

# The Canadian Dairy Sector

**Maurice Doyon**  
**Laure Saulais**

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# Outline

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- Overview of the Canadian dairy sector
- The essence of supply management
- Supply management: an evolving system
- Current issues



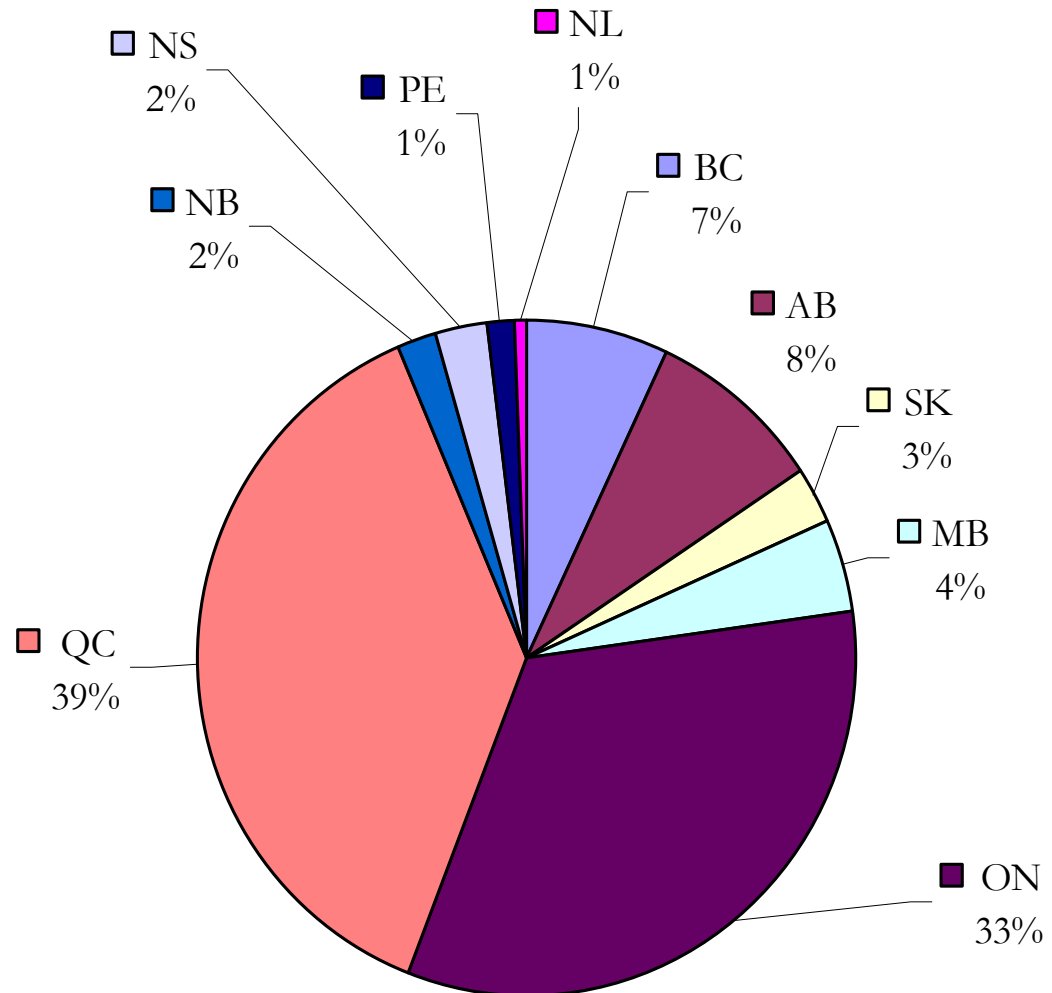
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# Canadian dairy cattle

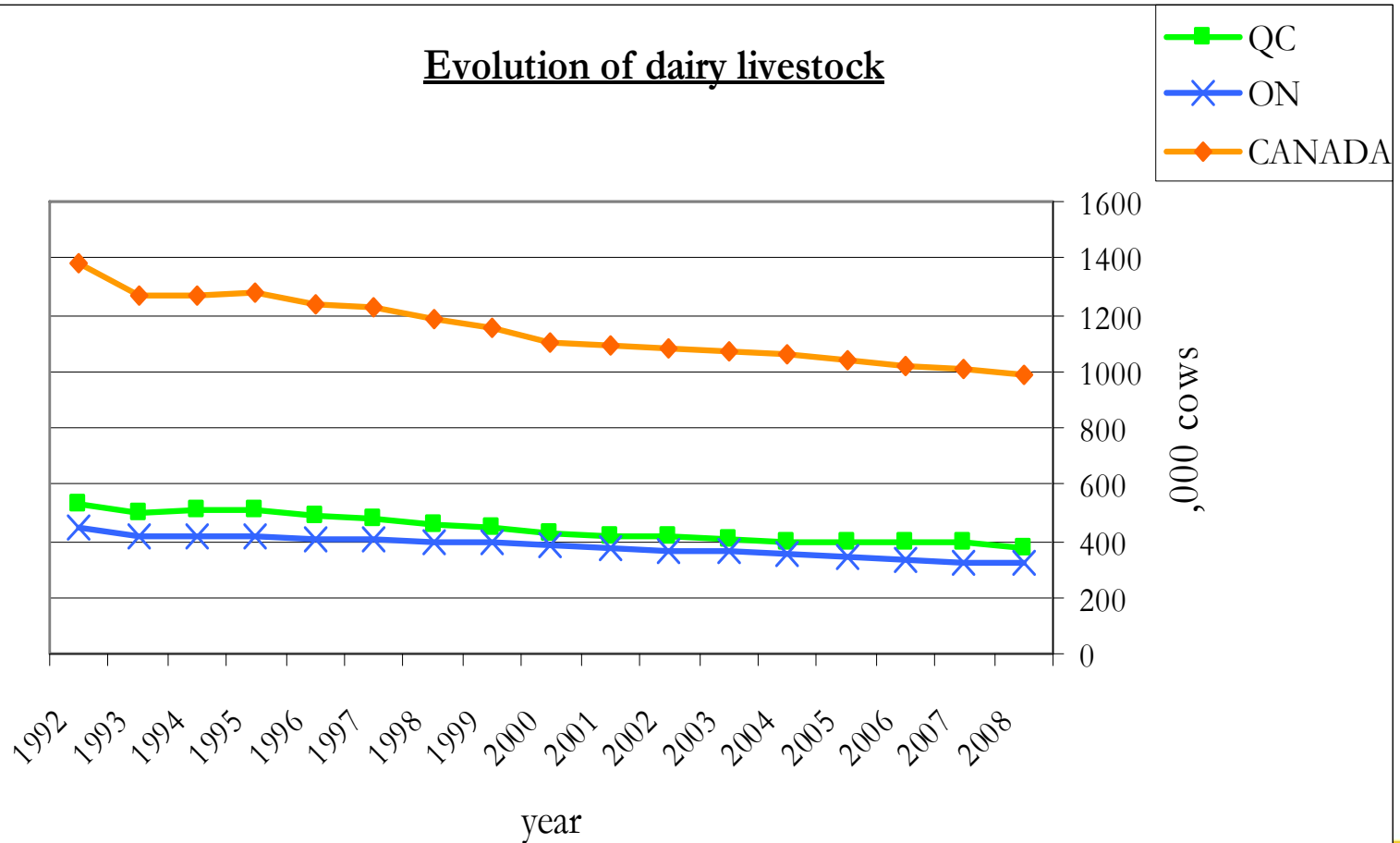
- Canadian dairy cattle: 1,459,600 heads (989,500 dairy cows)
- 72% of dairy cows = Quebec and Ontario

Dairy Cows per Province - 2008



# Evolution of livestock

Evolution of dairy livestock



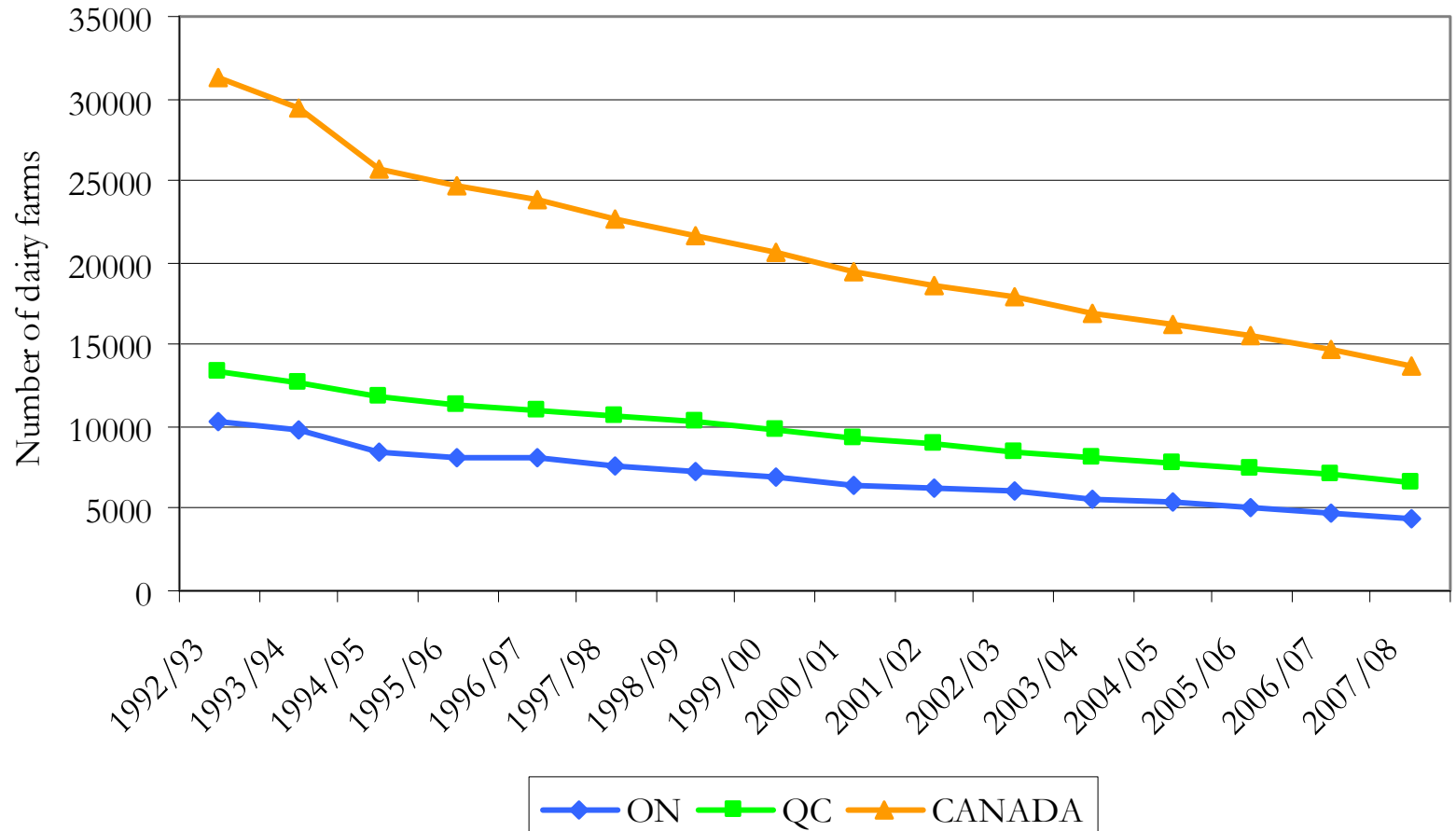
Source: CDIC



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# Evolution of the number of dairy farms



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# Average farm size

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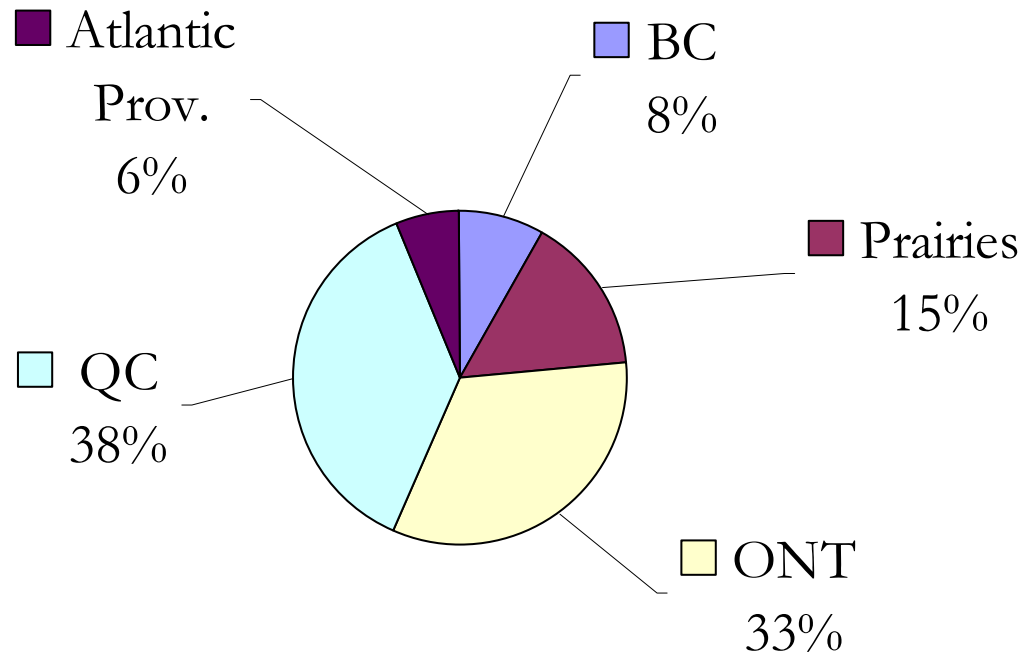
- Average farm in Canada = 67 dairy cows (2007)
  - Quebec: 51 cows/farm
  - Ontario: 68 cows/farm
  - Alberta : 120 cows/farm
  - British Columbia: 116 cows/farm
- **Restructuration** : Total number of farms is decreasing; small farms disappear to the detriment of larger farms.
- **Concentration of production** : 15% of farms have a quota higher than (6500 hl) 1,5 M lbs and produce 33.5% of the total.



# Milk production

## Milk production at the farm, calendar year 2007

Total production :  
75,84 million hl  
(17 000 million  
pounds)



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# Yield

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- The average Canadian cow produces 9 538 kg (21,000 pounds) of milk (305 days of lactation)
  - 3.77% fat
  - 3.22% protein
- 93% of dairy herd = Holstein



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# Number of processing plants

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- 445 processing plants in Canada in 2007 = 22,130 jobs
- 313 of these plants are located in Quebec and Ontario
- 14% of Canadian plants process 70% of the Canadian milk and are owned by three firms : Saputo, Parmalat, Agropur



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## Three major players on the Canadian market

	Parmalat Canada Ltd.	Saputo Inc.	Agropur Cooperative
<b>% milk processed</b>	22%	25%	23%
<b>Ownership</b>	Private	Public	Cooperative
<b>2007 Sales*</b> <i>(million \$)</i>	2,100	4,000	2,450
<b>Number of plants</b>	19	28	20
<b>Products (market share)</b>	Fluid milk (25%)	Cheese (38%) Fluid milk (20%)	Fluid milk (25%) Cheese (18%)
		Yogurt: 30% through joint venture (Ultima Foods)	



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•\* Global Canadian sales of the firms, includes non-dairy products

## Other firms

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- Other important competitors on specific markets:
  - Cheese market: Kraft Canada (23%) (Agropur)
  - Ice cream market : Nestlé (28%), Unilever (23%)
  - Yogurt: Danone Canada Inc. (30%)
- Regional processors :
  - Local competitors, on specific markets
    - e.g. the fine cheeses market is dominated by small and even artisanal processors (especially in Quebec)



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# Products

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- Milk utilizations in Canada: 39% of milk destined to the fluid milk market, 61% to dairy processing
  - **Quebec: 23%/77%**
  - ON : 43%/57%
  - NS: 64%/36%
  - **PEI: 16%/84%**
  - BC: 53%/47%



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# Products

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- Five classes of dairy products (harmonized milk classification system):
  - 1: Fluid milk, cream
  - 2: Yogurt, ice cream, milk shake products
  - 3: Cheeses
  - 4: Butter and butteroil; SMP,
  - 5: Special classes



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# Organic milk

- A rising number of certified organic milk producers in Canada :
  - 2000/01 : 65 farms - 99,513 hl (22 M lbs)
  - 2007/08 : 173 farms – 622,043 hl ( 140 M lbs)
- Quebec:
  - 98 farms– produced 123,199 hl (28 M lbs) of certified organic milk between August and December 2008
  - Average premium / hl : \$17.57 (\$<sub>us</sub>6.30 cwt) (+7% compared with same period in 2007)



# Average revenue from milk production

*(In 2007/2008, on a 3.6 kg butterfat/hl basis):*

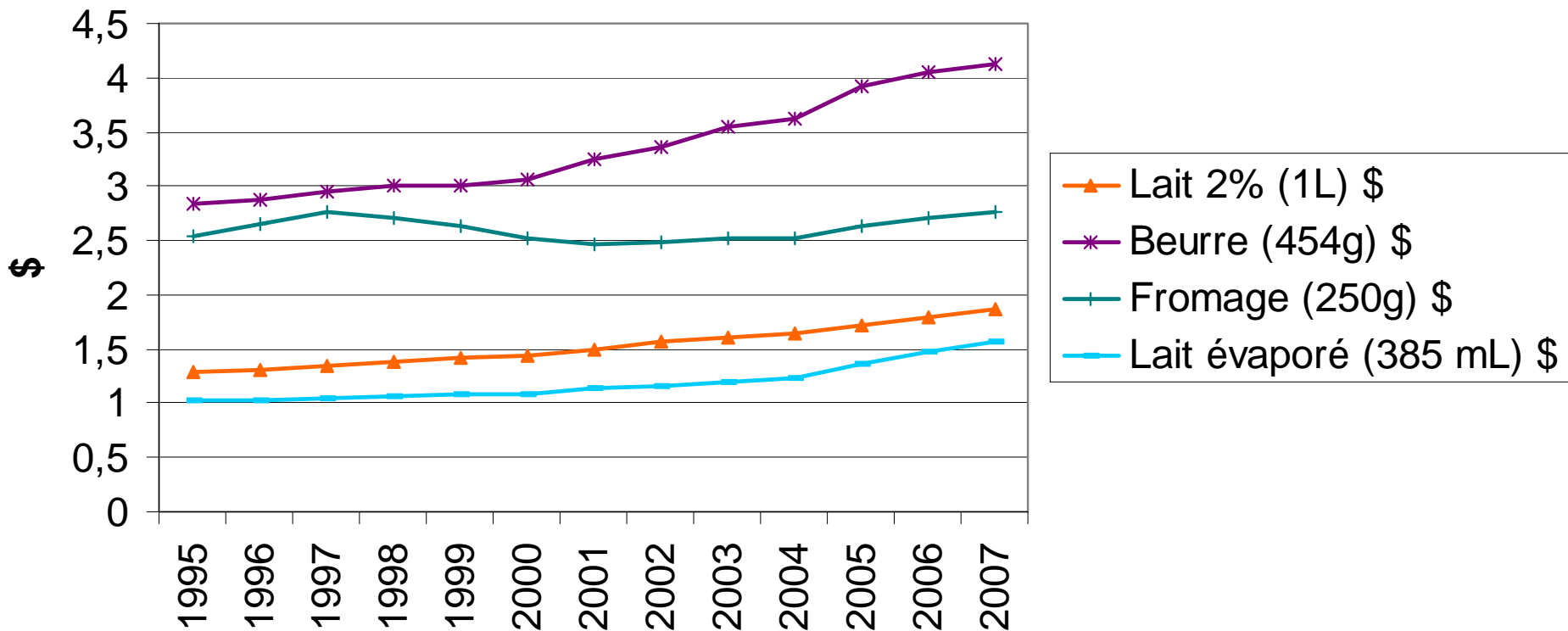
- **Average total revenue** : \$71.11/hl (\$<sub>us</sub> 25,50 cwt)
- **Average revenue from fluid milk**: \$81.28/hl (\$<sub>us</sub> 29,15 cwt)
- **Average revenue from processed milk**: \$64.32/hl (\$<sub>us</sub> 23,10 cwt)
- **Support price**: \$ 72.45 /hl (\$<sub>us</sub> 26 cwt)



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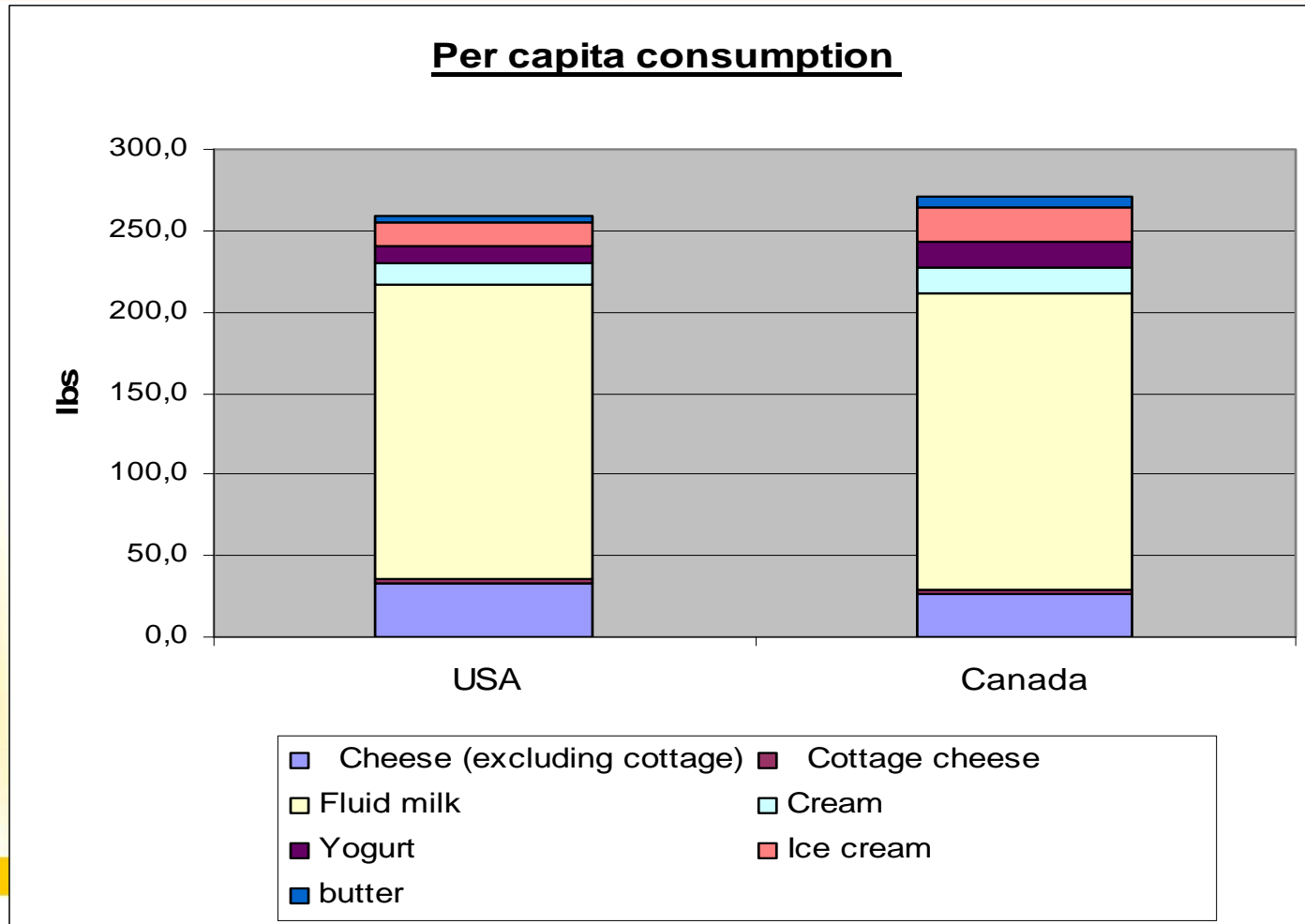
## Average retail price of dairy products - Canada



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# Per capita consumption : a comparison



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# Share of consumer dollar captured

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- Doyon et al, (1999) found that Canadian dairy farmers capture a much larger share of dairy consumer dollar than American (NY and CA) dairy farmers
- Doyon et al. (2008) review processors and retailers margin for dairy products in the US and numerous regulation discussed or put into place to curb this perceived problem
- The pie is not that dissimilar, it is how it is split that makes the major difference between the US and Canada

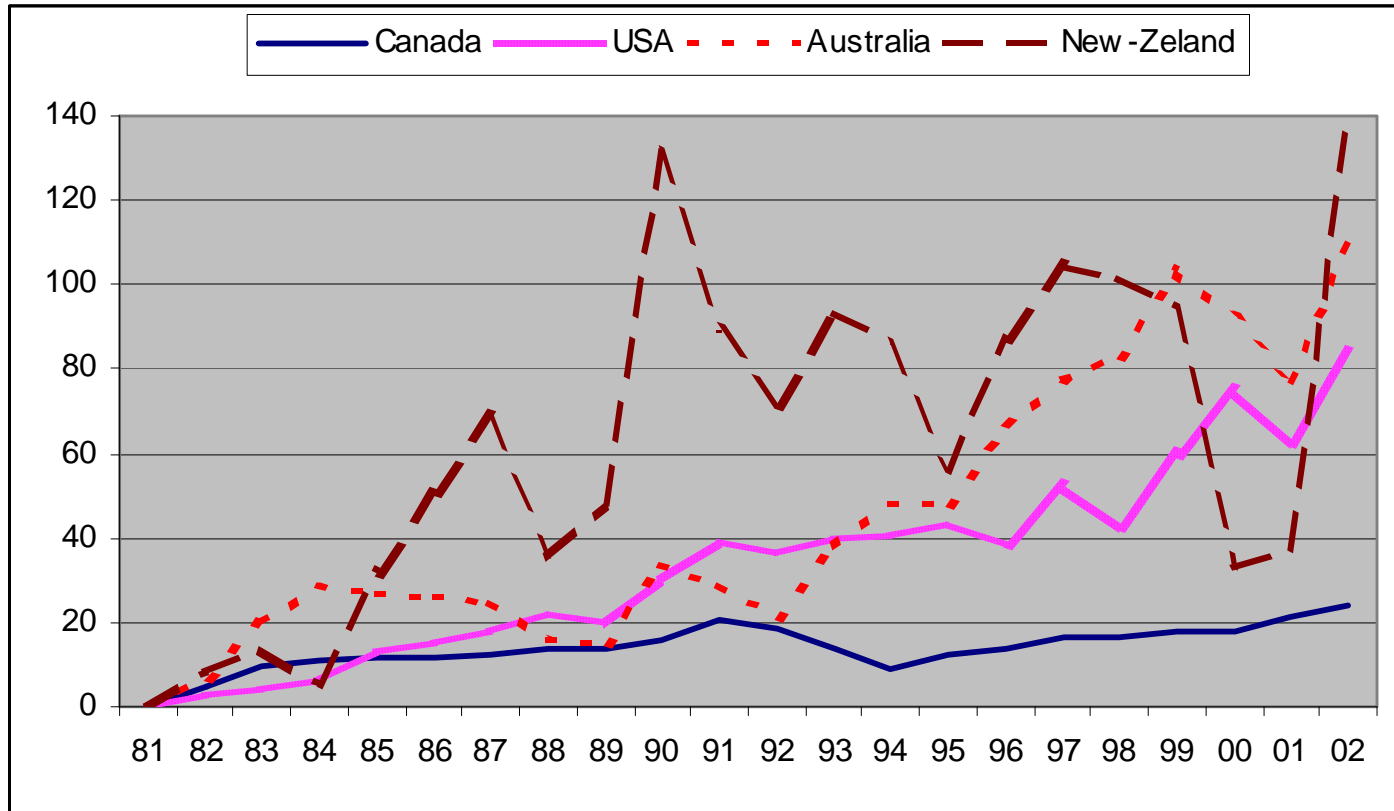


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# Share of consumer \$

Figure 5 Evolution of aggregated processor and retailer margins based on the difference between consumer price index and production price index, by country, 1981 to 2002



•Sources: Statistic Canada, USDA from Gouin 2004



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## 2) The essence of supply management



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## 1966: Canadian Dairy Commission (CDC) is created

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- Canadian Dairy Commission Act, 1967
- Coordinates provincial and federal systems
- Goals:
  - To ensure a fair revenue for producers
  - To secure (quantity, availability and quality) the supply of dairy products to consumers



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# 1971: National Milk Marketing Plan

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- Regulation of industrial milk marketing
- National production quota as a function of milk demand for butterfat
  - Distribution of this quota to the provinces on historical basis



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# 1971: National Milk Marketing Plan

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- Producers are responsible for production surplus
- Subsidies to producers for processed milk to maintain a low price of dairy products on the consumption market (has been dropped since)
- Target price of processed milk as a function of production costs

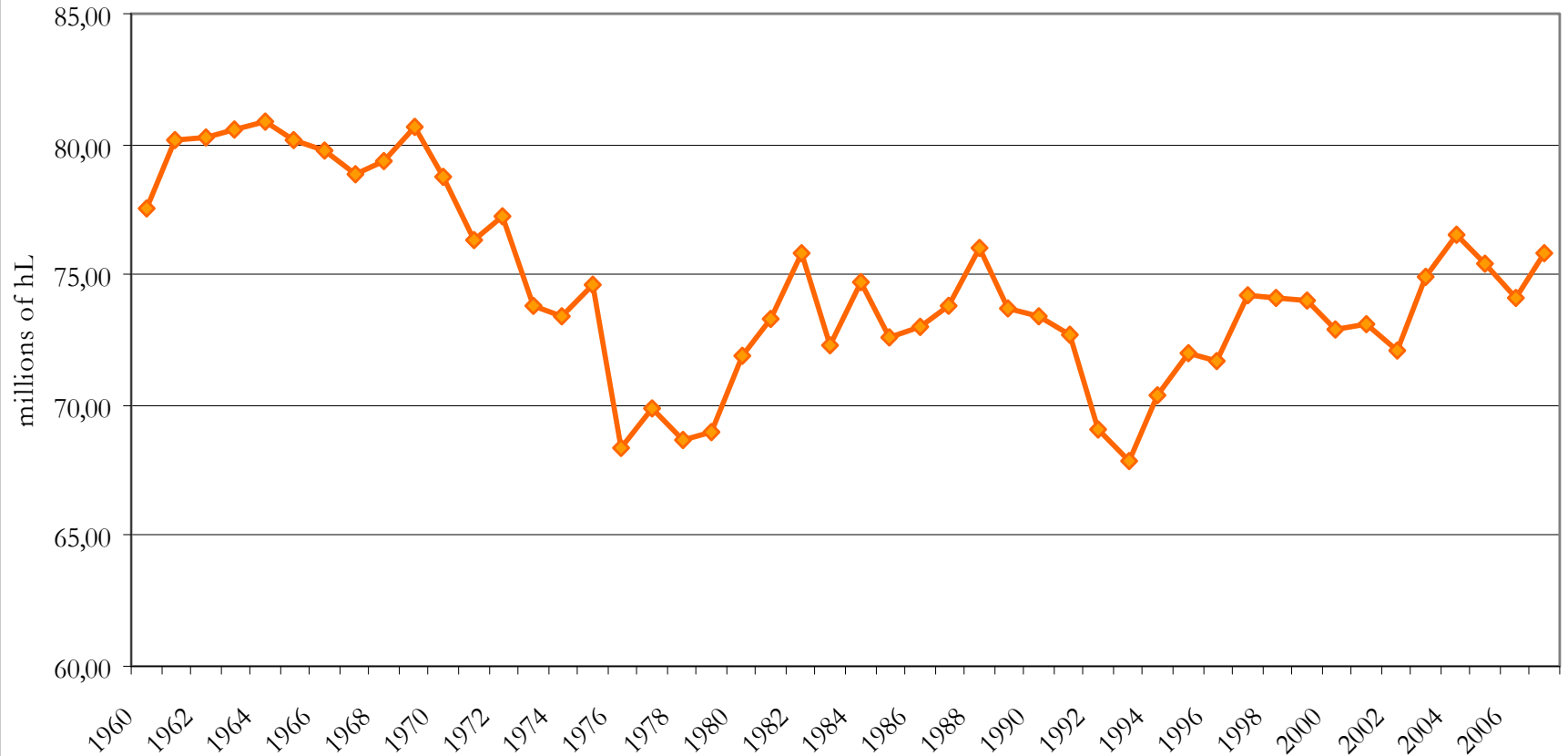


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# Canadian milk production evolution

Evolution of milk production at the farm (Canada)



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# Federal and provincial legislation

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- First level of legislation = **Federal** : for international and inter-provincial trade
  - Importation tariffs
  - Support prices and level of subsidies for producers
  - Guaranties on SMP & butter
  - Determination of the Canadian milk quota and distribution to each province
- Second level of legislation = **Provincial**: for intra-provincial trade
  - Rules of individual quota allocation and transfers
  - Production price (based on the federal support price)
  - Rules of milk allocation to processors



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# Industrial milk support price system

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- Federal Government sets a target producer revenue for the milk (butter & SMP)
- This price is a basis for the negotiation of price. Additional elements are fixed at the provincial level:
  - Processor margin
  - Transportation costs (pool)
  - Generic advertising
  - Contribution to producers' cooperative or union



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•(Sept.20008 prices)

•**Butter support price**

•\$7.0462/kg

•**SMP support price**

•\$6.1125/kg

•Set by the CDC

•x

•**Yield of butter**

4.3793kg/hl of milk

•x

•**Yield of SMP**

8.9121 kg/ hl of milk

•**Market return based on Butter support price**

•\$30.86/hl

•**Market return based on the SMP Support Price**

•\$54.48/hl

•**Total market return**

•\$85.33/hl

•**Processor Margin**

•\$11.33/hl

•**Carrying charges**

•\$0.10/hl

•**Target Producer Revenue**

•\$73.90/hl

•\* 3.6 kg butterfat/hl

•Source: CDC

# Provincial level: marketing board

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- National Dairy Policy is applied at the provincial level
- In Quebec, the FPLQ is responsible for this task
  - Role:
    - Negotiation of milk price
    - Definition of other deductions
    - Distribution of individual quotas
    - Quota Transfer system



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# Sales Agreement

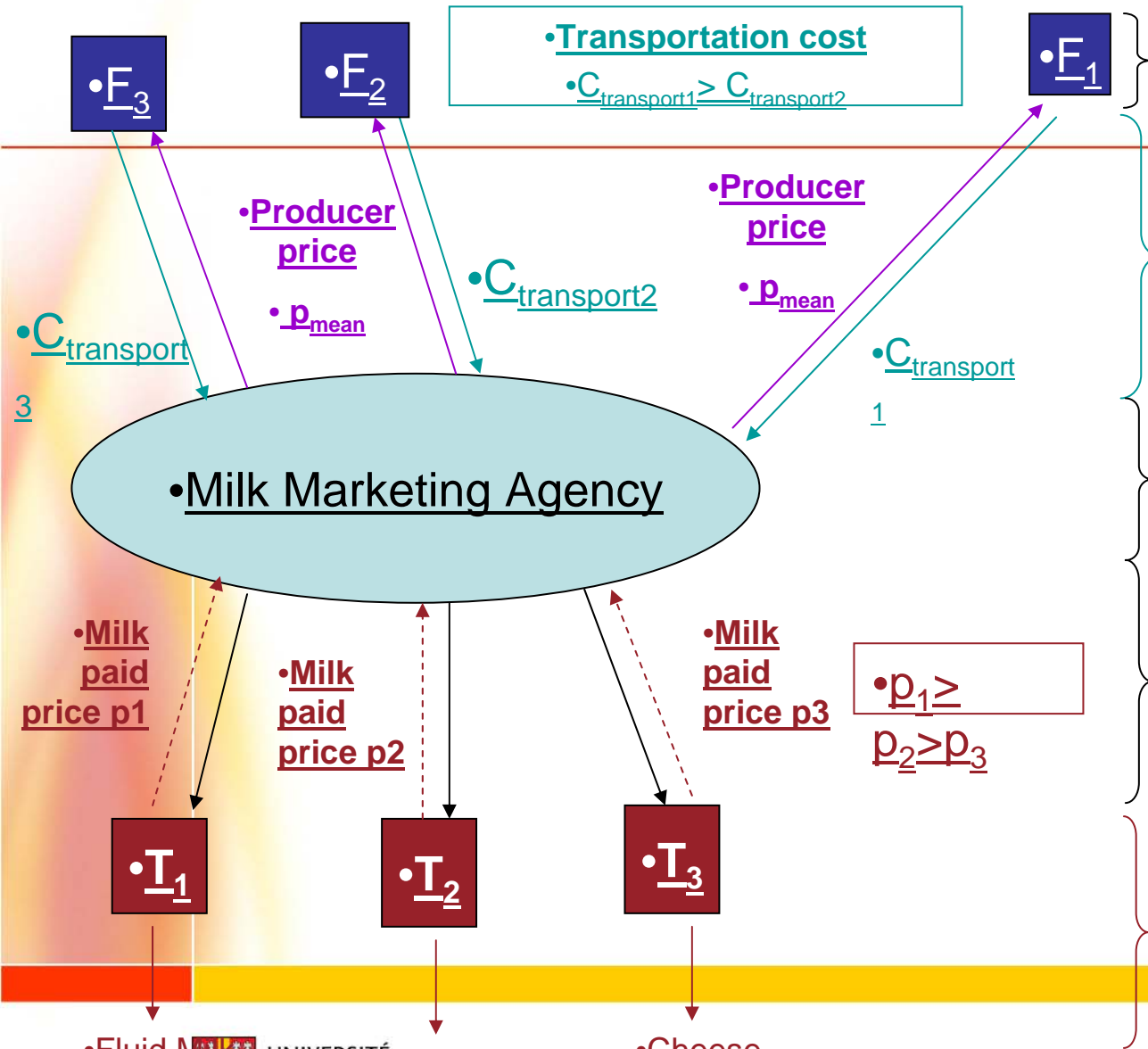
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- Definition of the conditions of sales
  - Quality of milk, delivery conditions
  - Price, volume
- Five classes of milk : paid according to end-use
- FPLQ has the right to give priority to the highest paid classes (especially fluid milk)
- All milk produced in Quebec is pooled (Sales Agency) and redirected to the processors (coop)
  - All producers are paid the same price for their milk, regardless of transportation costs or actual use of their milk



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- Producers :  $F_1, F_2, F_3 \dots$
- (7000 farms in Quebec)

- Transportation of raw milk by transporters under contract with the milk marketing board

- Milk production is centralized and distributed to processors according to a classification system of processed dairy products. The best paying categories are supplied in priority.
- Milk is delivered by the agency to the processors

- Processors:  $T_1, T_2, T_3 \dots$
- (3 main firms in Canada)

# National Quota

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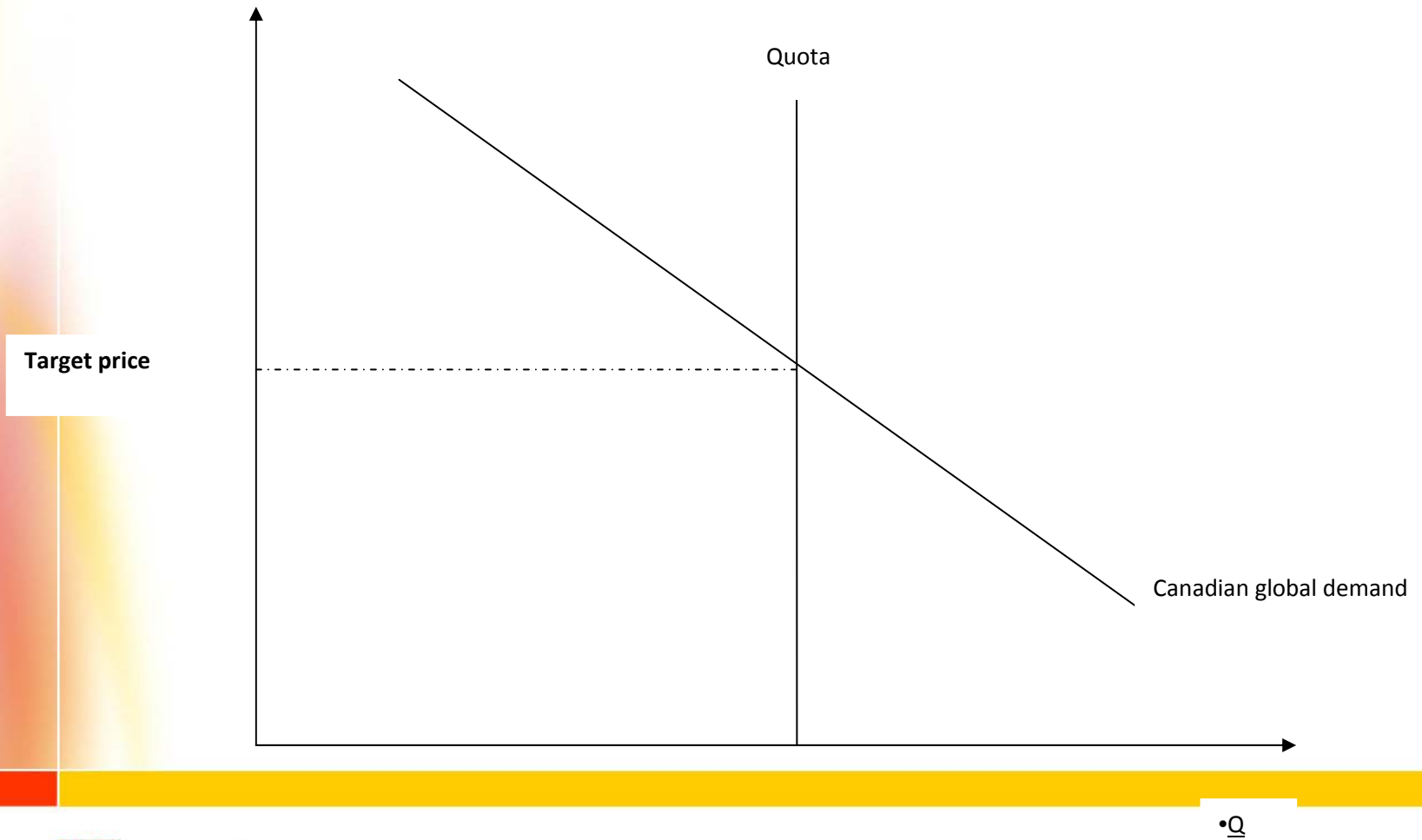
- Global Canadian quota is calculated based on butterfat consumption
  - Provincial allocation based on historical production
  - Butter acts as a buffer to absorb milk surpluses, balance snf (imports), butter stocks are used to adjust quota (twice a year)
- Producers are responsible for surpluses
  - incentives not to produce above quota level



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# National Quota



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# National Quota

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- In 2007 : total quota of 297.19 million kg of butterfat (653,8 million lbs )
- 99.98% of Canadian quota was produced in 2007
- 2006-2008: based on an increase of consumption, quota was increased
  - from 288.4 to 299.26 million kg butterfat)
  - Fluid milk market stable
  - Ice cream market declining
  - The increase is due mainly to yogurt (7 to 8% growth rate) and cheese (3-4%)



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# Pricing mechanism

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- Target support prices are defined and revised once a year
- On the basis of production costs (70% most efficient)
  - Labor (includes family labour)
  - Expenses and capital costs
  - Quota related cost excluded of the calculation



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# Border protection

- GATT article 11: import restrictions may be allowed under certain conditions, if domestic production is restricted (quotas)
- Uruguay Round (1994): import quotas converted into tariffs, progressively reduced
- Tariff Rate Quotas (TRQ) and tariffs, from Aug. 1st, 2008:

	TRQ (tons)	Tariff above TRQ (%)	% imports*
<b>Butter</b>	3 274	298.5	6%
<b>Cheese</b>	20 411.9	245.5	37%
<b>Ice cream</b>	0.484	277.0	0.3%
<b>Yogurt</b>	332	237,5	<8%
<b>SMP</b>	0	201.5	12.7%



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•\* % of the total value of imports of dairy products to Canada (\$ 621 million in 2007)

# SNF structural surplus

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- Milk needs are higher when calculated on a butterfat basis than on a SNF (solids non fat) basis
  - SNF: Lactose, protein, other solids
- Since milk supply is calculated on the basis of BF, there is a structural SNF surplus of SMP
  - This surplus is supported by producers
  - Sold at low prices + WTO agreements restrict exports
  - In 2004, situation became critical (imports of butter)
- July 2004
  - An annual reduction target for each province



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# SNF structural surplus

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- At the provincial level SNF/BF target ratio
- At the producer's level, two measures :
  - Maximum monthly ratio of SNF/kg of BF delivered in-quota
  - Transfer of \$/hl from protein to BF



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# 3) An Evolving System



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# Evolution of structure of dairy processing

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- Rationalization of dairy processing industry from 1,413 plants in 1965 to 445 in 2007
- Expansion of marketing zones : from a local to a provincial/national level
- In response to this concentration of processors, milk pools were created to allow better management of financial risks for producers



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# Milk pools

Three pools:

- Comprehensive Agreement on Special Class Pooling (P10)
- Agreement on all milk pooling (P5)
- Western Milk Pooling Agreement (WMP)

2007/2008	Fluid milk production (million hl)	Industrial milk production (million hl)	Part of Canadian quota	Blend price to producer (\$/hl) <i>(in-quota, 3.6 kg butterfat/hl basis)</i>
P-5	22.3	40.9	76%	70.26
WMP	10.1	9.1	23%	71.5

## P-10

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- An agreement between all provinces (since 2001)
- 1995: Special Milk Class Permit Program
  - Industrial milk is sold at prices which vary according to its end-use to allow international competition on further processed products
- P-10 agreement: revenues from industrial milk in special classes is shared between producer of all provinces



## P-5

- August 1996 : an agreement between 5 Eastern Provinces : ON, QC, NB, NS, PEI (6 at first : Manitoba left in 2003)
- **Goal:** A common pool of all milk revenues throughout the provinces
  - For all milk classes (not only industrial milk)
  - Harmonization of milk revenues + other elements (daily quota system, quota exchange, end-use pricing of components)
- Since February 2007, same price is billed for Class 1 in all 5 provinces

## Quota prices (december 2008)

NS	unique quota \$/kg butterfat/day	28111
PEI		27000
NB		24998
QC		24000
ON		30610
MB		25000

Over the past few years, quota centralized exchanges have been modified with various degree of success to curb high inflation on quota price. High quota prices were perceived has being problematic by milk producers

# 4) Current Issues



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# P5

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## A fully integrated P5

- one quota price
- one pooled price
- same number of days of tolerance

More efficient negotiation with processors, synergy and reduction of administrative costs



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# Structural surplus response

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WTO Article 28 : Cap imports of dairy ingredients. Costly solution since we were at the limit of existing technology capability, need to compensate the U.S. and NZ, and give an extra 10% in volume.



# Structural surplus response

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## Dairy product norms

- ◆ Old Cheddar (100 % proteine from fresh milk)
- ◆ Fine cheese (95 %)
- ◆ Cheddar and american (83 %)
- ◆ Mozzarella for pizza (63 %)
- ◆ Yogurt?



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# Structural surplus response

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- Why the norms?
- Development of new special classes
  - ◆ Focus on volume without hurting existing products
  - ◆ Allows to work on structural surplus ...
  - ◆ Might get back some loss market such as ice cream (ice cream mixed)

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• Dairy ingredients (potentiel gain for the Canadian industry)



# WTO Negotiations

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- Even if tariffs are high, little margin left for the Canadian system
- Decreases in dairy world price and /or increases of the Canadian \$ reduce the effectiveness of Canadian dairy tariffs
- A true tariff reduction of 20% would be really hurtful for the supply management system. Greater tariff reductions would likely be fatal
- So far, governments as well as producers are strongly behind the system. Supply management does not cost much to governments



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**Thank you for your attention!**

**Maurice Doyon**

Professor

Director of Graduate Program

Department of Agricultural Economics and Consumer Science

Laval University

Tél. : (418) 656-2131 poste 4546

Télec. : (418) 656-7821

Email [maurice.doyon@eac.ulaval.ca](mailto:maurice.doyon@eac.ulaval.ca)



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