Canadian Agricultural Policies and Health: An Example from the Meat Sector

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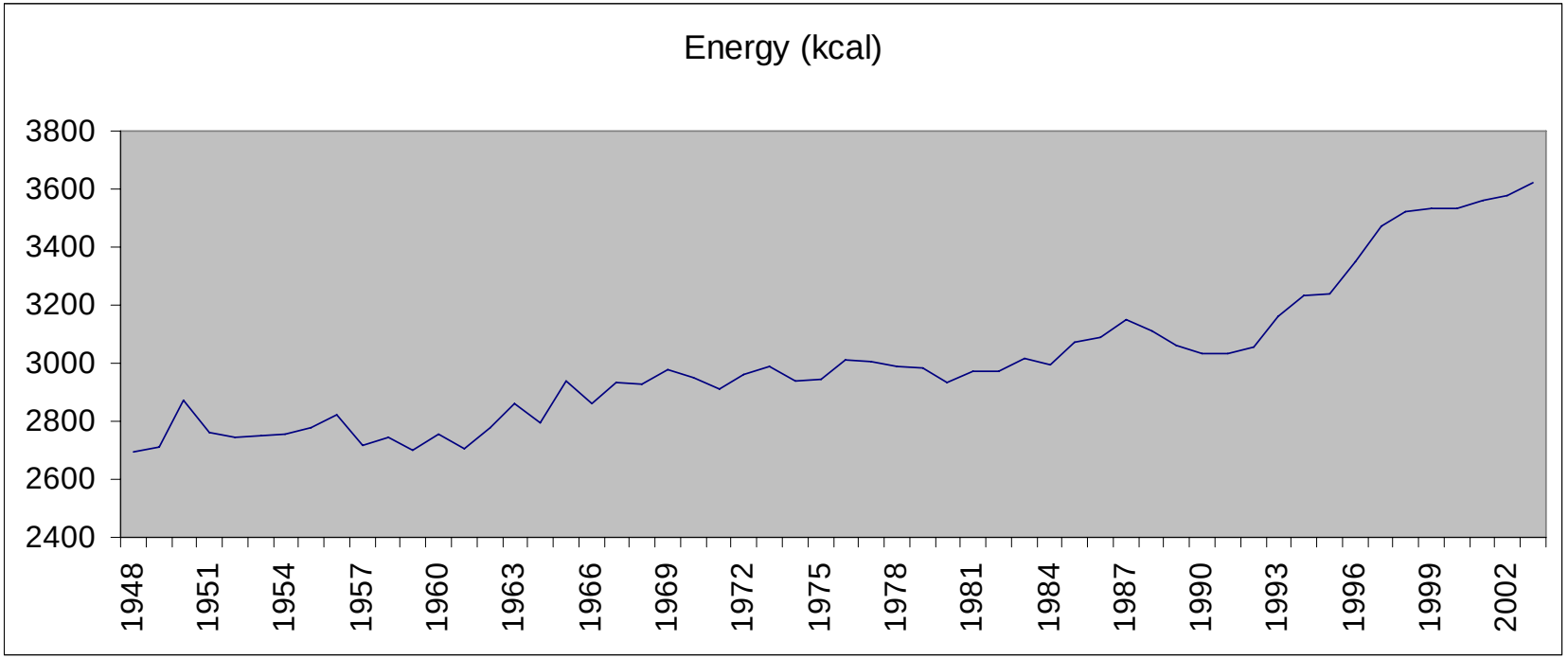
Ellen Goddard, Mel Lerohl, Sean B. Cash and José Lomeli
Department of Rural Economy
University of Alberta

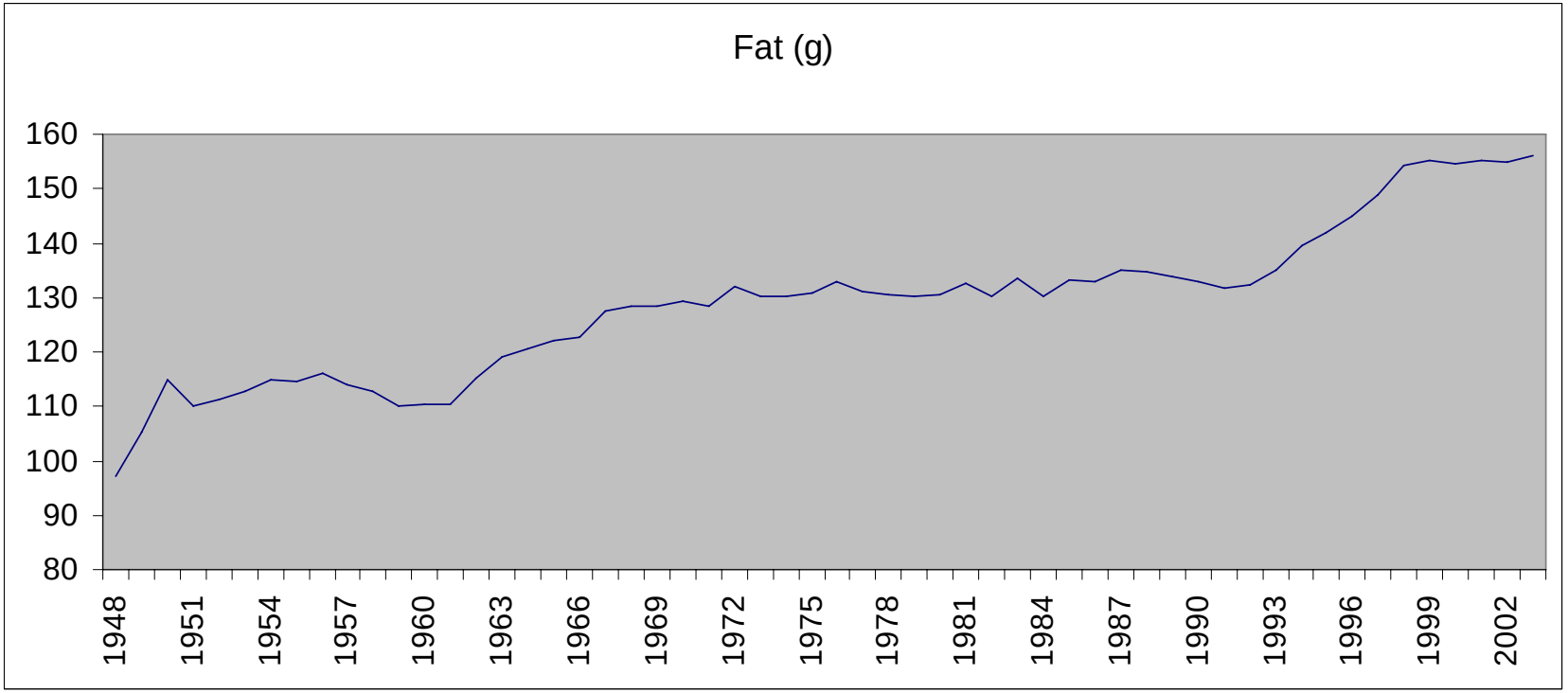
Introduction

- As in many countries governments are becoming increasingly concerned about rising health care costs associated with ‘preventable’ diseases
- These concerns are highlighting the need for coordinated public action
- Historical food disappearance data in Canada illustrate sharply increasing levels of energy/fat disappearance.

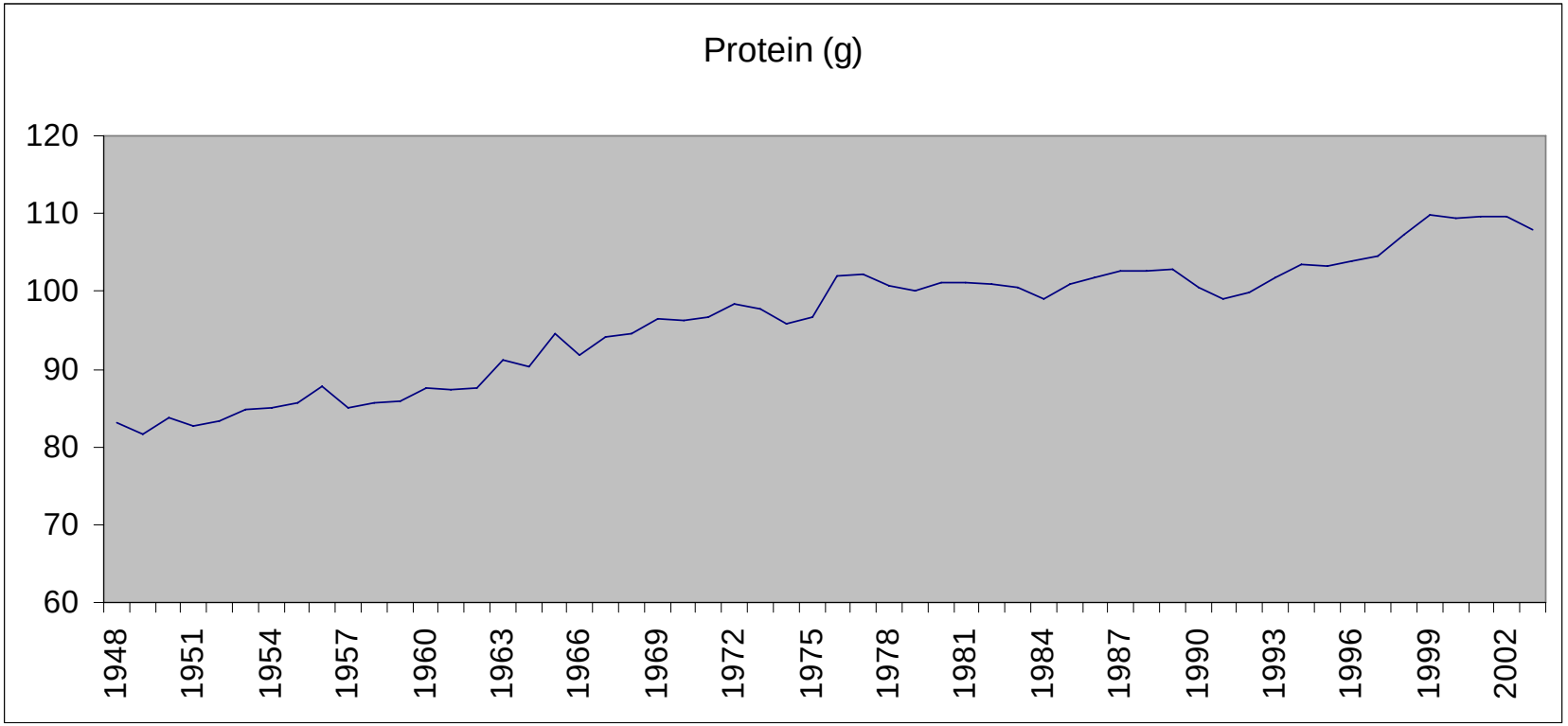
Canadian Disappearance of Energy Kcal/person/day



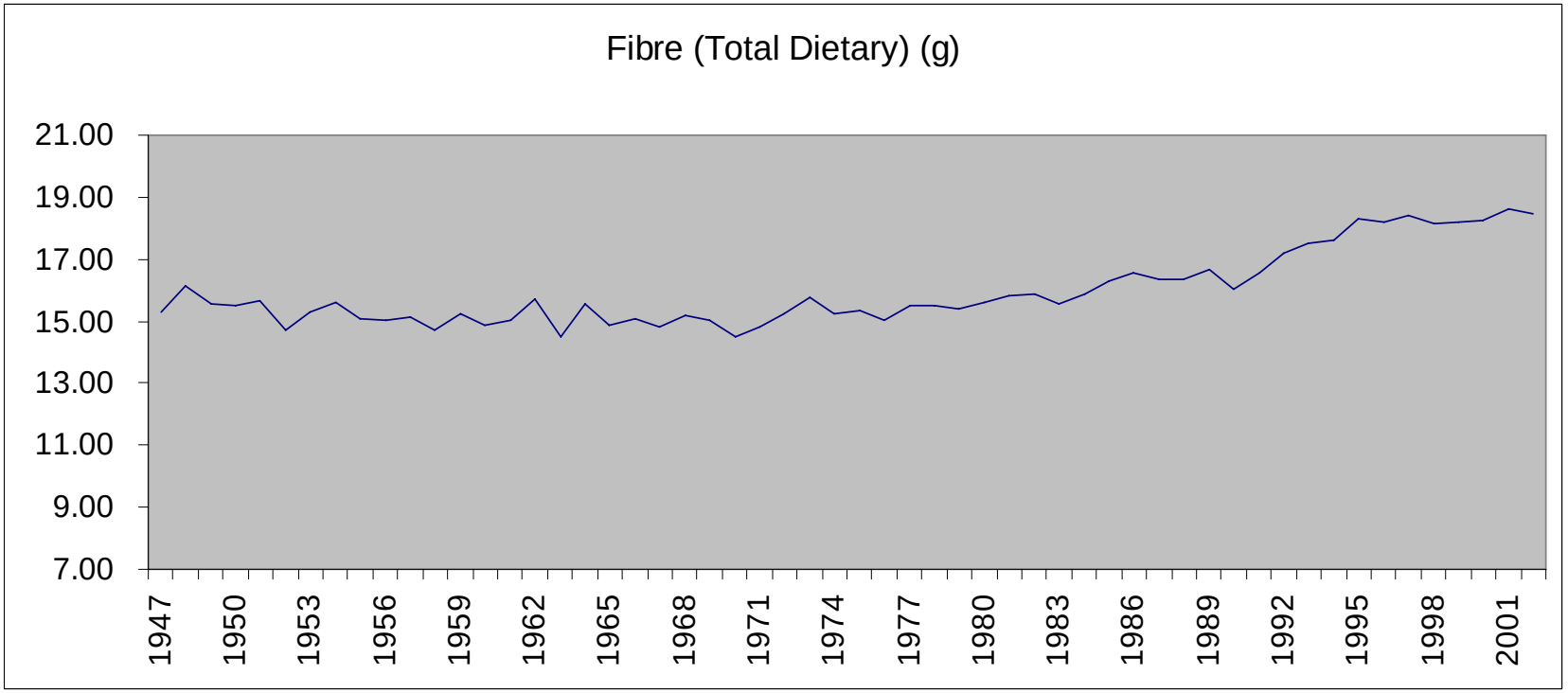
Canadian Fat Disappearance g/person/day



Canadian Protein Disappearance g/person/day



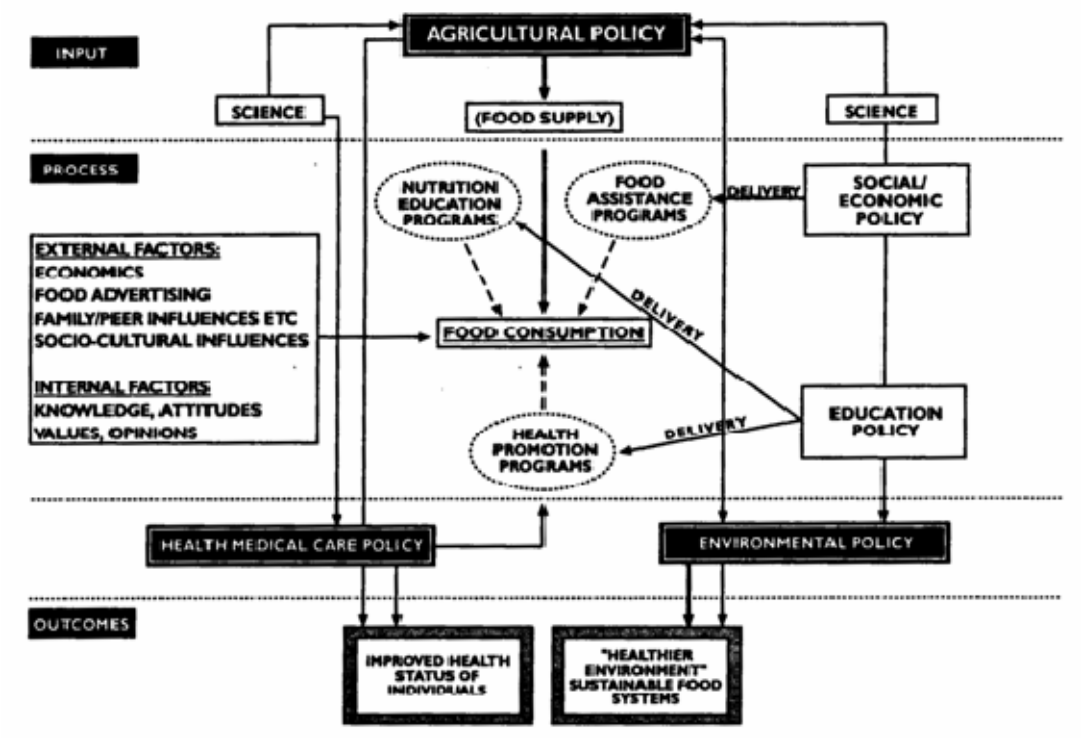
Canadian Fibre Disappearance
g/person/day



Role of Agricultural Policy

- One possible driver of changes in food consumption patterns may be agricultural policy
- Agricultural policy in many countries is not viewed with a health filter; in spite of its potential to affect health outcomes

A Systems Model of Nutrition Policy
(Sims, 1998)



Other References to the Role of Agricultural Policy (Haddad, 2003, Sims, 1998)

Food policy instruments for influencing dietary fat

Stage of the food system	Types of policy instrument	Examples used in the dietary fat issue	Effectiveness in controlling fat intake
Food production	Commodity price subsidies/ supports	Feed grain subsidies for feedlot animals	Negative
		Dairy price supports	Negative
	Import/export quotas	Export incentives for US vegetable oil	Uncertain
		Restrictions on beef imports	Uncertain
Food processing	Meat grading standards	Beef grading (changes from choice to select)	Positive
	'Standards of identity'	'Standards of identity' changed for low-fat milk and yoghurt	Positive
	Food labelling	Food label descriptors (e.g. 'low fat', etc.) changed for fluid milk, ice cream	Quite positive
Food distribution and marketing	Marketing orders for dairy	Changes in milk marketing orders	Negative
	Food labelling	Use of '% lean' claims on ground beef	Slightly negative
		Restaurant labelling of menu items with 'low fat' claims	Slightly positive
	Food advertising	Harmonisation between the FTC and FDA on ads using fat 'discriptors'	Uncertain
Food consumption	Food labelling	Fat descriptor information on food label	Positive
	Dietary information	Dietary guidelines	Positive
		Food Guide Pyramid	Quite positive
	Commodity promotion boards	Promotion of cheese, ice cream, milk, beef, pork	Negative

Source: Adapted from Sims (1998).

Examples of discordance in health and food supply policies (Source: Lobstein 2002)

Health policy	Food supply policy
Dietary guidelines to reduce intake of dairy fats	Agriculture policy support for production and promotion of dairy fats, butter distribution subsidies, butter and oil advertising support
Dietary guidelines to limit sugar consumption	Agriculture policy support for production of sugar, over-production 'institutionalised'
Policies to encourage greater consumption of fruits and vegetables	Market protection measures encourage destruction of produce and of orchards, intensive production leads to potential pesticide contamination
Recommendations to eat more fish, especially oily fish	Incentives to over-fish lead to stock collapse and emergency quotas. Intensive fish farming leads to contamination concerns
Food safety concerns with beef, eggs, chicken	Subsidies for animal feed production encourage higher animal production levels, antibiotic use encourages resistant strains of bacteria, cheap imports threaten local production and increase inspection problems

Previous Empirical Research in Canada

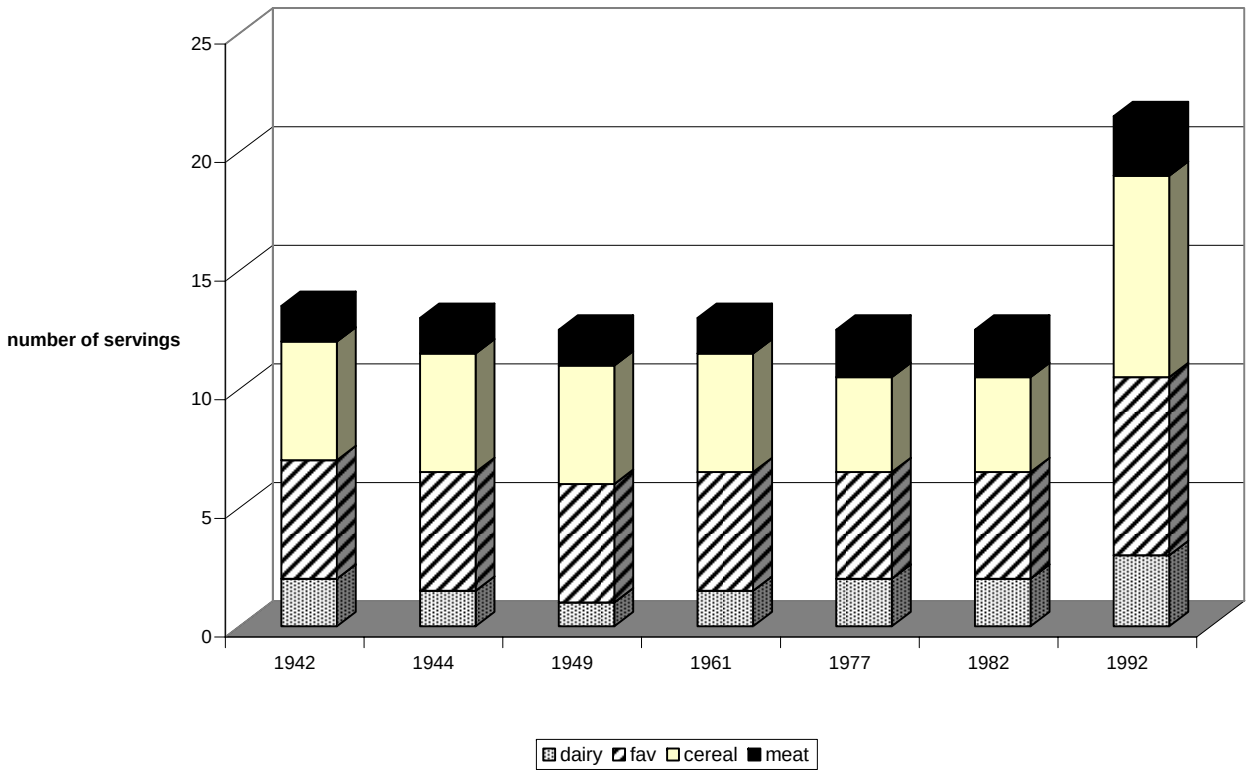
- Almost non-existent
- Gray and Malla (1998) looked at the specific example of Canadian dairy supply management (restricting production, imports to maintain high producer prices) and its implications for consumption of butter fat.
- They concluded that '*when the health cost externalities associated with saturated fat consumption are considered in a welfare analysis of supply management production quotas… the quotas are shown to produce a small net gain relative to the competitive equilibrium*'

Canadian Ag Policies: Meat

- Supply Management – potentially cause some shift from white meat to red meat consumption through relative prices
- Income Support, Research, Stabilization- potentially cause shifts in production of meats, affecting prices and consumption

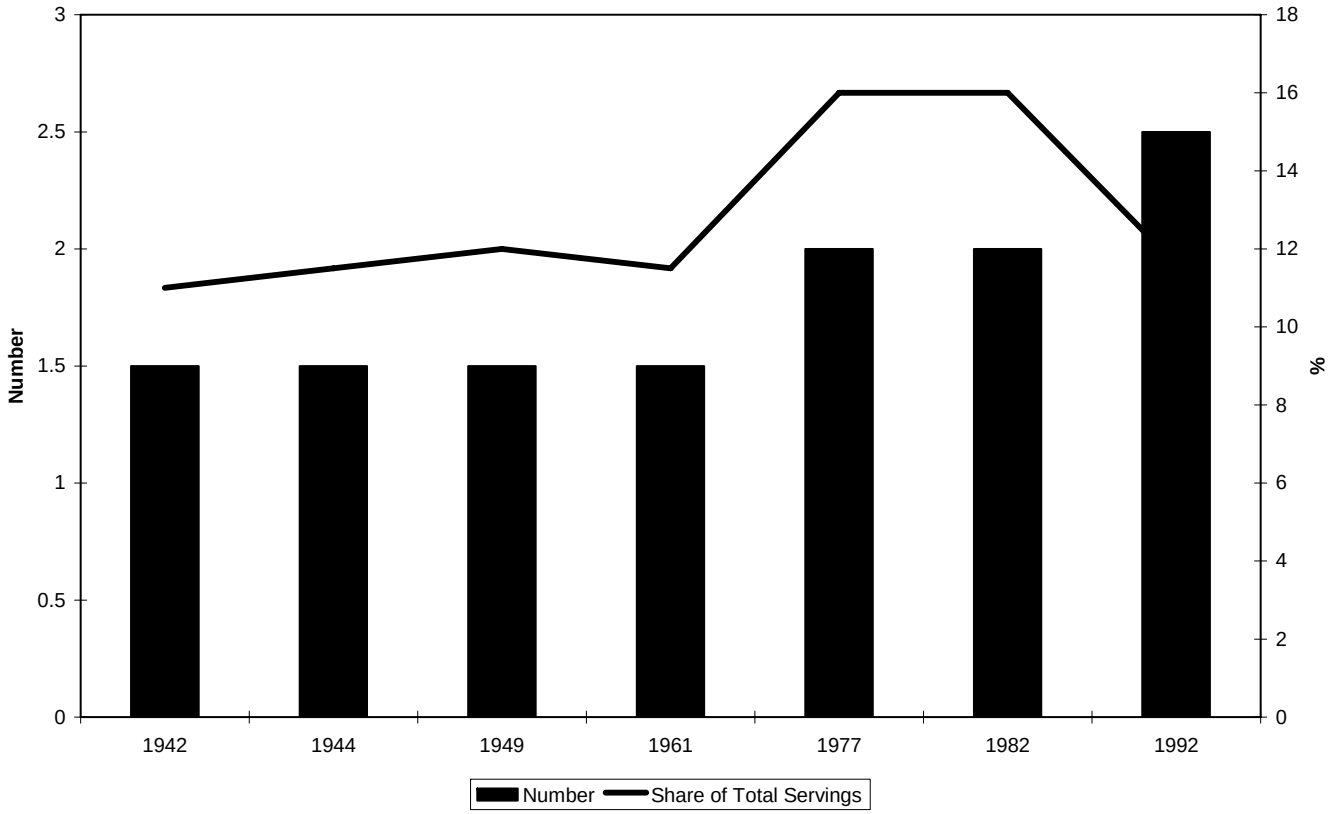
What Has Happened in the Canadian Meat Sector?

Figure 2: Canada's Food Guide to Healthy Eating Recommendations

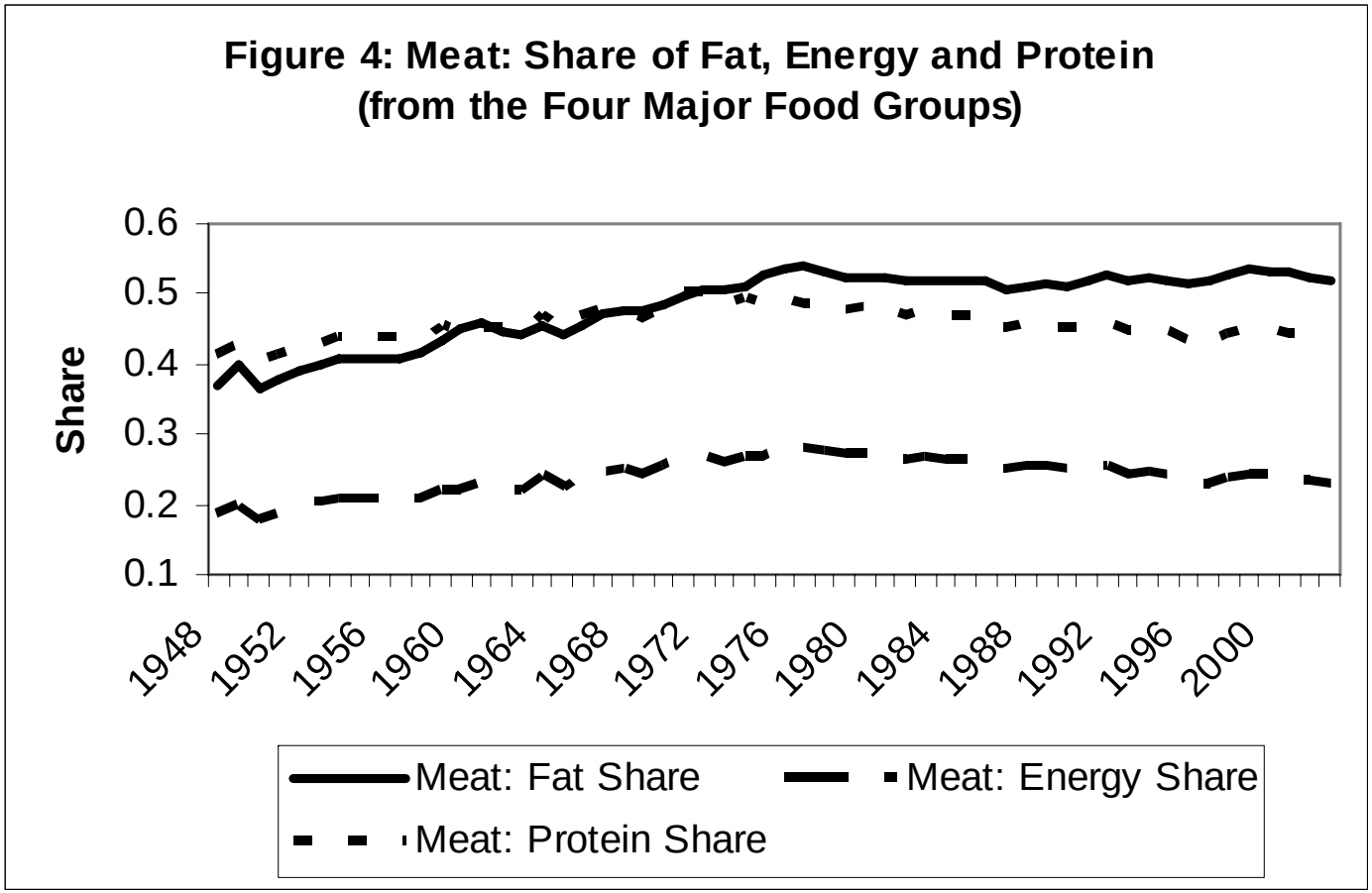


Recommendations on Meat Consumption

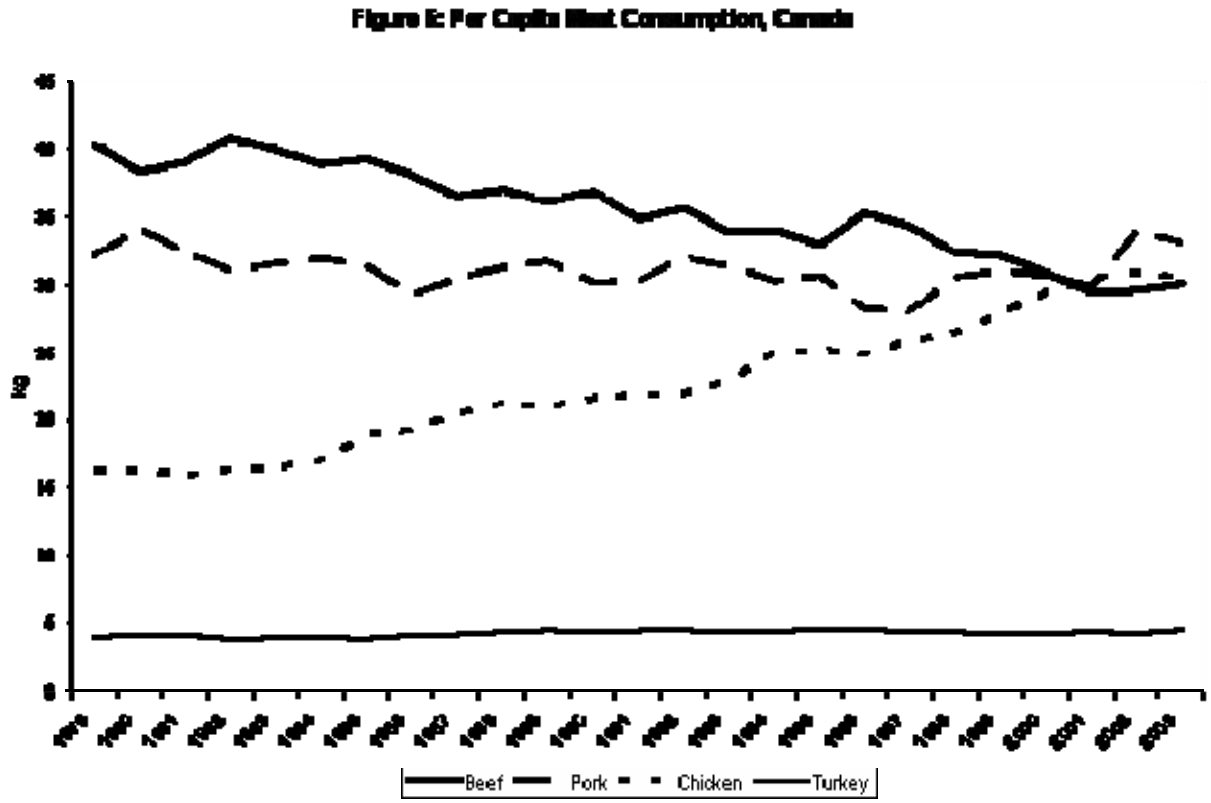
Figure 3: Recommended Meat and Substitute Servings



Meat as Share of Nutrient Disappearance



Actual Meat Consumption, Canada



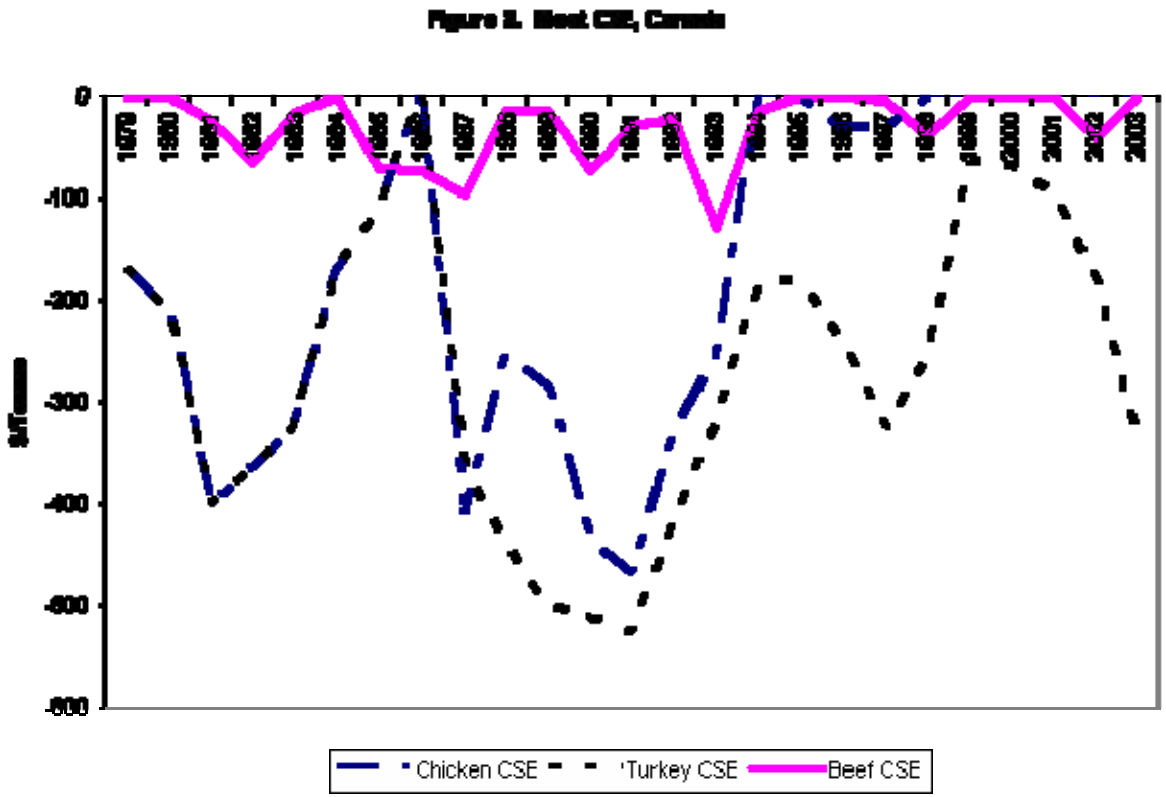
Empirical Analysis

- A two stage meat model (beef, pork, chicken, turkey) estimated for Canada, over the period 1979 to 2004.
- Apart from prices and income various information variables are included
  - Advertising – generic, brand, restaurant
  - Health and individual meat – media coverage index
  - Food safety and individual meat – media coverage index
  - Canada's Food Guide recommendations

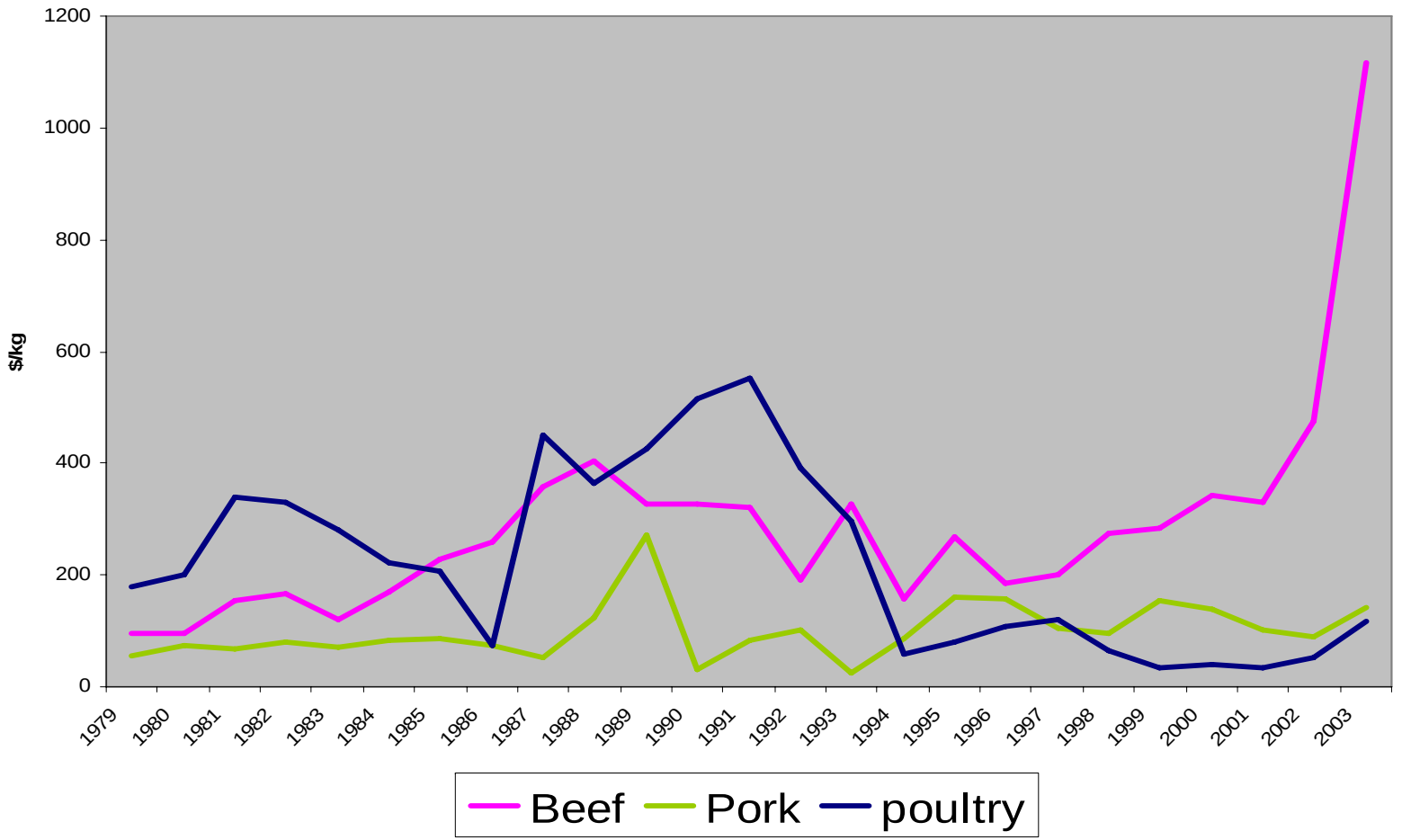
Model Simulations

- Four separate simulations of the meat demand model are conducted here:
  - A base run to establish comparable values for beef, pork, chicken and turkey per capita consumption.
  - A simulation without the Consumer Support Estimates in place for Canadian beef, chicken and turkey (implying a removal of supply management policies).
  - A simulation without the Producer Support Estimates for Canadian beef, pork.
  - As a basis of comparison to the above, a simulation where the recommendations of the Canadian Food Guide for Healthy Eating have meat serving recommendations that are twenty percent lower than actual.

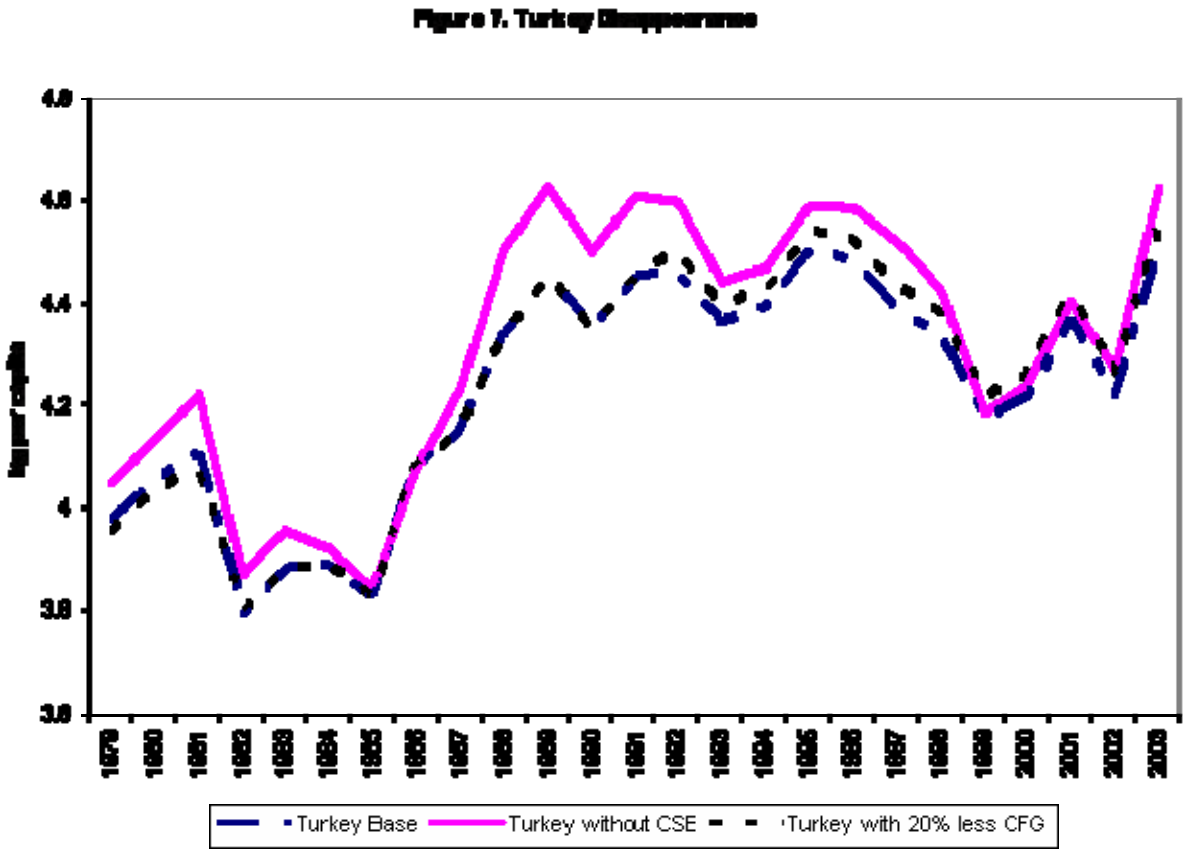
Consumer Support Estimates (OECD, 2004)



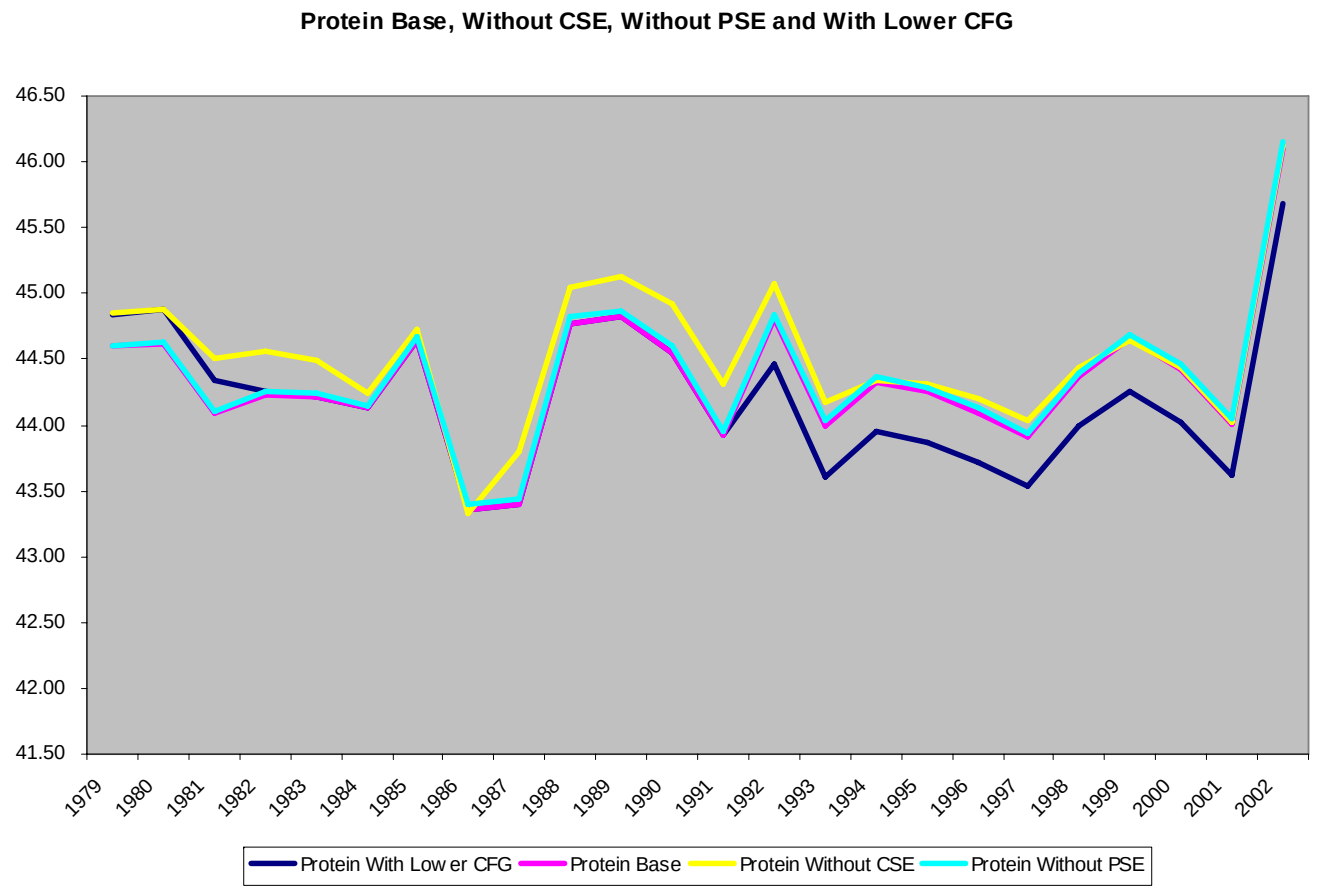
Producer Support Estimates, (OECD, 2004)



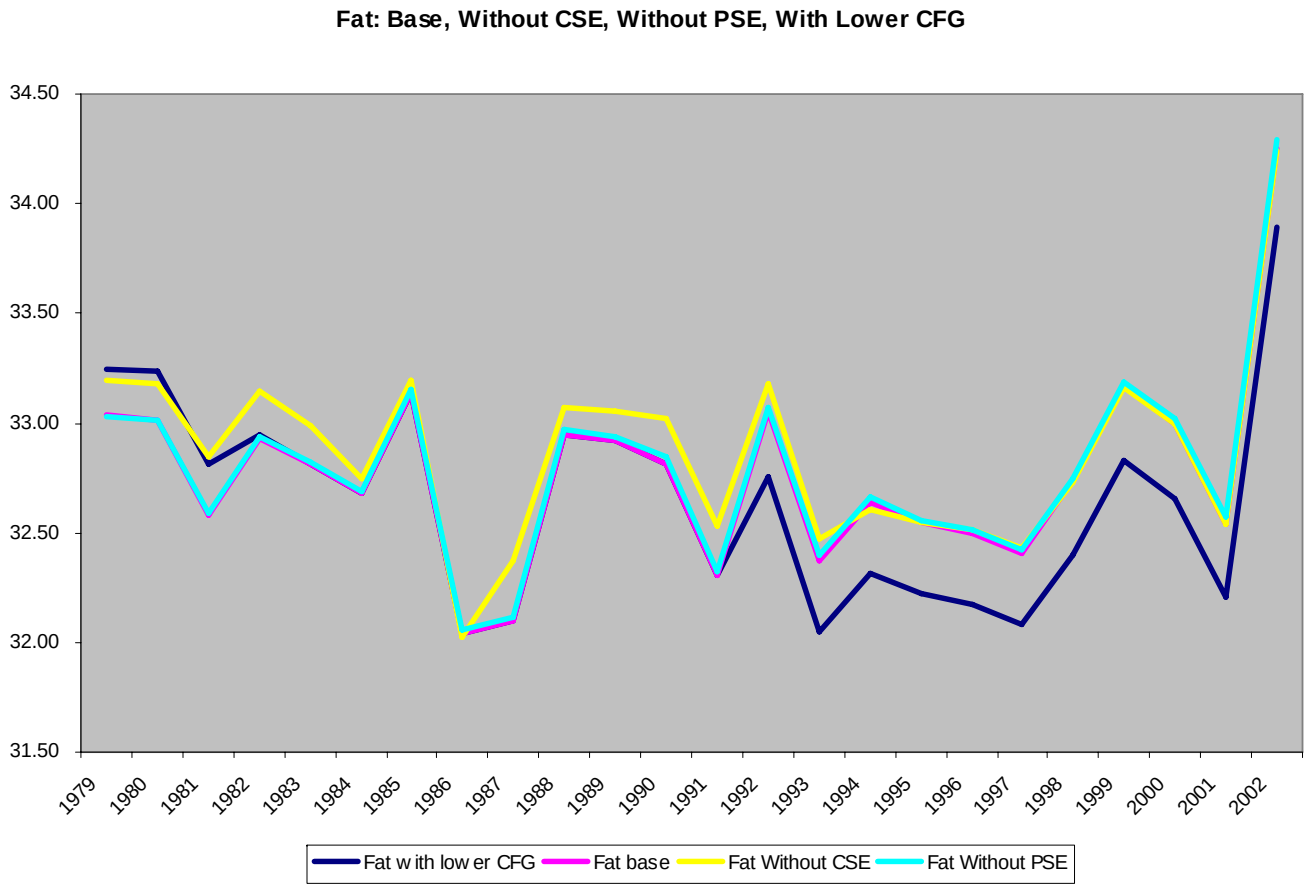
Simulation Results example



Simulation Results, Protein



Simulation Results: Fat



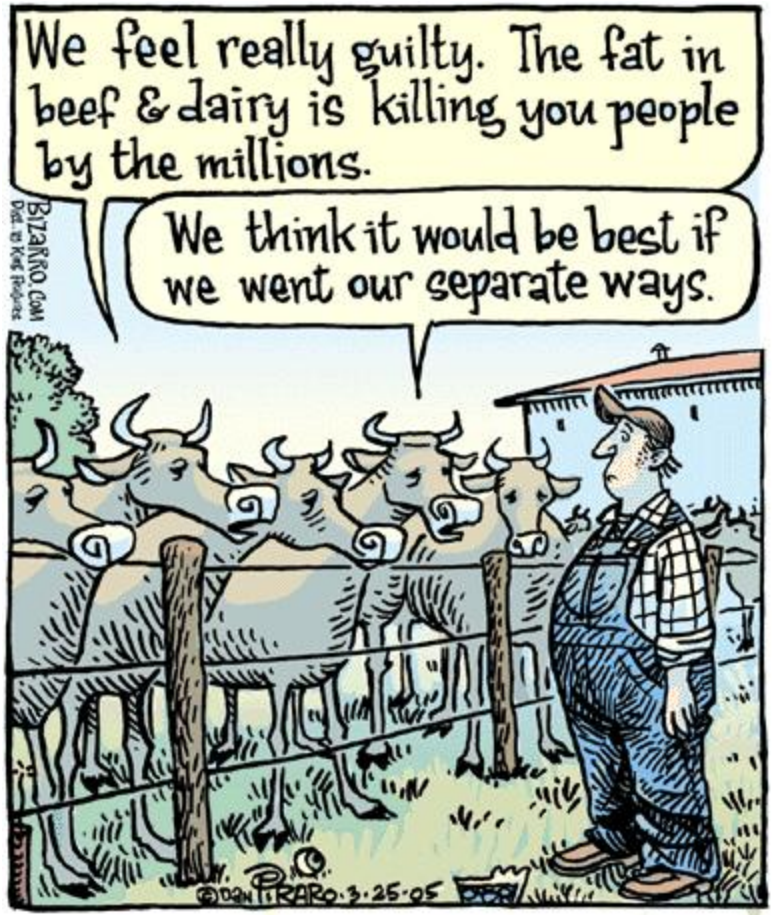
And so ….

- Implications of eradicating poultry supply management – results in increased meat consumption; price effects outweigh substitution effects
- Implications of reducing producer price supports – results in very small changes in meat consumption patterns
- Changes in recommendations of Canada's Food Guide have significant implications for meat consumption patterns
- Quantity changes reflect changes in overall levels of protein, fat consumed in Canada
- Government policies need to be viewed with a 'health' filter

Extensions

- Extending analysis to the individual products consumed within each meat category
  - Chicken – nuggets; fried; boneless, skinless chicken breast, for example.
- Extending analysis to the substitution effects outside basic category
  - Include fish, eggs, lentils, pulses etc.

Thank You!


We feel really guilty. The fat in beef & dairy is killing you people by the millions.
We think it would be best if we went our separate ways.
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