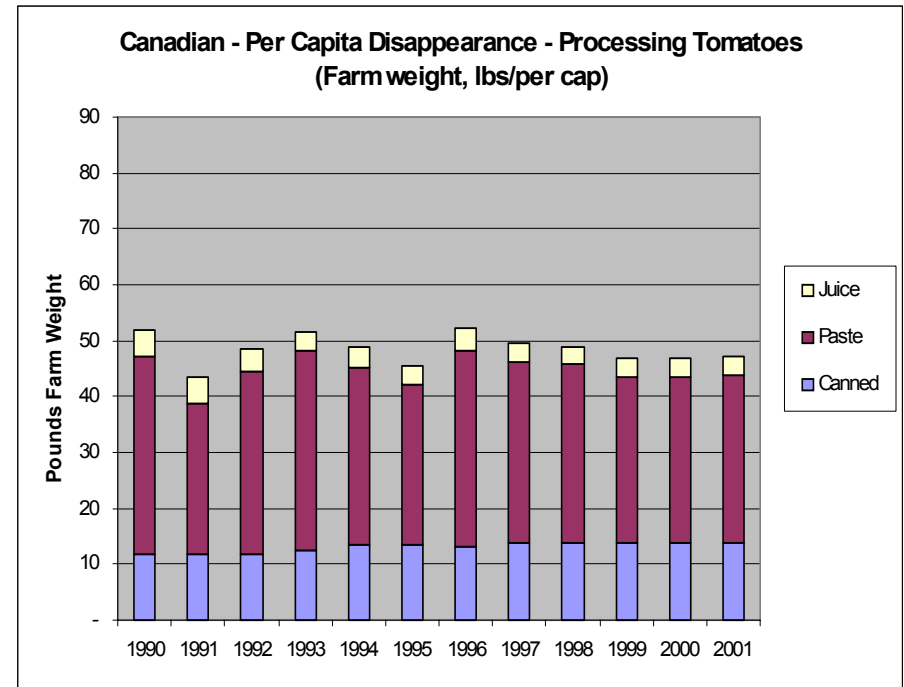
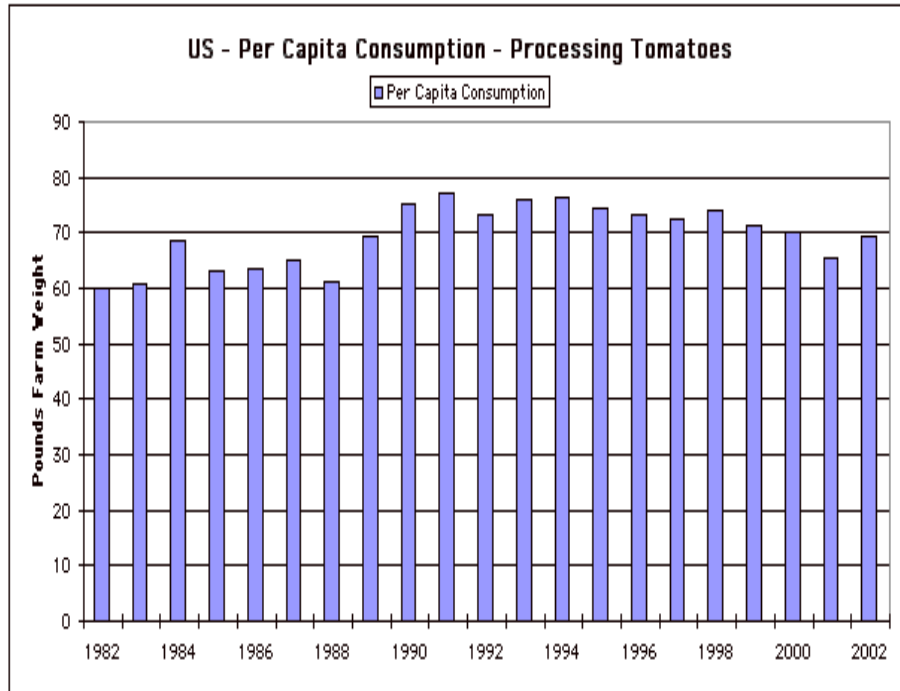
- **California has ideal growing conditions, well established infrastructure, a solid base of input suppliers**
  - **Water supply infrastructure is reliable, but pressure on urban/rural water allocation will continue to challenge the industry**
- **A wide range of microclimates within the state enables tomato processors to receive tomatoes over approximately 100 harvesting days per year**
- **The California industry draws from several specific resources (human, knowledge, and infrastructure) that focus (or are geared towards) this cluster**
- **Production costs in California are below the OECD average In terms of productivity, or output per man-hour**

# Consumers Demand Less in Ontario

- **Canadians consume 1/3 less processed tomatoes per capita than Americans**
  - **Ontario retail purchases are not significantly different from Canada**
- **Retailers are increasing shelf space for white label products at the expense of branded products**
- **Consumers view tomato products as a commodity**
- **Local consumers' tastes vary widely and they continue to import specialty products**
  - **Processors may not be taking full advantage of the culture driven demand for specialty products**
- **Limited market research is conducted to discover opportunities for novel products or niche markets**
- **There is limited brand or industry advertising to stimulate demand**

- **The United States, has a per-capita consumption rate of approximately 70 pounds; this is significantly higher than other OECD countries with the exception of some Mediterranean countries**
- **U.S. per-capita consumption has been flat since 1990 and *may* have reached a plateau**
  - **Increases in the past are attributed to new products**
  - **Future increases may be linked to health benefits rather than product-related (e.g., lycopene)**
- **Recent U.S. labeling schemes, such as “Buy California” and “COOL” may increase demand for domestic agricultural products they may also limit market access to U.S.**
- **Retail shelves in California include a wide range (in terms of price) of processed tomato products, indicating a relatively tomato savvy consumer base**

# Canadians Consume Fewer Tomato Products



Annual per capita disappearance varies widely

Italy – 147 lbs.

Canada – 47 lbs.

US – 70 lbs.

Australia – 40 lbs.

Source: Morningstar Company, Statistics Canada

- **Local raw materials suppliers are internationally competitive and assist firms to upgrade and innovate**
- **Technology transfer among crops is significant and beneficial**
  - **This should increase yields for companion crops**

## However

- **Global machinery and equipment suppliers charge premiums to customize to local needs**
- **Grocery retailers maintain leadership in value chain**

- **California grows over 350 commodities:**
  - many competing crops are an advantage by providing growers a wide range of crop choices
- **Many of crop alternatives are high value horticultural crops, some are directly supported by the government**
- **Several related industries, notably the seed industry and trucking, are vertically linked within this cluster**
- **The strength of California's horticultural sector allows for, and encourages, spillover benefits across crops**

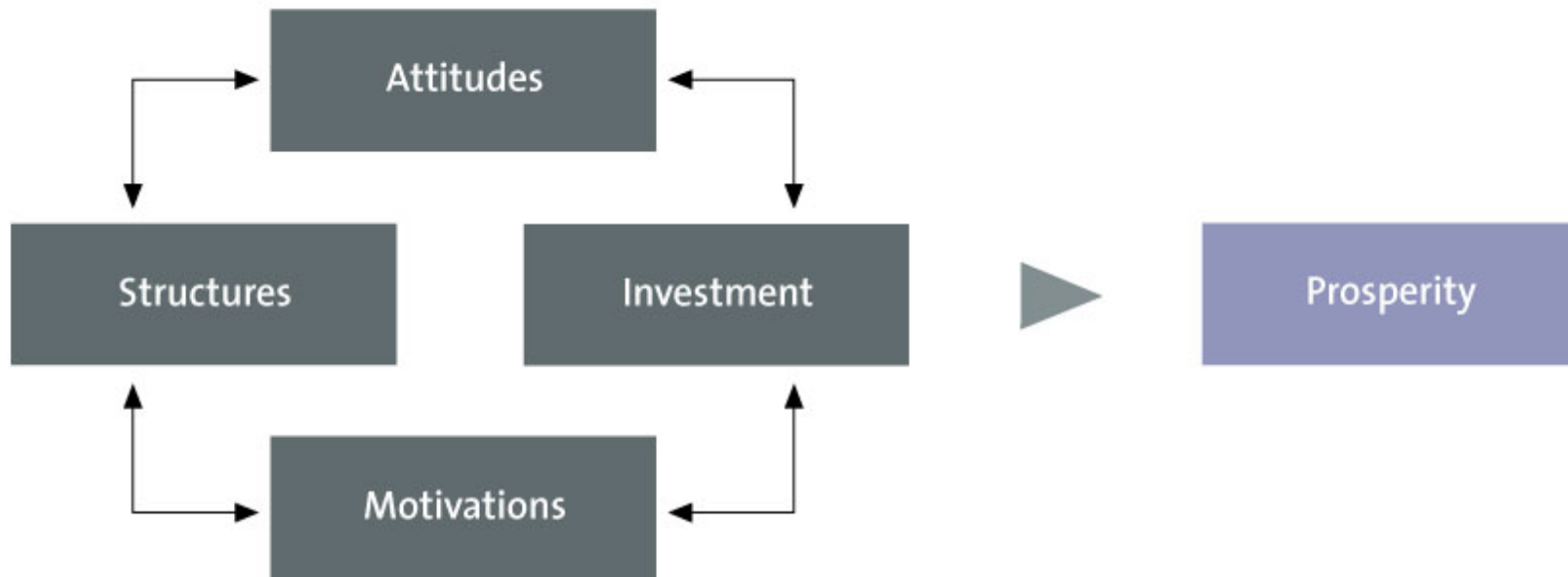
# In Ontario Firm Strategy is Focused on Cooperation

- **Ontario has a unique culture of cooperation that improves innovation, and productivity**
- **Rivalry among growers is limited to competing for processor favour and land**
- **Processors compete on price and completeness of product lines**
  - **Grocery retailers apply intense price pressure**
- **Strategies that have improved efficiency include:**
  - **Drip irrigation, transplanting, tomato breeding, and other productivity enhancing technologies in processing plants**
- **Unique local structures include the productivity based price system and crop insurance program**

# More Intense Rivalry in California, But Still Price Based

- **Stage I products (bulk paste and bulk diced products) are essentially undifferentiated commodities**
  - **Undifferentiated commodities are heavily price (and cost) sensitive, and compete in global markets**
- **The majority of processing tomatoes in California are used to produce bulk products**
  - **Firm strategy and rivalry is significant at the Stage I level of processing, this pressure feeds upstream to the growers via the contract price**
- **Efficient growers are rewarded by Stage I processors through premiums and performance incentives**
  - **Early and late deliveries, and qualitative factors**

# AIMS Builds Capacity for Innovation and Upgrading to Increase Prosperity



Source: Institute for Competitiveness & Prosperity

# AIMS for Opportunities

## Attitudes

- **Is Ontario aspiring to be a global leader?**

## Structures

- **What source of competitive advantage can create a stronger structure for Ontario's Tomato Cluster, e.g.?**
  - **Niche products**
  - **Technology**
  - **Seedlings**

## Investments

- **Is the industry prepared to invest in new and better capital and practices?**
- **Is the industry prepared to invest in an Ontario brand or unique marketing approach?**
- **Is the industry prepared to increase support for world-class product and consumer research?**

## Motivations

- **Are there potential or existing non-tariff barriers that could impede export growth?**

# Initiatives for Future Growth

## Growth Initiatives: potential breakout strategies

### Penetrate US Market

- Build share in the US NE and Midwest states
- Address non-tariff barriers
- Use transportation cost advantage

### Independent Paste Production

- Invest in local supply of paste (collaboration among processors) and market a portfolio of products to remanufacturers

### Niche Products

- Define and improve quality
- Develop an Ontario brand
- Explore local community for new ideas
- Strengthen product research capability

## Platform Capabilities: Initiatives required to remain competitive

**Ongoing Initiatives by Growers:** irrigation pond construction and drip irrigation expansion, increase grower scale and efficiency, continue moving to better soils and developing methods for operating in wet fields, encourage more collaboration with retailers and food service firms

**Ongoing Initiatives by Processors:** continue developing better varieties, extend processing season and capital utilization, invest in new more efficient capital, increase collaboration with retailers and food service firms

**Ongoing Initiatives by Government:** deepen study of strategies employed in competing regions, encourage public consumer and product research, continue to develop water use strategies and infrastructure that will improve Ontario's competitiveness and investment environment

# Ontario Wineries have Developed a Wine Brand

- **Ontario wineries developed the VQA and set a world class quality standard**
- **Wineries frequently enter international competitions and win**
- **Industry advertising has raised the profile of Ontario wines among local consumers**
- **Education has made consumers more sophisticated and moved local demand upscale**
- **Competition and tourism have helped wineries build the VQA brand as well as their own**
- **Ontario's cold weather has become an advantage**
  - **Ice Wines are a niche product Ontario has become known for**

# Variables used in analysis

	Average Annual Exchange Rate	CPI Deflator (1990=100)
1988		90.890
1989		95.391
1990	1.17	100.000
1991	1.15	105.573
1992	1.21	107.181
1993	1.29	109.110
1994	1.37	109.325
1995	1.37	111.683
1996	1.36	113.505
1997	1.38	115.327
1998	1.48	116.399
1999	1.49	118.435
2000	1.49	121.651
2001	1.55	124.759
2002	1.57	127.546

Source: Statistics Canada

# List of sources

- **Interviews of Industry members**
- **Statistics Canada**
- **Strategis, Industry Canada**
- **Economic Research Service, USDA**
- **National Agricultural Statistics Service, USDA**
- **US Bureau of the Census**
- **Morningstar Company (California)**
- **World Processing Tomato Council**
- **World Trade Organization, Agricultural Negotiations, Introduction**
- **Michael Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School**

# Appendix:

Information provided by  
Brad Rickard, CalPoly

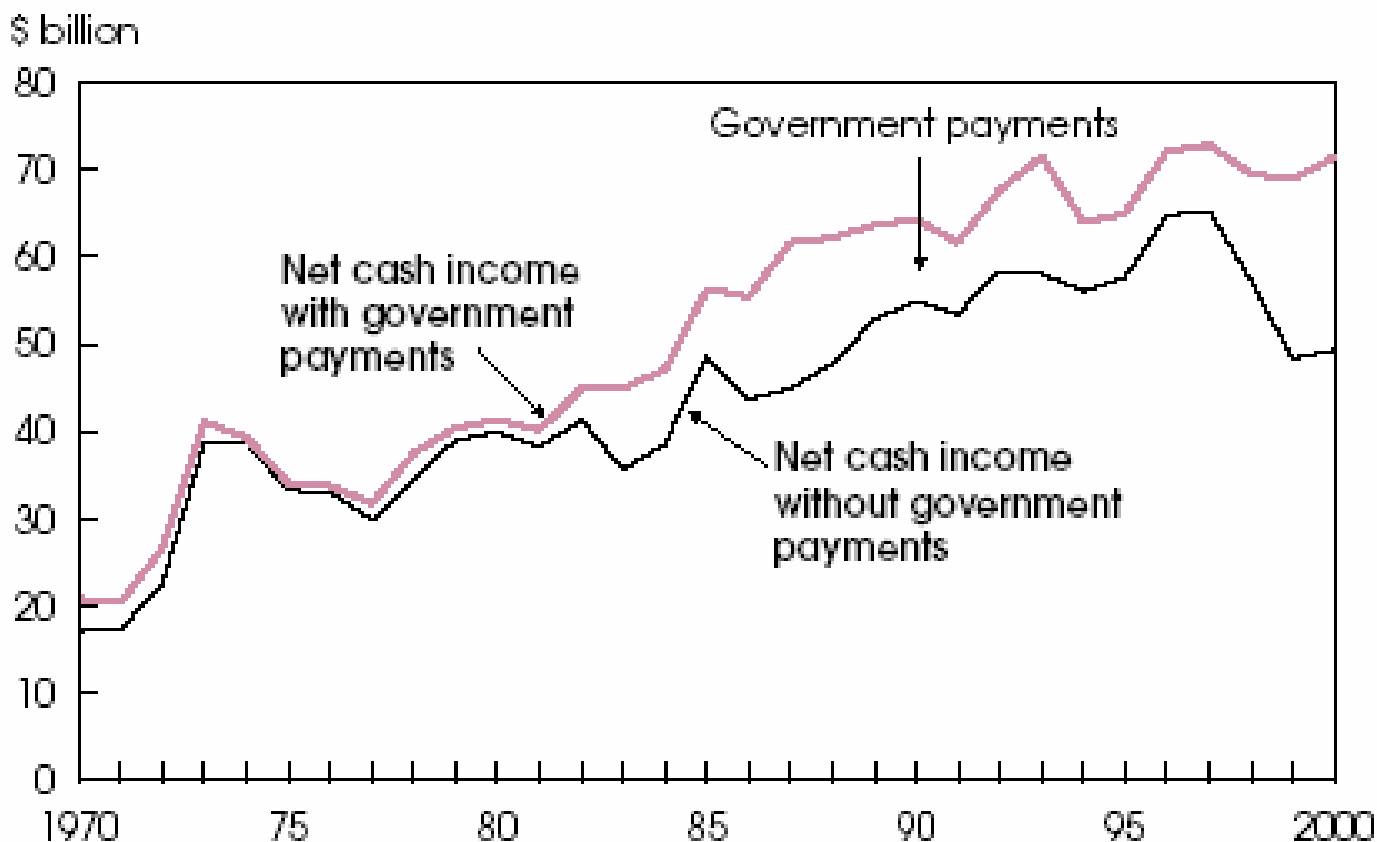
# Distortions in the U.S. and Europe Impact Ontario

- **U.S. farm policy does not directly support processing tomatoes; however, it does support program crops that compete for agricultural resources and this will have spillover effects for tomato growers and processors**
  - Downward pressure on California's acreage in processing tomatoes as land and other resources shift towards other crops
- **U.S. has stringent quality standards related to mould on imported processed tomato products**
  - When enforced, it will restrict Ontario tomato exports
- **The EU Common Agricultural Policy continues to directly subsidize the production of processing tomatoes, and protect processed tomato products via border measures**
  - Reduced market access in the EU, and in EU export markets

Source: B.J. Rickard, CalPoly

# US Farm Bill Subsidies are Growing

Government Payments Amounted to Almost One-Third of Net Cash Income to Farm Operators and Landowners in 2000



Economic Research Service, USDA

# EU Production Aid Reduces Local Prices

## Processed Fruit and Vegetables - EU financial aid (in million Euros)

	2001	2002*	2003*
Production aid for processing tomatoes	223	285	279
Production aid for fruit-based products (processing peaches, pears, prunes, and figs)	71	83	86
Production aid and intervention for dried grapes	113	127	112
Production aid for citrus fruits	170	231	249
Production aid and schemes related to the production of olive oil	2,469	2,298	2,278

Source: USDA/FAS/GAIN #E23067

# Less Protection Benefits Ontario's Tomato Industry

## The Reductions in Agricultural Subsidies and Protection Agreed in the Uruguay Round

	Developed countries 6 years: 1995–2000	Developing countries <sup>a</sup> 10 years: 1995–2004
Average tariff cut for all agricultural products	–36%	–24%
Minimum tariff cut per product	–15%	–10%
Domestic support (from 1986-88 levels)	–20%	–13%
Value of export subsidies (outlays)	–36%	–24%
Subsidized quantity of exports	–21%	–14%

Source: World Trade Organization, Agricultural Negotiations: Introduction.  
[http://www.wto.org/english/tratop\\_e/agric\\_e/negs\\_bkgrnd05\\_intro\\_e.htm#presentreform](http://www.wto.org/english/tratop_e/agric_e/negs_bkgrnd05_intro_e.htm#presentreform)